



Jesse A. Langer
(t) 203.786.8317
(f) 203.772.2037
Jlanger@uks.com

September 19, 2023

**VIA FEDERAL EXPRESS AND
ELECTRONIC MAIL**

Melanie.bachman@ct.gov
Siting.council@ct.gov

Ms. Melanie A. Bachman, Esq., Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

Re: Docket 511

Dear Attorney Bachman:

This office represents Barrett Outdoor Communications, Inc. (“Applicant”) in the above-captioned matter. On behalf of the Applicant, and pursuant to § 16-50j-75 *et seq.* of the Regulations of Connecticut State Agencies, I have enclosed one original and fifteen copies of Tarpon’s Development and Management (“D&M”) Plan submission in connection with the above-captioned docket. The submission includes the following:

- Pursuant to Condition 1, final site plans including a monopole at a height of 135 feet above ground level sufficient to accommodate AT&T, Verizon and Dish. The Plans are appended hereto as Attachment 1.
- Pursuant to Condition 2(a), a letter from a wireless telecommunications carrier with a firm commitment to install associated wireless equipment at the facility upon completion of construction. Two letters are appended hereto as Attachment 2.
- Pursuant to Condition 2(b), the final site plans employ the governing standards and other details as called out in this condition.
- Pursuant to Condition 2(c), the final site plans include construction plans for site clearing and other stabilization measures, including compliance with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control*. See in particular Sheets C-1, C-4, EC-1 and N-1.

Updike, Kelly & Spellacy, P.C.

One Century Tower • 265 Church Street • New Haven, CT 06510 (t) 203.786.8300 (f) 203.772.2037 www.uks.com

- Pursuant to Condition 2(d), tower and foundation design incorporating a yield point to avoid any interference with the operations of the Metro-North Railroad (“MNRR”) or the electric transmission line operated by the United Illuminating Company (“UI”). The tower and design documentation is appended hereto as Attachment 3. *See also* Sheet C-2.
- Pursuant to Condition 2(e), information pertaining to the potential use and location of a propane backup power generator for Verizon’s equipment. *See* Sheets C-1 and C-7.
- Pursuant to Condition 2(f), identification of safety zones and safety procedures for construction adjacent to MNRR and UI electric transmission lines. *See* Sheet C-2.
- Pursuant to Condition 2(g), a construction schedule. *See* Sheet EC-1.

The Applicant respectfully requests that the Connecticut Siting Council include this D&M Plan submission for review and approval on the next available agenda. Please do not hesitate to contact me with any questions.

Very truly yours,



Jesse A. Langer

Enclosures

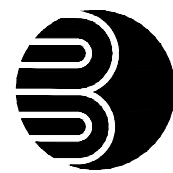
cc: Service List (*via email*)

The Honorable Laura R. Hoydick (*via email*)

The Honorable Richard M. Smith (*via email*)

ATTACHMENT 1

(Final Site Plans)



BARRETT OUTDOOR COMMUNICATIONS, INC.

"DOCK SHOPPING CENTER" WIRELESS COMMUNICATIONS FACILITY 200 EAST MAIN ST. REAR STRATFORD, CT 06614

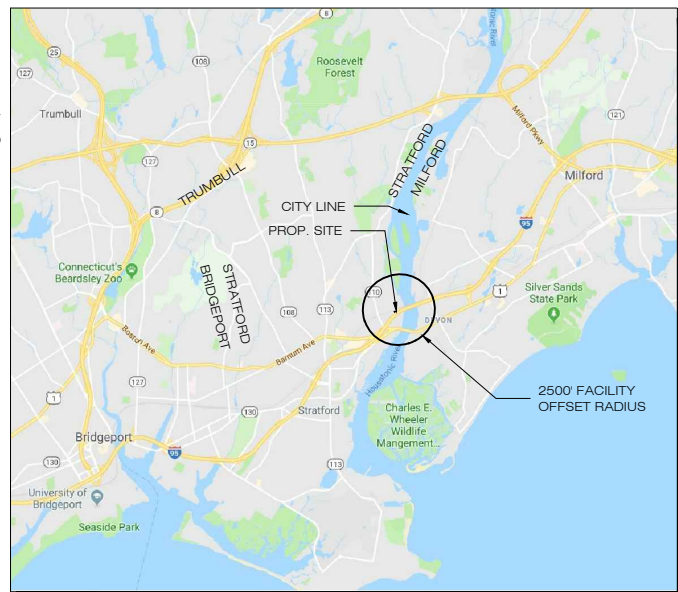
DRAWING INDEX

- T-1 TITLE SHEET
- S1 TELECOMMUNICATIONS EASEMENT MAP (1 OF 4)
- S2 TELECOMMUNICATIONS EASEMENT MAP (2 OF 4)
- S3 TELECOMMUNICATIONS EASEMENT MAP (3 OF 4)
- S4 TELECOMMUNICATIONS EASEMENT MAP (4 OF 4)
- R-1 ABUTTERS MAP
- SP-1 SITE PLAN & PARTIAL SITE PLAN
- C-1 PROPOSED COMPOUND PLAN & ELEVATION
- C-2 COMPOUND SECTION
- C-3 SITE DETAILS
- C-4 SITE DETAILS
- C-5 AT&T EQUIPMENT PLAN & DETAILS
- C-6 AT&T ANTENNA PLAN & DETAILS
- C-7 CELLCO PARTNERSHIP EQUIP. PLAN & DETAILS
- C-8 CELLCO PARTNERSHIP ANTENNA PLAN & DETAILS
- C-9 DISH WIRELESS LLC EQUIPMENT PLANS & DETAILS
- EC-1 EROSION CONTROL NOTES
- S-1 STRUCTURAL FOUNDATION & FLOOR FRAMING PLANS
- S-2 STRUCTURAL ROOF FRAMING PLANS
- S-3 EQUIPMENT PLATFORM PARTIAL ELEVATION, SECTION & DETAIL
- N-1 NOTES & SPECIFICATIONS

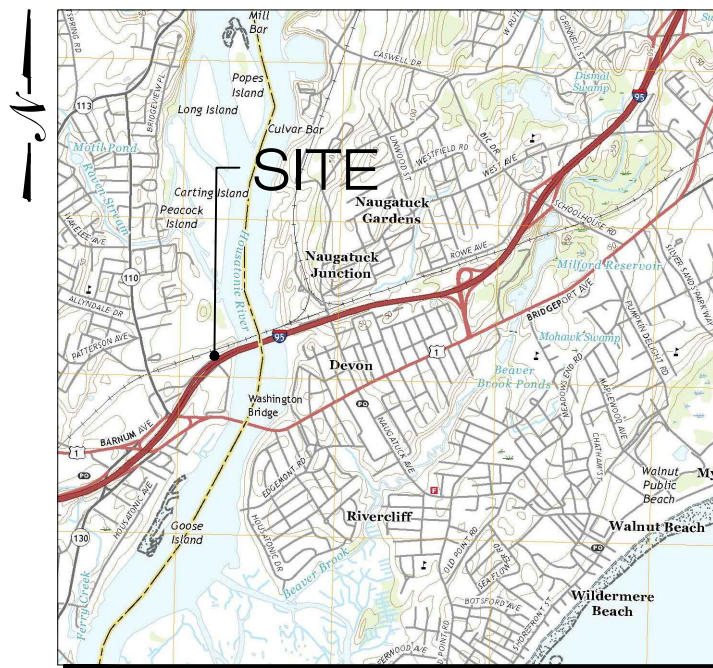
SITE INFORMATION

SITE NAME: "DOCK SHOPPING CENTER"
 SITE ADDRESS: 200 EAST MAIN ST. REAR, STRATFORD, CT 06614
 SITE TYPE/DESCRIPTION: INSTALLATION OF A 135'± AGL MONOPOLE AND ELEVATED WIRELESS COMMUNICATIONS EQUIPMENT PLATFORM WITHIN 4,210'± SF COMPOUND/EASEMENT AREA.
 PROPERTY OWNER: UB RAILSIDE LLC
 321 RAILROAD AVE.
 GREENWICH, CT 06830
 APPLICANT: BARRETT OUTDOOR COMMUNICATIONS, INC.
 381 HIGHLAND STREET
 WEST HAVEN, CT 06516
 LEGAL/REGULATORY COUNSEL: JESSE A. LANGER
 UPDIKE, KELLY & SPELLACY, P.C.
 ONE CENTURY TOWER
 265 CHURCH STREET, 10th FLOOR
 NEW HAVEN, CT 06512-0
 (203) 786-8317
 ENGINEERING CONTACT: ALL-POINTS TECHNOLOGY CORPORATION, P.C.
 567 VAUXHALL STREET EXTENSION - SUITE 311
 WATERFORD, CT 06385
 860 663-1697
 LATITUDE: N41°12'14.92" (41.2041144) (NAD 83)
 LONGITUDE: W73°06'47.91" (-73.113308) (NAD 83)
 ELEVATION: 12.3'± AMSL
 MAP: 60
 BLOCK: 11
 LOT: 1/7
 ZONING DISTRICT: CA (RETAIL COMMERCIAL DISTRICT)
 COASTAL BOUNDARY (CMA, C.G.S. 22a-113)

COORDINATES & GROUND ELEVATION INDICATED HEREIN WERE ESTABLISHED FROM AN FAA 1-A SURVEY CERTIFICATION, AS PREPARED BY CODESPOTI & ASSOCIATES, P.C., DATED JULY 14, 2022.



MUNICIPAL NOTIFICATION LIMIT MAP
SCALE: 1" = 4000'-0"



VICINITY MAP
SCALE: 1" = 2,000'

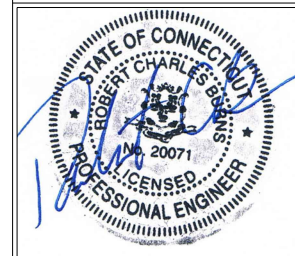
ALL-POINTS
TECHNOLOGY CORPORATION
567 VAUXHALL STREET EXTENSION - SUITE 311
WATERFORD, CT 06385 PHONE: (860)-663-1697
WWW.ALLPOINTSTECH.COM FAX: (860)-663-0935

BARRETT OUTDOOR COMMUNICATIONS, INC.

381 HIGHLAND STREET
WEST HAVEN, CT 06516
OFFICE: (203) 932-4601

D&M DOCUMENTS		
NO	DATE	REVISION
0	08/17/23	FOR FILING: JRM
1	09/07/23	REV. FOR FILING: JRM

OWNER: UB RAILSIDE LLC
ADDRESS: 200 EAST MAIN ST. REAR
STRATFORD, CT 06614



"DOCK SHOPPING CENTER"
 SITE: 200 EAST MAIN ST. REAR
 ADDRESS: STRATFORD, CT 06614
 APT FILING NUMBER: CT560100
 DRAWN BY: JM/ELZ CHECKED BY: JRM
 DATE: 08/XX/23

SHEET TITLE:
TITLE SHEET

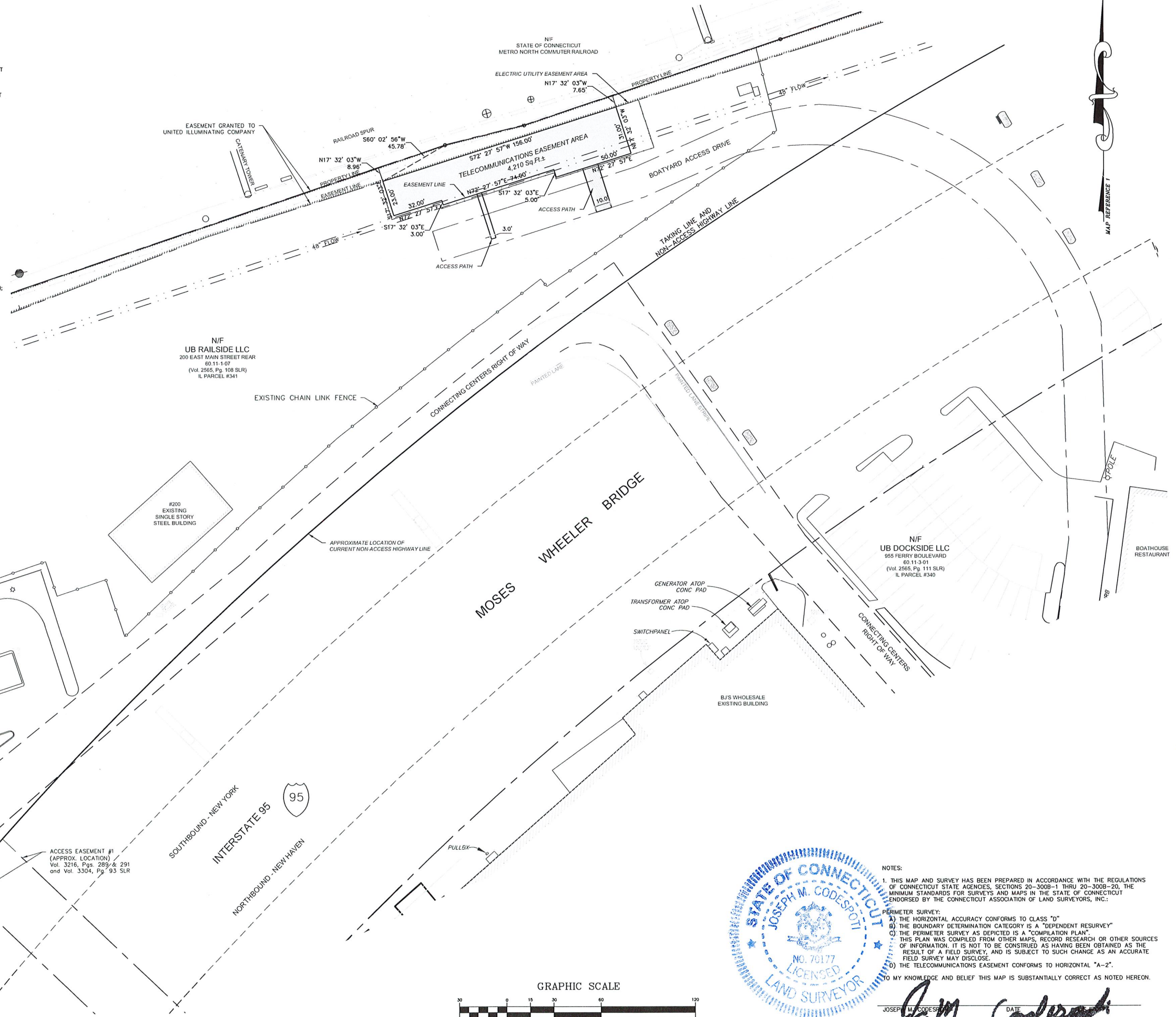
SHEET NUMBER:
T-1

MAP REFERENCES:

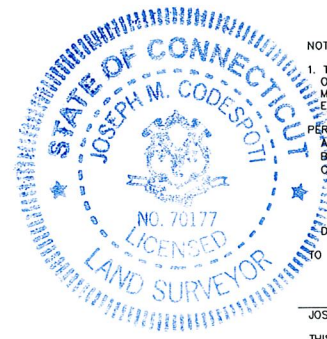
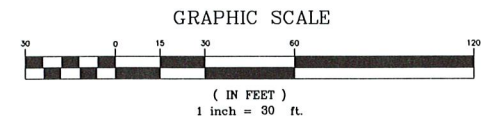
1. "ALTA/ACSM LAND TITLE SURVEY DEPICTING THE DOCK SHOPPING CENTER EAST MAIN STREET & FERRY BOULEVARD STRATFORD, CT. FOR URSTADT-BIDDLE PROPERTIES, INC. FEB. 2012 BY REDNISS & MEAD.
2. "LAYOUT PLAN SELF STORAGE FACILITY EAST MAIN STREET AND SIDNEY STREET STRATFORD, CT." 1"=30' 9/22/17.
3. "MAP SHOWING EASEMENT AREA GRANTED TO UNITED ILLUMINATING COMPANY 200 EAST MAIN STREET AND 200 EAST MAIN STREET REAR STRATFORD, CT." 07/17/17 1" = 50' SHEET 1 OF 2, SHEET 2 OF 2 EA340 BY BL COMPANIES.
4. STATE OF CONNECTICUT DEPT. MOSES WHEELER BRIDGE BREAKOUT PROJECT STRATFORD-MILFORD PROJECT NO. 138-249, PLAN HWY-2 ROADWAY PLAN DOCK DRIVE SHEET 3.30, DRAINAGE PLAN SHEET 3.37 AND GRADING PLAN SHEET 3.25.
5. "TOWN OF STRATFORD MAP SHOWING LAND ACQUIRED FROM UB RAILSIDE, LLC BY THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION MOSES WHEELER BRIDGE ON INTERSTATE RTE 95 PROJECT NO. 138-221, SHEET 2 OF 2.
6. "GENERAL LOCATION SURVEY DEPICTING THE DOCK SHOPPING CENTER EAST MAIN STREET & FERRY BOULEVARD STRATFORD, CT. PREPARED FOR URSTADT-BIDDLE PROPERTIES, INC." 1" = 100' 02/08/2012 BY REDNISS & MEAD.

NOTES:

1. UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED AND NOTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING SUPPLIED BY THE RESPECTIVE UTILITY COMPANIES OR GOVERNMENTAL AGENCIES, FROM PAROLE TESTIMONY AND FROM OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED AS APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE, THE EXISTENCE OF WHICH ARE UNKNOWN TO US. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.
2. THIS SURVEY SHALL NOT BE USED WITH AN AFFIDAVIT OR LETTER OF ANY KIND FOR REUSE INCLUDING, BUT NOT LIMITED TO, FUTURE CLOSINGS, PLOT PLANS, CONSTRUCTION, LANDSCAPING, PERMITTING, ETC. IT IS A VIOLATION OF THE FEDERAL COPYRIGHT ACT TO COPY OR MODIFY AND REUSE THIS SURVEY BEYOND THE DATE AND SCOPE NOTED HEREIN. CODESPOT & ASSOCIATES, P.C., AND/OR ITS AGENTS SHALL NOT BE LIABLE FOR USE OF THIS SURVEY BY ANY OTHER ENTITIES OR PERSONS FOR ANY PURPOSE BEYOND THE DATE & SCOPE.
3. THE SUBJECT PARCEL APPEARS TO LIE WITHIN FLOOD ZONE "AE11" AS DEPICTED ON FEMA'S FLOOD INSURANCE RATE MAP (FIRM), ENTITLED FAIRFIELD COUNTY, CONNECTICUT (ALL JURISDICTIONS), PANEL NO. 453, MAP NO.0900100453G EFFECTIVE JULY 8, 2013 1"=500'. ANY FEMA FLOODPLAIN AND/OR FLOODWAY INFORMATION BY CODESPOT & ASSOCIATES P.C. DOES NOT WARRANT THE ACCURACY OF THIS INFORMATION, AND MAKES NO REPRESENTATIONS UPON WHICH THE CLIENT SHOULD RELY IN CONNECTION WITH THE FLOOD ZONE OF THE SUBJECT PARCEL OR ANY FEMA FLOODPLAIN AND/OR FLOODWAY INFORMATION DEPICTED HEREON.
4. OFFSETS (IF SHOWN) ARE FOR SURVEY REFERENCES ONLY AND ARE NOT TO BE USED IN CONSTRUCTION OF ANY TYPE.
5. THE SURVEYED PROPERTY IS SUBJECT BUT NOT LIMITED TO THE FOLLOWING FACTS AS REVEALED BY THE HEREON REFERENCED INFORMATION. THE INFORMATION SHOWN HEREON DOES NOT CONSTITUTE A TITLE SEARCH BY THE SURVEYOR. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT, AND MAY NOT REFLECT ALL FACTS THAT MAY BE REVEALED BY A CURRENT AND ACCURATE TITLE COMMITMENT.
6. THE SUBJECT PARCEL IS LOCATED IN THE MA ZONE OF STRATFORD. ZONING INFORMATION SHOWN HEREON IS TAKEN FROM RECORD PLANS, DEEDS AND TOWN ZONING ORDINANCES AND DOES NOT REPRESENT AN OPINION BY THE SURVEYOR.
7. UNLESS SPECIFICALLY NOTED HEREON, STORM AND SANITARY SEWER INFORMATION, INCLUDING PIPE INVERT, PIPE MATERIAL, AND PIPE SIZE, WAS OBSERVED AND MEASURED AT FIELD LOCATED STRUCTURES (MANHOLES/CATCH BASINS, ETC.) CONDITIONS CAN VARY FROM THOSE ENCOUNTERED AT THE TIMES WHEN AND LOCATIONS WHERE DATA IS OBTAINED. DESPITE MEETING THE REQUIRED STANDARD OF CARE, THE SURVEYOR CANNOT, AND DOES NOT WARRANT THAT PIPE MATERIAL AND/OR PIPE SIZE THROUGHOUT THE PIPE RUN ARE THE SAME AS THOSE OBSERVED AT EACH STRUCTURE, OR THAT THE PIPE RUN IS STRAIGHT BETWEEN THE LOCATED STRUCTURES.
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ACCESS EASEMENT #1
(APPROX. LOCATION)
Vol. 3216, Pgs. 289 & 291
and Vol. 3304, Pg. 93 SLR



- NOTES:**
1. THIS MAP AND SURVEY HAS BEEN PREPARED IN ACCORDANCE WITH THE REGULATIONS OF CONNECTICUT STATE AGENCIES, SECTIONS 20-300B-1 THRU 20-300B-20, THE MINIMUM STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT ENDORSED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC.
 - PERIMETER SURVEY:
 - A) THE HORIZONTAL ACCURACY CONFORMS TO CLASS "0"
 - B) THE BOUNDARY DETERMINATION CATEGORY IS A "DEPENDENT RESURVEY"
 - C) THE PERIMETER SURVEY AS DEPICTED IS A "COMPILED PLAN"
 - THIS PLAN WAS COMPILED FROM OTHER MAPS, RECORD RESEARCH OR OTHER SOURCES OF INFORMATION. IT IS NOT TO BE CONSTRUED AS HAVING BEEN OBTAINED AS THE RESULT OF A FIELD SURVEY, AND IS SUBJECT TO SUCH CHANGE AS AN ACCURATE FIELD SURVEY MAY DISCLOSE.
 - THE TELECOMMUNICATIONS EASEMENT CONFORMS TO HORIZONTAL "A-2".
- TO MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

JOSEPH M. CODESPOTI
DATE: _____
THIS MAP IS NOT VALID WITHOUT A LAND SURVEYOR'S SEAL.

BY	
REVISIONS	

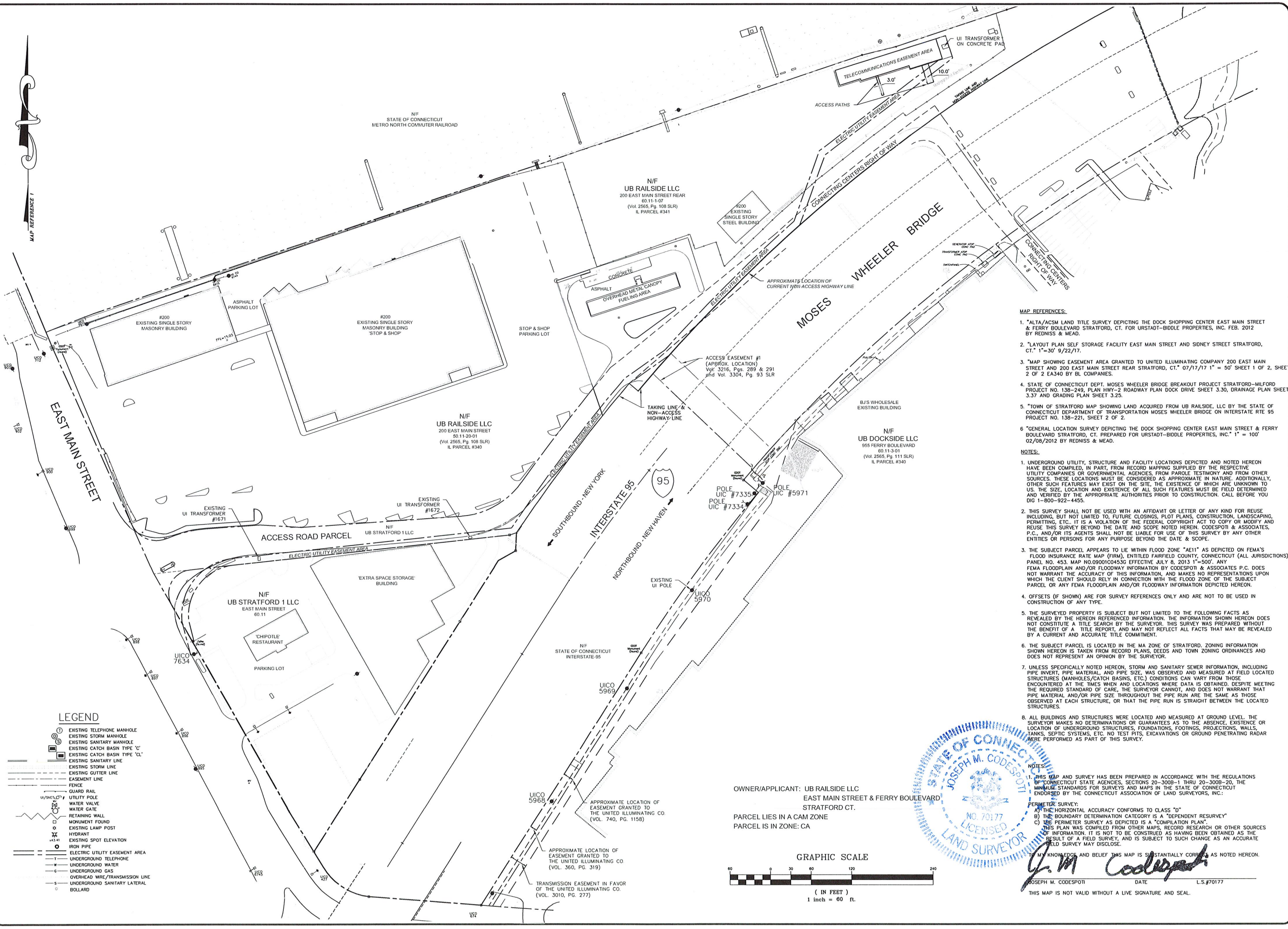
SITE PLANNING
 DESIGN & ARCHITECTURE
CODESPOTI & ASSOCIATES P.C.
 965 BOSTON STREET, SUITE 5
 ORANGE, CONNECTICUT 06477
 TEL. 203-799-1400
 FAX 203-799-0011

TELECOMMUNICATIONS EASEMENT MAP
DOCK SHOPPING CENTER
 200 EAST MAIN STREET
 FOR URSTADT BIDDLE PROPERTIES INC.
 STRATFORD, CONNECTICUT

SHEET 1
 TELECOMMUNICATIONS
 EASEMENT AREA

DWG #	CHECKED
04327	
CAD FILE	CAD VER
4373	C302012
DATE	
07/17/23	
SCALE	
1" = 30'	
JOB NO.	
4373	
SHEET	

S1
 SHEET 1 of 4



LEGEND

- ① EXISTING TELEPHONE MANHOLE
- ② EXISTING STORM MANHOLE
- ③ EXISTING SANITARY MANHOLE
- ④ EXISTING CATCH BASIN TYPE "C"
- ⑤ EXISTING CATCH BASIN TYPE "CL"
- ⑥ EXISTING SANITARY LINE
- ⑦ EXISTING STORM LINE
- ⑧ EXISTING GUTTER LINE
- ⑨ EASEMENT LINE
- ⑩ FENCE
- ⑪ GUARD RAIL
- ⑫ UTILITY POLE
- ⑬ WATER VALVE
- ⑭ WATER GATE
- ⑮ RETAINING WALL
- ⑯ MONUMENT FOUND
- ⑰ EXISTING LAMP POST
- ⑱ HYDRANT
- ⑲ EXISTING SPOT ELEVATION
- ⑳ IRON PIPE
- ㉑ ELECTRIC UTILITY EASEMENT AREA
- ㉒ UNDERGROUND TELEPHONE
- ㉓ UNDERGROUND WATER
- ㉔ UNDERGROUND GAS
- ㉕ OVERHEAD WIRE/TRANSMISSION LINE
- ㉖ UNDERGROUND SANITARY LATERAL
- ㉗ BOLLARD

MAP REFERENCES:

1. "ALTA/ACSM LAND TITLE SURVEY DEPICTING THE DOCK SHOPPING CENTER EAST MAIN STREET & FERRY BOULEVARD STRATFORD, CT. FOR URSTADT-BIDDLE PROPERTIES, INC. FEB. 2012 BY REDNISS & MEAD.
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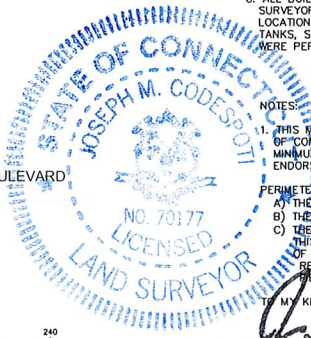
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 - B) THE BOUNDARY DETERMINATION CATEGORY IS A "DEPENDENT RESURVEY"
 - C) THE PERIMETER SURVEY AS DEPICTED IS A "COMPLETION PLAN"

TO MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

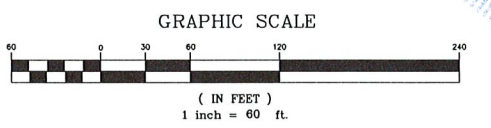
JOSEPH M. CODESPOTI DATE _____ L.S.#70177

THIS MAP IS NOT VALID WITHOUT A LIVE SIGNATURE AND SEAL.



OWNER/APPLICANT: UB RAILSIDE LLC
 EAST MAIN STREET & FERRY BOULEVARD
 STRATFORD CT.

PARCEL LIES IN A CAM ZONE
 PARCEL IS IN ZONE: CA



REVISIONS	BY

TELECOMMUNICATIONS EASEMENT MAP
DOCK SHOPPING CENTER
 200 EAST MAIN STREET
 STRATFORD, CONNECTICUT

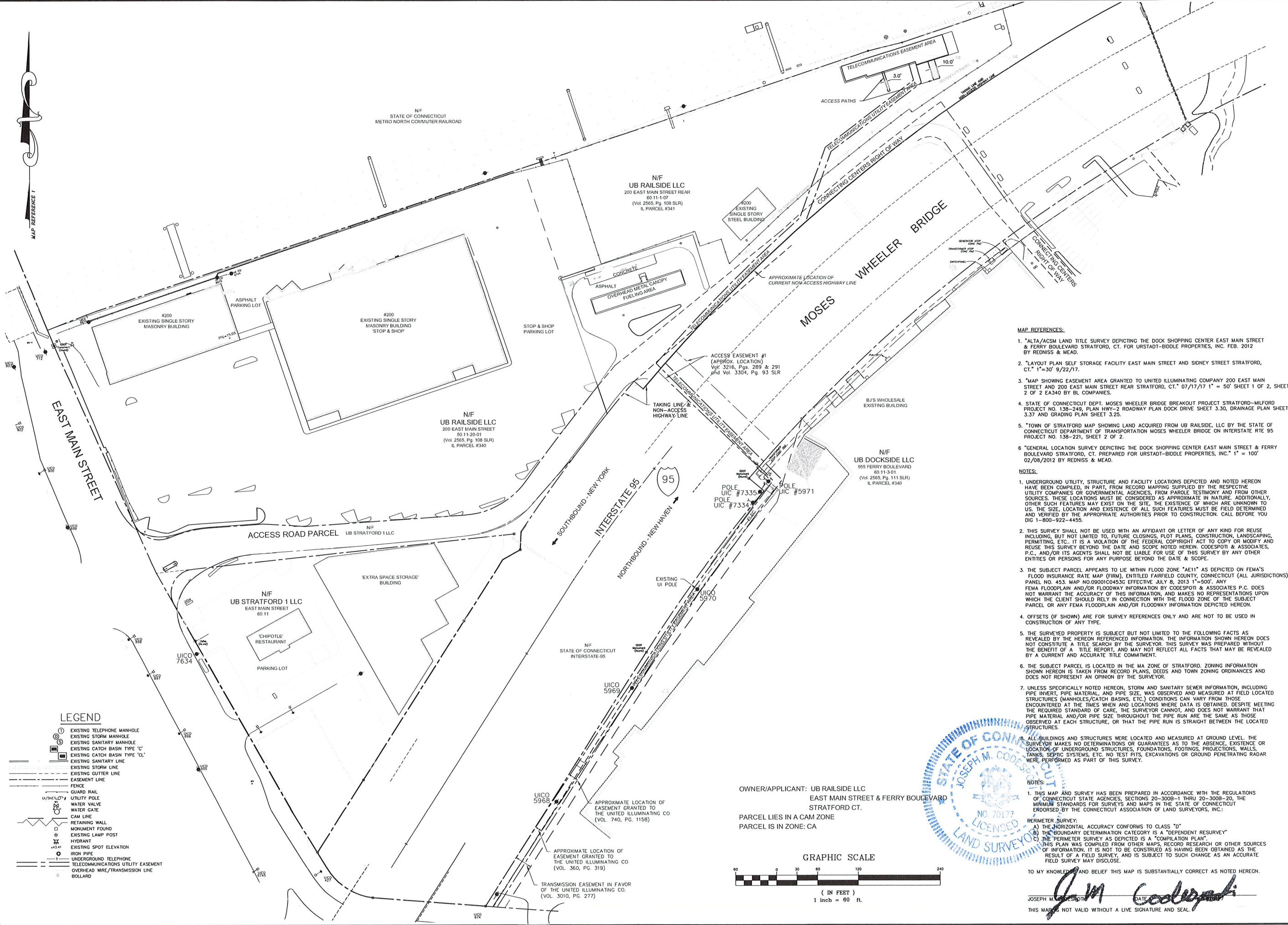
FOR URSTADT BIDDLE PROPERTIES INC.

CODESPOTI & ASSOCIATES P.C.
 100 BERNHARDT BLVD., SUITE 5
 GRANVILLE, CONNECTICUT 06437
 203-799-1400
 203-799-0011

SHEET 2
 ELECTRIC UTILITY
 EASEMENT AREA

DWG #	CHECKED
04327	
CAD FILE	CAD VER
4373	C302012
DATE	
07/17/23	
SCALE	
1" = 60'	
JOB NO.	
4373	
SHEET	
S2	
SHEET 2 of 4	

THIS MAP IS A COPYRIGHTED WORK OF CODESPOTI & ASSOCIATES, P.C., ALL RIGHTS RESERVED



- LEGEND**
- ① EXISTING TELEPHONE MANHOLE
 - ② EXISTING STORM MANHOLE
 - ③ EXISTING SANITARY MANHOLE
 - Ⓢ EXISTING CATCH BASIN TYPE 'C'
 - Ⓢ EXISTING CATCH BASIN TYPE 'CL'
 - EXISTING SANITARY LINE
 - EXISTING STORM LINE
 - EXISTING GUTTER LINE
 - EXISTING EASEMENT LINE
 - FENCE
 - GUARD RAIL
 - UTILITY POLE
 - WATER VALVE
 - WATER GATE
 - CAM LINE
 - RETAINING WALL
 - MONUMENT FOUND
 - EXISTING LAMP POST
 - HYDRANT
 - EXISTING SPOT ELEVATION
 - IRON PIPE
 - UNDERGROUND TELEPHONE
 - TELECOMMUNICATIONS UTILITY EASEMENT
 - OVERHEAD WIRE/TRANSMISSION LINE
 - BOLLARD

OWNER/APPLICANT: UB RAILSIDE LLC
 EAST MAIN STREET & FERRY BOULEVARD
 STRATFORD CT.

