Robinson+Cole

KENNETH C. BALDWIN

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Also admitted in Massachusetts
and New York

June 16, 2021

Via Electronic Mail

Melanie A. Bachman, Esq.
Executive Director/Staff Attorney
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: **Notice of Exempt Modification – Facility Modification**
Mitchell College, 40 Debiasi Drive, New London, Connecticut

Dear Attorney Bachman:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains an existing wireless telecommunications facility at the above-referenced address (the "Property"). The facility consists of antennas and remote radio heads attached to two roof-top towers on the existing building and related equipment on the ground adjacent to the building. The towers and antennas are located within faux chimney screening structures. Cellco's existing facility was approved by the Council in August of 2017 (Petition No. 1311). A copy of the Council's approval letter and staff report for Petition No. 1311 is included in Attachment 1.

Cellco now intends to modify its facility by replacing two (2) existing antennas with two (2) Samsung 64T64RMMU antennas and two (2) existing remote radio heads ("RRHs") with two (2) new RRHs on the existing roof-top towers. Included in Attachment 2 is a set of project plans and the new antennas and RRH specifications.

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to New London's Chief Elected Official and Land Use Officer.

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

1. The proposed modifications will not result in an increase in the height of the existing tower or faux chimney screening structures.

2. The proposed modifications will occur on the roof of the building and will not require the extension of the site boundary.

3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.

4. The installation of Cellco's new antennas and RRHs will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. Far Field Approximation Tables for the modified facility are included in Attachment 3. The modified facility will be capable of providing Cellco's 5G wireless service.

5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.

6. According to the attached Structural Analysis (SA) and Antenna Frame Mount Analysis (MA), the existing building, antenna masts, and antenna mounting devices can support Cellco's proposed modifications. A copy of the SA and MA are included in Attachment 4.

A copy of the parcel map and Property owner information is included in Attachment 5. A Certificate of Mailing verifying that this filing was sent to municipal officials and the property owner is included in Attachment 6.

For the foregoing reasons, Cellco respectfully submits that the proposed modifications to the above-referenced telecommunications facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,

Kenneth C. Baldwin

Enclosures
Copy to:
Michael Passero, New London Mayor
Felix Reyes, New London Director of the Office of Development and Planning
Mitchell College, Property Owner
Aleksey Tyurin

ATTACHMENT 1

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL
Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
www.ct.gov/csc

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

August 31, 2017

Kenneth C. Baldwin, Esq.
Robinson & Cole LLP
280 Trumbull Street
Hartford, CT 06103-3597

RE: **PETITION NO. 1311** - Cellco Partnership d/b/a Verizon Wireless petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed installation of a wireless telecommunications facility on the roof of the existing Yarnall Athletic Center and Bookstore at Mitchell College located at 40 Debiasi Drive, New London, Connecticut.

Dear Attorney Baldwin:

At a public meeting held on August 31, 2017, the Connecticut Siting Council (Council) considered and ruled that the above-referenced proposal would not have a substantial adverse environmental effect, and pursuant to Connecticut General Statutes § 16-50k, would not require a Certificate of Environmental Compatibility and Public Need with the following conditions:

1. Approval of any minor project changes be delegated to Council staff;

2. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed within three years from the date of the mailing of the Council's decision, this decision shall be void, and the facility owner/operator shall dismantle the facility and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's decision shall not be counted in calculating this deadline. Authority to monitor and modify this schedule, as necessary, is delegated to the Executive Director. The facility owner/operator shall provide written notice to the Executive Director of any schedule changes as soon as is practicable;

3. Any request for extension of the time period to fully construct the facility shall be filed with the Council not later than 60 days prior to the expiration date of this decision and shall be served on all parties and intervenors, if applicable, and the City of New London;

4. Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;

5. Any nonfunctioning antenna and associated antenna mounting equipment on this facility owned and operated by the Petitioner shall be removed within 60 days of the date the antenna ceased to function;

6. The facility owner/operator shall remit timely payments associated with annual assessments and invoices submitted by the Council for expenses attributable to the facility under Conn. Gen. Stat. §16-50v;

7. If the facility ceases to provide wireless services for a period of one year the Petitioner shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council within 90 days from the one year period of cessation of service. The Petitioner may submit a written request to the Council for an extension of the 90 day period not later than 60 days prior to the expiration of the 90 day period; and

8. This Declaratory Ruling may be transferred or partially transferred, provided both the facility owner/operator/transferor and the transferee are current with payments to the Council for their respective annual assessments and invoices under Conn. Gen. Stat. §16-50v. The Council shall be notified of such sale and/or transfer and of any change in contact information for the individual or representative responsible for management and operations of the facility within 30 days of the sale and/or transfer. Both the facility owner/operator/transferor and the transferee shall provide the Council with a written agreement as to the entity responsible for any quarterly assessment charges under Conn. Gen. Stat. §16-50v(b)(2) that may be associated with this facility.

This decision is under the exclusive jurisdiction of the Council and is not applicable to any other modification or construction. All work is to be implemented as specified in the petition dated June 21, 2017.

Enclosed for your information is a copy of the staff report on this project.

Very truly yours,

Robert Stein MAB

Robert Stein
Chairman

RS/MAB/RDM/bm

Enclosure: Staff Report dated August 31, 2017

c: The Honorable Michael E. Passero, Mayor, City of New London
Tammy Daugherty, Director of the Office of Development & Planning, City of New London

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL
Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
www.ct.gov/csc

Petition No. 1311

Cellco - Small Cell Facility
Mitchell College, New London

Staff Report
August 31, 2017

On June 22, 2017, the Connecticut Siting Council (Council) received a petition from Cellco Partnership d/b/a Verizon Wireless (Cellco) for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed installation of a small cell telecommunications facility at Mitchell College, 40 Debiasi Drive, New London, Connecticut. The small cell facility would provide 1900 MHz and 2100 MHz service to the surrounding area.

Cellco would install two tower masts on the northern portion of the roof of the Yarnall Building at Mitchell College. Each mast would support 2 antennas and 2 remote radio heads. Each mast would be enclosed in a faux chimney structure extending 10 feet above the building roof, to a height 51.5 feet above grade. Radio and associated equipment would be installed at ground level on an 8.5-foot by 9.5-foot steel platform with a canopy roof. The platform would be located adjacent to the north side of the building and would be enclosed by an eight-foot tall vinyl fence. Cabling would extend from the ground equipment to the antennas along the exterior building wall and along the roof in a cable tray. Power and telephone service would extend from existing service within the building.

The subject property consists of an 18.95-acre parcel located in New London's Institutional Zone. The Yarnall Building is located adjacent to other campus buildings and an athletic field. The visibility impact would be minimal given that the antenna masts are within roof-mounted faux chimney structures designed to match existing building materials. Exterior wall-mounted cables would be painted to match the existing façade. Ground equipment would be concealed behind a vinyl fence.

No wetlands or trees would be impacted by the project. The calculated power density would be 16.4 percent of the applicable limit using a -10 dB off-beam adjustment. The structures would not pose an aviation hazard under Federal Aviation Administration regulations.

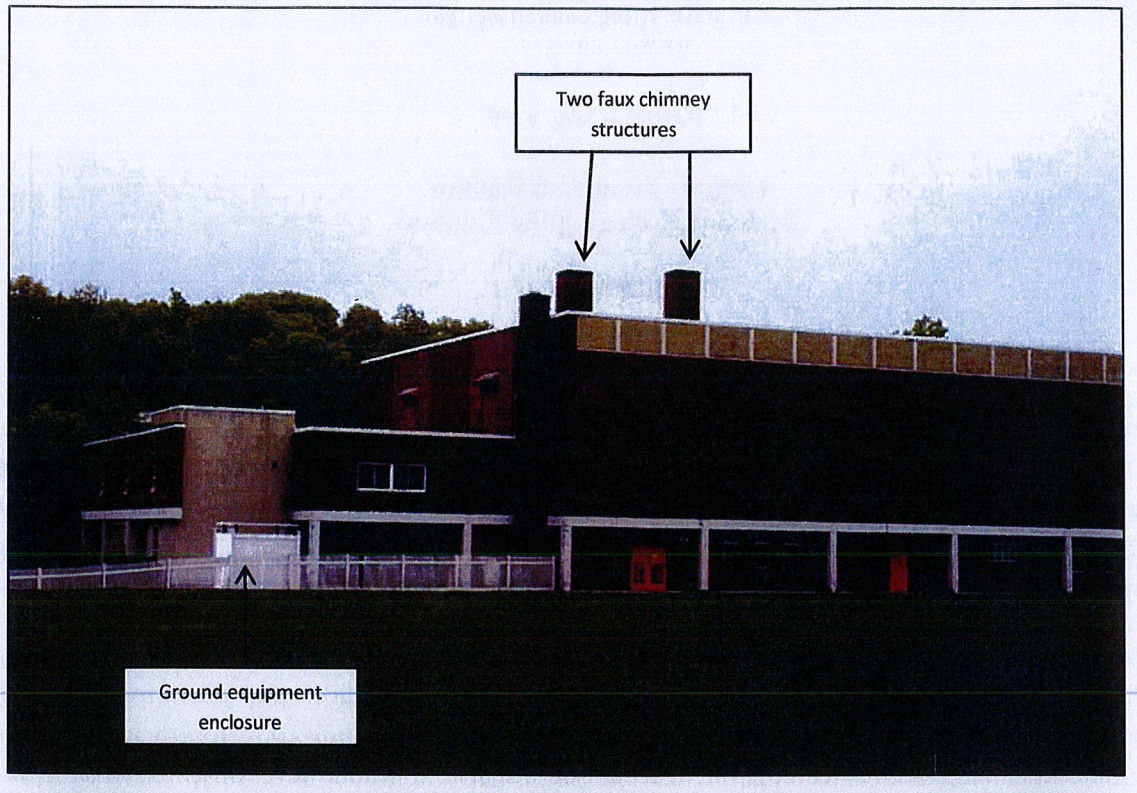
Notice was provided to the City of New London, the property owner, and abutting property owners on or about June 21, 2017. The Council has not received any comments to date.

Cellco contends that this proposed project would not have a substantial adverse environmental impact.

Staff recommends the following condition:

1. Approval of any minor project changes be delegated to Council staff.

Photo-simulation of installation from athletic field north of Yarnall Building



Site Location

ATTACHMENT 2

WIRELESS COMMUNICATIONS FACILITY

SITE NAME:
NEW LONDON SOUTH CT

MITCHELL COLLEGE-YARNELL CTR.
40 DEBIASI DR.
NEW LONDON, CT 06320

ANTENNA MODIFICATION

PROJECT SUMMARY	
SITE NAME:	NEW LONDON SOUTH CT
SITE ADDRESS:	40 DEBIASI DR. NEW LONDON, CT 06320
PROPERTY OWNER:	MITCHELL COLLEGE 437 PEQUOT AVE. NEW LONDON, CT 06320
PARCEL ID:	F21-44-35
COORDINATES:	41° 19' 41.878" N 72° 05' 55.689" W
VERIZON CONSTRUCTION:	WALTER CHARCZYNSKI (860) 306-1806
VERIZON REAL ESTATE:	ALEX TYURIN (860) 550-3195

AERIAL MAP

SHEET INDEX

verizon
WIRELESS COMMUNICATIONS FACILITY
20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

On Air Engineering, LLC
88 Foundry Pond Road
Cold Spring, NY 10516
201-456-4624
onair@optonline.net

LICENSURE

STATE OF CONNECTICUT · DAVID A. WEINPAHL · NO. 22144 · LICENSED PROFESSIONAL ENGINEER

DAVID WEINPAHL, P.E.
CT LIC. NO. 22144

SUBMITTALS

NO	DATE	DESCRIPTION
0	03.04.21	REVIEW

DRAWN BY:	MF
CHECKED BY:	DW

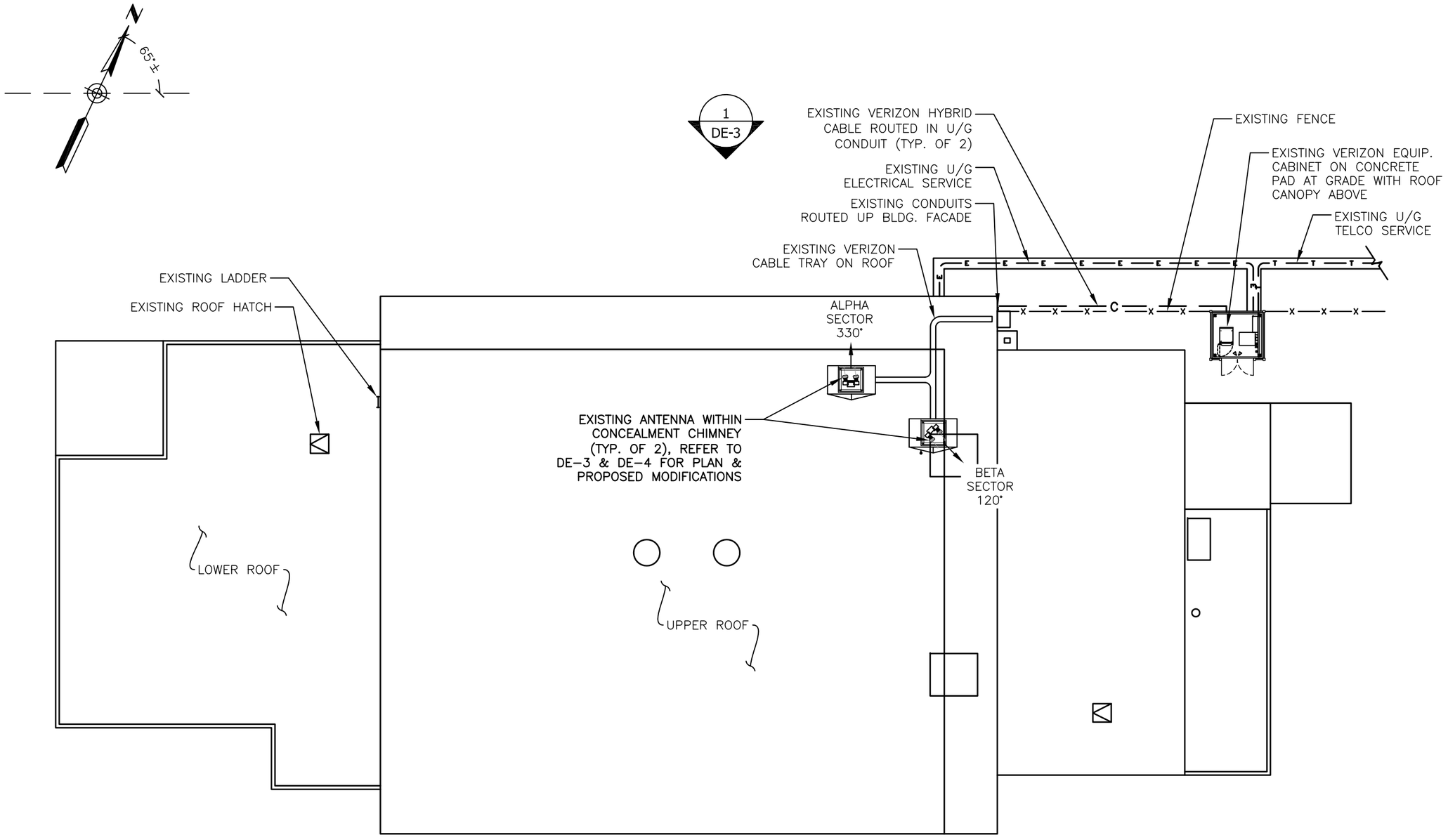
PROJECT NAME:
ANTMO
MT6407
DESIGN EXHIBITS

SITE NAME:
NEW LONDON SOUTH CT

SITE ADDRESS:
MITCHELL COLLEGE
YARNELL CENTER
40 DEBIASI DR.
NEW LONDON, CT 06320

SHEET TITLE:
TITLE SHEET

SHEET NUMBER:
DE-1



1 DE-2 **SITE LAYOUT**
Scale: 1" = 20'

verizon

WIRELESS COMMUNICATIONS FACILITY

20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

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NO	DATE	DESCRIPTION
0	03.04.21	REVIEW

