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Kristen Motel, Esq.
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November 18, 2021

VIA ELECTRONIC MAIL & FIRST CLASS MAIL
Melanie A. Bachman
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: New Cingular Wireless PCS, LLC ("AT&T")
Petition No. 1361 – Installation of a Rooftop Facility Equipment Cabinet Relocation
500 Newfield Avenue, Stamford, Connecticut

Dear Executive Director Bachman:

This letter and enclosures are respectfully submitted on behalf of New Cingular Wireless PCS, LLC ("AT&T") in connection with the above-referenced Petition for the relocation of supporting equipment.

Subsequent to the Siting Council's ruling that the captioned Facility would not have a substantial adverse environmental effect and would not require a Certificate of Environmental Compatibility and Public Need, further structural evaluation indicated a need to relocate supporting equipment from the roof to the interior of the building.

As such, AT&T revised the proposed Facility design to replace the proposed outdoor cabinets with indoor battery racks and relocate all supporting equipment that was originally proposed on the rooftop to the basement. This proposed relocation is shown on Sheets C-3 – C-5 of the enclosed Site Drawings prepared by Dewberry Engineers Inc., revised through November 2, 2021. Also enclosed are Construction Drawings for Platform Framing and Structural Details, prepared by Dewberry Engineers Inc., revised through October 15, 2021. All other details of the Facility will remain the same. The proposed indoor equipment location is within AT&T's lease area and as such, meets the definition of "site" provided in the Regulations of Connecticut State Agencies ("R.C.S.A.") Section 16-50j-2a(29).[1] This minor modification will reduce the roof load and also significantly cut the cost of the required structural modifications to the existing building. See

[1] R.C.S.A. Section 16j-50j-2a(29) defines "site" as "a contiguous parcel of property with specified boundaries, including, but not limited to, the leased area, right-of-way, access and easements, on which a facility and associated equipment are located, shall be located, or are proposed to be located."

CUDDY +FEDER LLP

enclosed Structural Analysis, prepared by Dewberry Engineers Inc., dated October 15, 2021.

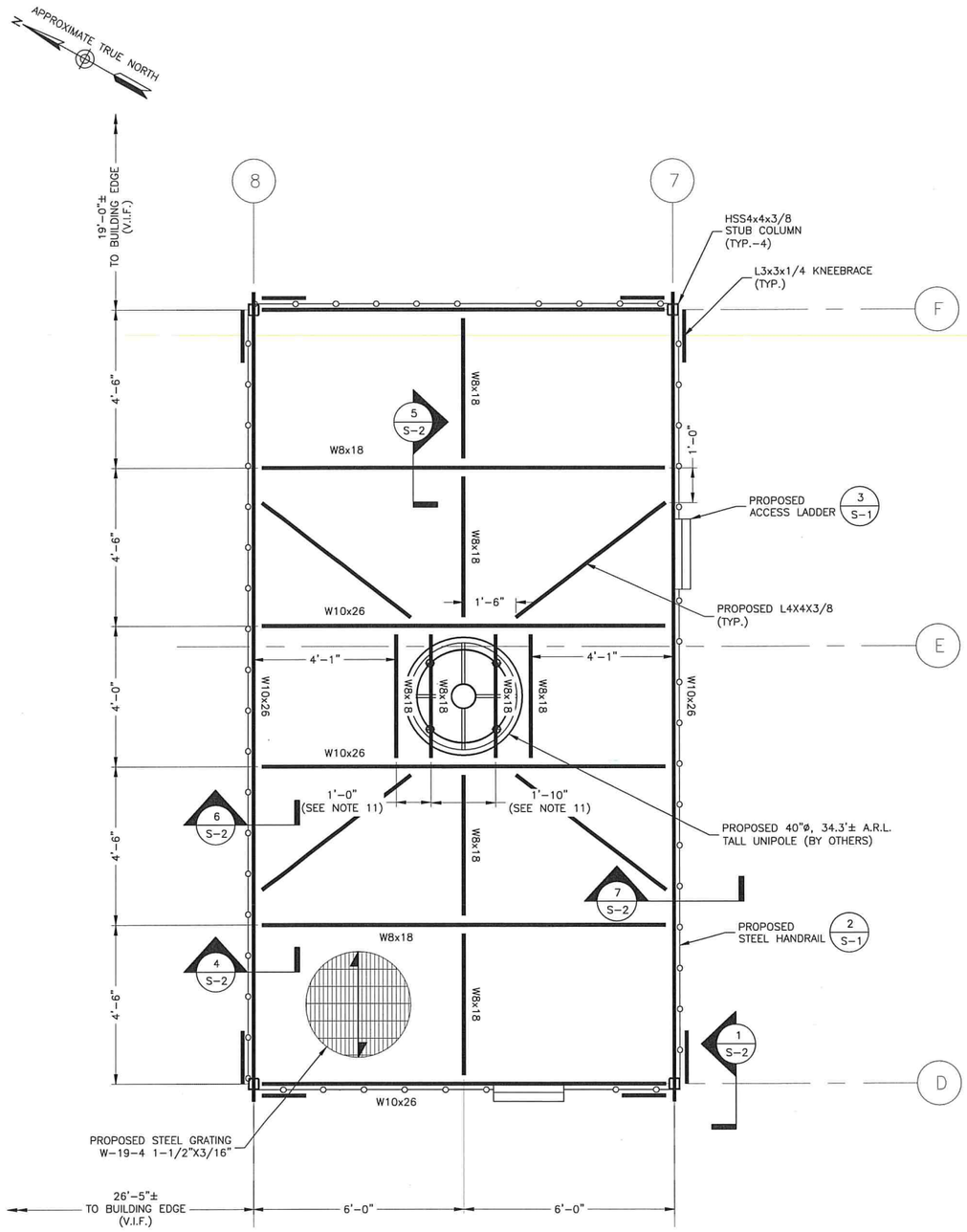
Please accept this letter as notification of a minor amendment to Petition No. 1361. A copy of this letter and enclosures are being sent by email to the City of Stamford Mayor David Martin and the City Land Use Bureau as well as by first class mail to WCL Limited Partnership, the owner of the property.

Thank you for your consideration of this information. Should you need any additional information, please do not hesitate to contact me.

Very truly yours,

Kristen Motel

Enclosure
cc: City of Stamford Mayor David Martin
Ralph Blessing, Land Use Bureau Chief, City of Stamford
WCL Limited Partnership
AT&T
SAI Group, LLC
Lucia Chiocchio, Esq.

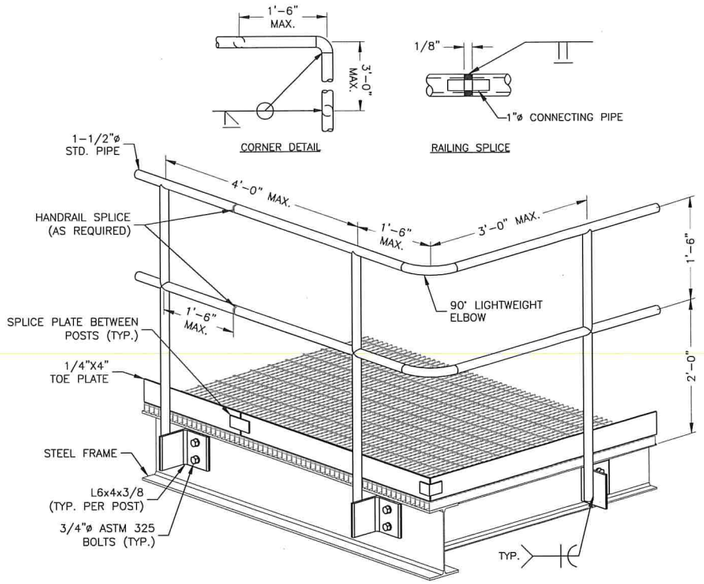


PLATFORM FRAMING PLAN

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

1

0' 1' 2' 4'



NOTE:

1. ALL EXPOSED CORNERS MUST HAVE A 2" RADIUS ELBOW (UNO).

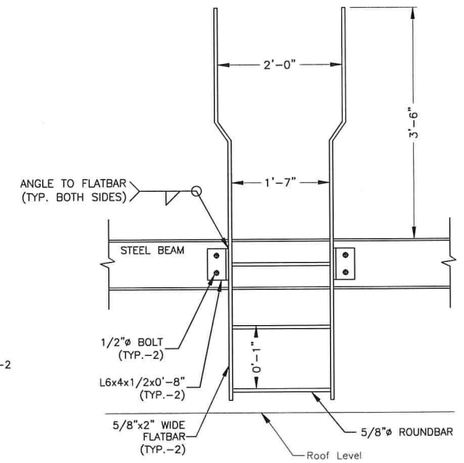
FIXED HANDRAIL

SCALE: N.T.S.

2

NOTES:

1. CONTRACTOR TO VERIFY EXISTING CONDITIONS, BEARING WALLS, COLUMN LOCATIONS PRIOR TO FABRICATION. SEE SHEETS C-1 & C-2 FOR STEEL FRAME LOCATION.
2. NOT ALL INFORMATION SHOWN FOR CLARITY.
3. NORTH IS SHOWN AS APPROXIMATE.
4. ALL BOLTS SHALL BE 3/4" ASTM A325 BOLTS UNLESS NOTED OTHERWISE.
5. PROVIDE SHOP DRAWINGS TO DEWBERRY ENGINEERS INC. FOR REVIEW & APPROVAL PRIOR TO STEEL FABRICATION.
6. CONTRACTOR TO RUN CONDUITS BELOW FRAME TO AVOID TRIP HAZARDS.
7. SEE STRUCTURAL STEEL NOTES ON SHEET G-1.
8. STRUCTURAL STEEL SHALL BE INSTALLED IN ACCORDANCE WITH STRUCTURAL ANALYSIS & STRUCTURAL MODIFICATIONS BY DEWBERRY ENGINEERS INC. DATED 10/15/2021.
9. GRATING BEARINGS BARS TO BE PERPENDICULAR TO SHORTEST SUPPORT SPAN.
10. SEE SHEET C-2 FOR RRH & EQUIPMENT LAYOUT.
11. FINAL LOCATION OF W8X18 BEAMS SUPPORTING THE UNIPOLE BASE PLATE SHALL BE DETERMINED AFTER UNIPOLE DESIGN HAS BEEN PROVIDED.



NOTES:

1. INSTALL ALL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS.
2. ALL EQUIPMENT SHALL BE GROUNDED PER AT&T STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.
3. SEE SITE PLAN FOR PROPOSED LOCATIONS.

ACCESS LADDER MOUNTED TO STEEL FRAME

SCALE: N.T.S.

3

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SALEM, NH 03079

CT2818
STAMFORD
NEWFIELD AVE

CONSTRUCTION DRAWINGS

0	10/15/21	FOR CONSTRUCTION
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STATE OF CONNECTICUT
BENJAMIN B. WHITE
28971
LICENSED
PROFESSIONAL ENGINEER

BENJAMIN B. WHITE, P.E.
CONNECTICUT LICENSE NO.: 0028971

DRAWN BY:	JC
REVIEWED BY:	DS
CHECKED BY:	BBR
PROJECT NUMBER:	50055106
JOB NUMBER:	50065694
SITE ADDRESS:	

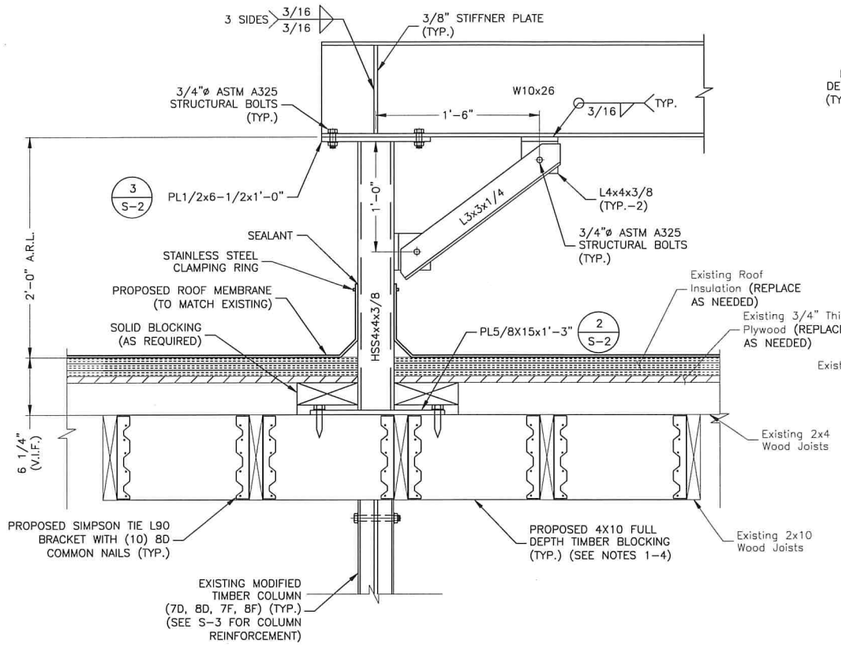
500 NEWFIELD AVENUE
STAMFORD, CT 06905

SHEET TITLE

PLATFORM FRAMING PLAN

SHEET NUMBER

S-1



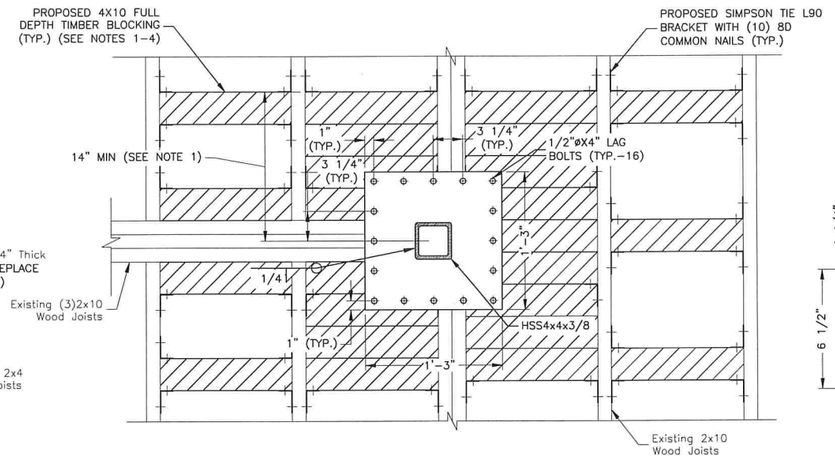
ROOFING NOTES:

1. ALL ROOFING WORK TO BE COMPLETED BY LANDLORD APPROVED ROOFER AND IN ACCORDANCE WITH ANY ROOFING WARRANTIES.

FRAME SUPPORT-POST DOWN 1

SCALE: 3/4"=1' FOR 11"x17"
1 1/2"=1' FOR 22"x34"

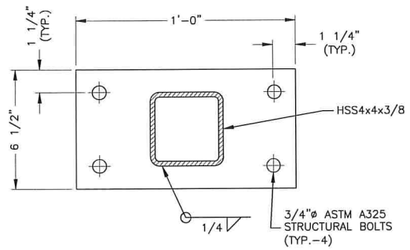
0' 1/2' 1' 1 1/2'



PL5/8x15x1'-3" (BASE PLATE) 2

SCALE: 3/4"=1' FOR 11"x17"
1 1/2"=1' FOR 22"x34"

0' 1/2' 1' 1 1/2'



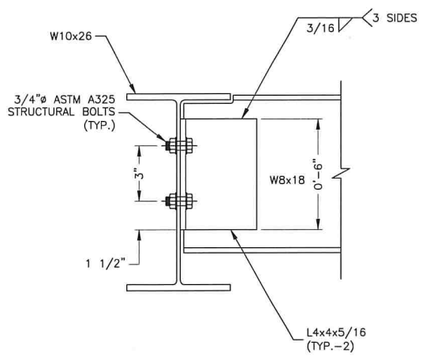
PL1/2x6-1/2x1'-0" (CAP PLATE) 3

SCALE: 1 1/2"=1' FOR 11"x17"
3"=1' FOR 22"x34"

0' 3" 6" 9"

BLOCKING NOTES:

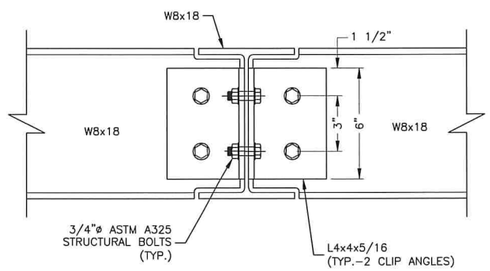
1. PROPOSED TIMBER BLOCKING TO EXTEND A MINIMUM OF (2) ROOF JOIST BAYS PERPENDICULAR AND A MINIMUM OF 14" PARALLEL TO THE ROOF JOISTS FROM THE CENTER OF THE PROPOSED POST DOWNS.
2. TOTAL OF (8) SIMPSON TIE L90 BRACKETS SHALL BE USED WITHIN EACH BLOCKING SECTION WITH (4) EVENLY SPACED ALONG EACH END OF THE BLOCKING IN THE BAYS DIRECTLY ADJACENT TO THE POST DOWN. TOTAL OF (8) SIMPSON TIE L90 BRACKETS SHALL BE USED IN THE SECOND BAYS ADJACENT TO THE POST DOWN. TOTAL OF (40) BRACKETS FOR BLOCKING AT EACH POST DOWN.
3. 4X10 BLOCKING SHALL BE SCREWED TO EACH OTHER WITH A MIN OF (4) 4.5" #10 DECKING SCREWS
4. 4X10 BLOCKING SHALL BE SHIMMED AND NOTCHED AROUND SIMPSON TIE L90 BRACKETS TO ENSURE THERE ARE NO GAPS BETWEEN BLOCKING MEMBERS.
5. CONTRACTOR TO VERIFY EXISTING ROOF FRAMING PLAN.
6. REINSTALL PLYWOOD ROOF DECK TO MATCH EXISTING DEPTH. GLUE AND SCREW TO ROOF JOIST. INSULATE AND REROOF AS REQUIRED.



W8 TO W10 CONNECTION DETAIL 4

SCALE: 1 1/2"=1' FOR 11"x17"
3"=1' FOR 22"x34"

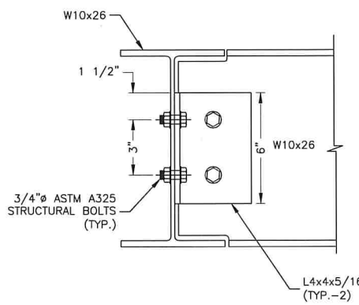
0' 3" 6" 9"



W8 TO W8 CONNECTION DETAIL 5

SCALE: 1 1/2"=1' FOR 11"x17"
3"=1' FOR 22"x34"

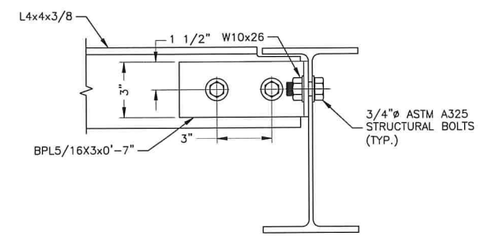
0' 3" 6" 9"



W10 TO W10 CONNECTION DETAIL 6

SCALE: 1 1/2"=1' FOR 11"x17"
3"=1' FOR 22"x34"

0' 3" 6" 9"



L4 TO W10 CONNECTION DETAIL 7

SCALE: 1 1/2"=1' FOR 11"x17"
3"=1' FOR 22"x34"

0' 3" 6" 9"

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SALEM, NH 03079

CT2818
STAMFORD
NEWFIELD AVE

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FAX: 973.739.9710

BENJAMIN B. RITE, P.E.
CONNECTICUT LICENSE NO. 0028971

DRAWN BY:	JC
REVIEWED BY:	DS
CHECKED BY:	BBR
PROJECT NUMBER:	50055106
JOB NUMBER:	50065694
SITE ADDRESS:	

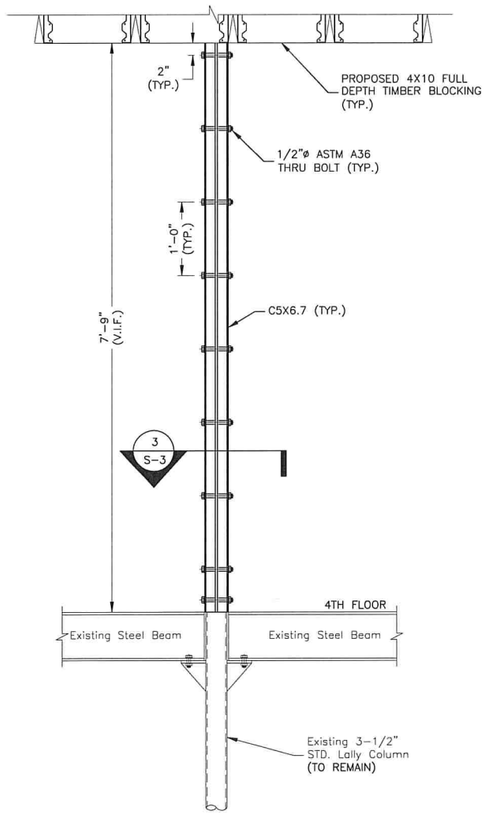
500 NEWFIELD AVENUE
STAMFORD, CT 06905

SHEET TITLE

POST DOWN DETAILS

SHEET NUMBER

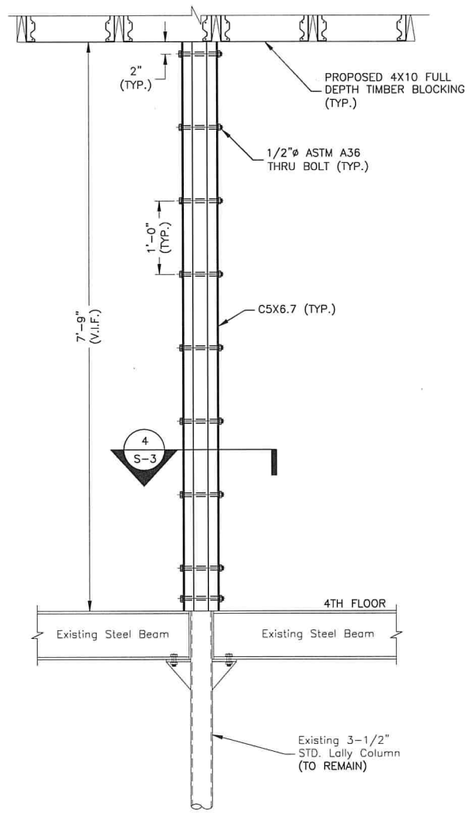
S-2



4X4 TIMBER COLUMN MODIFICATION 1

SCALE: 1/2"=1' FOR 11"x17"
1"=1' FOR 22"x34"

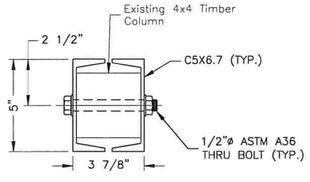
0' 1' 2'



4X6 TIMBER COLUMN MODIFICATION 2

SCALE: 1/2"=1' FOR 11"x17"
1"=1' FOR 22"x34"

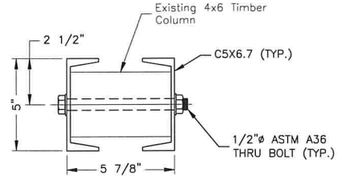
0' 1' 2'



4X4 TIMBER COLUMN MODIFICATION 3

SCALE: 1 1/2"=1' FOR 11"x17"
3"=1' FOR 22"x34"

0' 3" 6" 9"



4X6 TIMBER COLUMN MODIFICATION 4

SCALE: 1 1/2"=1' FOR 11"x17"
3"=1' FOR 22"x34"

0' 3" 6" 9"

TIMBER COLUMN MODIFICATION NOTES:

1. CONTRACTOR TO VERIFY EXISTING COLUMN SIZE AND USE APPLICABLE MODIFICATION DETAIL.
2. CONTRACTOR TO REPLACE ANY TIMBER STUDS THAT NEED TO BE REMOVED DURING MODIFICATION CONSTRUCTION.
3. CONTRACTOR TO INSTALL SHEETROCK AND FINISH WALL TO MATCH EXISTING CONDITIONS AFTER MODIFICATION IS COMPLETE.
4. COORDINATE ALL WORK WITH OWNER AND TENANTS.
5. EXISTING WALL FRAMING NOT SHOWN FOR CLARITY.

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SALEM, NH 03079

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STATE OF CONNECTICUT
BENJAMIN B. RIVETTE
28971
LICENSED
PROFESSIONAL ENGINEER

BENJAMIN B. RIVETTE, P.E.
CONNECTICUT LICENSE NO. 0028971

DRAWN BY:	JC
REVIEWED BY:	DS
CHECKED BY:	BBR
PROJECT NUMBER:	50055106
JOB NUMBER:	50065694
SITE ADDRESS:	

500 NEWFIELD AVENUE
STAMFORD, CT 06905

SHEET TITLE

STRUCTURAL DETAILS

SHEET NUMBER

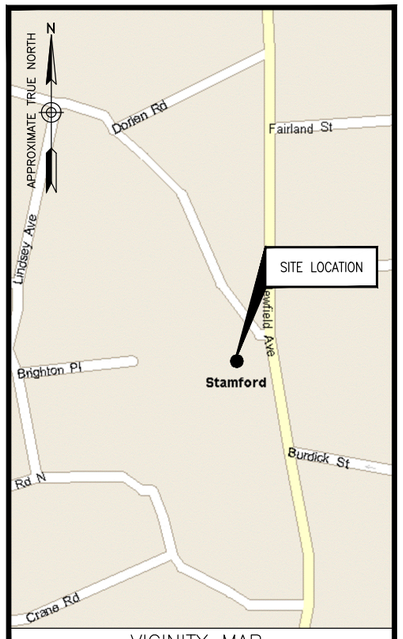
S-3

SITE NAME: STAMFORD NEWFIELD AVE
FA #: 10577823
PACE ID #: MRCTB006490/MRCTB029903/ MRCTB029866/MRCTB047833/ MRCTB029871
NATIONAL SITE ID #: CT2818
500 NEWFIELD AVENUE
STAMFORD, CT 06905

at&t Mobility

REVIEWED
By Brian Freeman at 3:52 pm, Nov 08, 2021

APPROVED
By Radu Alecsandru at 1:26 pm, Nov 04, 2021



VICINITY MAP

DIRECTIONS FROM 500 ENTERPRISE DRIVE, ROCKY HILL, CT:

HEAD SOUTH FOR I-91 S. AT EXIT 17, TAKE RAMP RIGHT FOR CT-15 SOUTH TOWARD W. CROSS PKWY/E. MAIN ST. AT EXIT 36, TAKE RAMP RIGHT FOR CT-106 SOUTH/OLD STAMFORD RD. TURN RIGHT ONTO WOODWAY RD. TURN LEFT ONTO HOPE ST. TURN RIGHT ONTO WEED HILL AVE. TURN LEFT ONTO NEWFIELD AVE. TAKE A SHARP RIGHT ONTO OAKLAWN AVE.

THE SITE WILL BE ON THE LEFT.

CONSULTANT TEAM

ENGINEER:
DEWBERRY ENGINEERS INC.
600 PARSIPPANY ROAD
SUITE 301
PARSIPPANY, NJ 07054

CONTACT: BEN REVETTE
PHONE #: (617) 531-0800

SITE ACQUISITION:
SAI GROUP
12 INDUSTRIAL WAY
SALEM, NH 03079

CONTACT: DAN BILEZIKIAN
PHONE #: (401) 368-0006

CONSTRUCTION:
QUALTEK WIRELESS
16 ESQUIRE ROAD
BILLERICA, MA 01862

CONTACT: STEVE MELE
PHONE #: (845) 664-5480

PROJECT SUMMARY

SITE NAME:
STAMFORD NEWFIELD AVE.

SITE NUMBER:
CT2818

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

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

PROJECT DIRECTORY

SITE ADDRESS:
500 NEWFIELD AVENUE
STAMFORD, CT 06905

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

PROJECT DESCRIPTION

THE PROJECT CONSISTS OF THE INSTALLATION OF 3 SECTORS OF 2 PANEL ANTENNAS (STACKED) PER SECTOR WHICH SHALL BE MOUNTED TO WITHIN A PROPOSED 34.3'± TALL UNIPOLE ON AN EXISTING ROOF AND THE INSTALLATION OF AN EQUIPMENT ROOM IN THE BASEMENT OF THE EXISTING BUILDING. POWER, TELCO & GROUND WILL BE TAKEN FROM DEMARCS WITHIN THE EXISTING BUILDING. 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 OR TWICE PER MONTH FOR MAINTENANCE. THE FACILITY IS NOT EXPECTED TO GENERATE ADDITIONAL NOISE, FUMES OR VIBRATIONS. NO WATER OR SEWER SERVICES ARE NEEDED.

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 INDEX

SHT. NO.	DESCRIPTION
T-1	TITLE SHEET
G-1	GENERAL NOTES
C-1	PROPOSED ROOF PLAN
C-2	PROPOSED ROOFTOP PLATFORM PLAN
C-3	PROPOSED BASEMENT PLAN
C-4	NEWFIELD AVENUE ELEVATION
C-5	PROPOSED EQUIPMENT ROOM PLAN
C-6	LIGHTING & CABLE TRAY/ALARM/SIGNAL PLANS
C-7	CONSTRUCTION DETAILS - I
C-8	CONSTRUCTION DETAILS - II
C-9	CONSTRUCTION DETAILS - III
C-10	ANTENNA DETAILS & PLUMBING DIAGRAM
C-11	EQUIPMENT DETAILS
C-12	EQUIPMENT MOUNTING DETAILS
S-1	PLATFORM FRAMING PLAN
S-2	POST DOWN DETAILS
S-3	STRUCTURAL DETAILS
E-1	ELECTRICAL NOTES & RISER DIAGRAM
E-2	GROUNDING NOTES & SCHEMATICS
E-3	GROUNDING DETAILS
M-1	MECHANICAL DETAILS - I
M-2	MECHANICAL DETAILS - II

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500 NEWFIELD AVENUE
STAMFORD, CT 06905

SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1

GENERAL CONSTRUCTION NOTES:

1. 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.
2. CONTRACTOR SHALL CONTACT "DIG SAFE 1888 DIG SAFE" (888-344-7233) FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
3. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
4. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
5. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
6. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
7. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
8. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
9. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, ETC. BEFORE COMMENCING WORK.
10. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE OWNER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING.
11. EACH CONTRACTOR SHALL COOPERATE WITH THE OWNER'S REPRESENTATIVE, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
12. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE LANDLORD AND EXISTING TENANT.
13. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
14. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR WILL NOTIFY ENGINEER, AT&T MOBILITY PROJECT CONSTRUCTION MANAGER, AND LANDLORD IMMEDIATELY.
15. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
16. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
17. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH LANDLORD AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
18. CONTRACTOR SHALL FURNISH AT&T MOBILITY WITH THREE AS-BUILT SETS OF DRAWINGS UPON COMPLETION OF WORK.
19. ANTENNAS AND CABLES ARE TYPICALLY PROVIDED BY AT&T MOBILITY. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH AT&T MOBILITY PROJECT MANAGER TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED BY AT&T MOBILITY WIRELESS. ALL ITEMS NOT PROVIDED BY AT&T MOBILITY SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED BY AT&T MOBILITY.
20. PRIOR TO SUBMISSION OF BID, CONTRACTOR WILL COORDINATE WITH AT&T MOBILITY PROJECT MANAGER TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY AT&T MOBILITY. ALL REQUIRED PERMITS NOT OBTAINED BY AT&T MOBILITY MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
21. CONTRACTOR SHALL START UP HVAC UNITS AND SYNCHRONIZE THE THERMOSTATS.
22. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH AT&T MOBILITY SPECIFICATIONS AND REQUIREMENTS.
23. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
24. UNLESS OTHERWISE NOTED AT&T MOBILITY SHALL PROVIDE ALL REQUIRED RF MATERIAL FOR CONTRACTOR TO INSTALL, INCLUDING ANTENNAS, TMA'S, BIAS-T'S, COMBINERS, PDU, DC BLOCKS, SURGE ARRESTORS, GPS ANTENNA, GPS SURGE ARRESTOR, COAXIAL CABLE.
25. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL VERIFY ALL EQUIPMENT TO BE PROVIDED BY AT&T MOBILITY FOR INSTALLATION BY CONTRACTOR.
26. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO AT&T MOBILITY SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
27. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLEY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
28. EQUIPMENT SHELTER SHALL HAVE ONE (1) EXTERIOR MOTION DETECTOR OPERATED 100-WATT LIGHT WITH DOWNWARD REFLECTOR SHIELD.
29. CONTRACTOR SHALL NOTIFY DEWBERRY 48 HOURS IN ADVANCE OF POURING CONCRETE, OR BACKFILLING TRENCHES, SEALING ROOF AND WALL PENETRATIONS & POST DOWNS, FINISHING NEW WALLS OR FINAL ELECTRICAL CONNECTIONS FOR ENGINEER REVIEW.
30. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.

CONSTRUCTION NOTES:

1. SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH UL LISTED D FIRE CODE APPROVED MATERIALS.
2. REPAIR ANY DAMAGE DURING CONSTRUCTION TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE CONSTRUCTION MANAGER AND LANDLORD.
3. THE DOOR SHALL BE A STEELCRAFT STEEL UNIT, L-SERIES TYPE, OR APPROVED EQUAL, 3'x7'. THE UNIT SHALL BE INSULATED AND WEATHER-STRIPPED, WITH ALUMINUM THRESHOLD, STANLEY 4 1/2" X 4 1/2" BALL BEARING HINGES (PART # FBB179), AND LOCK PUSHBUTTON COMBO SIMPLEX, LEFT (RIGHT 504507) OR AS SPECIFIED BY AT&T REPRESENTATIVE. THE DOOR SHALL BE SET IN A 16 GAUGE STEEL FRAME. BOTH DOOR & FRAME SHALL BE FACTORY PAINTED AND SHALL HAVE A FIRE RATING OF 2 HOURS, MINIMUM. WWW.STEELCRAFT.COM
4. FINISH ALL DRYWALL SCREWS OR NAILS, AND JOINTS, UNLESS OTHERWISE NOTED. PRIME DRYWALL AND EXTERIOR SURFACES WITH ONE COAT OF WHITE LATEX PRIMER. FINISH WITH TWO COATS OF INTERIOR SEMI-GLASS LATEX PAINT. PAINT SHALL BE BY SHERMAN WILLIAMS, BENJAMIN MOORE, DUTCH BOY, OR EQUAL.
5. CONTRACTOR SHALL INSTALL NEW RESILIENT FLOOR TILE WITHIN LIMITS OF THE PROPOSED AT&T EQUIPMENT ROOM AS FOLLOWS: PREPARATION - CONTRACTOR SHALL INSTALL NEW RESILIENT FLOOR TILE WHICH SHALL BE ASTM F1066 12"x12"x1/8" THICK, ARMSTRONG IMPERIAL TEXTURE TILE #51836, COLOR-SHELTER WHITE. BASE - PROVIDE FS SS-W-40, TYPE II, 4" H. ROPPE VINYL COVE BASE, COLOR BLACK.
6. TURN OVER ALL SALVAGABLE BUILDING MATERIAL TO BUILDING MANAGER.
7. ALL GYPSUM WALL BOARD SHALL BE TYPE GOLD BOND FIRE-SHIELD TYPE X HI-IMPACT WALLBOARD - FIRE RESISTANT RATING - ANSI/UL263. TO ACHIEVE 2 HOUR FIRE RESISTANCE USE DESIGN NO. U495 FOR MATERIALS AND SCREW SPACINGS.
8. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
9. SHIM NEW SILLS, AS NECESSARY, TO LEVEL AND PLUMB WALL.
10. ALL DISRUPTIVE WORK AND WORK WITHIN TENANT SPACES TO BE COORDINATED WITH BUILDING REPRESENTATIVE.
11. ALL ROOF PENETRATIONS SHALL BE RESTORED TO MAINTAIN ALL ROOF WARRANTIES AND ENSURE A PERMANENT WATERPROOF SEAL.

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
2. STRUCTURAL STEEL ROLLED SHAPES, PLATES, AND BARS SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS:

ASTM A-992, GRADE 50	ALL W SHAPES, UNLESS NOTED OR A992 OTHERWISE.
ASTM A-36	ALL OTHER ROLLED SHAPES, PLATES AND BARS UNLESS NOTED OTHERWISE.
ASTM A-500, GRADE B	HSS SECTION (SQUARE, RECTANGULAR, ROUND)
ASTM A-325, TYPE SC OR N	ALL BOLTS FOR CONNECTING STRUCTURAL MEMBERS.
F1554, GRADE 36	ALL ANCHORS BOLTS, UNLESS NOTED OTHERWISE.
ASTM A-53, GRADE B	STEEL PIPE

3. ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND AWS D1.1 WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION", 14TH EDITION. WHERE WELD LENGTH IS NOT INDICATED, USE FULL LENGTH WELD. AT THE COMPLETION OF ALL WELDING, ALL DAMAGE TO GALVANIZED COATING SHALL BE REPAIRED.
4. BOLTED CONNECTIONS SHALL USE BEARING TYPE GALVANIZED ASTM A325 BOLTS (3/4" DIA.) SUPPLIED WITH A NUT AND WASHER UNDER TURNED END AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
5. DO NOT DRILL HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
6. NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIA. GALVANIZED ASTM A 307 BOLTS UNLESS NOTED OTHERWISE.
7. USE PRECAUTIONS & PROCEDURES PER AWS D1.1 WHEN WELDING GALVANIZED METALS.
8. ALL EXISTING BEAM AND COLUMN DIMENSIONS SHALL BE FIELD VERIFY BY CONTRACTOR PRIOR TO FABRICATION. ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THOSE SHOWN SHALL BE REPORTED TO DEWBERRY ENGINEER IMMEDIATELY.
9. CONNECTION DESIGN BY FABRICATOR WILL BE SUBJECT TO REVIEW AND APPROVAL BY ENGINEER.
10. ALL EXTERIOR STEEL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH SPECIFICATION ASTM A123/A123M-00 HOT-DIP GALVANIZED FINISH UNLESS OTHERWISE NOTED. GALVANIZING SHALL BE PERFORMED AFTER SHOP FABRICATION TO THE GREATEST EXTENT POSSIBLE. ALL DINGS, SCRAPES, MARS, AND WELDS IN THE GALVANIZED AREAS SHALL BE REPAIRED. REPAIR DAMAGED GALVANIZED COATINGS ON GALVANIZED ITEMS WITH GALVANIZED REPAIR PAINT ACCORDING TO ASTM A780 AND MANUFACTURER'S WRITTEN INSTRUCTIONS, PRIOR TO COMPLETION OF WORK. TOUCHUP ALL DAMAGED GALVANIZED STEEL WITH APPROVED COLD ZINC, "GALVANOX", "DRY GALV", "ZINC-IT", OR APPROVED EQUIVALENT, IN ACCORDANCE WITH MANUFACTURERS GUIDELINES. TOUCHUP DAMAGED NON GALVANIZED STEEL WITH SAME PAINT APPLIED IN SHOP OR FIELD.
11. ALL WELDED COMPONENTS TO BE SHOP WELDED PRIOR TO INSTALLATION. NO WELDING ACTIVITIES IS PERMITTED DURING INSTALLATION OF PROPOSED EQUIPMENT5 AND/OR HARDWARE ON SITE.
12. STEEL SHOP DRAWINGS AND FABRICATION SHALL CONFORM TO THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES.
13. STRUCTURAL STEEL FABRICATION SHALL BE PERFORMED BY AN ORGANIZATION EXPERIENCED IN STRUCTURAL FABRICATION OF EQUIVALENT MAGNITUDE TO THIS PROJECT, AND HAS AN AISC CERTIFICATION FOR STRUCTURAL STEELWORK. PROVIDE, WITH THE BID, A COPY OF THE AISC CERTIFICATE INDICATING THAT THE FABRICATION PLANT MEETS AISC CATEGORY STD CERTIFICATION. IN LIEU OF AN AISC CERTIFICATION, THE FABRICATOR MAY SUBMIT DOCUMENTATION OF EQUIVALENT EXPERIENCE IN THE FABRICATION OF THE ITEM OR ITEMS IN QUESTION.
14. SPLICING OF STRUCTURAL STEEL SECTIONS, NOT INDICATED ON CONTRACT DOCUMENTS, IS PROHIBITED WITHOUT PRIOR WRITTEN APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD.
15. ORIENT MILL CAMBER UPWARD DURING FABRICATION AND ERECTION.
16. ALUMINUM AND STEEL MEMBERS SHALL BE TREATED OR PROPERLY SEPARATED TO PREVENT GALVANIC AND CORROSIVE EFFECTS.
17. ALL STEEL WORK SHALL BE PAINTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND IN ACCORDANCE WITH ASTM A36 UNLESS OTHERWISE NOTED.

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CONSTRUCTION DRAWINGS		
0	11/02/21	FOR CONSTRUCTION
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BENJAMIN B. REVETTE, P.E.
CONNECTICUT LICENSE NO. 0028971

DRAWN BY:	JC
REVIEWED BY:	DS
CHECKED BY:	BBR
PROJECT NUMBER:	50055106
JOB NUMBER:	50065694
SITE ADDRESS:	

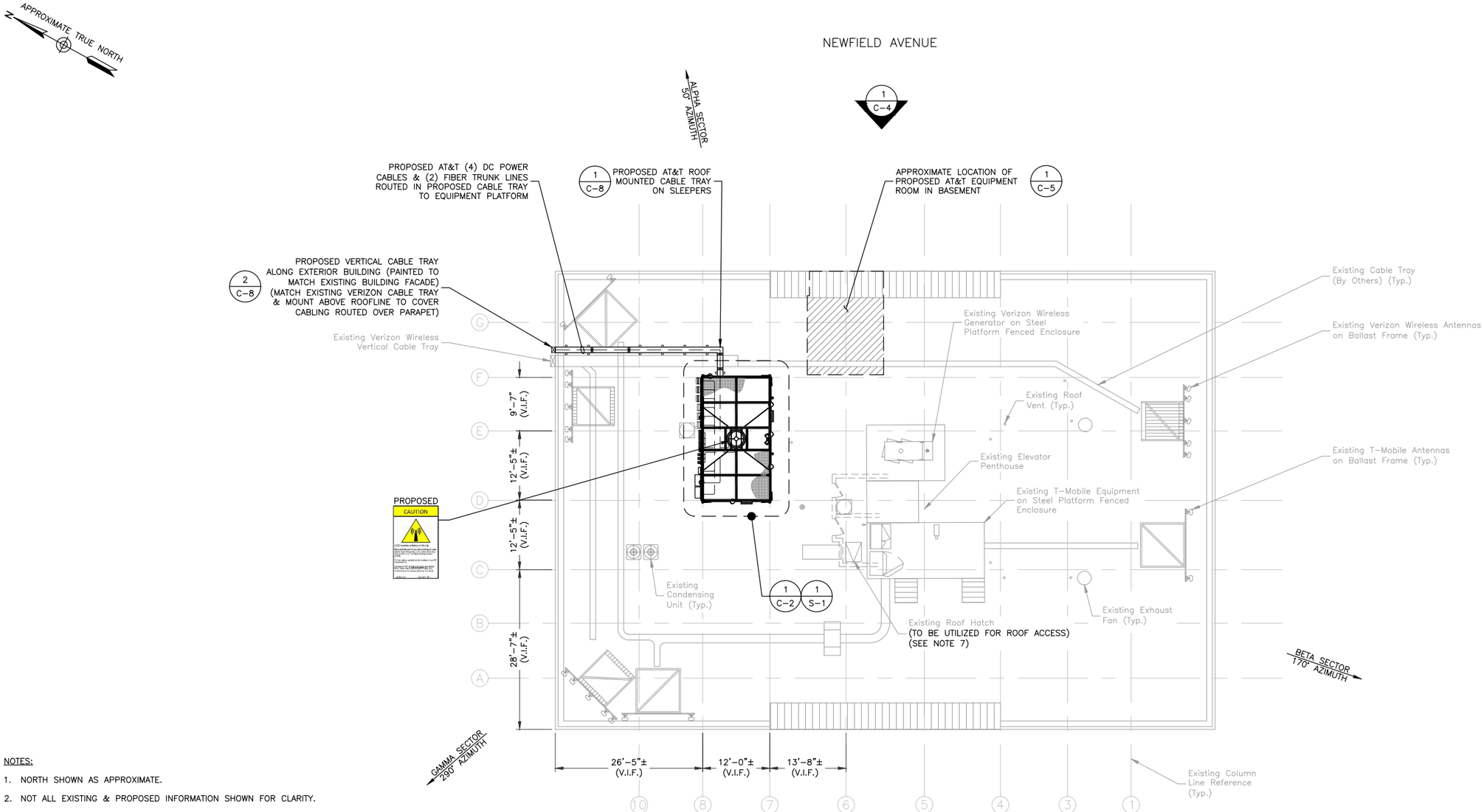
500 NEWFIELD AVENUE
STAMFORD, CT 06905

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

G-1



PROPOSED ROOF PLAN 1

SCALE: 1"=20' FOR 11"x17"
1"=10' FOR 22"x34"

0' 10' 20'

NOTES:

1. NORTH SHOWN AS APPROXIMATE.
2. NOT ALL EXISTING & PROPOSED INFORMATION SHOWN FOR CLARITY.
3. ROOF PLAN BASED ON SITE VISITS BY DEWBERRY ENGINEERS INC. ON 06/30/17 & 01/07/21 AND EXISTING DRAWINGS BY NATCOMM, INC. DATED 05/08/09.
4. STRUCTURAL STEEL & COLUMN REINFORCEMENT SHALL BE INSTALLED IN ACCORDANCE WITH STRUCTURAL ANALYSIS & STRUCTURAL MODIFICATIONS BY DEWBERRY ENGINEERS INC. DATED 10/15/21.
5. DEWBERRY ENGINEERS INC. WAS NOT PROVIDED OR CONTRACTED TO PERFORM UNIPOLE DESIGN & ANALYSIS. TOWER DESIGN IS SHOWN AS CONCEPTUAL BY OTHERS.
6. GROUND ALL PROPOSED EQUIPMENT TO EXISTING WATER METER STREET SIDE.
7. EXISTING ROOF ACCESS LADDER TO BE RESECURED INTO EXISTING WALL.
8. TEMPORARY RAILING & ALL REQUIRED SAFETY MEASURES TO BE INSTALLED ON ROOF DURING CONSTRUCTION.
9. YELLOW RF CAUTION SIGN SHALL BE INSTALLED AT THE BASE OF THE UNIPOLE IN ACCORDANCE WITH THE RF COMPLIANCE REPORT BY SITESAFE FOR SITE ID: CT2818 BY LEO ROMERO DATED 12/13/18.
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.