PARCEL LIES IN A CAM ZONE
 PARCEL IS IN ZONE: CA

GRAPHIC SCALE

(IN FEET)
 1 inch = 60 ft.



- MAP REFERENCES:**
- "ALTA/ACSM LAND TITLE SURVEY DEPICTING THE DOCK SHOPPING CENTER EAST MAIN STREET & FERRY BOULEVARD STRATFORD, CT. FOR URSTADT-BIDDLE PROPERTIES, INC. FEB. 2012 BY REDNISS & MEAD.
 - "LAYOUT PLAN SELF STORAGE FACILITY EAST MAIN STREET AND SIDNEY STREET STRATFORD, CT." 1"=30' 9/22/17.
 - "MAP SHOWING EASEMENT AREA GRANTED TO UNITED ILLUMINATING COMPANY 200 EAST MAIN STREET AND 200 EAST MAIN STREET REAR STRATFORD, CT." 07/17/17 1" = 50' SHEET 1 OF 2, SHEET 2 OF 2 EA340 BY BL COMPANIES.
 - STATE OF CONNECTICUT DEPT. MOSES WHEELER BRIDGE BREAKOUT PROJECT STRATFORD-MILFORD PROJECT NO. 138-249, PLAN HWY-2 ROADWAY PLAN DOCK DRIVE SHEET 3.30, DRAINAGE PLAN SHEET 3.37 AND GRADING PLAN SHEET 3.25.
 - "TOWN OF STRATFORD MAP SHOWING LAND ACQUIRED FROM UB RAILSIDE, LLC BY THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION MOSES WHEELER BRIDGE ON INTERSTATE RTE 95 PROJECT NO. 138-221, SHEET 2 OF 2.
 - "GENERAL LOCATION SURVEY DEPICTING THE DOCK SHOPPING CENTER EAST MAIN STREET & FERRY BOULEVARD STRATFORD, CT. PREPARED FOR URSTADT-BIDDLE PROPERTIES, INC." 1" = 100' 02/08/2012 BY REDNISS & MEAD.

- NOTES:**
- UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED AND NOTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING SUPPLIED BY THE RESPECTIVE UTILITY COMPANIES OR GOVERNMENTAL AGENCIES, FROM PAROLE TESTIMONY AND FROM OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED AS APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE, THE EXISTENCE OF WHICH ARE UNKNOWN TO US. THE SITE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.
 - THIS SURVEY SHALL NOT BE USED WITH AN AFFIDAVIT OR LETTER OF ANY KIND FOR REUSE INCLUDING, BUT NOT LIMITED TO, FUTURE CLOSINGS, PLOT PLANS, CONSTRUCTION, LANDSCAPING, PERMITTING, ETC. IT IS A VIOLATION OF THE FEDERAL COPYRIGHT ACT TO COPY OR MODIFY AND REUSE THIS SURVEY BEYOND THE DATE AND SCOPE NOTED HEREIN. CODESPOTI & ASSOCIATES, P.C. AND/OR ITS AGENTS SHALL NOT BE LIABLE FOR USE OF THIS SURVEY BY ANY OTHER ENTITIES OR PERSONS FOR ANY PURPOSE BEYOND THE DATE & SCOPE.
 - THE SUBJECT PARCEL APPEARS TO LIE WITHIN FLOOD ZONE "AE11" AS DEPICTED ON FEMA'S FLOOD INSURANCE RATE MAP (FIRM), ENTITLED FAIRFIELD COUNTY, CONNECTICUT (ALL JURISDICTIONS); PANEL NO. 453, MAP NO.0900100453G EFFECTIVE JULY 8, 2013 1"=500'. ANY FEMA FLOODPLAIN AND/OR FLOODWAY INFORMATION BY CODESPOTI & ASSOCIATES P.C. DOES NOT WARRANT THE ACCURACY OF THIS INFORMATION, AND MAKES NO REPRESENTATIONS UPON WHICH THE CLIENT SHOULD RELY IN CONNECTION WITH THE FLOOD ZONE OF THE SUBJECT PARCEL OR ANY FEMA FLOODPLAIN AND/OR FLOODWAY INFORMATION DEPICTED HEREON.
 - OFFSETS (IF SHOWN) ARE FOR SURVEY REFERENCES ONLY AND ARE NOT TO BE USED IN CONSTRUCTION OF ANY TYPE.
 - THE SURVEYED PROPERTY IS SUBJECT BUT NOT LIMITED TO THE FOLLOWING FACTS AS REVEALED BY THE HEREON REFERENCED INFORMATION. THE INFORMATION SHOWN HEREON DOES NOT CONSTITUTE A TITLE SEARCH BY THE SURVEYOR. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT, AND MAY NOT REFLECT ALL FACTS THAT MAY BE REVEALED BY A CURRENT AND ACCURATE TITLE COMMITMENT.
 - THE SUBJECT PARCEL IS LOCATED IN THE MA ZONE OF STRATFORD. ZONING INFORMATION SHOWN HEREON IS TAKEN FROM RECORD PLANS, DEEDS AND TOWN ZONING ORDINANCES AND DOES NOT REPRESENT AN OPINION BY THE SURVEYOR.
 - UNLESS SPECIFICALLY NOTED HEREON, STORM AND SANITARY SEWER INFORMATION, INCLUDING PIPE INVERT, PIPE MATERIAL, AND PIPE SIZE, WAS OBSERVED AND MEASURED AT FIELD LOCATED STRUCTURES (MANHOLES/CATCH BASINS, ETC.) CONDITIONS CAN VARY FROM THOSE ENCOUNTERED AT THE TIMES WHEN AND LOCATIONS WHERE DATA IS OBTAINED. DESPITE MEETING THE REQUIRED STANDARD OF CARE, THE SURVEYOR CANNOT, AND DOES NOT WARRANT THAT PIPE MATERIAL AND/OR PIPE SIZE THROUGHOUT THE PIPE RUN ARE THE SAME AS THOSE OBSERVED AT EACH STRUCTURE, OR THAT THE PIPE RUN IS STRAIGHT BETWEEN THE LOCATED STRUCTURES.
 - ALL BUILDINGS AND STRUCTURES WERE LOCATED AND MEASURED AT GROUND LEVEL. THE SURVEYOR MAKES NO DETERMINATIONS OR GUARANTEES AS TO THE ABSENCE, EXISTENCE OR LOCATION OF UNDERGROUND STRUCTURES, FOUNDATIONS, FOOTINGS, PROJECTIONS, WALLS, TANKS, SEPTIC SYSTEMS, ETC. NO TEST PITS, EXCAVATIONS OR GROUND PENETRATING RADAR WERE PERFORMED AS PART OF THIS SURVEY.

NOTES:

- THIS MAP AND SURVEY HAS BEEN PREPARED IN ACCORDANCE WITH THE REGULATIONS OF CONNECTICUT STATE AGENCIES, SECTIONS 20-300B-1 THRU 20-300B-21, THE MINIMUM STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT ENDORSED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC.

PERIMETER SURVEY:
 A) THE HORIZONTAL ACCURACY CONFORMS TO CLASS "D"
 B) THE BOUNDARY DETERMINATION CATEGORY IS A "DEPENDENT RESURVEY"
 C) THE PERIMETER SURVEY AS DEPICTED IS A "COMPILATION PLAN"
 THIS PLAN WAS COMPILED FROM OTHER MAPS, RECORD RESEARCH OR OTHER SOURCES OF INFORMATION. IT IS NOT TO BE CONSTRUED AS HAVING BEEN OBTAINED AS THE RESULT OF A FIELD SURVEY, AND IS SUBJECT TO SUCH CHANGE AS AN ACCURATE FIELD SURVEY MAY DISCLOSE.

TO MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

JOSEPH M. CODESPOTI
 DATE: 07/17/23
 THIS MAP IS NOT VALID WITHOUT A LIVE SIGNATURE AND SEAL.

BY	
REVISIONS	

SITE PLANNING
 LANDSCAPE ARCHITECTURE
 TELECOMMUNICATIONS SURVEYING

CODESPOTI & ASSOCIATES P.C.

263 BOSTON POST ROAD, SUITE 5
 STRATFORD, CT 06424
 TEL: 860-393-1400
 203-799-1400
 203-799-0011
 FAX

TELECOMMUNICATIONS EASEMENT MAP
DOCK SHOPPING CENTER
 200 EAST MAIN STREET
 FOR URSTADT BIDDLE PROPERTIES INC.
 CONNECTICUT
 STRATFORD.

SHEET 3
 TELECOMMUNICATIONS
 UTILITY EASEMENT
 AREA

DWG #	CHECKED
04327	
CAD FILE	CAD VER
4373	C302012
DATE	
07/17/23	
SCALE	
1" = 60'	
JOB NO.	
4373	
SHEET	
S3	
SHEET 3 of 4	

THIS MAP IS A COPYRIGHTED WORK OF CODESPOTI & ASSOCIATES, P.C., ALL RIGHTS RESERVED

D&M DOCUMENTS

NO	DATE	REVISION
0	08/17/23	FOR FILING: JRM
1	09/07/23	REV. FOR FILING: JRM

OWNER UB RAILSIDE LLC
ADDRESS: 200 EAST MAIN ST. REAR
STRATFORD, CT 06614

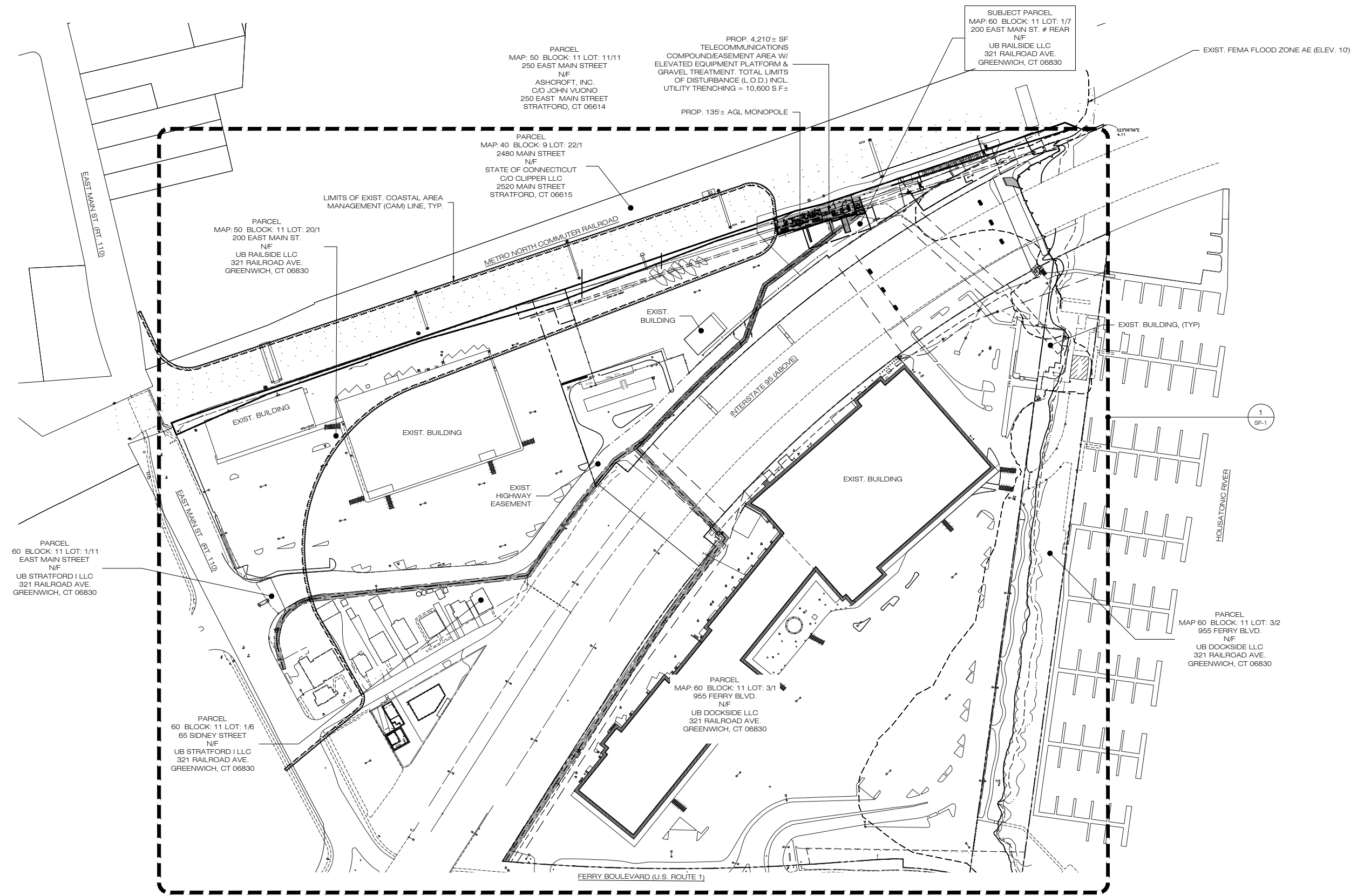


"DOCK SHOPPING CENTER"

SITE 200 EAST MAIN ST. REAR
ADDRESS: STRATFORD, CT 06614
APT FILING NUMBER: CT560100
DRAWN BY: JM/ELZ CHECKED BY: JRM
DATE: 08/XX/23

SHEET TITLE:
**ABUTTERS
MAP**

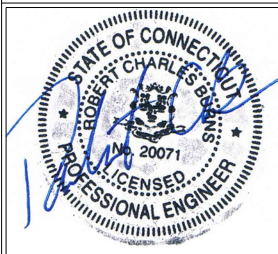
SHEET NUMBER:
R-1



D&M DOCUMENTS

NO	DATE	REVISION
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OWNER UB RAILSIDE LLC
ADDRESS: 200 EAST MAIN ST. REAR STRATFORD, CT 06614

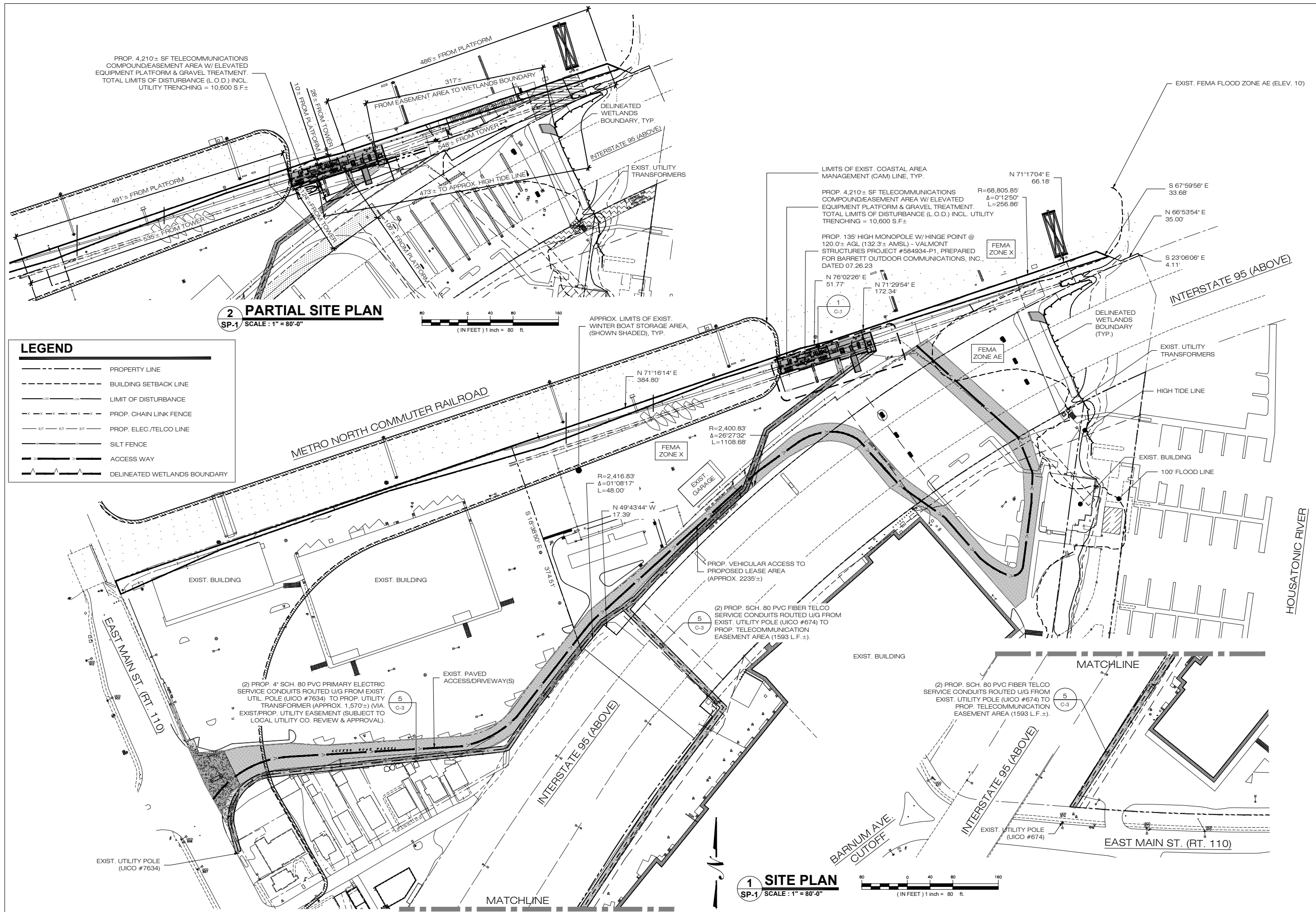


"DOCK SHOPPING CENTER"

SITE 200 EAST MAIN ST. REAR
ADDRESS: STRATFORD, CT 06614
APT FILING NUMBER: CT560100
DRAWN BY: JM/ELZ **CHECKED BY:** JRM
DATE: 08/XX/23

SHEET TITLE:
SITE PLAN & PARTIAL SITE PLAN

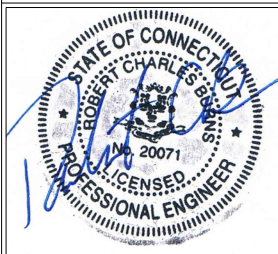
SHEET NUMBER:
SP-1



D&M DOCUMENTS

NO	DATE	REVISION
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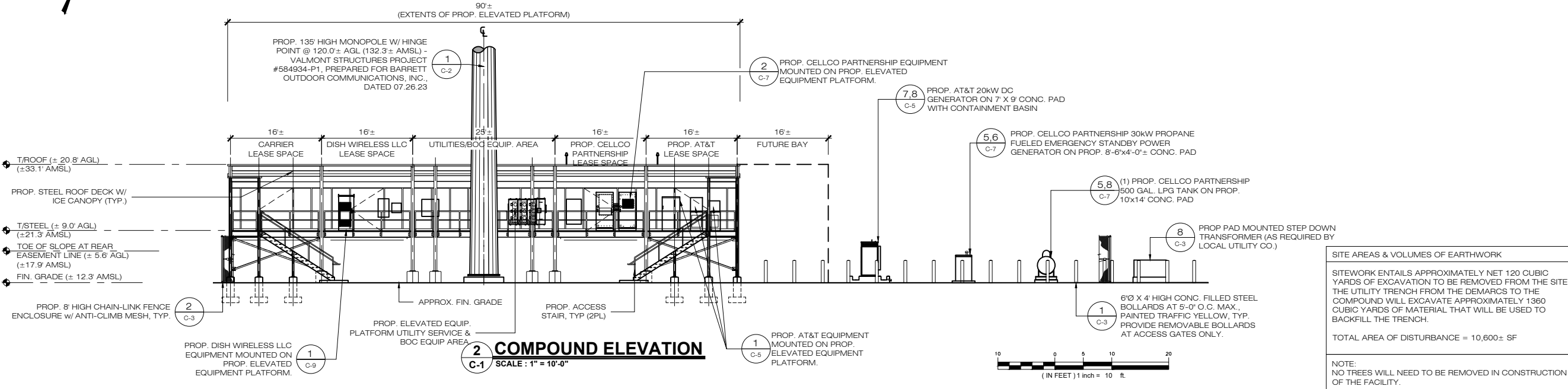
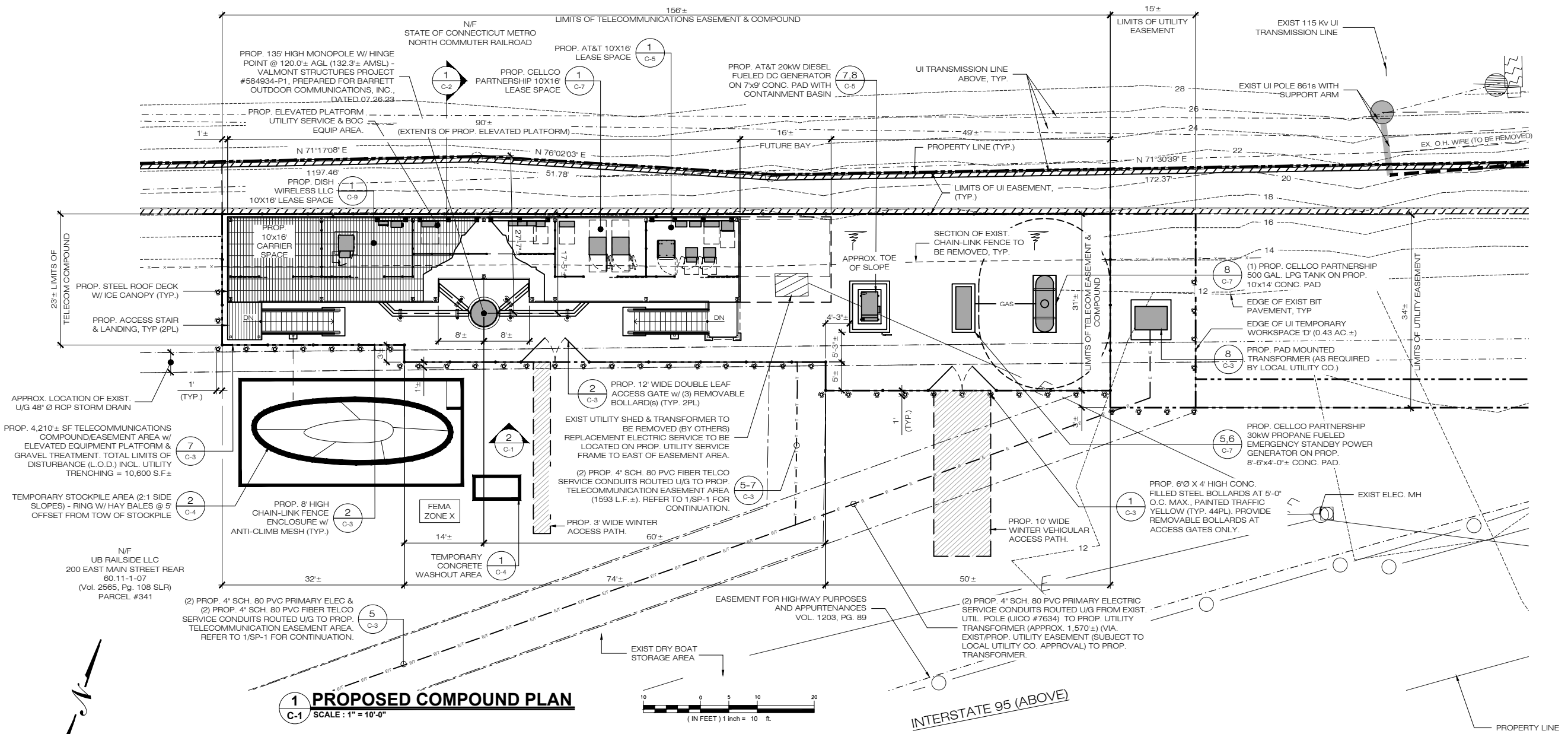
OWNER UB RAILSIDE LLC
ADDRESS: 200 EAST MAIN ST. REAR
STRATFORD, CT 06614



"DOCK SHOPPING CENTER"
SITE 200 EAST MAIN ST. REAR
ADDRESS: STRATFORD, CT 06614
APT FILING NUMBER: CT560100
DRAWN BY: JMWELZ **CHECKED BY:** JRM
DATE: 08/XX/23

SHEET TITLE:
PROPOSED COMPOUND PLAN & ELEVATION

SHEET NUMBER:
C-1

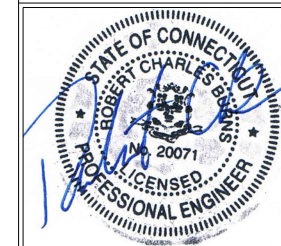


SITE AREAS & VOLUMES OF EARTHWORK
SITING WORK ENTAILS APPROXIMATELY NET 120 CUBIC YARDS OF EXCAVATION TO BE REMOVED FROM THE SITE. THE UTILITY TRENCH FROM THE DEMARCS TO THE COMPOUND WILL EXCAVATE APPROXIMATELY 1360 CUBIC YARDS OF MATERIAL THAT WILL BE USED TO BACKFILL THE TRENCH.
TOTAL AREA OF DISTURBANCE = 10,600± SF
NOTE: NO TREES WILL NEED TO BE REMOVED IN CONSTRUCTION OF THE FACILITY.

D&M DOCUMENTS

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STRATFORD, CT 06614



"DOCK SHOPPING CENTER"

SITE 200 EAST MAIN ST. REAR
ADDRESS: STRATFORD, CT 06614

APT FILING NUMBER: CT560100

DRAWN BY: JM/ELZ CHECKED BY: JRM

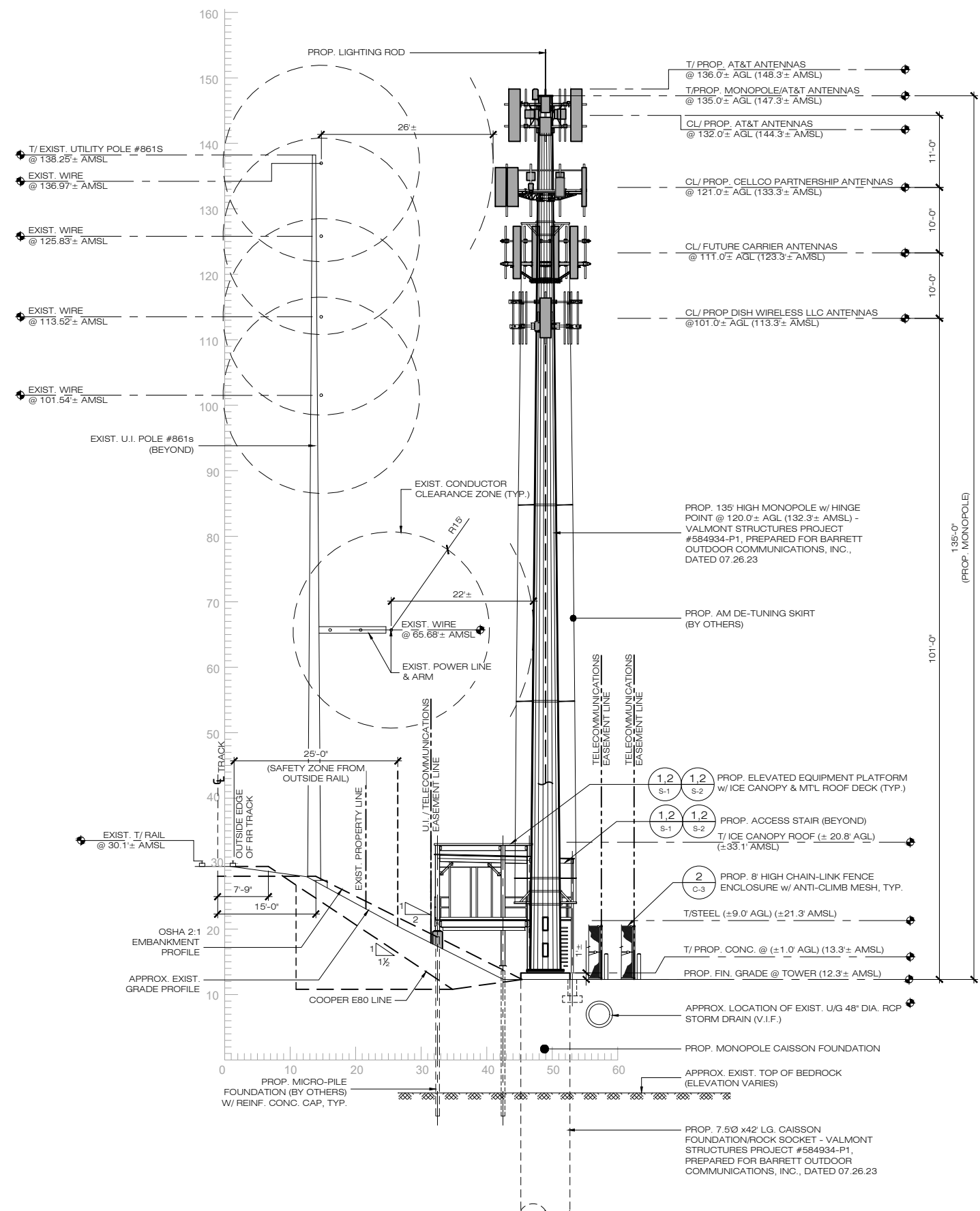
DATE: 08/XX/23

SHEET TITLE:

COMPOUND SECTION

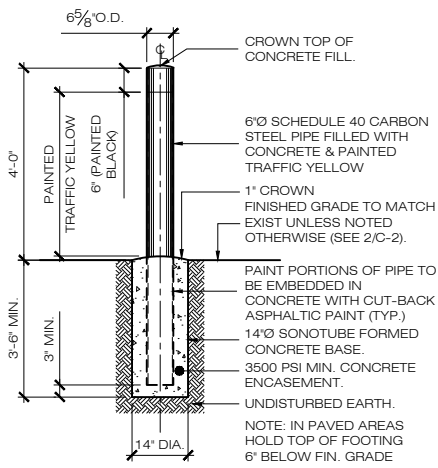
SHEET NUMBER:

C-2

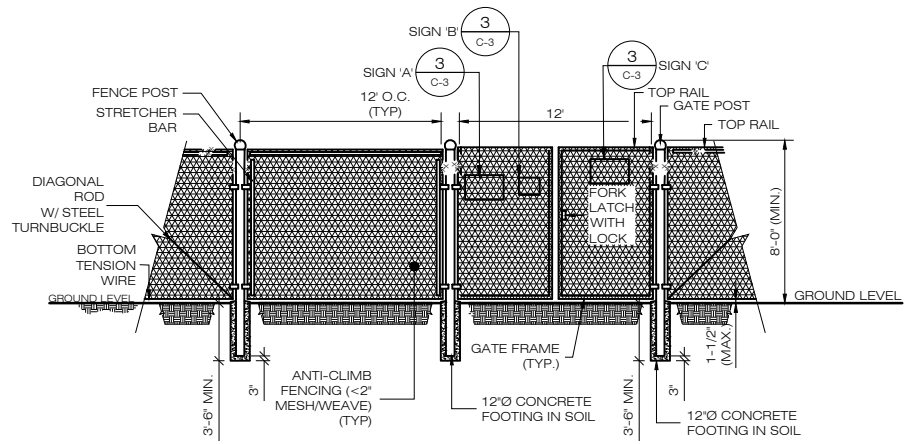


SECTION W/ METRO NORTH SAFETY PROFILE THRU PROP. TELECOMMUNICATIONS COMPOUND
SCALE: 1" = 10'-0"

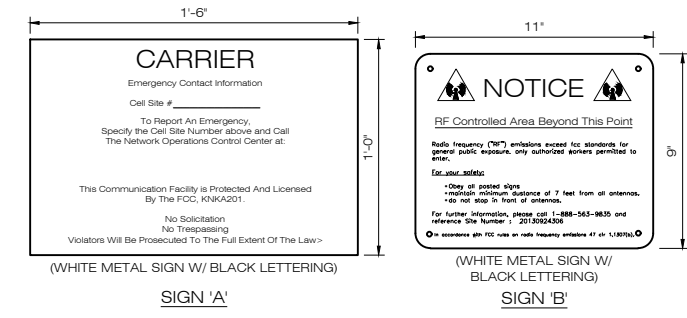




1 BOLLARD DETAIL
C-3 SCALE: N.T.S.

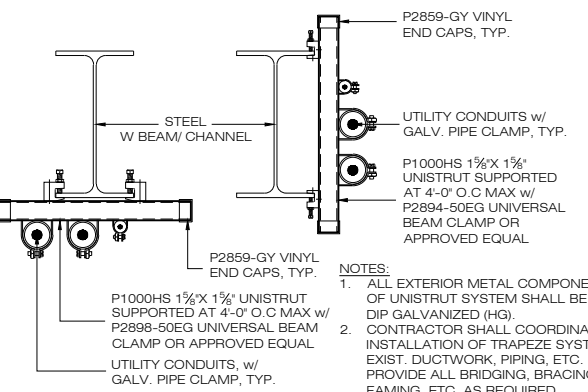


2 CHAIN-LINK FENCING & FENCE GATE DETAIL
C-3 SCALE: N.T.S.

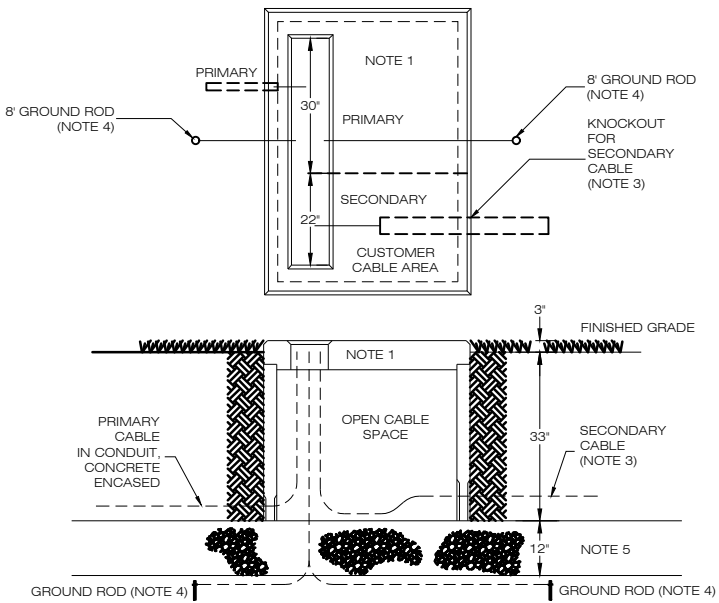
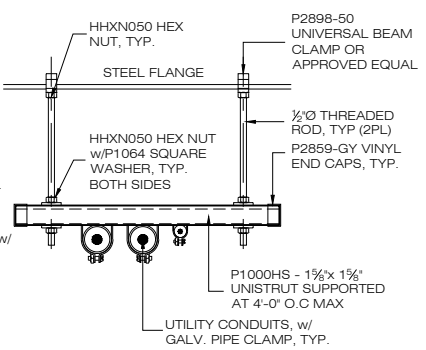


3 TYPICAL SIGNAGE
C-3 SCALE: N.T.S.

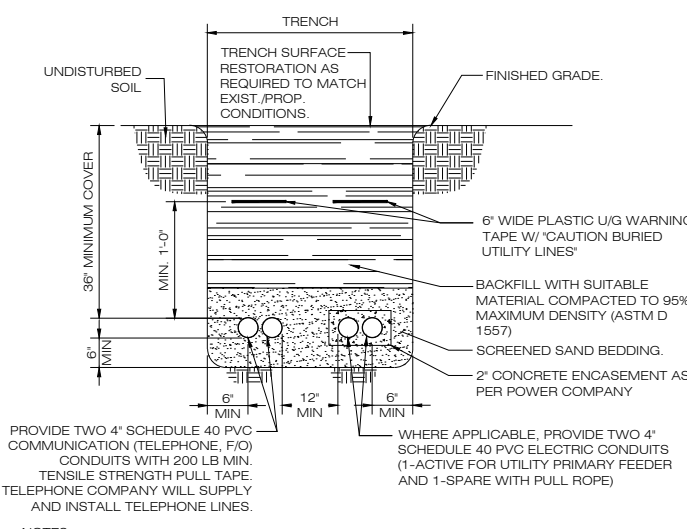
- STRUT ATTACHMENT NOTES:**
- EXIST. CMU WALL (HOLLOW & GROUT-FILLED)**
FASTEN TO CMU w/ 3/8" DIA. SS HILTI HLC-HX 3/8"x1-7/8" HLC SLEEVE ANCHORS (MIN. 2 PER UNI-STRUT)
- MIN. EMBED: 1 1/2"
- MIN. SPACING: 8"
- MIN. EDGE DISTANCE: 12"
 - CONCRETE WALL/CEILING**
UNI-STRUT ANCHORED TO WALL/CEILING w/ 1/2" DIA. SS HAS-E ROD (MIN 2/UNI-STRUT) W/ HILTI HY200 EPOXY ADHESIVE.
- MIN. EMBED: 2 1/4"
- MIN. SPACING: 8"
- MIN. EDGE DISTANCE: 8"
 - BRICK MASONRY WALL/CEILING**
UNI-STRUT ANCHORED TO WALL w/ 1/2" DIA. SS HAS-E THREADED ROD W/ HILTI HY270 EPOXY ADHESIVE (MIN. 2 PER BRACKET) w/ LOCK WASHERS AND NUTS.
- MIN. 3 3/8" EMBED.
- MIN. SPACING: 16" (VERT & HORZ.)
- MIN. EDGE DISTANCE: 16"
 - WD. JOIST CEILING**
UNI-STRUT ANCHORED TO U/S OF EXIST. WD. JOIST @ 8'-0" O.C. MAX W/ #10X 1 1/2" LG. SIMPSON SD CONNECTOR SCREWS W/ FLAT WASHERS (MODEL NO. SD11012), TYP. 2 PER STRUT.
1. USE STAINLESS STEEL ANCHORS INTO CONCRETE.
2. USE CARBON STEEL ANCHORS INTO BRICK OR MASONRY.
3. INSTALL ALL ANCHORS PER MANUFACTURERS RECOMMENDATIONS.