DRAWN BY:	MF
CHECKED BY:	DW

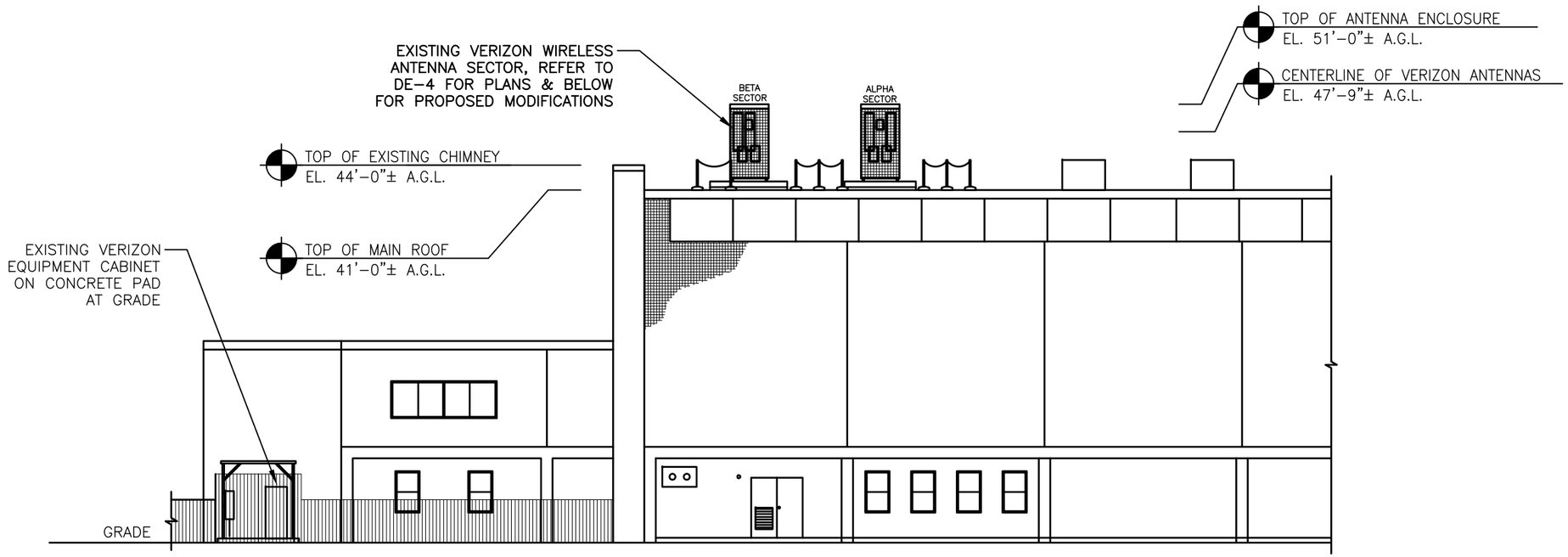
PROJECT NAME:
ANTMO
MT6407
DESIGN EXHIBITS

SITE NAME:
NEW LONDON SOUTH CT

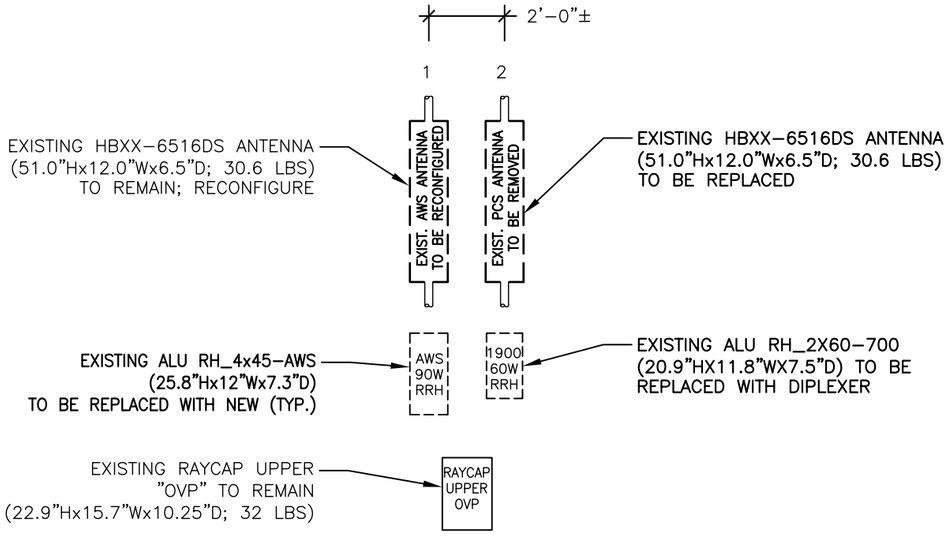
SITE ADDRESS:
MITCHELL COLLEGE
YARNELL CENTER
40 DEBIASI DR.
NEW LONDON, CT 06320

SHEET TITLE:
SITE LAYOUT

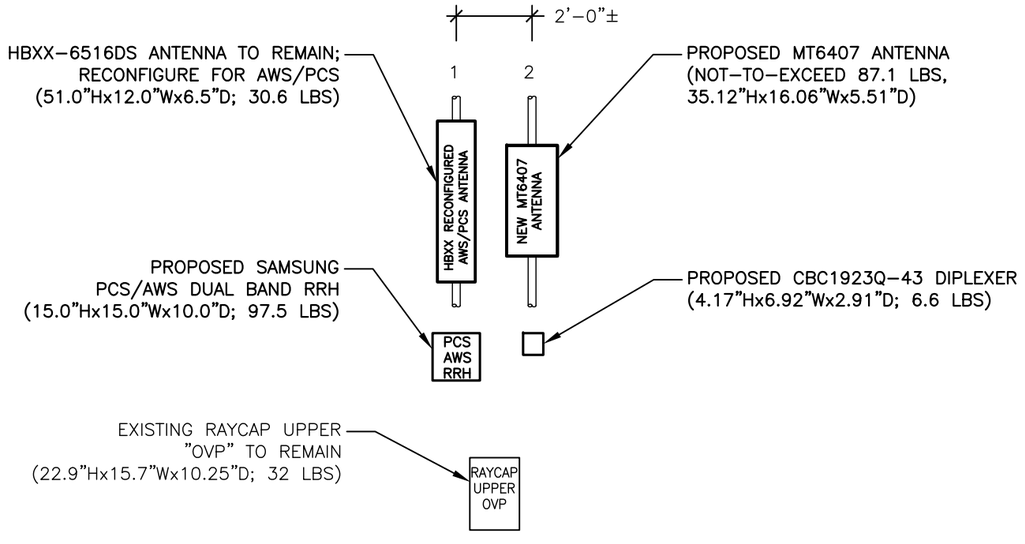
SHEET NUMBER:
DE-2



1 / DE-3 PARTIAL NORTH ELEVATION
Scale: 1" = 15'



SECTOR VIEWED FROM BEHIND
2 / DE-5 ANTENNA ELEVATION - EXISTING (ALPHA/BETA)
Scale: 1/4" = 1'-0"



SECTOR VIEWED FROM BEHIND
3 / DE-5 ANTENNA ELEVATION - PROPOSED (ALPHA/BETA)
Scale: 1/4" = 1'-0"

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WIRELESS COMMUNICATIONS FACILITY

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NO	DATE	DESCRIPTION

DRAWN BY:	MF
CHECKED BY:	DW

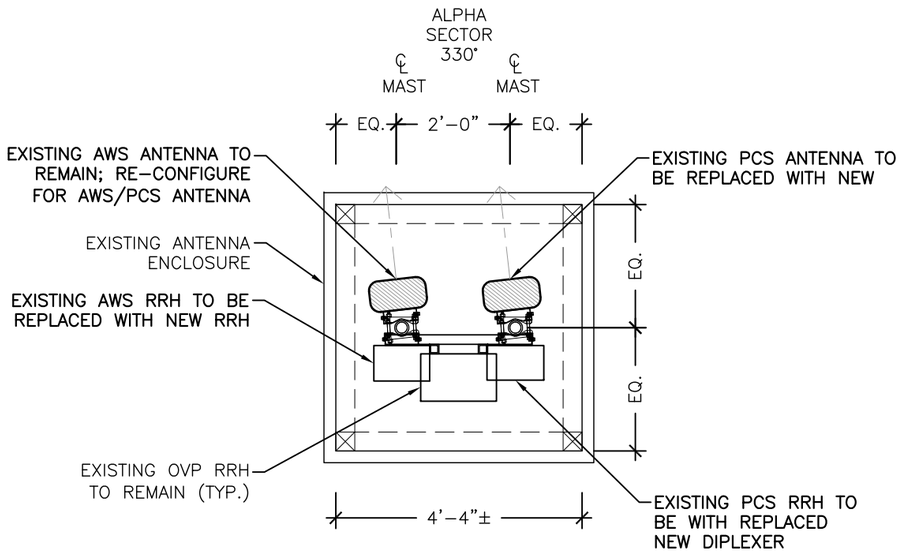
PROJECT NAME:
ANTMO
MT6407
DESIGN EXHIBITS

SITE NAME:
NEW LONDON SOUTH CT

SITE ADDRESS:
MITCHELL COLLEGE
YARNELL CENTER
40 DEBIASI DR.
NEW LONDON, CT 06320

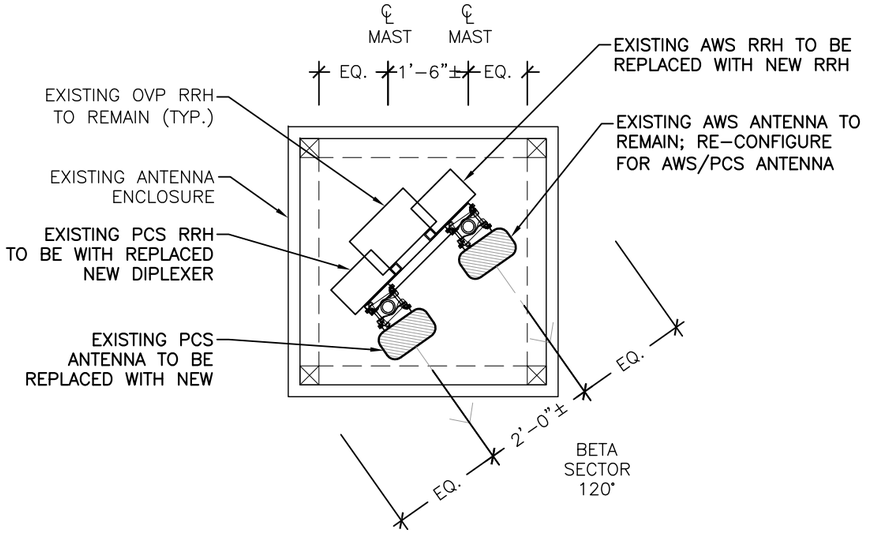
SHEET TITLE:
BUILDING &
ANTENNA
ELEVATIONS

SHEET NUMBER:
DE-3



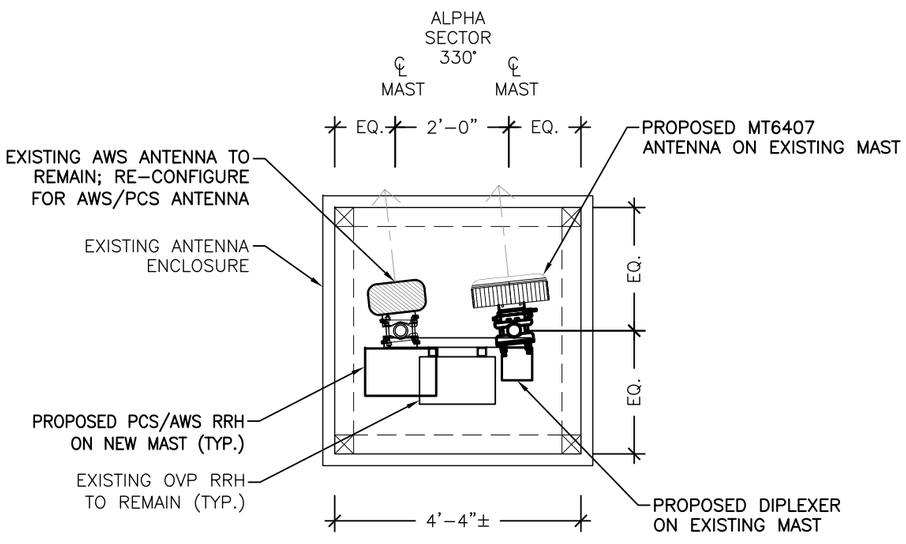
1 DE-5 ALPHA SECTOR PLAN - EXISTING

Scale: 3/8" = 1'-0"



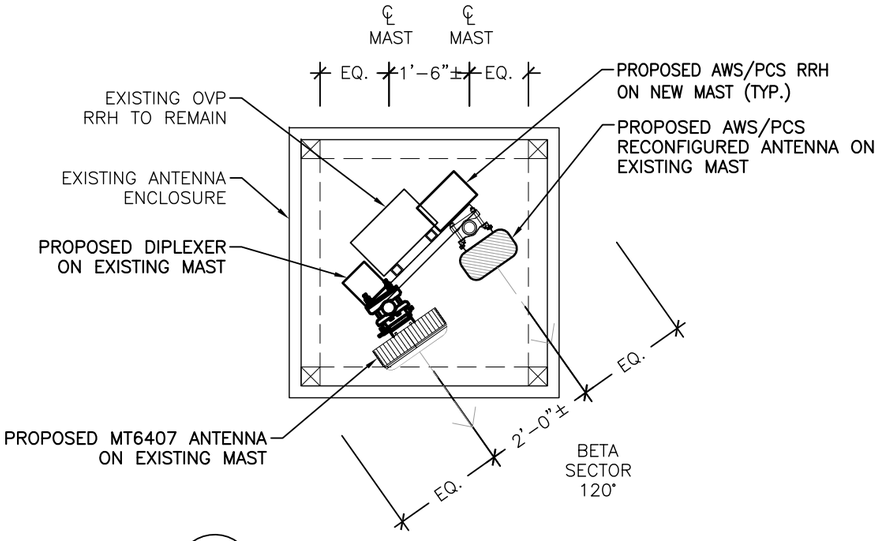
3 DE-5 BETA SECTOR PLAN - EXISTING

Scale: 3/8" = 1'-0"



2 DE-5 ALPHA SECTOR PLAN - PROPOSED

Scale: 3/8" = 1'-0"



4 DE-5 BETA SECTOR PLAN - PROPOSED

Scale: 3/8" = 1'-0"

verizon

WIRELESS COMMUNICATIONS FACILITY

20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

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SUBMITTALS

NO	DATE	DESCRIPTION
0	03.04.21	REVIEW

DRAWN BY:	MF
CHECKED BY:	DW

PROJECT NAME:

ANTMO
MT6407
DESIGN EXHIBITS

SITE NAME:

NEW LONDON SOUTH CT

SITE ADDRESS:

MITCHELL COLLEGE
YARNELL CENTER
40 DEBIASI DR.
NEW LONDON, CT 06320

SHEET TITLE:

ALPHA/ BETA
SECTOR PLANS

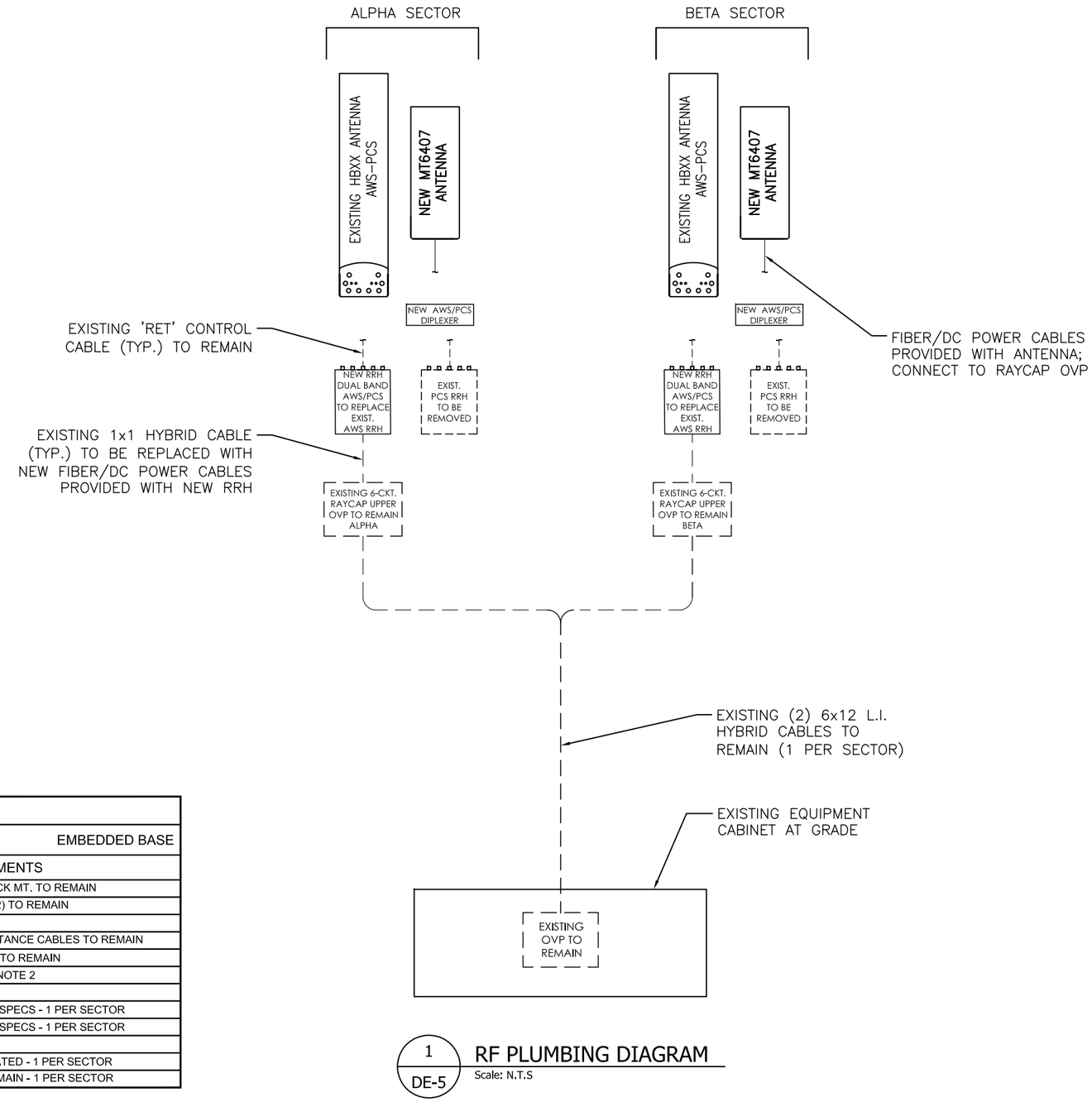
SHEET NUMBER:

DE-4

GENERAL NOTES:

1. CONTRACTOR SHALL REFER TO THE LATEST VERIZON WIRELESS RFDS WHICH MAY INCLUDE ANTENNA SECTOR AZIMUTHS/ANTENNA CHANGES, ETC. THAT ARE REQUIRED AS PART OF THE PROJECT.
2. CONTRACTOR SHALL SECURE ALL CONTROL CABLES IN ACCORDANCE WITH INDUSTRY STANDARDS AND MANUFACTURERS INSTRUCTIONS. EXTERIOR CABLES MAY BE TAPED OR TIE-WRAPPED TO EXISTING SUPPORTS EVERY 4 FT. MAX. FOR HORIZONTAL RUNS. CONTRACTOR MAY USE HOISTING GRIPS AT TOP OF VERTICAL CABLE RUNS WHEN REQUIRED.
3. ALL CABLES SHALL BE ROUTED AND SECURED ON STRUCTURAL MEMBERS ONLY - DO NOT "LOOP" THE CABLES IN MID-AIR BETWEEN ANTENNAS
4. REFER TO RFDS FOR DETAILED PLUMBING DIAGRAM SHOWING ALL JUMPER AND OTHER CABLING CONNECTIONS AT ANTENNAS, RRH's, DIPLEXERS OR OTHER DEVICES.