RF SAFETY ANALYSIS

BASE OF FLAGPOLE:

PARAPET HEIGHT: 10"
BARRIER TYPE: NO BARRIER REQUIRED
SIGN TYPE: PROPOSED CAUTION 2B SIGN

NOTES:

1. BARRIER TYPE & CONSTRUCTION SHALL BE BASED ON DESIGN GUIDANCE FROM "RF SAFETY BARRIER – AT&T ENGINEERED SOLUTION" DATED 02/14/2014. FINAL DESIGN TO BE REVIEWED AND APPROVED BY AT&T PRIOR TO INSTALLATION.
2. NO RF SAFETY BARRIERS SHALL BE INSTALLED WITHIN 6' OF UNPROTECTED ROOF EDGE.
3. BARRIER SOLUTIONS MUST NOT CONNECT TO OTHER WIRELESS CARRIER ANTENNAS OR ANTENNA MOUNTS.
4. RF SAFETY PLAN SHOWN IS FOR GENERAL REFERENCE ONLY. ALL SIGNAGE & ROOF BARRIERS SHALL BE INSTALLED PER THE RF COMPLIANCE REPORT BY SITESAFE FOR SITE ID: CT2818 BY LEO ROMERO DATED 12/13/18.

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STATE OF CONNECTICUT
BENJAMIN B. REVETTE
28971
LICENSED
PROFESSIONAL ENGINEER

BENJAMIN B. REVETTE, P.E.
CONNECTICUT LICENSE NO. 0028971

DRAWN BY:	JC
REVIEWED BY:	DS
CHECKED BY:	BBR
PROJECT NUMBER:	50055106
JOB NUMBER:	50065694
SITE ADDRESS:	

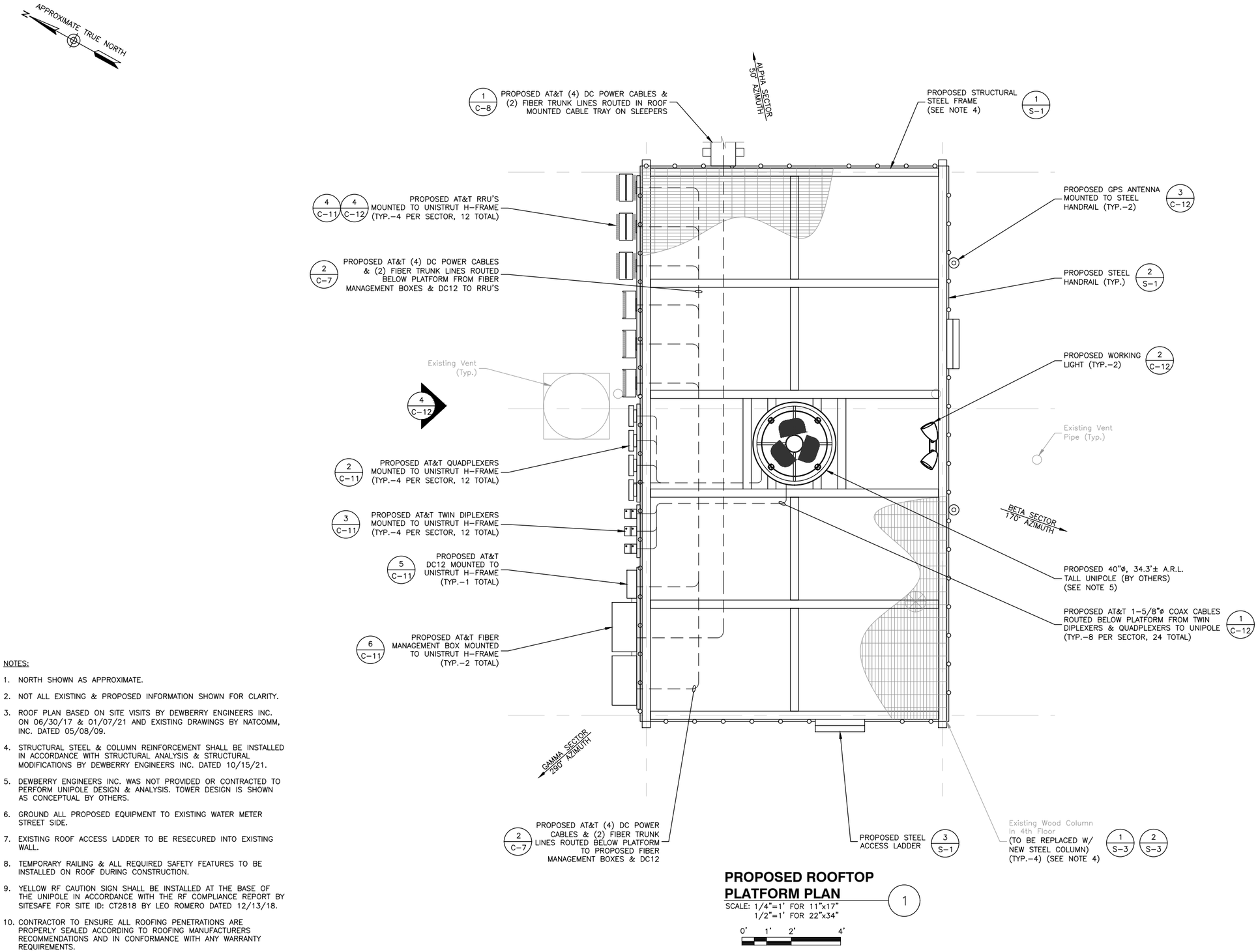
500 NEWFIELD AVENUE
STAMFORD, CT 06905

SHEET TITLE

PROPOSED ROOF PLAN

SHEET NUMBER

C-1



PROPOSED ROOFTOP PLATFORM PLAN

1

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

0' 1' 2' 4'

NOTES:

1. NORTH SHOWN AS APPROXIMATE.
2. NOT ALL EXISTING & PROPOSED INFORMATION SHOWN FOR CLARITY.
3. ROOF PLAN BASED ON SITE VISITS BY DEWBERRY ENGINEERS INC. ON 06/30/17 & 01/07/21 AND EXISTING DRAWINGS BY NATCOMM, INC. DATED 05/08/09.
4. STRUCTURAL STEEL & COLUMN REINFORCEMENT SHALL BE INSTALLED IN ACCORDANCE WITH STRUCTURAL ANALYSIS & STRUCTURAL MODIFICATIONS BY DEWBERRY ENGINEERS INC. DATED 10/15/21.
5. DEWBERRY ENGINEERS INC. WAS NOT PROVIDED OR CONTRACTED TO PERFORM UNIPOLE DESIGN & ANALYSIS. TOWER DESIGN IS SHOWN AS CONCEPTUAL BY OTHERS.
6. GROUND ALL PROPOSED EQUIPMENT TO EXISTING WATER METER STREET SIDE.
7. EXISTING ROOF ACCESS LADDER TO BE RESECURED INTO EXISTING WALL.
8. TEMPORARY RAILING & ALL REQUIRED SAFETY FEATURES TO BE INSTALLED ON ROOF DURING CONSTRUCTION.
9. YELLOW RF CAUTION SIGN SHALL BE INSTALLED AT THE BASE OF THE UNIPOLE IN ACCORDANCE WITH THE RF COMPLIANCE REPORT BY SITESAFE FOR SITE ID: CT2818 BY LEO ROMERO DATED 12/13/18.
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.

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BENJAMIN R. REVETHE
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LICENSED
PROFESSIONAL ENGINEER

BENJAMIN R. REVETHE, P.E.
CONNECTICUT LICENSE NO. 0028971

DRAWN BY:	JC
REVIEWED BY:	DS
CHECKED BY:	BBR
PROJECT NUMBER:	50055106
JOB NUMBER:	50065694
SITE ADDRESS:	

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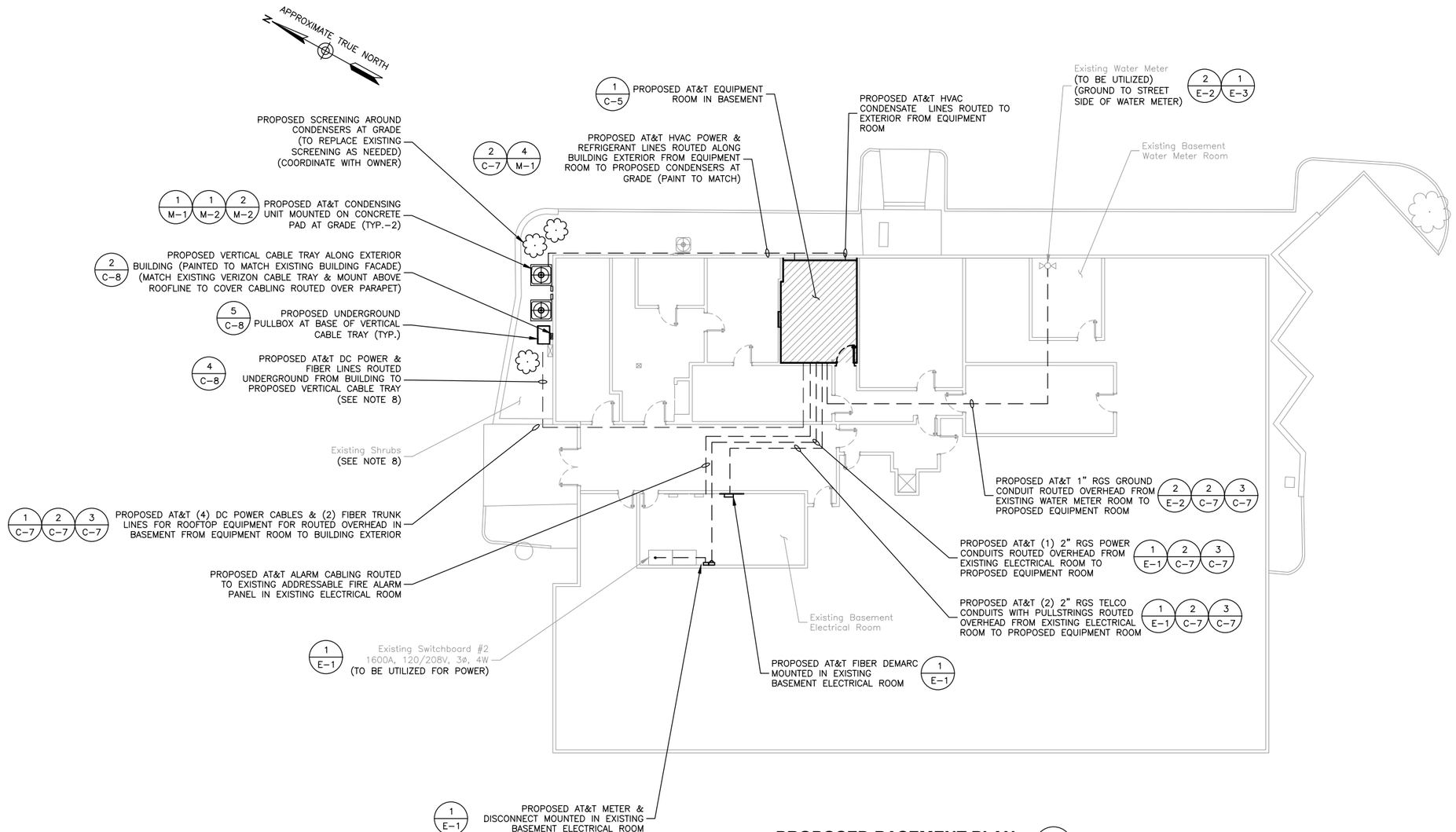
STAMFORD, CT 06905

SHEET TITLE

PROPOSED ROOFTOP PLATFORM PLAN

SHEET NUMBER

C-2



PROPOSED BASEMENT PLAN 1

SCALE: 1"=20' FOR 11"x17"
1"=10' FOR 22"x34"

0' 10' 20'

NOTES:

1. NORTH SHOWN AS APPROXIMATE.
2. NOT ALL EXISTING & PROPOSED INFORMATION SHOWN FOR CLARITY.
3. BASEMENT PLAN BASED ON SITE VISITS BY DEWBERRY ENGINEERS INC. ON 06/30/17 & 01/07/21 AND EXISTING DRAWINGS BY NATCOMM, INC. DATED 05/08/09.
4. STRUCTURAL STEEL SHALL BE INSTALLED IN ACCORDANCE WITH STRUCTURAL ANALYSIS & STRUCTURAL MODIFICATIONS BY DEWBERRY ENGINEERS INC. DATED 10/15/21.
5. DEWBERRY ENGINEERS INC. WAS NOT PROVIDED OR CONTRACTED TO PERFORM UNIPOLE DESIGN & ANALYSIS. TOWER DESIGN IS SHOWN AS CONCEPTUAL BY OTHERS.
6. GROUND ALL PROPOSED EQUIPMENT TO EXISTING WATER METER STREET SIDE.
7. EXISTING ROOF ACCESS LADDER TO BE RESECURED INTO EXISTING WALL.
8. CONTRACTOR SHALL MAKE ACCOMMODATIONS TO PROTECT EXISTING SHRUBS AS REQUIRED. ANY SHRUBS THAT NEED TO BE REMOVED FOR EQUIPMENT/CONDUIT INSTALLATION SHALL BE REPLACED WITH NEW SHRUBS WITH LL & AT&T CM APPROVAL.

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STATE OF CONNECTICUT BENJAMIN B. REVETTE 28971 LICENSED PROFESSIONAL ENGINEER

BENJAMIN B. REVETTE, P.E.
CONNECTICUT LICENSE NO. 0028971

DRAWN BY:	JC
REVIEWED BY:	DS
CHECKED BY:	BBR
PROJECT NUMBER:	50055106
JOB NUMBER:	50065694
SITE ADDRESS:	

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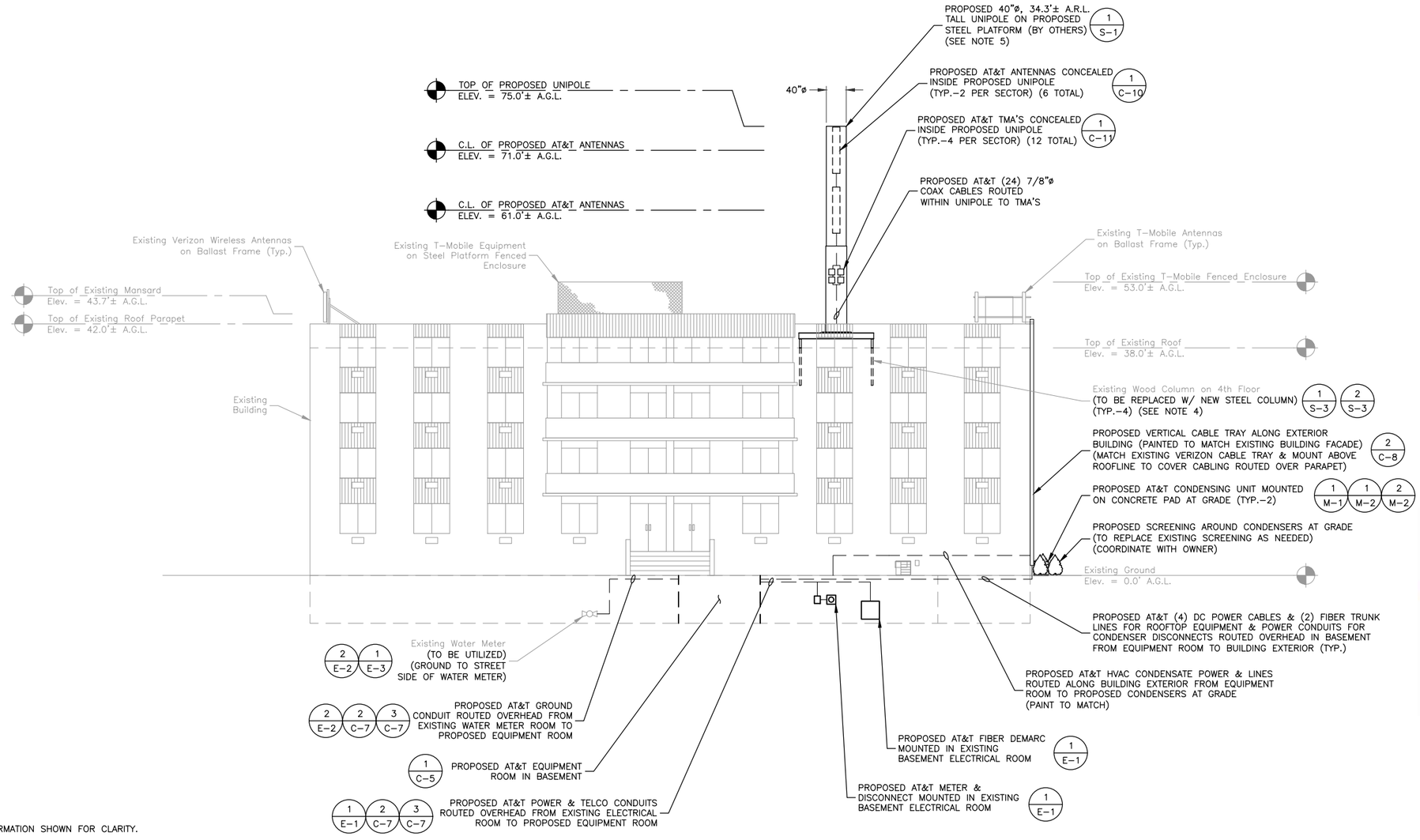
STAMFORD, CT 06905

SHEET TITLE

PROPOSED
BASEMENT PLAN

SHEET NUMBER

C-3



NEWFIELD AVENUE ELEVATION 1

SCALE: 1"=20' FOR 11"x17"
1"=10' FOR 22"x34"

0' 10' 20'

NOTES:

1. NORTH SHOWN AS APPROXIMATE.
2. NOT ALL EXISTING & PROPOSED INFORMATION SHOWN FOR CLARITY.
3. ELEVATION BASED ON SITE VISITS BY DEWBERRY ENGINEERS INC. ON 06/30/17 & 01/07/21 AND EXISTING DRAWINGS BY NATCOMM, INC. DATED 05/08/09.
4. STRUCTURAL STEEL SHALL BE INSTALLED IN ACCORDANCE WITH STRUCTURAL ANALYSIS & STRUCTURAL MODIFICATIONS BY DEWBERRY ENGINEERS INC. DATED 10/15/21.
5. DEWBERRY ENGINEERS INC. WAS NOT PROVIDED OR CONTRACTED TO PERFORM UNIPOLE DESIGN & ANALYSIS. TOWER DESIGN IS SHOWN AS CONCEPTUAL BY OTHERS.
6. GROUND ALL PROPOSED EQUIPMENT TO EXISTING WATER METER STREET SIDE.
7. EXISTING ROOF ACCESS LADDER TO BE RESECURED INTO EXISTING WALL.
8. TEMPORARY RAILING & ALL REQUIRED SAFETY FEATURES TO BE INSTALLED ON ROOF DURING CONSTRUCTION.
9. YELLOW RF CAUTION SIGN SHALL BE INSTALLED AT THE BASE OF THE UNIPOLE IN ACCORDANCE WITH THE RF COMPLIANCE REPORT BY SITESAFE FOR SITE ID: CT2818 BY LEO ROMERO DATED 12/13/18.
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.

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CONSTRUCTION DRAWINGS

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E	03/25/21	REVISED PER COMMENTS
D	03/09/21	PRELIMINARY SUBMISSION
C	01/29/21	PRELIMINARY SUBMISSION
B	08/26/20	PRELIMINARY SUBMISSION
A	08/24/18	PRELIMINARY SUBMISSION

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STATE OF CONNECTICUT
BENJAMIN B. REVETTE
28971
LICENSED
PROFESSIONAL ENGINEER

BENJAMIN B. REVETTE, P.E.
CONNECTICUT LICENSE NO. 0028971

DRAWN BY:	JC
REVIEWED BY:	DS
CHECKED BY:	BBR
PROJECT NUMBER:	50055106
JOB NUMBER:	50065694
SITE ADDRESS:	

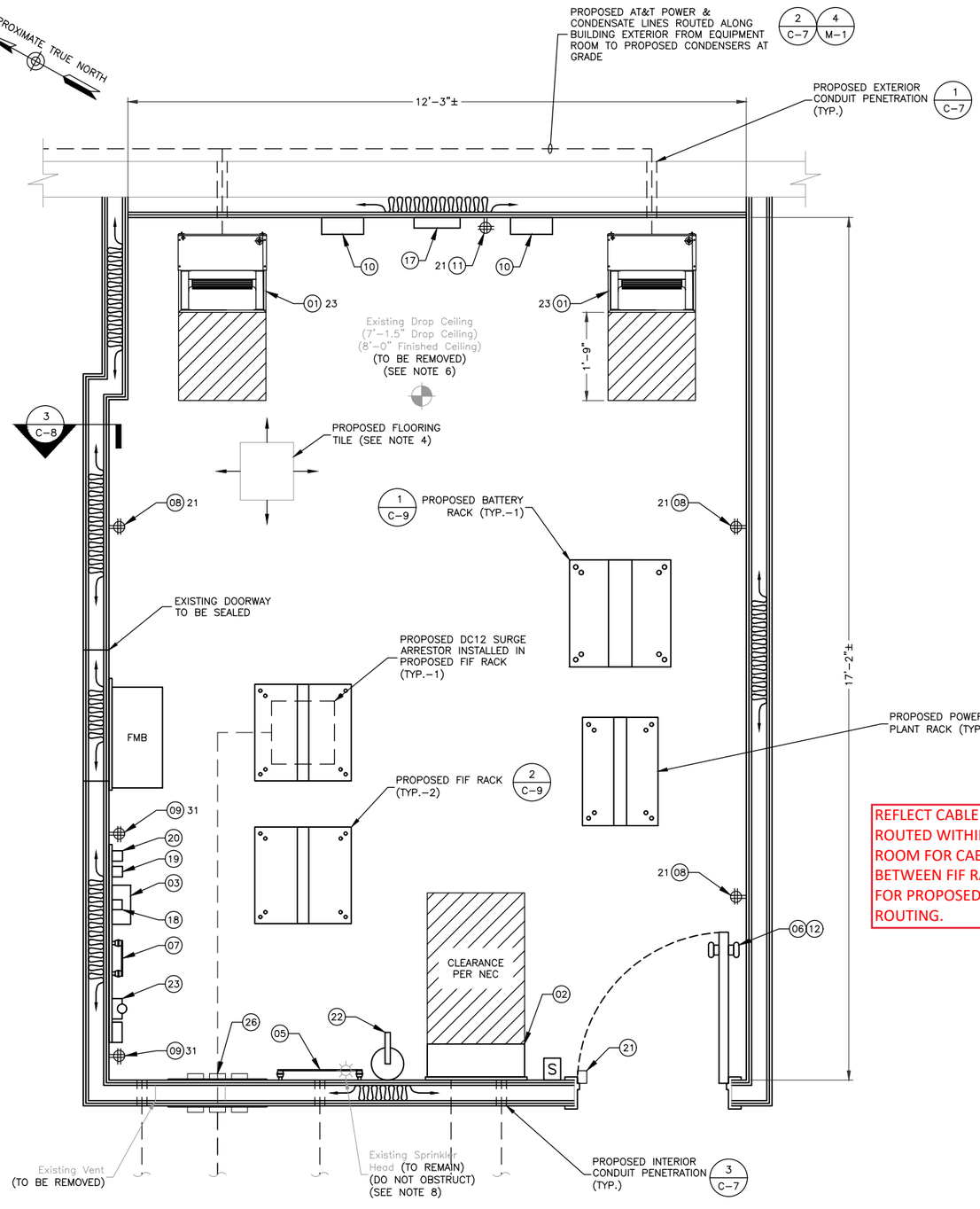
500 NEWFIELD AVENUE
STAMFORD, CT 06905

SHEET TITLE

NEWFIELD AVENUE ELEVATION

SHEET NUMBER

C-4



PROPOSED EQUIPMENT ROOM PLAN

1

SCALE: 3/8"=1' FOR 11"x17"
3/4"=1' FOR 22"x34"

0' 1' 2' 3'

REFLECT CABLE LADDER ROUTED WITHIN EQUIPMENT ROOM FOR CABLING ROUTED BETWEEN FIF RACK AND PP FOR PROPOSED CABLE ROUTING.

BILL OF MATERIALS

01	TRANE 5 AC UNIT, 5 TON (SEE PAGE M-1)
02	LOAD CENTER (200A, 2P, 120/208V;3ø) (SEE NOTE 9)
03	TELCO ALARM BOX 16"x12"x16" NEMA 1
04	TELCO BOARD, 3/4"x4'-0"x8'-0" AC PAINTED WHITE
05	MASTER GROUND BAR, 4"x20"x1/4" TINNED
06	3'-6"x7'-0" DOOR, FRAME AND HARDWARE, SEE NOTE 3 UNDER CONSTRUCTION NOTES ON G-1
07	TELCO GROUND BAR, 2"x14"x1/4"
08	QUAD RECEPTACLES, 20 AMP - (2) TWO HUBBELL P/N 5362W w/P82W PLATE @18" AFF
09	RECEPTACLE, 20A, 120V, TWISTLOCK - HUBBELL P/N 2310 w/P720W PLATE
10	SQUARE D HU361RB, 60A, NEMA 3R NON-FUSED SAFETY SWITCH
11	HUBBELL #6FR5362WA, 20A, 120V GFCI RECEPTACLE (PLATE INCLUDED) (FEED FROM "AT&T" PANEL)
12	DOOR LOCK KABA POWERPLEX 2000 SERIES, ELECTRONIC (SELF-POWERING; NO BATTERIES) W/ BEST CORE
13	INTERIOR LIGHT SWITCH, 20AMP HUBBELL P/N 1221 W/ P/N P11N WALL PLATE
14	INTERIOR LIGHT FIXTURES, LITHONIA LIGHTING P/N: ZL1N 4' LED STRIP LIGHT
15	EMERGENCY LIGHT, LITHONIA QUANTUM LED EMERGENCY LIGHTING UNIT P/N: ELM2 LED EXIT LIGHT, COOPER APC/APCH COMBO EMERGENCY LIGHTING P/N: APC7
16	4"x4" JUNCTION BOX
17	LEAD LAG CONTROLLER (SEE DETAIL 3 ON SHEET M-1)
18	ALARM BLOCK, 100 TERMINAL (SIEMENS PIN S66B450MH49)
19	HIGH TEMPERATURE ALARM, DAYTON 2E206
20	LOW TEMPERATURE ALARM, DAYTON 2E206
21	MAGNETIC DOOR ALARM CONTACTS
22	FIRE EXTINGUISHER FE-36 DUPONT
23	EYE WASH STATION, DUAL 32 OZ BOTTLE
26	CABLE ENTRY PORT (SITE PRO 1 P/N: E1118)

NOTE:

(#) :-REFER TO THIS SHEET FOR BILL OF MATERIALS.

:-REFER TO SHEET E-1 FOR POWER PANEL SCHEDULE.

FOR RISER DIAGRAM SEE SHEET E-1.

NOTES:

1. SOME EXISTING & PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
2. VERIFY FINAL EQUIPMENT CONFIGURATION WITH AT&T CM PRIOR TO CONSTRUCTION.
3. PROVIDE 3/4" PLYWOOD FIRE RESISTANT BACKBOARD, EYE WASH KIT, FIRST AID KIT, FLOOR MAT, 6' FIBER GLASS STEP, HEAVY DUTY DUST PAN, BROOM & GARBAGE CAN, DESK & CHAIR.
4. INSTALL NEW RESILIENT TILE FLOOR. PROVIDE FS SS-W-40, TYPE II, 4" H. ROPPE VINYL COVE BASE, COLOR BLACK.
5. GENERAL CONTRACTOR TO SUBMIT CLOSE OUT PACKAGE UPON JOB COMPLETION INCLUDING AS-BUILT DRAWINGS (PER RED LINED DRAWINGS, MANUALS, SIGN OFF, PERMITS, ALL TESTING & CERTIFICATE OF OCCUPANCY.
6. EXISTING DROP CEILING, SUPPORT FRAMING & LIGHTING TO BE REMOVED. EXISTING CEILING TO BE CLEANED & REFINISHED WITH FRP PANELS TO LIMITS OF PROPOSED EQUIPMENT ROOM. INSPECT AREA FOR ANY WATER DAMAGE & REVIEW WITH AT&T CM PRIOR TO REFINISHING.
7. LL TO REMOVE ALL ALL STORAGE & IDENTIFY ANY ABANDONED FEATURES TO BE REMOVED.
8. EXISTING SPRINKLER SYSTEM TO REMAIN. NO CHANGES TO ROOM FOOTPRINT/COVERAGE AREA PROPOSED. PROPOSED FEATURES SHALL NOT OBSTRUCT SPRINKLER HEADS.
9. CONTRACTOR SHALL CONFIRM PANEL TYPE & TEMPORARY GENERATOR PLUG COMPATIBILITY WITH AT&T & CM PRIOR TO ORDERING.

at&t
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STAMFORD, CT 06905

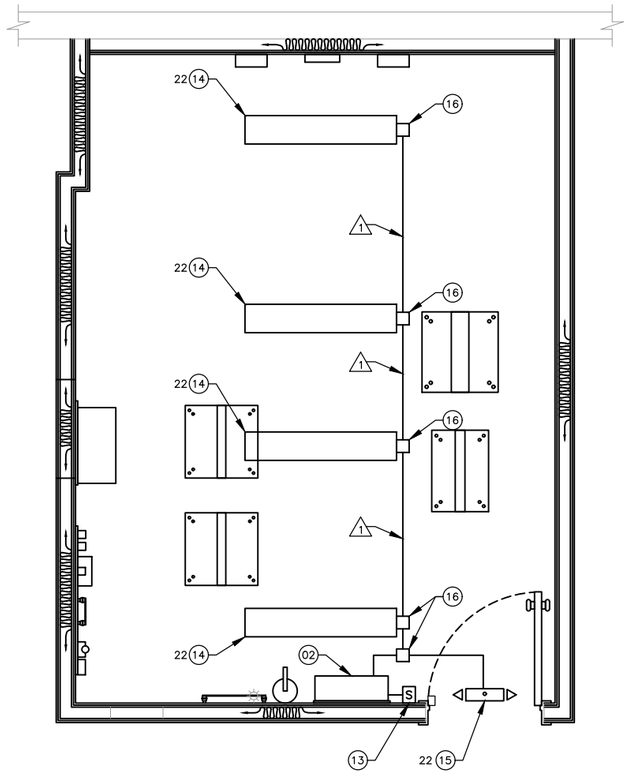
SHEET TITLE

PROPOSED EQUIPMENT ROOM PLAN

SHEET NUMBER

C-5

APPROXIMATE TRUE NORTH

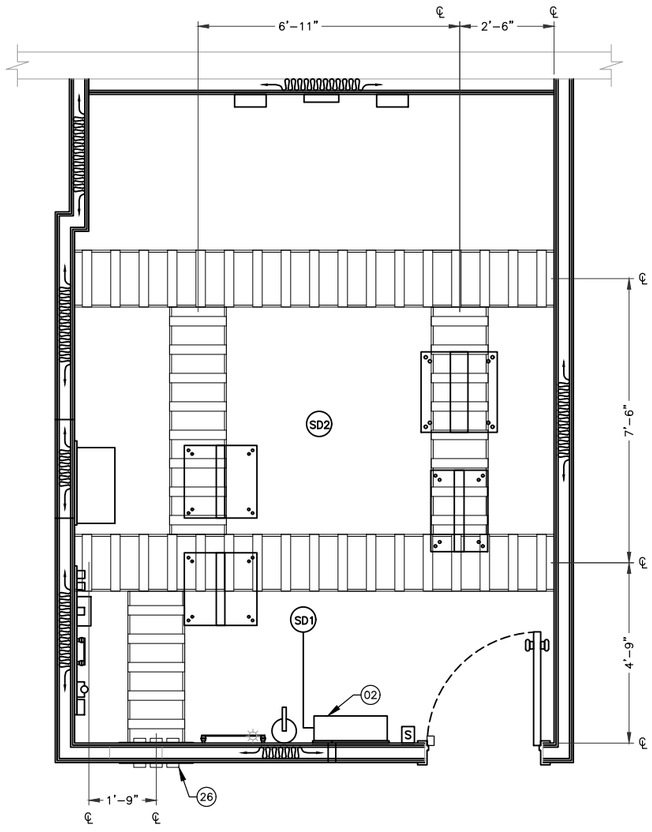


LIGHTING PLAN

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

1

0' 1' 2' 4'



CABLE TRAY/ALARM/SIGNAL PLAN

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

2

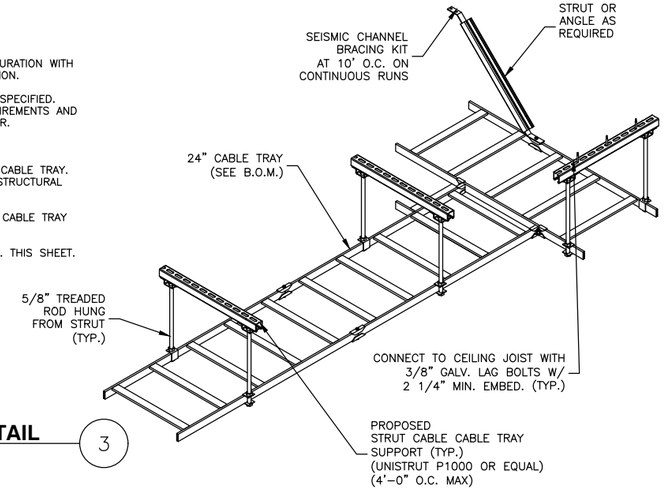
0' 1' 2' 4'

LEGEND	
SD1	CONNECT SMOKE DETECTOR TO EXISTING BUILDING ADDRESSABLE FIRE ALARM PANEL IN EXISTING ELECTRICAL ROOM
SD2	STAND ALONE SMOKE DETECTOR WITH DRY CONTACTS FOR CONNECTION TO AT&T DIAL UP
(#)	:-REFER TO SHEET C-5 FOR BILL OF MATERIALS.
#	:-REFER TO SHEET E-1 FOR POWER PANEL SCHEDULE. FOR RISER DIAGRAM SEE SHEET E-1.
1	2#12 & 1#12G IN 3/4" C (EMT)

24" CABLE TRAY PARTS-BOM
NEWTON INSTRUMENT #0020032645, 24-INCH CABLE TRAY
NEWTON INSTRUMENT #0021170000, CABLE TRAY FINISH CAP
NEWTON INSTRUMENT #0020110010, SPLICE CLAMP
NEWTON INSTRUMENT #0020130010, CORNER CLAMP
NEWTON INSTRUMENT #0020660030, CEILING HANGER BRACKET
NEWTON INSTRUMENT #0020460010, CABLE RACK HANGER
NEWTON INSTRUMENT #2023935110, 5/8"X10' TREADED ROD
NEWTON INSTRUMENT #2111990400, 5/8" THREADED ROD END CAP
NEWTON INSTRUMENT #0030530310, 5/8" THREADED ROD COUPLER
NEWTON INSTRUMENT #0030140810, 5/8"-11 NUT
NEWTON INSTRUMENT #0020830230, WALL TERMINATION BRACKET
NEWTON INSTRUMENT #2126590030, POWER CABLE BRACKET
NEWTON INSTRUMENT #0020851230, 24" END CLOSING BAR

CABLE TRAY NOTES:

1. COORDINATE FINAL TRAY CONFIGURATION WITH AT&T CM PRIOR TO CONSTRUCTION.
2. NOT ALL REQUIRED PARTS ARE SPECIFIED. FIELD VERIFY CABLE TRAY REQUIREMENTS AND COORDINATE WITH MANUFACTURER.
3. GROUND ALL TRAYS SECTIONS.
4. PROVIDE SEISMIC BRACING FOR CABLE TRAY. CONNECT BRACING TO CEILING STRUCTURAL MEMBERS.
5. DETAIL IS SCHEMATIC. STRUT & CABLE TRAY ORIENTATION VARY.
6. SEE CABLE TRAY PLAN & B.O.M. THIS SHEET.



CABLE TRAY DETAIL

SCALE: N.T.S.

3

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JOB NUMBER:	50065694
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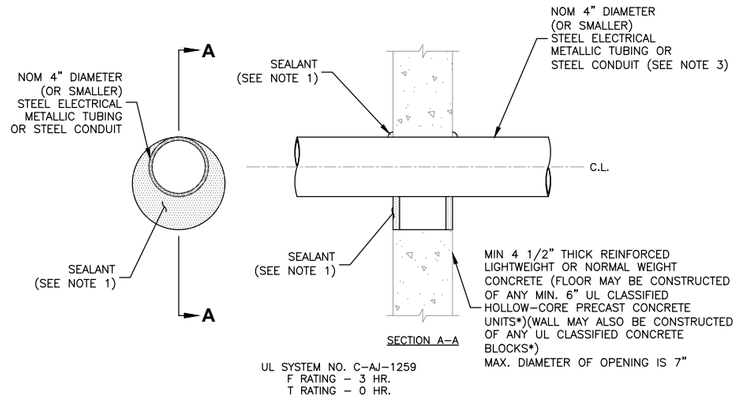
500 NEWFIELD AVENUE
STAMFORD, CT 06905

SHEET TITLE

LIGHTING & CABLE TRAY/ ALARM/SIGNAL PLANS

SHEET NUMBER

C-6



UL SYSTEM NO. C-AJ-1259
F RATING - 3 HR.
T RATING - 0 HR.

NOTES:

1. FILL, VOID OR CAVITY MATERIAL* - SEALANT - MIN. 1/2" THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH BOTH SURFACES OF FLOOR OR WALL. AT THE POINT CONTACT LOCATION BETWEEN PENETRATING ITEM AND CONCRETE, A MIN. 1/4" THICK BEAD OF FILL MATERIAL SHALL BE APPLIED AT THE CONCRETE/ PENETRATING ITEM INTERFACE ON BOTH SIDES OF FLOOR OR WALL.

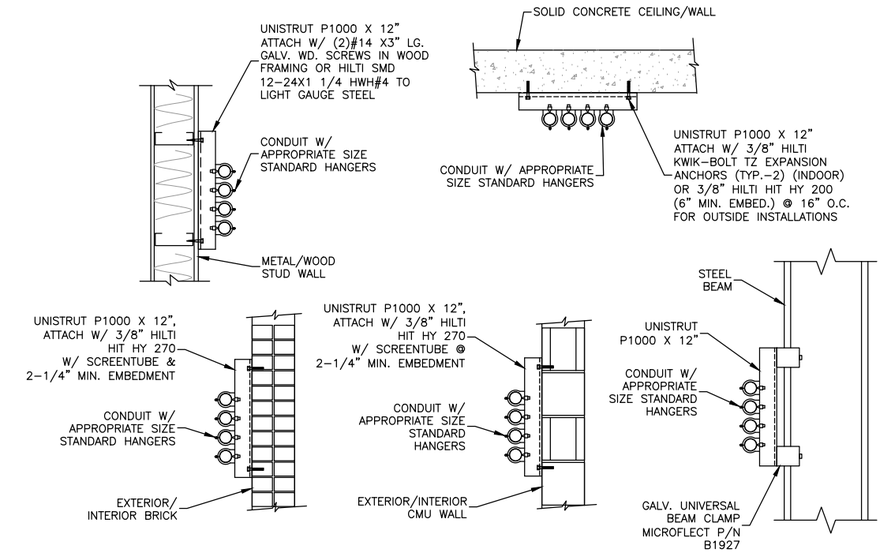
2. FORMING MATERIAL - (OPTIONAL, NOT SHOWN) - MINERAL WOOL BATT PACKING MATERIAL OR POLYURETHANE BACKER ROD FRICTION FITTED INTO OPENING AND RECESSED FROM FLOOR OR WALL SURFACES AS REQUIRED TO ACCOMMODATE THICKNESS OF FILL MATERIAL.

3. ONE CONDUIT TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN THE CONDUIT AND THE PERIPHERY OF THE OPENING SHALL BE A MIN. OF 0" (POINT OF CONTACT) TO A MAX. OF 3". CONDUIT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY.

* BEARING THE UL CLASSIFICATION MARK.

CORING DETAIL 1

SCALE: N.T.S.



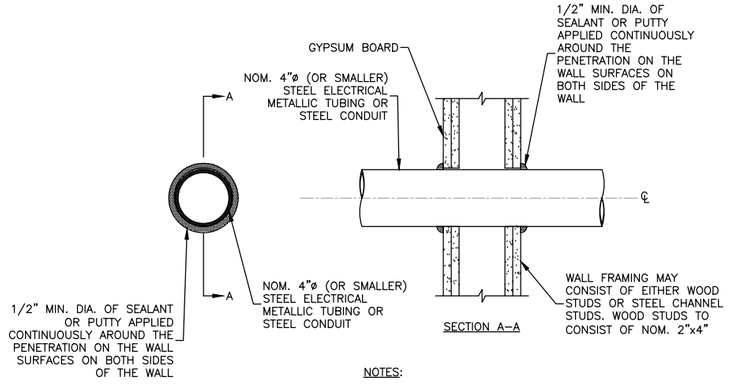
NOTES:

1. ALL COAX SUPPORT SPACING: 4'-0" MAX.

2. ALL CONDUIT SUPPORT SPACING: 10'-0" MAX.

CABLE/CONDUIT SUPPORT DETAIL 2

SCALE: N.T.S.