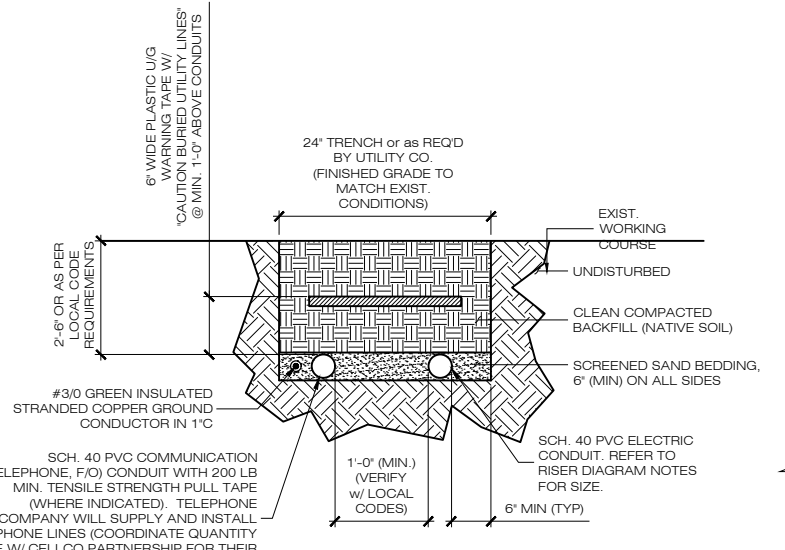
4 UTILITY CONDUIT SUPPORT DETAILS
C-3 SCALE: N.T.S.



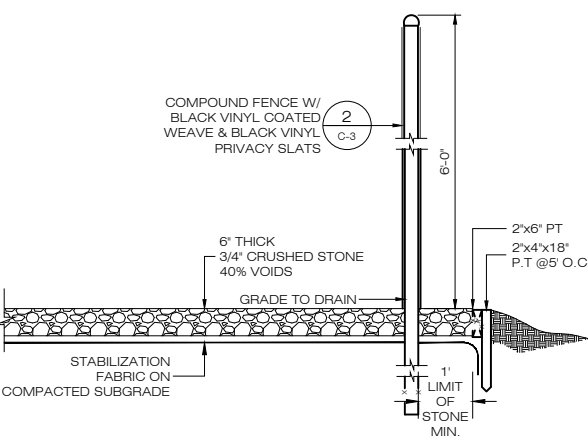
- NOTES**
- 75 - 300KVA - INSTALL 76"x54"x36" PAD AS PER SPC P-013 AND P-014.
500-2500KVA - INSTALL 76"x70"x36" PAD AS PER SPC P-015 AND P-016.
(COORDINATE REQUIRED PAD SIZE FOR PROJECT WITH UTILITY COMPANY)
 - PRIMARY CABLE: BY UTILITY COMPANY
 - SECONDARY CABLE: LEAVE SLACK FOR FUTURE RECONNECTING TO TRANSFORMERS WITH HIGHER SECONDARY TERMINALS. CUSTOMER CABLE(S) SHALL ENTER FROM THE REAR AND SHALL BE CONFINED TO THE AREA DEFINED AS THE "CUSTOMER CABLE AREA".
 - GALVANIZED GROUND RODS: INSTALL IN TRENCH AND CONNECT A #2 COPPER CONDUCTOR FROM ROD THROUGH PAD OPENING AND EXTENDING 5'-0" ABOVE PAD. GROUND RODS SHALL BE A MINIMUM OF 8' FROM EACH OTHER.
 - THE EXCAVATION FOR THE PAD SHALL BE CARRIED TO A DEPTH OF 12 INCHES BELOW THE BOTTOM OF THE PAD WALLS. THE BACKFILL UNDER THE PAD WALLS SHALL BE A CLEAN GRAVEL, FREE OF FOREIGN MATTER AND CONSTRUCTION DEBRIS, AND IN ACCORDANCE WITH CONNECTICUT DOT SPEC M.02.06 GRADING "A"; BACKFILL SHALL BE PLACED IN 6 INCH LAYERS AND COMPACTED WITH MECHANICAL TAMPERS TO NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY STANDARD COMPACTION TESTS, AASHTO T180 OR ASTM D698.
 - ALL WORK SHALL CONFORM TO EVERSOURCE TRANSFORMER PAD INSTALLATION REQUIREMENTS. REFER TO EVERSOURCE CONSTRUCTION STANDARD DTR 58.301 FOR ADDITIONAL INFORMATION.



5 PRIMARY UTILITY TRENCH
C-3 SCALE: N.T.S.



6 SECONDARY UTILITY TRENCH DETAIL
C-3 SCALE: N.T.S.



7 COMPOUND DETAIL
C-3 SCALE: N.T.S.

8 UTILITY PAD TRANSFORMER DETAIL
C-3 SCALE: N.T.S.

ALL-POINTS TECHNOLOGY CORPORATION
567 VAUXHALL STREET EXTENSION - SUITE 311
WATERFORD, CT 06385 PHONE: (860)-663-1697
WWW.ALLPOINTSTECH.COM FAX: (860)-663-0935

BARRETT OUTDOOR COMMUNICATIONS, INC.
381 HIGHLAND STREET
WEST HAVEN, CT 06516
OFFICE: (203) 932-4601

D&M DOCUMENTS

NO	DATE	REVISION
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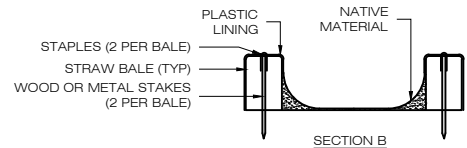
OWNER UB RAILSIDE LLC
ADDRESS: 200 EAST MAIN ST. REAR STRATFORD, CT 06614



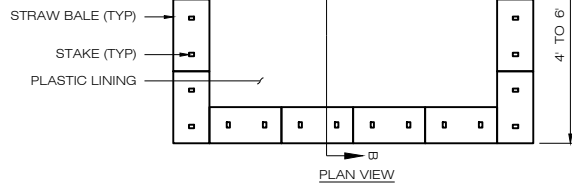
"DOCK SHOPPING CENTER"
SITE 200 EAST MAIN ST. REAR
ADDRESS: STRATFORD, CT 06614
APT FILING NUMBER: CT560100
DRAWN BY: JMWELZ **CHECKED BY:** JRM
DATE: 08/XX/23

SHEET TITLE:
SITE DETAILS

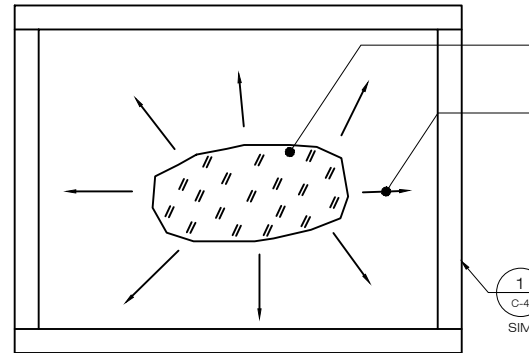
SHEET NUMBER:
C-3



- NOTES:
- PERFORM WASHOUT OF CONCRETE TRUCKS OFFSITE OR IN DESIGNATED CONCRETE WASHOUT AREA ONLY.
 - DO NOT WASH OUT CONCRETE TRUCKS ONTO THE GROUND, OR INTO STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS.
 - DO NOT ALLOW EXCESS CONCRETE TO BE DUMPED ONSITE, EXCEPT IN DESIGNATED CONCRETE WASHOUT AREA.

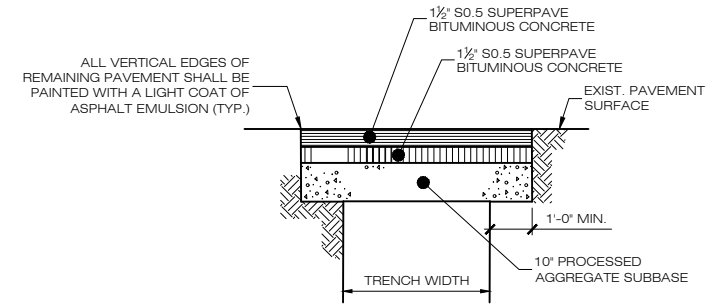


1 CONCRETE WASHOUT DETAIL
C-4 SCALE : N.T.S.



- NOTES:
- ALL EXISTING EXCAVATED MATERIAL THAT IS NOT TO BE REUSED IN THE WORK IS TO BE IMMEDIATELY REMOVED FROM THE SITE AND PROPERLY DISPOSED OF.
 - SOIL/AGGREGATE STOCKPILE SITES TO BE WHERE SHOWN ON THE DRAWINGS.
 - RESTORE STOCKPILE SITES TO PRE-EXISTING PROJECT CONDITION AND RESEED AS REQUIRED.
 - STOCKPILE HEIGHTS MUST NOT EXCEED 35'. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.
 - ANY SOIL IN STOCKPILES IN EXCESS OF SEVEN (7) DAYS SHALL BE SEEDED AND MULCHED OR COVERED.

2 TEMPORARY STOCKPILE DETAIL
C-4 SCALE : N.T.S.

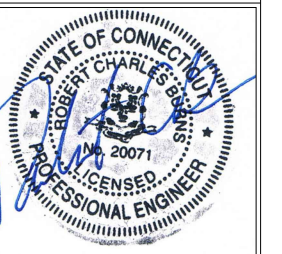


- NOTES:
- CONTRACTOR TO MATCH EXIST. PAVEMENT THICKNESS, IF GREATER THAN INDICATED ABOVE.
 - REFER TO SECTION M.04 OF CTDOT FORM 818 FOR BITUMINOUS CONCRETE MATERIALS.

3 BITUMINOUS PAVEMENT REPAIR DETAIL OVER TRENCH
C-4 SCALE : N.T.S.

D&M DOCUMENTS		
NO	DATE	REVISION
0	08/17/23	FOR FILING: JRM
1	09/07/23	REV. FOR FILING: JRM

OWNER UB RAILSIDE LLC
ADDRESS: 200 EAST MAIN ST. REAR
STRATFORD, CT 06614

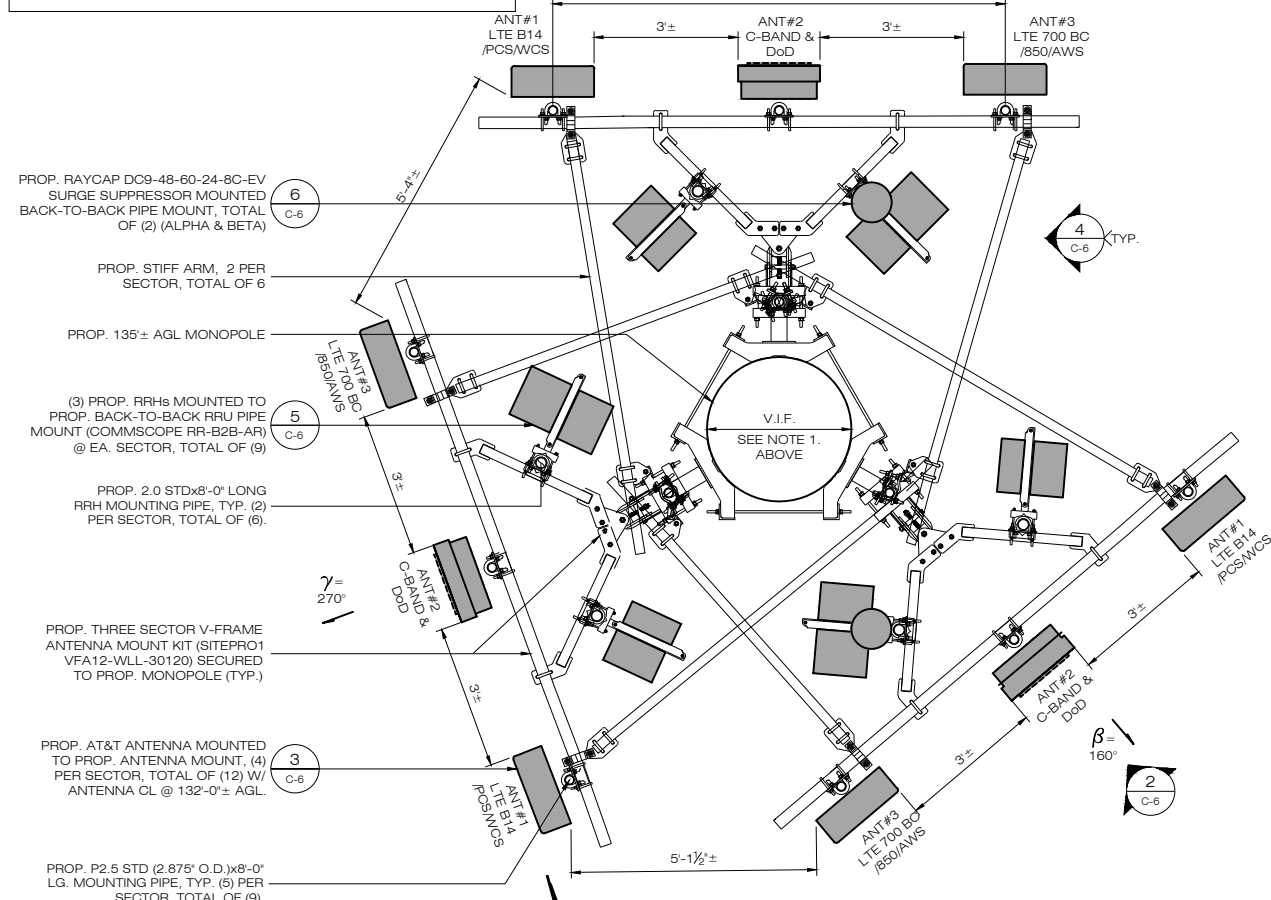


"DOCK SHOPPING CENTER"
SITE 200 EAST MAIN ST. REAR
ADDRESS: STRATFORD, CT 06614
APT FILING NUMBER: CT560100
DRAWN BY: JM/ELZ CHECKED BY: JRM
DATE: 08/XX/23

SHEET TITLE:
SITE DETAILS

SHEET NUMBER:
C-4

ANTENNA MOUNT NOTE:
 1. CONTRACTOR SHALL VERIFY DIAMETER OF MONOPOLE PRIOR TO ORDERING MOUNT AND RING MOUNT. CONTRACTOR SHALL VERIFY PART NUMBERS WITH MANUFACTURER PRIOR TO ORDERING.



1 ANTENNA PLAN
 C-6 SCALE: 1/2" = 1'-0"

PROP. RAYCAP DC9-48-60-24-8C-EV SURGE SUPPRESSOR MOUNTED BACK-TO-BACK PIPE MOUNT, TOTAL OF (2) (ALPHA & BETA) (6) C-6

(3) PROP. RRHs MOUNTED TO PROP. BACK-TO-BACK RRU PIPE MOUNT (COMMSCOPE RR-B2B-AR) @ EA SECTOR, TOTAL OF (9) (5) C-6

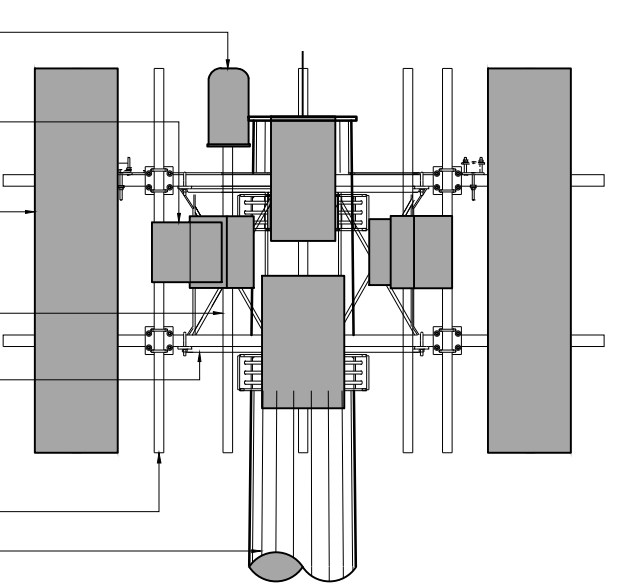
PROP. AT&T ANTENNA MOUNTED TO PROP. ANTENNA MOUNT, (4) PER SECTOR, TOTAL OF (12) W/ ANTENNA CL @ 132'-0"± AGL. (3) C-6

PROP. 2.0 STDx8'-0" LONG RRH MOUNTING PIPE, TYP. (2) PER SECTOR, TOTAL OF (6) (5) C-6

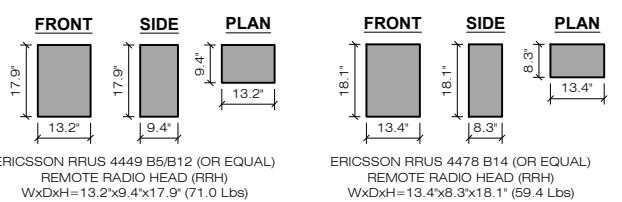
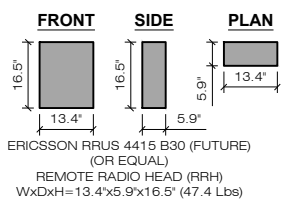
PROP. THREE SECTOR V-FRAME ANTENNA MOUNT KIT (SITEPRO1 VFA12-WLL-30120) SECURED TO PROP. MONOPOLE (TYP.) (4) C-6

PROP. P2.5 STD (2.875" O.D.)x8'-0" LG. MOUNTING PIPE, TYP. (5) PER SECTOR, TOTAL OF (9) (3) C-6

PROP. 135°± AGL MONOPOLE (2) C-6

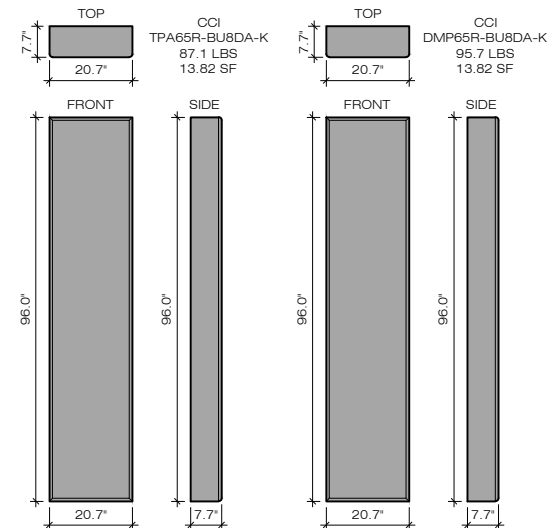


2 ANTENNA MOUNTING DETAIL
 C-6 SCALE: 1/2" = 1'-0"

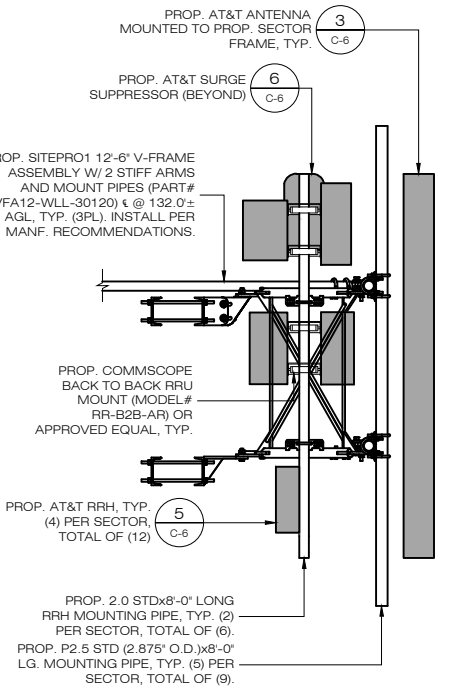


NOTES:
 1. DIMENSIONS SUBJECT TO CHANGE BASED UPON AVAILABILITY AT TIME OF CONSTRUCTION.
 2. REFER TO MANUFACTURER RECOMMENDATION FOR ALL RRH CLEARANCES.

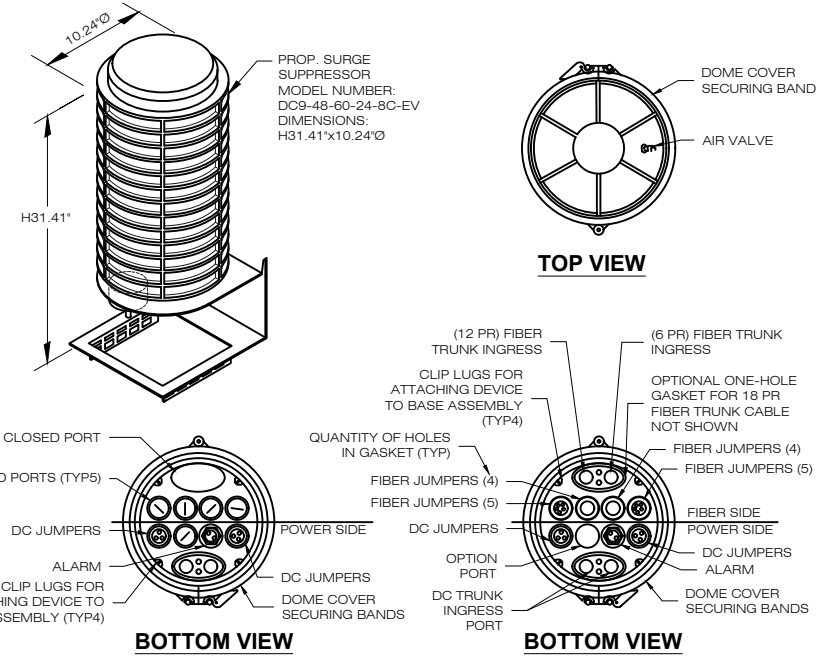
5 RRH EQUIPMENT
 C-6 SCALE: 1/2" = 1'-0"



3 ANTENNA DETAIL
 C-6 SCALE: 1/2" = 1'-0"



4 RRU MOUNTING DETAIL
 C-6 SCALE: 1/2" = 1'-0"



RAYCAP DC9-48-60-24-8C-EV (SURGE SUPPRESSOR)
 HxDia. = 31.41x10.24" (26.2 Lbs)
 (OR EQUAL)
 COLOR: GRAY

NOTES:
 1. MOUNT PER MANUFACTURER'S SPECIFICATIONS.
 2. REMOVE CABLE SEALING GLAND AND INSTALL M32x1.5 METRIC TO 1" NPT ADAPTER (COOPER CROUSE-HINES P/N CAP 740 994 OR EQUIVALENT MFR) WHEN CONNECTING CONDUIT TO OVP

6 TYPICAL SURGE SUPPRESSOR
 C-6 SCALE: N.T.S.

D&M DOCUMENTS

NO	DATE	REVISION
0	08/17/23	FOR FILING: JRM
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OWNER: UB RAILSIDE LLC
 ADDRESS: 200 EAST MAIN ST. REAR STRATFORD, CT 06614



"DOCK SHOPPING CENTER"
 SITE: 200 EAST MAIN ST. REAR STRATFORD, CT 06614
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 DATE: 08/XX/23

SHEET TITLE:
AT&T ANTENNA PLAN & DETAILS

SHEET NUMBER:
C-6

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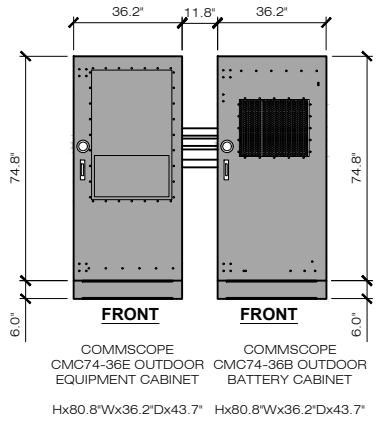
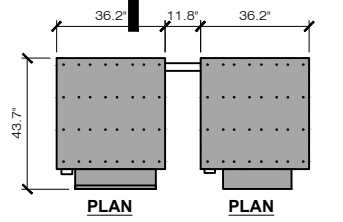
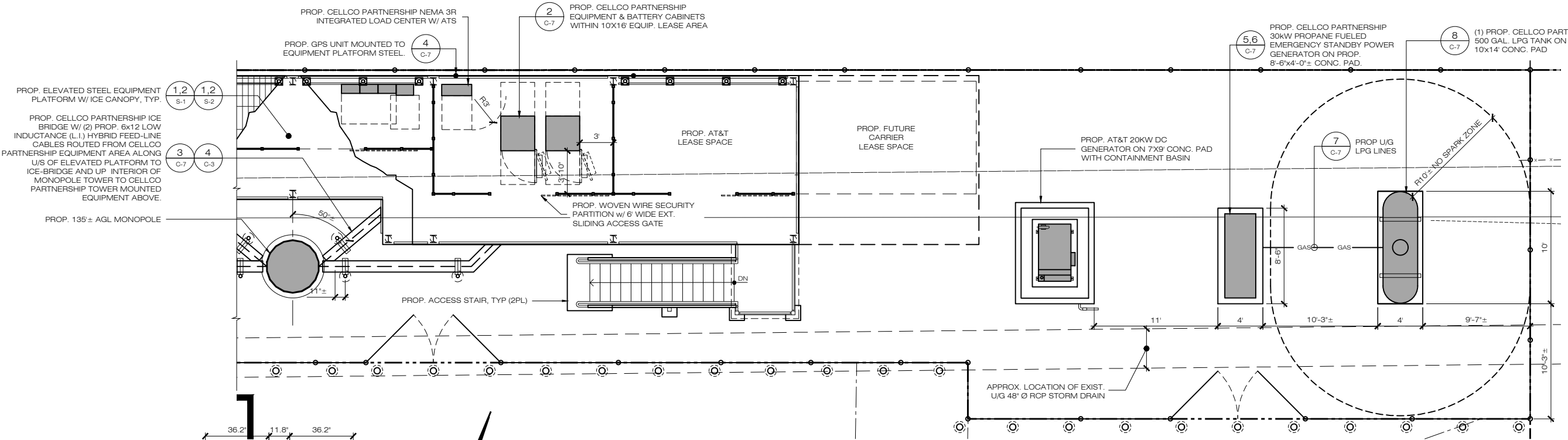
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STRATFORD, CT 06614



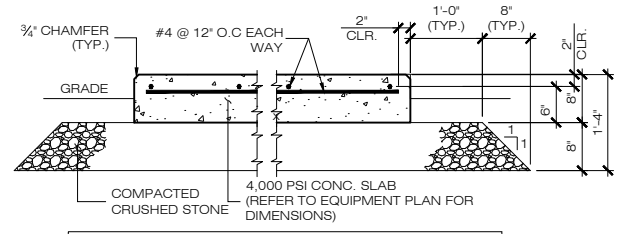
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CELLCO PARTNERSHIP EQUIPMENT PLAN & DETAILS

SHEET NUMBER:
C-7

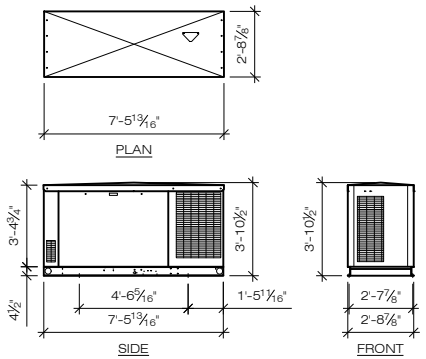


2 OUTDOOR EQUIPMENT CABINETS
C-7 SCALE: 3/8" = 1'-0"



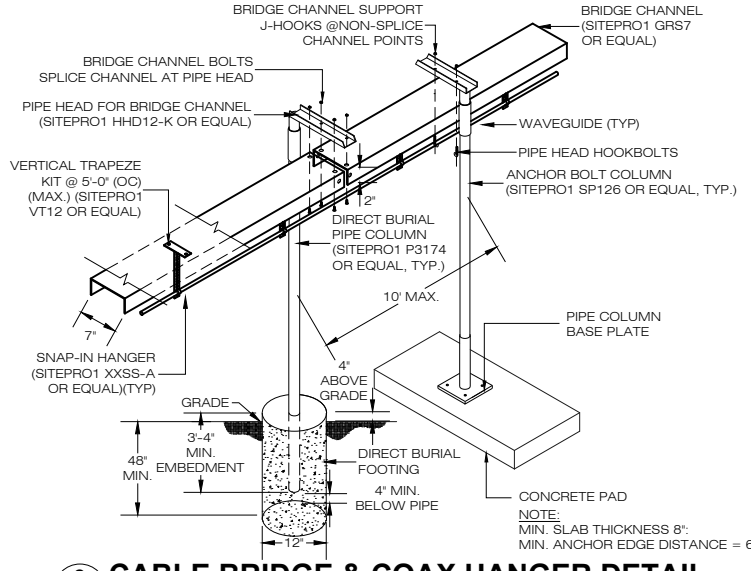
NOTES:
1. CONTRACTOR SHALL COORDINATE ALL SLAB DIMENSIONS, CONDUIT STUB-UP LOCATIONS & HOLD DOWN REQUIREMENTS W/ EQUIPMENT MANUFACTURER.
2. CONCRETE SLAB DESIGN IS BASED ON A MINIMUM ALLOWABLE SOIL BEARING PRESSURE (q_a) OF 3,000 PSF

5 CONCRETE PAD DETAIL
C-7 SCALE: N.T.S.

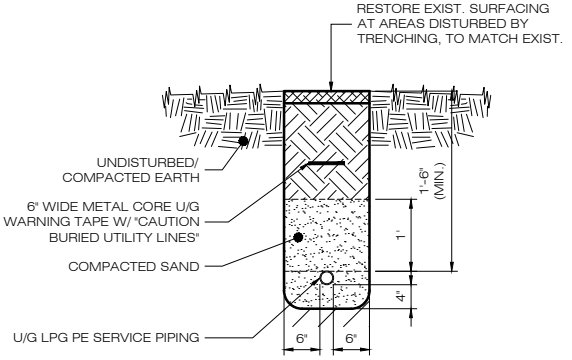


KOHLER CO. POWER SYSTEMS.
30kW PROPANE-POWERED GENERATOR
MODEL #30CCL, 120/240V, 1Ø, 60Hz

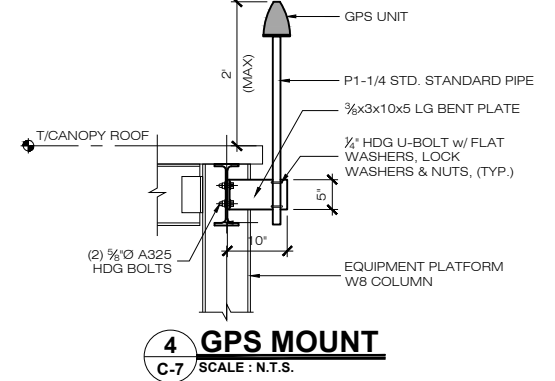
6 GENERATOR SCHEMATICS
C-7 SCALE: 3/4" = 1'-0"



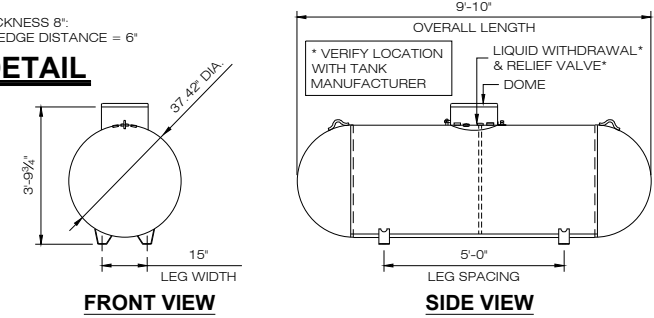
3 CABLE BRIDGE & COAX HANGER DETAIL
C-7 SCALE: N.T.S.