NOTE: ALL ANTENNAS VIEWED FROM REAR



1 / DE-5 RF PLUMBING DIAGRAM
Scale: N.T.S

BILL OF MATERIALS			
SITE NAME: NEW LONDON SOUTH CT		ANTMO MT6407	EMBEDDED BASE
DESCRIPTION	QTY	LENGTH	COMMENTS
LOWER OVP	-	-	EXISTING (2) RACK MT. TO REMAIN
6-CKT. UPPER OVP	-	-	EXISTING (2) TO REMAIN
6x12 HYBRID CABLE	-	-	EXISTING (2) LOW INDUCTANCE CABLES TO REMAIN
RET CONTROL CABLE	-	-	EXISTING TO REMAIN
1/2" JUMPER CABLE	-	-	SEE NOTE 2
AWS/PCS DUAL BAND RRH	2	-	REFER TO RFDS FOR SPECS - 1 PER SECTOR
AWS/PCS DIPLEXER	2	-	REFER TO RFDS FOR SPECS - 1 PER SECTOR
MT6407 ANTENNA	2	-	SAMSUNG INTEGRATED - 1 PER SECTOR
HBXX ANTENNA - AWS/PCS	-	-	EXISTING (2) TO REMAIN - 1 PER SECTOR

NOTES:
1. ITEMS SHOWN ARE FOR MAJOR DESIGN ELEMENTS ONLY. REFER TO VERIZON WIRELESS RFDS FOR ALL MANUFACTURER PART NUMBERS AND ACCESSORY ITEMS REQUIRED FOR A COMPLETE INSTALLATION.
2. CONTRACTOR SHALL DETERMINE AND PROVIDE ALL REQUIRED PRE-FAB JUMPER QUANTITIES AND LENGTHS, KEEPING ALL LENGTHS TO A MINIMUM.

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MT6407
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SITE NAME:
NEW LONDON SOUTH CT

SITE ADDRESS:
MITCHELL COLLEGE
YARNELL CENTER
40 DEBIASI DR.
NEW LONDON, CT 06320

SHEET TITLE:
RF PLUMBING
DIAGRAM & B.O.M.

SHEET NUMBER:
DE-5

GENERAL CONSTRUCTION NOTES:

1. CONTRACTOR SHALL NOT COMMENCE ANY WORK UNTIL HE OBTAINS, AT HIS OWN EXPENSE, ALL INSURANCE REQUIRED BY *CELLCO PARTNERSHIP d/b/a VERIZON, THE PRO*PERTY OWNER AND/OR PROPERTY MANAGEMENT COMPANY.

2. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS AND ALL LOCAL LAWS AND REGULATIONS, CURRENT EDITIONS.

3. CONTRACTOR SHALL VISIT THE JOB SITE AND FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND MAKE PROVISIONS AS TO THE COST THEREOF. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.

4. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS, ANGLES AND EXISTING CONDITIONS AT THE SITE PRIOR TO FABRICATION AND/OR INSTALLATION OF ANY WORK IN THE CONTRACT AREA AND SUBMIT TO THE ENGINEER ANY DISCREPANCIES FROM THE DRAWINGS.

5. CONTRACTOR IS TO REVIEW ALL DRAWINGS AND SPECIFICATIONS IN THE CONTRACT DOCUMENT SET. CONTRACTOR SHALL COORDINATE ALL WORK SHOWN IN THE SET OF DRAWINGS. CONTRACTOR SHALL PROVIDE A COMPLETE SET OF DRAWINGS TO ALL SUB-CONTRACTORS AND ALL RELATED PARTIES. THE SUB-CONTRACTORS SHALL EXAMINE ALL THE DRAWINGS AND SPECIFICATIONS FOR THE INFORMATION THAT AFFECTS THEIR WORK.

6. CONTRACTOR SHALL PROVIDE A COMPLETE BUILD-OUT WITH ALL FINISHES, STRUCTURAL, MECHANICAL AND ELECTRICAL COMPONENTS AND PROVIDE ALL ITEMS AS SHOWN OR INDICATED ON DRAWINGS OR WRITTEN IN SPECIFICATIONS.

7. CONTRACTOR SHALL FURNISH ALL MATERIAL, LABOR AND EQUIPMENT TO COMPLETE THE WORK AND FURNISH A COMPLETED JOB IN ACCORDANCE WITH LOCAL AND STATE GOVERNING AUTHORITIES AND OTHER AUTHORITIES HAVING LAWFUL JURISDICTION OVER THE WORK.

8. CONTRACTOR SHALL OBTAIN AT HIS OWN EXPENSE ALL PERMITS AND ALL INSPECTIONS REQUIRED FROM FEDERAL AND STATE GOVERNMENTS, COUNTIES, MUNICIPALITIES AND OTHER REGULATORY AGENCIES WHICH MAY BE REQUIRED FOR THE PROJECT.

10. DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK.

11. ALL MATERIAL PROVIDED BY *CELLCO PARTNERSHIP d/b/a VERIZON IS TO BE* REVIEWED BY CONTRACTOR AND ALL APPLICABLE SUB-CONTRACTOR PRIOR TO INSTALLATION. ANY DEFICIENCIES TO PROVIDED MATERIALS SHALL BE BROUGHT TO THE CONSTRUCTION MANAGERS ATTENTION IMMEDIATELY.

12. THE MATERIALS INSTALLED IN THE WORK SHALL MEET THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. NO SUBSTITUTIONS ARE ALLOWED.

13. CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION, FOR SEQUENCES AND PROCEDURES TO BE USED, AND TO ENSURE THE SAFETY OF THE EXISTING BUILDING AND ITS COMPONENT DURING CONSTRUCTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, BRACING, UNDERPINNING, ETC. THAT MAY BE NECESSARY.

14. CONTRACTOR SHALL COORDINATE ALL CIVIL, STRUCTURAL AND ELECTRICAL DRAWINGS FOR THE LOCATION OF ALL OPENINGS, RECESSES, BUILT-IN WORK, ETC.

15. CONTRACTOR SHALL RECEIVE CLARIFICATION IN WRITING AND SHALL RECEIVE IN WRITING AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY ITEMS NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.

16. CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER OF ALL PRODUCTS OR ITEMS NOTED AS "EXISTING" WHICH ARE NOT FOUND TO BE IN THE FIELD.

17. ERECTION SHALL BE DONE IN A WORKMANLIKE MANNER BY COMPETENT EXPERIENCED WORKMEN IN ACCORDANCE WITH APPLICABLE CODES AND THE BEST-ACCEPTED PRACTICE. ALL MEMBERS SHALL BE LAID PLUMB AND TRUE AS INDICATED ON THE DRAWINGS.

18. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE WORK AREA, ADJACENT AREAS, AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT. WORK SHALL CONFORM TO ALL O.S.H.A REQUIREMENTS.

19. CONTRACTOR SHALL COORDINATE HIS WORK AND SCHEDULE HIS ACTIVITIES AND WORKING HOURS IN ACCORDANCE WITH THE REQUIREMENTS OF THE PROPERTY OWNER AND/OR PROPERTY MANAGEMENT COMPANY.

20. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS WORK WITH THE WORK OF OTHERS AS IT MAY RELATE TO RADIO EQUIPMENT, ANTENNAS AND ANY OTHER PORTIONS OF THE WORK.

21. CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY INDICATED OR WHERE LOCAL CODES OR REGULATIONS MAY TAKE PRECEDENCE.

22. CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING SURFACES, EQUIPMENT, IMPROVEMENTS, PIPING, ANTENNA AND ANTENNA CABLES AND REPAIR ANY DAMAGE THAT OCCURS DURING CONSTRUCTION.

23. CONTRACTOR SHALL REPAIR ALL EXISTING SURFACES DAMAGED DURING CONSTRUCTION SUCH THAT THEY MATCH AND BLEND WITH ADJACENT SURFACES.

24. CONTRACTOR SHALL KEEP CONTRACT AREA CLEAN, HAZARD FREE AND DISPOSE OF ALL DEBRIS AND RUBBISH. EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY OF THE OWNER SHALL BE REMOVED. LEAVE PREMISES IN CLEAN CONDITIONS AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL ITEMS UNTIL COMPLETION OF CONSTRUCTION.

25. BEFORE FINAL ACCEPTANCE OF THE WORK, CONTRACTOR SHALL REMOVE ALL EQUIPMENT, TEMPORARY WORKS, UNUSED AND USELESS MATERIALS, RUBBISH AND TEMPORARY STRUCTURES.

verizon

WIRELESS COMMUNICATIONS FACILITY

20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

On Air Engineering, LLC
88 Foundry Pond Road
Cold Spring, NY 10516
201-456-4624
onair@optonline.net

LICENSURE

STATE OF CONNECTICUT
DAVID A. WEINPAHL
NO. 22144
LICENSED
LICENSED PROFESSIONAL ENGINEER

DAVID WEINPAHL, P.E.
CT LIC. NO. 22144

SUBMITTALS

NO	DATE	DESCRIPTION
0	03.04.21	REVIEW

DRAWN BY:	MF
CHECKED BY:	DW

PROJECT NAME:
ANTMO
MT6407
DESIGN EXHIBITS

SITE NAME:
NEW LONDON SOUTH CT

SITE ADDRESS:
MITCHELL COLLEGE
YARNELL CENTER
40 DEBIASI DR.
NEW LONDON, CT 06320

SHEET TITLE:
GENERAL CONSTRUCTION NOTES

SHEET NUMBER:
DE-6

SAMSUNG

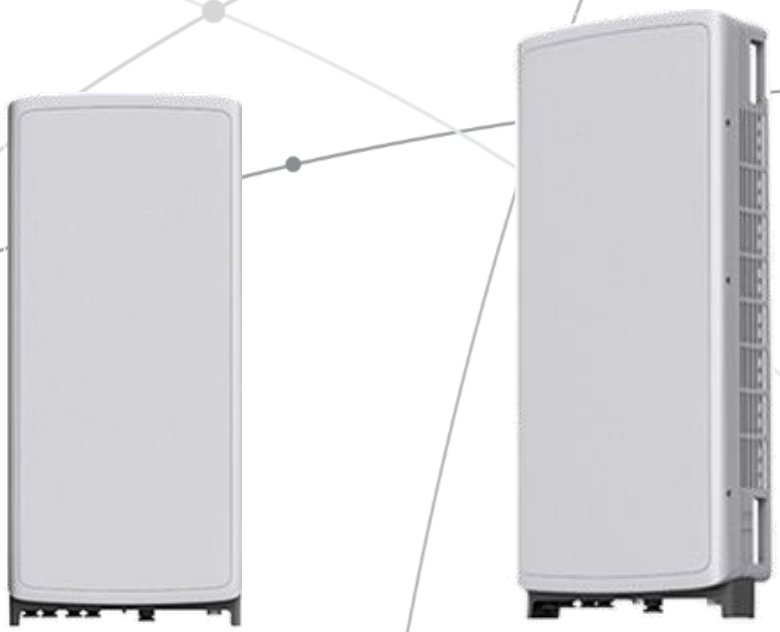
SAMSUNG

C-Band 64T64R Massive MIMO Radio

for High Capacity and Wide Coverage

Samsung C-Band 64T64R Massive MIMO Radio enables mobile operators to increase coverage range, boost data speeds and ultimately offer enriched 5G experiences to users in the U.S..

Model Code : MT6407-77A

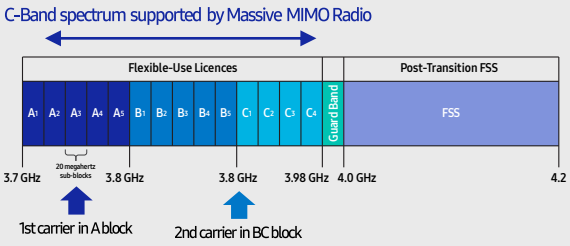


Points of Differentiation

Wide Bandwidth

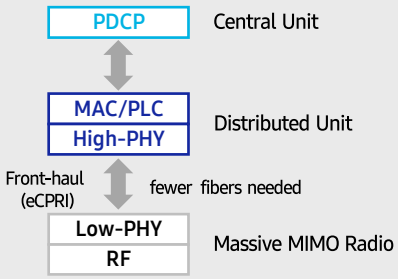
With capability to support up to 2 CC carrier configuration, Samsung C-Band massive MIMO Radio supports 200 MHz bandwidth in the C-Band spectrum.

Samsung C-Band massive MIMO Radio covers the entire C-Band 280 MHz spectrum, so it can meet the operator's needs in current A block and future B/C blocks



Future Proof Product

Samsung C-Band 64T64R Massive MIMO radio supports not only CPRI but also eCPRI as front-haul interface.
It enables operators can cut down on OPEX/CAPEX by reducing front-haul bandwidth through low layer split and using ethernet based higher efficient line.



Enhanced Performance

C-Band massive MIMO Radio creates sharp beams and extends networks' coverage on the critical mid-band spectrum using a large number of antenna elements and high output power to boost data speeds.

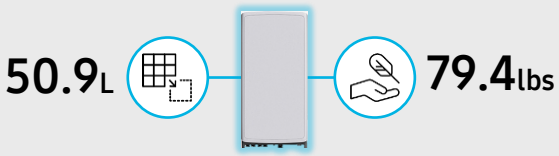
This helps operators reduce their CAPEX as they now need less products to cover the same area than before.

Furthermore, as C-Band massive MIMO Radio supports MU-MIMO(Multi-user MIMO) , it enables to increase user throughput by minimizing interference.

Well Matched Design

Samsung C-Band Massive MIMO radio utilizes 64 antennas, supports up to 280MHz bandwidth, and delivers a 200W output power. despite the above advanced performance, the Radio has a compact size of 50.9L and 79.4lbs. This makes it easy to install the Radio.

It is designed to look solid and compact, with a low profile appearance so that, when installed, harmonizes well with the surrounding environment..



Technical Specifications

Item	Specification
Tech	NR
Band	n77
Frequency Band	3700 - 3980 MHz
EIRP	78.5dBm (53.0 dBm+25.5 dBi)
IBW/OBW	280 MHz / 200 MHz
Installation	Pole/Wall
Size/ Weight	16.06 x 35.06 x 5.51 inch (50.86L)/ 79.4 lbs

SAMSUNG

About Samsung Electronics Co., Ltd.

Samsung inspires the world and shapes the future with transformative ideas and technologies. The company is redefining the worlds of TVs, smartphones, wearable devices, tablets, digital appliances, network systems, and memory, system LSI, foundry and LED solutions.

129 Samsung-ro, Yeongtong-gu, Suwon-si Gyeonggi-do, Korea

SAMSUNG

Dual-Band Radio Unit
AWS/PCS (B66/B2)
RFV01U-D1A

Samsung's RFV01U-D1A is a compact remote Radio Unit (RU) designed for deployments that require flexibility in installation and rapid onlining, without compromising on coverage, capacity or operational expenses.

The RFV01U-D1A RU targets dual-band support across Band 66 (AWS) and Band 2 (PCS), making it an ideal product for broad coverage footprints across multiple common mid-range frequencies.

The RU handles all Radio Frequency (RF) processing in a single, compact unit, and is designed to interface via CPRI with Samsung's CDU baseband offerings, in both distributed- and central-RAN configurations.

In addition to its minimal footprint and ease of installation, the RU is also designed to reduce cost of ownership through its integrated spectrum analyzer, which allows for remote RF monitoring, greatly reducing the need for on-site maintenance visits.