SYSTEM NO. W-L-1344
F RATINGS - 1 AND 2 HR
T RATING - 1/4 HR
L RATING AT AMBIENT - LESS THAN 1 CFM/SQ FT
L RATING AT 400 F - LESS THAN 1 CFM/SQ FT

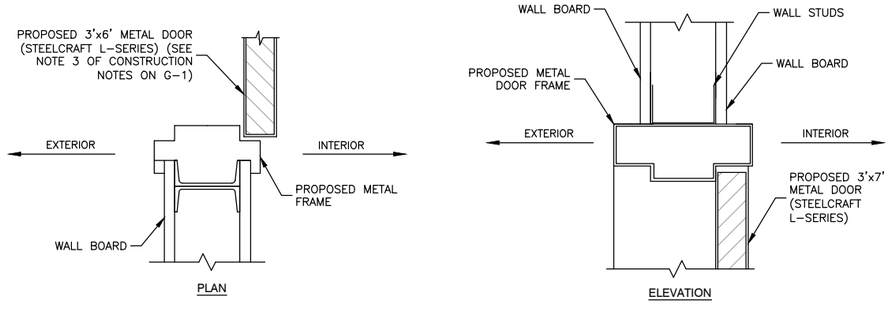
NOTES:

1. THE 1 AND 2 HOUR FIRE RATED GYPSUM WALL BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS & MANNER SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL & PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY.

2. 5" DIAMETER OPENING MAX.

SECTION - THROUGH PENETRATION FIRESTOP SYSTEM 3

SCALE: N.T.S.



NOTE:

1. THE DOOR SHALL BE A STEELCRAFT STEEL UNIT, L-SERIES TYPE, OR APPROVED EQUAL, (1) 3'x7'. THE UNIT SHALL BE INSULATED AND WEATHER-STRIPPED, WITH ALUMINUM THRESHOLD, STANLEY 4 1/2" X 4 1/2" BALL BEARING HINGES (PART# FBB179), AND A "BEST" DEAD BOLT CYLINDRICAL LOCK OR AS SPECIFIED BY T-MOBILE REPRESENTATIVE. THE DOOR SHALL BE SET IN A 16 GAUGE STEEL FRAME. BOTH DOOR & FRAME SHALL BE FACTORY PAINTED AND SHALL HAVE A FIRE RATING OF 2 HOURS, MINIMUM. WWW.STEELCRAFT.COM

DOOR JAMB DETAIL 4

SCALE: N.T.S.

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SITE ADDRESS:	

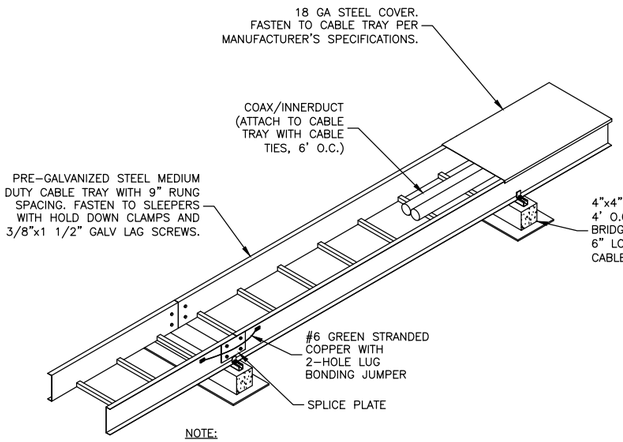
500 NEWFIELD AVENUE
STAMFORD, CT 06905

SHEET TITLE

CONSTRUCTION DETAILS - II

SHEET NUMBER

C-7



NOTE:

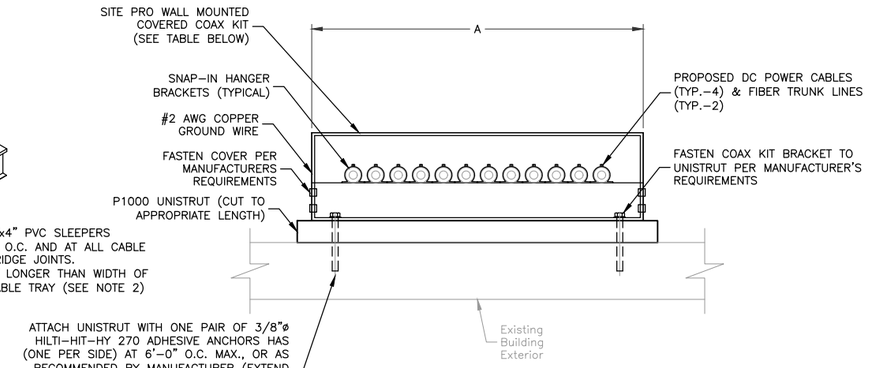
1. ALL PART NUMBERS ARE SITE PRO 1 PART NUMBERS.
2. EVERY OTHER PVC SLEEPER IS TO BE FILLED WITH CONCRETE.

WIDTH	CABLE TRAY PART #	CABLE TRAY COVER PART #
6"	LT-06-4D	LT-VSS-06-A
9"	LT-09-4D	LT-VSS-09-A
12"	LT-12-4D	LT-VSS-12-A
24"	LT-24-4D	LT-VSS-24-A

ROOF MOUNTED CABLE TRAY

SCALE: N.T.S.

1



NO. CABLES	SITE PRO WALL MOUNTED COVERED COAX KIT (P/N)	A
4	WMC4	11-1/2"
8	WMC8	21-1/2"
12	WMC12	31"

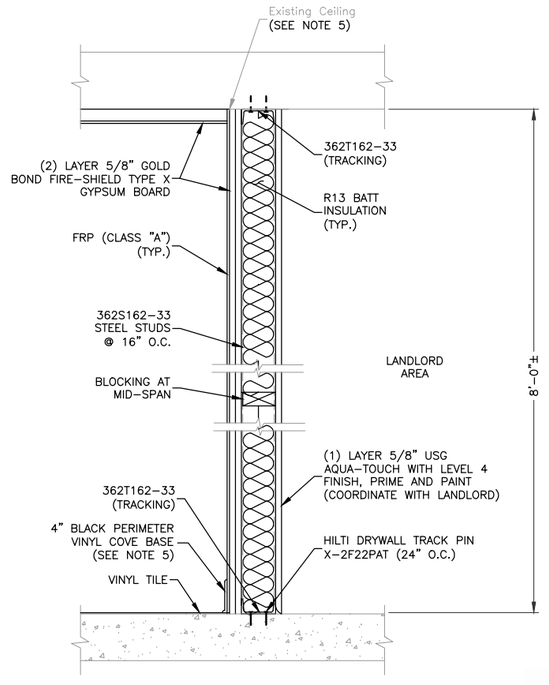
NOTES:

1. VERTICAL TRAY SHALL BE PAINTED TO MATCH BUILDING SURROUNDING SURFACE ONLY AT SPECIFIC REQUEST OF LANDLORD.
2. SUPPORT ELECTRICAL CABLES WITH TIE WRAPS EVERY 3 FEET. COAX CABLES SHALL BE SUPPORTED AS REQUIRED BY MANUFACTURERS BUT AT A MINIMUM OF EVERY 3 FEET USING MANUFACTURER RECOMMENDED CABLE SUPPORTS.
3. WHEN CABLE TRAY COVERS ARE SPECIFIED, THEY SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS INSTALLATION PROCEDURES AND INSTRUCTIONS FOR 'HIGH WIND CONDITIONS'. THIS INCLUDES CONNECTOR TYPE AND SPACING.
4. INSTALL ANCHORS PER MANUFACTURER'S INSTRUCTIONS. PROVIDE WATER-TIGHT SEAL AT ALL PENETRATIONS.

VERTICAL MOUNT CABLE TRAY

SCALE: N.T.S.

2



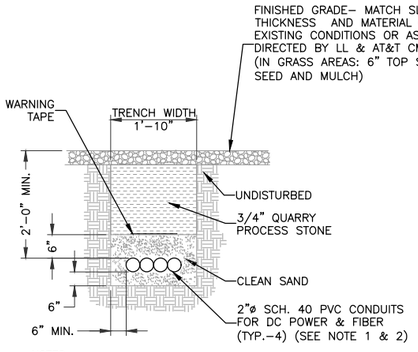
NOTES:

1. SOME INFORMATION NOT SHOWN FOR CLARITY.
2. ROOM TO MAINTAIN A 1 HR. FIRE RATING BETWEEN LANDLORD & AT&T EQUIPMENT ROOM (UL DES U301).
3. APPLY ALL GYPSUM BOARD PERPENDICULAR TO FRAMING WITH STRAP BLOCKING BEHIND THE HORIZONTAL WALLBOARD JOINT WITH SOLID BLOCKING BETWEEN THE FIRST TWO END STUDS.
4. EXISTING DROP CEILING, SUPPORT FRAMING & LIGHTING TO BE REMOVED. EXISTING WALLS & CEILING TO BE CLEANED & REFINISHED WITH FRP PANELS TO LIMITS OF PROPOSED EQUIPMENT ROOM. INSPECT AREA FOR ANY WATER DAMAGE & REVIEW WITH AT&T CM PRIOR TO REFINISHING.
5. INSTALL NEW RESILIENT TILE FLOOR. PROVIDE FS SS-W-40, TYPE II, 4" H. ROPPE VINYL COVE BASE, COLOR BLACK.

INTERIOR WALL DETAIL

SCALE: N.T.S.

3



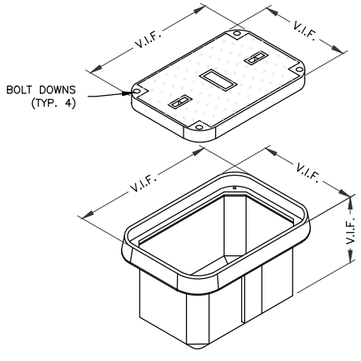
NOTES:

1. CONTRACTOR TO CONFIRM PROPOSED FIBER/POWER CABLE COUNT WITH AT&T CM/RF & CONFIRM NUMBER OF COORESPONDING CONDUITS REQUIRED FOR PROPOSED/FUTURE CONDITIONS.
2. CONTRACTOR SHALL MAKE ACCOMMODATIONS TO PROTECT EXISTING SHRUBS AS REQUIRED. ANY SHRUBS THAT NEED TO BE REMOVED FOR EQUIPMENT/CONDUIT INSTALLATION SHALL BE REPLACED WITH NEW SHRUBS WITH LL & AT&T CM APPROVAL.

DC POWER & FIBER TRENCH DETAIL

SCALE: N.T.S.

4



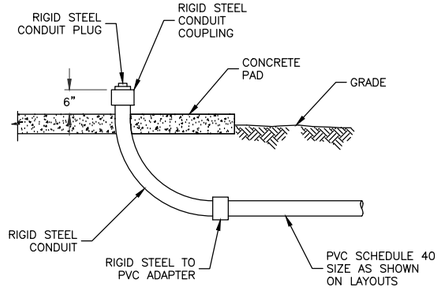
NOTES:

1. ALL STUB-UP CONDUITS INSIDE PULL BOXES WILL BE 6" FROM TOP OF BOX AND HAVE PULL STRING AND CAPS.
2. ANY HAND HOLE/PULL BOXES IN PARKING LOT SHALL BE RATED FOR VEHICULAR TRAVEL.
3. CONTRACTOR TO DETERMINE SIZE OF PULL BOX BASED ON FIELD CONDITIONS & NUMBER OF CONDUITS REQUIRED.

HAND HOLE/ PULL BOX DETAIL

SCALE: N.T.S.

5



UNDERGROUND CONDUIT STUB-UP DETAIL

SCALE: N.T.S.

6

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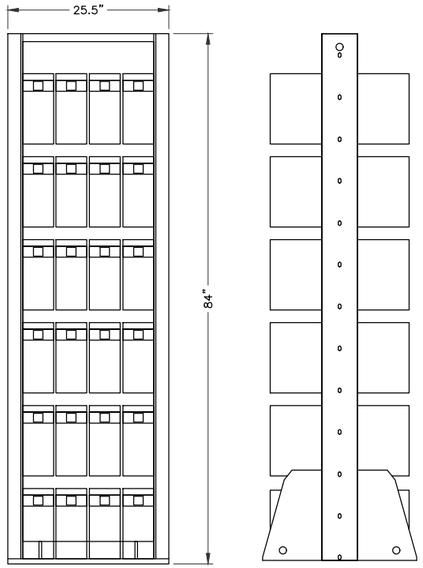
CONSTRUCTION DETAILS – II

SHEET NUMBER

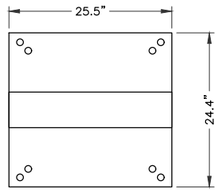
C-8



NOTE:

1. CONTRACTOR TO COORDINATE AND VERIFY WITH AT&T THE NUMBER OF BATTERY STRINGS REQUIRED.

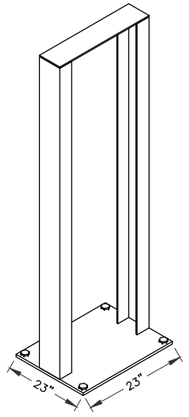
WEIGHT: 500 LBS (WITHOUT BATTERIES)



EMERSON NETSURE VRLA BATTERY RACK DETAIL

SCALE: N.T.S

1



NOTE:

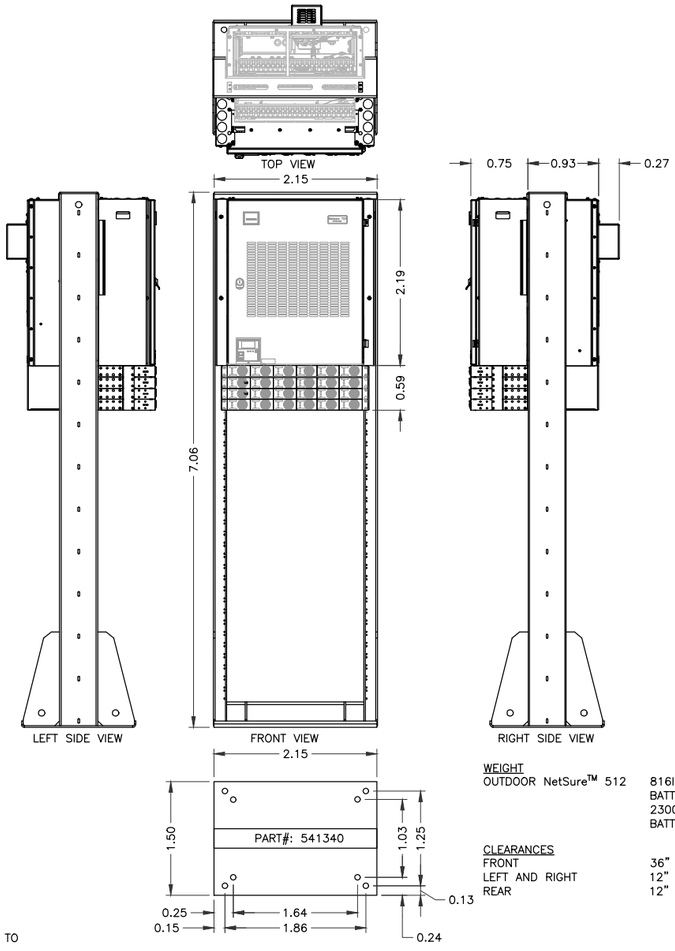
ISOMETRIC

1. CONTRACTOR SHALL SECURE RACK AS PER MANUFACTURER RECOMMENDATIONS.

23" x 23" INDOOR RACK

SCALE: N.T.S

2



WEIGHT

OUTDOOR NetSure™ 512	816lbs (W/O BATTERIES) 2300lbs (W/GNB BATTERIES)

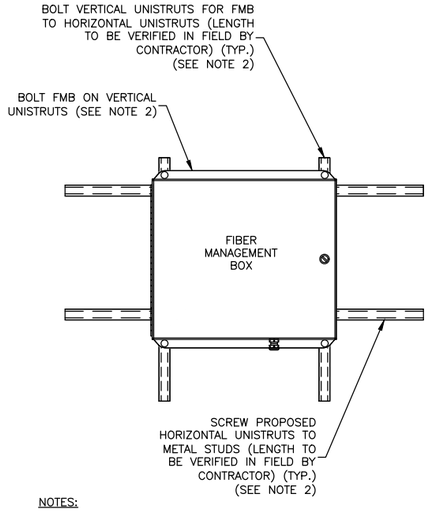
CLEARANCES

FRONT	36"
LEFT AND RIGHT	12"
REAR	12"

EMERSON INDOOR NETSURE 721 DC POWER SYSTEM

SCALE: N.T.S.

3



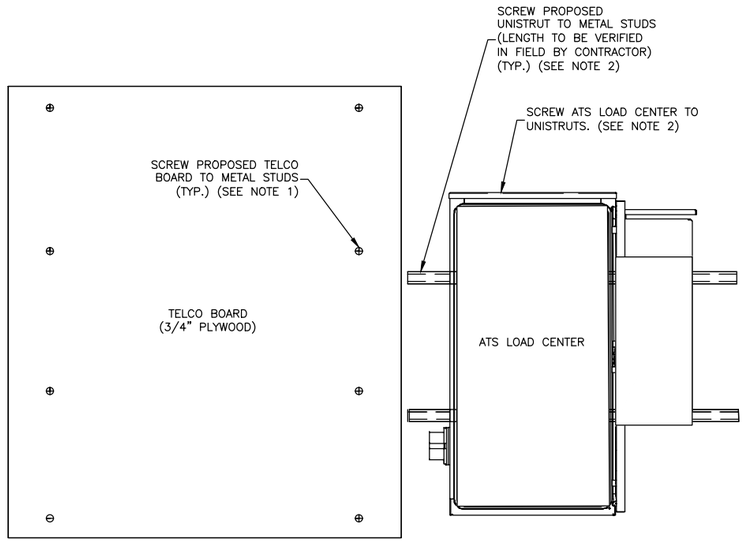
NOTES:

1. USE HILTI DRYWALL SCREW (P/N PBH SD Z) OR APPROVED EQUAL TO ATTACH PROPOSED TELCO BOARD ON METAL STUDS.
2. INSTALL FMB, ATS LOAD CENTER, AND VERTICAL UNISTRUT USING UNISTRUT PRODUCTS (P/N P1010) & (P/N HHCS050125).

FMB MOUNTING DETAILS

SCALE: N.T.S.

4



TELCO BOARD & ATS LOAD CENTER MOUNTING DETAILS

SCALE: N.T.S.

5

at&t
500 ENTERPRISE DRIVE SUITE 3A
ROCKY HILL, CT 06067

SAI
12 INDUSTRIAL WAY
SALEM, NH 03079

CT2818
STAMFORD
NEWFIELD AVE

CONSTRUCTION DRAWINGS

0	11/02/21	FOR CONSTRUCTION
G	04/20/21	REVISED PER COMMENTS
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PHONE: 973.739.9400
FAX: 973.739.9710

STATE OF CONNECTICUT
BENJAMIN R. LEVETTE
28971
LICENSED
PROFESSIONAL ENGINEER

BENJAMIN R. LEVETTE, P.E.
CONNECTICUT LICENSE NO. 0028971

DRAWN BY:	JC
REVIEWED BY:	DS
CHECKED BY:	BBR
PROJECT NUMBER:	50055106
JOB NUMBER:	50065694
SITE ADDRESS:	

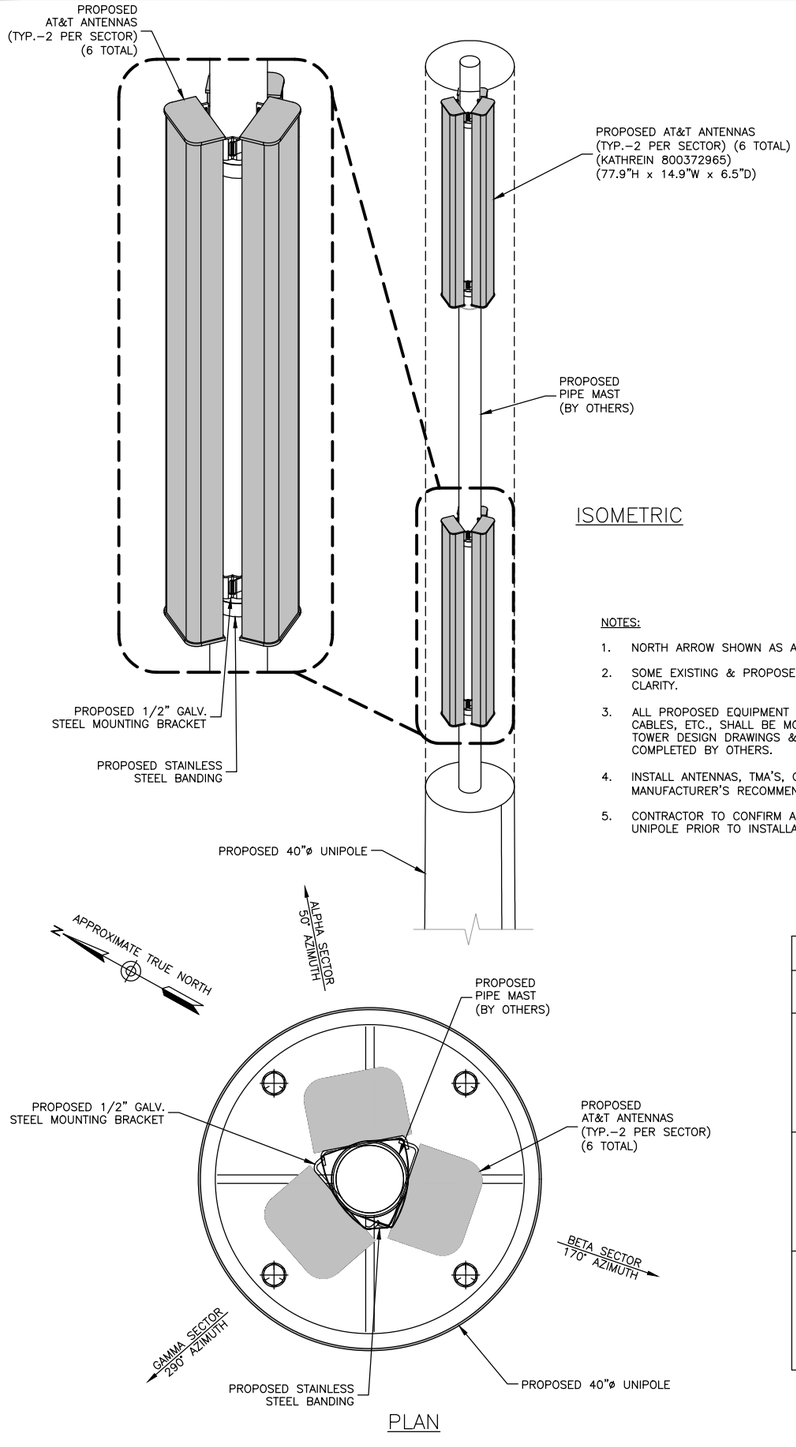
500 NEWFIELD AVENUE
STAMFORD, CT 06905

SHEET TITLE

CONSTRUCTION DETAILS – III

SHEET NUMBER

C–9



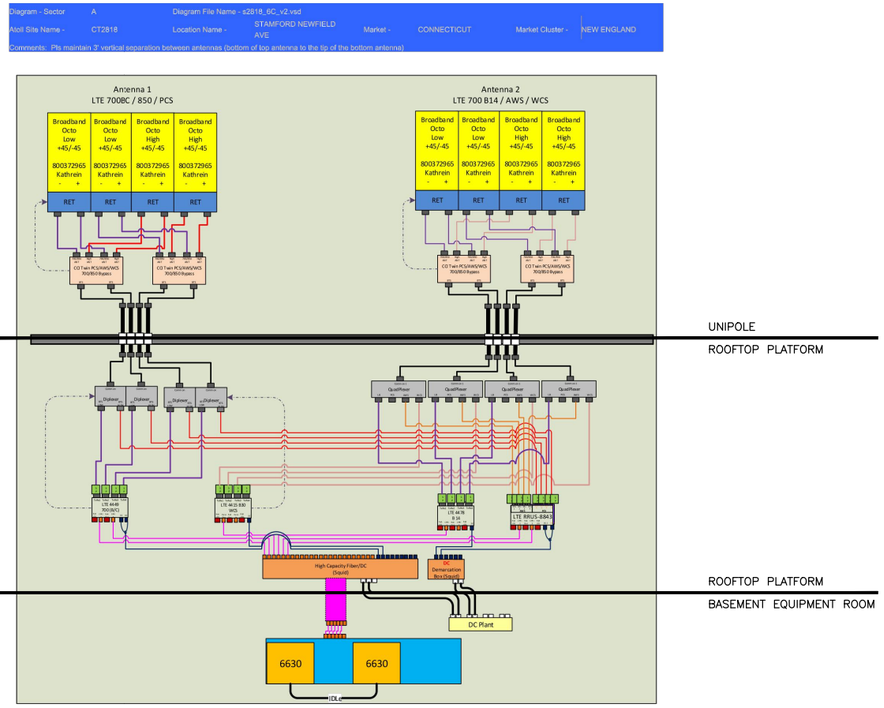
NOTES:

1. NORTH ARROW SHOWN AS APPROXIMATE.
2. SOME EXISTING & PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
3. ALL PROPOSED EQUIPMENT INCLUDING ANTENNAS, TMA's, COAX CABLES, ETC., SHALL BE MOUNTED IN ACCORDANCE WITH THE TOWER DESIGN DRAWINGS & STRUCTURAL ANALYSIS TO BE COMPLETED BY OTHERS.
4. INSTALL ANTENNAS, TMA'S, COAX & MOUNT PER MANUFACTURER'S RECOMMENDATIONS.
5. CONTRACTOR TO CONFIRM ANTENNA & TMA FITMENT WITHIN UNIPOLE PRIOR TO INSTALLATION.

PROPOSED ANTENNA CONFIGURATION

SCALE: N.T.S.

1



NOTES:

1. RF PLUMBING DIAGRAM BASED ON CT2818 RFDS VERSION 8.00 DATED 03/30/2021.
2. CONTRACTOR TO VERIFY FINAL RFDS AND CABLE LENGTHS PRIOR TO CONSTRUCTION.

RFDS PLUMBING DIAGRAM

SCALE: N.T.S.

2

FINAL EQUIPMENT CONFIGURATION

SECTOR	BAND	ANTENNA	SIZE (INCHES) (LxWxD)	RAD. CENTER	AZIMUTH	TMA	RRU	TWIN DIPLEXER / QUADPLEXER	DC POWER/ FIBER TRUNK	COAX/ CABLES
ALPHA	LTE 700 BC/850/PCS	KATHREIN 800372965	77.9x14.9x6.5	71.0'	50°	(2) TMABPDB7823VG12A	RRUS 4449 B5/B12	(2) DBC0115F1V91–2 TWIN DIPLEXERS	(4) DC POWER CABLES & (2) FIBER TRUNK LINES ROUTED FROM BASEMENT EQUIPMENT ROOM TO ROOFTOP EQUIPMENT PLATFORM	(4) 7/8"ø COAX CABLES FROM RRU'S TO TOWER
	LTE 700 B14/AWS/WCS	KATHREIN 800372965	77.9x14.9x6.5	61.0'	50°	(2) TMABPDB7823VG12A	RRUS 8843 B2/B66A RRUS 4478 B14 RRUS 4415 B30	(4) CQX6192123–DS–43 QUADPLEXERS		(4) 7/8"ø COAX CABLES FROM RRU'S TO TOWER
BETA	LTE 700 BC/850/PCS	KATHREIN 800372965	77.9x14.9x6.5	71.0'	170°	(2) TMABPDB7823VG12A	RRUS 4449 B5/B12	(2) DBC0115F1V91–2 TWIN DIPLEXERS		(4) 7/8"ø COAX CABLES FROM RRU'S TO TOWER
	LTE 700 B14/AWS/WCS	KATHREIN 800372965	77.9x14.9x6.5	61.0'	170°	(2) TMABPDB7823VG12A	RRUS 8843 B2/B66A RRUS 4478 B14 RRUS 4415 B30	(4) CQX6192123–DS–43 QUADPLEXERS		(4) 7/8"ø COAX CABLES FROM RRU'S TO TOWER
GAMMA	LTE 700 BC/850/PCS	KATHREIN 800372965	77.9x14.9x6.5	71.0'	290°	(2) TMABPDB7823VG12A	RRUS 4449 B5/B12	(2) DBC0115F1V91–2 TWIN DIPLEXERS		(4) 7/8"ø COAX CABLES FROM RRU'S TO TOWER
	LTE 700 B14/AWS/WCS	KATHREIN 800372965	77.9x14.9x6.5	61.0'	290°	(2) TMABPDB7823VG12A	RRUS 8843 B2/B66A RRUS 4478 B14 RRUS 4415 B30	(4) CQX6192123–DS–43 QUADPLEXERS		(4) 7/8"ø COAX CABLES FROM RRU'S TO TOWER

NOTES:

1. RF PLUMBING DIAGRAM BASED ON CT2818 RFDS VERSION 8.00 DATED 03/30/2021.
2. CONTRACTOR TO VERIFY FINAL RFDS AND CABLE LENGTHS PRIOR TO CONSTRUCTION.

FINAL EQUIPMENT CONFIGURATION

SCALE: N.T.S.

3

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500 ENTERPRISE DRIVE SUITE 3A
ROCKY HILL, CT 06067

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BENJAMIN B. REVETTE, P.E.
CONNECTICUT LICENSE NO. 0028971

DRAWN BY:	JC
REVIEWED BY:	DS
CHECKED BY:	BBR
PROJECT NUMBER:	50055106
JOB NUMBER:	50065694
SITE ADDRESS:	

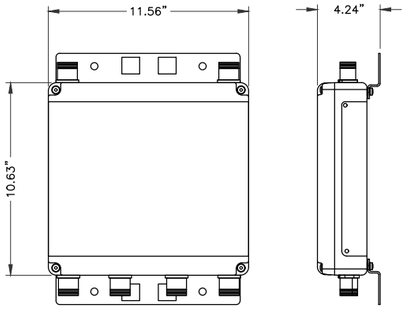
500 NEWFIELD AVENUE
STAMFORD, CT 06905

SHEET TITLE

ANTENNA DETAILS & PLUMBING DIAGRAM

SHEET NUMBER

C–10

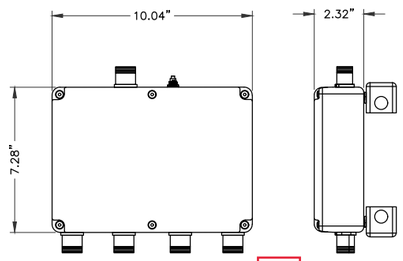


TMA	
MANUFACTURER:	CCI
MODEL NUMBER:	TMABPD7823VG12A
DIMENSIONS:	10.63"Hx11.56"Wx4.24"D
WEIGHT:	26.0 LBS

NOTES:

1. GROUND EQUIPMENT AND MOUNTS PER MANUFACTURER'S RECOMMENDATIONS AND AT&T STANDARDS.
2. INSTALL TMA'S WITHIN UNIPOLE IN ACCORDANCE WITH THE TOWER DESIGN DRAWINGS & STRUCTURAL ANALYSIS TO BE COMPLETED BY OTHERS. CONTRACTOR TO CONFIRM TMA FITMENT WITHIN UNIPOLE PRIOR TO CONSTRUCTION.
3. CONFIRM REQUIRED EQUIPMENT WITH LATEST RFDS.

TMA DETAIL 1
SCALE: N.T.S.

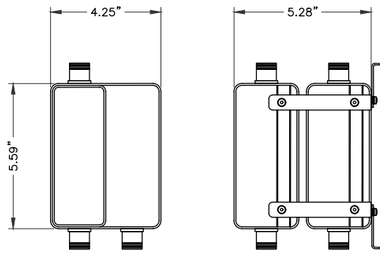


QUADPLEXER	
MANUFACTURER:	COMMSCOPE
MODEL NUMBER:	CQX6192123-DS-43
DIMENSIONS:	7.28"Hx10.04"Wx2.32"D
WEIGHT:	8.82 LBS

NOTES:

1. GROUND EQUIPMENT AND MOUNTS PER MANUFACTURER'S RECOMMENDATIONS AND AT&T STANDARDS.
2. MOUNT EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS.
3. CONFIRM REQUIRED EQUIPMENT WITH LATEST RFDS.

QUADPLEXER DETAIL 2
SCALE: N.T.S.

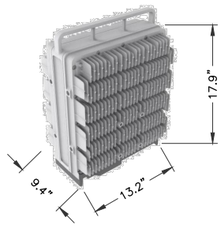


TWIN DIPLEXER	
MANUFACTURER:	KAELUS
MODEL NUMBER:	DBC0115F1V91-2
DIMENSIONS:	5.59"Hx4.25"Wx5.28"D
WEIGHT:	7.06 LBS

NOTES:

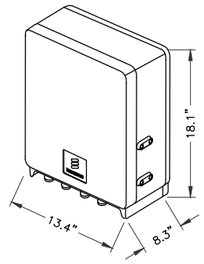
1. GROUND EQUIPMENT AND MOUNTS PER MANUFACTURER'S RECOMMENDATIONS AND AT&T STANDARDS.
2. MOUNT EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS.
3. CONFIRM REQUIRED EQUIPMENT WITH LATEST RFDS.

TWIN DIPLEXER DETAIL 3
SCALE: N.T.S.



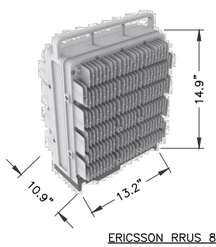
SPECIFICATIONS:
HEIGHT: 17.9"
WIDTH: 13.2"
DEPTH: 9.4"
WEIGHT: 70.4 LBS

ERICSSON RRUS 4449 B5/B12



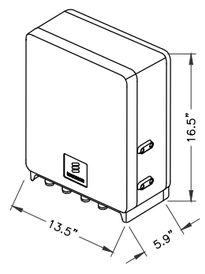
SPECIFICATIONS:
HEIGHT: 18.1"
WIDTH: 13.4"
DEPTH: 8.3"
WEIGHT: 59.4 LBS

ERICSSON RRUS 4478 B14



SPECIFICATIONS:
HEIGHT: 14.9"
WIDTH: 13.2"
DEPTH: 10.9"
WEIGHT: 72.0 LBS

ERICSSON RRUS 8843 B2/B66A



SPECIFICATIONS:
HEIGHT: 16.5"
WIDTH: 13.5"
DEPTH: 5.9"
WEIGHT: 44.1 LBS

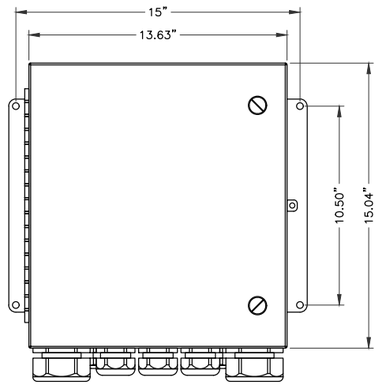
ERICSSON RRUS 4415 B30

RRU NOTES:

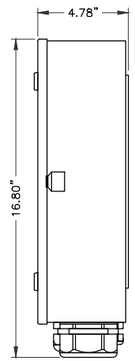
1. MOUNT EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS.
2. GROUND EQUIPMENT AND MOUNTS PER MANUFACTURER'S RECOMMENDATIONS AND AT&T STANDARDS.
3. CONFIRM REQUIRED EQUIPMENT WITH THE LATEST RFDS.

REMOTE RADIO UNIT DETAILS 4
SCALE: N.T.S.

PROVIDE MOUTING DETAIL FOR ATTACHMENT OF PROPOSED TMA'S BANDED TO UNIPOLE

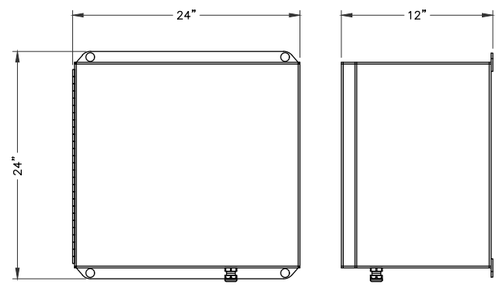


FRONT VIEW



RIGHT SIDE VIEW

DC12-48-60-0-25E DETAIL 5
SCALE: N.T.S.



NOTE:

1. DIMENSIONS SHOWN AS APPROXIMATE. VERIFY W/ CM PRIOR TO CONSTRUCTION.

FIBER MANAGEMENT BOX DETAIL 6
SCALE: N.T.S.

at&t
500 ENTERPRISE DRIVE SUITE 3A
ROCKY HILL, CT 06067

SAI
12 INDUSTRIAL WAY
SALEM, NH 03079

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STAMFORD
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STATE OF CONNECTICUT
BENJAMIN B. LEVETTE P.E.
28971
LICENSED PROFESSIONAL ENGINEER

BENJAMIN B. LEVETTE P.E.
CONNECTICUT LICENSE NO. 0028971

DRAWN BY:	JC
REVIEWED BY:	DS
CHECKED BY:	BBR
PROJECT NUMBER:	50055106
JOB NUMBER:	50065694
SITE ADDRESS:	

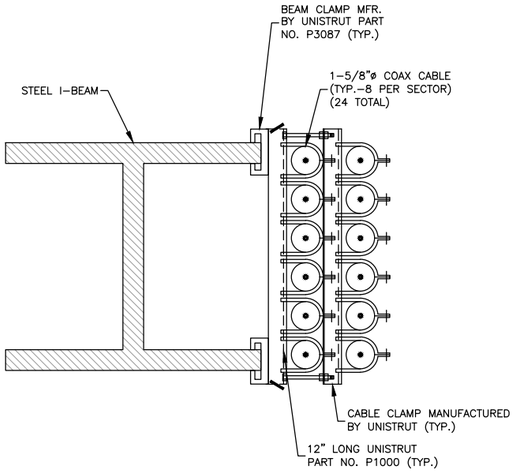
500 NEWFIELD AVENUE
STAMFORD, CT 06905

SHEET TITLE

EQUIPMENT DETAILS

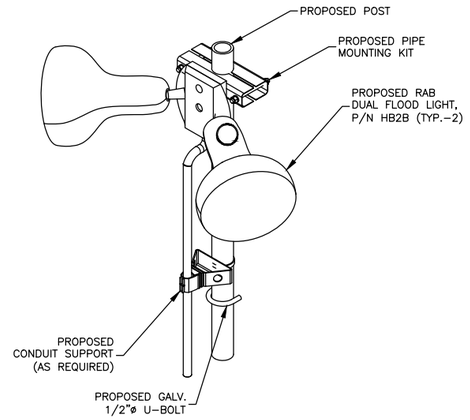
SHEET NUMBER

C-11



CABLE SUPPORT DETAIL 1

SCALE: N.T.S.

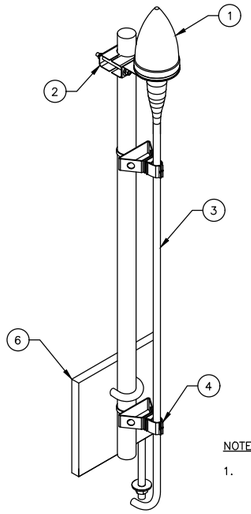


NOTE:

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

WORK LIGHT MOUNT 2

SCALE: N.T.S.



B.O.M.

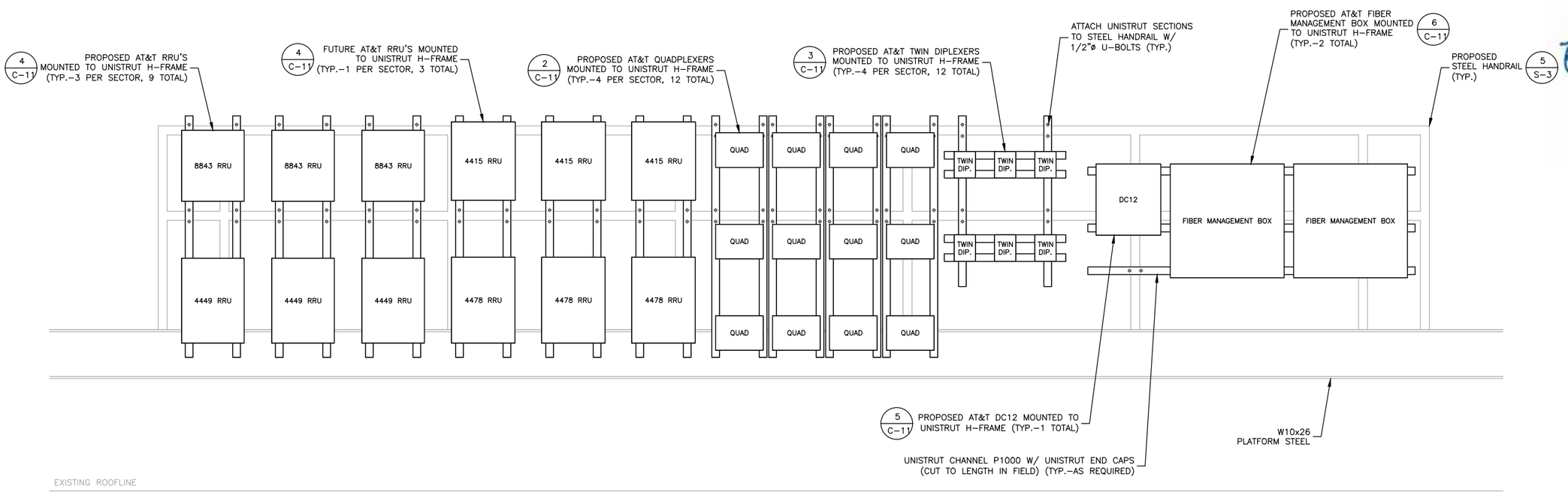
1	GPS ANTENNA
2	L BRACKET MOUNT KIT
3	COAXIAL CABLE
4	STAINLESS STEEL BUTTERFLY KIT & STAND OFF MOUNT
5	L4x4x3/8
6	CROSSOVER KIT SITE PRO SCX1-K
7	3/8"ø ASTM A325 STRUCTURAL BOLTS (TYP.-4)

NOTES:

1. GPS TO BE THROUGH BOLTED TO STRUCTURAL STEEL PLATFORM. FINAL MOUNT LOCATION TO BE VERIFIED WITH AT&T CONSTRUCTION MANAGER.
2. INSTALL GPS, COAX & MOUNT PER MANUFACTURERS RECOMMENDATIONS.
3. TIE MOUNT INTO GROUNDING SYSTEM.

GPS ANTENNA DETAIL 3

SCALE: N.T.S.



NOTES:

1. MOUNT EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS.
2. GROUND EQUIPMENT AND MOUNTS PER MANUFACTURER'S RECOMMENDATIONS AND AT&T STANDARDS.
3. CONFIRM REQUIRED EQUIPMENT WITH THE LATEST RFDS.