7 PROPANE GAS TRENCH
C-7 SCALE: N.T.S.



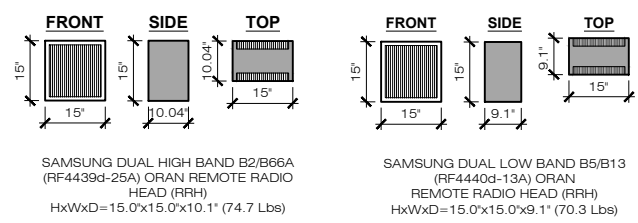
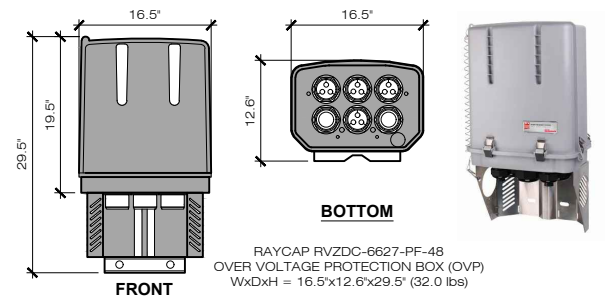
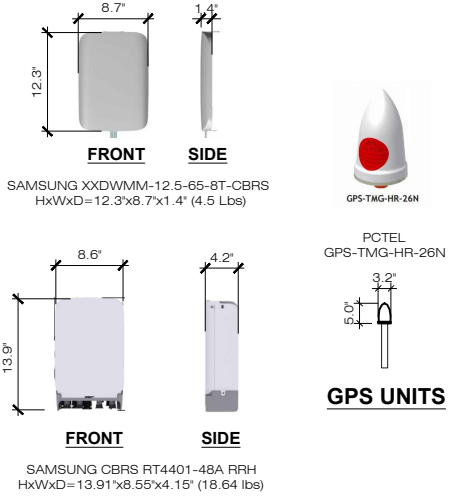
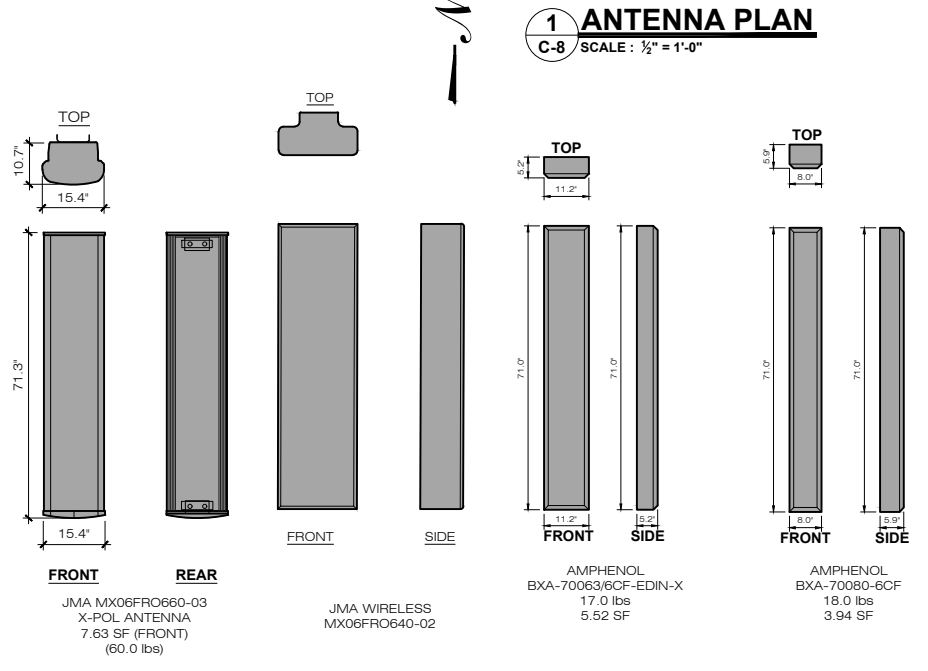
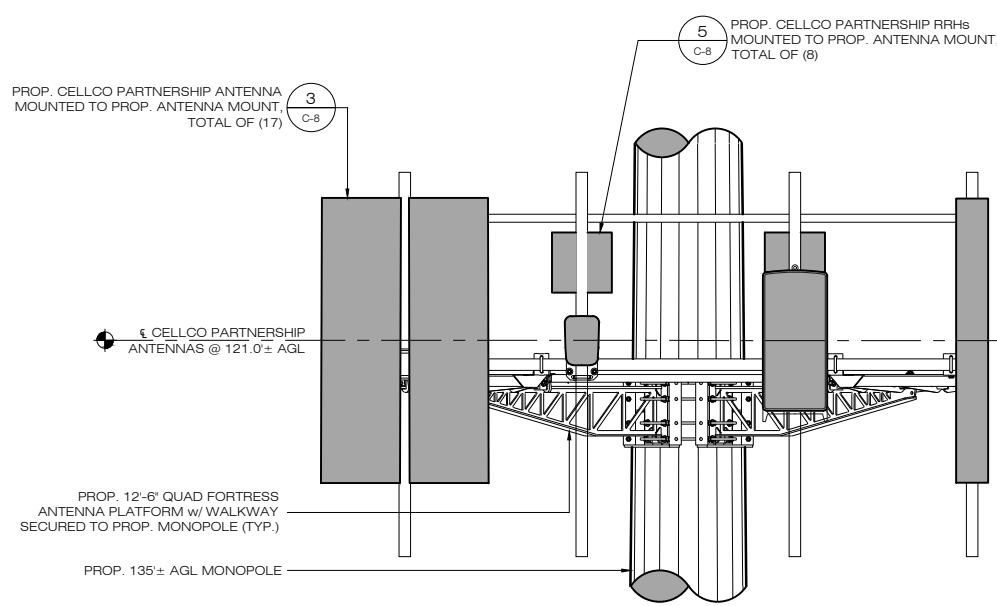
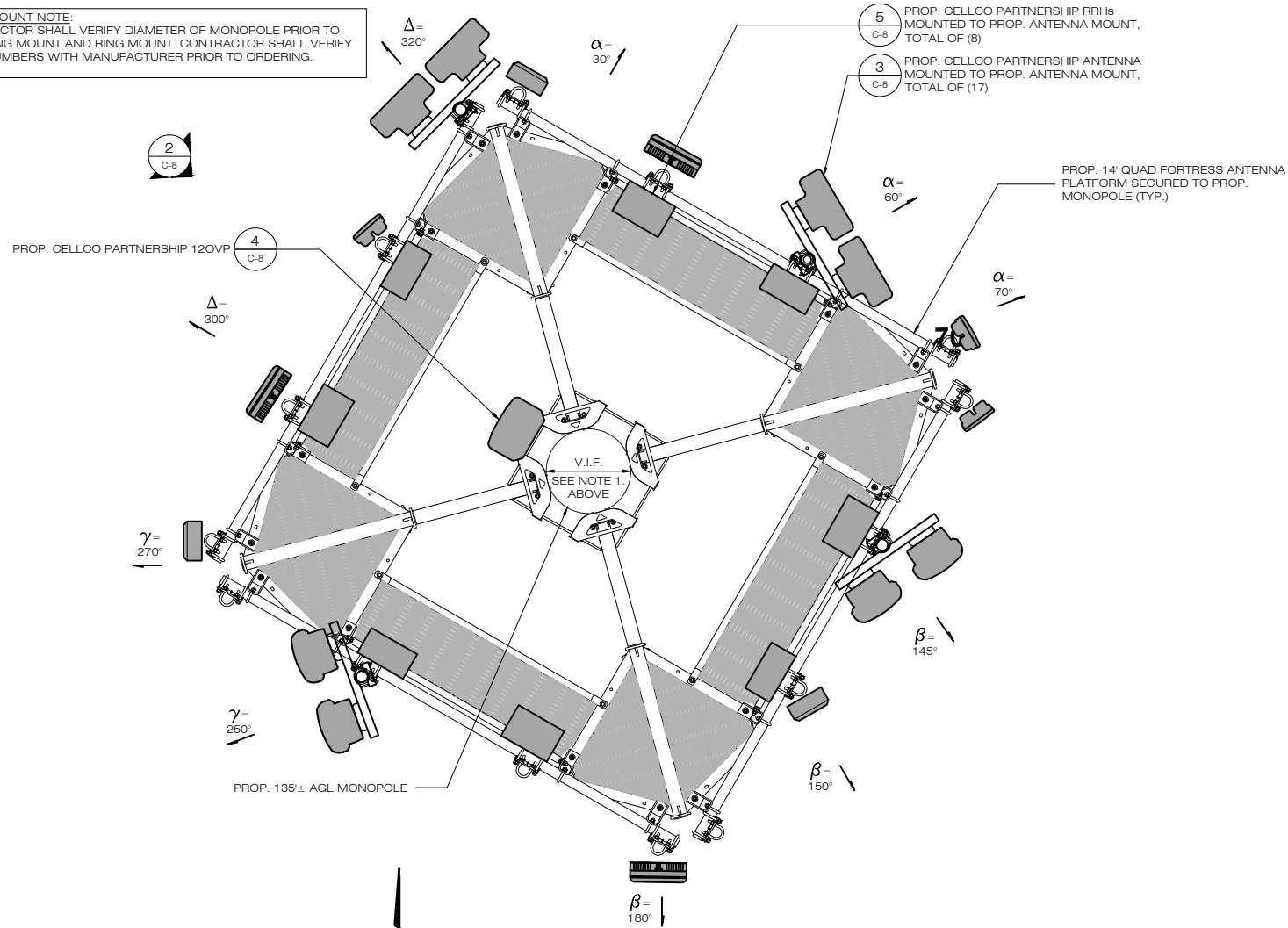
4 GPS MOUNT
C-7 SCALE: N.T.S.



1. 500 USWG AMSE VIII, DIV. 1 ABOVE GROUND LPG TANK
• WEIGHT (EMPTY) = 871 LBS
NOTE: PROVIDE TANK MANUFACTURER SHOP DRAWING FOR REVIEW BY ENGINEER OF RECORD PRIOR TO PURCHASE
NOTES:
1. PROPANE TANKS SHALL BE REFILLED FROM HOSE PULLED FROM A REFILLING VEHICLE PARKED OUTSIDE THE COMPOUND.
2. PER NFPA 58 TABLE 5.9.4.1(B) FILLER VALVE REQUIRED ON ALL TANKS BUT MAY BE MANUAL OR BACKFLOW CHECK VALVE, NFPA 58 5.9.4.1(C)(7).
3. ALL ABOVE-GROUND GAS SERVICE LINES MUST MEET LOCAL CODE REGULATIONS.

8 ABOVE GROUND PROPANE TANK DETAIL
C-7 SCALE: N.T.S.

ANTENNA MOUNT NOTE:
 1. CONTRACTOR SHALL VERIFY DIAMETER OF MONOPOLE PRIOR TO ORDERING MOUNT AND RING MOUNT. CONTRACTOR SHALL VERIFY PART NUMBERS WITH MANUFACTURER PRIOR TO ORDERING.



ALL-POINTS TECHNOLOGY CORPORATION
 567 VAUXHALL STREET EXTENSION - SUITE 311
 WATERFORD, CT 06385 PHONE: (860)-663-1697
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BARRETT OUTDOOR COMMUNICATIONS, INC.
 381 HIGHLAND STREET
 WEST HAVEN, CT 06516
 OFFICE: (203) 932-4601

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C-8

EROSION CONTROL NOTES

- THE CONTRACTOR SHALL CONSTRUCT ALL SEDIMENT AND EROSION CONTROLS IN ACCORDANCE WITH THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, LATEST EDITION, IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, AND AS DIRECTED BY THE CITY OF STRATFORD, PERMITTEE, AND/OR SWPCP MONITOR. ALL PERIMETER SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF CLEARING AND GRUBBING AND DEMOLITION OPERATIONS.
- THESE DRAWINGS ARE ONLY INTENDED TO DESCRIBE THE SEDIMENT AND EROSION CONTROL MEASURES FOR THIS SITE. SEE CONSTRUCTION SEQUENCE FOR ADDITIONAL INFORMATION. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE EROSION & SEDIMENT CONTROL PLAN ARE SHOWN AS REQUIRED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL EROSION CONTROL MEASURES ARE CONFIGURED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION OF SOILS AND PREVENT THE TRANSPORT OF SEDIMENTS AND OTHER POLLUTANTS TO STORM DRAINAGE SYSTEMS AND/OR WATERCOURSES. ACTUAL SITE CONDITIONS OR SEASONAL AND CLIMATIC CONDITIONS MAY WARRANT ADDITIONAL CONTROLS OR CONFIGURATIONS, AS REQUIRED, AND AS DIRECTED BY THE PERMITTEE AND/OR SWPCP MONITOR. REFER TO SITE PLAN FOR GENERAL INFORMATION AND OTHER CONTRACT PLANS FOR APPROPRIATE INFORMATION.
- A BOND OR LETTER OF CREDIT MAY BE REQUIRED TO BE POSTED WITH THE GOVERNING AUTHORITY FOR THE EROSION CONTROL INSTALLATION AND MAINTENANCE.
- THE CONTRACTOR SHALL APPLY THE MINIMUM EROSION & SEDIMENT CONTROL MEASURES SHOWN ON THE PLAN IN CONJUNCTION WITH CONSTRUCTION SEQUENCING, SUCH THAT ALL ACTIVE WORK ZONES ARE PROTECTED. ADDITIONAL AND/OR ALTERNATIVE SEDIMENT AND EROSION CONTROL MEASURES MAY BE INSTALLED DURING THE CONSTRUCTION PERIOD IF FOUND NECESSARY BY THE CONTRACTOR, OWNER, SITE ENGINEER, MUNICIPAL OFFICIALS, OR ANY GOVERNING AGENCY. THE CONTRACTOR SHALL CONTACT THE OWNER AND APPROPRIATE GOVERNING AGENCIES FOR APPROVAL IF ALTERNATIVE CONTROLS OTHER THAN THOSE SHOWN ON THE PLANS ARE PROPOSED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL TAKE EXTREME CARE DURING CONSTRUCTION SO AS NOT TO DISTURB UNPROTECTED WETLAND AREAS OR INSTALLED SEDIMENTATION AND EROSION CONTROL MEASURES. THE CONTRACTOR SHALL INSPECT ALL SEDIMENT AND EROSION CONTROLS WEEKLY AND WITHIN 24 HOURS OF A STORM WITH A RAINFALL AMOUNT OF 0.25 INCHES OR GREATER TO VERIFY THAT THE CONTROLS ARE OPERATING PROPERLY AND MAKE REPAIRS AS NECESSARY IN A TIMELY MANNER.
- THE CONTRACTOR SHALL KEEP A SUPPLY OF EROSION CONTROL MATERIAL (SILT FENCE, COMPOST FILTER SOCK, EROSION CONTROL BLANKET, ETC.) ON-SITE FOR PERIODIC MAINTENANCE AND EMERGENCY REPAIRS.
- ALL FILL MATERIAL PLACED ADJACENT TO ANY WETLAND AREA SHALL BE GOOD QUALITY, WITH LESS THAN 5% FINES PASSING THROUGH A #200 SIEVE (BANK RUN), SHALL BE PLACED IN MAXIMUM ONE FOOT LIFTS, AND SHALL BE COMPACTED TO 95% MAX. DRY DENSITY MODIFIED PROCTOR OR AS SPECIFIED IN THE CONTRACT SPECIFICATIONS.
- PROTECT EXISTING TREES THAT ARE TO BE SAVED BY FENCING, ORANGE SAFETY FENCE, CONSTRUCTION TAPE, OR EQUIVALENT FENCING/TAPE. ANY LIMB TRIMMING SHOULD BE DONE AFTER CONSULTATION WITH AN ARBORIST AND BEFORE CONSTRUCTION BEGINS IN THAT AREA; FENCING SHALL BE MAINTAINED AND REPAIRED DURING CONSTRUCTION.
- CONSTRUCTION ENTRANCES (ANTI-TRACKING PADS) SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR CONSTRUCTION ACTIVITY AND SHALL BE MAINTAINED THROUGHOUT THE DURATION OF ALL CONSTRUCTION IF REQUIRED. THE LOCATION OF THE TRACKING PADS MAY CHANGE AS VARIOUS PHASES OF CONSTRUCTION ARE COMPLETED. CONTRACTOR SHALL ENSURE THAT ALL VEHICLES EXITING THE SITE ARE PASSING OVER THE ANTI-TRACKING PADS PRIOR TO EXISTING.
- ALL CONSTRUCTION SHALL BE CONTAINED WITHIN THE LIMIT OF DISTURBANCE, WHICH SHALL BE MARKED WITH SILT FENCE, SAFETY FENCE, HAY BALES, RIBBONS, OR OTHER MEANS PRIOR TO CLEARING. CONSTRUCTION ACTIVITY SHALL REMAIN ON THE UPHILL SIDE OF THE SEDIMENT BARRIER UNLESS WORK IS SPECIFICALLY CALLED FOR ON THE DOWNHILL SIDE OF THE BARRIER.
- NO CUT OR FILL SLOPES SHALL EXCEED 3:1 EXCEPT WHERE STABILIZED BY ROCK FACED EMBANKMENTS OR EROSION CONTROL BLANKETS. ALL SLOPES SHALL BE SEEDED AND BANKS WILL BE STABILIZED IMMEDIATELY UPON COMPLETION OF FINAL GRADING UNTIL TURF IS ESTABLISHED.
- DIRECT ALL DEWATERING PUMP DISCHARGE TO A SEDIMENT CONTROL DEVICE CONFORMING TO THE GUIDELINES WITHIN THE APPROVED LIMIT OF DISTURBANCE IF REQUIRED. DISCHARGE TO STORM DRAINS OR SURFACE WATERS FROM SEDIMENT CONTROLS SHALL BE CLEAR AND APPROVED BY THE PERMITTEE OR MUNICIPALITY.
- THE CONTRACTOR SHALL MAINTAIN A CLEAN CONSTRUCTION SITE AND SHALL NOT ALLOW THE ACCUMULATION OF RUBBISH OR CONSTRUCTION DEBRIS ON THE SITE. PROPER SANITARY DEVICES SHALL BE MAINTAINED ON-SITE AT ALL TIMES AND SECURED APPROPRIATELY. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID THE SPILLAGE OF FUEL OR OTHER POLLUTANTS ON THE CONSTRUCTION SITE AND SHALL ADHERE TO ALL APPLICABLE POLICIES AND REGULATIONS RELATED TO SPILL PREVENTION AND RESPONSE/CONTAINMENT.
- MINIMIZE LAND DISTURBANCES. SEED AND MULCH DISTURBED AREAS WITH TEMPORARY MIX AS SOON AS PRACTICABLE (2 WEEK MAXIMUM UNSTABILIZED PERIOD) USING PERENNIAL RYEGRASS AT 40 LBS PER ACRE. MULCH ALL CUT AND FILL SLOPES AND SWALES WITH LOOSE HAY AT A RATE OF 2 TONS PER ACRE. IF NECESSARY, REPLACE LOOSE HAY ON SLOPES WITH EROSION CONTROL BLANKETS OR JUTE CLOTH. MODERATELY GRADED AREAS, ISLANDS, AND TEMPORARY CONSTRUCTION STAGING AREAS MAY BE HYDROSEEDED WITH TACKIFIER.
- SWEEP AFFECTED PORTIONS OF OFF SITE ROADS ONE OR MORE TIMES A DAY (OR LESS FREQUENTLY IF TRACKING IS NOT A PROBLEM) DURING CONSTRUCTION. FOR DUST CONTROL, PERIODICALLY MOISTEN EXPOSED SOIL SURFACES WITH WATER ON UNPAVED TRAVELWAYS TO KEEP THE TRAVELWAYS DAMP. CALCIUM CHLORIDE MAY ALSO BE APPLIED TO ACCESS ROADS. DUMP TRUCK LOADS EXITING THE SITE SHALL BE COVERED.
- VEGETATIVE ESTABLISHMENT SHALL OCCUR ON ALL DISTURBED SOIL, UNLESS THE AREA IS UNDER ACTIVE CONSTRUCTION, IT IS COVERED IN STONE OR SCHEDULED FOR PAVING WITHIN 30 DAYS. TEMPORARY SEEDING OR NON-LIVING SOIL PROTECTION OF ALL EXPOSED SOILS AND SLOPES SHALL BE INITIATED WITHIN THE FIRST 7 DAYS OF SUSPENDING WORK IN AREAS TO BE LEFT LONGER THAN 30 DAYS.
- MAINTAIN ALL PERMANENT AND TEMPORARY SEDIMENT CONTROL DEVICES IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD. UPON COMPLETION OF WORK SWEEP CONCRETE PADS, CLEAN THE STORMWATER MANAGEMENT SYSTEMS AND REMOVE ALL TEMPORARY SEDIMENT CONTROLS ONCE THE SITE IS FULLY STABILIZED AND APPROVAL HAS BEEN RECEIVED FROM PERMITTEE OR THE MUNICIPALITY.
- SEEDING MIXTURES SHALL BE NEW ENGLAND SEMI-SHADE GRASS AND FORBS MIX, OR APPROVED EQUAL BY OWNER.

SEDIMENT & EROSION CONTROL NARRATIVE

- THE PROJECT INCLUDES THE INSTALLATION OF A 135± AGL GALVANIZED MONOPOLE WITH ASSOCIATED GROUND MOUNTED EQUIPMENT. ALL DISTURBED AREAS ARE TO BE SEEDED AND STABILIZED PRIOR TO THE INSTALLATION OF THE PROPOSED EQUIPMENT.
THE PROPOSED PROJECT INVOLVES THE FOLLOWING CONSTRUCTION:
A. CONSTRUCTION OF 135± AGL MONOPOLE.
B. CONSTRUCTION OF 4,210± SF) FENCED EQUIPMENT COMPOUND W/ GRAVEL SURFACE TREATMENT, ELEVATED EQUIPMENT PLATFORM AND ASSOCIATED UTILITIES.
C. CONSTRUCTION OF 7'x9' CONCRETE GENERATOR PAD, 4'x8'-6" CONCRETE GENERATOR PAD & 4'x10' CONCRETE EQUIPMENT PAD WITH 500 GALLON PROPANE TANK.
- FOR THIS PROJECT, THERE ARE APPROXIMATELY 10,600± SF OF THE SITE BEING DISTURBED.
- A GEOTECHNICAL ENGINEERING REPORT HAS BEEN COMPLETED FOR THIS PROJECT AND WILL BE AVAILABLE UNDER SEPARATE COVER.
- IT IS ANTICIPATED THAT CONSTRUCTION WILL BE COMPLETED IN APPROXIMATELY 12 WEEKS.
- REFER TO THE CONSTRUCTION SEQUENCING AND EROSION AND SEDIMENTATION NOTES FOR INFORMATION REGARDING SEQUENCING OF MAJOR OPERATIONS IN THE ON-SITE CONSTRUCTION PHASES.
- MEASURES ARE BASED UPON ENGINEERING PRACTICE, JUDGEMENT AND THE APPLICABLE SECTIONS OF THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.
- DETAILS FOR THE TYPICAL EROSION AND SEDIMENTATION MEASURES ARE SHOWN ON PLAN SHEET C-4 OR PROVIDED AS SEPARATE SUPPORT DOCUMENTATION FOR REVIEW IN THIS PLAN.
- CONSERVATION PRACTICES TO BE USED DURING CONSTRUCTION AREA:
A. STAGED CONSTRUCTION;
B. MINIMIZE THE DISTURBED AREAS DURING CONSTRUCTION;
C. STABILIZE DISTURBED AREAS AS SOON AS POSSIBLE WITH TEMPORARY OR PERMANENT MEASURES;
D. MINIMIZE IMPERVIOUS AREAS;
E. UTILIZE APPROPRIATE CONSTRUCTION EROSION AND SEDIMENTATION MEASURES.

SUGGESTED CONSTRUCTION SEQUENCE

THE FOLLOWING SUGGESTED SEQUENCE OF CONSTRUCTION ACTIVITIES IS PROJECTED BASED UPON ENGINEERING JUDGEMENT AND BEST MANAGEMENT PRACTICES. THE CONTRACTOR MAY ELECT TO ALTER THE SEQUENCING TO BEST MEET THE CONSTRUCTION SCHEDULE. THE EXISTING SITE ACTIVITIES AND WEATHER CONDITIONS. CONTRACTOR TO HIRE SUPERVISOR FOR PROJECT STAKEOUT AS NEEDED THROUGHOUT CONSTRUCTION ACTIVITIES. CONSTRUCTION OF THE FACILITY WILL ONLY TAKE PLACE BETWEEN THE HOURS OF 8:00 A.M AND 5:00 P.M., MONDAY THROUGH FRIDAY.

- CONTACT THE OWNER TO SCHEDULE A PRE-CONSTRUCTION MEETING.
- CONDUCT A PRE-CONSTRUCTION MEETING TO DISCUSS THE PROPOSED WORK AND EROSION AND SEDIMENTATION CONTROL MEASURES. THE MEETING SHOULD BE ATTENDED BY THE OWNER, THE OWNER REPRESENTATIVE(S), THE GENERAL CONTRACTOR, DESIGNATED SUB-CONTRACTORS AND THE PERSON, OR PERSONS, RESPONSIBLE FOR THE IMPLEMENTATION, OPERATION, MONITORING AND MAINTENANCE OF THE EROSION AND SEDIMENTATION MEASURES. THE CONSTRUCTION PROCEDURES FOR THE ENTIRE PROJECT SHALL BE REVIEWED AT THIS MEETING.
- NOTIFY THE OWNER AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO COMMENCEMENT OF ANY DEMOLITION, CONSTRUCTION OR REGULATED ACTIVITY ON THIS PROJECT. NOTIFY CALL BEFORE YOU DIG CONNECTICUT AT (800) 922-4455.
- INSTALL THE PERIMETER EROSION AND SEDIMENTATION CONTROL MEASURES AND, IF APPLICABLE, TREE PROTECTION.
- INSTALL CONSTRUCTION ENTRANCE.
- TEMPORARILY SEED DISTURBED AREAS NOT UNDER CONSTRUCTION FOR THIRTY (30) DAYS OR MORE.
- EXCAVATE AND GRADE NEW GRAVEL EQUIPMENT COMPOUND..
- EXCAVATE FOR TOWER FOUNDATION, EQUIPMENT PLATFORM & EQUIPMENT PADS.
- PREPARE SUBGRADE AND INSTALL FORMS, STEEL REINFORCING, & CONCRETE FOR TOWER FOUNDATION & EQUIPMENT PADS.
- INSTALL BURIED GROUND RINGS, GROUND RODS, GROUND LEADS, UTILITY CONDUITS & UTILITY EQUIPMENT.
- BACKFILL TOWER FOUNDATION.
- ERECT MONOPOLE.
- INSTALL TELECOMMUNICATIONS EQUIPMENT ON TOWER, WITHIN COMPOUND & ELEVATED EQUIPMENT PLATFORM.
- INSTALL COMPOUND GRAVEL SURFACES.
- FINALIZE GRADES. INSTALL GRAVEL SURFACES.
- INSTALL FENCING.
- CONNECT GROUNDING LEADS & LIGHTNING PROTECTION
- FINAL GRADE AROUND COMPOUND.
- LOAM & SEED DISTURBED AREAS OUTSIDE COMPOUND, AS REQUIRED.
- TEST ALL NEW EQUIPMENT.
- AFTER THE SITE IS STABILIZED AND WITH THE APPROVAL OF THE OWNER, REMOVE PERIMETER EROSION AND SEDIMENTATION CONTROLS.
- PERFORM FINAL PROJECT CLEANUP.

THE ESTIMATED TIME FOR THE COMPLETION OF THE WORK IS APPROXIMATELY SIXTEEN (16) WEEKS. THE EXACT PROCESS MAY VARY DEPENDING ON THE CONTRACTORS & SUBCONTRACTORS AVAILABILITY TO COMPLETE WORK & WEATHER DELAYS.

CONSTRUCTION OPERATION AND MAINTENANCE PLAN - BY CONTRACTOR

E&S MEASURE	INSPECTION SCHEDULE
CONSTRUCTION ENTRANCE	DAILY
HAY BALES	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 0.2"
SILT FENCE/FILTER SOCKS	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 0.2"
SILT SACKS	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 0.2"
TOPSOIL/BORROW STOCKPILES	DAILY
WATER BARS	DAILY
TEMPORARY DIVERSION DITCHES	DAILY & WITHIN 24 HOURS OF RAINFALL > 0.2"
TEMPORARY SEDIMENT TRAPS/BASINS	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 0.2"
TEMPORARY SOIL PROTECTION	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 0.2"

MAINTENANCE REQUIRED

- PLACE ADDITIONAL STONE, EXTEND THE LENGTH OR REMOVE AND REPLACE THE STONE. CLEAN PAVED SURFACES OF TRACKED SEDIMENT.
- REPAIR/REPLACE WHEN FAILURE, OR OBSERVED DETERIORATION, IS OBSERVED. REMOVE SILT WHEN IT REACHES 1/2 THE HEIGHT OF THE BALE.
- REPAIR/REPLACE WHEN FAILURE, OR OBSERVED DETERIORATION, IS OBSERVED. REMOVE SILT WHEN IT REACHES 1/2 THE HEIGHT OF THE FENCE.
- REPAIR/REPLACE WHEN FAILURE, OR OBSERVED DETERIORATION, IS OBSERVED. REMOVE SILT WHEN IT REACHES 1/2 THE HEIGHT OF THE SACK.
- REPAIR/REPLACE SEDIMENT BARRIERS AS NECESSARY.
- REPAIR/RESHAPE AS NECESSARY. REMOVE SILT WHEN IT REACHES 1/2 THE HEIGHT OF THE WATER BAR.
- REPAIR/RESHAPE AS NECESSARY. REVIEW CONDITIONS IF REPETITIVE FAILURES OCCUR.
- REMOVE SEDIMENT WHEN IT REACHES 1/2 OF THE MINIMUM REQUIRED WET STORAGE VOLUME.
- REPAIR ERODED OR BARE AREAS IMMEDIATELY. RESEED AND MULCH.



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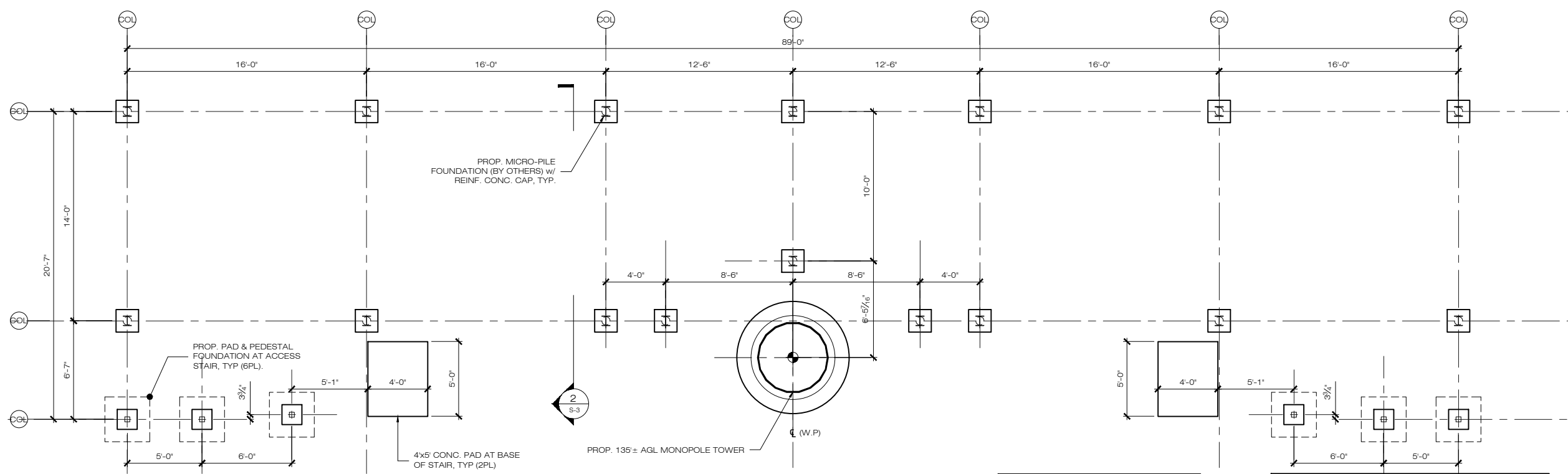
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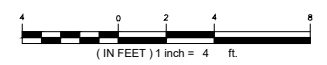
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EC-1

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1 PROPOSED FOUNDATION PLAN
S-1 SCALE: 1/4" = 1'-0"

FRAMING PLAN NOTES:
1. T/ PLATFORM STEEL EL. = +9'-0" AGL. (+0'-0") (W.P.)

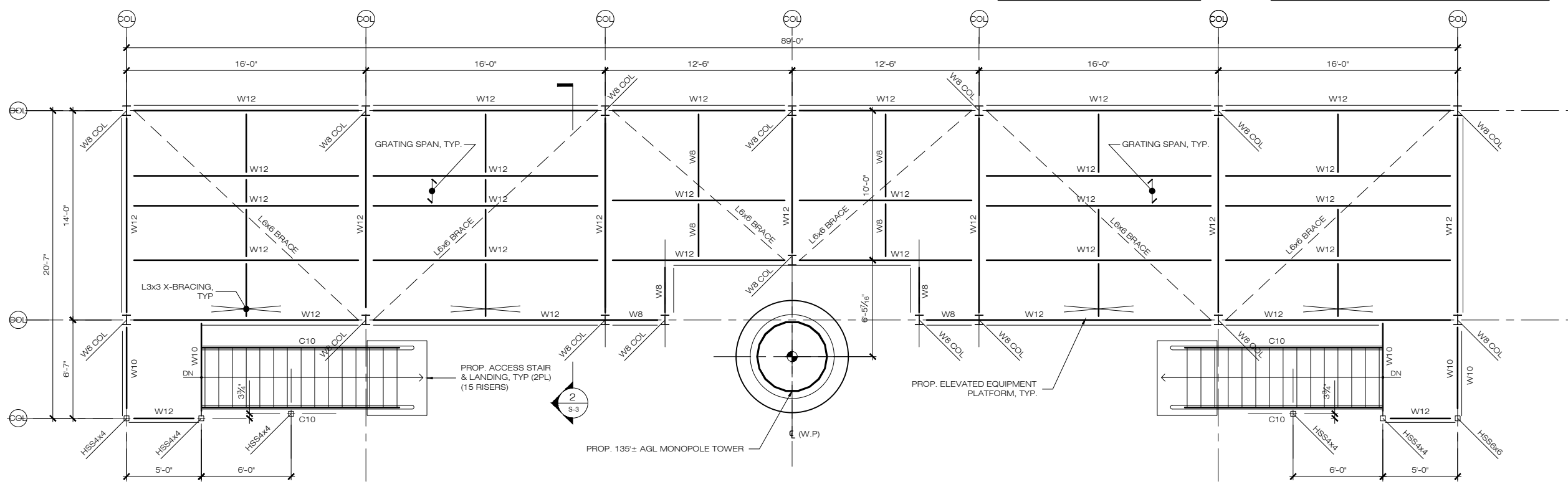


LEGEND:

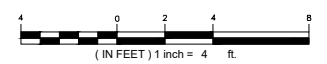
- W.P. = WORKING POINT
- H.P. = HIGH POINT
- DECK/GRATING SPAN
- X-BRACE BAY
- # = COL. DESIGNATION
- MOMENT CONNECTION

EXCAVATION & TRENCHING NOTES:

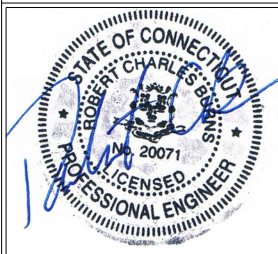
- CONTRACTOR SHALL ENGAGE THE SERVICES OF AN UNDERGROUND UTILITY LOCATING COMPANY TO LOCATE ALL UNDERGROUND CONDUITS & EQUIPMENT IN THE TRENCHING AREA TO AVOID ANY DAMAGE.
- HAND EXCAVATE WITHIN 5' OF EXIST. UNDERGROUND UTILITIES (V.I.F.) MAINTAIN 18" MIN. CLEARANCE.
- CONTRACTOR TO COORDINATE TRENCHING OPERATIONS w/ OWNER AND/OR MANAGEMENT COMPANY SO AS TO MINIMIZE DISRUPTIONS TO THE EXIST. PROPERTY OPERATIONS.