Features and Benefits

- Dual-band support for broad frequency coverage
- Minimal footprint reduces site costs
- Rapid, easy installation
- Flexibly deployable in any location
- Remote RF monitoring capability
- Convection cooled, silent operation
- Built-in Broadcast Auxiliary Services (BAS) filter ensures compliant AWS operation without impacting footprint

Key Technical Specifications

Duplex Type: FDD
Operating Frequencies:
    B66: DL(2,110-2,180MHz)/UL(1,710-1,780MHz)
    B2: DL(1,930-1,990MHz)/UL(1,850-1,910MHz)
Instantaneous Bandwidth:
    70MHz(B66) + 60MHz(B2)
RF Chain: 4T4R/2T4R/2T2R
Output Power: Total 320W
DU-RU Interface: CPRI (10Gbps)
Dimensions: 380 x 380 x 255mm (36.8L)
Weight: 38.3kg
Input Power: -48V DC
Operating Temp.: -40 - 55°(w/o solar load)
Cooling: Natural convection

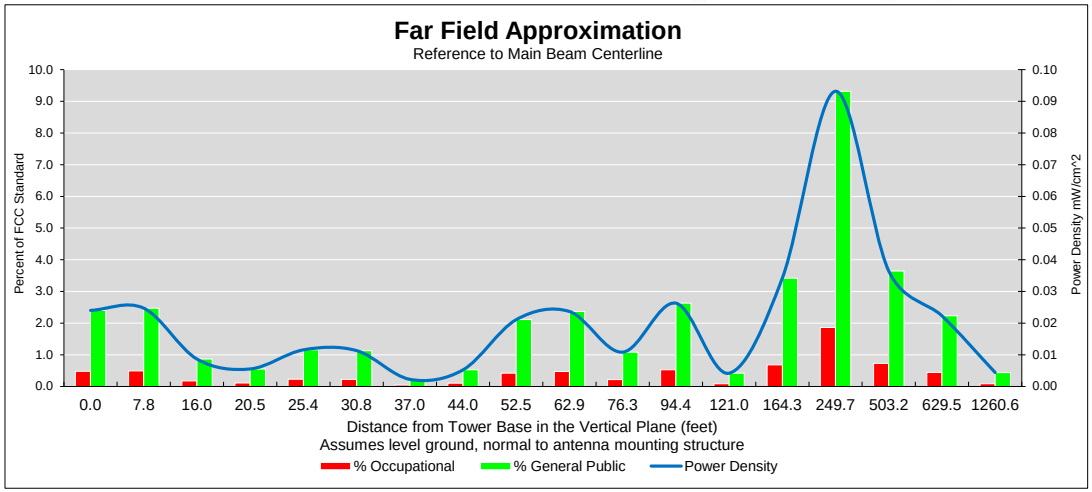
ATTACHMENT 3

Far Field Approximation
with downtilt variation

Estimated Radiated Emission
Single Emitter Far Field Model
Dipole/Wire/Yagi Antenna Types

Location:	**New London South CT**
Site #:	2-0435
Date:	06/02/21
Name:	Wesley Stevens
File Name:	New London South CT - FF Power

Antenna Type:	**VZ-MT6407-77A**
Operating Freq. (MHz):	**3730**
Antenna Height (ft):	**47.0**
Antenna Gain (dBi):	**25.5**
Downtilt (degrees):	**0.0**
Feedline Loss (dB):	**0.0**
Tx Power (W):	**30.2**
No. of Channels:	**4**



Calc Angle	90.0	80.0	70.0	65.0	60.0	55.0	50.0	45.0	40.0	35.0	30.0	25.0	20.0	15.0	10.0	5.0	4.0	2.0
Solve for r, dx to antenna	44.0	44.7	46.8	48.6	50.8	53.7	57.5	62.3	68.5	76.7	88.0	104.2	128.7	170.1	253.5	505.1	631.1	1261.4
Distance from Antenna Structure Base in Horizontal plane	0.0	7.8	16.0	20.5	25.4	30.8	37.0	44.0	52.5	62.9	76.3	94.4	121.0	164.3	249.7	503.2	629.5	1260.6
Angle from Main Beam (reference to horizontal plane)	90.0	80.0	70.0	65.0	60.0	55.0	50.0	45.0	40.0	35.0	30.0	25.0	20.0	15.0	10.0	5.0	4.0	2.0
dB down from centerline (referenced to centerline)	23.06	22.8	26.95	28.58	24.98	24.59	31	26.65	19.78	18.29	20.49	15.18	21.32	9.78	1.96	0.05	0.25	1.29
Reflection Coefficient (1 to 4, 2.56 typical)	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56
Power Density (mW/cm^2)	0.02	0.02	0.01	0.01	0.01	0.01	0.00	0.01	0.02	0.02	0.01	0.03	0.00	0.03	0.09	0.04	0.02	0.00
Percent of Occupational Standard	0.48	0.49	0.17	0.11	0.23	0.23	0.05	0.10	0.42	0.47	0.22	0.53	0.08	0.68	1.86	0.73	0.45	0.09
Percent of General Population Standard	2.40	2.47	0.87	0.55	1.16	1.13	0.23	0.52	2.11	2.37	1.08	2.63	0.42	3.42	9.32	3.64	2.23	0.44

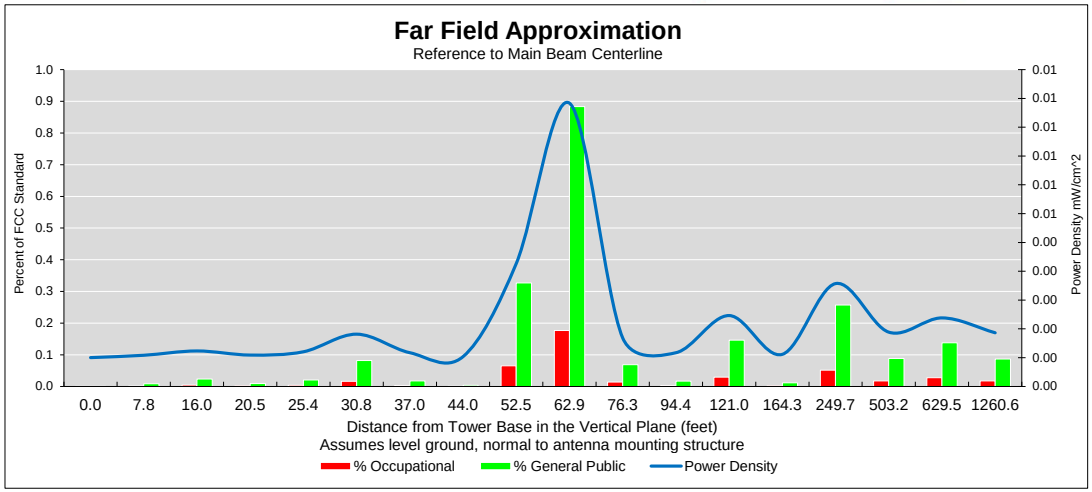
Far Field Approximation
with downtilt variation

Estimated Radiated Emission
Single Emitter Far Field Model
Dipole/Wire/Yagi Antenna Types

verizonwireless

Location:	**New London South CT**
Site #:	2-0435
Date:	06/02/21
Name:	Wesley Stevens
File Name:	New London South CT - FF Power

Antenna Type:	**HBXX-6516DS-A2M**
Operating Freq. (MHz):	**1978**
Antenna Height (ft):	**47.0**
Antenna Gain (dBi):	**17.1**
Downtilt (degrees):	**0.0**
Feedline Loss (dB):	**0.0**
Tx Power (W):	**40.0**
No. of Channels:	**4**



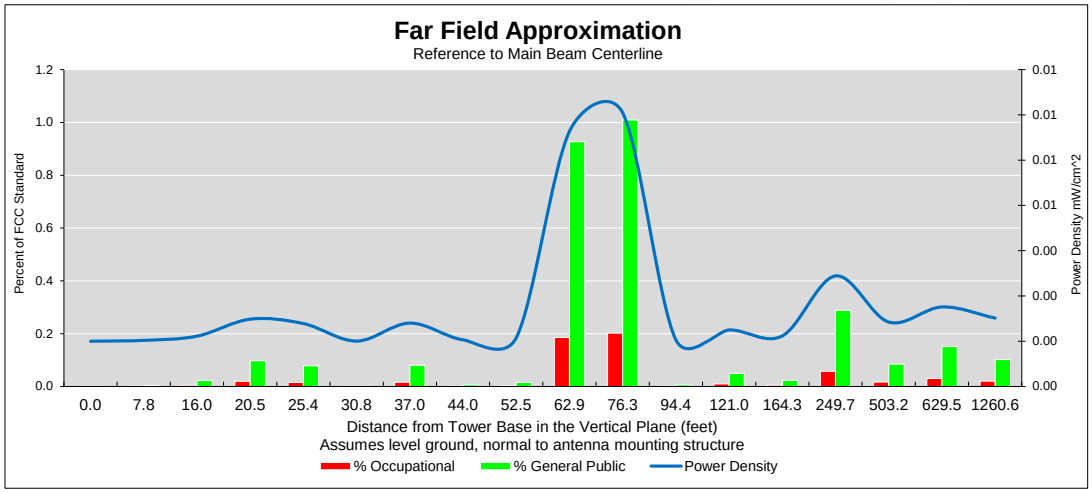
Calc Angle	90.0	80.0	70.0	65.0	60.0	55.0	50.0	45.0	40.0	35.0	30.0	25.0	20.0	15.0	10.0	5.0	4.0	2.0
Solve for r, dx to antenna	44.0	44.7	46.8	48.6	50.8	53.7	57.5	62.3	68.5	76.7	88.0	104.2	128.7	170.1	253.5	505.1	631.1	1261.4
Distance from Antenna Structure Base in Horizontal plane	0.0	7.8	16.0	20.5	25.4	30.8	37.0	44.0	52.5	62.9	76.3	94.4	121.0	164.3	249.7	503.2	629.5	1260.6
Angle from Main Beam (reference to horizontal plane)	90.0	80.0	70.0	65.0	60.0	55.0	50.0	45.0	40.0	35.0	30.0	25.0	20.0	15.0	10.0	5.0	4.0	2.0
dB down from centerline (referenced to centerline)	55.98	40.3	35.43	39.23	35.29	28.8	34.96	41.07	20.67	15.36	25.27	29.81	18.68	27.25	10.34	8.98	5.12	1.14
Reflection Coefficient (1 to 4, 2.56 typical)	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56
Power Density (mW/cm^2)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Percent of Occupational Standard	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.07	0.18	0.01	0.00	0.03	0.00	0.05	0.02	0.03	0.02
Percent of General Population Standard	0.00	0.01	0.02	0.01	0.02	0.08	0.02	0.00	0.33	0.88	0.07	0.02	0.15	0.01	0.26	0.09	0.14	0.09

Far Field Approximation
with downtilt variation

Estimated Radiated Emission
Single Emitter Far Field Model
Dipole/Wire/Yagi Antenna Types

Location:	**New London South CT**
Site #:	2-0435
Date:	06/02/21
Name:	Wesley Stevens
File Name:	New London South CT - FF Power

Antenna Type:	**HBXX-6516DS-A2M**
Operating Freq. (MHz):	**2120**
Antenna Height (ft):	**47.0**
Antenna Gain (dBi):	**17.7**
Downtilt (degrees):	**0.0**
Feedline Loss (dB):	**0.0**
Tx Power (W):	**40.0**
No. of Channels:	**4**



Calc Angle	90.0	80.0	70.0	65.0	60.0	55.0	50.0	45.0	40.0	35.0	30.0	25.0	20.0	15.0	10.0	5.0	4.0	2.0
Solve for r, dx to antenna	44.0	44.7	46.8	48.6	50.8	53.7	57.5	62.3	68.5	76.7	88.0	104.2	128.7	170.1	253.5	505.1	631.1	1261.4
Distance from Antenna Structure Base in Horizontal plane	0.0	7.8	16.0	20.5	25.4	30.8	37.0	44.0	52.5	62.9	76.3	94.4	121.0	164.3	249.7	503.2	629.5	1260.6
Angle from Main Beam (reference to horizontal plane)	90.0	80.0	70.0	65.0	60.0	55.0	50.0	45.0	40.0	35.0	30.0	25.0	20.0	15.0	10.0	5.0	4.0	2.0
dB down from centerline (referenced to centerline)	68.51	44.35	36.28	29.54	30.11	50.8	28.93	39.38	34.62	15.78	14.22	35.19	23.99	24.84	10.47	9.81	5.35	1.04
Reflection Coefficient (1 to 4, 2.56 typical)	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56
Power Density (mW/cm^2)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Percent of Occupational Standard	0.00	0.00	0.00	0.02	0.02	0.00	0.02	0.00	0.00	0.19	0.20	0.00	0.01	0.00	0.06	0.02	0.03	0.02
Percent of General Population Standard	0.00	0.00	0.02	0.10	0.08	0.00	0.08	0.01	0.02	0.93	1.01	0.01	0.05	0.02	0.29	0.08	0.15	0.10

ATTACHMENT 4

STRUCTURAL ANALYSIS REPORT

FOR

SITE NAME: NEW LONDON SOUTH CT
MITCHELL COLLEGE-YARNELL CTR.
40 DEBIASI DR.
NEW LONDON, CT 06320

PREPARED FOR:

verizon

WIRELESS COMMUNICATIONS FACILITY
20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

On Air Engineering, LLC
88 FOUNDRY POND ROAD
COLD SPRING, NY 10516
ONAIR@OPTONLINE.NET
201-456-4624

PBA ENGINEERING, P.C
Structural Engineers

12 KULICK ROAD
FAIRFIELD, NEW JERSEY 07004-3363
PHONE: (973) 276-1700
FAX: (973) 276-9766

PROJECT NO. N-572
DATE: 3/24/2021

Paul C. Beck, P.E.
Connecticut Professional Engineer
License No: 12949

CONTENTS

1. PURPOSE

The purpose of this analysis is to determine whether the existing steel framing and structure located at *40 De Biasi Drive, New London, CT 06320* is adequate to support the proposed modifications to Verizon's antennas and equipment. "Mounting Analysis" (MA) is in a separate report.

2. REFERENCES

1. Verizon CD's by On Air Engineering, LLC, dated: March 04, 2021
2. Photographs and antenna frame supports
3. Original CD's by All-Points Technology Corporation, P.C., dated: February 19, 2018
4. Structural letter by BL Companies dated 02-20-2017.

3. BUILDING CODES

1. 2018 Connecticut State Building Code
2. 2015 International Building Code
3. ASCE/SEI 7-16 (Minimum Design Loads for Buildings and Other Structures)
4. Standard Load Table for Deep Long-span Steel Joists, DLH- Series, dated February 1, 1970

4. EXISTING STRUCTURE & FIELD OBSERVATIONS

Verizon has a 2-sector antenna configuration with (2) rooftop chimney concealment enclosures supported on W8 dunnage frames. Antennas and accessory equipment are mounted to steel masts pipes within each enclosure. Each enclosure is approximately 10' tall and 4.5' square and is supported by two 60DLH14 long-span roof joists. The roof joists span 100' and are spaced at 7'-8", as shown on the original drawings of the fitness center.

5. PROPOSED VERIZON ANTENNA/EQUIPMENT CONFIGURATION (TYP. EA. SECTOR)

a. (1) MT6407-77A Integrated Antenna
b. (1) HBXX Antenna
c. (1) AWS/PCS Diplexer
d. (1) Dual Band RRH
e. (1) Raycap 6-ckt. OVP

6. RESULTS

A structural analysis was completed on the building roof framing. Our analysis was performed based on the wind, equipment, dead, and live loads. The max. support reaction will be 13.8 kips due to the existing and proposed equipment, and the support reaction is 21 kips in case we apply 420 lb/ft on the roof joist – this load from the Standard Load Table for Deep Long-span Steel Joists, DLH-Series 1970 is the maximum load can the 60DLH14 joist carry– so it's at 65.7% for the shear stresses, and at 94% for the bending moment which is adequate. See Appendix (A) for the calculations.

7. CONCLUSION

The steel joists are adequate and safe to support the existing and proposed Verizon equipment.

This analysis is based on the information provided to our office and is assumed to correctly depict the existing condition. The existing roof and foundation are assumed to be installed properly and in a professional manner.

If you have any questions concerning the items contained within this report, please do not hesitate to contact our office.

Sincerely,
PBA ENGINEERING, P.C.