EQUIPMENT MOUNTING DETAIL 4

SCALE: N.T.S.

at&t

500 ENTERPRISE DRIVE SUITE 3A
ROCKY HILL, CT 06067

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LICENSED
PROFESSIONAL ENGINEER

BENJAMIN B. REVETTE, P.E.
CONNECTICUT LICENSE NO. 0028971

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REVIEWED BY:	DS
CHECKED BY:	BBR
PROJECT NUMBER:	50055106
JOB NUMBER:	50065694
SITE ADDRESS:	

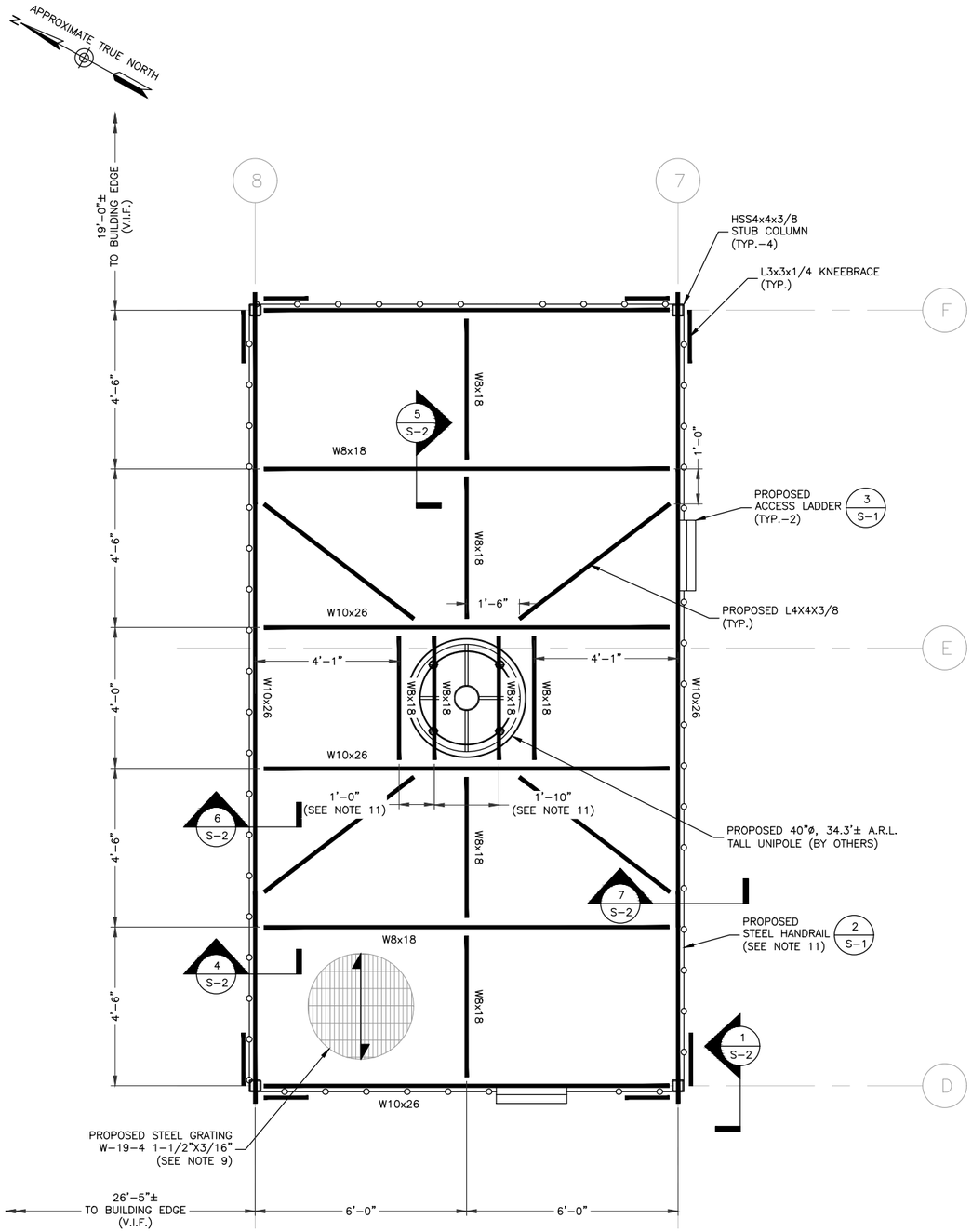
500 NEWFIELD AVENUE
STAMFORD, CT 06905

SHEET TITLE

EQUIPMENT MOUNTING DETAILS

SHEET NUMBER

C-12

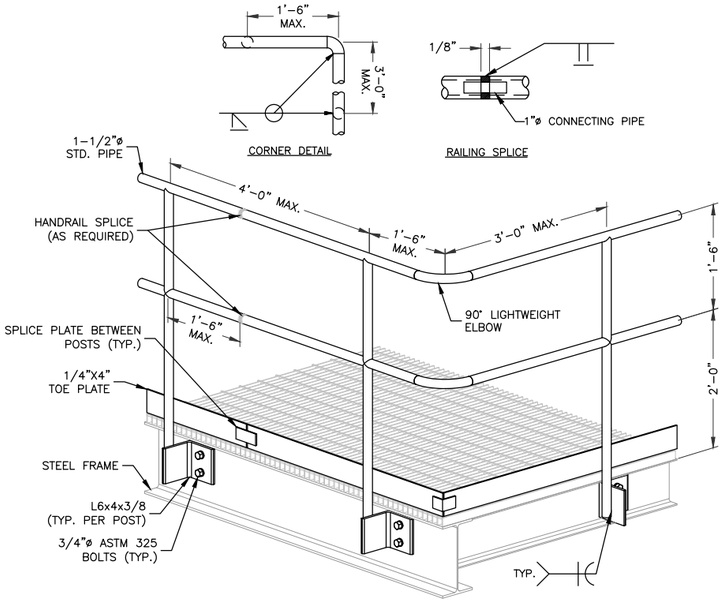


PLATFORM FRAMING PLAN

1

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

0' 1' 2' 4'



NOTE:

1. ALL EXPOSED CORNERS MUST HAVE A 2" RADIUS ELBOW (UNO).

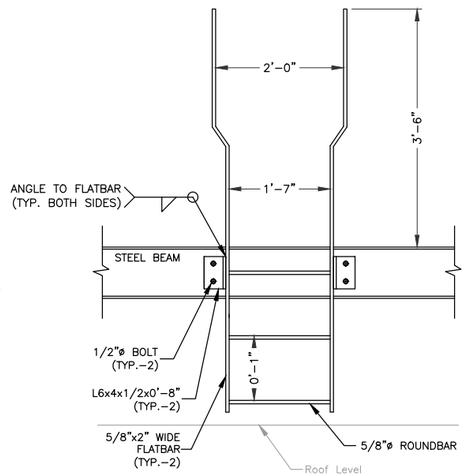
FIXED HANDRAIL

2

SCALE: N.T.S.

NOTES:

1. CONTRACTOR TO VERIFY EXISTING CONDITIONS, BEARING WALLS, COLUMN LOCATIONS PRIOR TO FABRICATION. SEE SHEETS C-1 & C-2 FOR STEEL FRAME LOCATION.
2. NOT ALL INFORMATION SHOWN FOR CLARITY.
3. NORTH IS SHOWN AS APPROXIMATE.
4. ALL BOLTS SHALL BE 3/4" ASTM A325 BOLTS UNLESS NOTED OTHERWISE.
5. PROVIDE SHOP DRAWINGS TO DEWBERRY ENGINEERS INC. FOR REVIEW & APPROVAL PRIOR TO STEEL FABRICATION.
6. CONTRACTOR TO RUN CONDUITS BELOW FRAME TO AVOID TRIP HAZARDS.
7. SEE STRUCTURAL STEEL NOTES ON SHEET G-1.
8. STRUCTURAL STEEL SHALL BE INSTALLED IN ACCORDANCE WITH STRUCTURAL ANALYSIS & STRUCTURAL MODIFICATIONS BY DEWBERRY ENGINEERS INC. DATED 10/15/2021.
9. GRATING BEARINGS BARS TO BE PERPENDICULAR TO SHORTEST SUPPORT SPAN & SECURE WITH SADDLE CLIPS. GRATING SHALL BE REMOVED UNDER UNIPOLE BASE PLATE.
10. SEE SHEET C-2 FOR RRH & EQUIPMENT LAYOUT.
11. THE STEEL DESIGN IS BASED ON ESTIMATED BASE REACTIONS FOR THE UNIPOLE CALCULATED USING THE SIZE OF THE PROPOSED UNIPOLE AND CORRESPONDING WIND LOADING. FINAL UNIPOLE DESIGN AND REACTIONS SHALL BE PROVIDED WITH STEEL SHOP DRAWINGS PRIOR TO FABRICATION OF FRAME. FINAL LOCATION OF W8X18 BEAMS SUPPORTING THE UNIPOLE BASE PLATE SHALL BE DETERMINED AFTER UNIPOLE DESIGN HAS BEEN PROVIDED.



NOTES:

1. INSTALL ALL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS.
2. ALL EQUIPMENT SHALL BE GROUNDED PER AT&T STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.
3. SEE PLAN FOR PROPOSED LOCATIONS.

ACCESS LADDER MOUNTED TO STEEL FRAME

3

SCALE: N.T.S.

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STATE OF CONNECTICUT
BENJAMIN B. REVETTE
28971
LICENSED
PROFESSIONAL ENGINEER

BENJAMIN B. REVETTE, P.E.
CONNECTICUT LICENSE NO. 0028971

DRAWN BY:	JC
REVIEWED BY:	DS
CHECKED BY:	BBR
PROJECT NUMBER:	50055106
JOB NUMBER:	50065694
SITE ADDRESS:	

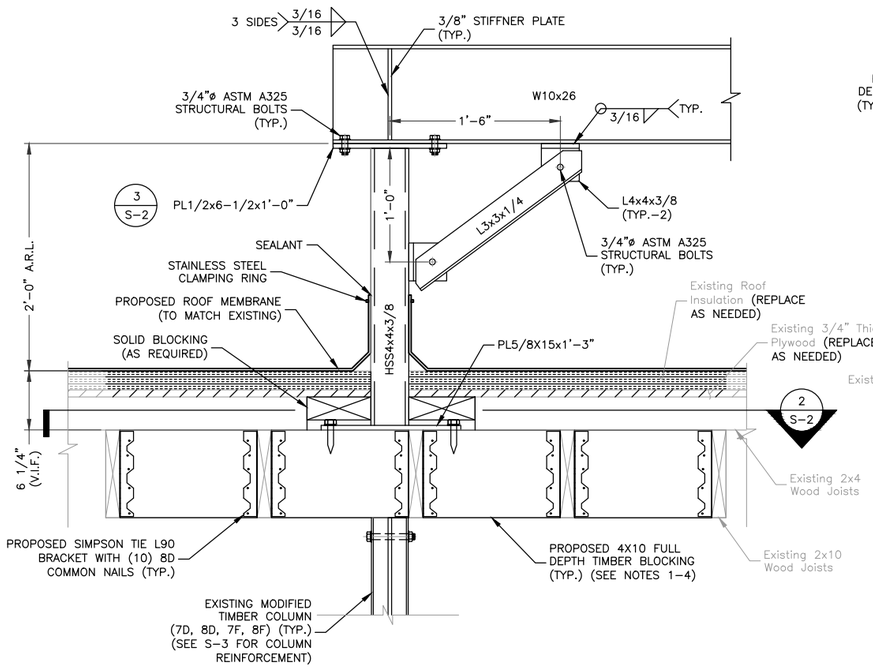
500 NEWFIELD AVENUE
STAMFORD, CT 06905

SHEET TITLE

PLATFORM FRAMING PLAN

SHEET NUMBER

S-1



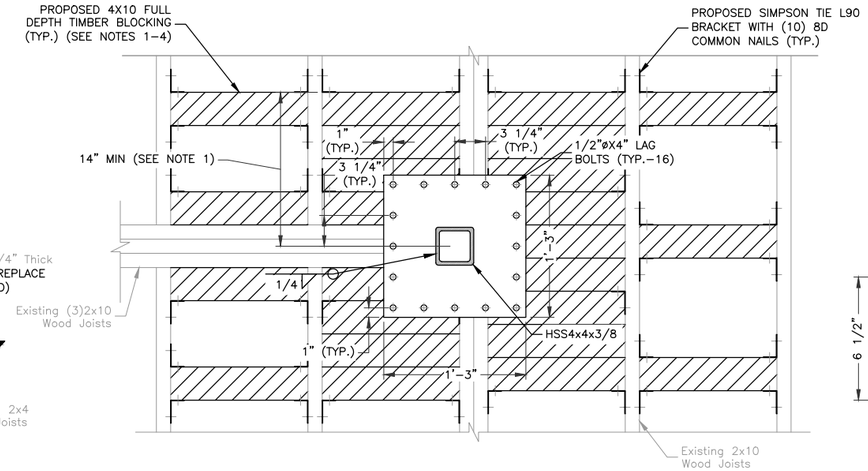
ROOFING NOTES:

1. ALL ROOFING WORK TO BE COMPLETED BY LANDLORD APPROVED ROOFER AND IN ACCORDANCE WITH ANY ROOFING WARRANTIES.

FRAME SUPPORT-POST DOWN (1)

SCALE: 3/4"=1' FOR 11"x17"
1 1/2"=1' FOR 22"x34"

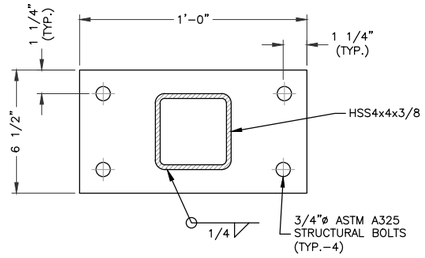
0' 1/2' 1' 1 1/2'



PL5/8x15x1'-3" (BASE PLATE) (2)

SCALE: 3/4"=1' FOR 11"x17"
1 1/2"=1' FOR 22"x34"

0' 1/2' 1' 1 1/2'



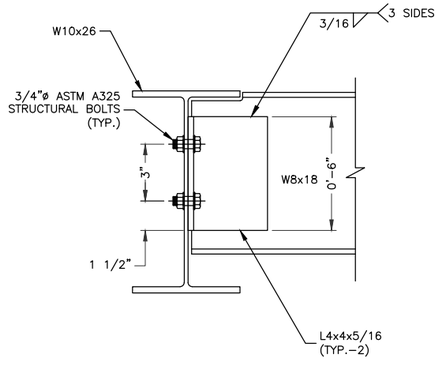
PL1/2x6-1/2x1'-0" (CAP PLATE) (3)

SCALE: 1 1/2"=1' FOR 11"x17"
3"=1' FOR 22"x34"

0' 3" 6" 9"

BLOCKING NOTES:

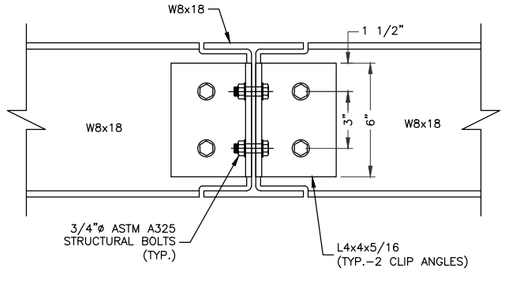
1. PROPOSED TIMBER BLOCKING TO EXTEND A MINIMUM OF (2) ROOF JOIST BAYS PERPENDICULAR AND A MINIMUM OF 14" PARALLEL TO THE ROOF JOISTS FROM THE CENTER OF THE PROPOSED POST DOWNS.
2. TOTAL OF (8) SIMPSON TIE L90 BRACKETS SHALL BE USED WITHIN EACH BLOCKING SECTION WITH (4) EVENLY SPACED ALONG EACH END OF THE BLOCKING IN THE BAYS DIRECTLY ADJACENT TO THE POST DOWN. TOTAL OF (8) SIMPSON TIE L90 BRACKETS SHALL BE USED IN THE SECOND BAYS ADJACENT TO THE POST DOWN. TOTAL OF (40) BRACKETS FOR BLOCKING AT EACH POST DOWN.
3. 4X10 BLOCKING SHALL BE SCREWED TO EACH OTHER WITH A MIN OF (4) 4.5" #10 DECKING SCREWS
4. 4X10 BLOCKING SHALL BE SHIMMED AND NOTCHED AROUND SIMPSON TIE L90 BRACKETS TO ENSURE THERE ARE NO GAPS BETWEEN BLOCKING MEMBERS.
5. CONTRACTOR TO VERIFY EXISTING ROOF FRAMING PLAN.
6. REINSTALL PLYWOOD ROOF DECK TO MATCH EXISTING DEPTH. GLUE AND SCREW TO ROOF JOIST. INSULATE AND REROOF AS REQUIRED.



W8 TO W10 CONNECTION DETAIL (4)

SCALE: 1 1/2"=1' FOR 11"x17"
3"=1' FOR 22"x34"

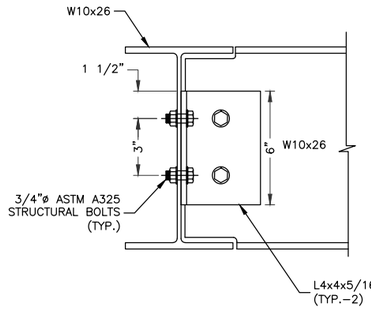
0' 3" 6" 9"



W8 TO W8 CONNECTION DETAIL (5)

SCALE: 1 1/2"=1' FOR 11"x17"
3"=1' FOR 22"x34"

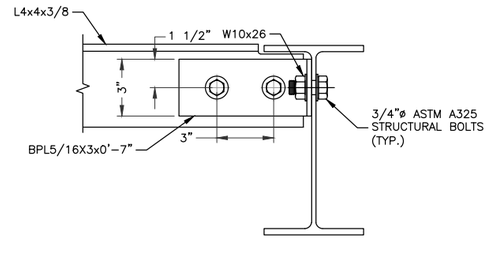
0' 3" 6" 9"



W10 TO W10 CONNECTION DETAIL (6)

SCALE: 1 1/2"=1' FOR 11"x17"
3"=1' FOR 22"x34"

0' 3" 6" 9"



L4 TO W10 CONNECTION DETAIL (7)

SCALE: 1 1/2"=1' FOR 11"x17"
3"=1' FOR 22"x34"

0' 3" 6" 9"

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PROFESSIONAL ENGINEER

BENJAMIN R. LAVERTY, P.E.
CONNECTICUT LICENSE NO. 0028971

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REVIEWED BY:	DS
CHECKED BY:	BBR
PROJECT NUMBER:	50055106
JOB NUMBER:	50065694
SITE ADDRESS:	

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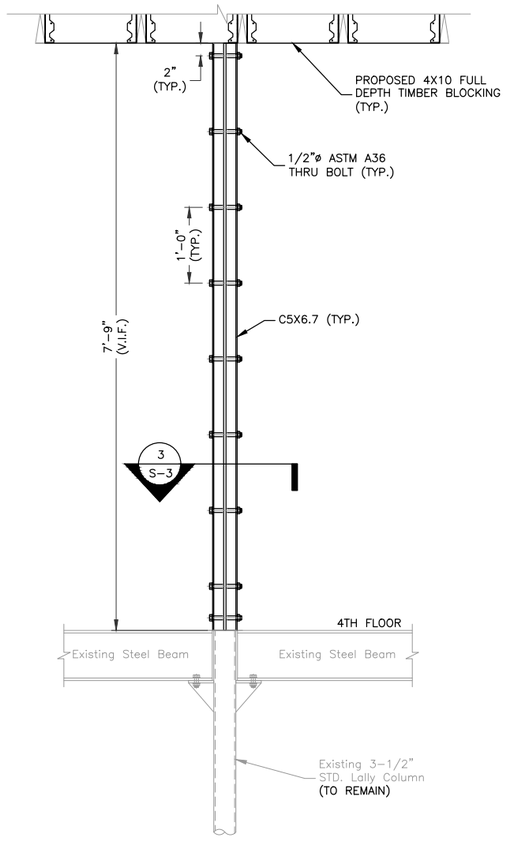
STAMFORD, CT 06905

SHEET TITLE

POST DOWN DETAILS

SHEET NUMBER

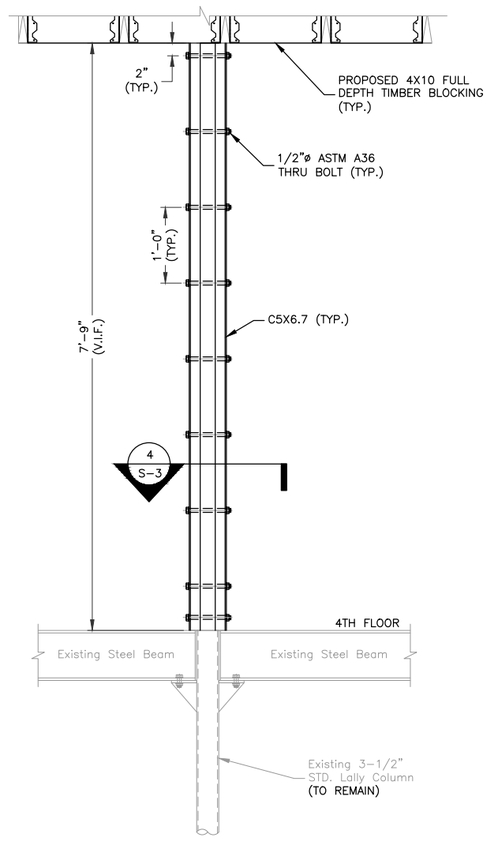
S-2



4X4 TIMBER COLUMN MODIFICATION 1

SCALE: 1/2"=1' FOR 11"x17"
1"=1' FOR 22"x34"

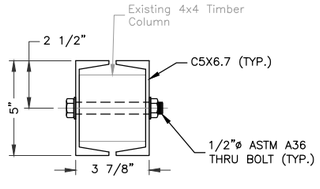
0' 1' 2'



4X6 TIMBER COLUMN MODIFICATION 2

SCALE: 1/2"=1' FOR 11"x17"
1"=1' FOR 22"x34"

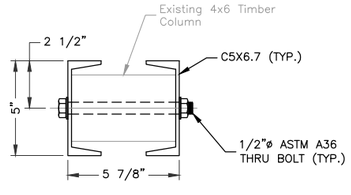
0' 1' 2'



4X4 TIMBER COLUMN MODIFICATION 3

SCALE: 1 1/2"=1' FOR 11"x17"
3"=1' FOR 22"x34"

0' 3" 6" 9"



4X6 TIMBER COLUMN MODIFICATION 4

SCALE: 1 1/2"=1' FOR 11"x17"
3"=1' FOR 22"x34"

0' 3" 6" 9"

TIMBER COLUMN MODIFICATION NOTES:

1. CONTRACTOR TO VERIFY EXISTING COLUMN SIZE AND USE APPLICABLE MODIFICATION DETAIL.
2. CONTRACTOR TO REPLACE ANY TIMBER STUDS THAT NEED TO BE REMOVED DURING MODIFICATION CONSTRUCTION.
3. CONTRACTOR TO INSTALL SHEETROCK AND FINISH WALL TO MATCH EXISTING CONDITIONS AFTER MODIFICATION IS COMPLETE.
4. COORDINATE ALL WORK WITH OWNER AND TENANTS.
5. EXISTING WALL FRAMING NOT SHOWN FOR CLARITY.
6. COLUMN SHALL BE REINFORCED PRIOR TO INSTALLING STEEL ROOF FRAME.

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500 NEWFIELD AVENUE
STAMFORD, CT 06905

SHEET TITLE

STRUCTURAL DETAILS

SHEET NUMBER

S-3

GENERAL ELECTRICAL NOTES

1. SUBMITTAL OF BID INDICATES CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED UNDER THIS CONTRACT.
2. CONTRACTOR SHALL PERFORM ALL VERIFICATION OBSERVATION TESTS, AND EXAMINATION WORK PRIOR TO THE ORDERING OF THE ELECTRICAL EQUIPMENT AND THE ACTUAL CONSTRUCTION. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE ARCHITECT LISTING ALL MALFUNCTIONS, FAULTY EQUIPMENT AND DISCREPANCIES.
3. HEIGHTS SHALL BE VERIFIED WITH OWNER PRIOR TO INSTALLATION.
4. THESE PLANS ARE DIAGRAMMATIC ONLY, FOLLOW AS CLOSELY AS POSSIBLE.
5. EACH CONDUCTOR OF EVERY SYSTEM SHALL BE PERMANENTLY TAGGED IN EACH PANEL BOARD, PULLBOX, J–BOX, SWITCH BOX, ETC., IN COMPLIANCE WITH OCCUPATIONAL SAFETY AND HEALTH ACT (O.S.H.A.)
6. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION, CONSTRUCTION TOOLS, TRANSPORTATION, ETC., FOR A COMPLETE AND PROPERLY OPERATIVE SYSTEM ENERGIZED THROUGHOUT AND AS INDICATED ON DRAWINGS, AS SPECIFIED HEREIN AND/OR AS OTHERWISE REQUIRED.
7. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN PERFECT CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT. MATERIALS SHALL BE LISTED AND APPROVED BY UNDERWRITER'S LABORATORY AND SHALL BEAR THE INSPECTION LABEL "L" WHERE SUBJECT TO SUCH APPROVAL. MATERIALS SHALL MEET WITH APPROVAL OF THE DIVISION OF INDUSTRIAL SAFETY AND ALL GOVERNING BODIES HAVING JURISDICTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA AND NBFU.
8. ALL CONDUIT INSTALLED MAY BE MOUNTED EXPOSED UNLESS OTHERWISE NOTED.
9. CONTRACTOR SHALL CARRY OUT HIS WORK IN ACCORDANCE WITH ALL GOVERNING STATE, COUNTY AND LOCAL CODES & O.S.H.A.
10. CONTRACTOR SHALL SECURE ALL NECESSARY BUILDING PERMITS AND PAY ALL REQUIRED FEES
11. COMPLETE JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF JOB ACCEPTANCE BY OWNER. ANY WORK, MATERIAL OR EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE CONTRACTOR.
12. ALL CONDUIT SHALL HAVE A PULL WIRE OR ROPE.
13. PROVIDE PROJECT MANAGER WITH ONE SET OF COMPLETE ELECTRICAL "AS INSTALLED" DRAWINGS AT THE COMPLETION OF THE JOB, SHOWING ACTUAL DIMENSIONS, ROUTINGS, AND CIRCUITS.
14. ALL BROCHURES, OPERATING MANUALS, CATALOGS, SHOP DRAWINGS, ETC. SHALL BE TURNED OVER TO OWNER AT JOB COMPLETION.
15. USE T–TAP CONNECTIONS ON ALL MULTI–CIRCUITS WITH COMMON NEUTRAL CONDUCTOR FOR LIGHTING FIXTURE.
16. ALL BUILDING WIRE #12 TO # 6 SHALL BE STRANDED COPPER TYPE THWN–THHN. CONDUCTORS #4 AND LARGER SHALL BE COPPER TYPE XHHW.
17. ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING RATING NOT LESS THE MAXIMUM SHORT CIRCUIT CURRENT TO WHICH THEY MAY BE SUBJECTED AND A MINIMUM OF 10,000 A.I.C.
18. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED BY ALL APPLICABLE CODES
19. PATCH, REPAIR AND PAINT ANY AREA THAT HAS BEEN DAMAGED IN THE COURSE OF THE ELECTRICAL WORK.
20. IN DRILLING HOLES INTO CONCRETE WHETHER FOR FASTENING OR ANCHORING PURPOSES, OR PENETRATIONS THROUGH THE FLOOR FOR CONDUIT RUNS, M PIPE RUNS, ETC., IT MUST BE CLEARLY UNDERSTOOD THAT TENDONS AND/OR REINFORCING STEEL WILL NOT BE DRILLED INTO CUT OR DAMAGED UNDER ANY CIRCUMSTANCES.
21. LOCATION OF TENDONS AND/OR REINFORCING STEEL ARE NOT DEFINITELY KNOWN AND, THEREFORE, MUST BE SEARCHED FOR BY APPROPRIATE METHODS AND EQUIPMENT VIA X–RAY OR OTHER DEVICES THAT CAN ACCURATELY LOCATE THE REINFORCING AND/OR STEEL TENDONS.
22. PENETRATIONS IN FIRE RATED WALLS SHALL BE FIRE STOPPED IN ACCORDANCE WITH FIRESTOP DETAILS.
23. WIRE AND CABLE CONDUCTORS SHALL BE STRANDED COPPER #12 AWG MINIMUM UNLESS SPECIFICALLY STATED OTHERWISE ON DRAWINGS.
24. VERIFY ALL CONDUIT ROUTING W/OWNER REP. & AT&T MOBILITY C.M.
25. ALL MATERIALS SHALL BE U.L. LISTED.
26. CONDUIT:

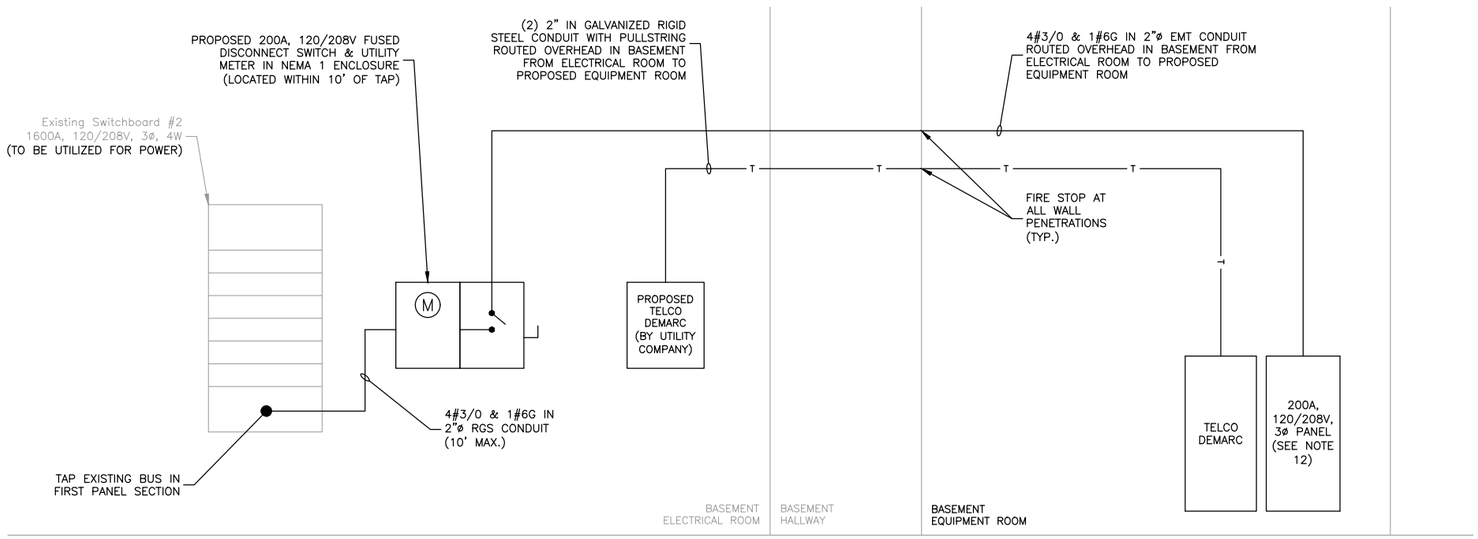
a. RIGID CONDUIT SHALL BE U.L. LABEL GALVANIZED ZINC COATED WITH ZINC INTERIOR AND SHALL BE USED WHEN INSTALLED IN OR UNDER CONCRETE SLABS, IN CONTACT WITH THE EARTH, UNDER PUBLIC ROADWAYS, IN MASONRY WALLS OR EXPOSED ON BUILDING EXTERIOR. RIGID CONDUIT IN CONTACT WITH EARTH SHALL BE 1/2 LAPPED WRAPPED WITH HUNTS WRAP PROCESS NO. 3.

b. ELECTRICAL METALLIC TUBING SHALL HAVE U.L. LABEL, FITTINGS SHALL BE GLAND RING COMPRESSION TYPE.

c. FLEXIBLE METALLIC CONDUIT SHALL HAVE U.L. LISTED LABEL AND MAY BE USED WHERE PERMITTED BY CODE. FITTINGS SHALL BE "JAKE" OR "SQUEEZE" TYPE, SEAL TIGHT FLEXIBLE CONDUIT. ALL CONDUIT IN EXCESS OF SIX FEET IN LENGTH SHALL HAVE FULL SIZE GROUND WIRE.

d. CONDUIT RUNS MAY BE CONCEALED IN CEILINGS OR WALLS UNLESS INDICATED OTHERWISE. CONDUIT INDICATED SHALL RUN PARALLEL OR AT RIGHT ANGLES TO CEILING, FLOOR OR BEAMS. VERIFY EXACT ROUTING OF ALL EXPOSED CONDUIT WITH ARCHITECT PRIOR TO INSTALLING.

27. ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT ENGRAVED PLASTIC LABELS.
28. COORDINATE THE ELECTRICAL SERVICE SHUTDOWN WITH BUILDING OWNER.
29. GROUNDING SYSTEM RESISTANCE SHALL NOT EXCEED 5 OHMS. IF THE RESISTANCE VALUE IS EXCEEDED, NOTIFY THE OWNER FOR FURTHER INSTRUCTION ON METHODS FOR REDUCING THE RESISTANCE VALUE. SUBMIT TEST REPORTS AND FURNISH TO DISPATCH COMMUNICATIONS ONE COMPLETE SET OF PRINTS SHOWING "INSTALLED WORK".
30. UPON COMPLETION OF WORK, CONDUCT CONTINUITY, AND FALL POTENTIAL GROUNDING TESTS FOR APPROVAL. SUBMIT TEST REPORTS TO PROJECT MANAGER. CLEAN PREMISES OF ALL DEBRIS RESULTING FROM WORK AND LEAVE WORK IN A COMPLETE AND UNDAMAGED CONDITION.
31. ALL WALL PENETRATIONS SHALL BE FIRE STOPPED WITH FS–ONE HIGH PERFORMANCE INTUMESCENT FIRE STOP BY HILTI OR APPROVED EQUAL. INSTALL PER MANUFACTURERS RECOMMENDATIONS.



ELECTRICAL RISER DIAGRAM 1
SCALE: N.T.S.

ELECTRICAL AND TELEPHONE GENERAL NOTES:

1. ELECTRICAL RISER DIAGRAM BASED ON EE MEMO COMPLETED BY MGR ELECTRICAL CONTRACTING INC. DATED 05/21/19.
2. FOLLOWING COMPLETION OF WORK, PROVIDE OWNER WITH AS–BUILT DRAWINGS SHOWING TELEPHONE AND ELECTRIC LOCATIONS.
3. WORK SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE, NEC 2017.
4. COORDINATE WITH UTILITY AND LOCAL ELECTRICAL INSPECTOR FOR FINAL POWER CONNECTION.
5. COORDINATE THE INSTALLATION OF NEW METER WITH BUILDING OWNER & LOCAL UTILITY COMPANY.
6. ALL EXISTING UNDERGROUND LINES ON SITE TO BE LOCATED PRIOR TO CONSTRUCTION. CALL 1–888–DIG–SAFE PRIOR TO CONSTRUCTION.
7. SEAL ALL SERVICE ENTRANCES INTO EQUIPMENT ROOM FOLLOWING INSTALLATION.
8. SEE PAGE E–2 FOR GENERAL GROUNDING NOTES.
9. COORDINATE WITH LOCAL TELEPHONE COMPANY FOR ALL ROUTING AND DESIGN.
10. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS AND ROUTING PRIOR TO INSTALLATION. ANY DISCREPANCIES NOTED SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
11. COORDINATE WORK & ANY REQUIRED BUILDING SHUTDOWN WITH TENANTS & BUILDING OWNER.
12. CONTRACTOR SHALL CONFIRM PANEL TYPE & TEMPORARY GENERATOR PLUG COMPATIBILITY WITH AT&T & CM PRIOR TO ORDERING.

NEMA 1 — **PANEL SCHEDULE P-1** — 22,000 A.I.C.

W/200A MAIN CIRCUIT BREAKER

CKT #	DESCRIPTION	AMP	AMP	DESCRIPTION	CKT #
1	RECTIFIER #1	40	40	RECTIFIER #2	2
3					4
5	RECTIFIER #3	40	40	RECTIFIER #4	6
7					8
9	RECTIFIER #5	40	40	RECTIFIER #6	10
11					12
13	RECTIFIER #7	40	40	RECTIFIER #8	14
15					16
17	RECTIFIER #9	40	40	RECTIFIER #10	18
19					20
21	RECEPTACLES – EQUIPMENT ROOM	20	20	LIGHTING–EQUIPMENT ROOM	22
23	HVAC UNIT	20	60	CONDENSER	24
25					26
27	HVAC UNIT	20	60	CONDENSER	28
29					30
31	TWIST LOCK RECEPTACLE–TELCO	15	20	GFCI RECEPTACLE @ AHU	32
33	SMOKE DETECTOR	20	20	CONDENSATE PUMP	34
35	SPARE	20	20	SPARE	36
37	SPARE	20	20	SPARE	38
39	SURGE ARRESTOR	60	20	SPARE	40
41			20	SPARE	42

NOTES:

1. EMPTY SPACES SHALL BE COVERED WITH BLANK PLATES.
2. PROVIDE HACR CIRCUIT BREAKERS.
3. VERIFY ALL BREAKER SIZES WITH MANUFACTURER PRIOR TO INSTALLATION.

PANEL SCHEDULE 2
SCALE: N.T.S.

at&t
500 ENTERPRISE DRIVE SUITE 3A
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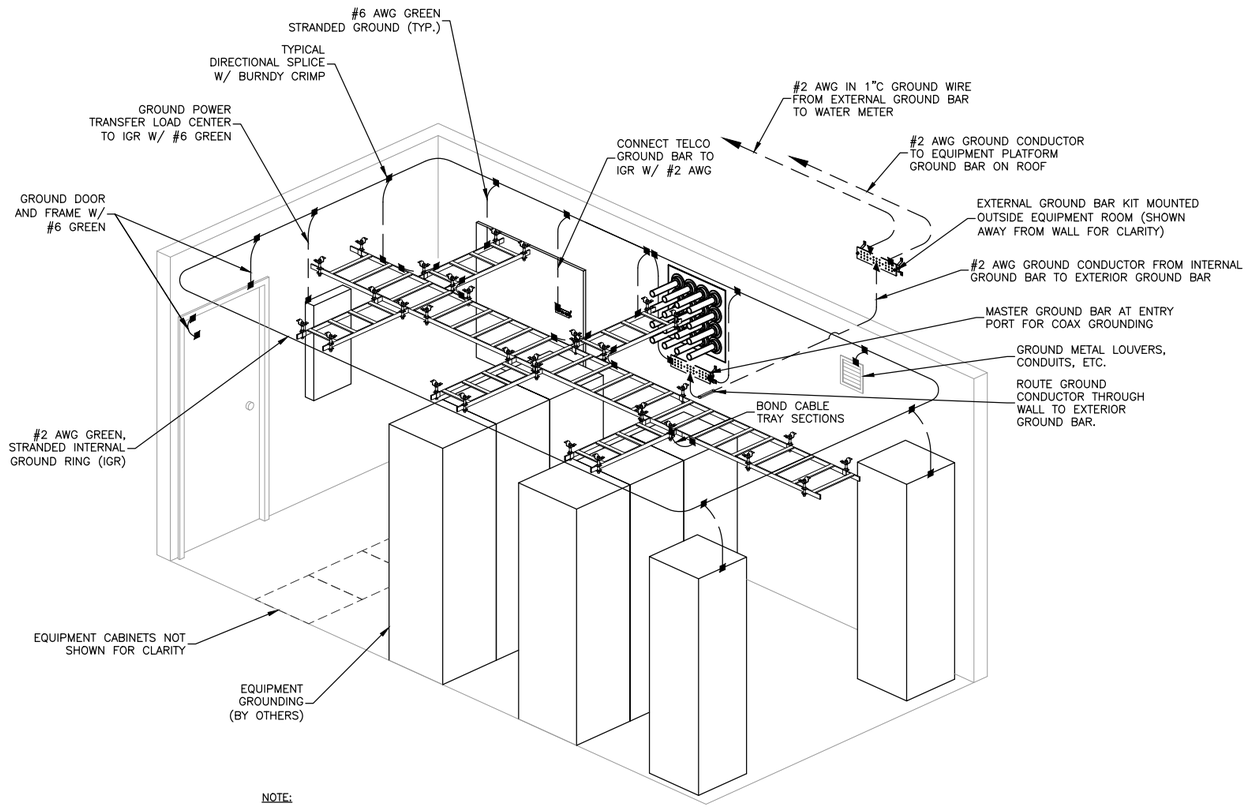
SHEET TITLE

ELECTRICAL NOTES
& RISER DIAGRAM

SHEET NUMBER

E–1



NOTE:

1. ROOM SCHEMATIC IS NOT REPRESENTATIVE OF ACTUAL ROOM LAYOUT. FOR ACTUAL ROOM LAYOUT SEE PAGE C-5.

TYPICAL EQUIPMENT ROOM GROUNDING SCHEMATIC (1)

SCALE: N.T.S.

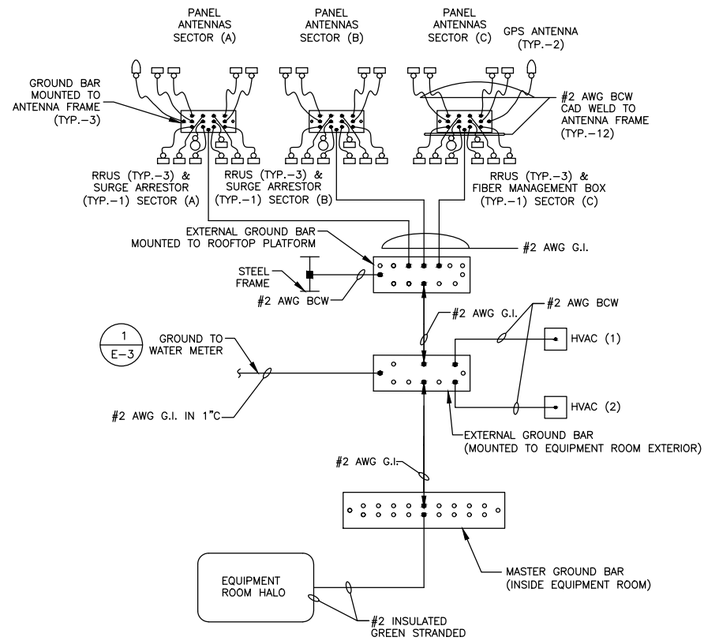
GROUNDING GENERAL NOTES

1. ALL DOWN CONDUCTORS AND THE GROUND RING CONDUCTOR SHALL BE #2 AWG, SOLID, BARE, TINNED COPPER, UNLESS OTHERWISE NOTED. ALL CONNECTIONS TO GROUND RING SHALL BE EXOTHERMICALLY WELDED. CONDUCTOR SHALL BE AT A MINIMUM DEPTH BELOW GRADE OF 18 INCHES OR TO LEDGE. MINIMUM BEND RADIUS SHALL BE 8 INCHES. CONDUCTOR SHALL BE AT LEAST 24 INCHES FROM ANY FOUNDATION, UNLESS OTHERWISE NOTED.
2. GROUND RODS SHALL BE 5/8" DIAMETER COPPER CLAD, HARGER, T&B, ERICO, OR EQUIVALENT. TOP OF ROD SHALL BE A MINIMUM OF 18" BELOW GRADE. IF LEDGE IS ENCOUNTERED, INSTALL GROUND ROD AT AN ANGLE. ELECTRICAL METER GROUND ROD EXCEPTED.
3. WHERE MECHANICAL CONNECTIONS ARE SPECIFIED, BOLTED, COMPRESSION-TYPE, CLAMPS OR SPLIT-BOLT TYPE CONNECTORS SHALL BE USED.
4. GRIND OFF GALVANIZING IN AFFECTED AREA. EXOTHERMICALLY WELD #2 CONDUCTOR AT 6" ABOVE GRADE OR FOUNDATION, WHICHEVER IS HIGHER. COLD-GALV AFTER. EXOTHERMICALLY WELD OTHER END TO GROUND RING.
5. INSTALL GROUNDING KITS AT ANTENNA CENTERLINE, AND TOWER EXIT POINTS. GROUND COAX LINES. EXOTHERMICALLY WELD #2 DOWN CONDUCTOR TO PLATES, RUN DOWN TOWER, AND TIE INTO GROUNDING SYSTEM.
6. ALL GROUNDING WORK SHALL COMPLY WITH AT&T CONSTRUCTION CONTRACT STANDARDS. FOLLOWING COMPLETION OF WORK, GROUND SYSTEM MUST BE TESTED AND SHALL HAVE A RESISTANCE OF 5 OHMS OR LESS SUBMIT AN INDEPENDENT "FALL POTENTIAL" TESTING REPORT.
7. ALL GROUNDING CONDUCTORS ON EXTERIOR WALL OF SHELTER SHALL BE INSTALLED IN 3/4" SCH 40 PVC CONDUIT TO 12" BELOW GRADE. ATTACH PVC WITH GALVANIZED "C" CLAMPS.
8. CONTRACTOR SHALL HAND-DIG IN AREAS AROUND EXISTING UTILITIES.
9. NOTIFY CONSTRUCTION ENGINEER IF THERE ARE ANY DIFFICULTIES INSTALLING GROUNDING SYSTEM DUE TO SITE SOIL CONDITIONS.
10. GROUNDING RING IS SHOWN AS SCHEMATIC ONLY. IT IS DESIGNED WITHOUT BENEFIT OF RESISTIVITY TESTING AND DOES NOT NECESSARILY REPRESENT A GROUNDING SYSTEM TO MEET ANY SPECIFIC GROUND RESISTANCE.
11. PRIOR TO POURING CONCRETE, ALL REBAR LOCATED NEAR THE BOTTOM OF THE FOUNDATION SHALL BE BONDED TOGETHER TO FORM A SINGLE GROUNDING ELECTRODE, BY STEEL TIES OF OTHER EFFECTIVE MEANS APPROVED BY NEC 2017 AND STRUCTURAL ENGINEER, AND BONDED TO THE GROUND RING AS DETAILED IN THESE PLANS. (INSPECTION MAY BE REQUIRED PRIOR TO POURING CONCRETE AND MUST BE COORDINATED BY CONTRACTOR.)
12. IN ACCORDANCE WITH NEC 2017 REQUIREMENTS, ALL GROUNDING ELECTRODES PRESENT ON SITE SHALL BE BONDED TOGETHER (REFERENCE 2017 NEC ARTICLE 250.50).