2 PROPOSED FLOOR FRAMING PLAN
S-1 SCALE: 1/4" = 1'-0"



OWNER UB RAILSIDE LLC
ADDRESS: 200 EAST MAIN ST. REAR
STRATFORD, CT 06614



"DOCK SHOPPING CENTER"

SITE 200 EAST MAIN ST. REAR
ADDRESS: STRATFORD, CT 06614
APT FILING NUMBER: CT560100
DRAWN BY: JM/ELZ CHECKED BY: JRM
DATE: 08/XX/23

SHEET TITLE:
STRUCTURAL FOUNDATION & FLOOR FRAMING PLANS

SHEET NUMBER:
S-1

D&M DOCUMENTS

NO	DATE	REVISION
0	08/17/23	FOR FILING: JRM
1	09/07/23	REV. FOR FILING: JRM

OWNER UB RAILSIDE LLC
ADDRESS: 200 EAST MAIN ST. REAR
STRATFORD, CT 06614

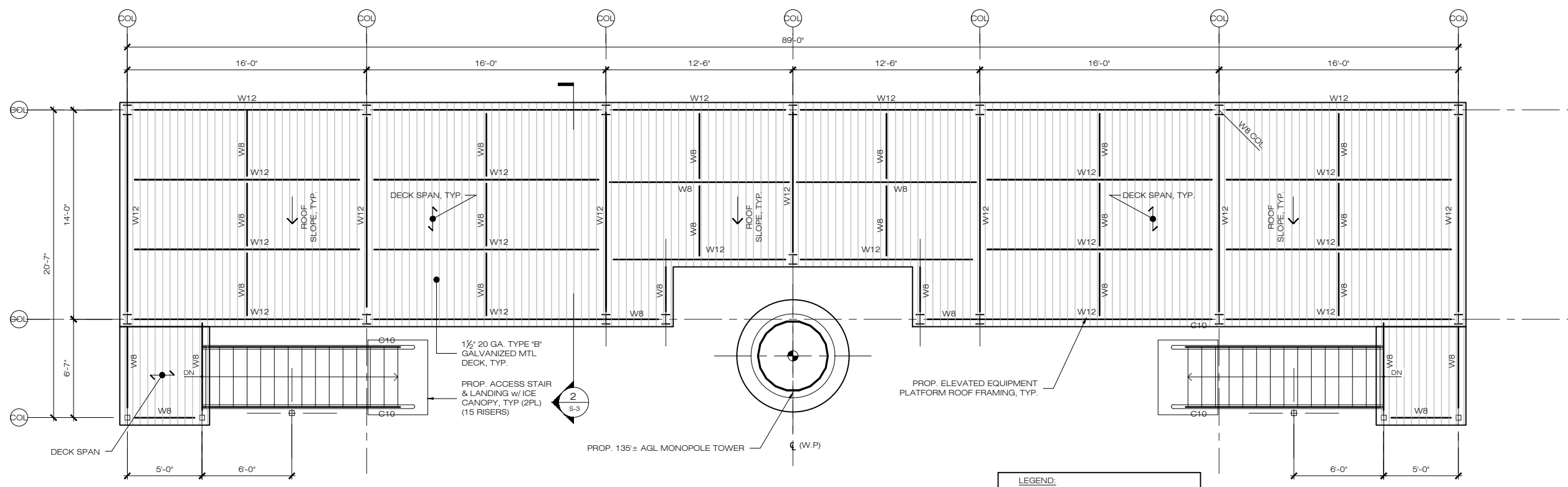


"DOCK SHOPPING CENTER"

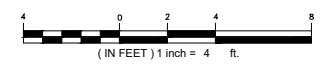
SITE 200 EAST MAIN ST. REAR
ADDRESS: STRATFORD, CT 06614
APT FILING NUMBER: CT560100
DRAWN BY: JM/ELZ CHECKED BY: JRM
DATE: 08/XX/23

STRUCTURAL ROOF FRAMING PLANS

SHEET NUMBER:
S-2

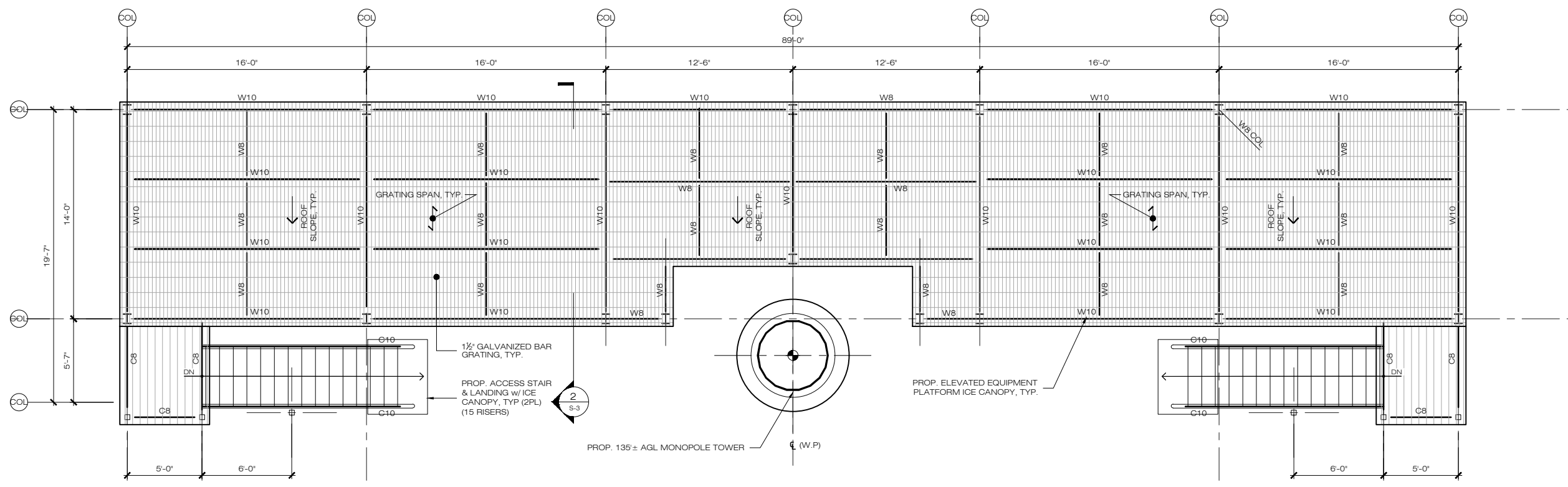


1 PROPOSED ROOF FRAMING PLAN
S-2 SCALE: 1/4" = 1'-0"

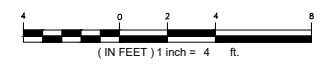


LEGEND:

- W.P. = WORKING POINT
- H.P. = HIGH POINT
- ↔ DECK/GRATING SPAN
- ✕ X-BRACE BAY
- ⊙ COL. DESIGNATION
- ◀▶ MOMENT CONNECTION



2 PROPOSED ICE CANOPY FRAMING PLAN
S-2 SCALE: 1/4" = 1'-0"



D&M DOCUMENTS

NO	DATE	REVISION
0	08/17/23	FOR FILING: JRM
1	09/07/23	REV. FOR FILING: JRM

OWNER: UB RAILSIDE LLC
ADDRESS: 200 EAST MAIN ST. REAR
STRATFORD, CT 06614



"DOCK SHOPPING CENTER"

SITE: 200 EAST MAIN ST. REAR
ADDRESS: STRATFORD, CT 06614

APT FILING NUMBER: CT560100

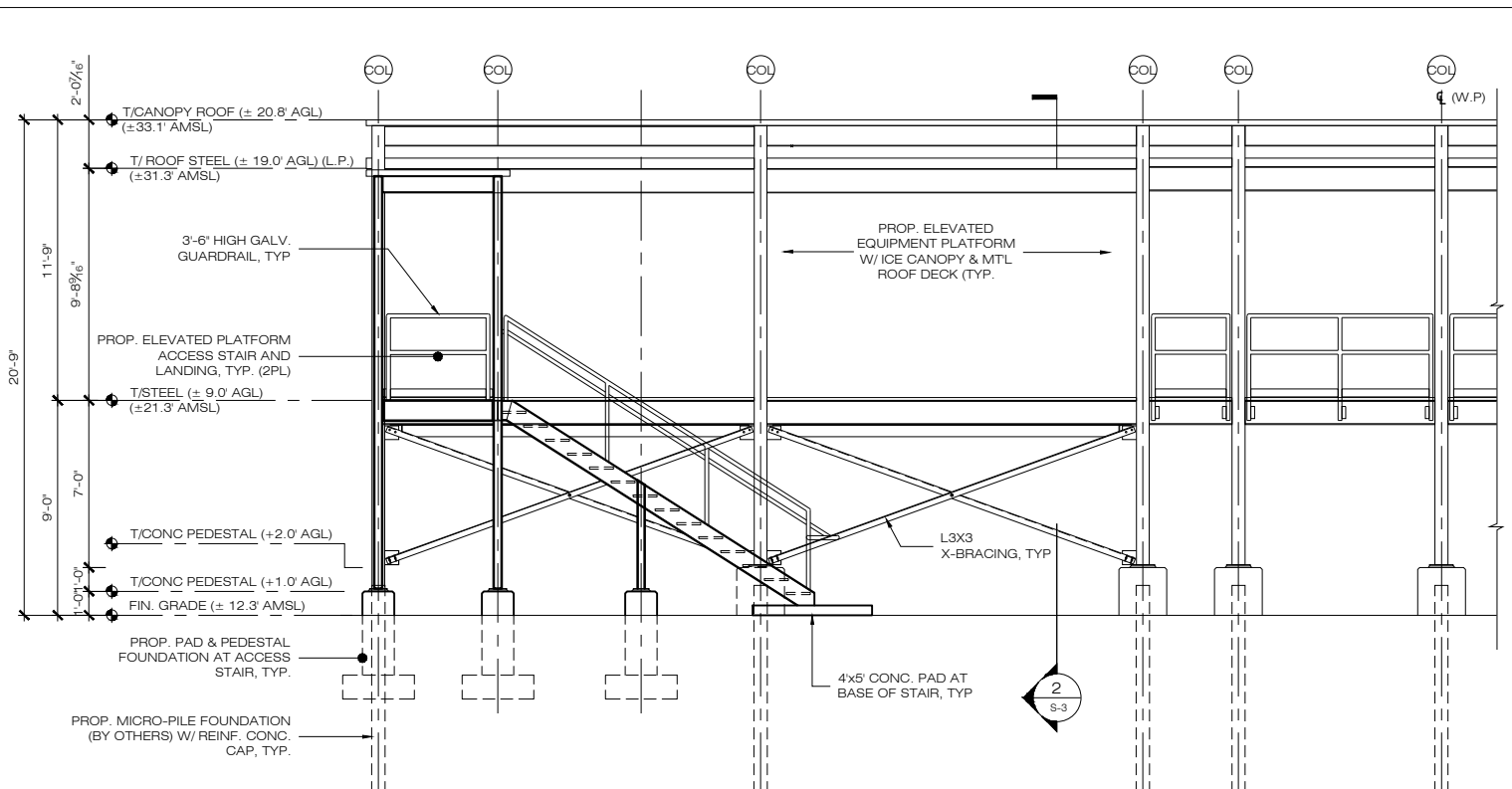
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DATE: 08/XX/23

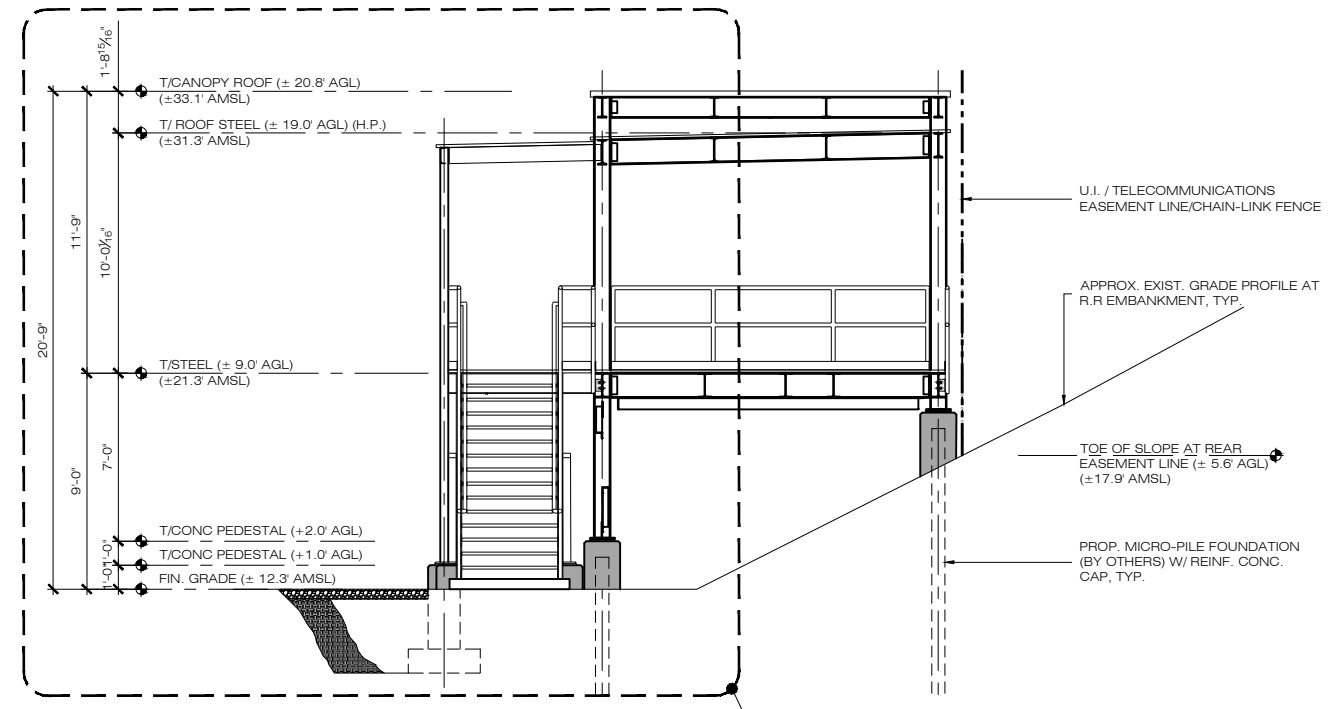
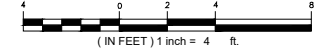
SHEET TITLE:
EQUIPMENT PLATFORM PARTIAL ELEVATION, SECTION & DETAIL

SHEET NUMBER:

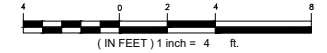
S-3



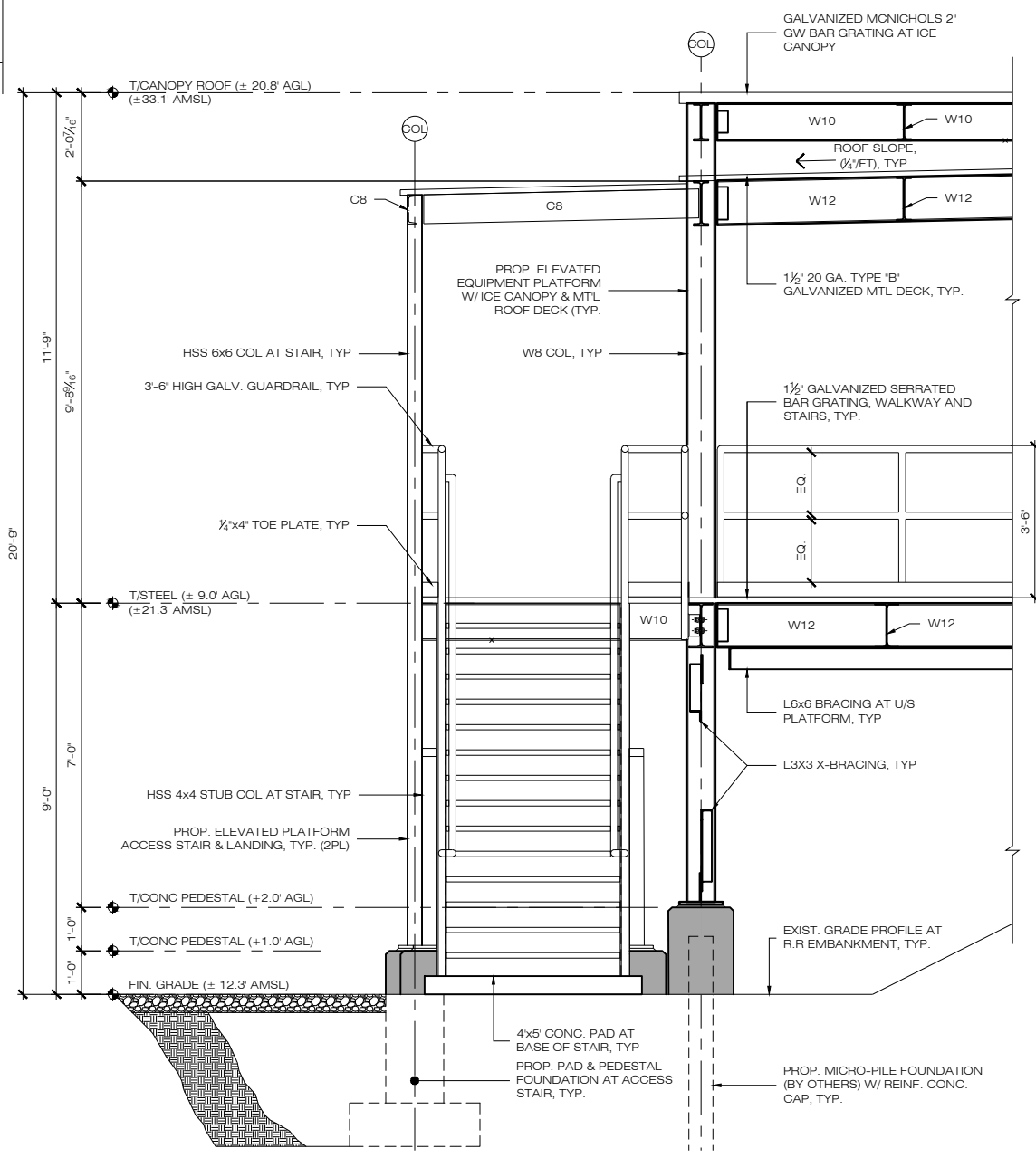
1 ELEVATED PLATFORM (PARTIAL ELEVATION)
S-3 SCALE: 1/4" = 1'-0"



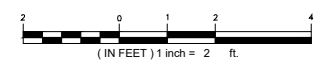
2 SECTION @ ELEVATED PLATFORM
S-3 SCALE: 1/4" = 1'-0"



3 ELEVATED EQUIP. PLATFORM DETAIL
S-3



3 DETAIL
S-3 SCALE: 1/2" = 1'-0"



DESIGN BASIS:		
GOVERNING CODES/DESIGN STANDARDS:		
2021 INTERNATIONAL BUILDING CODE (IBC) AS AMENDED BY THE 2022 CONNECTICUT STATE BUILDING CODE ASCE 7-16 (1A-222-H)		
RISK CRITERIA:		
DESIGN CATEGORY:	II	(2021 IBC TABLE 1604.5) (1A-222-H, TABLE 2-1)
WIND LOADS:		
ULTIMATE BASIC WIND SPEED, V _{ULT} (3-SECOND GUST)	120 MPH	(2022 CSBC APPENDIX P)
EXPOSURE CATEGORY:	C	(2021 IBC SEC. 1609.4) (1A-222-H, SEC. 2.6.5)
ICE LOADS:		
ICE THICKNESS, T _i	1.00 IN	(1A-222H, ANNEX B)
NOMINAL BASIC WIND SPEED W _i (ICE, VI (3-SECOND GUST))	50 MPH	(1A-222H, ANNEX B)
LIVE LOAD:		
ROOF LIVE LOAD, (L ₁)	150 PSF	(IBC 2021 TABLE 1607.1)
SNOW LOAD:		
GROUND SNOW LOAD (P _s) =	30 PSF	(2022 CSBC APPENDIX P)
ROOF SNOW LOAD (P _s) =	(MIN. PER 2022 CSBC ADD 1608.1.1)	
	ASCE 7-16 EQ. 7.3-1, SEC. 7.3.4	
REFER TO SECTION 1613 OF THE 2021 IBC 2022 CONNECTICUT STATE BUILDING CODE FOR SEISMIC CLASSIFICATION AND LOADING DETERMINATION.		

SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF THE OWNER OR ENGINEER.

ALL CONTRACTORS SHALL SUBMIT SHOP DRAWINGS OF ALL EQUIPMENT AND MATERIALS TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION AND INSTALLATION AND SHALL NOT PROCEED UNTIL ENGINEER APPROVAL IN WRITING IS RETURNED. EACH CONTRACTOR SHALL MAINTAIN ON JOB SITE A COMPLETE SET OF SHOP DRAWINGS WITH ANY DEVIATIONS FROM THE ORIGINAL DESIGN SHALL BE NOTED. ALL MATERIALS AND EQUIPMENT SHALL BE NEW, WITHOUT BLEMISH OR DEFECT, AND SUITABLE AND LISTED FOR THE INSTALLATION AND SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS OR SPECIFICATIONS. ALL ITEMS OF EQUIPMENT OR MATERIAL THAT ARE OF ONE GENERIC TYPE SHALL BE ONE MANUFACTURER THROUGHOUT.

ALL MATERIALS, EQUIPMENT, TOOLS, AND ITEMS UNDER THE CONTRACTORS RESPONSIBILITY ON THE JOB SITE SHALL BE ADEQUATELY SECURED, MAINTAINED, AND PROTECTED, SO AS NOT TO BECOME DAMAGED OR CREATE ANY HAZARD TO PERSONNEL OR PROPERTY.

THE CONTRACTORS HOURS OF WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES AND ORDINANCES AND BE APPROVED BY THE OWNER AND INSURE THAT EVERY CREW MEMBER FOLLOWS SAFE WORK PRACTICES. SAFETY TRAINING SHALL INCLUDE, BUT NOT BE LIMITED TO, FALL PROTECTION, CONFINED SPACE ENTRY, ELECTRICAL SAFETY, AND TRENCING/EXCAVATION SAFETY WHERE SUCH WORK IS EXECUTED OR ENCOUNTERED.

ALL TEMPORARY WORK REQUIRED OR SPECIFIED AS A PART OF THIS WORK SHALL MEET ALL OF THE SAME REQUIREMENTS AS PERMANENT INSTALLATIONS, SHALL MEET ALL APPLICABLE CODE REQUIREMENTS, AND SHALL BE COMPLETELY REMOVED AFTER ITS PURPOSE HAS BEEN SERVED.

ANY EXISTING UTILITY, SERVICE, STRUCTURE, EQUIPMENT, OR FIXTURE OBSTRUCTING THE WORK SHALL BE REMOVED AND/OR RELOCATED AS DIRECTED BY THE CONSTRUCTION MANAGER.

IF ASBESTOS IS ENCOUNTERED DURING WORK EXECUTION, CONTRACTOR SHALL IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER AND CEASE ALL ACTIVITIES IN AFFECTED AREAS UNTIL NOTIFIED BY THE CONSTRUCTION TO RESUME OPERATIONS.

ASBESTOS AND MECHANICAL, ELECTRICAL, PIPING, WIRING AND EQUIPMENT OBSTRUCTING THE WORK SHALL BE REMOVED AND/OR RELOCATED AS DIRECTED BY THE CONSTRUCTION MANAGER. TEMPORARY SERVICE INTERRUPTIONS MUST BE COORDINATED WITH OWNER.

04 CONCRETE:

THESE SPECIFICATIONS SHALL INCLUDE THE GENERAL SPECIFICATIONS HEREIN.

ALL CONCRETE CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE (ACI) CODES 301 & 318, LATEST REVISION.

ALL CONCRETE USED SHALL BE 4000 PSI (28 DAY COMP STRENGTH). THE CONCRETE MIX SHALL BE BASED ON USING THE FOLLOWING MATERIALS AND PARAMETERS:

PORTLAND CEMENT: ASTM C150, TI
AGGREGATE: ASTM C33, 1 INCH MAX
WATER: POTABLE
ADDMIXTURE: NON-CHLORIDE
AIR: 6%
SLUMP: 4 INCH

ALL CONCRETE EXPOSED TO FREEZING WEATHER SHALL CONTAIN ENTRAINED AIR PER ACI 211 TABLE 4.2.1 OF ACI 318-05.

ALL REINFORCING STEEL SHALL BE ASTM A615, GR. 60 (DEFORMED). WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 WELDED STEEL WIRE FABRIC. SPLICES SHALL BE CLASS B AND ALL HOOKS SHALL BE A61 STANDARD UNDO. REINFORCING BARS SHALL BE COLD BENT WHERE REQUIRED AND TIED (NOT WELDED).

THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL.

- CONCRETE CAST AGAINST EARTH = 3 IN.
- CONCRETE EXPOSED TO EARTH OR WEATHER:
 - #6 AND LARGER = 2 IN.
 - #5 AND SMALLER = 1 1/2 IN.
- CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:
 - SLAB AND WALL = 3/4 IN.
 - BEAMS AND COLUMNS = 1 1/2 IN.

A 3/4 IN. CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

CONCRETE SHALL BE PLACED IN A UNIFORM MANNER AND CONSOLIDATED IN PLACE.

CONCRETE FOOTINGS SHALL BE CAST AGAINST LEVEL, COMPACTED, NON-FROZEN BASE SOIL FREE OF STANDING WATER.

05 ANCHORS:

THESE SPECIFICATIONS SHALL INCLUDE THE GENERAL SPECIFICATIONS HEREIN.

EXPANSION ANCHORS SHALL BE USED WHERE ATTACHING TO CONCRETE. MASONRY MOUNTS SHALL HAVE INJECTION ADHESIVE ANCHORING.

EXPANSION BOLTS SHALL BE HLT1 KWIK BOLT 3 OR EQUAL. MINIMUM EMBEDMENT 4 INCHES.

INJECTION ADHESIVE ANCHORING IN MASONRY WITH VOIDS SHALL BE HLT1 HY 70 OR EQUAL, WITH THREADED ROD AND SCREEN TUBES. ANCHORING IN BRICKS WITH HOLES SHALL HAVE ANCHORS SPACED 2 COMPLETE BRICKS APART. MINIMUM, SHALL MAINTAIN 2 COMPLETE BRICKS OR 16 INCHES FROM FREE EDGES, WHICHEVER IS LESS, AND SHALL BE EMBEDDED 3-1/2 INCHES MINIMUM. ANCHORING IN HOLLOW CONCRETE BLOCK SHALL USE 50% MORE ANCHORS THAN SHOWN IN DETAIL. SHALL LIMIT ONE ANCHOR MAXIMUM PER BLOCK AND SHALL MAINTAIN 12" SPACING FROM FREE EDGES, AND SHALL BE EMBEDDED THROUGH FACE.

INJECTION ADHESIVE ANCHORING IN SOLID MASONRY AND GROUT FILLED BLOCK SHALL BE HLT1 HY 200 OR EQUAL, WITH THREADED ROD, MAINTAIN 12 INCHES BETWEEN ANCHORS AND ALL FREE EDGES. MINIMUM SPACING IS 12 INCHES.

ANCHORS SHALL BE INSTALLED PER MANUFACTURERS' RECOMMENDATIONS AND SHALL NOT BE INSTALLED IN MORTAR JOINTS.

REBAR DOWELING SYSTEM
CONCRETE HLT1 HY 200 ADHESIVE WITH SAFE SET (H0B) SYSTEM
SOLID GROUTED HLT1 HY 70
MASONRY ADHESIVE WITH SCREEN TUBE HLT1 HY 70 ADHESIVE WITH HOLLOW / MULTI-WIDTH HLT1 HY 70 ADHESIVE WITH SCREEN TUBE

ANCHOR CAPACITY USED IN DESIGN SHALL BE BASED ON THE TECHNICAL DATA PUBLISHED BY HLT1 OR SUCH OTHER METHOD AS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD. SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS MUST BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO USE.

CONTRACTOR SHALL PROVIDE CALCULATIONS DEMONSTRATING THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERFORMANCE VALUES OF THE SPECIFIED PRODUCT INCLUDING AN ICC-ES REPORT SHOWING COMPLIANCE WITH THE RELEVANT BUILDING CODE, SEISMIC USE, LOAD RESISTANCE, INSTALLATION CATEGORY, IN-SERVICE TEMPERATURE, INSTALLATION TEMPERATURE, ETC.

ADHESIVE ANCHORS INSTALLED IN A HORIZONTALLY OR UPWARDLY INCLINED ORIENTATION INTO CONCRETE AND SUPPORTING A SUSTAINED TENSION LOAD SHALL BE INSTALLED BY A CERTIFIED ADHESIVE ANCHOR INSTALLER, PER SECTION 9.2.2 OF ACI-318-14. INSTALLER SHALL BE CERTIFIED THROUGH THE ACCRIS ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM.

ANCHORS SHALL BE INSTALLED PER MANUFACTURERS' RECOMMENDATIONS AND SHALL NOT TO BE INSTALLED IN MORTAR JOINTS.

AS PER OSHA 29 CFR 1926.1153 SILICA DUST CONTROL REGULATIONS, DRILLED HOLES FOR POST INSTALLED ANCHORS IN CONCRETE AND MASONRY SHALL BE INSTALLED USING HLT1 SAFE SET INSTALLATION SYSTEM WHICH COMPRISES OF A CODE APPROVED HLT1 HOLLOW DRILL BIT AND VACUUM. ALTERNATE INSTALLATION METHODS ARE ALSO ALLOWED WITH AN APPROVED DUSTLESS SYSTEM THAT MAINTAINS SILICA DUST EMISSION BELOW THE PERMISSIBLE LEVELS.

CONTRACTOR SHALL ARRANGE AN ANCHOR MANUFACTURERS REPRESENTATIVE TO PROVIDE ANCHOR INSTALLATION TRAINING FOR ALL OF THEIR ANCHORING PRODUCTS SPECIFIED.

CONTRACTOR SHALL SUBMIT DOCUMENTATION CONFIRMING THAT ALL OF THE CONTRACTORS PERSONNEL INSTALLING ANCHORS HAVE RECEIVED THE REQUIRED TRAINING PRIOR TO THE COMMENCEMENT OF WORK.

CONTINUOUS OR PERIODIC SPECIAL INSPECTION FOR POST INSTALLED

06 ELECTRICAL:

THESE SPECIFICATIONS SHALL INCLUDE THE GENERAL SPECIFICATIONS HEREIN.

ALL ELECTRICAL CONDUCTORS

- INSULATION SHALL BE MINIMUM 600V TYPE THHN, THWN-2, OR XHHW.
- BRANCH CIRCUIT CONDUCTORS SHALL BE SOFT DRAWN 98% MINIMUM CONDUCTIVITY PROGRAMMED STRANDED OR COMPROMISED.
- FEDDER CIRCUIT CONDUCTORS SHALL BE EITHER COPPER OR ALUMINUM OF THE APPROPRIATE SIZE FOR THE APPLICATION, OR AS PERMANENTLY NOTED.
- PERMANENTLY LABEL OR TAG ALL CONDUCTORS WITH THEIR CIRCUIT DESIGNATION AT ALL TERMINATION ENDS, SPLICES, AND VISIBLE AS PASS-THROUGH ALL ENCLOSURES.
- ALL CONDUIT, RACEWAY, WIREWAYS, DUCTS, ETC. SHALL BE LISTED AND SUITABLE FOR THE APPLICATION. ONLY THE FOLLOWING CONDUITS AS APPROVED AND LISTED FOR THE APPLICATION SHALL BE ACCEPTABLE:
 - ELECTRICAL METALLIC TUBING (EMT)
 - COMPRESSION COUPLINGS AND CONNECTORS ONLY MADE UP WRENCH TIGHT.
 - FLEXIBLE METAL CONDUIT (FMC) AND LIQUIDTIGHT FLEXIBLE METAL CONDUIT (LFMC).
 - FINAL CONNECTIONS TO VIBRATING OR ADJUSTABLE EQUIPMENT INCLUDING, BUT NOT LIMITED TO, LIGHT FIXTURES, HVAC UNITS, TRANSFORMERS, MOTORS, ETC. OR WHERE EQUIPMENT IS PLACED UPON SLAB ON-GRADE.
 - RIGID GALVANIZED STEEL (RGS).
- ALL FITTING, CONNECTORS, AND COUPLINGS SHALL BE THREADED MADE UP WRENCH TIGHT.
- RIGID POLYVINYL CHLORIDE (PVC) SCHEDULE 40 OR SCHEDULE 80 MAY BE USED FOR SERVICES, EXTERIOR, BELOW GRADE, AND WET LOCATIONS.
- SHALL NOT BE USED IN CONCRETE SLABS NOR EXPOSED WITHIN A BUILDING OR STRUCTURE.
- METAL-CLAD CABLE (MC)
- CONCEALED INSTALLATIONS ONLY.
- WITHIN A DUCT WITH SMOOTH OR CORRUGATED METAL JACKET AND NO OUTER COVERING OVER THE METAL JACKET.
- IN FINISHED SPACES, ALL CONDUITS SHALL BE CONCEALED EXCEPT TO MAKE A FINAL CONNECTION TO EQUIPMENT NOT MOUNTED IN OR AGAINST FINISH MATERIAL.
- ALL FEEDER AND BRANCH CIRCUITS SHALL HAVE A SEPARATE TENSION LOAD SHALL BE INSTALLED BY A CERTIFIED ADHESIVE ANCHOR INSTALLER, PER SECTION 9.2.2 OF ACI-318-14. INSTALLER SHALL BE CERTIFIED THROUGH THE ACCRIS ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM.
- APPLICABLE CODES, THAT BONDS ALL ENCLOSURES, BOXES, ETC. CONDUIT SHALL NOT BE USED AS A GROUNDING OR BONDING CONDUCTOR.

IF EXISTING ELECTRIC SERVICE IS TO REMAIN, CONTRACTOR SHALL BE VERIFY THAT IT MEETS PROJECT REQUIREMENTS WITHOUT MODIFICATION. IF IT IS TO BE ADDED OR REPLACED AS A PART OF THIS WORK, CONTRACTOR SHALL ORDER FROM, COORDINATE WITH, AND OBTAIN APPROVAL FROM THE ELECTRICAL UTILITY. ALL ELECTRICAL EQUIPMENT SHALL BE AS SPECIFIED AND AS APPROVED BY THE LOCAL UTILITY WHERE APPLICABLE.

ALL EQUIPMENT, ENCLOSURES, ETC. SHALL BE SUITABLE FOR THE INSTALLED ENVIRONMENT. MINIMUM NEMA 3R FOR ALL EXTERIOR INSTALLATIONS.

WIRING DEVICES SHALL BE SPECIFICATION GRADE AND WIRING DEVICE COVER PLATES SHALL BE PLASTIC WITH ENGRAVING AS SPECIFIED. COLOR SHALL BE WHITE. ALL DEVICES AND COVER PLATES SHALL BE OF THE SAME MANUFACTURER.

ALL FIRE-RATED PENETRATIONS SHALL BE SEALED USING A BUTTABLE AND LISTED FIRE SEALING DEVICE OR GROUT THAT WILL MAINTAIN THE FIRE RATING OF THE STRUCTURE PENETRATED.

PROVIDE PERMANENTLY AFFIXED ENGRAVED NAMEPLATES FOR ALL WIRING DEVICES INCLUDING, BUT NOT LIMITED TO, PANELS, METERS, AND IDENTIFICATION, AND VOLTAGES WITHIN.

ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL FINAL TERMINATIONS TO ALL EQUIPMENT.

ALL ELECTRICAL APPLIANCES THAT ARE DISCONNECTED SHALL BE COMPLETELY REMOVED WITH EXISTING STRUCTURES TO REMAIN REPAIRED, FINISHED, FILLED, PAINTED, ETC. ALL PANEL SCHEDULES, EQUIPMENT LABELING, AND CODE APPROVED LABELING SHALL BE VERIFIED AND PROPERLY COMPLETED TO MATCH THE INSTALLATION.

26 GROUNDING:

THESE SPECIFICATIONS SHALL INCLUDE THE GENERAL SPECIFICATIONS HEREIN.

GROUND ALL SYSTEMS AND EQUIPMENT IN ACCORDANCE WITH BEST INDUSTRY PRACTICES. THE REQUIREMENTS OF THE NFPA 70 NATIONAL ELECTRICAL CODE (NEC) AND ALL OTHER APPLICABLE CODES AND REGULATIONS.