Paul C. Beck, P.E.
Connecticut Professional Engineer
License No: 12949

PCB/mf

L:\WP61\LTR\CELLULAR JOBS\N-572 Structural Analysis Report, Verizon - 40 De Biasi Drive, New London, CT.docx

APPENDIX - A

– From 2018 Connecticut State Building Code

(APPENDIX N) MUNICIPALITY - SPECIFIC STRUCTURAL DESIGN PARAMETERS												
				Wind Design Parameters								
Municipality	Ground Snow Load (psf)	MCE Spectral Accelerations (%g)		Ultimate Design Wind Speeds, V_{ult} (mph)			Nominal Design Wind Speeds, V_{asd} (mph)			Wind-Borne Debris Regions[1]		Hurricane-Prone Regions
		S_s	S_1	Risk Cat.I	Risk Cat.II	Risk Cat III-IV	Risk Cat. I	Risk Cat. II	Risk Cat. III-IV	Risk Cat. II & III except Occup I-2	Risk Cat III Occup I-2 & Risk Cat. IV	
Montville	30	0.165	0.059	125	135	145	97	105	112		Type A	Yes
Morris	35	0.187	0.065	110	120	125	85	93	97			Yes
Naugatuck	30	0.190	0.064	110	125	135	85	97	105			Yes
New Britain	30	0.183	0.064	115	125	135	89	97	105			Yes
New Canaan	30	0.240	0.068	110	120	130	85	93	101			Yes
New Fairfield	35	0.212	0.067	105	115	125	81	89	97			
New Hartford	40	0.180	0.065	110	120	130	85	93	101			Yes
New Haven	30	0.186	0.062	115	125	135	89	97	105		Type C	Yes
Newington	30	0.182	0.064	115	125	135	89	97	105			Yes
New London	30	0.161	0.058	125	135	145	97	105	112	Type B	Type A	Yes
New Milford	35	0.198	0.066	105	115	125	81	89	97			
Newtown	30	0.208	0.066	110	120	130	85	93	101			Yes
Norfolk	40	0.175	0.065	105	115	125	81	89	97			
North Branford	30	0.179	0.061	120	130	140	93	101	108			Yes
North Canaan	40	0.173	0.065	105	115	120	81	89	93			
North Haven	30	0.184	0.062	115	125	135	89	97	105			Yes
North Stonington	30	0.163	0.059	125	135	145	97	105	112		Type A	Yes
Norwalk	30	0.232	0.067	110	120	130	85	93	101			Yes
Norwich	30	0.168	0.060	125	135	145	97	105	112		Type A	Yes
Old Lyme	30	0.164	0.059	125	135	145	97	105	112	Type B	Type A	Yes
Old Saybrook	30	0.164	0.059	125	135	145	97	105	112	Type B	Type A	Yes
Orange	30	0.192	0.063	115	125	135	89	97	105			Yes
Oxford	30	0.196	0.064	110	125	130	85	97	101			Yes
Plainfield	35	0.170	0.061	125	135	145	97	105	112		Type A	Yes
Plainville	35	0.184	0.064	115	125	135	89	97	105			Yes
Plymouth	35	0.186	0.064	110	120	130	85	93	101			Yes
Pomfret	40	0.172	0.063	120	130	140	93	101	108			Yes
Portland	30	0.180	0.063	115	130	135	89	101	105			Yes
Preston	30	0.167	0.060	125	135	145	97	105	112		Type A	Yes
Prospect	30	0.188	0.064	115	125	135	89	97	105			Yes
Putnam	40	0.172	0.063	120	130	140	93	101	108			Yes
Redding	30	0.220	0.067	110	120	130	85	93	101			Yes
Ridgefield	30	0.230	0.068	110	120	125	85	93	97			Yes
Rocky Hill	30	0.181	0.063	115	125	135	89	97	105			Yes
Roxbury	35	0.197	0.065	110	120	125	85	93	97			Yes
Salem	30	0.170	0.060	120	135	140	93	105	108		Type A	Yes
Salisbury	40	0.173	0.065	105	115	120	81	89	93			
Scotland	30	0.172	0.061	120	130	140	93	101	108			Yes
Seymour	30	0.194	0.064	115	125	135	89	97	105			Yes
Sharon	40	0.179	0.065	105	115	120	81	89	93			
Shelton	30	0.199	0.064	115	125	135	89	97	105			Yes
Sherman	35	0.202	0.066	105	115	120	81	89	93			

Gust Factor Calculations

Gust Factor Category I Rigid Structures - Simplified Method

Gust1:	For Rigid Structures (Nat. Freq.>1 Hz) use 0.85	=	0.85

Gust Factor Category II Rigid Structures - Complete Analysis

Zm:	0.6*Ht	=	15.00 ft
lzm:	Cc*(33/Zm)^0.167	=	0.23
Lzm:	l*(Zm/33)^Epsilon	=	427.06 ft
Q:	(1/(1+0.63*((B+Ht)/Lzm)^0.63))^0.5	=	0.92
Gust2:	0.925*((1+1.7*lzm*3.4*Q)/(1+1.7*3.4*lzm))	=	0.88

Gust Factor Summary

Not a Flexible Structure use the Lessor of Gust1 or Gust2		=	0.85

Design Wind Pressure - Other Structures

Wind On Chimneys, Tanks, Rooftop Equip. & Similar Structures per Figure 29.5-2:

Elev ft	Kz	Kzt	Kd	qz psf	Pres psf
51.10	1.10	1.00	0.90	16.747	14.235

Top El ft	Btm El ft	Width ft	Type	Cf psf	Addl ft	Tot Wid ft	Shear Kip	Moment K-ft
51.10	41.10	4.501	1.320	.000	5.942		0.8	4.2

Notes:

- Top El = Top elevation of element under consideration relative to grade.
- Btm El = Top elevation of element under consideration relative to grade.
- Width = Dia of circular cross-section & least horizontal dim of square, hexagonal or octagonal cross section.
- Type = (1)Square-Wind on Face, (2)Square-Wind Along Diagonal, (3)Hexag. or Octag. (4)Round-Moderately Smooth, (5)Round-Rough, (6)Round-Very Rough
- Cf = Shape factor per Figure 6-21 based upon H/D ratio and Type selected.
- Addl = Additional Area (Piping, Ladders, platforms, etc..), Cf=1.0 is assumed.
- Tot Wid = Total Wind Width: Cf * Width + Addl
- Shear = Shear @ Btm: Press * Tot Wid + Shear(top)
- Moment = Mom @ Btm: Mom(Top)+Shear(Top)*(Top El-Btm El)+Shear(Btm)*(Top El-Btm El)/2

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and then using the "Printing &
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Project Title:
Engineer:
Project ID:
Project Descr:

Printed: 16 MAR 2021, 12:24PM

Steel Beam

File: Stresses on the Roof Joists.ec6

Lic. # : KW-06000304

PBA ENGINEERING, P.C.

DESCRIPTION: Stresses on the Beta 60DLH14 Roof joist

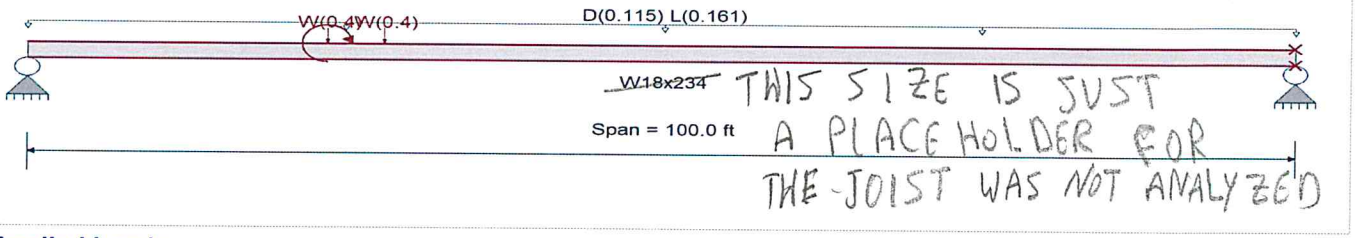
CODE REFERENCES

Calculations per AISC 360-10, IBC 2012, CBC 2013, ASCE 7-10
Load Combination Set : IBC 2012

Material Properties

Analysis Method : Load Resistance Factor Design
Beam Bracing : Beam is Fully Braced against lateral-torsional buckling
Bending Axis : Major Axis Bending

Fy : Steel Yield : 50.0 ksi
E: Modulus : 29,000.0 ksi



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight NOT internally calculated and added
Load(s) for Span Number 1
Moment : W = 4.20 k-ft, Loc = 23.50 ft in span, (Wind Moment on the Enclosure)

Point Load : W = 0.40 k @ 23.50 ft, (Wind Load on the Enclosure)

Uniform Load : D = 0.1150, L = 0.1610 k/ft, Tributary Width = 1.0 ft, (Roof Loads)

Point Load : W = 0.40 k @ 28.0 ft, (Wind Load on the Enclosure)

DESIGN SUMMARY

0.94

Design OK

Maximum Bending Stress Ratio =	~~0.240~~ : 1	Maximum Shear Stress Ratio =	~~0.027~~ : 1
Section used for this span	~~W18x234~~	Section used for this span	~~W18x234~~
Mu : Applied	494.500 k-ft	Vu : Applied	19.780 k
~~Mn * Phi / Allowable~~	~~2,058.750 k-ft~~	Vn * Phi : Allowable	734.28 k
Load Combination	+1.20D+1.60L	Load Combination	+1.20D+1.60L
Location of maximum on span	50.000 ft	Location of maximum on span	0.000 ft
Span # where maximum occurs	Span # 1	Span # where maximum occurs	Span # 1

0.65

$M_{wall} = \frac{0.42 * 100^2}{8} = 525$ k-ft

Maximum Deflection

Max Downward Transient Deflection	2.559 in	Ratio =	468 >=360
Max Upward Transient Deflection	0.000 in	Ratio =	0 <360
Max Downward Total Deflection	4.390 in	Ratio =	273 >=240.
Max Upward Total Deflection	0.000 in	Ratio =	0 <240.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Max Stress Ratios M	Max Stress Ratios V	Summary of Moment Values max Mu +	max Mu -	Mu Max	Mnx	Phi*Mnx	Cb	Rm	Summary of Shear Values VuMax	Vnx	Phi*Vnx
+1.40D													
Dsgn. L = 100.00 ft	1	0.098	0.011	201.25		201.25	2,287.50	2,058.75	1.00	1.00	8.05	734.28	734.28
+1.20D+1.60L													
Dsgn. L = 100.00 ft	1	0.240	0.027	494.50		494.50	2,287.50	2,058.75	1.00	1.00	19.78	734.28	734.28
+1.20D+0.50L													
Dsgn. L = 100.00 ft	1	0.133	0.015	273.13		273.13	2,287.50	2,058.75	1.00	1.00	10.93	734.28	734.28
+1.20D+0.50W													
Dsgn. L = 100.00 ft	1	0.087	0.010	178.76		178.76	2,287.50	2,058.75	1.00	1.00	7.18	734.28	734.28
+1.20D+0.50L+W													
Dsgn. L = 100.00 ft	1	0.139	0.016	285.67		285.67	2,287.50	2,058.75	1.00	1.00	11.48	734.28	734.28
+0.90D+W													
Dsgn. L = 100.00 ft	1	0.069	0.008	142.07		142.07	2,287.50	2,058.75	1.00	1.00	5.73	734.28	734.28
+0.90D													
Dsgn. L = 100.00 ft	1	0.063	0.007	129.38		129.38	2,287.50	2,058.75	1.00	1.00	5.18	734.28	734.28

Steel Beam

DESCRIPTION: Stresses on the Beta 60DLH14 Roof joist

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+L	1	4.3901	50.286		0.0000	0.000

Vertical Reactions

Support notation : Far left is #1 Values in KIPS

Load Combination	Support 1	Support 2
Overall MAXimum	13.800	13.800
Overall MINimum	0.552	0.248
D Only	5.750	5.750
+D+L	13.800	13.800
+D+0.750L	11.788	11.788
+D+0.60W	6.081	5.899
+D+0.750L+0.450W	12.036	11.899
+0.60D+0.60W	3.781	3.599
+0.60D	3.450	3.450
L Only	8.050	8.050
W Only	0.552	0.248

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Engineer:
Project ID:
Project Descr:

Printed: 16 MAR 2021, 12:24PM

Steel Beam

File: Stresses on the Roof Joists.ec6

Lic. # : KW-06000304

PBA ENGINEERING, P.C.

DESCRIPTION: Stresses on the Alpha 60DLH14 Roof joist

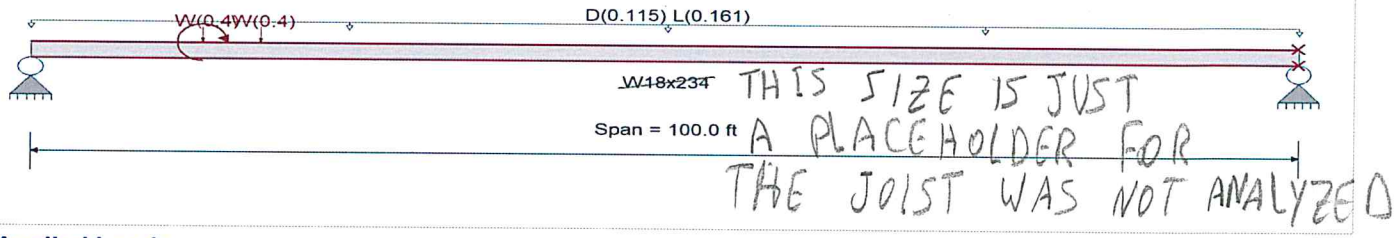
CODE REFERENCES

Calculations per AISC 360-10, IBC 2012, CBC 2013, ASCE 7-10
Load Combination Set : IBC 2012

Material Properties

Analysis Method : Load Resistance Factor Design
Beam Bracing : Beam is Fully Braced against lateral-torsional buckling
Bending Axis : Major Axis Bending

Fy : Steel Yield : 50.0 ksi
E: Modulus : 29,000.0 ksi



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight NOT internally calculated and added
Load(s) for Span Number 1
Moment : W = 4.20 k-ft, Loc = 13.50 ft in span, (Wind Moment on the Enclosure)

Point Load : W = 0.40 k @ 13.50 ft, (Wind Load on the Enclosure)

Uniform Load : D = 0.1150, L = 0.1610 k/ft, Tributary Width = 1.0 ft, (Roof Loads)

Point Load : W = 0.40 k @ 18.0 ft, (Wind Load on the Enclosure)

DESIGN SUMMARY

0.94

Design OK

Maximum Bending Stress Ratio =	~~0.240~~ : 1	Maximum Shear Stress Ratio =	~~0.027~~ : 1 0.65
Section used for this span	~~W18x234~~	Section used for this span	~~W18x234~~
Mu : Applied	494.500 k-ft	Vu : Applied	19.780 k
~~Mn * Phi / Allowable~~	~~2,058.750 k-ft~~	Vn * Phi : Allowable	734.28 k
Load Combination	+1.20D+1.60L	Load Combination	+1.20D+1.60L
Location of maximum on span	50.000 ft	Location of maximum on span	0.000 ft
Span # where maximum occurs	Span # 1	Span # where maximum occurs	Span # 1

wall. = $\frac{0.42 * 100^2}{8}$ = 525 K-ft

Maximum Deflection

Max Downward Transient Deflection	2.559 in	Ratio =	468 >=360
Max Upward Transient Deflection	0.000 in	Ratio =	0 <360
Max Downward Total Deflection	4.390 in	Ratio =	273 >=240.
Max Upward Total Deflection	0.000 in	Ratio =	0 <240.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Max Stress Ratios M	Max Stress Ratios V	Summary of Moment Values: max Mu +	max Mu -	Mu Max	Mnx	Phi*Mnx	Cb	Rm	Summary of Shear Values: VuMax	Vnx	Phi*Vnx
+1.40D													
Dsgn. L = 100.00 ft	1	0.098	0.011	201.25		201.25	2,287.50	2,058.75	1.00	1.00	8.05	734.28	734.28
+1.20D+1.60L													
Dsgn. L = 100.00 ft	1	0.240	0.027	494.50		494.50	2,287.50	2,058.75	1.00	1.00	19.78	734.28	734.28
+1.20D+0.50L													
Dsgn. L = 100.00 ft	1	0.133	0.015	273.13		273.13	2,287.50	2,058.75	1.00	1.00	10.93	734.28	734.28
+1.20D+0.50W													
Dsgn. L = 100.00 ft	1	0.086	0.010	176.73		176.73	2,287.50	2,058.75	1.00	1.00	7.22	734.28	734.28
+1.20D+0.50L+W													
Dsgn. L = 100.00 ft	1	0.137	0.016	281.59		281.59	2,287.50	2,058.75	1.00	1.00	11.56	734.28	734.28
+0.90D+W													
Dsgn. L = 100.00 ft	1	0.067	0.008	137.91		137.91	2,287.50	2,058.75	1.00	1.00	5.81	734.28	734.28
+0.90D													
Dsgn. L = 100.00 ft	1	0.063	0.007	129.38		129.38	2,287.50	2,058.75	1.00	1.00	5.18	734.28	734.28

Steel Beam

DESCRIPTION: Stresses on the Alpha 60DLH14 Roof joist

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+L	1	4.3901	50.286		0.0000	0.000

Vertical Reactions

Support notation : Far left is #1 Values in KIPS

Load Combination	Support 1	Support 2
Overall MAXimum	13.800	13.800
Overall MINimum	0.632	0.168
D Only	5.750	5.750
+D+L	13.800	13.800
+D+0.750L	11.788	11.788
+D+0.60W	6.129	5.851
+D+0.750L+0.450W	12.072	11.863
+0.60D+0.60W	3.829	3.551
+0.60D	3.450	3.450
L Only	8.050	8.050
W Only	0.632	0.168

ANTENNA MOUNT ANALYSIS REPORT

FOR

SITE NAME: NEW LONDON SOUTH CT
MITCHELL COLLEGE-YARNELL CTR.
40 DEBIASI DR.
NEW LONDON, CT 06320

PREPARED FOR:

verizon

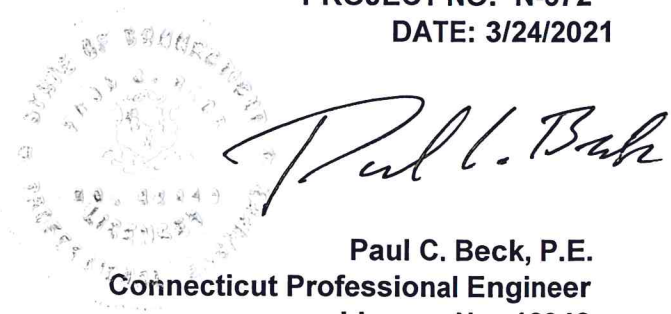
WIRELESS COMMUNICATIONS FACILITY
20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

On Air Engineering, LLC
88 FOUNDRY POND ROAD
COLD SPRING, NY 10516
ONAIR@OPTONLINE.NET
201-456-4624

PBA ENGINEERING, P.C
Structural Engineers

12 KULICK ROAD
FAIRFIELD, NEW JERSEY 07004-3363
PHONE: (973) 276-1700
FAX: (973) 276-9766

PROJECT NO. N-572
DATE: 3/24/2021



Paul C. Beck, P.E.
Connecticut Professional Engineer
License No: 12949

CONTENTS

1. PURPOSE

The purpose of this analysis is to determine whether the antenna support mount located at *40 Debiasi DR, New London, CT 06320 is adequate to support* the proposed modifications to Verizon's antennas and equipment.