GROUNDING LEGEND	
SYMBOL	DESCRIPTION
▶	EXOTHERMIC WELD
■	MECHANICAL CONNECTION

GROUNDING NOTES:

1. GROUND SHALL COMPLY WITH NEC ART. 250.
2. GROUND CONDUCTORS SHALL BE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR INDOOR USE.
3. ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
4. ROUTE GROUNDING CONNECTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NOT BE BENT AT RIGHT ANGLE. ALWAYS MAKE 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 6" RADIUS WHEN NECESSARY.
5. CONNECTIONS TO GROUND BAR SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
6. TEST COMPLETED GROUND SYSTEM AND RECORD RESISTANCE VALUES FOR PROJECT CLOSE-OUT DOCUMENTATION. GROUND RESISTANCE SHALL NOT EXCEED 5 OHMS.
7. GROUND CONDUCTORS BETWEEN MGB AND WATERMAIN SHALL BE #2/0. BONDING JUMPERS FROM METALLIC SURFACES SHALL BE #2 MINIMUM. ALL GROUND CONDUCTORS AND BONDING JUMPERS SHALL BE SOFT DRAWN ANNEALED, TINNED, BARE STRANDED COPPER WIRE. COAXIAL CABLES SHALL BE GROUNDED AT A MINIMUM OF TWO LOCATIONS USING AT&T PROVIDED GROUNDING KITS. EXACT LOCATIONS SHALL BE FINALIZED IN THE FIELD BY THE CONSTRUCTION MANAGER.



WIRE SIZE	LUG #	BOLT SIZE
#2	53207	1/4" - 20 NC x 1/2" S.S. BOLT & NUT W/LOCK WASHERS
#6	53205	

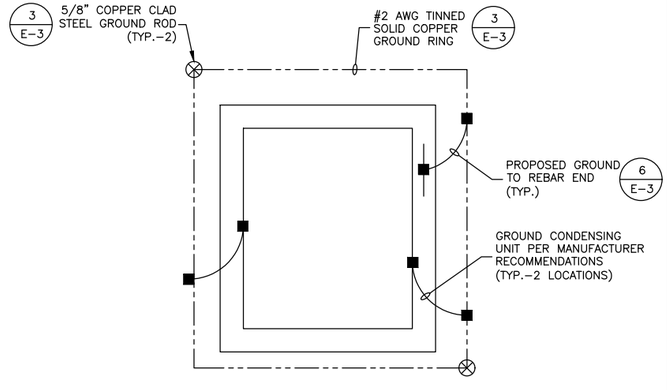
* USE WHERE EXOTHERMIC WELD IS NOT CALLED FOR.

NOTE:

1. SEE SHEET G-1 FOR GROUNDING NOTES.

GROUNDING SCHEMATIC (2)

SCALE: N.T.S.



CONDERNSER GROUNDING PLAN (3)

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

0' 1' 2' 4'

at&t
500 ENTERPRISE DRIVE SUITE 3A
ROCKY HILL, CT 06067

SAI
12 INDUSTRIAL WAY
SALEM, NH 03079

CT2818
STAMFORD
NEWFIELD AVE

CONSTRUCTION DRAWINGS		
0	11/02/21	FOR CONSTRUCTION
G	04/20/21	REVISED PER COMMENTS
F	04/12/21	REVISED PER COMMENTS
E	03/25/21	REVISED PER COMMENTS
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C	01/29/21	PRELIMINARY SUBMISSION
B	08/26/20	PRELIMINARY SUBMISSION
A	08/24/18	PRELIMINARY SUBMISSION

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LICENSED
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BENJAMIN B. REVETTE, P.E.
CONNECTICUT LICENSE NO. 0028971

DRAWN BY:	JC
REVIEWED BY:	DS
CHECKED BY:	BBR
PROJECT NUMBER:	50055106
JOB NUMBER:	50065694
SITE ADDRESS:	

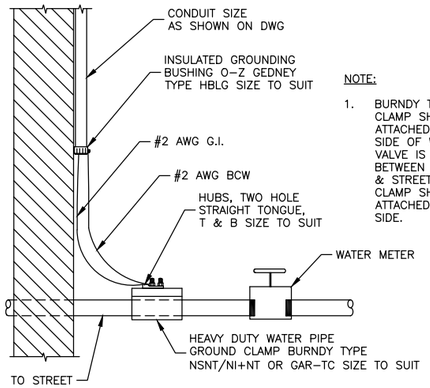
500 NEWFIELD AVENUE
STAMFORD, CT 06905

SHEET TITLE

GROUNDING NOTES & SCHEMATICS

SHEET NUMBER

E-2

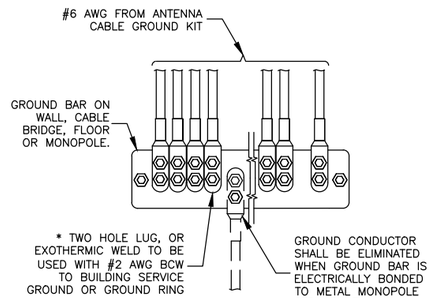


NOTE:

1. BURNDY TYPE GROUND CLAMP SHOULD BE ATTACHED ON STREET SIDE OF WATER CUT-OFF. VALVE IS INSULATED BETWEEN WATER METER & STREET GROUNDING CLAMP SHOULD BE ATTACHED TO STREET SIDE.

WATER METER GROUNDING 1

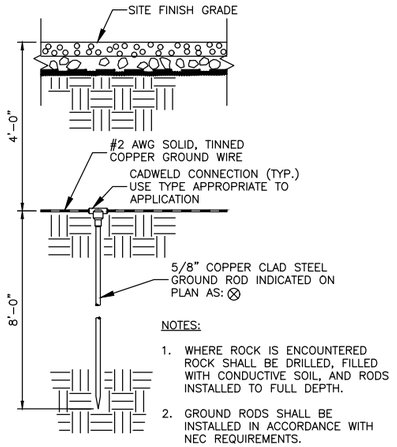
SCALE: N.T.S.



* GROUND BARS AT THE BOTTOM OF TOWER SHALL ONLY USE EXOTHERMIC WELDS.

INSTALLATION OF GROUND WIRE TO GROUND BAR 2

SCALE: N.T.S.

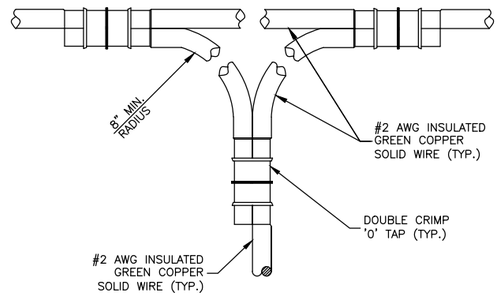


NOTES:

1. WHERE ROCK IS ENCOUNTERED ROCK SHALL BE DRILLED, FILLED WITH CONDUCTIVE SOIL, AND RODS INSTALLED TO FULL DEPTH.
2. GROUND RODS SHALL BE INSTALLED IN ACCORDANCE WITH NEC REQUIREMENTS.

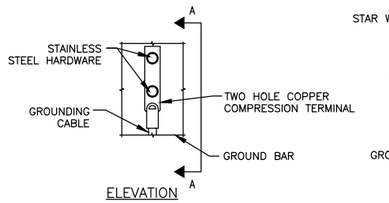
GROUND ROD AND RING DETAIL 3

SCALE: N.T.S.

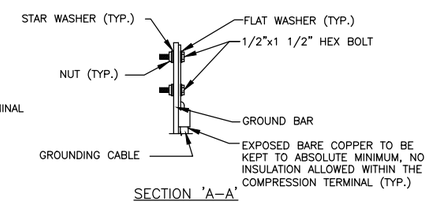


CONNECTION TO GROUND HALO DETAIL 4

SCALE: N.T.S.



ELEVATION



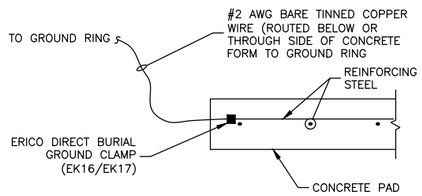
SECTION 'A-A'

NOTES:

1. DOUBLING UP OR STACKING OF CONNECTIONS IS NOT PERMITTED
2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.

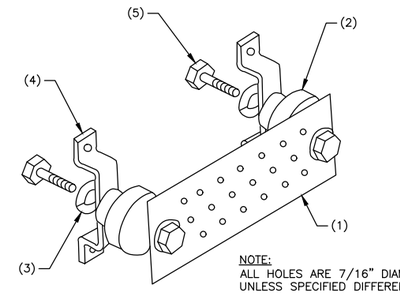
TYPICAL GROUND BAR MECHANICAL CONNECTION DETAIL 5

SCALE: N.T.S.



REBAR GROUNDING DETAIL 6

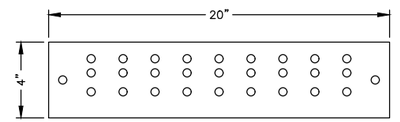
SCALE: N.T.S.



NOTE:
ALL HOLES ARE 7/16" DIAMETER UNLESS SPECIFIED DIFFERENTLY.

LEGEND:

1. COPPER GROUND BAR, 1/4"x4"x20", GBIT 14420 J 2-7. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION.
2. STANDOFF INSULATORS, HARGER LIGHTNING PROTECTION, INC. CAT. No. 5263-A8.
3. 1/2" LOCKWASHERS, HARGER CO. CAT. No. LWBS.
4. WALL MOUNTING STAINLESS STEEL, MOUNTING BRACKET, HARGER CAT NO. WBKT-1.
5. 1/2-13 x 1" HEX HEAD CAP SCREW, HARGER, CAT No. CS88S.



"J"

THE GROUND BAR IS 1/4" THICK, 4" WIDE, 20" LONG IT HAS A HOLE PATTERN "J" WITH A NO. 2 AWG SOLID TINNED TAIL.

GBIT 14420 J 2-7

STYLE | SIZE | HOLE PATTERN | TAIL

STYLE: GBIT - GROUNDED BAR WITH WALL MOUNTING BRACKETS, INSULATORS AND A 25' EXOTHERMICALLY WELDED TAIL.

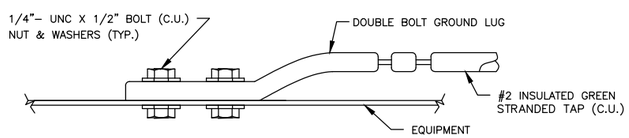
SIZE: THICKNESS, WIDTH, LENGTH IN INCHES.

HOLE PATTERN: HOLE PATTERN CENTERS MATCH NEMA DOUBLE LUG CONFIGURATION, SEE ISOMETRIC.

TAIL: SPECIFY AMERICAN WIRE GAUGE (AWG) SIZE AND STRANDING REQUIRED. 25' LENGTH IS STANDARD UNLESS OTHERWISE REQUESTED.

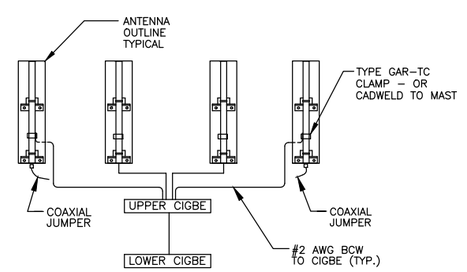
GROUND BAR DETAIL 11

SCALE: N.T.S.



CONNECTION TO EQUIPMENT DETAIL 7

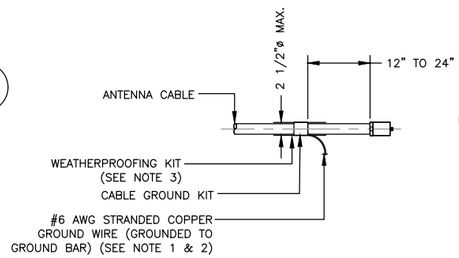
SCALE: N.T.S.



ELEVATION

ANTENNA MOUNT GROUNDING DETAIL 8

SCALE: N.T.S.

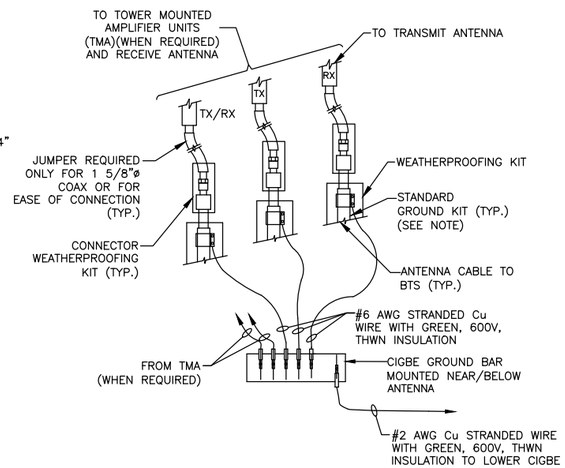


NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE ANDREW SUREGROUND TYPE KIT WITH TWO-HOLE LUG.
3. WEATHER PROOFING SHALL BE ANDREW TWO-PART TAPE SUPPLIED WITH KIT. COLD SHRINK SHALL NOT BE USED.

CONNECTION OF CABLE GROUND KIT TO ANTENNA CABLE DETAIL 9

SCALE: N.T.S.



NOTE:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE.

CONNECTION OF GROUND WIRE TO GROUNDING BAR DETAIL 10

SCALE: N.T.S.

at&t
500 ENTERPRISE DRIVE SUITE 3A
ROCKY HILL, CT 06067

SAI
12 INDUSTRIAL WAY
SALEM, NH 03079

CT2818
STAMFORD
NEWFIELD AVE

CONSTRUCTION DRAWINGS		
0	11/02/21	FOR CONSTRUCTION
G	04/20/21	REVISED PER COMMENTS
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A	08/24/18	PRELIMINARY SUBMISSION

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BENJAMIN B. REEVE
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BENJAMIN B. REEVE, P.E.
CONNECTICUT LICENSE NO. 0028971

DRAWN BY:	JC
REVIEWED BY:	DS
CHECKED BY:	BBR
PROJECT NUMBER:	50055106
JOB NUMBER:	50065694
SITE ADDRESS:	

500 NEWFIELD AVENUE
STAMFORD, CT 06905

SHEET TITLE

GROUNDING DETAILS

SHEET NUMBER

E-3

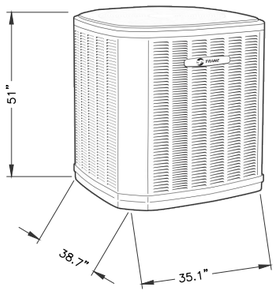
NOTES:

1. AC SYSTEM BASED ON A TRANE SPLIT SYSTEM.
2. PROVIDE THE FOLLOWING:
   - –COMPRESSOR START ASSIST
   - –CYCLE PROTECTOR
   - –TIME DELAY RELAY
   - –SOUND BLANKET
   - –FILTER RACK & FILTERS
   - –ACCUMULATOR
   - –CRANKHOUSE HEATER
   - –WINTER START CONTROL
   - –EVAPORATOR FREEZE THERMOSTAT
   - –LOW AMBIENT CONTROLLER
   - –SOLENOID KIT
3. PRESSURE CONTROL SHALL BE IN SERIES WITH THE CONDENSER MOTOR IN ORDER TO PROVIDE OPERATION DOWN TO 0°F.
4. ALL UNITS AND COMPONENTS CAN BE REPLACED WITH AN EQUAL UNIT, AS APPROVED BY ENGINEER.

INSTALLATION NOTE:

1. REFER TO MANUFACTURER SPECIFICATIONS FOR REQUIRED CLEARANCES.

OUTDOOR UNIT NO.	
MANUFACTURER	TRANE
MODEL NO.	4TTR6060A1000A
CAPACITY	5 TONS
CONDENSING UNIT	
FAN MOTOR RATED HP	1/4
ELECTRICAL DATA	
VOLTS–PH–HZ	208/230–1ø–60
CKT BKR AMPS	60A/2P



CONDENSING UNIT 1
SCALE: N.T.S.

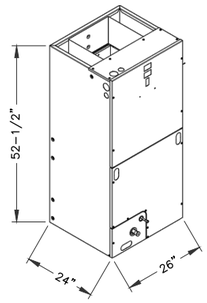
INDOOR UNIT NO.	
MANUFACTURER	TRANE
MODEL NO.	TEM3A0C60S51SA
CAPACITY	5 TONS
LOCATION	HEAD END
EVAPORATOR FAN	
HP	3/4
CFM (NOMINAL)	2000
EVAPORATOR COIL	
NUMBER OF ROWS	4
FACE AREA (SF)	5.91
ELECTRICAL DATA	
VOLTS–PH–HZ	208/230–1ø–60
FULL LOAD AMPS	2.5
CKT BKR AMPS	20
LEAD/LAG CONTROLLER	SCHROFFTECH

NOTES:

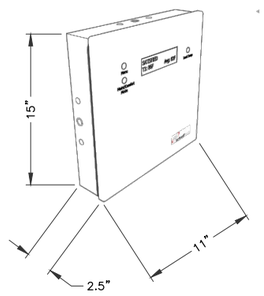
1. ALL UNITS AND COMPONENTS CAN BE REPLACED WITH AN EQUAL UNIT, AS APPROVED BY ENGINEER.

INSTALLATION NOTES:

1. CONTRACTOR TO PROVIDE BASE STAND, FILTER RACK, FILTERS, AND ALL HARDWARE REQUIRED FOR A COMPLETE INSTALLATION.
2. TO BE INSTALLED WITH AIR DOEWFLOW AT BASE OF HVAC

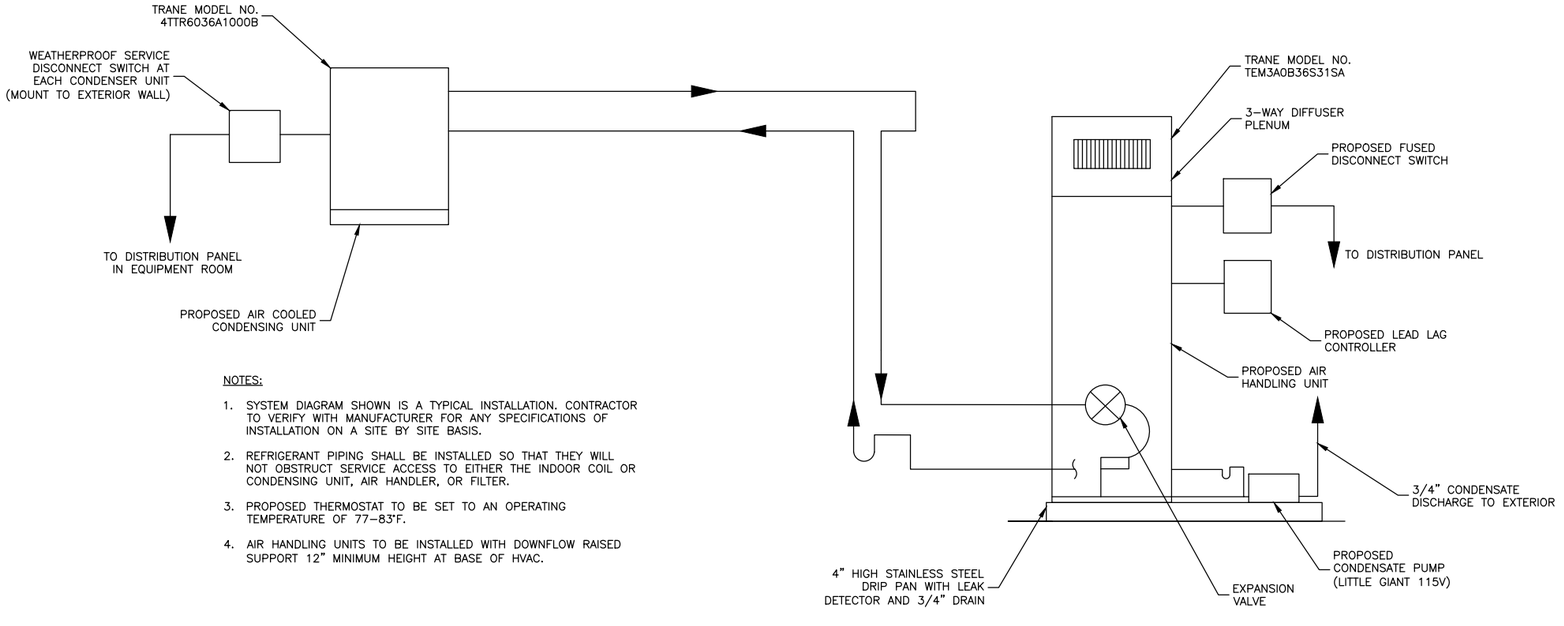


AIR HANDLING UNIT 2
SCALE: N.T.S.



MANUFACTURER	SCHROFFTECH
MODEL NO.	AF000136
TEMPERATURE RANGE	–20°/140°
CONTROL PROFILE	77°/83°/89°
ELECTRICAL DATA	
MAX INPUT VOLTAGE	60
MIN INPUT VOLTAGE	36

LEAD LAG CONTROLLER 3
SCALE: N.T.S.



NOTES:

1. SYSTEM DIAGRAM SHOWN IS A TYPICAL INSTALLATION. CONTRACTOR TO VERIFY WITH MANUFACTURER FOR ANY SPECIFICATIONS OF INSTALLATION ON A SITE BY SITE BASIS.
2. REFRIGERANT PIPING SHALL BE INSTALLED SO THAT THEY WILL NOT OBSTRUCT SERVICE ACCESS TO EITHER THE INDOOR COIL OR CONDENSING UNIT, AIR HANDLER, OR FILTER.
3. PROPOSED THERMOSTAT TO BE SET TO AN OPERATING TEMPERATURE OF 77–83°F.
4. AIR HANDLING UNITS TO BE INSTALLED WITH DOWNFLOW RAISED SUPPORT 12" MINIMUM HEIGHT AT BASE OF HVAC.

SYSTEM DIAGRAM 4
SCALE: N.T.S.

at&t
500 ENTERPRISE DRIVE SUITE 3A
ROCKY HILL, CT 06067

SAI
12 INDUSTRIAL WAY
SALEM, NH 03079

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SITE ADDRESS:	

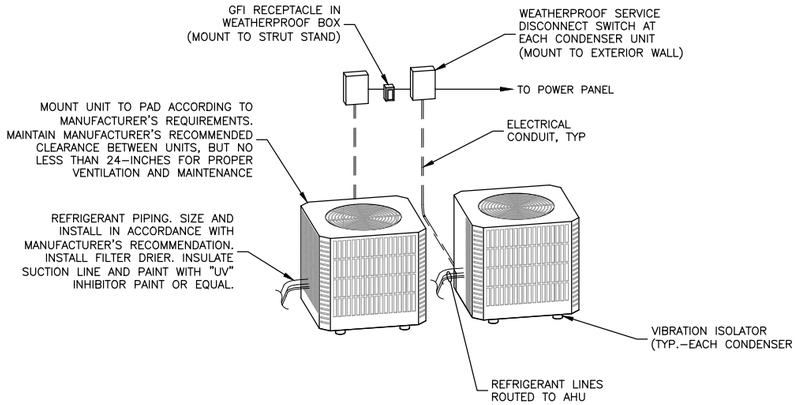
500 NEWFIELD AVENUE
STAMFORD, CT 06905

SHEET TITLE

MECHANICAL DETAILS – 1

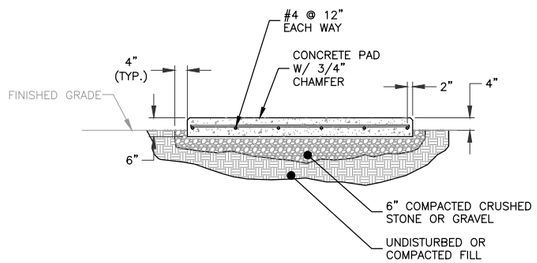
SHEET NUMBER

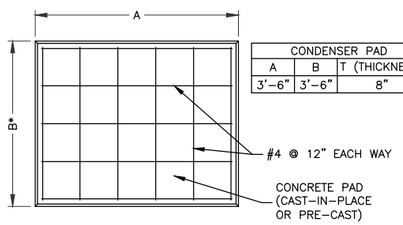
M–1



HVAC CONDENSER DETAIL 1

SCALE: N.T.S





CONDENSER PAD		
A	B	T (THICKNESS)
3'-6"	3'-6"	8"

NOTES:

1. USE GALVANIZED HILTI EXPANSION ANCHORS OR, APPROVED EQUAL, FOR EQUIPMENT ANCHORAGE.
2. VERIFY THE SIZE OF THE EMERGENCY GENERATOR WITH THE SUPPLIER.
3. FOR SIZE AND LOCATION OF ANCHORS AND OTHER REQUIREMENT, SEE EQUIPMENT VENDOR DRAWINGS.

OUTDOOR PAD FOR CONDENSERS 2

SCALE: N.T.S.

SPLIT-SYSTEM AIR CONDITIONING NOTES:

QUALITY ASSURANCE

CONFIRM THAT UNITS WILL NOT INTERFERE WITH "QUIET ENJOYMENT" OF TENANT SPACES ADJACENT TO THE PROPOSED UNITS.

COMPLY WITH GOVERNING CODES AND REGULATIONS. PROVIDE PRODUCTS OF ACCEPTABLE MANUFACTURERS WHICH HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR THREE YEARS. USE EXPERIENCED INSTALLERS. DELIVER, HANDLE, AND STORE MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

COMPLIANCE: ARI 210,360; ASHRAE 15; ASME CODE.

WARRANTY: WARRANTY FOR HVAC COMPONENTS SHALL BEGIN UPON SIGNED ACCEPTANCE OF THE PROJECT BY OWNER.

MATERIALS

SPLIT-SYSTEM UNITS: TRANE

COMPRESSORS: ALL COMPRESSORS USED IN THE HVAC UNITS SHALL BE SCROLL-TYPE COMPRESSORS AND SHALL BE SUITABLY EQUIPPED TO START UNDER LOW-AMBIENT TEMPERATURE CONDITIONS.

CONTRACTORS: CONTRACTORS SHALL BE HEAVY-DUTY DOUBLE POLE DEVICES, DESIGNED FOR HARD STARTS.

CONTROLS: THE HVAC UNITS SHALL BE CONTROLLED BY A STANDARD LEAD LAG CONTROLLER. THE HVAC UNITS AND THEIR CONTROLS SHALL BE CONFIGURED SUCH THAT NO CONDITION (INCLUDING FAILURE OF THE LEAD LAG CONTROLLER) WILL ALLOW MORE THAN ONE HVAC UNIT TO START AT THE SAME TIME. CONTROLS SHALL BE DESIGNED SUCH THAT ACTIVATION OF A SMOKE DETECTOR SHALL SHUT DOWN THE ENTIRE HVAC SYSTEM.

STATUS MONITORING: THE SYSTEM SHALL PROVIDE INDICATION (NORMALLY-CLOSED CONTACTS WHICH OPEN ON ALARM CONDITION) THAT A GIVEN UNIT OR UNITS ARE INOPERATIVE.

PUMPS: PROVIDE CONDENSATE PUMPS WITH LIQUID-TIGHT DRAIN PANS ON ALL SPLIT-SYSTEM AIR HANDLERS. COMPLY WITH MANUFACTURERS RECOMMENDATIONS TO SIZE CONDENSATE PUMP BASE ON VERTICAL DISCHARGE HEIGHT AND SITE SPECIFIC CONDITIONS.

PROTECTION: THE SYSTEM SHALL INCLUDE SUITABLE PROTECTION FOR COMPRESSORS SUCH THAT NO COMPRESSOR CAN BE DAMAGED DUE TO HIGH-PRESSURE OR LOW-PRESSURE REFRIGERANT CONDITIONS, LOSS OF REFRIGERANT, OR SHORT-CYCLING.

INSULATION MATERIALS FOR PIPING:

1) FLEXIBLE ELASTOMERIC CELLULAR INSULATION: FLEXIBLE EXPANDED CLOSED-CELL STRUCTURE WITH SMOOTH SKIN ON BOTH SIDES; TUBULAR MATERIALS, ASTM C 534, TYPE 1; SHEET MATERIALS, ASTM C 534, TYPE II.
2) FIRE PERFORMANCE: TYPE SUITABLE FOR SERVICE.
3) VAPOR BARRIER: TYPE SUITABLE FOR SERVICE.
4) INSULATION ACCESSORIES: INSULATING CEMENTS, ADHESIVE JACKETS TAPE, BANDS, WIRE, AND SEALING COMPOUNDS SUITABLE FOR SERVICE AND EXPOSURE.

INSTALLATION

INSTALL MATERIALS AND SYSTEM IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND APPROVED SUBMITTALS. INSTALL MATERIALS IN PROPER RELATION WITH ADJACENT CONSTRUCTION AND WITH UNIFORM APPEARANCE FOR EXPOSED WORK. COORDINATE WITH WORK OF OTHER SECTIONS. COMPLY WITH APPLICABLE REGULATIONS AND CODE REQUIREMENTS. PROVIDE PROPER CLEARANCES FOR SERVICING.

SUPPORT PIPING PROPERLY. PITCH TO DRAIN POINTS. INSTALL WITH PIPE EXPANSION LOOPS, MECHANICAL EXPANSION JOINTS, AND ANCHORS.

MAINTAIN INDICATED FIRE RATINGS OF WALLS, PARTITIONS, CEILINGS AND FLOORS AT PENETRATIONS. SEAL WITH FIRESTOPPING TO MAINTAIN FIRE RATING.

SIZE AND INSTALL REFRIGERANT PIPING ON SPLIT-SYSTEMS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. INSULATE FOR EXTERIOR APPLICATIONS, USE ULTRAVIOLET-RESISTANT INSULATION. USE PRESSURE-TREATED SLEEPERS TO SUPPORT LINES, A MAXIMUM OF 4 FEET ON CENTER ACROSS ROOFS AND FLAT SURFACES.

CHARGE THE HVAC SYSTEM, TEST FOR LEAKS, AND VERIFY THE UNIT IS FULLY OPERATIONAL. CLEARLY LABEL AND TAG ALL COMPONENTS. TEST AND BALANCE ALL SYSTEMS FOR PROPER OPERATION. REMOVE AND REPLACE UNITS WHICH DO NOT OPERATE PROPERLY AT NO ADDITIONAL EXPENSE TO THE CLIENT.

RESTORE DAMAGED FINISHES. CLEAN AND PROTECT WORK FROM DAMAGE.

SUBMITTALS

PRODUCT DATA: SUBMIT MANUFACTURER'S PRODUCT DATA AND INSTALLATION INSTRUCTIONS FOR EACH MATERIAL AND PRODUCT USED.

OPERATION AND MAINTENANCE DATA: SUBMIT MANUFACTURER'S OPERATION AND MAINTENANCE DATA, INCLUDING OPERATING INSTRUCTIONS, LIST OF SPARE PARTS AND MAINTENANCE SCHEDULE.

MECHANICAL NOTES:

1. DRAIN PANS SHALL BE CAPABLE OF SUPPORTING AIR-HANDLER UNITS. PANS SHALL SUPPORT CONDENSATE PUMP - PUMP TO BE MOUNTED PER MFGR. SPECIFICATIONS TO SUCCESSFULLY PUMP OUT DRAIN PAN THRU 3/4" CWT DISCHARGE WITH CHECK VALVE. DRAIN PAN SHALL BE DETAILED BY SUBCONTRACTOR BUT SHALL MEASURE APPROXIMATELY 4'X3'X4" HIGH.
2. CONTRACTOR SHALL INSTALL 3/4" CWT DRAIN LINE FROM DRAIN CONNECTION OF EACH AIR HANDLER THROUGH A SEAL TRAP (W/PLUG) TO THE CONDENSATE PUMP.
3. CONDENSATE PUMP SHALL LIFT THE CONDENSATE FROM THE CONDENSATE PAN AND DISCHARGE TO EXTERIOR
4. COORDINATE UNIT SMOKE DETECTOR WITH ELECTRICAL CONTRACTOR. SMOKE DETECTOR SHALL BE SUPPLIED BY THE ELECTRICAL CONTRACTOR AND INSTALLED BY MECHANICAL CONTRACTOR AS REQUIRED BY IMC 2012, AND LOCAL AUTHORITY HAVING JURISDICTION.
5. RETURN AIR AS PER DETAIL 3 AND FOOTNOTE 2 AND 2(a) OF THE INDOOR AIR HANDLING UNIT SCHEDULE.
6. CONTRACTOR SHALL FURNISH/INSTALL CONDENSING UNITS AS PER EQUIPMENT SCHEDULE, MATCHED TO EACH AIR HANDLER. UNITS TO BE INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND SPECIFICATIONS. SUBCONTRACTOR SHALL INSTALL REFRIGERANT TUBING FROM AIR HANDLERS TO CONDENSING UNITS SIZED AS PER MANUFACTURER'S RECOMMENDATIONS - EXACT LOCATIONS INCLUDING REQUIRED WALL/CEILING PENETRATIONS (WITH PROPER SEALING) SHALL BE FIELD DETERMINED WITH OWNER APPROVAL. 1" THICK ARMAFLEX INSULATION SHALL BE INSTALLED ON LIQUID REFRIGERANT PIPING.
7. CONTRACTOR SHALL INSTALL THERMOSTATS. BOXES, SMOKE DETECTORS, TIME CLOCK, AND ASSOCIATED HARDWARE TO CONTROL AIR HANDLER OPERATIONS IN MAINTAINING REQUIRED ATC ROOM TEMPERATURE.
8. ALL A/C PIPING IN EQUIPMENT ROOM MUST BE INSULATED TO PREVENT SWEATING.
9. CONTRACTOR TO VERIFY ALL PIPING SIZE WITH MANUFACTURER PRIOR TO INSTALLATION.
10. WHEN APPLICABLE, DUCTWORK TO BE CONSTRUCTED OF GALVANIZED SHEETMETAL IN ACCORDANCE W/ "SMACNA" 2" PRESSURE CLASS.

at&t
500 ENTERPRISE DRIVE SUITE 3A
ROCKY HILL, CT 06067

SAI
12 INDUSTRIAL WAY
SALEM, NH 03079

CT2818
STAMFORD
NEWFIELD AVE

CONSTRUCTION DRAWINGS		
0	11/02/21	FOR CONSTRUCTION
G	04/20/21	REVISED PER COMMENTS
F	04/12/21	REVISED PER COMMENTS
E	03/25/21	REVISED PER COMMENTS
D	03/09/21	PRELIMINARY SUBMISSION
C	01/29/21	PRELIMINARY SUBMISSION
B	08/26/20	PRELIMINARY SUBMISSION
A	08/24/18	PRELIMINARY SUBMISSION

Dewberry®
Dewberry Engineers Inc.
600 PARSIPPANY ROAD
SUITE 301
PARSIPPANY, NJ 07054
PHONE: 973.739.9400
FAX: 973.739.9710

BENJAMIN B. RICHETTE, P.E.
CONNECTICUT LICENSE NO. 0028971

DRAWN BY:	JC
REVIEWED BY:	DS
CHECKED BY:	BBR
PROJECT NUMBER:	50055106
JOB NUMBER:	50065694
SITE ADDRESS:	

500 NEWFIELD AVENUE
STAMFORD, CT 06905

SHEET TITLE

MECHANICAL DETAILS - II

SHEET NUMBER

M-2

Dewberry

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

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www.dewberry.com

October 15, 2021

Site Acquisitions, LLC (SAI)
12 Industrial Way
Salem, NH 03079

Re: Site Name: Stamford Newfield Avenue, Rev 3 MOD
Site No.: CT2818
500 Newfield Avenue
Stamford, CT 06905

To Whom It May Concern:

AT&T has proposed to install six (6) new antennas within a new concealment flagpole on the rooftop at the site referenced above. The new concealment flagpole will be installed on a new steel dunnage platform. Twelve (12) new Remote Radio Heads (RRHs), three (3) future RRHs, twelve (12) quadplexers, six (6) twin diplexers, two (2) DC12, and one (1) fiber management box will be installed on the new steel dunnage platform.

Dewberry Engineers Inc. (Dewberry) has reviewed the antenna design sheets (dated 07/09/20) provided by AT&T and has determined that the existing building structure has **sufficient** capacity **with modifications** to support the proposed equipment configuration. The attached calculations include the analysis and design of the proposed installation. Please note, the new concealment flagpole will be designed by others and is not included under the scope of this letter. Assumptions about the proposed flagpole were made in this analysis and are to be evaluated once the design of the flagpole is finalized. With the proposed conditions, the existing building 4th floor timber columns 7D, 8D, 7F and 8F are to be modified with channel modifications to support the proposed equipment configuration as shown in the latest construction drawings by Dewberry.

Our assessment is based on the assumption that the existing building is in good condition and was constructed in conformance with all applicable state and local building codes. If during construction any damage or deterioration is noticed, Dewberry is to be notified to assess any deviation from the assumed condition. Any alteration in equipment loading described above and on the associated plans will void any conclusions expressed herein and will require further analysis and design. No structural qualification is made or implied by this structural letter for existing structural members not supporting the proposed installation.

If you have any questions, please do not hesitate to call me at 617-531-0800.

Sincerely,
Dewberry Engineers Inc.

Benjamin B. Revette, P.E.
Connecticut Professional Engineer

Dewberry Engineers, Inc.
Structural Analysis Summary Sheet

Job No.:	50044142/50065694	**By:**	DAP	**Date:**	9/30/21
Job Name:	Stamford Newfield Avenue	**Checked:**	BGK	**Date:**	10/06/21

Location: 500 Newfield Avenue, Stamford, CT 06905
Client: SAI

Scope of Work:

- Proposed installation of six (6) new antennas within a new concealment flagpole.
- Proposed installation a new concealment flagpole, designed by others, on a new steel dunnage platform.
- Proposed installation of twelve (12) new RRHs and three (3) future RRHs on a new steel dunnage platform.
- Proposed installation of twelve (12) quadplexers (8.8 lb each), six (6) twin diplexers (7 lb each), two (2) DC12 , and one (1) fiber management box on a new steel dunnage platform.
- Proposed installation of one (1) Purcell FLX16 & FLX12 stacked cabinet (800 lb), one (1) Purcell FLX21 cabinet (675 lb), and two (2) Netxtend Flex 2.5 cabinets (2,206 lb each) in the basement equipment room.
- Proposed installation of a new steel dunnage platform on an existing rooftop.

Codes / Standards / References:

- IBC 2015
- 2018 Connecticut Building
- TIA-222-G
- AISC 14th Ed.
- RFDS dated 07/09/20
- Existing construction drawings by Joseph Osher P.E. & George Early R.A. Associated Architects & Engineers dated 01/10/70
- Site visit by Dewberry Engineers on 06/16/20

Design & Analysis Assumptions:

- Design and analysis are based on dead, wind, snow and live loads. The analysis checks for normal bending and shear stresses.
- Proposed flagpole, designed by others, is assumed to a 40”⌀ x 34.3’ tall with a maximum weight of 4,600 lbs.

Conclusion / Recommendations:

- The proposed platform has sufficient capacity to support the proposed installation.
- The existing building structure has **sufficient** capacity **with modifications** to support the proposed equipment configuration.
- The existing building 4th floor timber columns 7D, 8D, 7F and 8F are to be modified with channel modifications to support the proposed equipment configuration as shown in the latest construction drawings by Dewberry.