ALL GROUNDING ELECTRODES PRESENT AT EACH SERVICE LOCATION SHALL BE BONDED TOGETHER TO FORM THE GROUNDING ELECTRODE SYSTEM.

ALL EQUIPMENT ENCLOSURES, DEVICES, AND CONDUITS SHALL BE GROUNDING BY THE INSTALLATION OF A SEPARATE GROUNDING CONDUCTOR FOR ALL FEEDER AND BRANCH CIRCUITS THAT IS SIZED PER CODE OR IS OF THE SAME SIZE AS THE FEEDER OR BRANCH CIRCUIT CONTINUOUS IN LENGTH, AND SHALL BE BONDED TO EACH ENCLOSURE PASSED THROUGH CONDUIT SHALL NOT BE USED AS A GROUNDING OR BONDING WIRE OR CIRCUIT.

BOND ALL METALLIC CONDUITS TOGETHER THAT ARE CONNECTED TO NON-METALLIC ENCLOSURES, IN-GROUND BOXES, AND TO AN IN-GROUND CONDUCTOR OR TO A GROUNDING ELECTRODE SYSTEM. ACCOMPLISH THIS BOND WITH GROUNDING CONDUCTORS MINIMUM SIZED TO THE LARGEST GROUNDING CONDUCTOR PRESENT IN THE ENCLOSURE CONNECTED TO A GROUNDING TYPE BUSHING EQUALLY SIZED OR MAXIMUM GROUND WIRE ACCOMMODATION AVAILABLE IN STANDARD MANUFACTURE FOR THE CONDUIT SIZE, WHICHEVER IS LESS.

EQUIPMENT GROUNDING AND LOAD SIDE BONDING CONDUCTORS SHALL BE SIZED PER THE CIRCUITS OVER-CURRENT PROTECTIVE DEVICE (OCPD) SIZE. WHERE THE STANDARD FOR THE CIRCUITS OCPD, INCREASE THE GROUNDING CONDUCTOR PROPORTIONATELY TO THE CROSS-SECTIONAL AREA OF THE UNGROUNDED CONDUCTORS.

SERVICE MAIN BONDING JUMPERS AND GROUNDING ELECTRODE CONDUCTORS SHALL BE SIZED AND INSTALLED PER THE MINIMUM OF EITHER THE NATIONAL ELECTRICAL CODE (NEC) OR THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 70B.

26 LIGHTNING PROTECTION:

THESE SPECIFICATIONS SHALL INCLUDE THE GENERAL SPECIFICATIONS AND THE GROUNDING SPECIFICATIONS HEREIN.

THE LIGHTNING PROTECTION GROUNDING SYSTEM (LPGS) SHALL CONSIST OF BONDING ALL EQUIPMENT AND CONDUCTIVE STRUCTURES TO LOCALIZED SINGLE-POINT GROUNDING CONNECTIONS (TYPICALLY GROUND BARS) WHICH ARE BONDED TOGETHER AND TO AN IN-GROUND SYSTEM. IF THE LPGS IS ON A BUILDING, IT SHALL BE EFFECTIVELY GROUND BARS WHICH ARE BONDED TOGETHER AND TO AN IN-GROUND SYSTEM. IF THE LPGS IS ON A BUILDING, IT SHALL BE EFFECTIVELY GROUND BARS WHICH ARE BONDED TOGETHER AND TO AN IN-GROUND SYSTEM. IF THE LPGS IS ON A BUILDING, IT SHALL BE EFFECTIVELY GROUND BARS WHICH ARE BONDED TOGETHER AND TO AN IN-GROUND SYSTEM. IF THE LPGS IS ON A BUILDING, IT SHALL BE EFFECTIVELY GROUND BARS WHICH ARE BONDED TOGETHER AND TO AN IN-GROUND SYSTEM.

ALL CONDUCTIVE STRUCTURES IN CLOSE PROXIMITY (FENCES, ICE BREAKERS, ISOLATED EQUIPMENT, ETC.) ALSO BOND TO PROVIDE A COMMON ELECTRICAL EQUIPMENTAL SYSTEM FOR ALL CONDUCTIVE ELEMENTS AND STRUCTURES.

CONDUCTORS:

- MIN #2 AWG SOLID BARE TINNED COPPER (SBTC) FOR ALL IN-GROUND CONDUCTORS.
- MIN #2 AWG COPPER GREEN STRANDED FOR BONDING STRUCTURES, AND FOR INTER-SYSTEM BONDING OF INDIVIDUAL TOWER FOUNDATIONS, OR DOWNWARD TOWARDS EARTH.
- MIN #6 AWG COPPER GREEN STRANDED OR ALL EQUIPMENT BONDING.
- INSTALL ALL IN-GROUND CONDUCTORS IN THE SAME HORIZONTAL PLANE OR IN A DOWNWARD DIRECTION AWAY FROM THE TOWER AND EQUIPMENT AREAS.
- MADE DIRECT RUNS AS MUCH AS POSSIBLE.
- PLACE THROUGH NON-METALLIC SLEEVES WHEN PASSING THROUGH FLOORS, WALLS, CEILING, AND SIMILAR STRUCTURES.
- ALL CONNECTIONS IN CONTACT WITH EARTH WITH EXOTHERMIC WELDING. MAKE ALL OTHER CONNECTIONS WITH EXOTHERMIC WELDING, IRREVERSIBLE COMPRESSION CONNECTIONS, OR LISTED CONNECTORS.
- INSTALL ALL CONDUCTORS WITH A MINIMUM 18 INCH BEND RADIUS AND NO BEND LONGER THAN A 90 DEGREE ARC. ALL BENDS SHALL BE MADE WITH A RADIALLY OR DOWNWARD TOWARDS EARTH.
- ALL CONDUCTORS PASSING FROM ABOVE-GROUND TO IN-GROUND CONNECTIONS, WHEN EXPOSED, SHALL BE COVERED AND PROTECTED WITH A NON-METALlic CONDUIT SEALER AT BOTH ENDS.
- IF 2 OR MORE IN-GROUND CONDUCTORS ARE IN THE SAME PATH (2 RINGS OVERLAPPING, BONDS FOLLOWING ANOTHER RING OR RADIAL, OR SIMILAR, COMBINE WITH A SHARED SINGLE AND ASSOCIATED LISTED NUMBER.

EQUIPMENT AND TOWER GROUND RINGS SHALL BE:

- BONDED TO ANY CONDUCTIVE OBJECT OR STRUCTURE WITHIN 5 FEET OF EQUIPMENT GROUNDING RINGS OR WITHIN 20 FEET OF TOWER GROUND RING.
- INSTALL MINIMUM 18 INCHES FROM FOUNDATIONS, FOOTINGS, AND SIMILAR.
- MIN 30 INCHES BELOW GRADE, OR 6 INCHES BELOW THE FROST LINE, WHICHEVER IS GREATER DEPTH.
- MIN 2 FEET FROM FOUNDATIONS, FOOTINGS, OTHER GROUNDING SYSTEMS, AND SIMILAR STRUCTURES EXCEPT WHEN MAKING A BOND TO ANY OF THESE STRUCTURES. DO NOT BOND TO FOUNDATION INTERNAL REINFORCEMENT.
- COMMUNICATION AREAS ON EARTH SHALL HAVE A GROUND RING, STRUCTURE, OR SIMILAR SHALL BE BONDED TO A SINGLE-POINT GROUND, PREFERABLY AN ISOLATED GROUND BAR. BOND THE GROUND RINGS TOGETHER WITH MINIMUM 2 CONDUCTORS DIRECTED IN OPPOSITE DIRECTIONS WITH PARALLEL CONNECTIONS ON THE RING OR BONDING TO AN IN-GROUND RING. INSTALL 2 BONDING CONDUCTORS MINIMUM WITH EACH CONDUCTOR INSTALLED DIRECTIONALLY AWAY FROM EACH OTHER AND PARALLEL TO THE IN-GROUND CONDUCTOR, WITH NO TEE CONNECTIONS.

TOWER GROUNDING:

- EACH TOWER LEG SHALL BE BONDED TO ITS RING. SINGLE-LEGGED TOWERS, OR MONOPOLES, SHALL HAVE 2 BONDS ON OPPOSITE SIDES.
- BOND TO TOWER BASE, NOT TO VERTICAL TOWER STRUCTURE, AWAY FROM TOWER MOUNTING HARDWARE.
- EACH BOND SHALL HAVE A CORRESPONDING GROUND ROD ON THE RING.
- EACH BOND SHALL CONSIST OF 2 CONDUCTORS FROM THE TOWER TO ITS RING WITH EACH CONDUCTOR DIRECTED IN OPPOSITE DIRECTIONS WITH A PARALLEL CONNECTION ON THE RING OR OPPOSITE SIDES OF THE GROUND ROD.

EQUIPMENT AREA GROUNDING:

- COMMUNICATION AREAS ON EARTH SHALL HAVE A GROUND RING.
- BOND ALL EQUIPMENT TO A SINGLE-POINT GROUND (GROUND BAR, CONDUIT, LFMC).
- BOND THE EQUIPMENT SINGLE-POINT GROUND TO THE EQUIPMENT GROUND RING WITH MINIMUM 2 CONDUCTORS DIRECTED IN OPPOSITE DIRECTIONS WITH PARALLEL CONNECTIONS ON THE RING.
- EQUIPMENT IS ENCLOSED IN A SHELTER.
- IF THE SHELTER IS CONSIDERED TO BE EXPOSED TO A DIRECT LIGHTNING STRIKE, INSTALL A BUILDING LIGHTNING PROTECTION SYSTEM PER APPLICABLE VERSION OF NFPA 780.
- BOND ALL FIXED CONDUCTIVE BUILDING COMPONENTS TOGETHER AND TO THE BUILDING RING GROUND AT THE CORNERS. THIS IS TYPICALLY CALLED A PERIMETER HALO GROUND. DO NOT BOND EQUIPMENT TO THE HALO GROUND.
- BOND ALL EQUIPMENT TOGETHER TO A SINGLE-POINT OR INTERIOR EQUIPMENT RING GROUND (EGR). BOND THE SINGLE-POINT OR EGR TO THE EXTERNAL EQUIPMENT GROUND RING.
- PLACE GROUND RODS AT THE EQUIPMENT GROUND RING CORNERS.

GROUND RODS:

- SEPARATION SPACE BETWEEN ANY 2 GROUND RODS SHALL BE NO CLOSER THAN THEIR DEPTH. THIS APPLIES TO ALL RODS IN THE CONCRETE SYSTEM.
- DRIVE VERTICALLY IN UNDISTURBED SOIL WITH THE TOP AT SAME DEPTH AS THE IN-GROUND CONDUCTOR, IF NOT POSSIBLE TO INSTALL VERTICALLY, PLACE AS CLOSE TO VERTICAL AS POSSIBLE AND IN A DIRECTION AWAY FROM THE NEAREST ABOVE-GROUND CONDUCTIVE ELEMENT (TOWER, EQUIPMENT, ETC.).
- RADIALS (PER NEW DECATAGON COMMUNICATION SYSTEM):
 - WHERE FEASIBLE WITH ENOUGH SPACE AVAILABLE, INSTALL A MINIMUM OF 4, MAXIMUM 10 RING RADIALS.
 - EACH RADIALS LENGTH SHALL BE MIN 20 FT, MAX 80 FT.
 - INSTALL RADIALS AT 90 DEGREE PERPENDICULAR TO AN STRAIGHT LINE AS POSSIBLE, AWAY FROM OTHER RING RADIALS, RADIALS, BONDING, AND SIMILAR.
 - A COMMON PRACTICE IS TO PLACE 4 RADIALS FROM THE TOWER RING TO THE 4 CORNERS OF THE AVAILABLE AREA.
- AT A MINIMUM, BOND ALL COMPOUND CONDUCTIVE FENCE CORNER POSTS AND GATE POSTS TO THE LPGS. PREFERABLY, INSTALL A

GROUND RING THAT FOLLOWS THE FENCE LINE, BONDING ALL POSTS TO THE RING.

27 ANTENNAS & CABLES:

THESE SPECIFICATIONS SHALL INCLUDE THE GENERAL SPECIFICATIONS HEREIN.

THE CONTRACTOR SHALL FURNISH AND INSTALL ALL TRANSMISSION CABLES, JUMPERS, CONNECTORS, GROUNDING STRAPS, ANTENNAS, MOUNTS AND HARDWARE. ALL MATERIALS SHALL BE INSPECTED BY THE CONTRACTOR FOR DAMAGE UPON DELIVERY. JUMPERS SHALL BE SUPPLIED AT ANTENNAS AND EQUIPMENT INSIDE SHELTER.

COORDINATE LENGTH OF WIRE CABLES WITH OWNER. COORDINATE AND VERIFY ALL OF THE MATERIALS TO BE PROVIDED WITH OWNER PRIOR TO SUBMITTING BID AND ORDERING MATERIALS.

AFTER INSTALLATION, THE TRANSMISSION LINE SYSTEM SHALL BE PW/ SWEEP TESTED FOR PROPER INSTALLATION AND DAMAGE WITH ANTENNAS CONNECTED. CONTRACTOR SHALL OBTAIN AND USE LATEST TESTING PROCEDURES FROM OWNER OR MANUFACTURER PRIOR TO BIDDING.

ANTENNA CABLES SHALL BE UNIQUELY COLOR-CODED AT THE ANTENNAS. BOTH SIDES OF EQUIPMENT SHELTER WALL, AND JUMPER CABLES AT THE EQUIPMENT.

THE CONTRACTOR SHALL FURNISH AND INSTALL ALL CONNECTORS, ASSOCIATED CABLE MOUNTING AND HARDWARE, WALL MOUNTS, STANDOFFS, AND ALL ASSOCIATED HARDWARE TO INSTALL ALL CABLES AND ANTENNAS TO THE MANUFACTURERS AND OWNERS SPECIFICATIONS.

ANTENNA CABLES SHALL BE FOAM DIELECTRIC COAXIAL CABLES AS FOLLOWS:

- BASE STATION ANTENNAS:
 - 7/8" DIAMETER FOR CABLE LENGTHS UP TO 100 FT.
 - 1-5/8" DIAMETER FOR CABLE LENGTHS GREATER THAN 100 FT.
 - GPS ANTENNAS
 - 7/8" DIAMETER FOR CABLE LENGTHS UP TO 200 FT.
 - 1-5/8" DIAMETER FOR CABLE LENGTHS GREATER THAN 200 FT.
- MINIMUM BENDING RADIUS FOR COAXIAL CABLES SHALL BE:
 - 15 FT FOR 7/8" COAXIAL CABLES
 - 25 FT FOR 1-5/8" COAXIAL CABLES
- CABLE SHALL BE INSTALLED WITH A MINIMUM NUMBER OF BENDS WHERE POSSIBLE. CABLE SHALL NOT BE LEFT UNTERMINATED AND SHALL BE SEALED IMMEDIATELY AFTER BEING INSTALLED.
- ALL EXTERIOR CABLE CONNECTIONS SHALL BE COVERED WITH A WATERPROOF SPlicing KIT.
- CONTRACTOR SHALL VERIFY EXACT LENGTH AND DIRECTION OF TRAVEL IN FIELD PRIOR TO CONSTRUCTION.
- CABLE SHALL BE FURNISHED AND INSTALLED WITHOUT SPLICES AND WITH CONNECTORS AT EACH END.

28 CABLE TRAY:

THESE SPECIFICATIONS SHALL INCLUDE THE GENERAL SPECIFICATIONS HEREIN.

CABLE TRAY SHALL BE MADE OF EITHER CORROSION RESISTANT METAL OR WITH A CORROSION RESISTANT FINISH.

CABLE TRAY SHALL BE OF LADDER TRAY TYPE WITH FLAT COVER CLAIMED TO SIDE RAILS.

CABLE LADDER SHALL BE SIZED TO FIT ALL CABLES IN ACCORDANCE WITH NEC AND NEMA 11-15-84.

CABLE LADDER TRAYS SHALL BE NEMA CLASS 12A BY PW INDUSTRIES, INC. OR EQUAL.

CABLE LADDER TRAY SHALL BE SUPPORTED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.

ALL WORKMANSHIP SHALL CONFORM TO THESE REQUIREMENTS AND ALL LOCAL CODES AND STANDARDS TO ENSURE SAFE AND ADEQUATE GROUNDING SYSTEM.

31 EXCAVATION & FILL:

THESE SPECIFICATIONS SHALL INCLUDE THE GENERAL SPECIFICATIONS HEREIN.

CONTRACTOR SHALL GRADE ONLY AREAS SHOWN TO BE MODIFIED AS A PART OF THIS WORK AND ONLY TO THE EXTENT REQUIRED TO SHED OVERLAND WATER FLOW AWAY FROM SITE. ALL MADE SLOPES SHALL NOT BE STEEPER THAN 3:1 HORIZONTAL:VERTICAL. SEDIMENTATION AND EROSION CONTROLS SHOWN AND SPECIFIED SHALL BE ESTABLISHED BEFORE STRIPPING EXISTING VEGETATION.

ORGANIC MATERIAL AND DEBRIS SHALL BE STRIPPED AND STOCKPILED BEFORE ADDING FILL MATERIAL.

NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.

ALL FILL SHALL BE PLACED IN ONE FOOT LIFTS AND COMPACTED IN PLACE. STRUCTURAL FILL SHALL BE COMPACTED TO 95% OF MAXIMUM DRY UNIT WEIGHT TESTED IN ACCORDANCE WITH ASTM D1557.

EXCAVATIONS FOR FOOTINGS SHALL BE CUT LEVEL TO THE REQUIRED DEPTH AND TO UNDISTURBED SOIL. REPORT UNSUITABLE SOIL CONDITIONS TO THE CONSTRUCTION MANAGER.

TRENCH EXCAVATIONS SHALL BE BACKFILLED AT THE END OF EACH DAY.

TOWER FOUNDATION EXCAVATION, BACKFILL AND COMPACTION SHALL BE IN ACCORDANCE WITH TOWER MANUFACTURERS' DESIGNS AND SPECIFICATIONS.

NATIVE GRAVEL MATERIAL MAY BE USED FOR TRENCH BACKFILL WHERE SELECT MATERIAL IS NOT SPECIFIED. GRAVEL MATERIAL FOR CONDUIT TRENCH BACKFILL SHALL NOT CONTAIN ROCK OR OTHER ROCK MATERIAL IN DIAMETER.

BANK OR CRUSHED GRAVEL SHALL CONSIST OF TOUGH, DURABLE PARTICLES OF CRUSHED OR UNCRUSHED GRAVEL FREE OF SOFT, THIN, ELONGATED OR LAMINATED PIECES AND MEET THE SPECIFIED GRADE.

PROCESSED AGGREGATE BASE SHALL CONSIST OF COURSE AND FINE AGGREGATES COMBINED AND MIXED SO THAT THE RESULTING MATERIAL COMPACTED TO 95% OF MAXIMUM DRY UNIT WEIGHT SHALL BE EITHER GRAVEL, OR BROKEN STONE AND FINE AGGREGATE SHALL CONSIST OF SAND.

BANK GRAVEL FILL SHALL PASS WITH THE FOLLOWING SIZE SQUARE MESH SIEVES:

- 25-60% WITH PASS #14
- 15-65% WITH PASS #10
- 2-25% WITH PASS #40
- 0-10% WITH PASS #100
- 0-5% WITH PASS #200

PROCESSED AFG BASE SHALL PASS WITH THE FOLLOWING SIZE SQUARE MESH SIEVES:

- 90-100% WITH PASS 3-1/2"
- 50-90% WITH PASS 1-1/2"
- 50-70% WITH PASS 3/4"
- 25-45% WITH PASS #14
- 5-20% WITH PASS #40
- 2-12% WITH PASS #100
- 0-10% WITH PASS #100
- 0-5% WITH PASS #200

FILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL, ICE, TRASH AND DEBRIS. REFER TO GEOTECHNICAL ENGINEERING AS APPLICABLE FOR ALL FILL MATERIAL REQUIREMENTS.

31 SEDIMENTATION & EROSION CONTROL:

THESE SPECIFICATIONS SHALL INCLUDE THE GENERAL SPECIFICATIONS HEREIN.

CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXIST SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL REGULATIONS FOR EROSION AND SEDIMENTATION CONTROL.

LIMITS OF CLEARING AND GRUBBING SHALL BE CLEARLY MARKED BEFORE COMMENCING WITH SUCH WORK.

SEDIMENTATION AND EROSION CONTROL MEASURES SHOWN SHALL BE INSTALLED PRIOR TO LAND CLEARING, EXCAVATION OR GRADING OPERATIONS. REQUIREMENTS OF LOCAL WETLAND AGENCY SHALL BE MET PRIOR TO EARTHWORK OPERATIONS.

IT IS THE CONTRACTORS RESPONSIBILITY TO MAINTAIN SEC MEASURES THROUGHOUT DURATION OF PROJECT UNTIL DISTURBED LAND IS THOROUGHLY VEGETATED.

FAILURE OF THE SEC SYSTEMS SHALL BE CORRECTED IMMEDIATELY AND SUPPLEMENTED WITH ADDITIONAL MEASURES AS NEEDED.

TOPSOIL SHALL BE SPREAD TO FINISH GRADES AND SEEDED AS SOON AS FINISHED GRADES ARE ESTABLISHED. STRAW MULCH, LIME NUTTING OR MATS SHALL BE USED WHERE THE NEW SEED IS PLACED.

VEGETATIVE SEEDING:

- AREA TO BE SEEDED SHALL BE LOOSE AND FRAGILE TO A DEPTH OF 3" TOPSOIL SHALL BE LOOSENED BY PANKING OR DISKING BEFORE SEEDING. SEEDING SHALL BE PERFORMED IN PREFERENTIAL AREAS AS FOLLOWS:
 - 10-10-10 FERTILIZER PER 1000 SF. HARROW LINE AND FERTILIZER INTO LOOSE SOIL.
 - APPLY COMMON BERMAUDA AND RYE GRASS AT 50 LBS PER ACRE. USE CYCLONE SEED DRILL CULTPACKER SEEDER OR HYDROSEEDER (SEED & FERTILIZER SLURRY) FOR STEEP SLOPES. IRRIGATE UNTIL VEGETATION IS COMPLETELY ESTABLISHED.



567 VAUXHALL STREET EXTENSION - SUITE 311
WATERFORD, CT 06385 PHONE: (860)-663-1697
WWW.ALLPOINTS TECH.COM FAX: (860)-663-9935

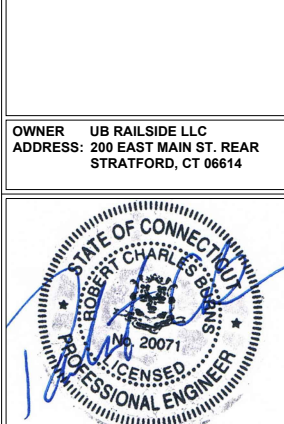


381 HIGHLAND STREET
WEST HAVEN, CT 06516
OFFICE: (203) 932-4601

D&M DOCUMENTS

NO	DATE	REVISION
0	08/17/23	FOR FILING: JRM
1	09/07/23	REV. FOR FILING: JRM

OWNER UB RAILSIDE LLC
ADDRESS 200 EAST MAIN ST. REAR STRATFORD, CT 06614



"DOCK SHOPPING CENTER"

SITE 200 EAST MAIN ST. REAR
ADDRESS STRATFORD, CT 06614

APT FILING NUMBER: CT560100

DRAWN BY: JME/LZ **CHECKED BY:** JRM

DATE: 08/XX/23

SHEET TITLE:

NOTES & SPECIFICATIONS

SHEET NUMBER:

N-1

ATTACHMENT 2

(Letters from Wireless Carriers)



September 1, 2023

Jesse A. Langer, Esq.
Updike, Kelly & Spellacy, P.C.
One Century Tower
265 Church Street - 10th Floor
New Haven, CT 06510

Re: Barrett Outdoor Communications, CSC Docket 511, 200 East Main Street Rear, Stratford, CT AT&TCT1848 Stratford 12685513

Dear Attorney Langer,

Enclosed, please find a Certification Letter for the above referenced matter.

Thank you.

A handwritten signature in blue ink that reads 'Kevin L. Mason'.

Kevin L. Mason
Sr. Project Manager
617-597-7256
kmason@saigrp.com

Lynn Brady, AT&T
Dan Bilezikian, SAI



August 31, 2023

Ms. Melanie A. Bachman, Esq.
Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

Re: DOCKET NO. 511 – Barrett Outdoor Communications application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a telecommunications facility located at 200 East Main Street Rear, Stratford, Connecticut. Certification Letter

Dear Attorney Bachman:

In accordance with condition 2a of the Siting Council's Decision and Order ("D&O") in Docket No. 511, this letter serves as AT&T's commitment to install and operate its wireless facility on the approved monopole facility upon completion of construction by Barrett Outdoor Communications.

Thank you for your consideration of this information.

Very truly yours,

A handwritten signature in blue ink, appearing to read "Lynn Brady".

Lynn Brady
Sr. Manager, Real Estate & Construction
AT&T Mobility New England

550 Cochituate Rd. Suite 13 and 14
Framingham, MA 01701



August 31, 2023

Ms. Melanie A. Bachman, Esq.
Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

Re: Docket 511 - Barrett Outdoor Communications, Inc application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a telecommunications facility located at 200 East Main Street Rear, Stratford, Connecticut.

Dear Attorney Bachman:

Cellco Partnership, dba Verizon Wireless, has a Fully Executed Lease with John Barrett & Barrett Outdoor Communications, Inc., and intends to relocate its Communications Facility currently located on the billboard at 28 Sidney Street, Stratford to the recently approved monopole telecommunication facility located at the 200 East Main Street Rear, Stratford.

Verizon will relocate its equipment to the new tower once construction of the tower is completed, and Verizon has received all required Approvals and Permits to collocate from both the Connecticut Siting Council and the Town of Stratford.

Please let me know if you have any questions. I can be reached by phone at 508-330-6678, or by email at anthony.befera@verizonwireless.com. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "Anthony Befera".

Tony Befera
Principal Engineer - Real Estate / Regulatory



20 Alexander Drive
Wallingford, CT 06492

M 508-330-6678

ATTACHMENT 3

(Tower and Foundation Design)

Date: 7/28/2023

Barrett Outdoor

Attn: John Barrett

SUBJECT: Project Number: 584934
Site Name: Dock Shopping Center – Stratford, CT
Structure: 134-ft Monopole
Designed within a Theoretical Fall Radius of 15-ft

Communication structures designed by Valmont are sized in accordance with the latest governing revision of the ANSI/TIA 222 standard unless otherwise requested by our customer or the governing jurisdiction. This standard has been approved by ANSI/ASCE, which has dealt with the design of antenna support structures since the late 1950s. The TIA standard, based on provisions of this nationally known specification, has a long history of reliability. Its core philosophy is first and foremost to safeguard and maintain the health and welfare of the public.

Valmont's communication structures have proven to be very reliable products. We use the latest standards, wind speed information, and sophisticated analytical tools to ensure that we continue providing high quality structures.

This structure is designed to the following criteria:

- Exposure Category C
- Topographical Category 1
- Risk Category II
- Site Elevation 12 feet
- 120 MPH Ultimate Wind Speed (no ice) per ASCE 7-16
- 50 MPH with 1.0 inch ice per ANSI/TIA-222-H

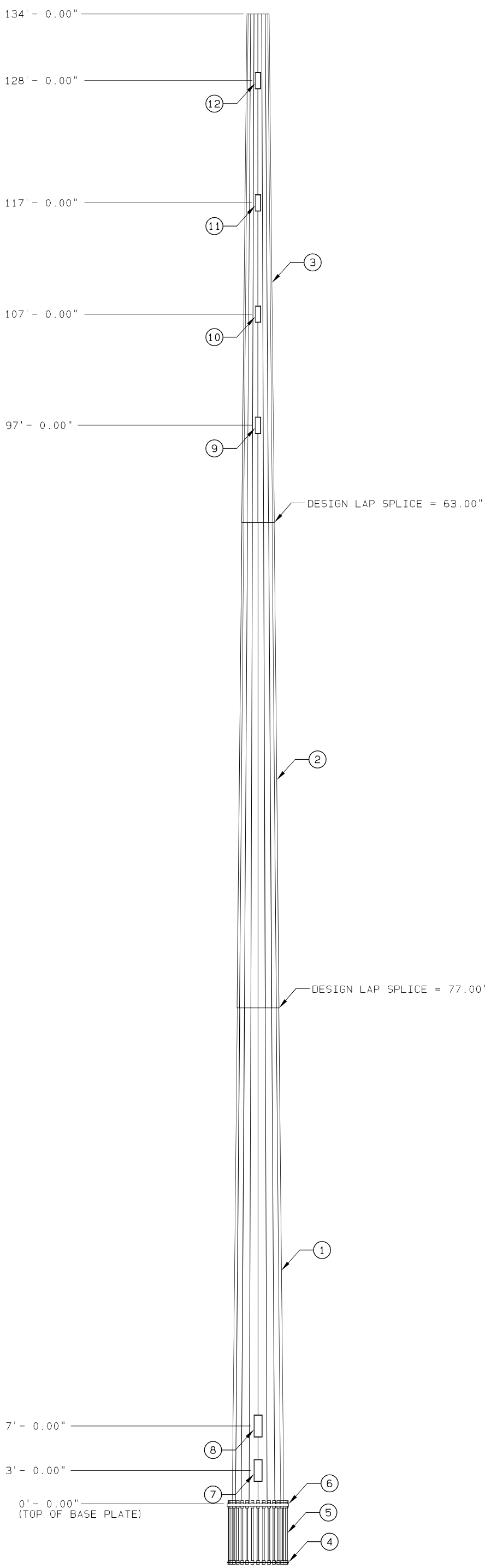
The theoretical failure point is at the structure midpoint or above by purposely over designing the structural components below this point. The predicted mode of wind induced failure would be local buckling of the shaft at or above the midpoint with the upper section folding over onto the intact lower sections resulting in an effective fall zone radius of 0 feet (less than 15 feet).

I hope these comments address any questions or concerns relative to the anticipated performance of this structure; please reach out directly should you have any questions or comments.

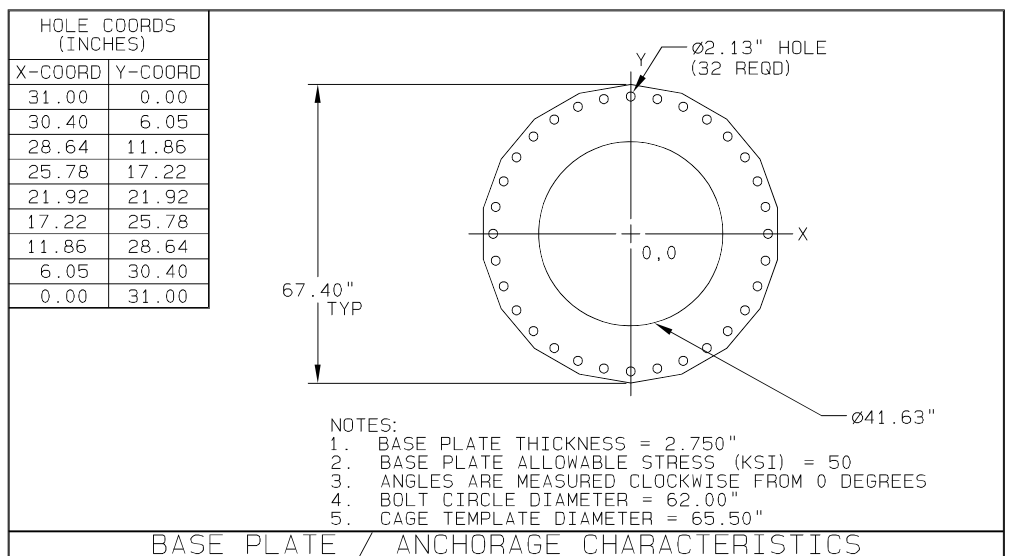
Sincerely,

Chandra Sekhar Rugada
Assistant Manager - Design
Chandra.Rao@Valmont.com





ITEM ID	NO. REQD	FEATURES	UNIT WEIGHT (LBS)	WEIGHT (LBS)
1	1	SECTION A VALMONT S-22 0.500" THK (A572 GR65)	13,368	13,368
2	1	SECTION B VALMONT S-22 0.438" THK (A572 GR65)	8,971	8,971
3	1	SECTION C VALMONT S-22 0.250" THK (A572 GR65)	3,610	3,610
4	1	BOTTOM CAGE PLATE	121	121
5	32	1.75" ANCHOR BOLT, LENGTH=5.50' A615 GR75	64	2,029
6	1	BASE PLATE VALMONT S-56 2.750" THK (A572 GR50)	1,577	1,577
	1	TOP CAGE PLATE (REMOVE BEFORE SETTING POLE)	160	160
	1	SAFETY CLIMBING CABLE (LENGTH = 124.00')	98	98
	3	GROUNDING LUG	2	6
		GALVANIZING	439	439
	168	STEP AND CLIP (VALMONT STANDARD)	1	168
7	2	HAND HOLE HVY (9" x 24")	52	104
8	2	HAND HOLE HVY (9" x 24")	52	104
9	3	HAND HOLE STD (6" x 18")	18	54
10	3	HAND HOLE STD (6" x 18")	18	54
11	3	HAND HOLE STD (6" x 18")	18	54
12	3	HAND HOLE STD (6" x 18")	18	54
	1	POLE CAP	30	30



- NOTES:
- FACTORED BASE REACTIONS
 MOMENT = 70.879 IN-KIPS
 SHEAR = 55,686 #
 VERTICAL = 54,238 #
 - GALVANIZED PER ASTM A-123.
 - DESIGN CRITERIA: TIA-222-H
 - THIS STRUCTURE HAS BEEN DESIGNED FOR THE FOLLOWING LOADING:
 EXPOSURE CATEGORY = C
 TOPOGRAPHY CATEGORY = 1
 RISK CATEGORY = II
 SITE ELEVATION = 12 FT
 EARTHQUAKE SPECTRAL RESPONSE ACCELERATION AT SHORT PERIODS $S_S = 0.21$
 EARTHQUAKE SPECTRAL RESPONSE ACCELERATION AT ONE SECOND $S_1 = 0.05$
 EARTHQUAKE SITE CLASS = D
 WIND LOAD CASES ARE BASED ON 3 SECOND GUST AND 700 YEAR MRI
 A. CASE 1: WIND = 120 MPH WIND SPEED
 B. CASE 2: WIND = 50 MPH ICE AND WIND SPEED
 DESIGN ICE THICKNESS = 1.00 IN
 C. CASE 3: WIND = 60 MPH WIND SPEED
 D. CASE 4: SEISMIC
 E. CASE 5: SEISMIC
 F. EQUIPMENT

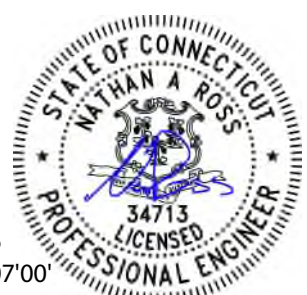
DESCRIPTION	ABP MTG HT. (FT)	ABP CENTROID HT. (FT)	WITHOUT ICE EPA WT (FT**2)	WITH ICE EPA WT (FT**2)	WITHOUT ICE WT (LBS)	WITH ICE WT (LBS)
1-CARRIER #1 - 208 SQ FT	131.00	131.00	208.00	416.00	416.00	8320
1-CARRIER #2 - 208 SQ FT	120.00	120.00	208.00	416.00	416.00	8320
1-CARRIER #3 - 208 SQ FT	110.00	110.00	208.00	416.00	416.00	8320
1-CARRIER #4 - 208 SQ FT	100.00	100.00	208.00	416.00	416.00	8320
3-DETUNING SKIRT MOUNT	127.00	127.00	2.10	4.20	4.20	8
3-DETUNING SKIRT MOUNT	110.00	110.00	3.00	6.00	6.00	12
3-DETUNING SKIRT MOUNT	90.00	90.00	3.00	6.00	6.00	12
3-DETUNING SKIRT MOUNT	70.00	70.00	3.00	6.00	6.00	12
3-DETUNING SKIRT MOUNT	50.00	50.00	3.00	6.00	6.00	12
3-DETUNING SKIRT MOUNT	30.00	30.00	3.00	6.00	6.00	12
3-DETUNING SKIRT MOUNT	10.00	10.00	3.00	6.00	6.00	12
1-1/2" X 4' LIGHTNING ROD LIGH	134.00	136.00	0.20	0.96	0.96	24
3-24" STANDOFF MOUNTS	127.00	127.00	3.41	5.22	5.22	223
3-24" STANDOFF MOUNTS	110.00	110.00	3.41	5.19	5.19	220
3-24" STANDOFF MOUNTS	90.00	90.00	3.41	5.16	5.16	217
3-24" STANDOFF MOUNTS	70.00	70.00	3.41	5.12	5.12	212
3-24" STANDOFF MOUNTS	50.00	50.00	3.41	5.07	5.07	207
3-24" STANDOFF MOUNTS	30.00	30.00	3.41	5.00	5.00	199
3-24" STANDOFF MOUNTS	10.00	10.00	3.41	4.85	4.85	186

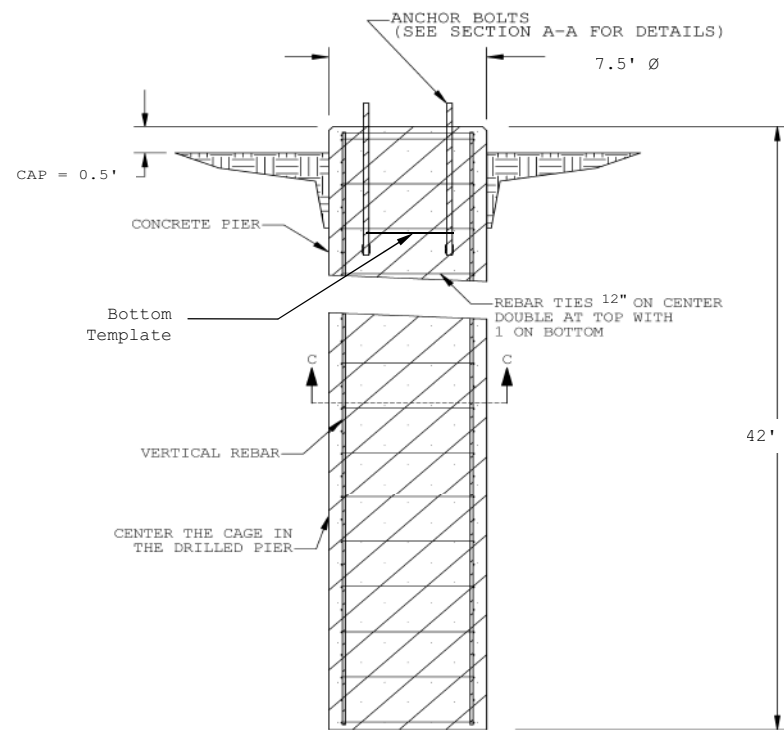
- FEEDLINES ARE PLACED INTERIOR TO THE POLE SHAFT (UNLESS NOTED OTHERWISE)
- TOTAL POLE HEIGHT IS 135 FT AGL
- ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE (APPROX. 1 FT AGL)
- 18 SIDED SHAFT
- DESIGNED TO A MAXIMUM CSR OF 0.85
- DESIGN MEETS THE REQUIRED 15' FALL ZONE RADIUS
- A STANDARD 3-WIRE (3/8") DETUNING KIT ASSUMED TO RUN FROM TOP TO BOTTOM WITH STANDOFF POINTS AT EVERY 20' INTERVAL
- MINIMUM TOP DIAMETER = 24"
- ALTHOUGH RARE, VIBRATIONS SEVERE ENOUGH TO CAUSE DAMAGE CAN OCCASIONALLY OCCUR IN STRUCTURES OF ALL TYPES. BECAUSE THEY ARE INFLUENCED BY MANY INTERACTING VARIABLES, VIBRATIONS ARE GENERALLY UNPREDICTABLE. THE USER'S MAINTENANCE PROGRAM SHOULD INCLUDE OBSERVATION FOR EXCESSIVE VIBRATION AND EXAMINATION FOR ANY STRUCTURAL DAMAGE OR BOLT LOOSENING. THE VALMONT WARRANTY SPECIFICALLY EXCLUDES FATIGUE FAILURE OR SIMILAR PHENOMENA RESULTING FROM INDUCED VIBRATION, HARMONIC OSCILLATION OR RESONANCE ASSOCIATED WITH MOVEMENT OF AIR CURRENTS AROUND THE PRODUCT.