2. REFERENCES

1. Verizon CD's by On Air Engineering, LLC, dated: March 04, 2021
2. Photographs and antenna frame supports
3. Original CD's by All-Points Technology Corporation, P.C., dated: February 19, 2018
4. Structural letter by BL Companies dated 02-20-2017.

3. BUILDING CODES

1. 2018 Connecticut State Building Code
2. 2015 International Building Code
3. ASCE/SEI 7-16 (Minimum Design Loads for Buildings and Other Structures)
4. Standard Load Table for Deep Long-span Steel Joists, DLH- Series, dated February 1, 1970

4. EXISTING STRUCTURE & FIELD OBSERVATIONS

Verizon has a 2-sector antenna configuration with (2) rooftop chimney concealment enclosures supported on W8 dunnage frames. Antennas and accessory equipment are mounted to steel masts pipes within each enclosure. The steel pipes are P3.0 STD with 9'-4" height, as shown on the All-Points Technology Corporation, P.C DWGs.

5. PROPOSED VERIZON ANTENNA/EQUIPMENT CONFIGURATION (TYP. EA. SECTOR)

a. (1) MT6407-77A Integrated Antenna
b. (1) HBXX Antenna
c. (1) AWS/PCS Diplexer
d. (1) Dual Band RRH
e. (1) Raycap 6-ckt. OVP

6. RESULTS

A structural analysis was completed on steel pipe masts supporting the antenna/equipment and the W8 base beams of the enclosure dunnage. Our analysis was performed based on the wind and equipment weights. The maximum support reaction is 0.25 kips on the P3.0STD steel pipe due to the existing and proposed equipment, it's at 33.6% for the bending moment which is adequate. The maximum bending stress ratio is 9% for the W8s beam of the dunnage frame, which it's adequate. See Appendix (A) for the calculations.

7. CONCLUSION

The antenna support masts and the dunnage frame are adequate and safe to support the existing and proposed Verizon equipment.

This analysis is based on the information provided to our office and is assumed to correctly depict the existing condition. The existing roof and foundation are assumed to be installed properly and in a professional manner.

If you have any questions concerning the items contained within this report, please do not hesitate to contact our office.

Sincerely,
PBA ENGINEERING, P.C.

Paul C. Beck, P.E.
Connecticut Professional Engineer
License No: 12949

PCB/mf

L:\WP61\LTR\CELLULAR JOBS\N-572 Mounting Analysis Report, Verizon - 40 Debiasi Drive, New London, CT.docx

APPENDIX - A

– From 2018 Connecticut State Building Code

(APPENDIX N) MUNICIPALITY - SPECIFIC STRUCTURAL DESIGN PARAMETERS												
				Wind Design Parameters								
Municipality	Ground Snow Load (psf)	MCE Spectral Accelerations (%g)		Ultimate Design Wind Speeds, V_{ult} (mph)			Nominal Design Wind Speeds, V_{asd} (mph)			Wind-Borne Debris Regions[1]		Hurricane-Prone Regions
		S_s	S_1	Risk Cat.I	Risk Cat.II	Risk Cat III-IV	Risk Cat. I	Risk Cat. II	Risk Cat. III-IV	Risk Cat. II & III except Occup I-2	Risk Cat III Occup I-2 & Risk Cat. IV	
Montville	30	0.165	0.059	125	135	145	97	105	112		Type A	Yes
Morris	35	0.187	0.065	110	120	125	85	93	97			Yes
Naugatuck	30	0.190	0.064	110	125	135	85	97	105			Yes
New Britain	30	0.183	0.064	115	125	135	89	97	105			Yes
New Canaan	30	0.240	0.068	110	120	130	85	93	101			Yes
New Fairfield	35	0.212	0.067	105	115	125	81	89	97			
New Hartford	40	0.180	0.065	110	120	130	85	93	101			Yes
New Haven	30	0.186	0.062	115	125	135	89	97	105		Type C	Yes
Newington	30	0.182	0.064	115	125	135	89	97	105			Yes
New London	30	0.161	0.058	125	135	145	97	105	112	Type B	Type A	Yes
New Milford	35	0.198	0.066	105	115	125	81	89	97			
Newtown	30	0.208	0.066	110	120	130	85	93	101			Yes
Norfolk	40	0.175	0.065	105	115	125	81	89	97			
North Branford	30	0.179	0.061	120	130	140	93	101	108			Yes
North Canaan	40	0.173	0.065	105	115	120	81	89	93			
North Haven	30	0.184	0.062	115	125	135	89	97	105			Yes
North Stonington	30	0.163	0.059	125	135	145	97	105	112		Type A	Yes
Norwalk	30	0.232	0.067	110	120	130	85	93	101			Yes
Norwich	30	0.168	0.060	125	135	145	97	105	112		Type A	Yes
Old Lyme	30	0.164	0.059	125	135	145	97	105	112	Type B	Type A	Yes
Old Saybrook	30	0.164	0.059	125	135	145	97	105	112	Type B	Type A	Yes
Orange	30	0.192	0.063	115	125	135	89	97	105			Yes
Oxford	30	0.196	0.064	110	125	130	85	97	101			Yes
Plainfield	35	0.170	0.061	125	135	145	97	105	112		Type A	Yes
Plainville	35	0.184	0.064	115	125	135	89	97	105			Yes
Plymouth	35	0.186	0.064	110	120	130	85	93	101			Yes
Pomfret	40	0.172	0.063	120	130	140	93	101	108			Yes
Portland	30	0.180	0.063	115	130	135	89	101	105			Yes
Preston	30	0.167	0.060	125	135	145	97	105	112		Type A	Yes
Prospect	30	0.188	0.064	115	125	135	89	97	105			Yes
Putnam	40	0.172	0.063	120	130	140	93	101	108			Yes
Redding	30	0.220	0.067	110	120	130	85	93	101			Yes
Ridgefield	30	0.230	0.068	110	120	125	85	93	97			Yes
Rocky Hill	30	0.181	0.063	115	125	135	89	97	105			Yes
Roxbury	35	0.197	0.065	110	120	125	85	93	97			Yes
Salem	30	0.170	0.060	120	135	140	93	105	108		Type A	Yes
Salisbury	40	0.173	0.065	105	115	120	81	89	93			
Scotland	30	0.172	0.061	120	130	140	93	101	108			Yes
Seymour	30	0.194	0.064	115	125	135	89	97	105			Yes
Sharon	40	0.179	0.065	105	115	120	81	89	93			
Shelton	30	0.199	0.064	115	125	135	89	97	105			Yes
Sherman	35	0.202	0.066	105	115	120	81	89	93			

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Project Descr:

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Steel Beam

File: Mount Calc..ec6

Lic. # : KW-06000304
PBA ENGINEERING, P.C.

DESCRIPTION: 3" Steel Pipe Mast

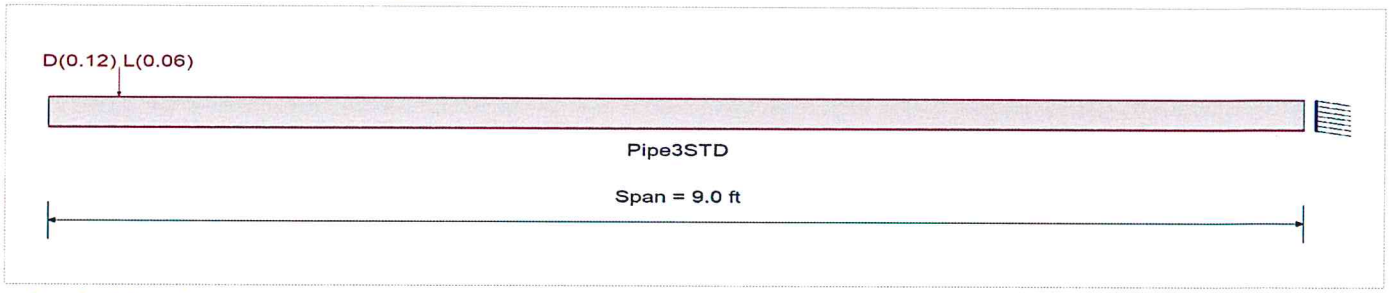
CODE REFERENCES

Calculations per AISC 360-10, IBC 2012, CBC 2013, ASCE 7-10
Load Combination Set : IBC 2012

Material Properties

Analysis Method : Allowable Strength Design
Beam Bracing : Beam is Fully Braced against lateral-torsional buckling
Bending Axis : Major Axis Bending

Fy : Steel Yield : 50.0 ksi
E: Modulus : 29,000.0 ksi



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loading
Load(s) for Span Number 1
Point Load : D = 0.120, L = 0.060 k @ 0.50 ft, (Antenna, RRH and unistrut wieghts)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	0.336 : 1	Maximum Shear Stress Ratio =	0.013 : 1
Section used for this span	Pipe3STD	Section used for this span	Pipe3STD
Ma : Applied	1.837 k-ft	Va : Applied	0.2482 k
Mn / Omega : Allowable	5.464 k-ft	Vn/Omega : Allowable	18.593 k
Load Combination	+D+L	Load Combination	+D+L
Location of maximum on span	9.000 ft	Location of maximum on span	9.000 ft
Span # where maximum occurs	Span # 1	Span # where maximum occurs	Span # 1

Maximum Deflection

Max Downward Transient Deflection	0.280 in	Ratio =	771 >=360
Max Upward Transient Deflection	0.000 in	Ratio =	0 <360
Max Downward Total Deflection	0.970 in	Ratio =	223 >=180.
Max Upward Total Deflection	0.000 in	Ratio =	0 <180.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Max Stress Ratios M	Max Stress Ratios V	Summary of Moment Values Mmax +	Mmax -	Ma Max	Mnx	Mnx/Omega	Cb	Rm	Summary of Shear Values Va Max	Vnx	Vnx/Omega
D Only													
Dsgn. L = 9.00 ft	1	0.243	0.010		-1.33	1.33	9.13	5.46	1.00	1.00	0.19	31.05	18.59
+D+L													
Dsgn. L = 9.00 ft	1	0.336	0.013		-1.84	1.84	9.13	5.46	1.00	1.00	0.25	31.05	18.59
+D+0.750L													
Dsgn. L = 9.00 ft	1	0.313	0.013		-1.71	1.71	9.13	5.46	1.00	1.00	0.23	31.05	18.59
+0.60D													
Dsgn. L = 9.00 ft	1	0.146	0.006		-0.80	0.80	9.13	5.46	1.00	1.00	0.11	31.05	18.59

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+L	1	0.9703	0.000		0.0000	0.000

Vertical Reactions

Support notation : Far left is #1 Values in KIPS

Load Combination	Support 1	Support 2
Overall MAXimum		0.248
Overall MINimum		0.060
D Only		0.188
+D+L		0.248
+D+0.750L		0.233
+0.60D		0.113
L Only		0.060

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Engineer:
Project ID:
Project Descr:

Printed: 25 MAR 2021, 12:06PM

Steel Beam

File: Stresses on the Roof Joists.ec6

Lic. # : KW-06000304

PBA ENGINEERING, P.C.

DESCRIPTION: W8x24 Dunnage Frame Beam 7'-8" Long

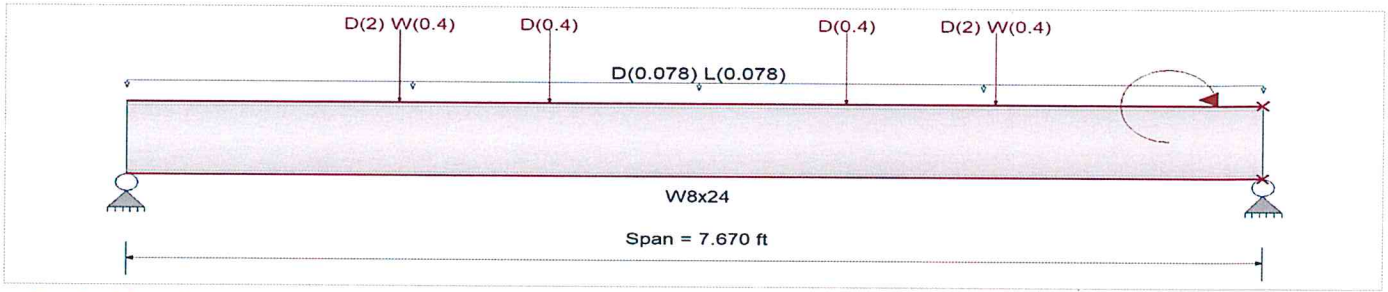
CODE REFERENCES

Calculations per AISC 360-10, IBC 2012, CBC 2013, ASCE 7-10
Load Combination Set : IBC 2012

Material Properties

Analysis Method : Load Resistance Factor Design
Beam Bracing : Beam is Fully Braced against lateral-torsional buckling
Bending Axis : Major Axis Bending

Fy : Steel Yield : 50.0 ksi
E: Modulus : 29,000.0 ksi



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loading
Load(s) for Span Number 1
Moment : W = 4.20 k-ft, Loc = 7.0 ft in span, (Max. Moment from Enclosure)

Point Load : D = 2.0, W = 0.40 k @ 1.830 ft, (Max. Loads from Enclosure)

Uniform Load : D = 0.030, L = 0.030 ksf, Tributary Width = 2.60 ft, (Roof Loads)

Point Load : D = 2.0, W = 0.40 k @ 5.830 ft, (Max. Loads from Enclosure)

Point Load : D = 0.40 k @ 2.830 ft, (Antenna and Beams weight)

Point Load : D = 0.40 k @ 4.830 ft, (Antenna and Beams weight)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	0.090 : 1	Maximum Shear Stress Ratio =	0.076 : 1
Section used for this span	W8x24	Section used for this span	W8x24
Mu : Applied	7.776 k-ft	Vu : Applied	4.442 k
Mn * Phi : Allowable	86.625 k-ft	Vn * Phi : Allowable	58.286 k
Load Combination	+1.40D	Load Combination	+1.20D+0.50L+W
Location of maximum on span	3.857 ft	Location of maximum on span	7.670 ft
Span # where maximum occurs	Span # 1	Span # where maximum occurs	Span # 1

Maximum Deflection

Max Downward Transient Deflection	0.003 in	Ratio =	36,177 >=240.
Max Upward Transient Deflection	-0.008 in	Ratio =	12,152 >=240.
Max Downward Total Deflection	0.029 in	Ratio =	3190 >=180.
Max Upward Total Deflection	0.000 in	Ratio =	0 <180.0

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Max Stress Ratios M	Max Stress Ratios V	Summary of Moment Values max Mu +	max Mu -	Mu Max	Mnx	Phi*Mnx	Cb	Rm	Summary of Shear Values VuMax	Vnx	Phi*Vnx
+1.40D													
Dsgn. L = 7.67 ft	1	0.090	0.067	7.78		7.78	96.25	86.63	1.00	1.00	3.91	58.29	58.29
+1.20D+1.60L													
Dsgn. L = 7.67 ft	1	0.088	0.066	7.58		7.58	96.25	86.63	1.00	1.00	3.83	58.29	58.29
+1.20D+0.50L													
Dsgn. L = 7.67 ft	1	0.080	0.060	6.95		6.95	96.25	86.63	1.00	1.00	3.50	58.29	58.29
+1.20D+0.50W													
Dsgn. L = 7.67 ft	1	0.071	0.066	6.19		6.19	96.25	86.63	1.00	1.00	3.82	58.29	58.29
+1.20D+0.50L+W													

Title Block Line 1
You can change this area
using the "Settings" menu item
and then using the "Printing &
Title Block" selection.
Title Block Line 6

Project Title:
Engineer:
Project ID:
Project Descr:

Printed: 25 MAR 2021, 12:06PM

Steel Beam

File: Stresses on the Roof Joists.ec6

Lic. # : KW-06000304

PBA ENGINEERING, P.C.