APPENDIX A

Dewberry

Job Number:	50065694
Made by:	DAP
Date:	9/30/2021
Checked by:	BGK
Date:	10/6/2021

(CT2818) - Design Wind Load

\\par-fs\Parsippany\Projects\50055106\50065694\Tech\Rev 3 MOD\SA\Calculations\Platform Loading Calcs (7-10).xlsx

Site Name: CT2818

Dead Loading

Handrail Loading

Equipment	*Weight Ea. (lbs)*	*Quantity*	*Weight Total (lbs)*	*Status*
RRUS 4449*	75.4	3	226.2	*Proposed*
RRUS 4415*	49.1	3	147.3	*Proposed*
RRUS 8843*	77	3	231	*Proposed*
RRUS 4478*	64.9	3	194.7	*Future*
Quadplexer	8.8	12	105.6	*Proposed*
Diplexer	7	6	42	*Proposed*
DC12	30	2	60	*Proposed*
FMB	35	1	35	*Proposed*
		Total:	1041.8	

**Weight includes mounting hardware*

Length of Hand Rail: 22.00 ft

Distributed Dead Load Along Handrail: 47.4 lb/ft

Grating: 10.0 psf

Roof dead load:

Roof Dead Load: 26.00 psf *(Existing building drawings dated 01/10/70)*

	Area	*Conc. Load*
Column (STAAD Node 2, Column D7):	139 sf	3.61 k
Column (STAAD Node 3, Column D8):	145 sf	3.77 k
Column (STAAD Node 6, Column F7):	107 sf	2.78 k
Column (STAAD Node 7, Column F8):	113 sf	2.95 k

Live Loading

Roof live load:

Live Load: 30.0 psf

	*Area**	*Conc. Load*
Column (STAAD Node 2, Column D7):	101.3 sf	3.04 k
Column (STAAD Node 3, Column D8):	107.6 sf	3.23 k
Column (STAAD Node 6, Column F7):	78.3 sf	2.35 k
Column (STAAD Node 7, Column F8):	84.7 sf	2.54 k

*minus Platform Overlap Area

Snow Loading

Pg = 30.0 psf *(ASCE 7-10, Hazard Tool)*

I = 1.0

Ce = 1.0

Ct = 1.2

$P_f = (0.7)(C_e)(Ct)(I)(P_g)$

= 25.2 psf

20 psf *(min snow)*

Use **25.2 psf**

	*Area**	*Conc. Load*
Column (STAAD Node 2, Column D7):	101.3 sf	2.55 k
Column (STAAD Node 3, Column D8):	107.6 sf	2.71 k
Column (STAAD Node 6, Column F7):	78.3 sf	1.97 k
Column (STAAD Node 7, Column F8):	84.7 sf	2.13 k

*minus Platform Overlap Area

Dewberry

Job Number:	50065694
Made by:	DAP
Date:	9/30/2021
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Date:	10/6/2021

(CT2818) - Design Wind Load

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Wind Load per ASCE 7-10

Design Criteria

Height, h =	43.80 ft	*(Centerline of Cabinets)*
Risk Category =	II	*(Table 1.5-1, ASCE 7-10)*
Basic Wind Speed, V =	125 mph	*(2018 CT Building Code)*
K_d =	0.85	*(Table 26.6-1, ASCE 7-10)*
Exposure Category =	B	*(Sect. 26.7.3, ASCE 7-10)*
K_{zt} =	1	*(Sect.26.8.2, ASCE 7-10)*
G =	0.85	*(Sect. 26.9.4, ASCE 7-10)*
K_h =	0.78	*(Table 27.3-1, ASCE 7-10)*

Velocity Pressure

$q_p = 0.00256(K_h)(K_{zt})(K_d)(V^2)$ *(Eqn. 27.3-1, ASCE 7-10)*

$= 26.54$ lb/ft²

Pressure on Equipment

GCr= 1.4 *(Sect. 29.5.1, ASCE 7-10)*

F = qz(GCr) *(Eqn. 29.5-2, ASCE 7-10)*

= **37.16 lb/ft²**

Handrail Loading

Description	Dimensions W	D	H	Quantity	Total Area Area (Z) (ft²)	Area (X) (ft²)
RRUS 4449*	13.20 in	9.40 in	17.90 in	3	4.92	1.17
RRUS 4415*	13.50 in	5.90 in	16.50 in	3	4.64	0.68
RRUS 8843*	13.20 in	10.90 in	14.90 in	3	4.10	1.13
RRUS 4478*	13.40 in	7.70 in	16.50 in	3	4.61	0.88
Quadplexer	10.00 in	2.32 in	7.28 in	12	6.07	0.12
Diplexer	4.25 in	5.28 in	5.59 in	6	0.99	0.20
DC12	15.00 in	4.80 in	15.00 in	2	3.13	0.50
FMB	24.00 in	12.00 in	24.00 in	1	4.00	2.00

Total Area (Z) 27.53 ft²

Distributed Load (Z) Along Handrail: 46.49 lb/ft

Flag Pole Dead Loading

Equipment	Weight Ea. (lbs)	Quantity	Weight Total (lbs)	Status	
Kathrein Antenna 80372965	84.4	6	506.4	*Proposed*	
TMABPD7823VG12A	26	12	312	*Proposed*	
40" DIA. x 20' x 1/4" FRP Conceal.	454	1	454	*Proposed*	*Assumed*
40" x 14.3' Unipole	1250	1	1250	*Proposed*	*Assumed*
4" x 20' Sch80 Mast Pipe	300	1	300	*Proposed*	*Assumed*
4'x4'x2" Base Plate	1307	1	1307	*Proposed*	*Assumed*
Misc.	-	-	475	*Proposed*	*Assumed*
		Total:	4604		

Loading Combinations (For Steel) *(Sect. 2.3.2, ASCE 7-10)*

1.4D
1.2D + 0.5(Lr or S)
1.2D+1.6(Lr or S)+0.5W
1.2D + 1.0W + 0.5(Lr or S)

L = Live Load
S = Snow Load
D = Dead Load
W = Load due to Pressure

Loading Combinations (For Anchorage) *(Sect. 2.4.1, ASCE 7-10)*

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

Dewberry

Job Number	50065694
Made by:	DAP
Date:	9/30/2021
Checked by:	BGK
Date:	10/6/2021

(CT2818) - Design Wind Load

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Wind Load Design Criteria

FLAGPOLE LOADING CALCULATIONS

Site Name: CT2818

General Information & Design Input

Item	Value	Description	Reference
V_{ult} =	125.00	Ultimate Design Wind Speed	*2018 CT Building Code*
K_d =	0.95	Wind Direction Probability Factor	*Table 26.6-1*
Class	II	Structure Classification	*Table 1.5-1*
I =	1.00	Importance Factor (Without Ice)	*Table 1.5-2*
z = h =	58.00	ft. (A.G.L.)	*Centerline of Flagpole*
Exp. Cat.	B	Exposure Category	*Sect. 26.7.3*
z_g =	1200.00	Terrain Exposure Constant	*Table 26.9-1*
α =	7.00	Terrain Exposure Constant	*Table 26.9-2*
K_z =	0.85	Velocity Pressure Coefficient	*Table 29.3-1*
Topo. Cat.	1.00	Topographic Category (1-5)	*Sect. 26.8.1*
e =	2.72	Natural Logarithmic base	
γ =	N/A	Height attenuation Factor	
L_h =	N/A	Distace upwind of crest	
H =	N/A	ft. Height of crest above surrounding terrain	
K_1 =	N/A	Topographic Multiplier	*Figure 26.8-1*
K_2 =	N/A	Topographic Multiplier	*Figure 26.8-1*
K_3 =	N/A	Topographic Multiplier	*Figure 26.8-1*
K_{zt} =	1.00	$= (1+K_1K_2K_3)^2$	*Sect. 26.8.2*
G_h =	0.85	Gust Effect Factor	*Sect. 26.9.1*
$q_{z\ design}$ =	32.2 psf	$= 0.00256(K_z)(K_{zt})(K_d)(V_{asd}^2)(I)$	*Sect.29.3.2*

Design Wind Forces:

Section 2.6.9.2

$F_a = q_{z\ design} G_h (EPA)_a$

(where $(EPA)_a$ = effective projected area of the appurtenance = $C_a A_a$)

(see calculation tables on following pages)

Dewberry

Job Number	50065694
Made by:	DAP
Date:	9/30/2021
Checked by:	BGK
Date:	10/6/2021

(CT2818) - Design Wind Load

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Element Definition

Description	Dimensions (in.)			Length / # Supports
	W	D	H	
40" Dia. FRP Flue	40.00	40.00	412.00	1.00

Design Wind Load

Equipment	Dimensions (ft.)			Area $(A_a)_n$	Area $(A_a)_t$	Aspect Ratio	Aspect Ratio	C_{an}	C_{at}
	Width *(Normal)*	Depth *(Tangent)*	Height *(or span)*	*(normal)* *(sf)*	*(tangent)* *(sf)*	*(normal)*	*(tangent)*	*Table 2-8*	*Table 2-8*
40" Dia. FRP Flue	3.33	3.33	34.33	114.32	114.32	10.31	10.31	0.87	0.87

Design Effective Projected Area & Wind Loads

Equipment	EPA_a @ 0.0° *(sf)*	EPA_a @ 30.0° *(sf)*	EPA_a @ 60.0° *(sf)*	EPA_a @ 90.0° *(sf)*	F_a @ 0.0° *(lb)*	F_a @ 30.0° *(lb)*	F_a @ 60.0° *(lb)*	F_a @ 90.0° *(lb)*
40" Dia. FRP Flue	99.46	99.46	99.46	99.46	2722.2	2722.2	2722.2	2722.2

Job Information

	Engineer	Checked	Approved
Name:	DAP	BGK	
Date:	9/30/21	10/6/21	

Project ID	
Project Name	

Structure Type	SPACE FRAME

Number of Nodes	108	Highest Node	195
Number of Elements	167	Highest Beam	322

Number of Basic Load Cases	9
Number of Combination Load Cases	63

Included in this printout are data for:

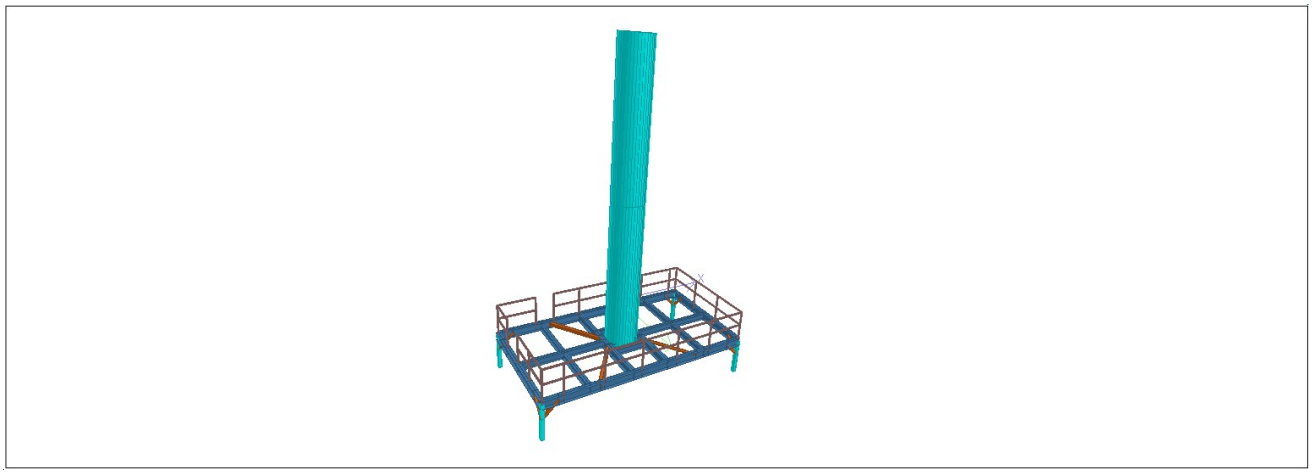
All	The Whole Structure

Included in this printout are results for load cases:

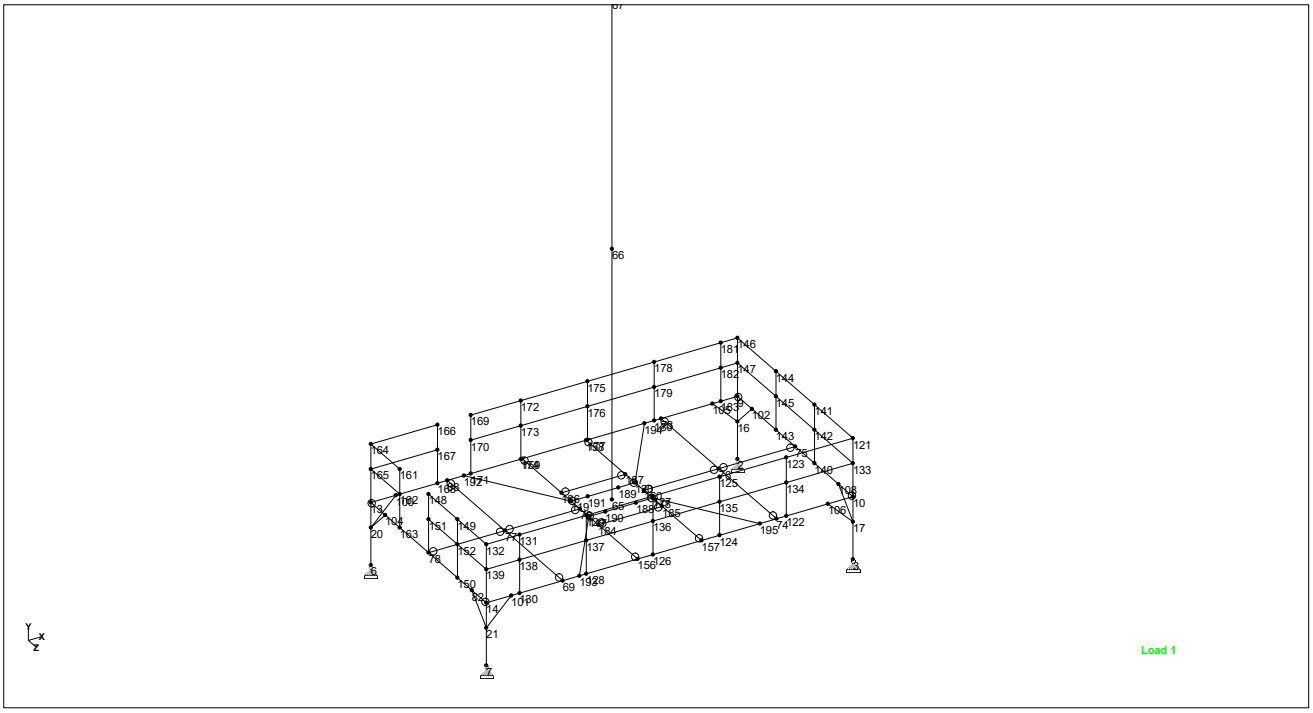
Type	L/C	Name
Primary	1	SELF WEIGHT
Primary	2	DEAD (TELECOM)
Primary	3	ROOF DEAD
Primary	4	LIVE
Primary	5	SNOW
Primary	6	ROOF SNOW
Primary	7	WIND(Z)
Primary	8	WIND(X)
Combination	9	1.4D
Combination	10	1.2D+1.6L+0.5W(Z)
Combination	18	1.2D+1.6L+0.5W(-Z)
Combination	19	1.2D+1.6L+0.5W(X)
Combination	20	1.2D+1.6L+0.5W(-X)
Combination	21	1.2D+1.6S+0.5W(Z)
Combination	26	1.2D+1.6S+0.5W(-Z)
Combination	27	1.2D+1.6S+0.5W(X)
Combination	28	1.2D+1.6S+0.5W(-X)
Combination	29	1.2D+0.5L
Combination	34	1.2D+0.5S
Combination	35	1.2D+1.0W(Z)+0.5L
Combination	36	1.2D+1.0W(-Z)+0.5L
Combination	37	1.2D+1.0W(X)+0.5L
Combination	38	1.2D+1.0W(-X)+0.5L
Combination	39	1.2D+1.0W(Z)+0.5S
Combination	40	1.2D+1.0W(-Z)+0.5S

Job Information Cont...

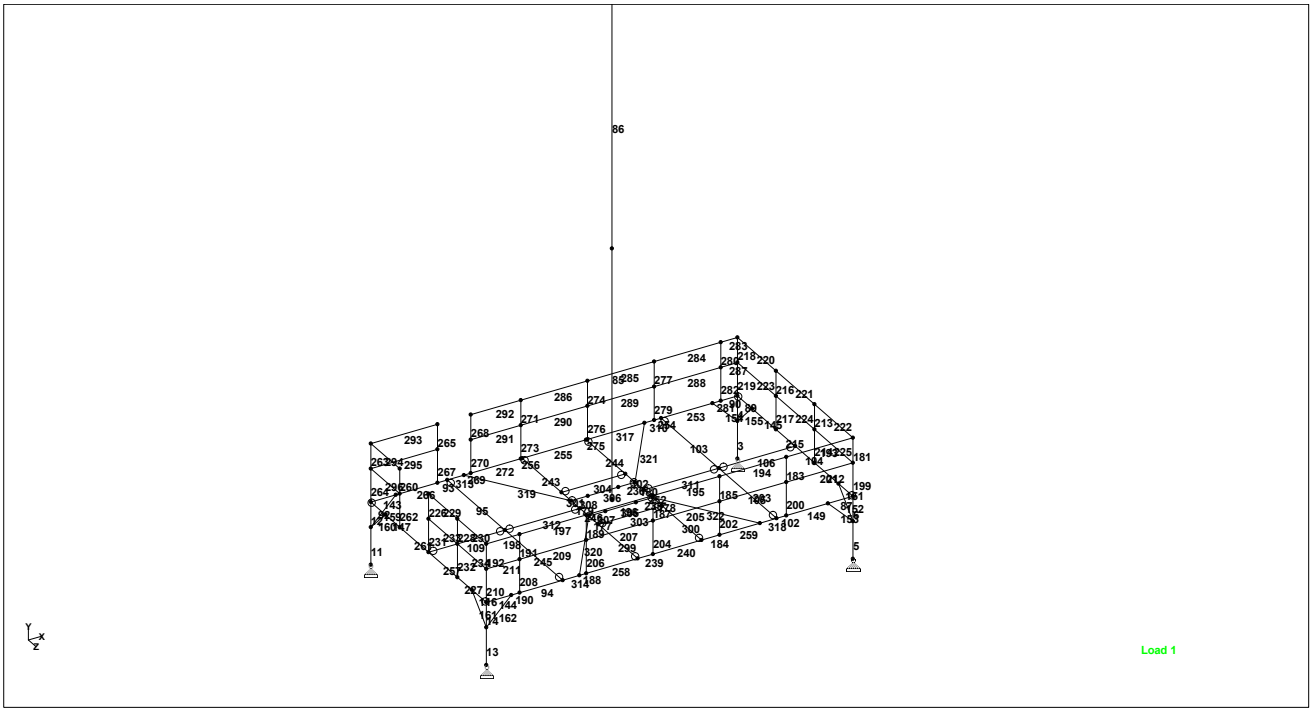
Type	L/C	Name
Combination	44	0.9D+1.0W(-Z)
Combination	45	0.9D+1.0W(X)
Combination	46	0.9D+1.0W(-X)
Primary	47	ROOF LIVE



3D Rendered View



Node Layout



Beam Layout

Section Properties

Prop	Section	Area (in^2)	I_{yy} (in^4)	I_{zz} (in^4)	J (in^4)	Material
1	W10X26	7.610	14.100	144.000	0.402	STEEL
2	W8X18	5.260	7.970	61.900	0.172	STEEL
3	L30304	1.440	1.982	0.506	0.030599	STEEL
4	HSST4X4X0.375	4.780	10.300	10.300	16.985	STEEL
5	Round 40.0X40.0X0.2	31.214	6.17E+3	6.17E+3	12.3E+3	STEEL
6	PIPS15	0.749	0.293	0.293	0.586	STEEL
7	L40406	2.860	6.943	1.774	0.137	STEEL

Materials

Mat	Name	E (kip/in^2)	ν	Density (kip/in^3)	α (/°F)
1	STEEL	29E+3	0.300	0.000283	6.5E -6
2	CONCRETE	3.15E+3	0.170	8.68e-05	5.5E -6
3	ALUMINUM	10E+3	0.330	9.8e-05	12.8E -6
4	STAINLESSSTEEL	28E+3	0.300	0.000283	9.9E -6
5	STEEL_36_KSI	29E+3	0.300	0.000283	6.5E -6
6	STEEL_50_KSI	29E+3	0.300	0.000283	6.5E -6
7	STEEL_275_NMM2	29.7E+3	0.300	0.000	6.67E -6
8	STEEL_355_NMM2	29.7E+3	0.300	0.000	6.67E -6

Supports

Node	X (kip/in)	Y (kip/in)	Z (kip/in)	rX (kip-ft/deg)	rY (kip-ft/deg)	rZ (kip-ft/deg)
2	Fixed	Fixed	Fixed	-	-	-
3	Fixed	Fixed	Fixed	-	-	-
6	Fixed	Fixed	Fixed	-	-	-
7	Fixed	Fixed	Fixed	-	-	-

Releases

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

Beam	Node	x	y	z	rx	ry	rz
89	9	Fixed	Fixed	Fixed	Fixed	Pin	Pin
92	13	Fixed	Fixed	Fixed	Fixed	Pin	Pin
95	68	Fixed	Fixed	Fixed	Fixed	Pin	Pin
103	73	Fixed	Fixed	Fixed	Fixed	Pin	Pin
105	74	Fixed	Fixed	Fixed	Fixed	Pin	Pin
106	75	Fixed	Fixed	Fixed	Fixed	Pin	Pin
106	76	Fixed	Fixed	Fixed	Fixed	Pin	Pin
109	77	Fixed	Fixed	Fixed	Fixed	Pin	Pin
109	78	Fixed	Fixed	Fixed	Fixed	Pin	Pin
116	14	Fixed	Fixed	Fixed	Fixed	Pin	Pin
151	10	Fixed	Fixed	Fixed	Fixed	Pin	Pin
235	118	Fixed	Fixed	Fixed	Fixed	Pin	Pin
236	120	Fixed	Fixed	Fixed	Fixed	Pin	Pin
243	159	Fixed	Fixed	Fixed	Fixed	Pin	Pin
244	158	Fixed	Fixed	Fixed	Fixed	Pin	Pin
245	69	Fixed	Fixed	Fixed	Fixed	Pin	Pin
299	156	Fixed	Fixed	Fixed	Fixed	Pin	Pin
300	157	Fixed	Fixed	Fixed	Fixed	Pin	Pin
303	185	Fixed	Fixed	Fixed	Fixed	Pin	Pin
303	184	Fixed	Fixed	Fixed	Fixed	Pin	Pin
304	187	Fixed	Fixed	Fixed	Fixed	Pin	Pin
304	186	Fixed	Fixed	Fixed	Fixed	Pin	Pin
307	117	Fixed	Fixed	Fixed	Fixed	Pin	Pin
308	119	Fixed	Fixed	Fixed	Fixed	Pin	Pin
311	76	Fixed	Fixed	Fixed	Fixed	Pin	Pin
311	160	Fixed	Fixed	Fixed	Fixed	Pin	Pin
312	79	Fixed	Fixed	Fixed	Fixed	Pin	Pin
312	77	Fixed	Fixed	Fixed	Fixed	Pin	Pin

Primary Load Cases

Number	Name	Type
1	SELF WEIGHT	None
2	DEAD (TELECOM)	None
3	ROOF DEAD	None
4	LIVE	None
5	SNOW	None
6	ROOF SNOW	None
7	WIND(Z)	None
8	WIND(X)	None
47	ROOF LIVE	Live

Combination Load Cases

Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
9	1.4D	1	SELF WEIGHT	1.40
		2	DEAD (TELECOM)	1.40
		3	ROOF DEAD	1.40
10	1.2D+1.6L+0.5W(Z)	1	SELF WEIGHT	1.20
		2	DEAD (TELECOM)	1.20
		3	ROOF DEAD	1.20
		4	LIVE	1.60
		7	WIND(Z)	0.50
11	D+L	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		3	ROOF DEAD	1.00
		4	LIVE	1.00
		47	ROOF LIVE	1.00
12	D+S	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		3	ROOF DEAD	1.00
		5	SNOW	1.00
		6	ROOF SNOW	1.00
13	D+0.75L	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		3	ROOF DEAD	1.00
		4	LIVE	0.75
		47	ROOF LIVE	0.75
14	D+0.6W(X)	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		3	ROOF DEAD	1.00
		8	WIND(X)	0.60
15	D+0.6W(Z)	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		3	ROOF DEAD	1.00

Combination Load Cases Cont...

Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
		7	WIND(Z)	0.60
16	D+0.6W(-X)	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		3	ROOF DEAD	1.00
		8	WIND(X)	-0.60
17	D+0.6W(-Z)	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		3	ROOF DEAD	1.00
		7	WIND(Z)	-0.60
18	1.2D+1.6L+0.5W(-Z)	1	SELF WEIGHT	1.20
		2	DEAD (TELECOM)	1.20
		3	ROOF DEAD	1.20
		4	LIVE	1.60
		7	WIND(Z)	-0.50
		47	ROOF LIVE	1.60
19	1.2D+1.6L+0.5W(X)	1	SELF WEIGHT	1.20
		2	DEAD (TELECOM)	1.20
		3	ROOF DEAD	1.20
		4	LIVE	1.60
		8	WIND(X)	0.50
		47	ROOF LIVE	1.60
20	1.2D+1.6L+0.5W(-X)	1	SELF WEIGHT	1.20
		2	DEAD (TELECOM)	1.20
		3	ROOF DEAD	1.20
		4	LIVE	1.60
		8	WIND(X)	-0.50
		47	ROOF LIVE	1.60
21	1.2D+1.6S+0.5W(Z)	1	SELF WEIGHT	1.20
		2	DEAD (TELECOM)	1.20
		3	ROOF DEAD	1.50
		5	SNOW	1.60
		6	ROOF SNOW	1.60
		7	WIND(Z)	0.50
22	D+0.75(L+0.6W(X))	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		3	ROOF DEAD	1.00
		4	LIVE	0.75
		8	WIND(X)	0.45
		47	ROOF LIVE	0.75
23	D+0.75(L+0.6W(Z))	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		3	ROOF DEAD	1.00
		4	LIVE	0.75
		7	WIND(Z)	0.45
		47	ROOF LIVE	0.75

Combination Load Cases Cont...

Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
24	D+0.75(L+0.6W(-X))	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		3	ROOF DEAD	1.00
		4	LIVE	0.75
		8	WIND(X)	-0.45
		47	ROOF LIVE	0.75
25	D+0.75(L+0.6W(-Z))	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		3	ROOF DEAD	1.00
		4	LIVE	0.75
		7	WIND(Z)	-0.45
		47	ROOF LIVE	0.75
26	1.2D+1.6S+0.5W(-Z)	1	SELF WEIGHT	1.20
		2	DEAD (TELECOM)	1.20
		3	ROOF DEAD	1.20
		5	SNOW	1.60
		6	ROOF SNOW	1.60
		7	WIND(Z)	-0.50
27	1.2D+1.6S+0.5W(X)	1	SELF WEIGHT	1.20
		2	DEAD (TELECOM)	1.20
		3	ROOF DEAD	1.20
		5	SNOW	1.60
		6	ROOF SNOW	1.60
		8	WIND(X)	0.50
28	1.2D+1.6S+0.5W(-X)	1	SELF WEIGHT	1.20
		2	DEAD (TELECOM)	1.20
		3	ROOF DEAD	1.20
		5	SNOW	1.60
		6	ROOF SNOW	1.60
		8	WIND(X)	-0.50
29	1.2D+0.5L	1	SELF WEIGHT	1.20
		2	DEAD (TELECOM)	1.20
		3	ROOF DEAD	1.20
		4	LIVE	0.50
		47	ROOF LIVE	0.50
30	0.6D+0.6W(X)	1	SELF WEIGHT	0.60
		2	DEAD (TELECOM)	0.60
		3	ROOF DEAD	0.60
		8	WIND(X)	0.60
31	0.6D+0.6W(Z)	1	SELF WEIGHT	0.60
		2	DEAD (TELECOM)	0.60
		3	ROOF DEAD	0.60
		7	WIND(Z)	0.60
32	0.6D+0.6W(-X)	1	SELF WEIGHT	0.60
		2	DEAD (TELECOM)	0.60

Combination Load Cases Cont...

Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
		3	ROOF DEAD	0.60
		8	WIND(X)	0.60
33	0.6D+0.6W(-Z)	1	SELF WEIGHT	0.60
		2	DEAD (TELECOM)	0.60
		3	ROOF DEAD	0.60
		7	WIND(Z)	-0.60
34	1.2D+0.5S	1	SELF WEIGHT	1.20
		2	DEAD (TELECOM)	1.20
		3	ROOF DEAD	1.20
		6	ROOF SNOW	0.50
		5	SNOW	0.50
35	1.2D+1.0W(Z)+0.5L	1	SELF WEIGHT	1.20
		2	DEAD (TELECOM)	1.20
		3	ROOF DEAD	1.20
		7	WIND(Z)	1.00
		4	LIVE	0.50
		47	ROOF LIVE	0.50
36	1.2D+1.0W(-Z)+0.5L	1	SELF WEIGHT	1.20
		2	DEAD (TELECOM)	1.20
		3	ROOF DEAD	1.20
		7	WIND(Z)	-1.00
		4	LIVE	0.50
		47	ROOF LIVE	0.50
37	1.2D+1.0W(X)+0.5L	1	SELF WEIGHT	1.20
		2	DEAD (TELECOM)	1.20
		3	ROOF DEAD	1.20
		8	WIND(X)	1.00
		4	LIVE	0.50
		47	ROOF LIVE	0.50
38	1.2D+1.0W(-X)+0.5L	1	SELF WEIGHT	1.20
		2	DEAD (TELECOM)	1.20
		3	ROOF DEAD	1.20
		8	WIND(X)	-1.00
		4	LIVE	0.50
		47	ROOF LIVE	0.50
39	1.2D+1.0W(Z)+0.5S	1	SELF WEIGHT	1.20
		2	DEAD (TELECOM)	1.20
		3	ROOF DEAD	1.20
		7	WIND(Z)	1.00
		5	SNOW	0.50
		6	ROOF SNOW	0.50
40	1.2D+1.0W(-Z)+0.5S	1	SELF WEIGHT	1.20
		2	DEAD (TELECOM)	1.20
		3	ROOF DEAD	1.20
		7	WIND(Z)	-1.00

Combination Load Cases Cont...

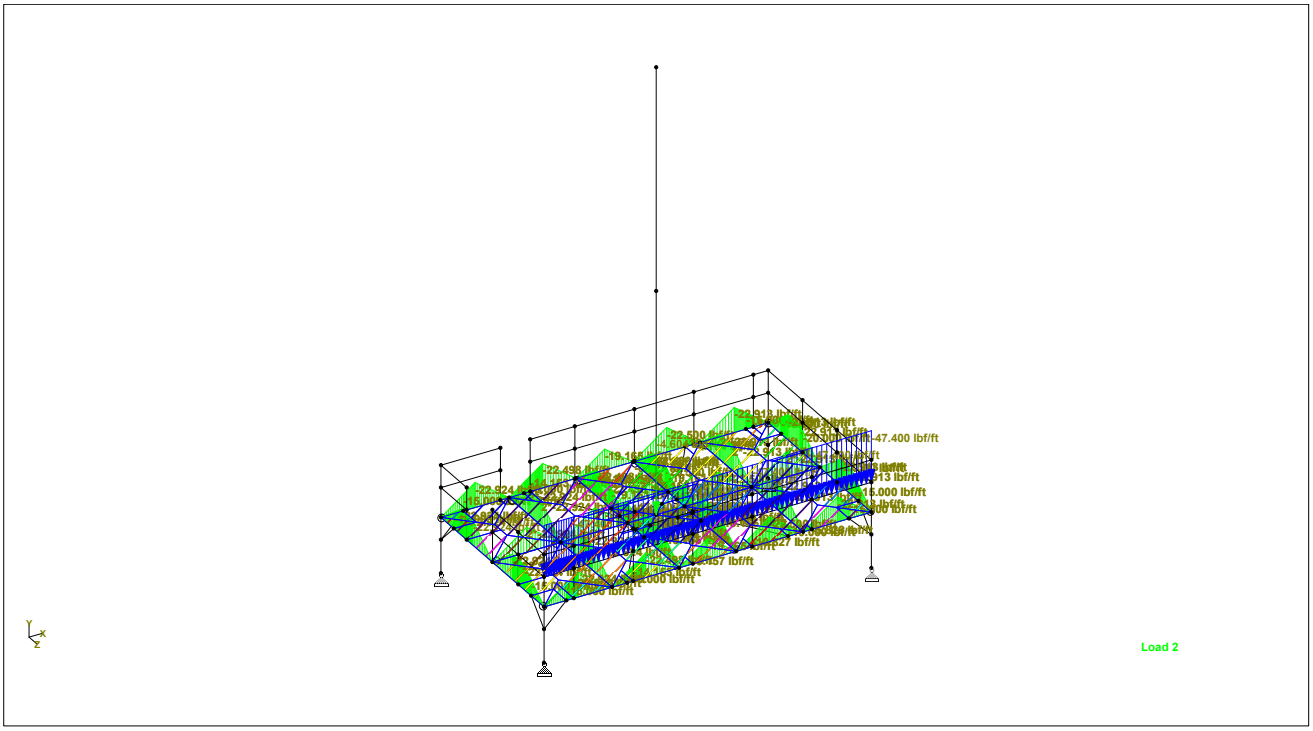
Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
		5	SNOW	0.50
		6	ROOF SNOW	0.50
41	1.2D+1.0W(X)+0.5S	1	SELF WEIGHT	1.20
		2	DEAD (TELECOM)	1.20
		3	ROOF DEAD	1.20
		8	WIND(X)	1.00
		5	SNOW	0.50
		6	ROOF SNOW	0.50
42	1.2D+1.0W(-X)+0.5S	1	SELF WEIGHT	1.20
		2	DEAD (TELECOM)	1.20
		3	ROOF DEAD	1.20
		8	WIND(X)	-1.00
		5	SNOW	0.50
		6	ROOF SNOW	0.50
43	0.9D+1.0W(Z)	1	SELF WEIGHT	0.90
		2	DEAD (TELECOM)	0.90
		3	ROOF DEAD	0.90
		7	WIND(Z)	1.00
44	0.9D+1.0W(-Z)	1	SELF WEIGHT	0.90
		2	DEAD (TELECOM)	0.90
		3	ROOF DEAD	0.90
		7	WIND(Z)	-1.00
45	0.9D+1.0W(X)	1	SELF WEIGHT	0.90
		2	DEAD (TELECOM)	0.90
		3	ROOF DEAD	0.90
		8	WIND(X)	1.00
46	0.9D+1.0W(-X)	1	SELF WEIGHT	0.90
		2	DEAD (TELECOM)	0.90
		3	ROOF DEAD	0.90
		8	WIND(X)	-1.00
48	D+0.75S	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		3	ROOF DEAD	1.00
		5	SNOW	0.75
		6	ROOF SNOW	0.75
49	D+0.75(S+0.6W(Z))	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		3	ROOF DEAD	1.00
		5	SNOW	0.75
		6	ROOF SNOW	0.75
		7	WIND(Z)	0.45
50	D+0.75(S+0.6W(-Z))	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		3	ROOF DEAD	1.00
		5	SNOW	0.75

Combination Load Cases Cont...

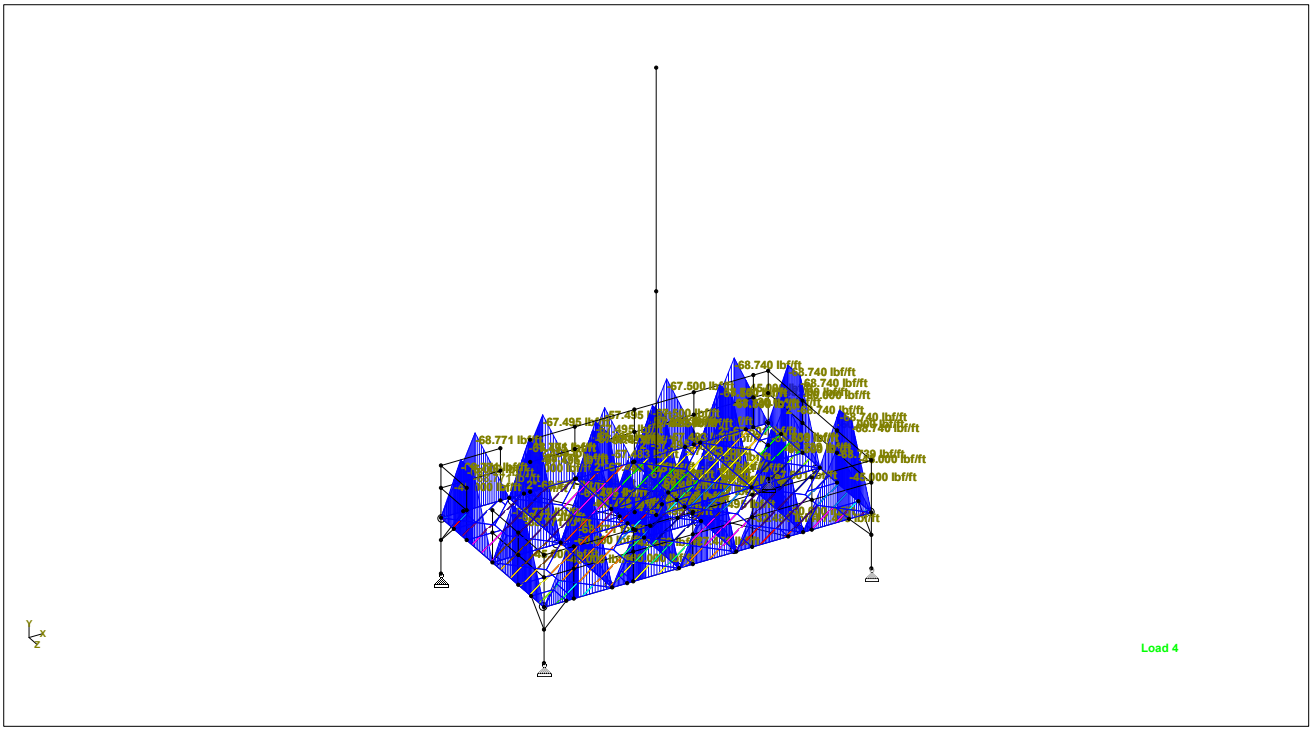
Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
		6	ROOF SNOW	0.75
		7	WIND(Z)	-0.45
51	D+0.75(S+0.6W(X))	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		3	ROOF DEAD	1.00
		5	SNOW	0.75
		6	ROOF SNOW	0.75
		8	WIND(X)	0.45
52	D+0.75(S+0.6W(-X))	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		3	ROOF DEAD	1.00
		5	SNOW	0.75
		6	ROOF SNOW	0.75
		8	WIND(X)	-0.45
53	D+L (TELECOM ONLY)	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		4	LIVE	1.00
54	D+S (TELECOM ONLY)	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		5	SNOW	1.00
55	D+0.75L (TELECOM ONLY)	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		4	LIVE	0.75
56	D+0.7S (TELECOM ONLY)	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		5	SNOW	0.75
57	D+0.6W(Z) (TELECOM ONLY)	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		7	WIND(Z)	0.60
58	D+0.6W(-Z) (TELECOM ONLY)	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		7	WIND(Z)	-0.60
59	D+0.6W(X) (TELECOM ONLY)	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		8	WIND(X)	0.60
60	D+0.6W(-Z) (TELECOM ONLY)	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		8	WIND(X)	-0.60
61	D+0.75(0.6W(Z))+0.75L (TELECOM ONLY	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		7	WIND(Z)	0.45
		4	LIVE	0.75
62	D+0.75(0.6W(-Z))+0.75L (TELECOM ONL'	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		7	WIND(Z)	-0.45

Combination Load Cases Cont...

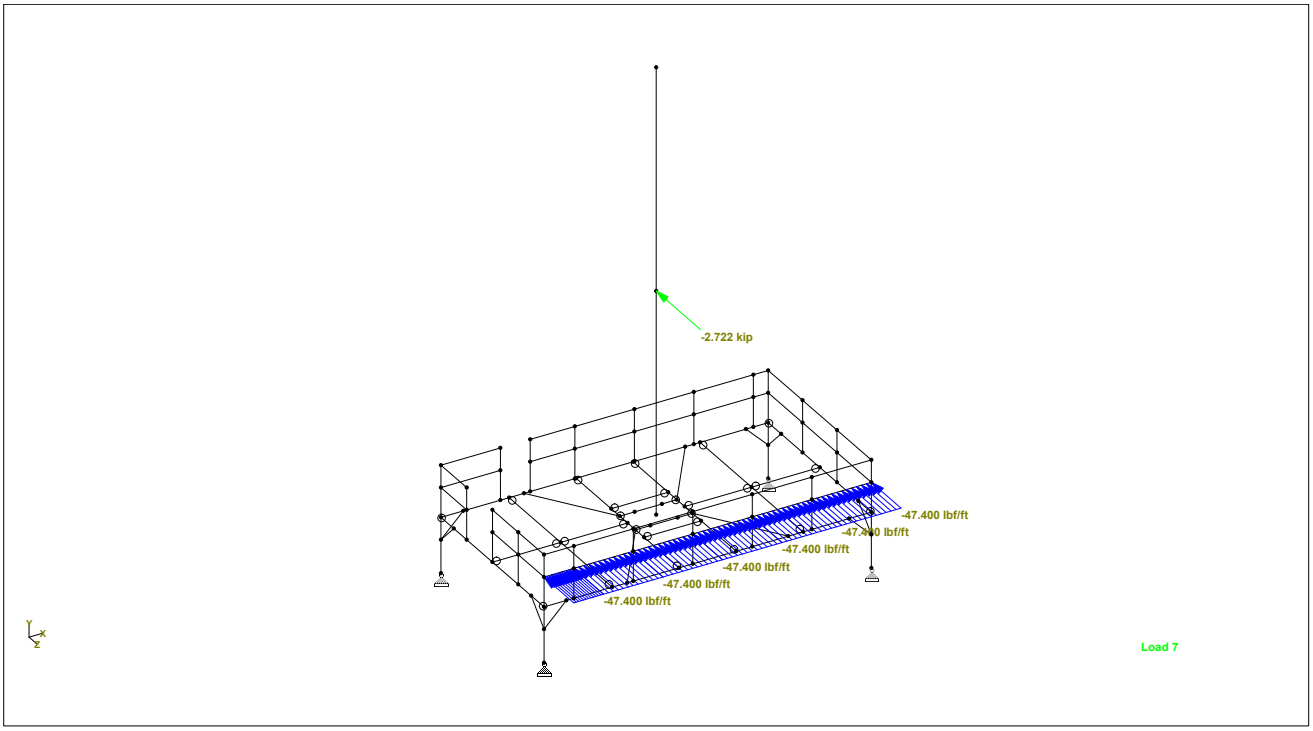
Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
		4	LIVE	0.75
63	D+0.75(0.6W(X))+0.75L (TELECOM ONLY	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		8	WIND(X)	0.45
		4	LIVE	0.75
64	D+0.75(0.6W(-X))+0.75L (TELECOM ONL	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		8	WIND(X)	-0.45
		4	LIVE	0.75
65	D+0.75(0.6W(Z))+0.75S (TELECOM ONLY	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		7	WIND(Z)	0.45
		5	SNOW	0.75
66	D+0.75(0.6W(-Z))+0.75S (TELECOM ONL	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		7	WIND(Z)	-0.45
		5	SNOW	0.75
67	D+0.75(0.6W(X))+0.75S (TELECOM ONLY	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		8	WIND(X)	0.45
		5	SNOW	0.75
68	D+0.75(0.6W(-X))+0.75S (TELECOM ONL	1	SELF WEIGHT	1.00
		2	DEAD (TELECOM)	1.00
		8	WIND(X)	-0.45
		5	SNOW	0.75
69	0.6D+0.6W(Z) (TELECOM ONLY)	1	SELF WEIGHT	0.60
		2	DEAD (TELECOM)	0.60
		7	WIND(Z)	0.60
70	0.6D+0.6W(-Z) (TELECOM ONLY)	1	SELF WEIGHT	0.60
		2	DEAD (TELECOM)	0.60
		7	WIND(Z)	-0.60
71	0.6D+0.6W(X) (TELECOM ONLY)	1	SELF WEIGHT	0.60
		2	DEAD (TELECOM)	0.60
		8	WIND(X)	0.60
72	0.6D+0.6W(-X) (TELECOM ONLY)	1	SELF WEIGHT	0.60
		2	DEAD (TELECOM)	0.60
		8	WIND(X)	-0.60



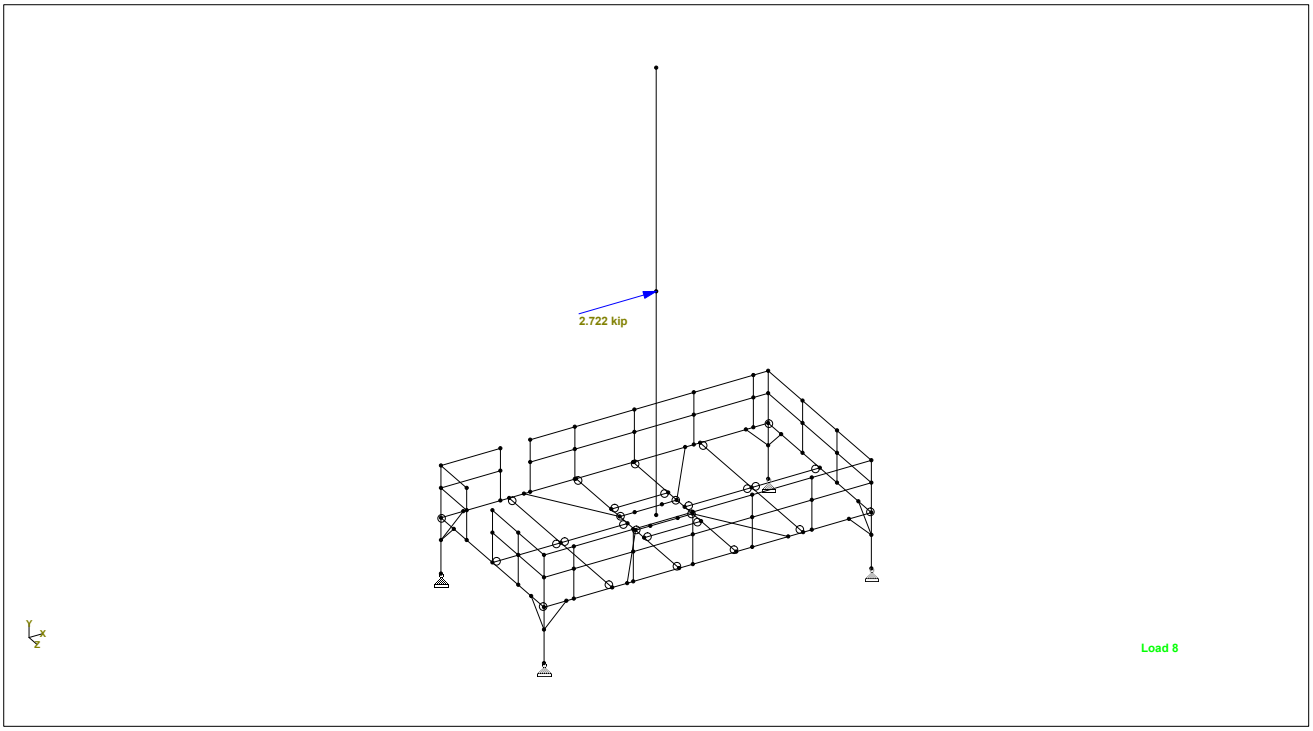
Dead Load



Live Load



Wind Load (Z-Direction)



Wind Load (X-Direction)

Utilization Ratio

Beam	Analysis Property	Design Property	Actual Ratio	Allowable Ratio	Ratio (Act./Allow.)	Clause	L/C	Ax (in^2)	Iz (in^4)	Iy (in^4)	Ix (in^4)
3	HSST4X4X0	HSST4X4X0	0.623	1.000	0.623	Eq. H1-1b	10	4.780	10.300	10.300	17.500
4	HSST4X4X0	HSST4X4X0	0.616	1.000	0.616	Eq. H1-1b	10	4.780	10.300	10.300	17.500
5	HSST4X4X0	HSST4X4X0	0.643	1.000	0.643	Eq. H1-1b	18	4.780	10.300	10.300	17.500
6	HSST4X4X0	HSST4X4X0	0.634	1.000	0.634	Eq. H1-1b	18	4.780	10.300	10.300	17.500
11	HSST4X4X0	HSST4X4X0	0.632	1.000	0.632	Eq. H1-1b	10	4.780	10.300	10.300	17.500
12	HSST4X4X0	HSST4X4X0	0.626	1.000	0.626	Eq. H1-1b	10	4.780	10.300	10.300	17.500
13	HSST4X4X0	HSST4X4X0	0.633	1.000	0.633	Eq. H1-1b	18	4.780	10.300	10.300	17.500
14	HSST4X4X0	HSST4X4X0	0.623	1.000	0.623	Eq. H1-1b	18	4.780	10.300	10.300	17.500
85	Round 40.0X	Round 40.0X	0.047	1.000	0.047	Eq. H1-1b	35	31.214	6.17E+3	6.17E+3	12.3E+3
86	Round 40.0X	Round 40.0X	0.003	1.000	0.003	Sec. E1	9	31.214	6.17E+3	6.17E+3	12.3E+3
87	W10X26	W10X26	0.183	1.000	0.183	Eq. H1-1b	36	7.610	144.000	14.100	0.402
89	W10X26	W10X26	0.039	1.000	0.039	Eq. H1-1b	36	7.610	144.000	14.100	0.402
90	W10X26	W10X26	0.132	1.000	0.132	Eq. H1-1b	35	7.610	144.000	14.100	0.402
92	W10X26	W10X26	0.038	1.000	0.038	Eq. H1-1b	36	7.610	144.000	14.100	0.402
93	W10X26	W10X26	0.323	1.000	0.323	Eq. H1-1b	35	7.610	144.000	14.100	0.402
94	W10X26	W10X26	0.294	1.000	0.294	Eq. H1-1b	36	7.610	144.000	14.100	0.402
95	W8X18	W8X18	0.130	1.000	0.130	Eq. H1-1b	20	5.260	61.900	7.970	0.172
102	W10X26	W10X26	0.302	1.000	0.302	Eq. H1-1b	36	7.610	144.000	14.100	0.402
103	W8X18	W8X18	0.130	1.000	0.130	Eq. H1-1b	19	5.260	61.900	7.970	0.172
104	W10X26	W10X26	0.032	1.000	0.032	Eq. H1-1b	35	7.610	144.000	14.100	0.402
105	W8X18	W8X18	0.130	1.000	0.130	Eq. H1-1b	19	5.260	61.900	7.970	0.172
106	W8X18	W8X18	0.012	1.000	0.012	Eq. H1-1b	10	5.260	61.900	7.970	0.172
109	W8X18	W8X18	0.012	1.000	0.012	Eq. H1-1b	10	5.260	61.900	7.970	0.172
116	W10X26	W10X26	0.040	1.000	0.040	Eq. H1-1b	35	7.610	144.000	14.100	0.402
143	W10X26	W10X26	0.168	1.000	0.168	Eq. H1-1b	35	7.610	144.000	14.100	0.402
144	W10X26	W10X26	0.184	1.000	0.184	Eq. H1-1b	36	7.610	144.000	14.100	0.402
145	W10X26	W10X26	03638	1.000	0.03638	Eq. H1-1b	36	7.610	144.000	14.100	0.402
147	W10X26	W10X26	0.035	1.000	0.035	Eq. H1-1b	36	7.610	144.000	14.100	0.402
149	W10X26	W10X26	0.243	1.000	0.243	Eq. H1-1b	36	7.610	144.000	14.100	0.402
151	W10X26	W10X26	0.039	1.000	0.039	Eq. H1-1b	35	7.610	144.000	14.100	0.402
152	L30304	L30304	0.134	1.000	0.134	Eq. H2-1	36	1.440	0.493	1.996	0.03
153	L30304	L30304	0.646	1.000	0.646	Eq. H2-1	18	1.440	0.493	1.996	0.03
154	L30304	L30304	0.625	1.000	0.625	Eq. H2-1	10	1.440	0.493	1.996	0.03
155	L30304	L30304	0.130	1.000	0.130	Eq. H2-1	35	1.440	0.493	1.996	0.03
159	L30304	L30304	0.631	1.000	0.631	Sec. E1	10	1.440	0.493	1.996	0.03
160	L30304	L30304	0.132	1.000	0.132	Sec. E1	35	1.440	0.493	1.996	0.03
161	L30304	L30304	0.129	1.000	0.129	Eq. H2-1	36	1.440	0.493	1.996	0.03
162	L30304	L30304	0.638	1.000	0.638	Eq. H2-1	18	1.440	0.493	1.996	0.03
177	W10X26	W10X26	0.505	1.000	0.505	Eq. H1-1b	38	7.610	144.000	14.100	0.402
178	W10X26	W10X26	0.502	1.000	0.502	Eq. H1-1b	37	7.610	144.000	14.100	0.402
179	W10X26	W10X26	0.502	1.000	0.502	Eq. H1-1b	38	7.610	144.000	14.100	0.402
180	W10X26	W10X26	0.504	1.000	0.504	Eq. H1-1b	37	7.610	144.000	14.100	0.402
181	PIPS15	PIPS15	0.357	1.000	0.357	Eq. H1-1b	36	0.749	0.293	0.293	0.586
183	PIPS15	PIPS15	0.527	1.000	0.527	Eq. H1-1b	18	0.749	0.293	0.293	0.586
184	W10X26	W10X26	0.427	1.000	0.427	Eq. H1-1b	18	7.610	144.000	14.100	0.402

Utilization Ratio Cont...