SECTION INFORMATION					
ITEM ID	LENGTH	BASE OD	TOP OD	THK	MATL
1	51' - 0.00"	55.50"	42.99"	0.500"	A572 65 KSI
2	48' - 11.00"	45.44"	33.44"	0.438"	A572 65 KSI
3	45' - 9.00"	35.22"	24.00"	0.250"	A572 65 KSI

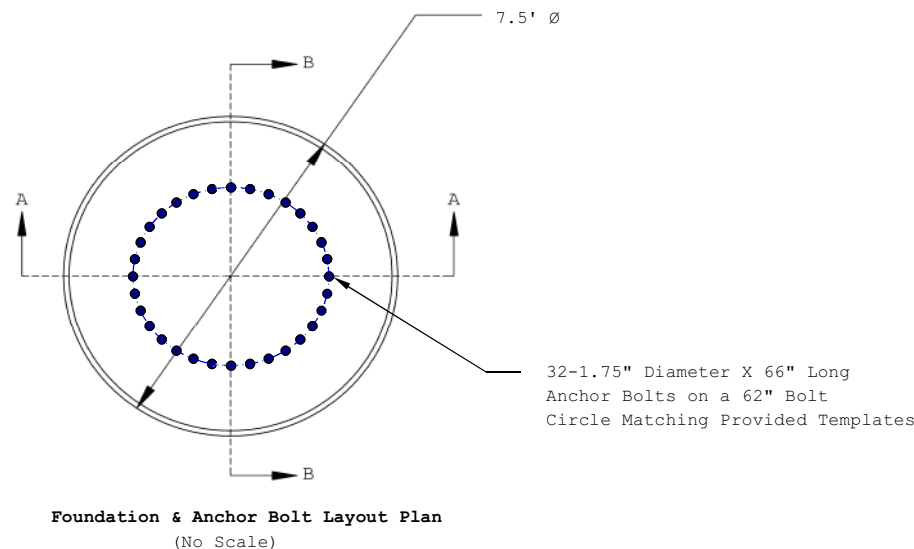
ORDER	PROJECT	FILE ID	SCALE	DATE	ENGR
584934		584934-P1	NONE	07/26/23	CR71
DESCRIPTION					
BARRETT OUTDOOR 134.0' POLE, SITE: DOCK SHOPPING CENTER - STRATFORD, CT					

Nathan A Ross
 Date: 2023.07.26
 14:37:30 -07'00'

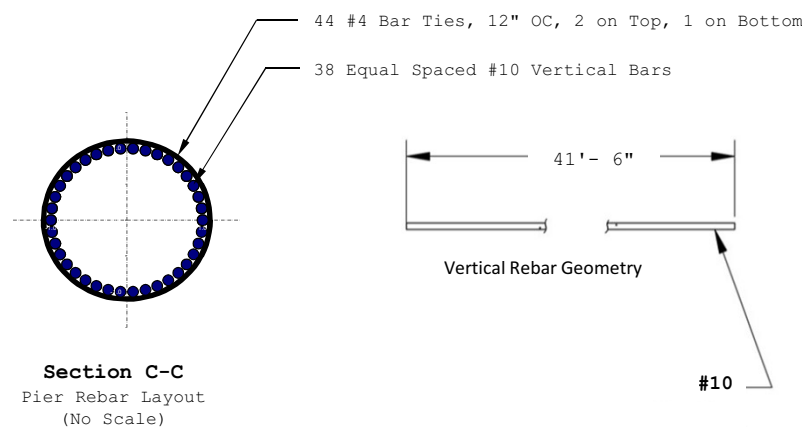




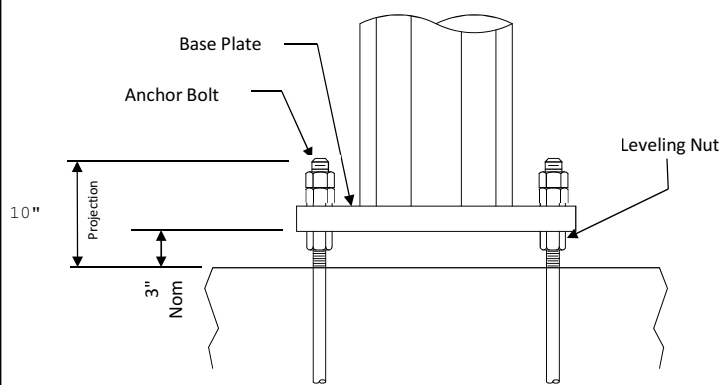
Section B-B
Pier Elevation
(No Scale)



Foundation & Anchor Bolt Layout Plan
(No Scale)



Section C-C
Pier Rebar Layout
(No Scale)



Section A-A Typ
Anchor Bolt Elevation
(No Scale)

Note:
Extreme care should be taken to ensure that all leveling nuts are level with respect to each other prior to erection of the structure. Anchor bolts shall extend through the top nut completely, fully engaging all nut threads. Distance from top of concrete to bottom of leveling nut shall not exceed the diameter of the anchor bolt.

- Special Inspection**
1. Inspection of reinforcing steel and placement (periodic).
 2. Inspection of anchor bolts cast in concrete (periodic).
 3. Verifying use of required mix design (periodic).
 4. At the time fresh concrete is sampled to fabricate specimens for strength tests; perform slump and air content tests and determine temperature of concrete (continuous).
 5. Inspection of concrete placement for proper application techniques (continuous).
 6. Verify excavations are extended to proper depth and have reached proper material (periodic).
 7. Observe drilling operations and maintain complete and accurate records for each element (continuous).
 8. Verify placement locations and plumbness, confirm element diameters, lengths, and adequate end-bearing strata capacity; record concrete volume (continuous).
 9. Inspect formwork for shape, location, and dimensions of the concrete member being formed (periodic).

General Notes: Drilled Pier

1. Prior to excavation, check the area for underground facilities.
2. All reinforcing shall be deformed bars conforming to ASTM A615 Grade 60 (60,000 psi min. yield) and shall be provided by the foundation contractor.
3. All concrete shall have a minimum compressive strength of 4500 psi @ 28 days. The requirement for the concrete shall be as given in the ACI "Building Code Requirements for Reinforced Concrete", ACI 318, the latest edition.
4. Trowel top of pedestal smooth with slight crown for proper drainage.
5. Steel reinforcement and concrete should be placed immediately upon completion of the pier excavations. Contractor shall not allow a cold joint to form in the pier. Portion above grade should be formed. Temporary casing may be required to prevent caving prior to concrete placement.
6. The ground water was encountered at 8' below grade during boring.
7. Concrete is assumed to weigh 150 pcf.
8. Estimated concrete volume = 68.8 cubic yards total.
9. Design Based on the following loads from installation drawing for order No: 584934.

Factored Moment = 84379 in-kips
Factored Shear = 66.29 kips
Factored Download = 54.24 kips

10. Reference: Langan Project No.: 140199301 dated 12 October 2020 (Reference Bore Log:LB-102)
11. Concrete shall be placed using a tremie to the depth indicated on the foundation drawing.
12. Anchor bolts to be ASTM A615, Gr. 75 ksi.
13. Ref Soils Report for installation recommendations.
14. Foundation designed to not exceed 84% of monopole's capacity.
15. A permanent steel casing is recommended per geotech report.
16. Bedrock is assumed to extend from 36' (Depth at which boring was terminated) to 42'. Please report to Valmont if a different type of soil is encountered below 36'.

Reinforcement Steel Schedule						
-	Type	Rebar size	Rebar Spacing	Bar Weight lb/ft	Weight (lbs)	Bar Qty
1	Vertical	#10	Equal	4.3	6781	38
2	Ties	#4	12"	0.67	667	44
Total Steel Weight for Foundation Installation =					7448	

Rebar Lap Splice Table			
Rebar Size	Rebar Grade	Concrete Strength PSI	Rebar Overlap Inches
#10	60	4500	45
#4	60	4500	14

Rebar Ties - Hook Geometry		
Rebar Size	6db* **	4db*
	Min Length	Nominal Diameter
	N/A	N/A

* db = Bar Diameter
** Refers to ACI 135 degree hook detail

Notes:
Lap splice may be used when seismic hooks are not required. Overlaps and hooks at ends of adjacent circular ties shall be staggered around the perimeter enclosing the vertical bars. Adjacent hooks shall not engage the same vertical bar. Where vertical bars are to be spliced, splices shall be staggered.



Nathan A Ross
Date: 2023.07.26
14:47:18 -07'00'

Rev	Description	Date	By/Ck

valmont STRUCTURES
28800 Ida Street
Valley, NE 68064
(402) 359-2201

By: CR
Check: CR
Date: 07-26-23

Drilled Pier Foundation Layout
Customer: Barrett Outdoor
Site: Dock Shopping Center - Stratford, CT



Valmont Industries, Inc.
PO Box 358, 28800 Ida Street
Valley, NE 68064 USA
1-800-547-2151

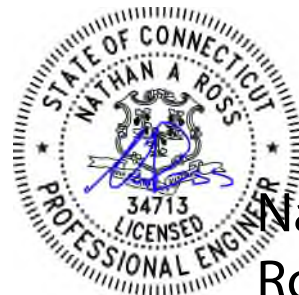
Communication Structure Calculations
for
Barrett Outdoor
Dock Shopping Center - Stratford, CT

584934-P1

Wednesday, 26 July 2023

Prepared By:
Chandra Rao

Reviewed By:
CR



Nathan A
Ross Date:
2023.07.26
14:38:42 -07'00'

Proprietary Information

These documents, drawings and/or calculations and all information related to them are the exclusive property and the proprietary information of Valmont Industries, Inc. and are furnished solely upon the conditions that they will be retained in strictest confidence and shall not be duplicated, used or disclosed in whole or in part for any purpose, in any way, without the prior written permission of Valmont Industries, Inc.



Valmont Industries, Inc.
PO Box 358, 28800 Ida Street
Valley, NE 68064 USA
1-800-547-2151

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BARRETT OUTDOOR 134.0' POLE, SITE: DOCK SHOPPING CENTER - STRATFORD, CT.....	1

Proprietary Information

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Valmont Industries, Inc.
 Project Summary
 Barrett Outdoor
 584934

Structure Identifier	Pole Height (ft)	Emb. Length (ft)	Anchor Bolts			Shaft Diameters			Weight (lb)								Global Base Reactions For Pole Shaft Governing Load Case				Max Defl (in)
			Max Bolt Circle (in)	Anchor Bolt Length (in)	Qty	Base (in)	Ground Line (in)	Top (in)	Sect A	Sect B	Sect C	Sect D	Sect E	Sect F	Base Plate	Anchor Bolts	Load Case Identifier	Moment (in-kip)	Shear (kips)	Axial (kips)	
584934-P1	134.00	----	62.00	66	32	55.50	55.50	24.00	13368	8971	3610	----	----	----	1577	2029	WIND	70879	55.7	52.7	104

Valmont Industries, Inc.
 Project Summary
 Barrett Outdoor
 584934

Structure Identifier	Shaft Yield Stress (ksi)	Shaft Taper (in/ft)	Shaft Shape	Anchor Bolt Diameter (in)	Base Plate Width/Length (in)	Base Plate Thickness (in)	Camber (in)	Length (ft)						Thickness (in)					
								Sect A	Sect B	Sect C	Sect D	Sect E	Sect F	Sect A	Sect B	Sect C	Sect D	Sect E	Sect F
584934-P1	65	0.245	18	1.75	66.38	2.75	0.0	51.00	48.92	45.75	----	----	----	0.500	0.438	0.250	----	----	----

Valmont Industries, Inc.
 Project Summary
 Barrett Outdoor
 584934

Structure Identifier	Section Data																
	"A" Base Diameter (in)	"A" Top Diameter (in)	"B" Base Diameter (in)	"B" Top Diameter (in)	"C" Base Diameter (in)	"C" Top Diameter (in)	"D" Base Diameter (in)	"D" Top Diameter (in)	"E" Base Diameter (in)	"E" Top Diameter (in)	"F" Base Diameter (in)	"F" Top Diameter (in)	"A"- "B" Joint Type	"B"- "C" Joint Type	"C"- "D" Joint Type	"D"- "E" Joint Type	"E"- "F" Joint Type
584934-P1	55.50	42.99	45.44	33.44	35.22	24.00	----	----	----	----	----	----	----	Slip Joint	Slip Joint	----	----

Valmont Industries, Inc.
Engineering Data

*** OVERVIEW ***

- 1 Structure design conforms to TIA-222-H including:
 - 120 mph Wind Speed (3 second gust, 700 year mean recurrence interval)
 - 50 mph Ice Wind (500 year mean recurrence interval)
 - 1.00 in ice thickness
 - 60.0 mph Basic Wind Speed with no ice for twist and sway
 - Exposure Category C
 - Risk Category II
 - Topographic Category 1
 - Site Elevation = 12 (ft) above mean sea level
 - Spectral response acceleration at short periods and 1 sec.: $S_s = 0.21$ & $S_1 = 0.05$
 - Site class = D
2. Feedlines are assumed to be placed interior to the pole
3. Total pole height is 135.0 ft agl
4. Elevations are measured from top of base plate (approximately 1.0 ft agl)
5. Designed to a maximum CSR of 0.85
6. Design meets the required 15' fall zone radius
7. A standard 3-wire (3/8") detuning kit assumed to run from top to bottom with standoff points at every 20' interval
8. Minimum Top Diameter = 24"

*** Structure Anchorage Information ***

Pole Height (ft):	134.0	Number of Anchor Bolts:	32
Bolt Circle (in):	62.00	Diameter of Anchor Bolts (in):	1.75
Base Shear (lbs):	55686	Length of Anchor Bolts (in):	66.00
Base Vertical (lbs):	54238	Projection Length (in):	10.00
Base Moment (in-kips):	70879	Template OD (in):	65.50

*** Loading Data***

Qty	Description	ABP Height (ft)	Without Ice		With Ice	
			EPA (ft ²)	Weight (lbs)	EPA (ft ²)	Weight (lbs)
1	CARRIER #1 - 208 SQ FT	131.00	208.00	4160	416.00	8320
1	CARRIER #2 - 208 SQ FT	120.00	208.00	4160	416.00	8320
1	CARRIER #3 - 208 SQ FT	110.00	208.00	4160	416.00	8320
1	CARRIER #4 - 208 SQ FT	100.00	208.00	4160	416.00	8320
3	DETUNING SKIRT MOUNT	127.00	2.10	3	4.20	9
3	DETUNING SKIRT MOUNT	110.00	3.00	6	6.00	12
3	DETUNING SKIRT MOUNT	90.00	3.00	6	6.00	12
3	DETUNING SKIRT MOUNT	70.00	3.00	6	6.00	12
3	DETUNING SKIRT MOUNT	50.00	3.00	6	6.00	12
3	DETUNING SKIRT MOUNT	30.00	3.00	6	6.00	12
3	DETUNING SKIRT MOUNT	10.00	3.00	6	6.00	12
1	1/2" X 4' LIGHTNING ROD	134.00	0.20	14	0.96	24
3	24" STANDOFF	127.00	3.42	87	5.22	222
3	24" STANDOFF	110.00	3.42	87	5.19	219
3	24" STANDOFF	90.00	3.42	87	5.16	216
3	24" STANDOFF	70.00	3.42	87	5.13	213
3	24" STANDOFF	50.00	3.42	87	5.07	207
3	24" STANDOFF	30.00	3.42	87	5.01	198
3	24" STANDOFF	10.00	3.42	87	4.86	186

*** SUMMARY ***

Design Code: TIA-222-H

----- DESIGN SUMMARY -----

Height Above Base Plate	134'- 0.00"	Dia. at Top of Baseplate (in)	55.500	Pole Shaft Weight (lbs)	25949
		Top Diameter (in)	24.000		
		Pole Taper (in/ft)	0.24534	Shape:	18 Sides

Connections Between Sections	/First/	/Second/
Height Above Ground	51'- 0.00"	93'- 6.00"
Type	Slip Joint	Slip Joint
Overlap Length (in)	77	63
Maximum Axial Force (lbs)	58257	45393

Section Characteristics	/First/	/Second/	/Third/
Base Diameter (in)	55.500	45.437	35.224
Top Diameter (in)	42.988	33.436	24.000
Thickness (in)	0.50000	0.43750	0.25000
Length	51'- 0.00"	48'-11.00"	45'- 9.00"
Weight (lbs)	13368	8971	3610
Yield Strength (ksi)	65.00	65.00	65.00
Section Shape	18 Sides	18 Sides	18 Sides

----- ANALYSIS SUMMARY -----

	Pt. of Fixity	Governing Level Sec.1	Governing Level Sec.2	Governing Level Sec.3	Pole Top
Governing Load Case	WIND	WIND	WIND	WIND	WIND
Height (ft)	0.00	0.00	51.00	93.50	134.00
Resultant Moment (in-kips)	70879	70879	37864	12495	0
Shear Force (lbs)	55780	55780	51702	47488	12
Axial Force (lbs)	52563	52563	31981	19976	15
Effective Yield Strength (ksi)	80.45	80.45	82.55	75.32	82.55
Combined Interaction Value	0.84	0.84	0.80	0.85	0.00
Total Deflection (in)	0.00	0.00	14.60	51.04	104.17

Note: Diameters are outside, measured across the flats
Forces and moments are reported in the local element coordinate system

BY VALMONT INDUSTRIES
Design Id: 584934-P1

FOR:

BARRETT OUTDOOR 134.0' POLE, SITE: DOCK SHOPPING CENTER - STRATFORD, C

DATE 07/26/2023

IMPAX 26.1.29.7

*** POLE SHAFT POINT OF FIXITY REACTIONS ***

Loading Case Identifier	Moments About X-Axis (in-kips)	Moments About Y-Axis (in-kips)	Moments Resultant (X & Y) (in-kips)	Moments Torsional (in-kips)	Vertical Force (lbs)	Shear In X-Direction (lbs)	Shear In Y-Direction (lbs)	Shear Resultant (X & Y) (lbs)	Notes
WIND	54296	-45560	70879	21	52661	35795	42658	55686	
ICE + WIND	19179	-16093	25036	7	80209	12141	14469	18888	
T+S	12108	-10160	15806	5	43335	8015	9551	12469	
Seismic	1338	-1123	1747	0	53899	835	995	1299	
Seismic 2	1324	-1111	1728	0	37030	835	995	1299	

Note: Positive vertical force is downward.

Reactions are considered in the global coordinate system.

*** INPUT LOADS ***

Design Code TIA-222-H
 Loading Case WIND (1.2 D + 1.0 Wo)

Basic Wind Velocity is 120.00 mph Ice Thickness 0.00
 Wind Orientation is 50.0 Degrees Clockwise From +X Axis
 Structure Weight Overload Factor is 1.200
 Exposure C, Gust Factor 1.10
 Risk Category II, Topographic Category 1, Crest Height 0.00 ft
 Orientations are Measured Clockwise From +X Axis
 Positive Y Axis is 90 Degrees Clockwise From +X Axis
 Foundation Rotation of 0.00 Degrees
 Elevation of structure base above surrounding terrain = 1.00 ft

Orientation of System
 +***** +X-Axis
 * * (Transverse)
 * *
 * *
 (Longitudinal) * * (Vertical)
 +Y-Axis * * +Z-Axis

Load Number	Mounting Height	Load Height	Load Eccentricity	Orientation in XY Plane (Degrees)	Force-X (lbs)	Force-Y (lbs)	Force-Z (lbs)	EPA (ft^2)	
1	131.00	131.00	0.00	50.00	6908	8233	4992	208.00	1-Carrier #1
2	120.00	120.00	0.00	50.00	6783	8083	4992	208.00	1-Carrier #2
3	110.00	110.00	0.00	50.00	6660	7938	4992	208.00	1-Carrier #3
4	100.00	100.00	0.00	50.00	6529	7781	4992	208.00	1-Carrier #4
5	127.00	127.00	2.00	50.00	69	83	4	2.10	3-Detuning sk
6	110.00	110.00	2.00	50.00	96	114	7	3.00	3-Detuning sk
7	90.00	90.00	2.00	50.00	92	110	7	3.00	3-Detuning sk
8	70.00	70.00	2.00	50.00	87	104	7	3.00	3-Detuning sk
9	50.00	50.00	2.00	50.00	82	97	7	3.00	3-Detuning sk
10	30.00	30.00	2.00	50.00	73	88	7	3.00	3-Detuning sk
11	10.00	10.00	2.00	50.00	63	75	7	3.00	3-Detuning sk
12	134.00	136.00	0.00	50.00	7	8	17	0.20	1-1/2" x 4' 1
13	127.00	127.00	0.00	50.00	113	134	104	3.42	3-24" Standof
14	110.00	110.00	0.00	50.00	110	131	104	3.42	3-24" Standof
15	90.00	90.00	0.00	50.00	105	125	104	3.42	3-24" Standof
16	70.00	70.00	0.00	50.00	100	119	104	3.42	3-24" Standof
17	50.00	50.00	0.00	50.00	93	111	104	3.42	3-24" Standof

BY VALMONT INDUSTRIES
Design Id: 584934-P1

FOR:

BARRETT OUTDOOR 134.0' POLE, SITE: DOCK SHOPPING CENTER - STRATFORD, C

DATE 07/26/2023

IMPAX 26.1.29.7

*** INPUT LOADS ***

Loading Case		WIND - Continued			Orientation of System				
Load Number	Mounting Height	Load Height	Load Eccentricity	Orientation in XY Plane (Degrees)	Force-X (lbs)	Force-Y (lbs)	Force-Z (lbs)	EPA (ft^2)	
18	30.00	30.00	0.00	50.00	84	100	104	3.42	3-24" Standof
19	10.00	10.00	0.00	50.00	72	86	104	3.42	3-24" Standof

*** INPUT LOADS ***

Design Code TIA-222-H
 Loading Case ICE + WIND (1.2 D + 1.0 Wi + 1.0 Di)

Basic Wind Velocity is 50.00 mph Ice Thickness 1.00
 Wind Orientation is 50.0 Degrees Clockwise From +X Axis
 Structure Weight Overload Factor is 1.200
 Exposure C, Gust Factor 1.10
 Risk Category II, Topographic Category 1, Crest Height 0.00 ft
 Orientations are Measured Clockwise From +X Axis
 Positive Y Axis is 90 Degrees Clockwise From +X Axis
 Foundation Rotation of 0.00 Degrees
 Elevation of structure base above surrounding terrain = 1.00 ft

Orientation of System
 +***** +X-Axis
 * * (Transverse)
 * *
 * *
 (Longitudinal) * * (Vertical)
 +Y-Axis * * +Z-Axis

Load Number	Mounting Height	Load Height	Load Eccentricity	Orientation in XY Plane (Degrees)	Force-X (lbs)	Force-Y (lbs)	Force-Z (lbs)	EPA (ft^2)	
1	131.00	131.00	0.00	50.00	2399	2859	9984	416.00	1-Carrier #1
2	120.00	120.00	0.00	50.00	2355	2807	9984	416.00	1-Carrier #2
3	110.00	110.00	0.00	50.00	2313	2756	9984	416.00	1-Carrier #3
4	100.00	100.00	0.00	50.00	2267	2702	9984	416.00	1-Carrier #4
5	127.00	127.00	2.00	50.00	24	29	11	4.20	3-Detuning sk
6	110.00	110.00	2.00	50.00	33	40	14	6.00	3-Detuning sk
7	90.00	90.00	2.00	50.00	32	38	14	6.00	3-Detuning sk
8	70.00	70.00	2.00	50.00	30	36	14	6.00	3-Detuning sk
9	50.00	50.00	2.00	50.00	28	34	14	6.00	3-Detuning sk
10	30.00	30.00	2.00	50.00	26	30	14	6.00	3-Detuning sk
11	10.00	10.00	2.00	50.00	22	26	14	6.00	3-Detuning sk
12	134.00	136.00	0.00	50.00	6	7	29	0.96	1-1/2" x 4' 1
13	127.00	127.00	0.00	50.00	30	36	266	5.22	3-24" Standof
14	110.00	110.00	0.00	50.00	29	34	263	5.19	3-24" Standof
15	90.00	90.00	0.00	50.00	28	33	259	5.16	3-24" Standof
16	70.00	70.00	0.00	50.00	26	31	256	5.13	3-24" Standof
17	50.00	50.00	0.00	50.00	24	29	248	5.07	3-24" Standof

BY VALMONT INDUSTRIES
Design Id: 584934-P1

FOR: BARRETT OUTDOOR 134.0' POLE, SITE: DOCK SHOPPING CENTER - STRATFORD, C

DATE 07/26/2023
IMPAX 26.1.29.7

*** INPUT LOADS ***

Loading Case		ICE + WIND - Continued			Orientation of System				
Load Number	Mounting Height	Load Height	Load Eccentricity	Orientation in XY Plane (Degrees)	Force-X (lbs)	Force-Y (lbs)	Force-Z (lbs)	EPA (ft^2)	
18	30.00	30.00	0.00	50.00	21	25	238	5.01	3-24" Standof
19	10.00	10.00	0.00	50.00	18	21	223	4.86	3-24" Standof

*** INPUT LOADS ***

Design Code TIA-222-H
 Loading Case T+S (1.0 D + 1.0 Wo)

Basic Wind Velocity is 60.00 mph Ice Thickness 0.00
 Wind Orientation is 50.0 Degrees Clockwise From +X Axis
 Structure Weight Overload Factor is 1.000
 Exposure C, Gust Factor 1.10
 Risk Category II, Topographic Category 1, Crest Height 0.00 ft
 Orientations are Measured Clockwise From +X Axis
 Positive Y Axis is 90 Degrees Clockwise From +X Axis
 Foundation Rotation of 0.00 Degrees
 Elevation of structure base above surrounding terrain = 1.00 ft

Orientation of System
 +***** +X-Axis
 * * (Transverse)
 * *
 * *
 (Longitudinal) * * (Vertical)
 +Y-Axis * * +Z-Axis

Load Number	Mounting Height	Load Height	Load Eccentricity	Orientation in XY Plane (Degrees)	Force-X (lbs)	Force-Y (lbs)	Force-Z (lbs)	EPA (ft^2)	
1	131.00	131.00	0.00	50.00	1545	1841	4160	208.00	1-Carrier #1
2	120.00	120.00	0.00	50.00	1517	1808	4160	208.00	1-Carrier #2
3	110.00	110.00	0.00	50.00	1490	1776	4160	208.00	1-Carrier #3
4	100.00	100.00	0.00	50.00	1461	1741	4160	208.00	1-Carrier #4
5	127.00	127.00	2.00	50.00	15	18	3	2.10	3-Detuning sk
6	110.00	110.00	2.00	50.00	21	26	6	3.00	3-Detuning sk
7	90.00	90.00	2.00	50.00	21	25	6	3.00	3-Detuning sk
8	70.00	70.00	2.00	50.00	20	23	6	3.00	3-Detuning sk
9	50.00	50.00	2.00	50.00	18	22	6	3.00	3-Detuning sk
10	30.00	30.00	2.00	50.00	16	20	6	3.00	3-Detuning sk
11	10.00	10.00	2.00	50.00	14	17	6	3.00	3-Detuning sk
12	134.00	136.00	0.00	50.00	1	2	14	0.20	1-1/2" x 4' 1
13	127.00	127.00	0.00	50.00	25	30	87	3.42	3-24" Standof
14	110.00	110.00	0.00	50.00	24	29	87	3.42	3-24" Standof
15	90.00	90.00	0.00	50.00	23	28	87	3.42	3-24" Standof
16	70.00	70.00	0.00	50.00	22	27	87	3.42	3-24" Standof
17	50.00	50.00	0.00	50.00	21	25	87	3.42	3-24" Standof

BY VALMONT INDUSTRIES FOR:
Design Id: 584934-P1

BARRETT OUTDOOR 134.0' POLE, SITE: DOCK SHOPPING CENTER - STRATFORD, C

DATE 07/26/2023
IMPAX 26.1.29.7

*** INPUT LOADS ***

Loading Case		T+S - Continued			Orientation of System					
Load Number	Mounting Height	Load Height	Load Eccentricity	Orientation in XY Plane (Degrees)	Force-X (lbs)	Force-Y (lbs)	Force-Z (lbs)	EPA (ft^2)		
18	30.00	30.00	0.00	50.00	19	22	87	3.42	3-24" Standof	
19	10.00	10.00	0.00	50.00	16	19	87	3.42	3-24" Standof	

*** INPUT LOADS ***

Design Code TIA-222-H
 Loading Case Seismic (1.2 D + 1.0 Ev + 1.0 Eh)
 Seismic analysis following the Equivalent Lateral Force Procedure
 Risk Category: II
 Site Class: D
 Response Acceleration at short periods: 0.21
 Response Acceleration at one second: 0.05
 The above are used to obtain the acceleration and velocity based site coefficients Fa and Fv
 Foundation Rotation of 0.00 Degrees
 Elevation of structure base above surrounding terrain = 1.00 ft

Load Number	Mounting Height	Load Height	Load Eccentricity	Orientation in XY Plane (Degrees)	Force-X (lbs)	Force-Y (lbs)	Force-Z (lbs)	EPA (ft^2)	
1	131.00	131.00	0.00	50.00	0	0	4992	208.00	1-Carrier #1
2	120.00	120.00	0.00	50.00	0	0	4992	208.00	1-Carrier #2
3	110.00	110.00	0.00	50.00	0	0	4992	208.00	1-Carrier #3
4	100.00	100.00	0.00	50.00	0	0	4992	208.00	1-Carrier #4
5	127.00	127.00	2.00	50.00	0	0	4	2.10	3-Detuning sk
6	110.00	110.00	2.00	50.00	0	0	7	3.00	3-Detuning sk
7	90.00	90.00	2.00	50.00	0	0	7	3.00	3-Detuning sk
8	70.00	70.00	2.00	50.00	0	0	7	3.00	3-Detuning sk
9	50.00	50.00	2.00	50.00	0	0	7	3.00	3-Detuning sk
10	30.00	30.00	2.00	50.00	0	0	7	3.00	3-Detuning sk
11	10.00	10.00	2.00	50.00	0	0	7	3.00	3-Detuning sk
12	134.00	136.00	0.00	50.00	0	0	17	0.20	1-1/2" x 4' 1
13	127.00	127.00	0.00	50.00	0	0	104	3.42	3-24" Standof
14	110.00	110.00	0.00	50.00	0	0	104	3.42	3-24" Standof
15	90.00	90.00	0.00	50.00	0	0	104	3.42	3-24" Standof
16	70.00	70.00	0.00	50.00	0	0	104	3.42	3-24" Standof
17	50.00	50.00	0.00	50.00	0	0	104	3.42	3-24" Standof
18	30.00	30.00	0.00	50.00	0	0	104	3.42	3-24" Standof