DESCRIPTION: W8x24 Dunnage Frame Beam 7'-8" Long

Load Combination / Segment Length	Span #	Max Stress Ratios M	V	Summary of Moment Values max Mu +	max Mu -	Mu Max	Mnx	Phi*Mnx	Cb	Rm	Summary of Shear Values VuMax	Vnx	Phi*Vnx
Dsgn. L = 7.67 ft +0.90D+W	1	0.070	0.076	6.05	-1.22	6.05	96.25	86.63	1.00	1.00	4.44	58.29	58.29
Dsgn. L = 7.67 ft +0.90D	1	0.048	0.059	4.18	-1.87	4.18	96.25	86.63	1.00	1.00	3.46	58.29	58.29
Dsgn. L = 7.67 ft	1	0.058	0.043	5.00		5.00	96.25	86.63	1.00	1.00	2.51	58.29	58.29

Overall Maximum Deflections

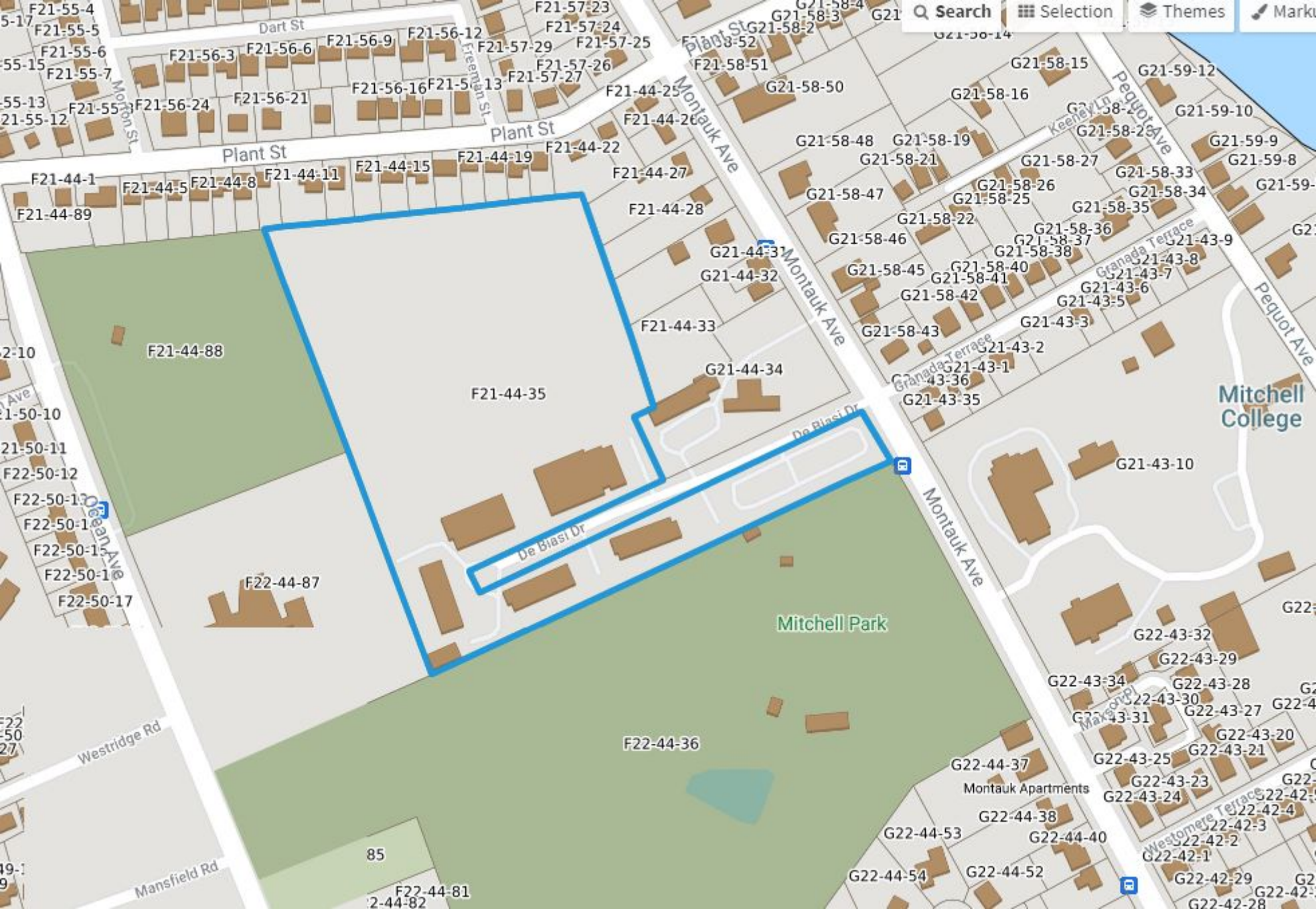
Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+L	1	0.0289	3.857		0.0000	0.000

Vertical Reactions

Support notation : Far left is #1 Values in KIPS

Load Combination	Support 1	Support 2
Overall MAXimum	3.093	3.439
Overall MINimum	-0.147	0.299
D Only	2.794	2.788
+D+L	3.093	3.087
+D+0.750L	3.019	3.012
+D+0.60W	2.706	3.356
+D+0.750L+0.450W	2.952	3.439
+0.60D+0.60W	1.588	2.241
+0.60D	1.677	1.673
L Only	0.299	0.299
W Only	-0.147	0.947

ATTACHMENT 5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Themes
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Plant St
Montauk Ave
Pequot Ave
Freeman St
Morton St
Keeney Ln
Granada Terrace
De Blasi Dr
Ocean Ave
Westridge Rd
Mansfield Rd
Maxson Pl
Westomere Terrace
F21-44-35
F21-44-88
F22-44-87
F22-44-36
F21-44-89
F21-44-1
F21-44-5
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F21-44-26
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Mitchell Park
Montauk Apartments
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G22-43-23
G22-43-24
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G22-42-29
85

NEW LONDON,CT

40 DEBIASI DR

Location
40 DEBIASI DR
City, State, Zip
,
Mblu
F21/ 44/ 35/ /
Acct#
F21 0044 0035
Owner
MITCHELL COLLEGE
Assessment
$12,124,560
Appraisal
$17,320,800
PID
1933
Building Count
5

Current Value

Appraisal

Valuation Year	Improvements	Land	Total
2018	$14,092,900	$3,227,900	$17,320,800

Assessment

Valuation Year	Improvements	Land	Total
2018	$9,865,030	$2,259,530	$12,124,560

Owner of Record

Owner MITCHELL COLLEGE
Co-Owner
Address 437 PEQUOT AVE
NEW LONDON, CT 06320
Sale Price $0
Certificate
Book & Page 0000/0000
Sale Date 01/01/1700
Instrument

Ownership History

Ownership History

Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
MITCHELL COLLEGE	$0		0000/0000		01/01/1700

Building Information
Building 1 : Section 1

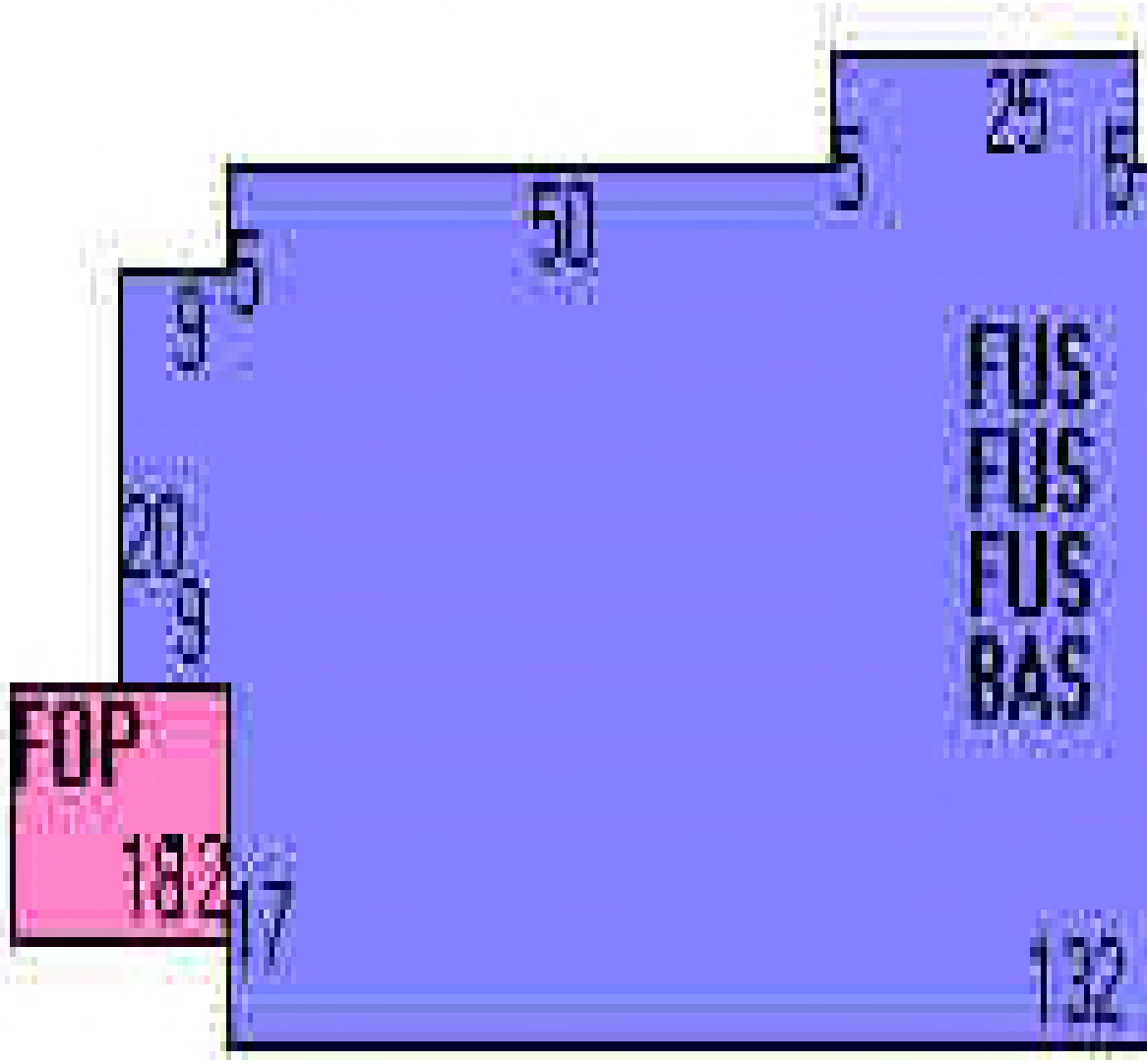
Year Built: 1965
Living Area: 24,116
Replacement Cost: $3,057,152
Building Percent Good: 55
Replacement Cost Less Depreciation: $1,681,400

Building Attributes

Field	Description
STYLE	Dormitory
MODEL	Commercial
Grade	Ave/Good
Stories:	3.5

Occupancy	1.00
Exterior Wall 1	Brick/Masonry
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Tar & Gravel
Interior Wall 1	Drywall/Sheet
Interior Wall 2	
Interior Floor 1	Inlaid Sht Gds
Interior Floor 2	Carpet
Heating Fuel	Gas
Heating Type	Forced Air-Duc
AC Type	None
Struct Class	
Bldg Use	PVT SCHOOL MDL-94
Total Rooms	
Total Bedrms	00
Total Baths	0
Conv Type	
Usrfld 219	
1st Floor Use:	904C
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	ABOVE AVERAGE
Wall Height	9.00
% Comn Wall	0.00

Building Photo


25
5
50
5
FUS
FUS
FUS
BAS
20
FOP
182
7
132

Building Sub-Areas (sq ft) Legend

Code	Description	Gross Area	Living Area
FUS	Upper Story, Finished	18,087	18,087
BAS	First Floor	6,029	6,029
FOP	Porch, Open, Finished	216	0
		24,332	24,116

Building 2 : Section 1

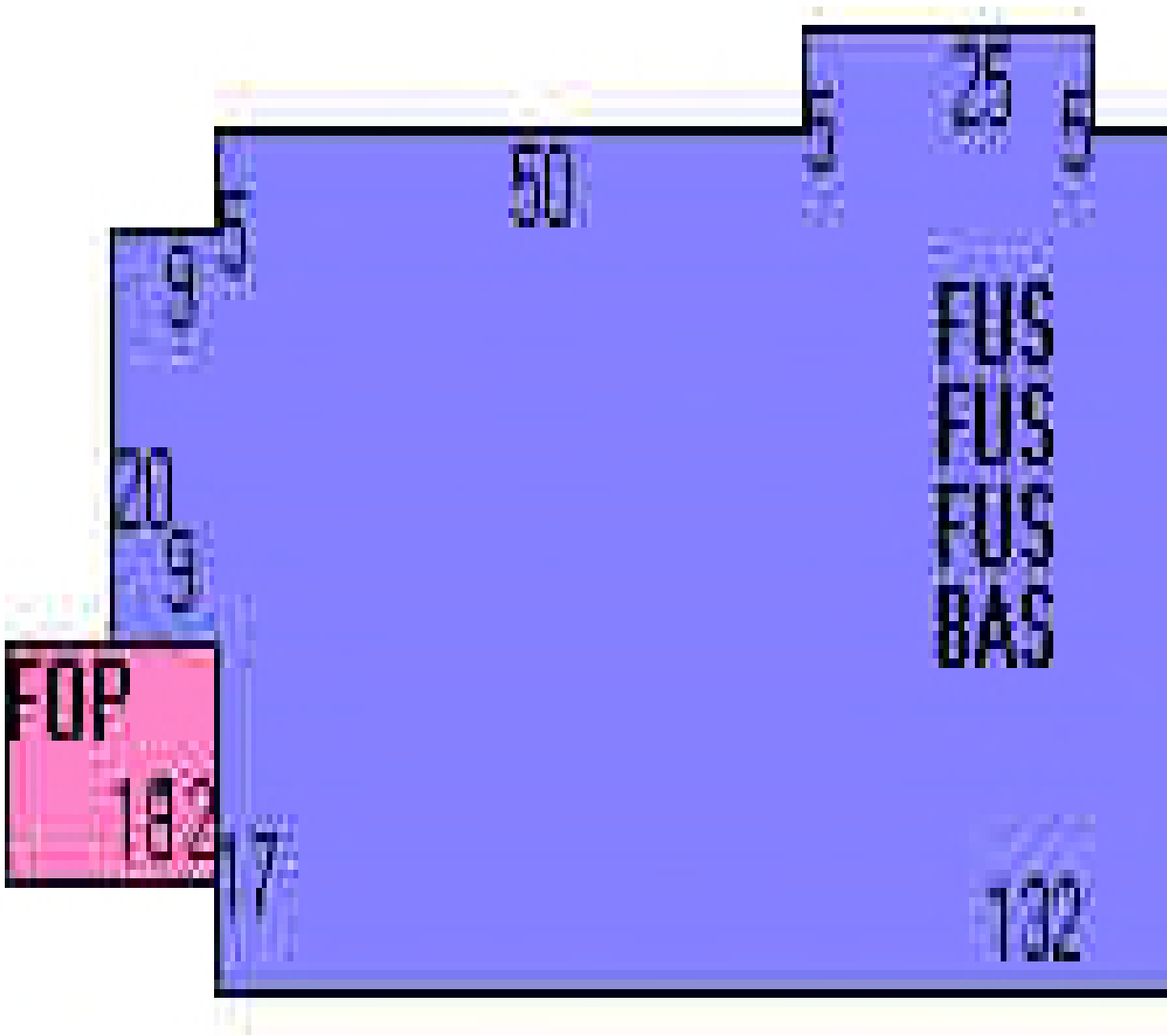
Year Built: 1965
Living Area: 24,116
Replacement Cost: $3,057,152
Building Percent Good: 55
Replacement Cost Less Depreciation: $1,681,400

Building Attributes : Bldg 2 of 5

Field	Description
STYLE	Dormitory
MODEL	Commercial
Grade	Ave/Good
Stories:	3.5
Occupancy	1.00
Exterior Wall 1	Brick/Masonry
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Tar & Gravel
Interior Wall 1	Drywall/Sheet
Interior Wall 2	
Interior Floor 1	Inlaid Sht Gds
Interior Floor 2	Carpet

Heating Fuel	Gas
Heating Type	Forced Air-Duc
AC Type	None
Struct Class	
Bldg Use	PVT SCHOOL MDL-94
Total Rooms	
Total Bedrms	00
Total Baths	0
Conv Type	
Usrfld 219	
1st Floor Use:	904C
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	ABOVE AVERAGE
Wall Height	9.00
% Comn Wall	0.00

Building Photo


25
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50
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9
FUS
FUS
FUS
BAS
20
5
FOP
182
17
132

Building Sub-Areas (sq ft) Legend

Code	Description	Gross Area	Living Area
FUS	Upper Story, Finished	18,087	18,087
BAS	First Floor	6,029	6,029
FOP	Porch, Open, Finished	216	0
		24,332	24,116