Beam	Analysis Property	Design Property	Actual Ratio	Allowable Ratio	Ratio (Act./Allow.)	Clause	L/C	Ax (in^2)	Iz (in^4)	Iy (in^4)	Ix (in^4)
185	PIPS15	PIPS15	0.377	1.000	0.377	Eq. H1-1b	36	0.749	0.293	0.293	0.586
187	PIPS15	PIPS15	0.137	1.000	0.137	Eq. H1-1b	36	0.749	0.293	0.293	0.586
188	W10X26	W10X26	0.399	1.000	0.399	Eq. H1-1b	36	7.610	144.000	14.100	0.402
189	PIPS15	PIPS15	0.328	1.000	0.328	Eq. H1-1b	18	0.749	0.293	0.293	0.586
190	W10X26	W10X26	0.177	1.000	0.177	Eq. H1-1b	36	7.610	144.000	14.100	0.402
191	PIPS15	PIPS15	0.499	1.000	0.499	Eq. H1-1b	18	0.749	0.293	0.293	0.586
192	PIPS15	PIPS15	0.348	1.000	0.348	Eq. H1-1b	18	0.749	0.293	0.293	0.586
193	PIPS15	PIPS15	0.560	1.000	0.560	Eq. H1-1b	36	0.749	0.293	0.293	0.586
194	PIPS15	PIPS15	0.450	1.000	0.450	Eq. H1-1b	36	0.749	0.293	0.293	0.586
195	PIPS15	PIPS15	0.269	1.000	0.269	Eq. H1-1b	36	0.749	0.293	0.293	0.586
196	PIPS15	PIPS15	0.318	1.000	0.318	Eq. H1-1b	36	0.749	0.293	0.293	0.586
197	PIPS15	PIPS15	0.407	1.000	0.407	Eq. H1-1b	36	0.749	0.293	0.293	0.586
198	PIPS15	PIPS15	0.523	1.000	0.523	Eq. H1-1b	36	0.749	0.293	0.293	0.586
199	PIPS15	PIPS15	0.761	1.000	0.761	Eq. H1-1b	18	0.749	0.293	0.293	0.586
200	PIPS15	PIPS15	0.772	1.000	0.772	Eq. H1-1b	18	0.749	0.293	0.293	0.586
201	PIPS15	PIPS15	0.730	1.000	0.730	Eq. H1-1b	36	0.749	0.293	0.293	0.586
202	PIPS15	PIPS15	0.498	1.000	0.498	Eq. H1-1b	36	0.749	0.293	0.293	0.586
203	PIPS15	PIPS15	0.468	1.000	0.468	Eq. H1-1b	18	0.749	0.293	0.293	0.586
204	PIPS15	PIPS15	0.279	1.000	0.279	Eq. H1-1b	36	0.749	0.293	0.293	0.586
205	PIPS15	PIPS15	0.210	1.000	0.210	Eq. H1-1b	38	0.749	0.293	0.293	0.586
206	PIPS15	PIPS15	0.527	1.000	0.527	Eq. H1-1b	18	0.749	0.293	0.293	0.586
207	PIPS15	PIPS15	0.276	1.000	0.276	Eq. H1-1b	36	0.749	0.293	0.293	0.586
208	PIPS15	PIPS15	0.676	1.000	0.676	Eq. H1-1b	18	0.749	0.293	0.293	0.586
209	PIPS15	PIPS15	0.413	1.000	0.413	Eq. H1-1b	36	0.749	0.293	0.293	0.586
210	PIPS15	PIPS15	0.646	1.000	0.646	Eq. H1-1b	18	0.749	0.293	0.293	0.586
211	PIPS15	PIPS15	0.701	1.000	0.701	Eq. H1-1b	36	0.749	0.293	0.293	0.586
212	W10X26	W10X26	0.037	1.000	0.037	Eq. H1-1b	35	7.610	144.000	14.100	0.402
213	PIPS15	PIPS15	0.104	1.000	0.104	Eq. H1-1b	39	0.749	0.293	0.293	0.586
214	PIPS15	PIPS15	0.167	1.000	0.167	Eq. H1-1b	35	0.749	0.293	0.293	0.586
215	W10X26	W10X26	0.031	1.000	0.031	Eq. H1-1b	19	7.610	144.000	14.100	0.402
216	PIPS15	PIPS15	0.066	1.000	0.066	Eq. H1-1b	35	0.749	0.293	0.293	0.586
217	PIPS15	PIPS15	0.124	1.000	0.124	Eq. H1-1b	35	0.749	0.293	0.293	0.586
218	PIPS15	PIPS15	0.258	1.000	0.258	Eq. H1-1b	10	0.749	0.293	0.293	0.586
219	PIPS15	PIPS15	0.480	1.000	0.480	Eq. H1-1b	10	0.749	0.293	0.293	0.586
220	PIPS15	PIPS15	0.117	1.000	0.117	Eq. H1-1b	35	0.749	0.293	0.293	0.586
221	PIPS15	PIPS15	0.110	1.000	0.110	Eq. H1-1b	36	0.749	0.293	0.293	0.586
222	PIPS15	PIPS15	0.283	1.000	0.283	Eq. H1-1b	35	0.749	0.293	0.293	0.586
223	PIPS15	PIPS15	0.175	1.000	0.175	Eq. H1-1b	35	0.749	0.293	0.293	0.586
224	PIPS15	PIPS15	0.098	1.000	0.098	Eq. H1-1b	36	0.749	0.293	0.293	0.586
225	PIPS15	PIPS15	0.302	1.000	0.302	Eq. H1-1b	36	0.749	0.293	0.293	0.586
226	PIPS15	PIPS15	0.077	1.000	0.077	Eq. H1-1b	35	0.749	0.293	0.293	0.586
227	W10X26	W10X26	0.038	1.000	0.038	Eq. H1-1b	35	7.610	144.000	14.100	0.402
228	PIPS15	PIPS15	0.128	1.000	0.128	Eq. H1-1b	35	0.749	0.293	0.293	0.586
229	PIPS15	PIPS15	0.122	1.000	0.122	Eq. H1-1b	40	0.749	0.293	0.293	0.586
230	PIPS15	PIPS15	0.259	1.000	0.259	Eq. H1-1b	35	0.749	0.293	0.293	0.586

Utilization Ratio Cont...

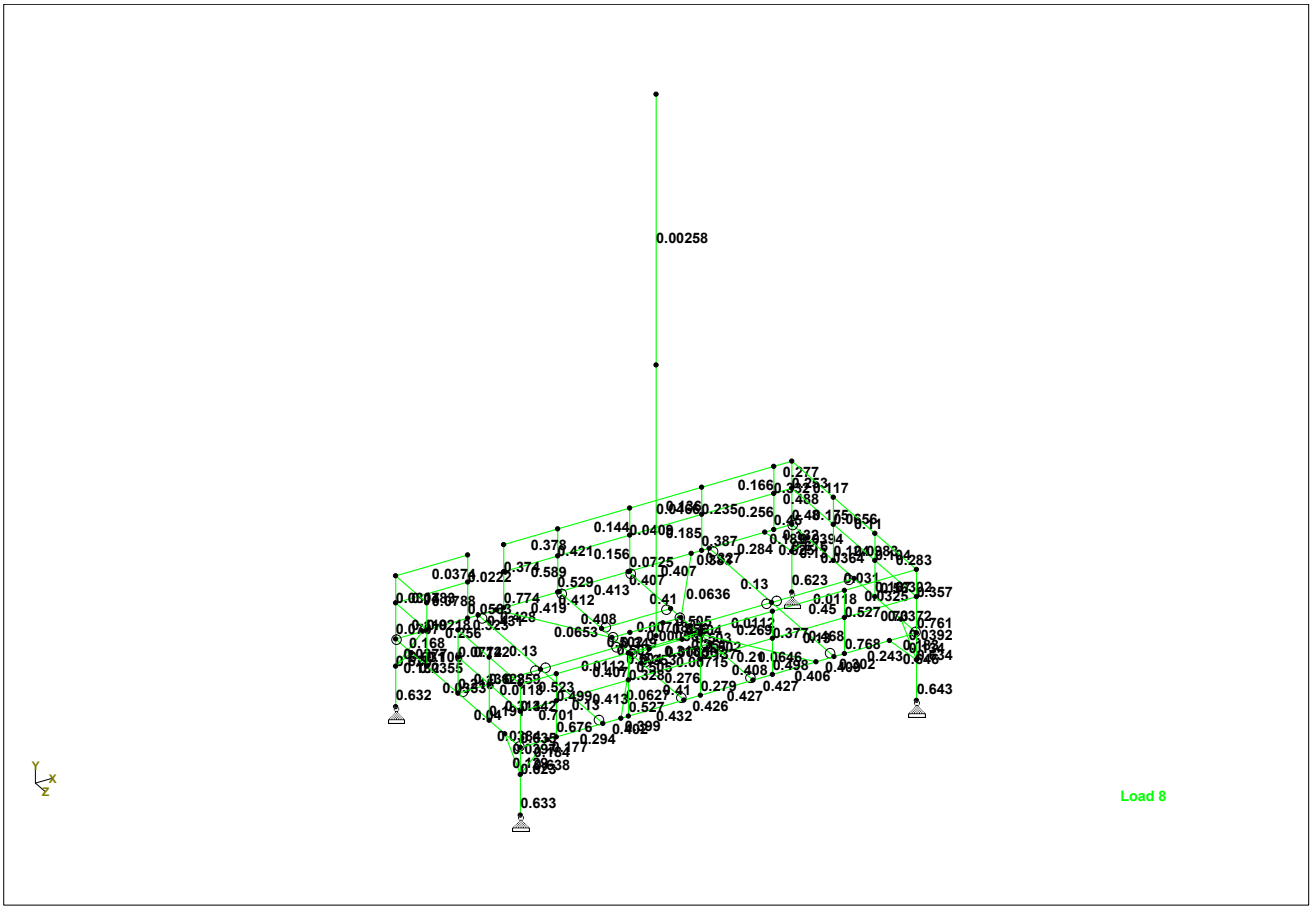
Beam	Analysis Property	Design Property	Actual Ratio	Allowable Ratio	Ratio (Act./Allow.)	Clause	L/C	Ax (in^2)	Iz (in^4)	Iy (in^4)	Ix (in^4)
231	PIPS15	PIPS15	0.215	1.000	0.215	Eq. H1-1b	35	0.749	0.293	0.293	0.586
232	PIPS15	PIPS15	0.191	1.000	0.191	Eq. H1-1b	35	0.749	0.293	0.293	0.586
233	PIPS15	PIPS15	0.136	1.000	0.136	Eq. H1-1b	40	0.749	0.293	0.293	0.586
234	PIPS15	PIPS15	0.314	1.000	0.314	Eq. H1-1b	35	0.749	0.293	0.293	0.586
235	W8X18	W8X18	0.351	1.000	0.351	Eq. H1-1b	40	5.260	61.900	7.970	0.172
236	W8X18	W8X18	0.356	1.000	0.356	Eq. H1-1b	35	5.260	61.900	7.970	0.172
239	W10X26	W10X26	0.426	1.000	0.426	Eq. H1-1b	18	7.610	144.000	14.100	0.402
240	W10X26	W10X26	0.427	1.000	0.427	Eq. H1-1b	18	7.610	144.000	14.100	0.402
243	W10X26	W10X26	0.408	1.000	0.408	Eq. H1-1b	38	7.610	144.000	14.100	0.402
244	W10X26	W10X26	0.410	1.000	0.410	Eq. H1-1b	37	7.610	144.000	14.100	0.402
245	W8X18	W8X18	0.130	1.000	0.130	Eq. H1-1b	20	5.260	61.900	7.970	0.172
246	W10X26	W10X26	0.504	1.000	0.504	Eq. H1-1b	38	7.610	144.000	14.100	0.402
252	W10X26	W10X26	0.503	1.000	0.503	Eq. H1-1b	37	7.610	144.000	14.100	0.402
253	W10X26	W10X26	0.284	1.000	0.284	Eq. H1-1b	35	7.610	144.000	14.100	0.402
254	W10X26	W10X26	0.327	1.000	0.327	Eq. H1-1b	35	7.610	144.000	14.100	0.402
255	W10X26	W10X26	0.413	1.000	0.413	Eq. H1-1b	10	7.610	144.000	14.100	0.402
256	W10X26	W10X26	0.412	1.000	0.412	Eq. H1-1b	10	7.610	144.000	14.100	0.402
257	W10X26	W10X26	0.040	1.000	0.040	Eq. H1-1b	35	7.610	144.000	14.100	0.402
258	W10X26	W10X26	0.432	1.000	0.432	Eq. H1-1b	18	7.610	144.000	14.100	0.402
259	W10X26	W10X26	0.406	1.000	0.406	Eq. H1-1b	36	7.610	144.000	14.100	0.402
260	PIPS15	PIPS15	0.022	1.000	0.022	Eq. H3-1	36	0.749	0.293	0.293	0.586
261	W10X26	W10X26	0.033	1.000	0.033	Eq. H1-1b	36	7.610	144.000	14.100	0.402
262	PIPS15	PIPS15	0.106	1.000	0.106	Eq. H1-1b	35	0.749	0.293	0.293	0.586
263	PIPS15	PIPS15	0.032	1.000	0.032	Eq. H1-1b	35	0.749	0.293	0.293	0.586
264	PIPS15	PIPS15	0.071	1.000	0.071	Eq. H3-1	35	0.749	0.293	0.293	0.586
265	PIPS15	PIPS15	22173	1.000	0.022173	Eq. H1-1b	39	0.749	0.293	0.293	0.586
266	W10X26	W10X26	0.256	1.000	0.256	Eq. H1-1b	35	7.610	144.000	14.100	0.402
267	PIPS15	PIPS15	0.057	1.000	0.057	Eq. H1-1b	35	0.749	0.293	0.293	0.586
268	PIPS15	PIPS15	0.375	1.000	0.375	Eq. H1-1b	10	0.749	0.293	0.293	0.586
269	W10X26	W10X26	0.428	1.000	0.428	Eq. H1-1b	35	7.610	144.000	14.100	0.402
270	PIPS15	PIPS15	0.775	1.000	0.775	Eq. H1-1b	10	0.749	0.293	0.293	0.586
271	PIPS15	PIPS15	0.421	1.000	0.421	Eq. H1-1b	10	0.749	0.293	0.293	0.586
272	W10X26	W10X26	0.419	1.000	0.419	Eq. H1-1b	10	7.610	144.000	14.100	0.402
273	PIPS15	PIPS15	0.529	1.000	0.529	Eq. H1-1b	10	0.749	0.293	0.293	0.586
274	PIPS15	PIPS15	0.041	1.000	0.041	Eq. H1-1b	37	0.749	0.293	0.293	0.586
275	W10X26	W10X26	0.407	1.000	0.407	Eq. H1-1b	10	7.610	144.000	14.100	0.402
276	PIPS15	PIPS15	0.072	1.000	0.072	Eq. H1-1b	42	0.749	0.293	0.293	0.586
277	PIPS15	PIPS15	0.235	1.000	0.235	Eq. H1-1b	35	0.749	0.293	0.293	0.586
279	PIPS15	PIPS15	0.387	1.000	0.387	Eq. H1-1b	10	0.749	0.293	0.293	0.586
280	PIPS15	PIPS15	0.332	1.000	0.332	Eq. H1-1b	10	0.749	0.293	0.293	0.586
281	W10X26	W10X26	0.189	1.000	0.189	Eq. H1-1b	35	7.610	144.000	14.100	0.402
282	PIPS15	PIPS15	0.450	1.000	0.450	Eq. H1-1b	10	0.749	0.293	0.293	0.586
283	PIPS15	PIPS15	0.277	1.000	0.277	Eq. H1-1b	35	0.749	0.293	0.293	0.586
284	PIPS15	PIPS15	0.174	1.000	0.174	Eq. H1-1b	10	0.749	0.293	0.293	0.586
285	PIPS15	PIPS15	0.150	1.000	0.150	Eq. H1-1b	35	0.749	0.293	0.293	0.586

Utilization Ratio Cont...

Beam	Analysis Property	Design Property	Actual Ratio	Allowable Ratio	Ratio (Act./Allow.)	Clause	L/C	Ax (in^2)	Iz (in^4)	Iy (in^4)	Ix (in^4)
286	PIPS15	PIPS15	0.144	1.000	0.144	Eq. H1-1b	19	0.749	0.293	0.293	0.586
287	PIPS15	PIPS15	0.488	1.000	0.488	Eq. H1-1b	35	0.749	0.293	0.293	0.586
288	PIPS15	PIPS15	0.257	1.000	0.257	Eq. H1-1b	35	0.749	0.293	0.293	0.586
289	PIPS15	PIPS15	0.188	1.000	0.188	Eq. H1-1b	35	0.749	0.293	0.293	0.586
290	PIPS15	PIPS15	0.156	1.000	0.156	Eq. H1-1b	19	0.749	0.293	0.293	0.586
291	PIPS15	PIPS15	0.595	1.000	0.595	Eq. H1-1b	10	0.749	0.293	0.293	0.586
292	PIPS15	PIPS15	0.382	1.000	0.382	Eq. H1-1b	10	0.749	0.293	0.293	0.586
293	PIPS15	PIPS15	0.037	1.000	0.037	Eq. H1-1b	35	0.749	0.293	0.293	0.586
294	PIPS15	PIPS15	48284	1.000	0.048284	Eq. H1-1b	35	0.749	0.293	0.293	0.586
295	PIPS15	PIPS15	78765	1.000	0.078765	Eq. H1-1b	35	0.749	0.293	0.293	0.586
296	PIPS15	PIPS15	0.119	1.000	0.119	Eq. H1-1b	35	0.749	0.293	0.293	0.586
299	W10X26	W10X26	0.410	1.000	0.410	Eq. H1-1b	38	7.610	144.000	14.100	0.402
300	W10X26	W10X26	0.408	1.000	0.408	Eq. H1-1b	37	7.610	144.000	14.100	0.402
301	W10X26	W10X26	0.502	1.000	0.502	Eq. H1-1b	38	7.610	144.000	14.100	0.402
302	W10X26	W10X26	0.505	1.000	0.505	Eq. H1-1b	37	7.610	144.000	14.100	0.402
303	W8X18	W8X18	0.007	1.000	0.007	Eq. H1-1b	18	5.260	61.900	7.970	0.172
304	W8X18	W8X18	0.007	1.000	0.007	Eq. H1-1b	10	5.260	61.900	7.970	0.172
305	W8X18	W8X18	0.001	1.000	0.001	Sec. G2.1(a)	9	5.260	61.900	7.970	0.172
306	W8X18	W8X18	0.001	1.000	0.001	Sec. G2.1(a)	9	5.260	61.900	7.970	0.172
307	W8X18	W8X18	0.353	1.000	0.353	Eq. H1-1b	36	5.260	61.900	7.970	0.172
308	W8X18	W8X18	0.349	1.000	0.349	Eq. H1-1b	39	5.260	61.900	7.970	0.172
310	W10X26	W10X26	0.383	1.000	0.383	Eq. H1-1b	35	7.610	144.000	14.100	0.402
311	W8X18	W8X18	0.011	1.000	0.011	Eq. H1-1b	20	5.260	61.900	7.970	0.172
312	W8X18	W8X18	0.011	1.000	0.011	Eq. H1-1b	20	5.260	61.900	7.970	0.172
313	W10X26	W10X26	0.431	1.000	0.431	Eq. H1-1b	35	7.610	144.000	14.100	0.402
314	W10X26	W10X26	0.402	1.000	0.402	Eq. H1-1b	36	7.610	144.000	14.100	0.402
317	W10X26	W10X26	0.407	1.000	0.407	Eq. H1-1b	10	7.610	144.000	14.100	0.402
318	W10X26	W10X26	0.409	1.000	0.409	Eq. H1-1b	36	7.610	144.000	14.100	0.402
319	L40406	L40406	0.065	1.000	0.065	Eq. H2-1	35	2.860	1.736	6.982	0.134
320	L40406	L40406	0.063	1.000	0.063	Eq. H2-1	36	2.860	1.736	6.982	0.134
321	L40406	L40406	0.064	1.000	0.064	Eq. H2-1	35	2.860	1.736	6.982	0.134
322	L40406	L40406	0.065	1.000	0.065	Eq. H2-1	36	2.860	1.736	6.982	0.134

Failed Members

There is no data of this type.



Utility Ratio

Node Displacement Summary

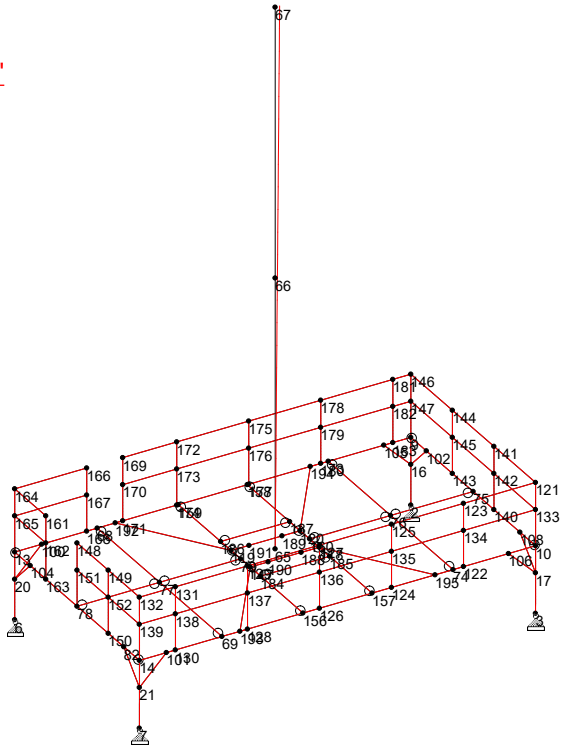
	Node	L/C	X (in)	Y (in)	Z (in)	Resultant (in)	rX (rad)	rY (rad)	rZ (rad)
Max X	164	11:D+L	**0.172**	-0.001	0.007	0.172	0.000	-0.000	-0.004
Min X	146	11:D+L	**-0.064**	-0.002	0.001	0.064	0.000	0.000	0.003
Max Y	2	11:D+L	0	**0**	0	0	-0.000	0.000	-0.003
Min Y	79	11:D+L	0.002	**-0.467**	0.000	0.467	0.000	-0.000	-0.001
Max Z	125	11:D+L	0.018	-0.362	**0.017**	0.363	0.000	-0.000	0.001
Min Z	132	11:D+L	0.024	-0.002	**-0.006**	0.025	-0.000	-0.001	-0.002
Max rX	187	11:D+L	0.003	-0.452	0.002	0.452	**0.001**	-0.000	0.002
Min rX	184	11:D+L	0.001	-0.458	0.000	0.458	**-0.001**	-0.000	-0.001
Max rY	141	11:D+L	-0.030	-0.009	0.001	0.032	-0.000	**0.001**	0.001
Min rY	149	11:D+L	0.054	-0.008	-0.006	0.055	-0.000	**-0.001**	-0.001
Max rZ	122	11:D+L	-0.002	-0.197	0.003	0.197	0.000	0.000	**0.004**
Min rZ	130	11:D+L	0.001	-0.092	-0.001	0.092	0.000	0.000	**-0.004**
Max Rst	79	11:D+L	0.002	-0.467	0.000	**0.467**	0.000	-0.000	-0.001

DISPLACEMENT:

Max Disp = 0.467" (Node 79)

Allowable Disp: L/240 = 0.600"

0.467" < 0.600" --> OK



Displacement

Reaction Summary

	Node	L/C	Horizontal FX (kip)	Vertical FY (kip)	Horizontal FZ (kip)	Moment MX (kip-in)	Moment MY (kip-in)	Moment MZ (kip-in)
Max FX	7	25:D+0.75(L+0	**3.869**	11.642	-0.541	0	0	0
Min FX	3	25:D+0.75(L+0	**-3.913**	13.007	-0.571	0	0	0
Max FY	3	11:D+L	-3.582	**13.236**	-0.173	0	0	0
Min FY	6	33:0.6D+0.6W(	0.653	**2.482**	-0.531	0	0	0
Max FZ	6	15:D+0.6W(Z)	3.205	7.922	**0.664**	0	0	0
Min FZ	3	17:D+0.6W(-Z)	-3.351	9.455	**-0.644**	0	0	0
Max MX	2	11:D+L	-3.422	12.348	0.149	**0**	0	0
Min MX	2	11:D+L	-3.422	12.348	0.149	**0**	0	0
Max MY	2	11:D+L	-3.422	12.348	0.149	0	**0**	0
Min MY	2	11:D+L	-3.422	12.348	0.149	0	**0**	0
Max MZ	2	11:D+L	-3.422	12.348	0.149	0	0	**0**
Min MZ	2	11:D+L	-3.422	12.348	0.149	0	0	**0**

Dewberry

Job Number	50065694
Made by:	DAP
Date:	9/30/21
Checked by:	BGK
Date:	10/6/21

(Stamford Newfield Ave) - Bearing Wall Capacity

\\par-fs\Parsippany\Projects\50055106\50065694\Tech\Rev 3 MOD\SA\Calculations\50065694 - Structural Loading.xlsx

Round Lally Column Compressive Capacity Calculation

3-1/2" OD. N.W. Lally Column (1st 2nd & 3rd Floor)

Properties of Concrete Filled Lally Columns:

Steel Yield Strength, f_y =	35 ksi	*(page 5, Lally Column Handbook 10th ed. 1897 - 1926)*
Concrete Compressive Stress, f'_c =	3000 psi	*(page 5, Lally Column Handbook 1897 - 1926)*
Lally Column Outer Diameter, D =	3.5 in	*(page 31, Lally Column Handbook 1897 - 1926)*
Lally Column Inner Diameter, d =	3.07 in	*(page 31, Lally Column Handbook 1897 - 1926)*
Steel Thickness, t =	0.22 in	*(page 31, Lally Column Handbook 1897 - 1926)*
Area of Steel, A_s =	2.23 si	*(page 31, Lally Column Handbook 1897 - 1926)*
Area of Concrete, A_c =	7.39 si	*(page 31, Lally Column Handbook 1897 - 1926)*
Cross Sectional Area, A_g =	9.62 si	
Steel Modulus of Elasticity, E =	29000 ksi	*(page 5, Lally Column Handbook 1897 - 1926)*
Unit Weight of Concrete, w_c =	145 pcf	
C_2 =	0.95	*(circlular section, AISC page 16.1-82 2b.)*
Effective Length Factor, K =	1.0	
Unbraced Length, L =	9.1 ft	

All conditions must be satisfied to be considered as a filled composite column (AISC page 16.1-81 2a.)

$A_s \geq 0.01\ A_g$	2.23 in²	>	0.10 in²	☑	*OK*
$0.15\ E/f_y \geq D/t$	124.29	>	16.20	☑	*OK*

Design Compressive Strength

$P_o = A_s f_y + C_2 A_c f'_c$ *(AISC Eq. I2-13)*

= **99.12 kips**

$P_e = \pi^2 (EI_{eff}) / (KL)^2$ *(AISC Eq. I2-5)*

= **82.52 kips**

$EI_{eff} = E_s I_s + C_3 E_c I_c$ *(AISC Eq. I2-14)*

= **99335 kip-in^2**

$C_3 = 0.6 + 2\ (As / (Ac + As)) \leq 0.9$ *(AISC Eq. I2-15)*

= **0.90**

Concrete Modulus of Elasticity, $E_c = w_c^{1.5} (f'_c)^{.5}$

= **3024 ksi**

Steel Moment of Inertia, $I_s = (\pi(D^4 - d^4))/64$

= **3.02 in^4**

Concrete Moment of Inertia, $I_c = (\pi\ d^4)/64$

= **4.35 in^4**

Determine design compressive strength equation to use (AISC page 16.1-79 1b.)

$P_e \geq 0.44\ P_o$	82.52 kips	>	43.61 kips	☑	*Use Equation I2-2 for Pn*

$\phi_c P_n = 0.75 * P_o\ (0.658^{\wedge(Po/Pe)})$ *(AISC Eq. I2-2)*

= **44.96 kips**

Dewberry

Job Number	50065694
Made by:	DAP
Date:	9/30/21
Checked by:	BGK
Date:	10/6/21

(Stamford Newfield Ave) - Bearing Wall Capacity

\\par-fs\Parsippany\Projects\50055106\50065694\Tech\Rev 3 MOD\SA\Calculations\50065694 - Structural Loading.xlsx

Round Lally Column Compressive Capacity Calculation

4" OD. N.W. Lally Column (Basement)

Properties of Concrete Filled Lally Columns:

Steel Yield Strength, f_y =	35 ksi	*(page 5, Lally Column Handbook 10th ed. 1897 - 1926)*
Concrete Compressive Stress, f'_c =	3000 psi	*(page 5, Lally Column Handbook 1897 - 1926)*
Lally Column Outer Diameter, D =	4.0 in	*(page 31, Lally Column Handbook 1897 - 1926)*
Lally Column Inner Diameter, d =	3.55 in	*(page 31, Lally Column Handbook 1897 - 1926)*
Steel Thickness, t =	0.23 in	*(page 31, Lally Column Handbook 1897 - 1926)*
Area of Steel, A_s =	2.68 si	*(page 31, Lally Column Handbook 1897 - 1926)*
Area of Concrete, A_c =	9.89 si	*(page 31, Lally Column Handbook 1897 - 1926)*
Cross Sectional Area, A_g =	12.57 si	
Steel Modulus of Elasticity, E =	29000 ksi	*(page 5, Lally Column Handbook 1897 - 1926)*
Unit Weight of Concrete, w_c =	145 pcf	
C_2 =	0.95	*(circlular section, AISC page 16.1-82 2b.)*
Effective Length Factor, K =	1.0	
Unbraced Length, L =	9.1 ft	

All conditions must be satisfied to be considered as a filled composite column (AISC page 16.1-81 2a.)

$A_s \geq 0.01\ A_g$	2.68 in²	>	0.13 in²	☑	*OK*
$0.15\ E/f_y \geq D/t$	124.29	>	17.70	☑	*OK*

Design Compressive Strength

$P_o = A_s f_y + C_2 A_c f'_c$ *(AISC Eq. I2-13)*

= **121.98 kips**

$P_e = \pi^2 (EI_{eff}) / (KL)^2$ *(AISC Eq. I2-5)*

= **132.93 kips**

$EI_{eff} = E_s I_s + C_3 E_c I_c$ *(AISC Eq. I2-14)*

= **160016 kip-in^2**

$C_3 = 0.6 + 2\ (As / (Ac + As)) \leq 0.9$ *(AISC Eq. I2-15)*

= **0.90**

Concrete Modulus of Elasticity, $E_c = w_c^{1.5} (f'_c)^{.5}$

= **3024 ksi**

Steel Moment of Inertia, $I_s = (\pi(D^4 - d^4))/64$

= **4.79 in^4**

Concrete Moment of Inertia, $I_c = (\pi\ d^4)/64$

= **7.78 in^4**

Determine design compressive strength equation to use (AISC page 16.1-79 1b.)

$P_e \geq 0.44\ P_o$	132.93 kips	>	53.67 kips	☑	*Use Equation I2-2 for Pn*

$\phi_c P_n = 0.75 * P_o\ (0.658^{\wedge(Po/Pe)})$ *(AISC Eq. I2-2)*

= **62.31 kips**

Dewberry

Job Number	50065694
Made by:	DAP
Date:	9/30/21
Checked by:	BGK
Date:	10/6/21

(CT2818 Stamford Newfield Ave) - Column Capacity

\\par-fs\Parsippany\Projects\50055106\50065694\Tech\Rev 3 MOD\SA\Calculations\50065694 - Structural Loading.xlsx

-Check capacity of existing 3-1/2 STD Lally columns on 1st, 2nd and 3rd Floor
-Check capacity of existing 4 STD Lally column in basement

Column Capacity

3-1/2 STD. Lally Column (9'-1" Floor Heights)	45.0 k	(See Capacity Calc.)
4 STD. Lally Column (9'-1" Floor Heights)	62.3 k	(See Capacity Calc.)

Existing & Proposed Roof Loading

Vertical Loading on Roof = 13.2 k *(see STAAD Output)*

Existing Loading

Floor

Tributary Area =	145.0 ft²	*(see exisitng plans)*	
Dead Load =	18.0 psf	2.6 k	
Live Load =	40.0 psf	5.8 k	*(residential - private room- corridor serving them)*

Wall

Tributary Area =	145.0 ft²	*(see exisitng plans)*	
Dead Load Single Stud =	10.0 psf	1.5 k	
Dead Load Double Stud =	17.0 psf	2.5 k	

ASD Load Combinations

	Existing + Proposed Loading on Roof
D+L	13.2 k

Existing Column Capacity

				Load Existing + Proposed Loading	< or >	Capacity	
13.2 k		Roof					
			Load on 4th Floor Column →	13 k	See timber column checks		
10.0 k	Reinforced Timber Column	4th Floor					
			Load on 3rd Floor Column →	23 k	<	45 k	*Pass*
9.9 k	Ex. 3-1/2 STD. Lally Column	3rd Floor					
			Load on 2nd Floor Column →	33 k	<	45 k	*Pass*
10.9 k	Ex. 3-1/2 STD. Lally Column	2nd Floor					
			Load on 1st Floor Column →	44 k	<	45 k	*Pass*
10.9 k	Ex. 3-1/2 STD. Lally Column	1st Floor					
			Load on Basement Column →	55 k	<	62 k	*Pass*
	Ex. 4 STD. Lally Column	Basement					

Reactions

		Horizontal	Vertical	Horizontal	Moment		
Node	L/C	FX (kip)	FY (kip)	FZ (kip)	MX (kip-in)	MY (kip-in)	MZ (kip-in)
2	2:DEAD (TELE	-1.248	1.807	0.020	0	0	0
	3:ROOF DEAD	0	3.610	0	0	0	0
	4:LIVE	-1.041	1.977	0.084	0	0	0
	5:SNOW	-0.874	1.660	0.071	0	0	0
	6:ROOF SNOV	0	2.550	0	0	0	0
	7:WIND(Z)	-1.336	2.387	0.952	0	0	0
	8:WIND(X)	-0.658	1.160	-0.002	0	0	0
	47:ROOF LIVE	0	3.040	0	0	0	0
3	2:DEAD (TELE	-1.475	2.337	-0.029	0	0	0
	3:ROOF DEAD	0	3.770	0	0	0	0
	4:LIVE	-1.009	1.983	-0.091	0	0	0
	5:SNOW	-0.847	1.666	-0.076	0	0	0
	6:ROOF SNOV	0	2.710	0	0	0	0
	7:WIND(Z)	1.296	-2.387	0.937	0	0	0
	8:WIND(X)	-0.686	1.160	0.002	0	0	0
	47:ROOF LIVE	0	3.230	0	0	0	0
6	2:DEAD (TELE	1.264	1.815	0.030	0	0	0
	3:ROOF DEAD	0	2.780	0	0	0	0
	4:LIVE	1.054	1.983	0.094	0	0	0
	5:SNOW	0.885	1.666	0.079	0	0	0
	6:ROOF SNOV	0	1.970	0	0	0	0
	7:WIND(Z)	1.324	2.366	0.968	0	0	0
	8:WIND(X)	-0.704	-1.160	0.002	0	0	0
	47:ROOF LIVE	0	2.350	0	0	0	0
7	2:DEAD (TELE	1.459	2.328	-0.021	0	0	0
	3:ROOF DEAD	0	2.950	0	0	0	0
	4:LIVE	0.996	1.977	-0.087	0	0	0
	5:SNOW	0.836	1.660	-0.073	0	0	0
	6:ROOF SNOV	0	2.130	0	0	0	0
	7:WIND(Z)	-1.284	-2.366	0.908	0	0	0
	8:WIND(X)	-0.675	-1.160	-0.003	0	0	0
	47:ROOF LIVE	0	2.540	0	0	0	0

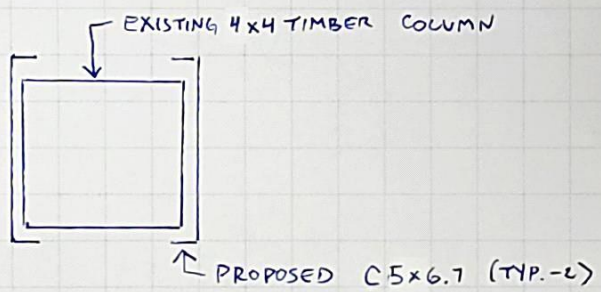
Dewberry

Calculation Sheet

Designer DAP Date 10/1/21 Checker BGK Date 10/6/21

Title TRANSFORMED SECTION PROPERTIES Job No. 5006594

Subject Sheet No. ____ of ____

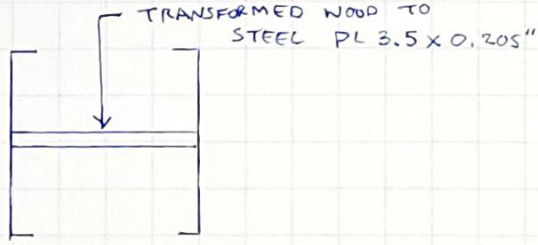


$E_{STEEL} = 2.9 \times 10^7$ PSI

$E_{WOOD} = 1.7 \times 10^6$ PSI

$$n = \frac{E_{WOOD}}{E_{STEEL}} = \frac{1.7 \times 10^6}{2.9 \times 10^7} = 0.0586$$

$b_w = n(b) = 0.0586\,(3.5) = 0.205"$



SEE NEXT PAGE FOR SECTION PROPERTIES

General Section Property Calculator

File = C:\Users\dpatel\Desktop\CT2818~1\SA\CALCUL~1\COLUMN~1.EC

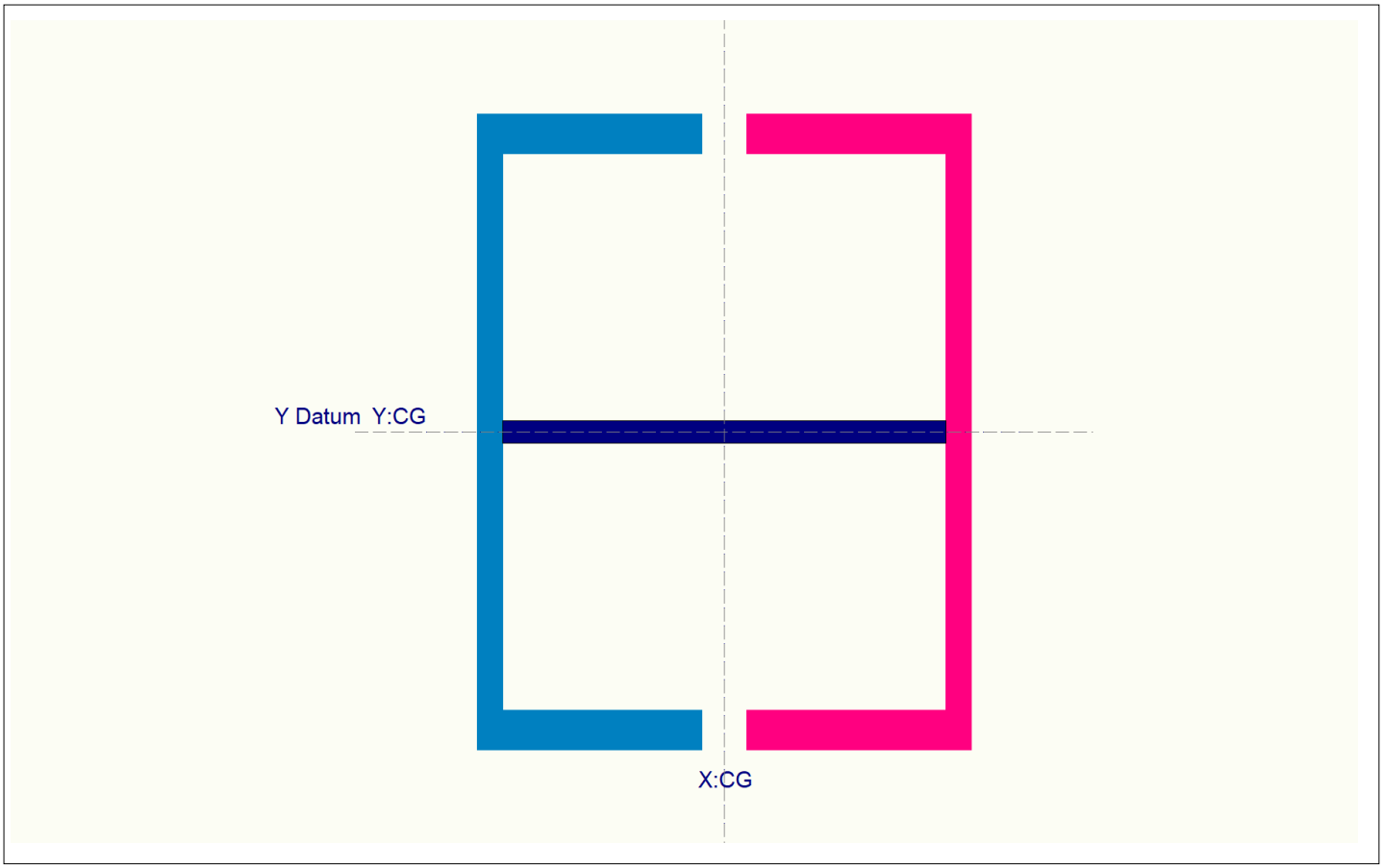
Lic. # : KW-06009005 **Licensee : DEWBERRY**