Building 3 : Section 1

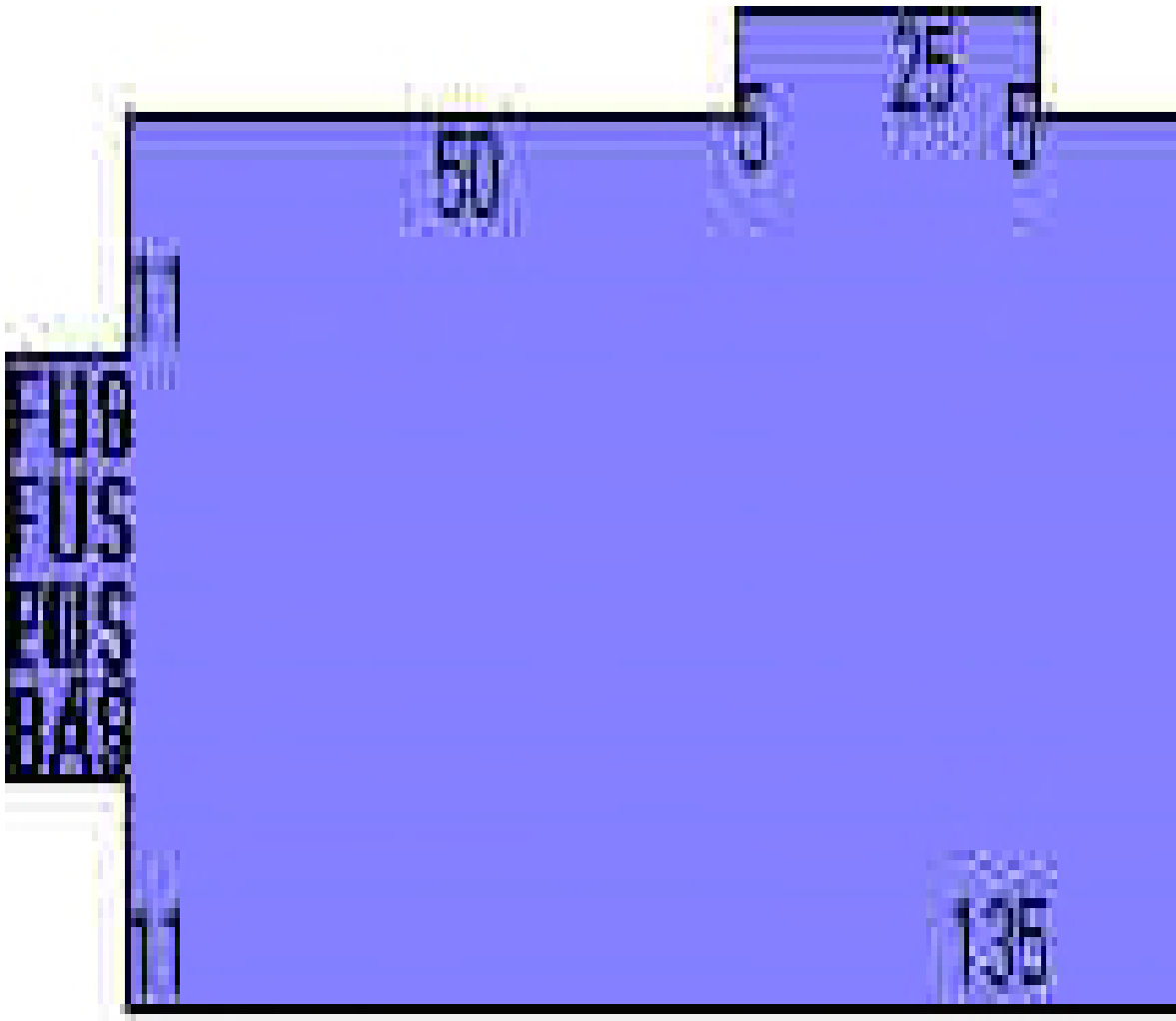
Year Built:	1965
Living Area:	24,780
Replacement Cost:	$3,144,040
Building Percent Good:	55
Replacement Cost Less Depreciation:	$1,729,200

Building Attributes : Bldg 3 of 5

Field	Description
STYLE	Dormitory
MODEL	Commercial
Grade	Ave/Good
Stories:	4
Occupancy	1.00
Exterior Wall 1	Brick/Masonry
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Tar & Gravel
Interior Wall 1	Drywall/Sheet
Interior Wall 2	
Interior Floor 1	Inlaid Sht Gds
Interior Floor 2	Carpet

Heating Fuel	Gas
Heating Type	Forced Air-Duc
AC Type	None
Struct Class	
Bldg Use	PVT SCHOOL MDL-94
Total Rooms	
Total Bedrms	00
Total Baths	0
Conv Type	
Usrfld 219	
1st Floor Use:	904C
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	ABOVE AVERAGE
Wall Height	9.00
% Comn Wall	0.00

Building Photo


50
5
25
5
11
FUS
FUS
PWS
BAS
11
135

Building Sub-Areas (sq ft) Legend

Code	Description	Gross Area	Living Area
FUS	Upper Story, Finished	18,585	18,585
BAS	First Floor	6,195	6,195
FEP	Porch, Enclosed, Finished	288	0
		25,068	24,780

Building 4 : Section 1

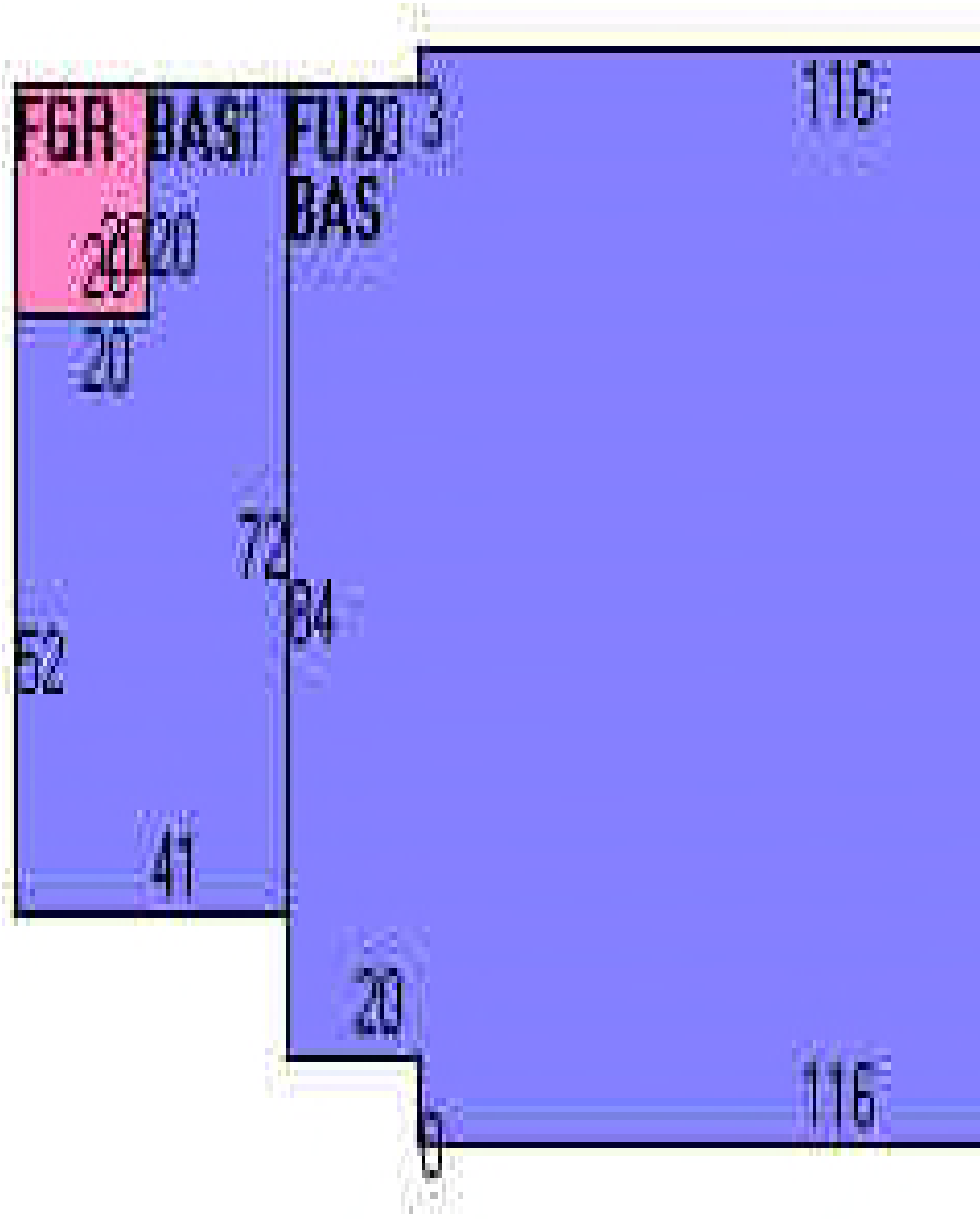
Year Built:	1968
Living Area:	34,758
Replacement Cost:	$5,046,425
Building Percent Good:	55
Replacement Cost Less Depreciation:	$2,775,500

Building Attributes : Bldg 4 of 5

Field	Description
STYLE	Health Club
MODEL	Commercial
Grade	Good
Stories:	2
Occupancy	1.00
Exterior Wall 1	Brick/Masonry
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Tar & Gravel
Interior Wall 1	Minim/Masonry
Interior Wall 2	Drywall/Sheet
Interior Floor 1	Inlaid Sht Gds
Interior Floor 2	Hardwood

Heating Fuel	Gas
Heating Type	Forced Air-Duc
AC Type	None
Struct Class	
Bldg Use	PVT SCHOOL MDL-94
Total Rooms	
Total Bedrms	00
Total Baths	0
Conv Type	
Usrfld 219	
1st Floor Use:	904C
Heat/AC	HEAT/AC PKGS
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	AVERAGE
Wall Height	14.00
% Comn Wall	0.00

Building Photo


FGR
BAS1
FUS1
BAS
20
20
20
72
84
52
41
20
116
116

Building Sub-Areas (sq ft) Legend

Code	Description	Gross Area	Living Area
BAS	First Floor	17,811	17,811
FUS	Upper Story, Finished	16,787	16,787
FGR	Garage, Finished	400	160
FOP	Porch, Open, Finished	1,528	0
		36,526	34,758

Building 5 : Section 1

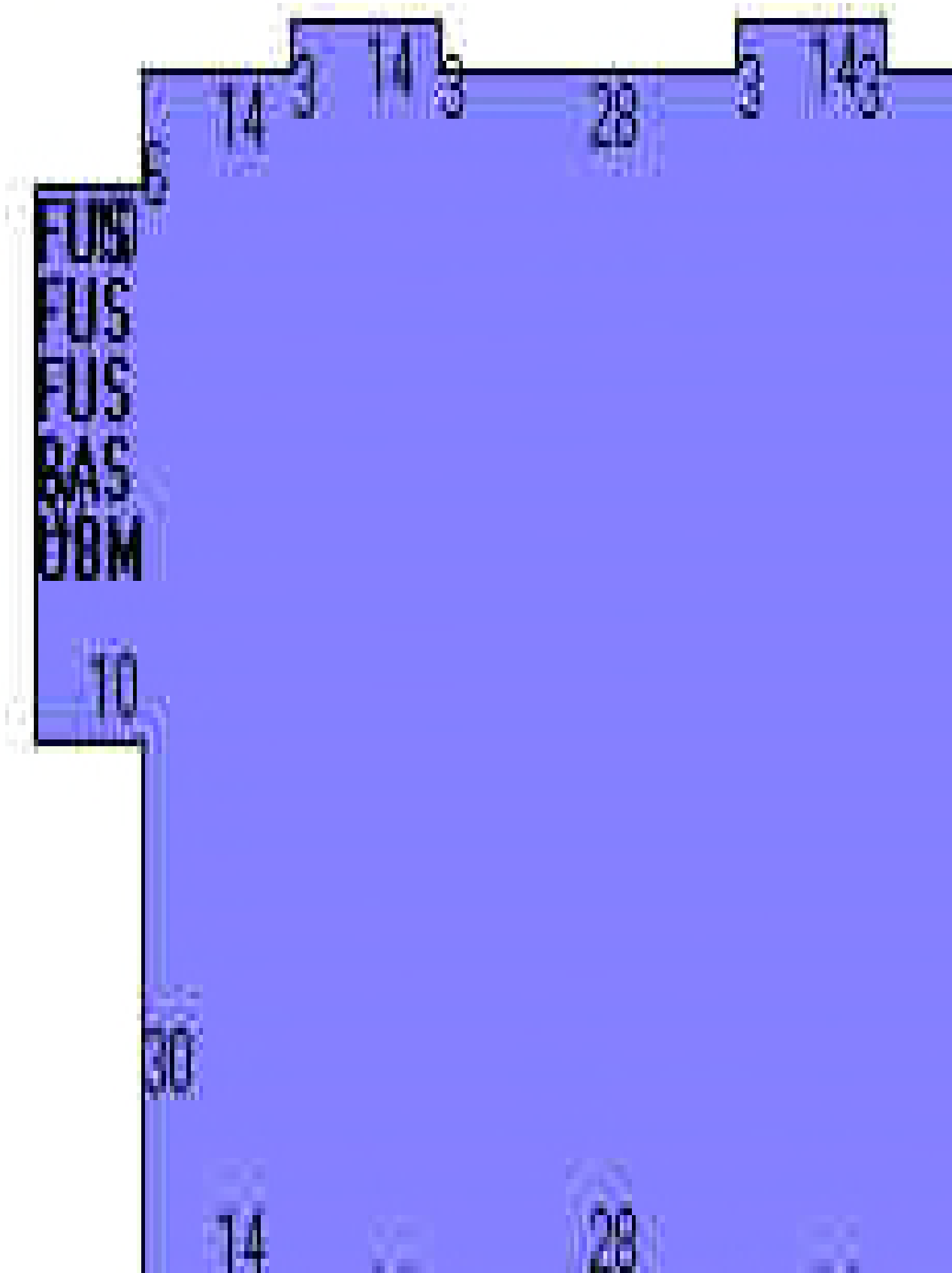
Year Built:	2008
Living Area:	35,472
Replacement Cost:	$6,373,587
Building Percent Good:	93
Replacement Cost Less Depreciation:	$5,927,400

Building Attributes : Bldg 5 of 5

Field	Description
STYLE	Dormitory
MODEL	Commercial
Grade	Excellent
Stories:	4
Occupancy	1.00
Exterior Wall 1	Clapboard
Exterior Wall 2	Brick Veneer
Roof Structure	Gable/Hip
Roof Cover	Asph/F Gls/Cmp
Interior Wall 1	Drywall/Sheet
Interior Wall 2	
Interior Floor 1	Vinyl/Asphalt

Interior Floor 2	Carpet
Heating Fuel	Gas
Heating Type	Hot Water
AC Type	Unit/AC
Struct Class	
Bldg Use	PVT SCHOOL MDL-94
Total Rooms	
Total Bedrms	
Total Baths	
Conv Type	
Usrfld 219	
1st Floor Use:	
Heat/AC	NONE
Frame Type	STEEL
Baths/Plumbing	ABOVE AVERAGE
Ceiling/Wall	SUS-CEIL & WL
Rooms/Prtns	ABOVE AVERAGE
Wall Height	10.00
% Comn Wall	

Building Photo


14
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28
3
14
3
FUS
FUS
FUS
BAS
BAS
DOM
10
30
14
28

Building Sub-Areas (sq ft) Legend

Code	Description	Gross Area	Living Area
FUS	Upper Story, Finished	26,604	26,604
BAS	First Floor	8,868	8,868
UBM	Basement, Unfinished	8,868	0
		44,340	35,472

Extra Features

Extra Features Legend

Code	Description	Size	Value	Bldg #
ELV1	Elevator, Pass	1.00 UNITS	$0	4
ELV1	Elevator, Pass	1.00 UNITS	$74,400	5
ELS1	Pass Stops	2.00 UNITS	$4,100	4
ELS1	Pass Stops	5.00 UNITS	$17,400	5
SPR2	WET/CONCEALED	35472.00 S.F.	$39,600	5
		0.00		1

Land

Land Use

Use Code 904C
Description PVT SCHOOL MDL-94
Zone INST
Neighborhood CRZ1
Alt Land Appr No
Category

Land Line Valuation

Size (Acres) 18.95
Frontage 0
Depth 0
Assessed Value $2,259,530
Appraised Value $3,227,900

Outbuildings

Outbuildings Legend

Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
SHP5	W/IMPROV GOOD			1950.00 S.F.	$43,900	1
LT2	W/DOUBLE LIGHT			3.00 UNITS	$1,700	1
SHD2	W/LIGHTS ETC			64.00 S.F.	$900	1
LT1	LIGHTS-IN W/PL			6.00 UNITS	$2,200	1
PAV1	PAVING-ASPHALT			80000.00 S.F.	$120,000	1
FGR2	GARAGE-GOOD			2100.00 S.F.	$58,800	1

Valuation History

Appraisal

Valuation Year	Improvements	Land	Total
2019	$14,092,900	$3,227,900	$17,320,800
2018	$14,072,100	$3,227,900	$17,300,000
2017	$12,689,300	$2,848,200	$15,537,500

Assessment

Valuation Year	Improvements	Land	Total
2019	$9,865,030	$2,259,530	$12,124,560
2018	$9,850,470	$2,259,530	$12,110,000
2017	$8,882,510	$1,993,740	$10,876,250

closeclosecloseclose

Name:

Email:

ATTACHMENT 6

UNITED STATES POSTAL SERVICE®

NEW LONDON SOUTH

Certificate of Mailing — Firm

Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here *Postmark with Date of Receipt.*
Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103	3	3	neopost 06/16/2021 US POSTAGE $002.89⁰ ZIP 06103 041L12203937
	Postmaster, per *(name of receiving employee)* V. P.		

USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Michael Passero, Mayor City of New London 181 State Street New London, CT 06320				
2.	Felix Reyes, Director of the Office of Development and Planning City of New London 181 State Street New London, CT 06320				
3.	Mitchell College 437 Pequot Avenue New London, CT 06320				
4.					
5.					
6.					

OLD STATE HOUSE STATION 06103 JUN 16 2021 USPS