Description : Channel Mod Section Properties (transformed)

Final Section Properties

Total Area	:	4.614 in^2	Ixx	:	14.911 in^4	Sxx : - Y	: 5.964 in^3
			Iyy	:	9.489 in^4	Sxx : +Y	: 5.964 in^3
Calculated final C.G. distance from Datum :						Syy : - X	: 4.891 in^3
X cg Dist.	:	0.0 in	Zxx	:	7.083 in^3	Syy : +X	: 4.891 in^3
Y cg Dist.	:	0.0 in	Zyy	:	6.070 in^3		
Edge Distances from CG. :						r xx	: 1.798 in
+X	:	1.940 in	+Y	:	2.50 in	r yy	: 1.434 in
-X	:	-1.940 in	-Y	:	-2.50 in		

Rotation of All Components : 0.00 deg CCW



Rectangular & Circular Shapes

Rectangular Shape — Height = 0.205 in — Width = 3.500 in — Rotation = 0 deg CCW

Area = 0.718 in^2 — Xcg = 0.000 in — Ycg = 0.000 in

Steel Shapes

C5x6.7 : 1 — Area = 1.948 in^2 — Rotation = 0 deg CCW — Xcg = -1.456 in — Ycg = 0.000 in

General Section Property Calculator

File = C:\Users\dpatel\Desktop\CT2818~1\SA\CALCUL~1\COLUMN~1.EC

Lic. # : KW-06009005 **Licensee : DEWBERRY**

Description : Channel Mod Section Properties (transformed)

C5x6.7 : 2

Area = 1.948 in^2

Rotation = 180 deg CCW

Xcg = 1.456 in

Ycg = 0.000 in

Steel Column

File = C:\Users\dpatel\Desktop\CT2818~1\SA\CALCUL~1\COLUMN~1.EC

Lic. # : KW-06009005 **Licensee : DEWBERRY**

Description : (2)C5x6.7 w/4x4 Timber Column 7D (Node 2)

Code References

Calculations per AISC 360-10, IBC 2018, CBC 2016, ASCE 7-10
Load Combinations Used : IBC 2015

General Information

Steel Section Name : **(2)C5x6.7w/4x4 timber**
Analysis Method : Load Resistance Factor
Steel Stress Grade
Fy : Steel Yield 36.0 ksi
E : Elastic Bending Modulus 29,000.0 ksi

Overall Column Height 7.750 ft
Top & Bottom Fixity Top & Bottom Pinned
Brace condition for deflection (buckling) along columns :
X-X (width) axis :
Unbraced Length for X-X Axis buckling = 7.750 ft, K = 1.0
Y-Y (depth) axis :
Unbraced Length for Y-Y Axis buckling = 7.750 ft, K = 1.0

Applied Loads

Service loads entered. Load Factors will be applied for calculations

Column self weight included : 109.663 lbs * Dead Load Factor
AXIAL LOADS . . .
Dead Load (Platform): Axial Load at 7.750 ft, D = 1.807 k
Dead Load (Roof): Axial Load at 7.750 ft, D = 3.610 k
Live Load (Platform): Axial Load at 7.750 ft, LR = 1.977 k
Snow (Platform): Axial Load at 7.750 ft, S = 1.660 k
Snow (Roof): Axial Load at 7.750 ft, S = 2.550 k
Wind (Platform): Axial Load at 7.750 ft, W = 2.387 k
Live Load (Roof): Axial Load at 7.750 ft, LR = 3.040 k

DESIGN SUMMARY

Bending & Shear Check Results

PASS Max. Axial+Bending Stress Ratio = **0.1323** : 1
Load Combination +1.20D+1.60Lr+0.50W+1.60H
Location of max.above base 0.0 ft
At maximum location values are . . .
Pu 15.853 k
0.9 * Pn 119.801 k
Mu-x 0.0 k-ft
0.9 * Mn-x : 19.124 k-ft
Mu-y 0.0 k-ft
0.9 * Mn-y : 16.389 k-ft

PASS Maximum Shear Stress Ratio = **0.0** : 1
Load Combination
Location of max.above base 0.0 ft
At maximum location values are . . .
Vu : Applied 0.0 k
Vn * Phi : Allowable 0.0 k

Maximum Load Reactions . .
Top along X-X 0.0 k
Bottom along X-X 0.0 k
Top along Y-Y 0.0 k
Bottom along Y-Y 0.0 k

Maximum Load Deflections . . .
Along Y-Y 0.0 in at 0.0 ft above base
for load combination :
Along X-X 0.0 in at 0.0 ft above base
for load combination :

Load Combination Results

Load Combination	Maximum Axial + Bending Stress Ratios			Maximum Shear Ratios		
	Stress Ratio	Status	Location	Stress Ratio	Status	Location
+1.40D+1.60H	0.065	PASS	0.00 ft	0.000	PASS	0.00 ft
+1.20D+0.50Lr+1.60L+1.60H	0.076	PASS	0.00 ft	0.000	PASS	0.00 ft
+1.20D+1.60L+0.50S+1.60H	0.073	PASS	0.00 ft	0.000	PASS	0.00 ft
+1.20D+1.60Lr+0.50L+1.60H	0.122	PASS	0.00 ft	0.000	PASS	0.00 ft
+1.20D+1.60Lr+0.50W+1.60H	0.132	PASS	0.00 ft	0.000	PASS	0.00 ft
+1.20D+0.50L+1.60S+1.60H	0.112	PASS	0.00 ft	0.000	PASS	0.00 ft
+1.20D+1.60S+0.50W+1.60H	0.122	PASS	0.00 ft	0.000	PASS	0.00 ft
+1.20D+0.50Lr+0.50L+W+1.60H	0.096	PASS	0.00 ft	0.000	PASS	0.00 ft
+1.20D+0.50L+0.50S+W+1.60H	0.093	PASS	0.00 ft	0.000	PASS	0.00 ft
+1.20D+0.50L+0.70S+E+1.60H	0.080	PASS	0.00 ft	0.000	PASS	0.00 ft
+0.90D+W+0.90H	0.061	PASS	0.00 ft	0.000	PASS	0.00 ft

Steel Column

File = C:\Users\dpatel\Desktop\CT2818~1\SA\CALCUL~1\COLUMN~1.EC

Lic. # : KW-06009005 **Licensee : DEWBERRY**

Description : (2)C5x6.7 w/4x4 Timber Column 7D (Node 2)

Load Combination Results

Load Combination	Maximum Axial + Bending Stress Ratios			Maximum Shear Ratios		
	Stress Ratio	Status	Location	Stress Ratio	Status	Location
+0.90D+E+0.90H	0.042	PASS	0.00 ft	0.000	PASS	0.00 ft

Maximum Reactions

Note: Only non-zero reactions are listed.

Load Combination	Axial Reaction @ Base	X-X Axis Reaction @ Base	@ Top	k	Y-Y Axis Reaction @ Base	@ Top	Mx - End Moments @ Base	@ Top	k-ft	My - End Moments @ Base	@ Top
+D+H	5.527										
+D+L+H	5.527										
+D+Lr+H	10.544										
+D+S+H	9.737										
+D+0.750Lr+0.750L+H	9.289										
+D+0.750L+0.750S+H	8.684										
+D+0.60W+H	6.959										
+D+0.70E+H	5.527										
+D+0.750Lr+0.750L+0.450W+H	10.364										
+D+0.750L+0.750S+0.450W+H	9.758										
+D+0.750L+0.750S+0.5250E+H	8.684										
+0.60D+0.60W+0.60H	4.748										
+0.60D+0.70E+0.60H	3.316										
D Only	5.527										
Lr Only	5.017										
L Only											
S Only	4.210										
W Only	2.387										
E Only											
H Only											

Extreme Reactions

Item	Extreme Value	Axial Reaction @ Base	X-X Axis Reaction @ Base	@ Top	k	Y-Y Axis Reaction @ Base	@ Top	Mx - End Moments @ Base	@ Top	k-ft	My - End Moments @ Base	@ Top
Axial @ Base	Maximum	10.544										
"	Minimum											
Reaction, X-X Axis Base	Maximum	5.527										
"	Minimum	5.527										
Reaction, Y-Y Axis Base	Maximum	5.527										
"	Minimum	5.527										
Reaction, X-X Axis Top	Maximum	5.527										
"	Minimum	5.527										
Reaction, Y-Y Axis Top	Maximum	5.527										
"	Minimum	5.527										
Moment, X-X Axis Base	Maximum	5.527										
"	Minimum	5.527										
Moment, Y-Y Axis Base	Maximum	5.527										
"	Minimum	5.527										
Moment, X-X Axis Top	Maximum	5.527										
"	Minimum	5.527										
Moment, Y-Y Axis Top	Maximum	5.527										
"	Minimum	5.527										

Maximum Deflections for Load Combinations

Load Combination	Max. X-X Deflection		Distance		Max. Y-Y Deflection		Distance	
+D+H	0.0000	in	0.000	ft	0.000	in	0.000	ft
+D+L+H	0.0000	in	0.000	ft	0.000	in	0.000	ft
+D+Lr+H	0.0000	in	0.000	ft	0.000	in	0.000	ft
+D+S+H	0.0000	in	0.000	ft	0.000	in	0.000	ft
+D+0.750Lr+0.750L+H	0.0000	in	0.000	ft	0.000	in	0.000	ft
+D+0.750L+0.750S+H	0.0000	in	0.000	ft	0.000	in	0.000	ft
+D+0.60W+H	0.0000	in	0.000	ft	0.000	in	0.000	ft
+D+0.70E+H	0.0000	in	0.000	ft	0.000	in	0.000	ft
+D+0.750Lr+0.750L+0.450W+H	0.0000	in	0.000	ft	0.000	in	0.000	ft

Steel Column

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Lic. # : KW-06009005 **Licensee : DEWBERRY**

Description : (2)C5x6.7 w/4x4 Timber Column 7D (Node 2)

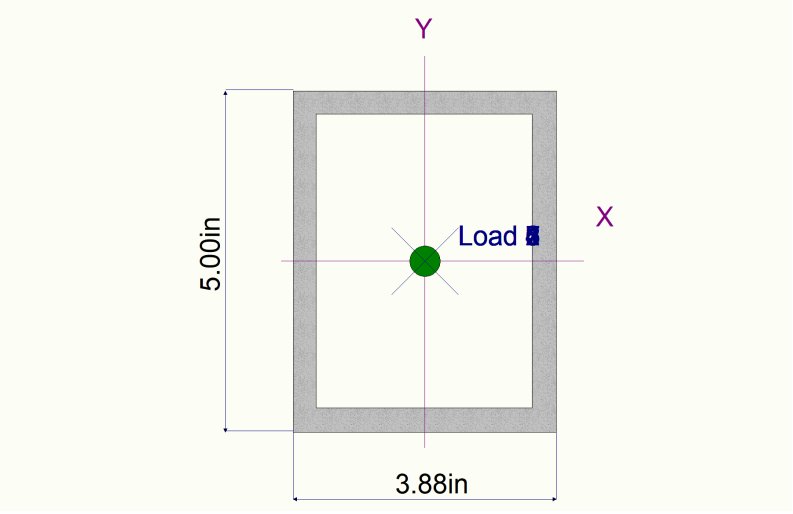
Maximum Deflections for Load Combinations

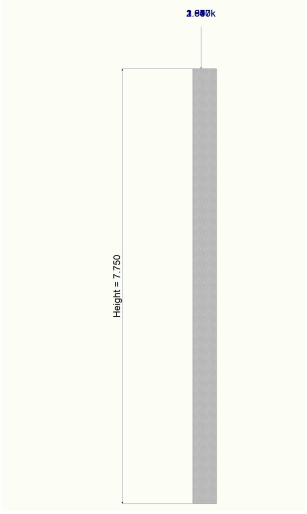
Load Combination	Max. X-X Deflection		Distance		Max. Y-Y Deflection		Distance	
+D+0.750L+0.750S+0.450W+H	0.0000	in	0.000	ft	0.000	in	0.000	ft
+D+0.750L+0.750S+0.5250E+H	0.0000	in	0.000	ft	0.000	in	0.000	ft
+0.60D+0.60W+0.60H	0.0000	in	0.000	ft	0.000	in	0.000	ft
+0.60D+0.70E+0.60H	0.0000	in	0.000	ft	0.000	in	0.000	ft
D Only	0.0000	in	0.000	ft	0.000	in	0.000	ft
Lr Only	0.0000	in	0.000	ft	0.000	in	0.000	ft
L Only	0.0000	in	0.000	ft	0.000	in	0.000	ft
S Only	0.0000	in	0.000	ft	0.000	in	0.000	ft
W Only	0.0000	in	0.000	ft	0.000	in	0.000	ft
E Only	0.0000	in	0.000	ft	0.000	in	0.000	ft
H Only	0.0000	in	0.000	ft	0.000	in	0.000	ft

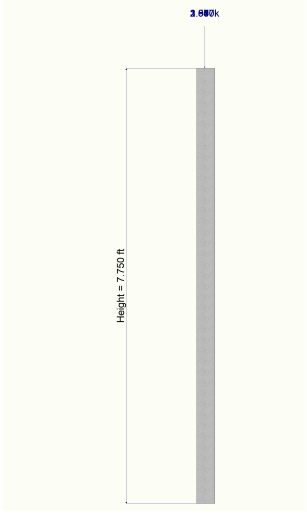
Steel Section Properties : (2)C5x6.7w/4x4 timber

Depth	=	5.000	in	I xx	=	14.91	in^4	J	=	0.000 in^4
Design Thick	=	0.320	in	S xx	=	5.96	in^3	Cw	=	0.00 in^6
Width	=	3.880	in	R xx	=	1.798	in			
Wall Thick	=	0.344	in	Zx	=	7.083	in^3			
Area	=	4.614	in^2	I yy	=	9.489	in^4	C	=	0.000 in^3
Weight	=	14.150	plf	S yy	=	4.891	in^3			
				R yy	=	1.434	in			
				Zy	=	6.070	in^3			
Ycg	=	0.000	in							

Sketches







Steel Column

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Lic. # : KW-06009005 **Licensee : DEWBERRY**

Description : (2)C5x6.7w/ 4x4 Timber Column 8F (Node 7)

Code References

Calculations per AISC 360-10, IBC 2018, CBC 2016, ASCE 7-10
Load Combinations Used : IBC 2015

General Information

Steel Section Name : **(2)C5x6.7w/4x4 timber**
Analysis Method : Allowable Strength
Steel Stress Grade
Fy : Steel Yield 36.0 ksi
E : Elastic Bending Modulus 29,000.0 ksi

Overall Column Height 7.750 ft
Top & Bottom Fixity Top & Bottom Pinned
Brace condition for deflection (buckling) along columns :
X-X (width) axis :
Unbraced Length for X-X Axis buckling = 7.750 ft, K = 1.0
Y-Y (depth) axis :
Unbraced Length for Y-Y Axis buckling = 7.750 ft, K = 1.0

Applied Loads

Service loads entered. Load Factors will be applied for calculations

Column self weight included : 109.663 lbs * Dead Load Factor
AXIAL LOADS . . .
Dead Load (Platform): Axial Load at 7.750 ft, D = 2.328 k
Dead Load (Roof): Axial Load at 7.750 ft, D = 2.950 k
Live Load (Platform): Axial Load at 7.750 ft, LR = 1.977 k
Snow (Platform): Axial Load at 7.750 ft, S = 1.660 k
Snow (Roof): Axial Load at 7.750 ft, S = 2.130 k
Wind (Platform): Axial Load at 7.750 ft, W = 2.366 k
Live Load (Roof): Axial Load at 7.750 ft, LR = 2.540 k

DESIGN SUMMARY

Bending & Shear Check Results

PASS Max. Axial+Bending Stress Ratio = **0.1243** : 1
Load Combination +D+Lr+H
Location of max.above base 0.0 ft
At maximum location values are . . .
Pa : Axial 9.905 k
Pn / Omega : Allowable 79.708 k
Ma-x : Applied 0.0 k-ft
Mn-x / Omega : Allowable 12.724 k-ft
Ma-y : Applied 0.0 k-ft
Mn-y / Omega : Allowable 10.904 k-ft

PASS Maximum Shear Stress Ratio = **0.0** : 1
Load Combination
Location of max.above base 0.0 ft
At maximum location values are . . .
Va : Applied 0.0 k
Vn / Omega : Allowable 0.0 k

Maximum Load Reactions . .
Top along X-X 0.0 k
Bottom along X-X 0.0 k
Top along Y-Y 0.0 k
Bottom along Y-Y 0.0 k

Maximum Load Deflections . . .
Along Y-Y 0.0 in at 0.0 ft above base
for load combination :
Along X-X 0.0 in at 0.0 ft above base
for load combination :

Load Combination Results

Load Combination	Maximum Axial + Bending Stress Ratios			Maximum Shear Ratios		
	Stress Ratio	Status	Location	Stress Ratio	Status	Location
+D+H	0.068	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+L+H	0.068	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+Lr+H	0.124	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+S+H	0.115	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750Lr+0.750L+H	0.110	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750L+0.750S+H	0.103	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.60W+H	0.085	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.70E+H	0.068	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750Lr+0.750L+0.450W+H	0.123	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750L+0.750S+0.450W+H	0.117	PASS	0.00 ft	0.000	PASS	0.00 ft
+D+0.750L+0.750S+0.5250E+H	0.103	PASS	0.00 ft	0.000	PASS	0.00 ft

Steel Column

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Lic. # : KW-06009005 **Licensee : DEWBERRY**

Description : (2)C5x6.7w/ 4x4 Timber Column 8F (Node 7)

Load Combination Results

Load Combination	Maximum Axial + Bending Stress Ratios			Maximum Shear Ratios		
	Stress Ratio	Status	Location	Stress Ratio	Status	Location
+0.60D+0.60W+0.60H	0.058	PASS	0.00 ft	0.000	PASS	0.00 ft
+0.60D+0.70E+0.60H	0.041	PASS	0.00 ft	0.000	PASS	0.00 ft

Maximum Reactions

Note: Only non-zero reactions are listed.

Load Combination	Axial Reaction @ Base	X-X Axis Reaction @ Base	X-X Axis Reaction @ Top	k	Y-Y Axis Reaction @ Base	Y-Y Axis Reaction @ Top	Mx - End Moments @ Base	Mx - End Moments @ Top	k-ft	My - End Moments @ Base	My - End Moments @ Top
+D+H	5.388										
+D+L+H	5.388										
+D+Lr+H	9.905										
+D+S+H	9.178										
+D+0.750Lr+0.750L+H	8.775										
+D+0.750L+0.750S+H	8.230										
+D+0.60W+H	6.807										
+D+0.70E+H	5.388										
+D+0.750Lr+0.750L+0.450W+H	9.840										
+D+0.750L+0.750S+0.450W+H	9.295										
+D+0.750L+0.750S+0.5250E+H	8.230										
+0.60D+0.60W+0.60H	4.652										
+0.60D+0.70E+0.60H	3.233										
D Only	5.388										
Lr Only	4.517										
L Only											
S Only	3.790										
W Only	2.366										
E Only											
H Only											

Extreme Reactions

Item	Extreme Value	Axial Reaction @ Base	X-X Axis Reaction @ Base	X-X Axis Reaction @ Top	k	Y-Y Axis Reaction @ Base	Y-Y Axis Reaction @ Top	Mx - End Moments @ Base	Mx - End Moments @ Top	k-ft	My - End Moments @ Base	My - End Moments @ Top
Axial @ Base	Maximum	9.905										
"	Minimum											
Reaction, X-X Axis Base	Maximum	5.388										
"	Minimum	5.388										
Reaction, Y-Y Axis Base	Maximum	5.388										
"	Minimum	5.388										
Reaction, X-X Axis Top	Maximum	5.388										
"	Minimum	5.388										
Reaction, Y-Y Axis Top	Maximum	5.388										
"	Minimum	5.388										
Moment, X-X Axis Base	Maximum	5.388										
"	Minimum	5.388										
Moment, Y-Y Axis Base	Maximum	5.388										
"	Minimum	5.388										
Moment, X-X Axis Top	Maximum	5.388										
"	Minimum	5.388										
Moment, Y-Y Axis Top	Maximum	5.388										
"	Minimum	5.388										

Maximum Deflections for Load Combinations

Load Combination	Max. X-X Deflection		Distance		Max. Y-Y Deflection		Distance	
+D+H	0.0000	in	0.000	ft	0.000	in	0.000	ft
+D+L+H	0.0000	in	0.000	ft	0.000	in	0.000	ft
+D+Lr+H	0.0000	in	0.000	ft	0.000	in	0.000	ft
+D+S+H	0.0000	in	0.000	ft	0.000	in	0.000	ft
+D+0.750Lr+0.750L+H	0.0000	in	0.000	ft	0.000	in	0.000	ft
+D+0.750L+0.750S+H	0.0000	in	0.000	ft	0.000	in	0.000	ft
+D+0.60W+H	0.0000	in	0.000	ft	0.000	in	0.000	ft
+D+0.70E+H	0.0000	in	0.000	ft	0.000	in	0.000	ft

Steel Column

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Lic. # : KW-06009005 **Licensee : DEWBERRY**

Description : (2)C5x6.7w/ 4x4 Timber Column 8F (Node 7)

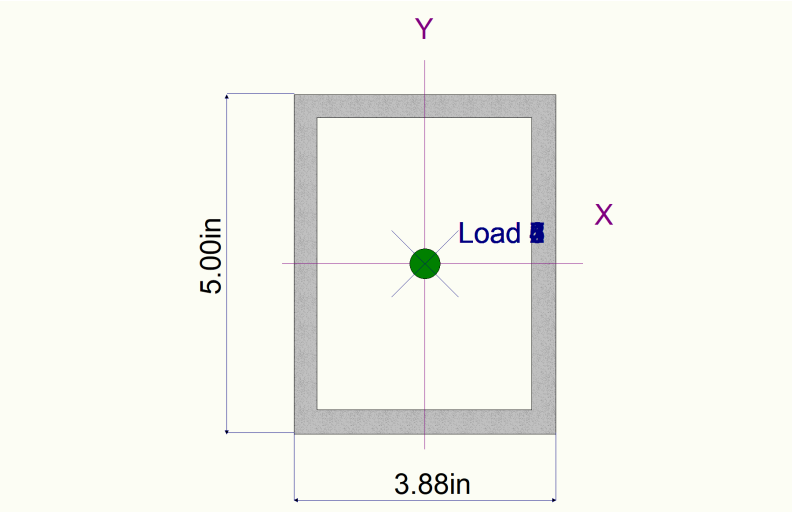
Maximum Deflections for Load Combinations

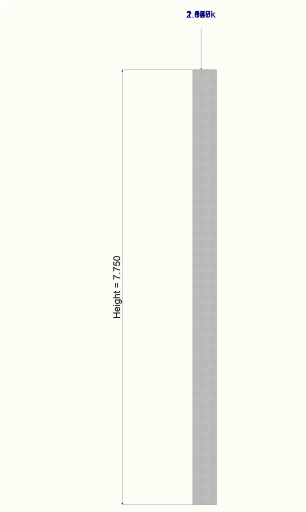
Load Combination	Max. X-X Deflection		Distance		Max. Y-Y Deflection		Distance	
+D+0.750Lr+0.750L+0.450W+H	0.0000	in	0.000	ft	0.000	in	0.000	ft
+D+0.750L+0.750S+0.450W+H	0.0000	in	0.000	ft	0.000	in	0.000	ft
+D+0.750L+0.750S+0.5250E+H	0.0000	in	0.000	ft	0.000	in	0.000	ft
+0.60D+0.60W+0.60H	0.0000	in	0.000	ft	0.000	in	0.000	ft
+0.60D+0.70E+0.60H	0.0000	in	0.000	ft	0.000	in	0.000	ft
D Only	0.0000	in	0.000	ft	0.000	in	0.000	ft
Lr Only	0.0000	in	0.000	ft	0.000	in	0.000	ft
L Only	0.0000	in	0.000	ft	0.000	in	0.000	ft
S Only	0.0000	in	0.000	ft	0.000	in	0.000	ft
W Only	0.0000	in	0.000	ft	0.000	in	0.000	ft
E Only	0.0000	in	0.000	ft	0.000	in	0.000	ft
H Only	0.0000	in	0.000	ft	0.000	in	0.000	ft

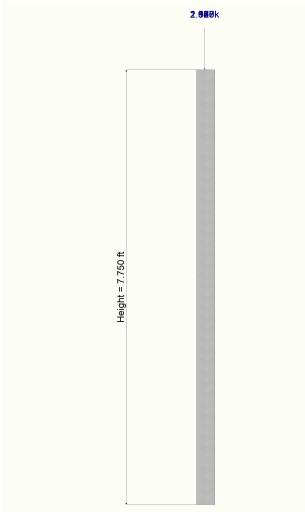
Steel Section Properties : (2)C5x6.7w/4x4 timber

Depth	=	5.000	in	I xx	=	14.91	in^4	J	=	0.000	in^4
Design Thick	=	0.320	in	S xx	=	5.96	in^3	Cw	=	0.00	in^6
Width	=	3.880	in	R xx	=	1.798	in				
Wall Thick	=	0.344	in	Zx	=	7.083	in^3				
Area	=	4.614	in^2	I yy	=	9.489	in^4	C	=	0.000	in^3
Weight	=	14.150	plf	S yy	=	4.891	in^3				
				R yy	=	1.434	in				
				Zy	=	6.070	in^3				
Ycg	=	0.000	in								

Sketches







Steel Column

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Lic. # : KW-06009005 **Licensee : DEWBERRY**

Description : (2)C5x6.7w/4x4 Timber Column 8D (Node 3)

Code References

Calculations per AISC 360-10, IBC 2018, CBC 2016, ASCE 7-10
Load Combinations Used : IBC 2015

General Information

Steel Section Name : **(2)C5x6.7w/4x4 timber**
Analysis Method : Load Resistance Factor
Steel Stress Grade
Fy : Steel Yield 36.0 ksi
E : Elastic Bending Modulus 29,000.0 ksi

Overall Column Height 7.750 ft
Top & Bottom Fixity Top & Bottom Pinned
Brace condition for deflection (buckling) along columns :
X-X (width) axis :
Unbraced Length for X-X Axis buckling = 7.750 ft, K = 1.0
Y-Y (depth) axis :
Unbraced Length for Y-Y Axis buckling = 7.750 ft, K = 1.0

Applied Loads

Service loads entered. Load Factors will be applied for calculations

Column self weight included : 109.663 lbs * Dead Load Factor
AXIAL LOADS . . .
Dead Load (Platform): Axial Load at 7.750 ft, D = 2.337 k
Dead Load (Roof): Axial Load at 7.750 ft, D = 3.770 k
Live Load (Platform): Axial Load at 7.750 ft, LR = 1.983 k
Snow (Platform): Axial Load at 7.750 ft, S = 1.666 k
Snow (Roof): Axial Load at 7.750 ft, S = 2.710 k
Wind (Platform): Axial Load at 7.750 ft, W = 2.387 k
Live Load (Roof): Axial Load at 7.750 ft, LR = 3.230 k

DESIGN SUMMARY

Bending & Shear Check Results

PASS Max. Axial+Bending Stress Ratio = **0.1419** : 1
Load Combination +1.20D+1.60Lr+0.50W+1.60H
Location of max.above base 0.0 ft
At maximum location values are . . .
Pu 16.994 k
0.9 * Pn 119.801 k
Mu-x 0.0 k-ft
0.9 * Mn-x : 19.124 k-ft
Mu-y 0.0 k-ft
0.9 * Mn-y : 16.389 k-ft

PASS Maximum Shear Stress Ratio = **0.0** : 1
Load Combination
Location of max.above base 0.0 ft
At maximum location values are . . .
Vu : Applied 0.0 k
Vn * Phi : Allowable 0.0 k

Maximum Load Reactions . .
Top along X-X 0.0 k
Bottom along X-X 0.0 k
Top along Y-Y 0.0 k
Bottom along Y-Y 0.0 k

Maximum Load Deflections . . .
Along Y-Y 0.0 in at 0.0 ft above base
for load combination :
Along X-X 0.0 in at 0.0 ft above base
for load combination :

Load Combination Results

Load Combination	Maximum Axial + Bending Stress Ratios			Maximum Shear Ratios		
	Stress Ratio	Status	Location	Stress Ratio	Status	Location
+1.40D+1.60H	0.073	PASS	0.00 ft	0.000	PASS	0.00 ft
+1.20D+0.50Lr+1.60L+1.60H	0.084	PASS	0.00 ft	0.000	PASS	0.00 ft
+1.20D+1.60L+0.50S+1.60H	0.081	PASS	0.00 ft	0.000	PASS	0.00 ft
+1.20D+1.60Lr+0.50L+1.60H	0.132	PASS	0.00 ft	0.000	PASS	0.00 ft
+1.20D+1.60Lr+0.50W+1.60H	0.142	PASS	0.00 ft	0.000	PASS	0.00 ft
+1.20D+0.50L+1.60S+1.60H	0.121	PASS	0.00 ft	0.000	PASS	0.00 ft
+1.20D+1.60S+0.50W+1.60H	0.131	PASS	0.00 ft	0.000	PASS	0.00 ft
+1.20D+0.50Lr+0.50L+W+1.60H	0.104	PASS	0.00 ft	0.000	PASS	0.00 ft
+1.20D+0.50L+0.50S+W+1.60H	0.100	PASS	0.00 ft	0.000	PASS	0.00 ft
+1.20D+0.50L+0.70S+E+1.60H	0.088	PASS	0.00 ft	0.000	PASS	0.00 ft
+0.90D+W+0.90H	0.067	PASS	0.00 ft	0.000	PASS	0.00 ft

Steel Column

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Description : (2)C5x6.7w/4x4 Timber Column 8D (Node 3)

Load Combination Results

Load Combination	Maximum Axial + Bending Stress Ratios			Maximum Shear Ratios		
	Stress Ratio	Status	Location	Stress Ratio	Status	Location
+0.90D+E+0.90H	0.047	PASS	0.00 ft	0.000	PASS	0.00 ft

Maximum Reactions

Note: Only non-zero reactions are listed.

Load Combination	Axial Reaction @ Base	X-X Axis Reaction @ Base	@ Top	k	Y-Y Axis Reaction @ Base	@ Top	Mx - End Moments @ Base	@ Top	k-ft	My - End Moments @ Base	@ Top
+D+H	6.217										
+D+L+H	6.217										
+D+Lr+H	11.430										
+D+S+H	10.593										
+D+0.750Lr+0.750L+H	10.126										
+D+0.750L+0.750S+H	9.499										
+D+0.60W+H	7.649										
+D+0.70E+H	6.217										
+D+0.750Lr+0.750L+0.450W+H	11.201										
+D+0.750L+0.750S+0.450W+H	10.573										
+D+0.750L+0.750S+0.5250E+H	9.499										
+0.60D+0.60W+0.60H	5.162										
+0.60D+0.70E+0.60H	3.730										
D Only	6.217										
Lr Only	5.213										
L Only											
S Only	4.376										
W Only	2.387										
E Only											
H Only											

Extreme Reactions

Item	Extreme Value	Axial Reaction @ Base	X-X Axis Reaction @ Base	@ Top	k	Y-Y Axis Reaction @ Base	@ Top	Mx - End Moments @ Base	@ Top	k-ft	My - End Moments @ Base	@ Top
Axial @ Base	Maximum	11.430										
"	Minimum											
Reaction, X-X Axis Base	Maximum	6.217										
"	Minimum	6.217										
Reaction, Y-Y Axis Base	Maximum	6.217										
"	Minimum	6.217										
Reaction, X-X Axis Top	Maximum	6.217										
"	Minimum	6.217										
Reaction, Y-Y Axis Top	Maximum	6.217										
"	Minimum	6.217										
Moment, X-X Axis Base	Maximum	6.217										
"	Minimum	6.217										
Moment, Y-Y Axis Base	Maximum	6.217										
"	Minimum	6.217										
Moment, X-X Axis Top	Maximum	6.217										
"	Minimum	6.217										
Moment, Y-Y Axis Top	Maximum	6.217										
"	Minimum	6.217										

Maximum Deflections for Load Combinations

Load Combination	Max. X-X Deflection		Distance		Max. Y-Y Deflection		Distance	
+D+H	0.0000	in	0.000	ft	0.000	in	0.000	ft
+D+L+H	0.0000	in	0.000	ft	0.000	in	0.000	ft
+D+Lr+H	0.0000	in	0.000	ft	0.000	in	0.000	ft
+D+S+H	0.0000	in	0.000	ft	0.000	in	0.000	ft
+D+0.750Lr+0.750L+H	0.0000	in	0.000	ft	0.000	in	0.000	ft
+D+0.750L+0.750S+H	0.0000	in	0.000	ft	0.000	in	0.000	ft
+D+0.60W+H	0.0000	in	0.000	ft	0.000	in	0.000	ft
+D+0.70E+H	0.0000	in	0.000	ft	0.000	in	0.000	ft
+D+0.750Lr+0.750L+0.450W+H	0.0000	in	0.000	ft	0.000	in	0.000	ft

Steel Column

File = C:\Users\dpatel\Desktop\CT2818~1\SA\CALCUL~1\COLUMN~1.EC

Lic. # : KW-06009005 **Licensee : DEWBERRY**

Description : (2)C5x6.7w/4x4 Timber Column 8D (Node 3)

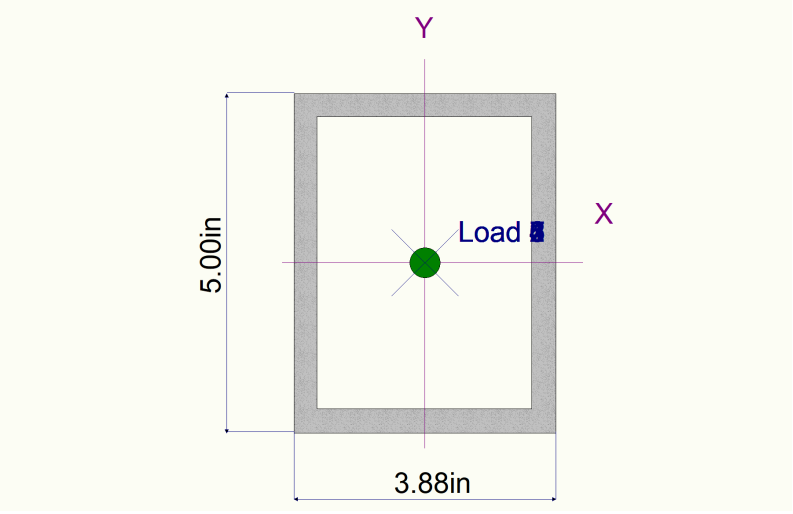
Maximum Deflections for Load Combinations

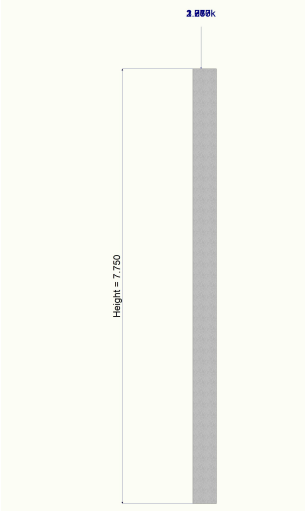
Load Combination	Max. X-X Deflection		Distance		Max. Y-Y Deflection		Distance	
+D+0.750L+0.750S+0.450W+H	0.0000	in	0.000	ft	0.000	in	0.000	ft
+D+0.750L+0.750S+0.5250E+H	0.0000	in	0.000	ft	0.000	in	0.000	ft
+0.60D+0.60W+0.60H	0.0000	in	0.000	ft	0.000	in	0.000	ft
+0.60D+0.70E+0.60H	0.0000	in	0.000	ft	0.000	in	0.000	ft
D Only	0.0000	in	0.000	ft	0.000	in	0.000	ft
Lr Only	0.0000	in	0.000	ft	0.000	in	0.000	ft
L Only	0.0000	in	0.000	ft	0.000	in	0.000	ft
S Only	0.0000	in	0.000	ft	0.000	in	0.000	ft
W Only	0.0000	in	0.000	ft	0.000	in	0.000	ft
E Only	0.0000	in	0.000	ft	0.000	in	0.000	ft
H Only	0.0000	in	0.000	ft	0.000	in	0.000	ft

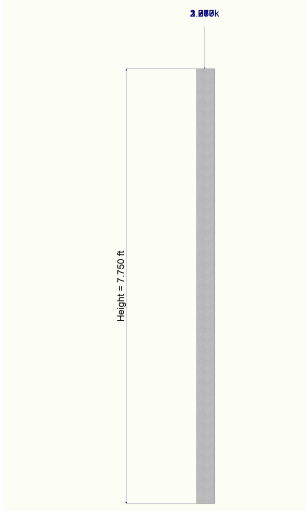
Steel Section Properties : (2)C5x6.7w/4x4 timber

Depth	=	5.000	in	I xx	=	14.91	in^4	J	=	0.000 in^4
Design Thick	=	0.320	in	S xx	=	5.96	in^3	Cw	=	0.00 in^6
Width	=	3.880	in	R xx	=	1.798	in			
Wall Thick	=	0.344	in	Zx	=	7.083	in^3			
Area	=	4.614	in^2	I yy	=	9.489	in^4	C	=	0.000 in^3
Weight	=	14.150	plf	S yy	=	4.891	in^3			
				R yy	=	1.434	in			
				Zy	=	6.070	in^3			
Ycg	=	0.000	in							

Sketches







Dewberry

Calculation Sheet

Designer DAP Date 10/4/21 Checker BGK Date 10/6/21

Title COLUMN BEARING CHECK Job No. 50065694

Subject Sheet No. 1 of 1

TIMBER COLUMN : 4 x 4

$f_c \leq F_c'$

CONTROLLING NODE 3: D + Lr = 11.32 K

$$f_c = \frac{11320}{(3.5)(3.5)} = 924 \text{ PSI}$$

$F_c' = F_c (C_D)(C_M)(C_t)(C_F)(C_i)$

$F_c = 1700$ PSI
$C_D = 1$
$C_M = 1$
$C_t = 1$
$C_F = 1.15$
$C_i = 1$

$F_c' = 1700 (1)(1)(1)(1.15)(1) = 1955$ PSI

924 PSI < 1955 PSI ✓ OK

Reaction Summary

	Node	L/C	Horizontal FX (kip)	Vertical FY (kip)	Horizontal FZ (kip)	Moment MX (kip-in)	Moment MY (kip-in)	Moment MZ (kip-in)
Max FX	7	62:D+0.75(0.6\	**3.869**	6.787	-0.541	0	0	0
Min FX	3	62:D+0.75(0.6\	**-3.913**	6.814	-0.571	0	0	0
Max FY	3	62:D+0.75(0.6\	-3.913	**6.814**	-0.571	0	0	0
Min FY	2	70:0.6D+0.6W(	-0.628	**0.801**	-0.532	0	0	0
Max FZ	6	57:D+0.6W(Z)	3.205	5.142	**0.664**	0	0	0
Min FZ	3	58:D+0.6W(-Z)	-3.351	5.685	**-0.644**	0	0	0
Max MX	2	53:D+L (TELE(	-3.422	5.698	0.149	**0**	0	0
Min MX	2	53:D+L (TELE(	-3.422	5.698	0.149	**0**	0	0
Max MY	2	53:D+L (TELE(	-3.422	5.698	0.149	0	**0**	0
Min MY	2	53:D+L (TELE(	-3.422	5.698	0.149	0	**0**	0
Max MZ	2	53:D+L (TELE(	-3.422	5.698	0.149	0	0	**0**
Min MZ	2	53:D+L (TELE(	-3.422	5.698	0.149	0	0	**0**

Force per lag bolt:

18 lag bolts total

FX: 3913/16 = 245 LB

FZ: 664/16 = 42 LB

FY: 801LB > 0 --> No Tension

Dewberry®

Job Number	50065694
Made by:	DAP
Date:	9/30/21
Checked by:	BGK
Date:	10/6/21

(CT2818 Stamford Newfield Ave) - Lag Screw Design

\\par-fs\Parsippany\Projects\50055106\50065694\Tech\Rev 3 MOD\SA\Calculations\Lag bolt design.xlsx

Size Lag Screws for Antenna Angle Supports

- Use (16x) lag screws to mount to proposed 4x10 timber blocking

Design Loading

F_y =	0 lb	*STAAD Max Tension Load*		
Moment =	0 lb-in	*STAAD Max Moment - Prying*		
F_z =	42 lb	*STAAD Max Vertical Load*		
F_x =	245 lb	*STAAD Max Shear Load*		
z =	249 lb	*Max Combined Shear Load*	θ =	80.3
w =	0 lb	*Withdrawal Load*		
zα =	249 lb	*Combined Lateral and Withdrawal*	α =	0.0

Lag Screw Dimensions: *(Table L2, NDS 2015)*

Dia. (D) =	0.5 in.	T =	2.5 in.	T-E =	2.1875 in.
Length =	4 in.	S =	1.5 in.		

Adjusted Design Values (per lag screw)

$W' = (1800G^{3/2}D^{3/4})C_d$ where: C_d = 1.6 *(duration factor, wind)*

= 699 lb G = 0.55 *(spec. grav. southern pine)*

$Z' = Z_\theta C_d C_g$ where: C_d = 1.6 *(duration factor, wind)*

= 467 lb C_g = 1 *(group factor, calc'd)*

Z_θ = 291.8 *(Yield Mode III_m)*

Combined Lateral and Withdrawal Loads

$$Z'\alpha = \frac{(W'p)\,Z'}{(W'p)\cos^2\alpha + z'\sin^2\alpha}$$

Z'α = 467 lb

Unity Checks

$$\frac{z\alpha}{Z'\alpha} = \frac{249\text{ lb}}{467\text{ lb}} = 53.2\%$$

APPENDIX B

ASCE 7 Hazards Report

Address:
500 Newfield Ave
Stamford, Connecticut
06905

Standard: ASCE/SEI 7-10
Risk Category: II
Soil Class:

Elevation: 128.93 ft (NAVD 88)
Latitude: 41.076952
Longitude: -73.533885

Snow

Results:

Ground Snow Load, p_g:	30 lb/ft^2
Elevation:	128.9 ft
Data Source:	ASCE/SEI 7-10, Fig. 7-1.
Date Accessed:	Thu Sep 10 2020

Values provided are ground snow loads. In areas designated "case study required," extreme local variations in ground snow loads preclude mapping at this scale. Site-specific case studies are required to establish ground snow loads at elevations not covered.

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