BY VALMONT INDUSTRIES
Design Id: 584934-P1

FOR:

BARRETT OUTDOOR 134.0' POLE, SITE: DOCK SHOPPING CENTER - STRATFORD, C

DATE 07/26/2023

IMPAX 26.1.29.7

*** INPUT LOADS ***

Loading Case		Seismic - Continued			Orientation of System				
Load Number	Mounting Height	Load Height	Load Eccentricity	Orientation in XY Plane (Degrees)	Force-X (lbs)	Force-Y (lbs)	Force-Z (lbs)	EPA (ft^2)	
19	10.00	10.00	0.00	50.00	0	0	104	3.42	3-24" Standof

*** INPUT LOADS ***

Design Code TIA-222-H
 Loading Case Seismic 2 (0.9 D - 1.0 Ev + 1.0 Eh)
 Seismic analysis following the Equivalent Lateral Force Procedure
 Risk Category: II
 Site Class: D
 Response Acceleration at short periods: 0.21
 Response Acceleration at one second: 0.05
 The above are used to obtain the acceleration and velocity based site coefficients Fa and Fv
 Foundation Rotation of 0.00 Degrees
 Elevation of structure base above surrounding terrain = 1.00 ft

Load Number	Mounting Height	Load Height	Load Eccentricity	Orientation in XY Plane (Degrees)	Force-X (lbs)	Force-Y (lbs)	Force-Z (lbs)	EPA (ft^2)	
1	131.00	131.00	0.00	50.00	0	0	3744	208.00	1-Carrier #1
2	120.00	120.00	0.00	50.00	0	0	3744	208.00	1-Carrier #2
3	110.00	110.00	0.00	50.00	0	0	3744	208.00	1-Carrier #3
4	100.00	100.00	0.00	50.00	0	0	3744	208.00	1-Carrier #4
5	127.00	127.00	2.00	50.00	0	0	3	2.10	3-Detuning sk
6	110.00	110.00	2.00	50.00	0	0	5	3.00	3-Detuning sk
7	90.00	90.00	2.00	50.00	0	0	5	3.00	3-Detuning sk
8	70.00	70.00	2.00	50.00	0	0	5	3.00	3-Detuning sk
9	50.00	50.00	2.00	50.00	0	0	5	3.00	3-Detuning sk
10	30.00	30.00	2.00	50.00	0	0	5	3.00	3-Detuning sk
11	10.00	10.00	2.00	50.00	0	0	5	3.00	3-Detuning sk
12	134.00	136.00	0.00	50.00	0	0	13	0.20	1-1/2" x 4' 1
13	127.00	127.00	0.00	50.00	0	0	78	3.42	3-24" Standof
14	110.00	110.00	0.00	50.00	0	0	78	3.42	3-24" Standof
15	90.00	90.00	0.00	50.00	0	0	78	3.42	3-24" Standof
16	70.00	70.00	0.00	50.00	0	0	78	3.42	3-24" Standof
17	50.00	50.00	0.00	50.00	0	0	78	3.42	3-24" Standof
18	30.00	30.00	0.00	50.00	0	0	78	3.42	3-24" Standof

BY VALMONT INDUSTRIES
Design Id: 584934-P1

FOR: BARRETT OUTDOOR 134.0' POLE, SITE: DOCK SHOPPING CENTER - STRATFORD, C

DATE 07/26/2023
IMPAX 26.1.29.7

*** INPUT LOADS ***

Loading Case		Seismic 2 - Continued			Orientation of System				
Load Number	Mounting Height	Load Height	Load Eccentricity	Orientation in XY Plane (Degrees)	Force-X (lbs)	Force-Y (lbs)	Force-Z (lbs)	EPA (ft^2)	
19	10.00	10.00	0.00	50.00	0	0	78	3.42	3-24" Standof

BY VALMONT INDUSTRIES FOR:
 Design Id: 584934-P1

BARRETT OUTDOOR 134.0' POLE, SITE: DOCK SHOPPING CENTER - STRATFORD, C

DATE 07/26/2023
 IMPAX 26.1.29.7

Equivalent Lateral Force Values for Pole

W = 43,300 lbs
 Cs = 0.03
 Vs = 1,299 lbs
 Sds = 0.22
 Ev = 1,940 lbs
 Fa = 1.60
 Fv = 2.40
 k = 2.00
 f1 = 0.39 Hz

Distance From Fixity H (ft)	Weight Wx (lbs)	H^k	H^k * Wx	Load Distribution Factor	Lateral Seismic Force Fx (lbs)
134.00	14	17,956.00	251,384	0.0008	1
133.25	96	17,755.56	1,711,038	0.0053	7
131.75	98	17,358.06	1,698,604	0.0052	7
131.00	4,160	17,161.00	71,389,760	0.2191	285
130.00	133	16,900.00	2,244,220	0.0069	9
128.00	135	16,384.00	2,219,110	0.0068	9
127.00	90	16,129.00	1,451,610	0.0045	6
126.63	51	16,033.89	825,337	0.0025	3
126.25	2	15,939.06	31,878	0.0001	0
125.13	157	15,656.27	2,452,697	0.0075	10
122.00	287	14,884.00	4,268,512	0.0131	17
120.00	4,164	14,400.00	59,961,600	0.1841	239
119.50	73	14,280.25	1,047,490	0.0032	4
116.50	377	13,572.25	5,112,637	0.0157	20
114.00	2	12,996.00	25,992	0.0001	0
112.00	313	12,544.00	3,929,804	0.0121	16
110.00	4,253	12,100.00	51,461,300	0.1580	205
109.50	80	11,990.25	958,937	0.0029	4
108.88	20	11,853.77	238,232	0.0007	1
108.75	3	11,826.56	35,480	0.0001	0
106.38	390	11,315.64	4,409,938	0.0135	18
103.38	105	10,686.39	1,122,521	0.0034	4
102.75	3	10,557.56	31,673	0.0001	0
101.38	235	10,276.89	2,412,355	0.0074	10
100.00	4,160	10,000.00	41,600,000	0.1277	166
99.50	87	9,900.25	857,367	0.0026	3
98.25	131	9,653.06	1,265,929	0.0039	5
97.50	2	9,506.25	19,013	0.0001	0
95.75	312	9,168.06	2,858,564	0.0088	11
93.75	45	8,789.06	397,307	0.0012	2
92.38	557	8,533.14	4,754,938	0.0146	19
91.25	4	8,326.56	33,306	0.0001	0
90.63	314	8,212.89	2,575,218	0.0079	10

Equivalent Lateral Force Values for Pole

Distance From Fixity H (ft)	Weight Wx (lbs)	H^k	H^k * Wx	Load Distribution Factor	Lateral Seismic Force Fx (lbs)
90.00	93	8,100.00	753,300	0.0023	3
89.50	253	8,010.25	2,025,758	0.0062	8
88.63	191	7,854.39	1,499,146	0.0046	6
86.67	516	7,511.11	3,875,930	0.0119	15
85.08	2	7,239.17	14,478	0.0000	0
84.54	179	7,147.29	1,280,823	0.0039	5
82.71	433	6,840.67	2,960,795	0.0091	12
80.13	441	6,420.02	2,828,394	0.0087	11
78.83	4	6,214.69	24,859	0.0001	0
76.42	845	5,839.51	4,934,666	0.0151	20
73.29	253	5,371.67	1,358,057	0.0042	5
72.58	2	5,268.34	10,537	0.0000	0
71.29	467	5,082.50	2,373,586	0.0073	9
70.00	93	4,900.00	455,700	0.0014	2
69.50	183	4,830.25	883,238	0.0027	4
67.67	493	4,578.78	2,258,628	0.0069	9
66.33	2	4,400.11	8,800	0.0000	0
65.17	438	4,246.69	1,861,682	0.0057	7
62.04	750	3,849.17	2,887,056	0.0089	12
60.08	2	3,610.01	7,220	0.0000	0
59.54	211	3,545.21	746,619	0.0023	3
57.71	508	3,330.25	1,690,730	0.0052	7
55.13	515	3,038.77	1,566,255	0.0048	6
53.83	2	2,898.03	5,796	0.0000	0
52.42	574	2,747.51	1,577,618	0.0048	6
50.50	434	2,550.25	1,106,508	0.0034	4
50.00	93	2,500.00	232,500	0.0007	1
49.50	436	2,450.25	1,069,206	0.0033	4
48.29	622	2,332.09	1,451,578	0.0045	6
47.58	2	2,264.17	4,528	0.0000	0
46.08	1,335	2,123.67	2,834,170	0.0087	11
44.29	138	1,961.75	271,471	0.0008	1
43.00	478	1,849.00	883,592	0.0027	4
42.00	2	1,764.00	3,528	0.0000	0
40.50	727	1,640.25	1,192,051	0.0037	5
37.96	512	1,440.84	737,278	0.0023	3
36.92	2	1,362.84	2,726	0.0000	0
35.46	726	1,257.29	912,849	0.0028	4
32.38	822	1,048.14	861,881	0.0026	3
30.75	3	945.56	2,837	0.0000	0
30.38	192	922.64	176,914	0.0005	1
30.00	93	900.00	83,700	0.0003	0
29.50	257	870.25	223,500	0.0007	1

BY VALMONT INDUSTRIES FOR:
 Design Id: 584934-P1

BARRETT OUTDOOR 134.0' POLE, SITE: DOCK SHOPPING CENTER - STRATFORD, C

DATE 07/26/2023
 IMPAX 26.1.29.7

Equivalent Lateral Force Values for Pole

Distance From Fixity H (ft)	Weight Wx (lbs)	H^k	H^k * Wx	Load Distribution Factor	Lateral Seismic Force Fx (lbs)
26.75	1,172	715.56	838,709	0.0026	3
24.50	2	600.25	1,201	0.0000	0
24.25	132	588.06	77,559	0.0002	0
21.50	1,337	462.25	618,077	0.0019	2
18.63	203	346.89	70,565	0.0002	0
18.25	2	333.06	666	0.0000	0
16.13	1,167	260.02	303,387	0.0009	1
13.00	557	169.00	94,195	0.0003	0
12.00	2	144.00	288	0.0000	0
11.00	563	121.00	68,082	0.0002	0
10.00	93	100.00	9,300	0.0000	0
9.50	283	90.25	25,570	0.0001	0
6.50	1,436	42.25	60,691	0.0002	0
2.00	1,173	4.00	4,692	0.0000	0

*** Properties ***

Connection Locations	Distance From Base (ft)	Diameter Across Flats (in)	Wall Thickness (in)	D/t Across Flats	w/t Across Flats	Moments of Inertia (in ⁴)	Area (in ²)
Top of Sect 3	134.00	24.000	0.2500	96.00	15.16	1343	18.84
	132.50	24.368	0.2500	97.47	15.42	1406	19.14
	131.00	24.736	0.2500	98.94	15.68	1471	19.43
	129.00	25.227	0.2500	100.91	16.03	1561	19.82
	127.00	25.717	0.2500	102.87	16.38	1655	20.21
	126.25	25.901	0.2500	103.61	16.51	1691	20.35
	124.00	26.453	0.2500	105.81	16.89	1803	20.79
	120.00	27.435	0.2500	109.74	17.59	2013	21.57
	119.00	27.680	0.2500	110.72	17.76	2068	21.76
	114.00	28.907	0.2500	115.63	18.62	2358	22.74
	110.00	29.888	0.2500	119.55	19.32	2609	23.52
	109.00	30.133	0.2500	120.53	19.49	2674	23.71
	108.75	30.195	0.2500	120.78	19.53	2691	23.76
	104.00	31.360	0.2500	125.44	20.36	3017	24.68
	102.75	31.667	0.2500	126.67	20.57	3108	24.93
	100.00	32.341	0.2500	129.37	21.05	3312	25.46
	99.00	32.587	0.2500	130.35	21.22	3389	25.66
97.50	32.955	0.2500	131.82	21.48	3506	25.95	
94.00	33.813	0.2500	135.25	22.09	3789	26.63	
93.50	33.936	0.2500	135.74	22.17	3831	26.73	
Top of Sect 2	93.50	33.436	0.4375	76.43	11.71	6302	45.82
	91.25	33.988	0.4375	77.69	11.94	6623	46.59
	90.00	34.295	0.4375	78.39	12.06	6807	47.01
Base of Sect 3	89.00	34.540	0.4375	78.95	12.16	6956	47.35
	88.25	34.724	0.4375	79.37	12.23	7069	47.61
	85.08	35.501	0.4375	81.15	12.54	7560	48.69
	84.00	35.767	0.4375	81.75	12.65	7734	49.06
	81.42	36.401	0.4375	83.20	12.91	8157	49.94
	78.83	37.034	0.4375	84.65	13.16	8596	50.82
	74.00	38.220	0.4375	87.36	13.64	9459	52.46
	72.58	38.568	0.4375	88.15	13.78	9723	52.95
	70.00	39.201	0.4375	89.60	14.04	10216	53.83
	69.00	39.447	0.4375	90.16	14.14	10411	54.17
	66.33	40.101	0.4375	91.66	14.40	10943	55.08
	64.00	40.674	0.4375	92.97	14.63	11424	55.87
	60.08	41.634	0.4375	95.16	15.02	12262	57.20
	59.00	41.900	0.4375	95.77	15.12	12501	57.57
	56.42	42.534	0.4375	97.22	15.38	13083	58.45
53.83	43.168	0.4375	98.67	15.63	13683	59.33	

*** Properties ***

Connection Locations	Distance From Base (ft)	Diameter Across Flats (in)	Wall Thickness (in)	D/t Across Flats	w/t Across Flats	Moments of Inertia (in ⁴)	Area (in ²)
	51.00	43.863	0.4375	100.26	15.91	14362	60.30
Top of Sect 1	51.00	42.988	0.5000	85.98	13.40	15373	67.43
	50.00	43.233	0.5000	86.47	13.48	15641	67.82
	49.00	43.479	0.5000	86.96	13.57	15912	68.20
Base of Sect 2	47.58	43.826	0.5000	87.65	13.69	16301	68.76
	44.58	44.562	0.5000	89.12	13.95	17146	69.92
	44.00	44.705	0.5000	89.41	14.00	17314	70.15
	42.00	45.196	0.5000	90.39	14.18	17897	70.93
	39.00	45.932	0.5000	91.86	14.43	18795	72.10
	36.92	46.443	0.5000	92.89	14.62	19437	72.91
	34.00	47.159	0.5000	94.32	14.87	20359	74.04
	30.75	47.956	0.5000	95.91	15.15	21421	75.31
	30.00	48.140	0.5000	96.28	15.21	21671	75.60
	29.00	48.385	0.5000	96.77	15.30	22007	75.99
	24.50	49.489	0.5000	98.98	15.69	23565	77.74
	24.00	49.612	0.5000	99.22	15.73	23742	77.94
	19.00	50.839	0.5000	101.68	16.17	25566	79.88
	18.25	51.023	0.5000	102.05	16.23	25848	80.18
	14.00	52.065	0.5000	104.13	16.60	27481	81.83
	12.00	52.556	0.5000	105.11	16.77	28273	82.61
	10.00	53.047	0.5000	106.09	16.94	29080	83.39
	9.00	53.292	0.5000	106.58	17.03	29489	83.78
	4.00	54.519	0.5000	109.04	17.46	31593	85.72
Pt of Fixity	0.00	55.500	0.5000	111.00	17.81	33346	87.28

Forces and Moments for Pole in the Local Element Coordinate System

Loading Case WIND

Dist. From Base (ft)	Mx (in-kips)	My (in-kips)	Resultant Mx & My (in-kips)	Torsion (in-kips)	Shear X-Dir. (lbs)	Shear Y-Dir. (lbs)	Resultant Shear (lbs)	Axial (lbs)
134.00	0	0	0	0	8	9	12	15
132.50	1	-1	1	0	73	87	113	130
132.50	1	-1	1	0	82	97	127	129
131.00	4	-3	5	0	148	176	230	245
131.00	4	-3	5	0	7383	8798	11486	3950
129.00	216	-181	282	0	7473	8904	11624	4110
127.00	431	-362	563	0	7564	9014	11767	4271
127.00	431	-362	563	3	7753	9238	12060	4347
126.25	515	-431	672	3	7788	9280	12115	4409
126.25	515	-431	672	3	7798	9292	12131	4412
124.00	767	-643	1001	3	7902	9416	12293	4609
120.00	1225	-1027	1599	3	8097	9648	12596	4951
120.00	1225	-1027	1599	3	15218	18134	23674	8712
119.00	1443	-1210	1883	3	15260	18184	23739	8832
114.00	2543	-2134	3319	3	15516	18489	24137	9282
114.00	2543	-2134	3319	3	15515	18488	24136	9342
110.00	3436	-2883	4486	3	15728	18742	24467	9716
110.00	3437	-2883	4486	6	22901	27289	35625	13665
109.00	3765	-3158	4914	6	22951	27348	35703	13777
108.75	3847	-3227	5021	6	22964	27365	35724	13801
108.75	3847	-3227	5021	6	22960	27360	35717	13880
104.00	5415	-4544	7069	6	23198	27643	36088	14443
102.75	5830	-4892	7611	6	23269	27728	36197	14568
102.75	5830	-4892	7611	6	23267	27726	36195	14644
100.00	6749	-5662	8809	6	23425	27914	36440	14924
100.00	6749	-5662	8809	6	30222	36014	47015	18953
99.00	7181	-6025	9374	6	30262	36062	47077	19124
97.50	7831	-6571	10223	6	30350	36166	47213	19281
97.50	7831	-6571	10223	6	30322	36133	47170	19428
94.00	9354	-7849	12211	6	30496	36341	47441	19922
93.50	9572	-8032	12495	6	30526	36376	47488	19976
93.50	9572	-8032	12495	6	30510	36357	47462	20037
91.25	10556	-8858	13780	6	30669	36547	47710	20703
91.25	10556	-8858	13780	6	30667	36545	47707	20776
90.00	11105	-9318	14497	6	30756	36651	47846	21151
90.00	11106	-9318	14497	10	30946	36877	48141	21282
89.00	11549	-9690	15075	10	31006	36949	48235	21622
88.25	11881	-9969	15510	10	31035	36983	48279	21938
85.08	13291	-11153	17351	10	31241	37229	48601	22555
85.08	13291	-11153	17351	10	31224	37208	48573	22652

Forces and Moments for Pole in the Local Element Coordinate System

Loading Case WIND

Dist. From Base (ft)	Mx (in-kips)	My (in-kips)	Resultant Mx & My (in-kips)	Torsion (in-kips)	Shear X-Dir. (lbs)	Shear Y-Dir. (lbs)	Resultant Shear (lbs)	Axial (lbs)
84.00	13776	-11559	17983	10	31269	37262	48643	22953
81.42	14934	-12531	19495	10	31401	37420	48850	23596
78.83	16097	-13507	21013	10	31574	37626	49119	24123
78.83	16097	-13507	21013	10	31535	37579	49057	24310
74.00	18288	-15346	23874	10	31810	37907	49485	25481
72.58	18934	-15887	24716	10	31907	38023	49636	25784
72.58	18934	-15887	24716	10	31882	37993	49598	25890
70.00	20115	-16878	26258	10	32060	38205	49875	26449
70.00	20115	-16878	26258	13	32219	38395	50122	26635
69.00	20576	-17265	26860	13	32254	38437	50177	26952
66.33	21810	-18300	28470	13	32440	38658	50466	27543
66.33	21810	-18300	28470	13	32402	38613	50407	27680
64.00	22894	-19210	29885	13	32504	38734	50565	28376
60.08	24722	-20744	32272	13	32779	39062	50993	29275
60.08	24722	-20744	32272	13	32737	39013	50929	29415
59.00	25230	-21170	32935	13	32775	39058	50988	29769
56.42	26444	-22189	34520	13	32902	39210	51185	30522
53.83	27663	-23212	36111	13	33084	39427	51469	31139
53.83	27663	-23212	36111	13	33035	39367	51391	31293
51.00	29005	-24338	37864	13	33234	39606	51702	31981
51.00	29005	-24338	37864	13	33192	39555	51636	32087
50.00	29480	-24737	38484	13	33271	39649	51759	32607
50.00	29481	-24737	38484	16	33427	39836	52003	32759
49.00	29959	-25139	39109	16	33480	39898	52084	33346
47.58	30639	-25709	39996	16	33591	40031	52258	34092
47.58	30639	-25709	39996	16	33551	39984	52196	34211
44.58	32083	-26921	41881	16	33744	40214	52496	35906
44.00	32365	-27157	42249	16	33755	40226	52512	36140
42.00	33332	-27969	43512	16	33894	40392	52729	36713
42.00	33332	-27969	43512	16	33844	40333	52652	36847
39.00	34789	-29191	45413	16	33991	40507	52879	37853
36.92	35803	-30043	46738	16	34134	40679	53103	38467
36.92	35803	-30043	46738	16	34086	40621	53028	38601
34.00	37229	-31239	48600	16	34209	40768	53219	39633
30.75	38824	-32578	50682	16	34430	41031	53562	40620
30.75	38824	-32578	50682	16	34392	40985	53503	40728
30.00	39194	-32887	51164	16	34442	41046	53582	40958
30.00	39194	-32887	51164	19	34579	41209	53794	41109
29.00	39689	-33303	51810	19	34575	41204	53788	41560
24.50	41923	-35178	54727	19	34874	41560	54253	42966

BY VALMONT INDUSTRIES FOR:
 Design Id: 584934-P1

BARRETT OUTDOOR 134.0' POLE, SITE: DOCK SHOPPING CENTER - STRATFORD, C

DATE 07/26/2023
 IMPAX 26.1.29.7

Forces and Moments for Pole in the Local Element Coordinate System

Loading Case WIND

Dist. From Base (ft)	Mx (in-kips)	My (in-kips)	Resultant Mx & My (in-kips)	Torsion (in-kips)	Shear X-Dir. (lbs)	Shear Y-Dir. (lbs)	Resultant Shear (lbs)	Axial (lbs)
24.50	41923	-35178	54727	19	34815	41490	54162	43099
24.00	42172	-35387	55052	19	34775	41442	54099	43399
19.00	44671	-37483	58313	19	35017	41732	54477	45152
18.25	45046	-37798	58804	19	35065	41788	54551	45397
18.25	45046	-37798	58804	19	35004	41715	54456	45526
14.00	47182	-39590	61591	19	35178	41923	54726	47086
12.00	48190	-40436	62907	19	35298	42066	54914	47754
12.00	48190	-40436	62907	19	35249	42008	54838	47858
10.00	49200	-41283	64226	19	35370	42152	55026	48533
10.00	49200	-41283	64226	21	35463	42263	55170	48718
9.00	49707	-41709	64888	21	35438	42233	55132	49208
4.00	52252	-43845	68210	21	35610	42438	55399	51155
0.00	54296	-45560	70879	21	35855	42730	55780	52563

Deflections for Pole

Loading Case WIND

Distance From Base (ft)	Defl. X-Dir (in)	Defl. Y-Dir (in)	Defl. Resultant X & Y (in)	Defl. Z-Dir (in)	Rotation (deg.)
134.00	67.0	79.8	104.2	4.5	6.70
132.50	65.6	78.2	102.1	4.4	6.70
132.50	65.6	78.2	102.1	4.4	6.70
131.00	64.3	76.6	100.0	4.3	6.70
131.00	64.3	76.6	100.0	4.3	6.70
129.00	62.5	74.4	97.2	4.1	6.70
127.00	60.7	72.3	94.4	4.0	6.68
127.00	60.7	72.3	94.4	4.0	6.68
126.25	60.0	71.5	93.3	3.9	6.68
126.25	60.0	71.5	93.3	3.9	6.68
124.00	58.0	69.1	90.2	3.7	6.65
120.00	54.4	64.8	84.7	3.4	6.59
120.00	54.4	64.8	84.7	3.4	6.59
119.00	53.5	63.8	83.3	3.3	6.57
114.00	49.2	58.6	76.5	2.9	6.43
114.00	49.2	58.6	76.5	2.9	6.43
110.00	45.7	54.5	71.2	2.6	6.28
110.00	45.7	54.5	71.2	2.6	6.28
109.00	44.9	53.5	69.9	2.6	6.24
108.75	44.7	53.3	69.5	2.5	6.23
108.75	44.7	53.3	69.5	2.5	6.23
104.00	40.8	48.6	63.5	2.2	5.99
102.75	39.8	47.4	61.9	2.1	5.92
102.75	39.8	47.4	61.9	2.1	5.92
100.00	37.6	44.9	58.6	2.0	5.75
100.00	37.6	44.9	58.6	2.0	5.75
99.00	36.9	43.9	57.4	1.9	5.69
97.50	35.7	42.6	55.6	1.8	5.58
97.50	35.7	42.6	55.6	1.8	5.58
94.00	33.2	39.5	51.6	1.6	5.33
93.50	32.8	39.1	51.0	1.6	5.29
93.50	32.8	39.1	51.0	1.6	5.29
91.25	31.2	37.2	48.6	1.5	5.18
91.25	31.2	37.2	48.6	1.5	5.18
90.00	30.4	36.2	47.2	1.4	5.12
90.00	30.4	36.2	47.2	1.4	5.12
89.00	29.7	35.4	46.2	1.4	5.07
88.25	29.2	34.8	45.4	1.3	5.03
85.08	27.1	32.2	42.1	1.2	4.86
85.08	27.1	32.2	42.1	1.2	4.86
84.00	26.3	31.4	41.0	1.2	4.80
81.42	24.7	29.4	38.4	1.0	4.66
78.83	23.1	27.5	36.0	0.9	4.51

Deflections for Pole

Loading Case WIND

Distance From Base (ft)	Defl. X-Dir (in)	Defl. Y-Dir (in)	Defl. Resultant X & Y (in)	Defl. Z-Dir (in)	Rotation (deg.)
78.83	23.1	27.5	36.0	0.9	4.51
74.00	20.3	24.2	31.5	0.8	4.23
72.58	19.5	23.2	30.3	0.7	4.14
72.58	19.5	23.2	30.3	0.7	4.14
70.00	18.1	21.5	28.1	0.7	3.98
70.00	18.1	21.5	28.1	0.7	3.98
69.00	17.5	20.9	27.3	0.6	3.92
66.33	16.2	19.3	25.1	0.6	3.76
66.33	16.2	19.3	25.1	0.6	3.76
64.00	15.0	17.9	23.3	0.5	3.61
60.08	13.2	15.7	20.5	0.4	3.37
60.08	13.2	15.7	20.5	0.4	3.37
59.00	12.7	15.1	19.7	0.4	3.30
56.42	11.5	13.8	18.0	0.3	3.14
53.83	10.5	12.5	16.3	0.3	2.98
53.83	10.5	12.5	16.3	0.3	2.98
51.00	9.4	11.2	14.6	0.2	2.80
51.00	9.4	11.2	14.6	0.2	2.80
50.00	9.0	10.7	14.0	0.2	2.74
50.00	9.0	10.7	14.0	0.2	2.74
49.00	8.6	10.3	13.4	0.2	2.69
47.58	8.1	9.7	12.7	0.2	2.60
47.58	8.1	9.7	12.7	0.2	2.60
44.58	7.1	8.5	11.1	0.2	2.43
44.00	6.9	8.3	10.8	0.2	2.40
42.00	6.3	7.5	9.8	0.1	2.28
42.00	6.3	7.5	9.8	0.1	2.28
39.00	5.4	6.5	8.4	0.1	2.11
36.92	4.8	5.8	7.5	0.1	1.99
36.92	4.8	5.8	7.5	0.1	1.99
34.00	4.1	4.9	6.4	0.1	1.82
30.75	3.3	4.0	5.2	0.1	1.64
30.75	3.3	4.0	5.2	0.1	1.64
30.00	3.2	3.8	4.9	0.1	1.60
30.00	3.2	3.8	4.9	0.1	1.60
29.00	3.0	3.5	4.6	0.0	1.54
24.50	2.1	2.5	3.3	0.0	1.29
24.50	2.1	2.5	3.3	0.0	1.29
24.00	2.0	2.4	3.1	0.0	1.27
19.00	1.3	1.5	2.0	0.0	0.99
18.25	1.2	1.4	1.8	0.0	0.95

BY VALMONT INDUSTRIES
Design Id: 584934-P1
Deflections for Pole

FOR: BARRETT OUTDOOR 134.0' POLE, SITE: DOCK SHOPPING CENTER - STRATFORD, C

DATE 07/26/2023
IMPAX 26.1.29.7

Loading Case WIND

Distance	Defl.	Defl.	Defl.	Defl.	
From	X-Dir	Y-Dir	Resultant	Z-Dir	Rotation
Base	(in)	(in)	(in)	(in)	(deg.)
18.25	1.2	1.4	1.8	0.0	0.95
14.00	0.7	0.8	1.1	0.0	0.72
12.00	0.5	0.6	0.8	0.0	0.62
12.00	0.5	0.6	0.8	0.0	0.62
10.00	0.3	0.4	0.5	0.0	0.51
10.00	0.3	0.4	0.5	0.0	0.51
9.00	0.3	0.3	0.4	0.0	0.46
4.00	0.1	0.1	0.1	0.0	0.20
0.00	0.0	0.0	0.0	0.0	0.00

Loading Case WIND

Distance From Base (ft)	Nominal Axial Strength (lbs)	Nominal Flexural Strength (in-kips)	Nominal Shear Strength (lbs)	Nominal Torsional Strength (in-kips)	Axial Interaction Term	Flexural Interaction Term	Shear Interaction Term	Torsion Interaction Term	Combined Stress Interaction
134.00	1,224,922	9,095	367,476	8,689	0.00	0.00	0.00	0.00	0.01
132.50	1,243,902	9,381	373,170	8,961	0.00	0.00	0.00	0.00	0.01
131.00	1,262,882	9,671	378,864	9,236	0.00	0.00	0.03	0.00	0.01
129.00	1,288,188	10,064	386,456	9,610	0.00	0.03	0.03	0.00	0.04
127.00	1,313,495	10,413	394,048	9,991	0.00	0.06	0.03	0.00	0.06
126.25	1,322,985	10,546	396,895	10,136	0.00	0.07	0.03	0.00	0.08
124.00	1,351,455	10,945	405,437	10,577	0.00	0.10	0.03	0.00	0.11
120.00	1,402,068	11,667	420,621	11,384	0.01	0.15	0.06	0.00	0.16
119.00	1,414,722	11,849	424,417	11,591	0.01	0.18	0.06	0.00	0.19
114.00	1,477,989	12,774	443,397	12,651	0.01	0.29	0.06	0.00	0.30
110.00	1,528,602	13,528	458,581	13,532	0.01	0.37	0.09	0.00	0.39
109.00	1,541,255	13,718	462,377	13,757	0.01	0.40	0.09	0.00	0.42
108.75	1,544,419	13,766	463,326	13,813	0.01	0.41	0.09	0.00	0.42
104.00	1,604,522	14,679	481,357	14,910	0.01	0.54	0.08	0.00	0.55
102.75	1,620,339	14,922	486,102	15,205	0.01	0.57	0.08	0.00	0.58
100.00	1,655,135	15,460	496,541	15,865	0.01	0.63	0.11	0.00	0.66
99.00	1,667,789	15,656	500,337	16,108	0.01	0.67	0.10	0.00	0.69
97.50	1,686,769	15,952	506,031	16,477	0.01	0.71	0.10	0.00	0.74
94.00	1,731,056	16,647	519,317	17,354	0.01	0.82	0.10	0.00	0.84
93.50	1,737,382	16,746	521,215	17,481	0.01	0.83	0.10	0.00	0.85
93.50	2,978,367	30,644	893,510	29,356	0.01	0.45	0.06	0.00	0.46
91.25	3,028,190	31,685	908,457	30,346	0.01	0.48	0.06	0.00	0.49
90.00	3,055,869	32,271	916,761	30,903	0.01	0.50	0.06	0.00	0.51
89.00	3,078,012	32,743	923,404	31,353	0.01	0.51	0.06	0.00	0.52
88.25	3,094,620	33,100	928,386	31,692	0.01	0.52	0.06	0.00	0.53
85.08	3,164,740	34,626	949,422	33,144	0.01	0.56	0.06	0.00	0.57
84.00	3,188,729	35,156	956,619	33,649	0.01	0.57	0.06	0.00	0.58
81.42	3,245,933	36,437	973,780	34,867	0.01	0.59	0.06	0.00	0.61
78.83	3,303,136	37,740	990,941	36,107	0.01	0.62	0.06	0.00	0.63
74.00	3,410,163	40,240	1,023,049	38,484	0.01	0.66	0.05	0.00	0.67
72.58	3,441,532	40,988	1,032,460	39,196	0.01	0.67	0.05	0.00	0.68
70.00	3,498,736	42,370	1,049,621	40,509	0.01	0.69	0.05	0.00	0.70
69.00	3,520,879	42,911	1,056,264	41,024	0.01	0.70	0.05	0.00	0.71
66.33	3,579,928	44,370	1,073,979	42,411	0.01	0.71	0.05	0.00	0.72
64.00	3,631,596	45,667	1,089,479	43,644	0.01	0.73	0.05	0.00	0.74
60.08	3,718,324	47,887	1,115,497	45,754	0.01	0.75	0.05	0.00	0.76
59.00	3,742,313	48,510	1,122,694	46,346	0.01	0.75	0.05	0.00	0.77
56.42	3,799,517	50,012	1,139,855	47,774	0.01	0.77	0.05	0.00	0.78
53.83	3,856,720	51,537	1,157,016	49,223	0.01	0.78	0.05	0.00	0.79
51.00	3,919,460	53,236	1,175,838	50,838	0.01	0.79	0.05	0.00	0.80

Loading Case WIND

Distance From Base (ft)	Nominal Axial Strength (lbs)	Nominal Flexural Strength (in-kips)	Nominal Shear Strength (lbs)	Nominal Torsional Strength (in-kips)	Axial Interaction Term	Flexural Interaction Term	Shear Interaction Term	Torsion Interaction Term	Combined Stress Interaction
51.00	4,382,679	58,146	1,314,804	55,619	0.01	0.72	0.04	0.00	0.73
50.00	4,407,985	58,823	1,322,396	56,263	0.01	0.73	0.04	0.00	0.74
49.00	4,433,292	59,504	1,329,988	56,911	0.01	0.73	0.04	0.00	0.74
47.58	4,469,143	60,476	1,340,743	57,835	0.01	0.73	0.04	0.00	0.75
44.58	4,545,063	62,560	1,363,519	59,817	0.01	0.74	0.04	0.00	0.75
44.00	4,559,825	62,969	1,367,948	60,206	0.01	0.75	0.04	0.00	0.76
42.00	4,610,439	64,383	1,383,132	61,550	0.01	0.75	0.04	0.00	0.76
39.00	4,686,359	66,532	1,405,908	63,594	0.01	0.76	0.04	0.00	0.77
36.92	4,739,081	68,046	1,421,724	65,033	0.01	0.76	0.04	0.00	0.77
34.00	4,812,892	70,194	1,443,868	67,074	0.01	0.77	0.04	0.00	0.78
30.75	4,895,139	72,626	1,468,542	69,386	0.01	0.78	0.04	0.00	0.79
30.00	4,914,119	73,193	1,474,236	69,925	0.01	0.78	0.04	0.00	0.79
29.00	4,939,426	73,953	1,481,828	70,647	0.01	0.78	0.04	0.00	0.79
24.50	5,053,306	77,420	1,515,992	73,942	0.01	0.79	0.04	0.00	0.80
24.00	5,065,959	77,810	1,519,788	74,313	0.01	0.79	0.04	0.00	0.80
19.00	5,192,493	81,605	1,557,748	78,072	0.01	0.79	0.04	0.00	0.81
18.25	5,211,473	82,129	1,563,442	78,644	0.01	0.80	0.04	0.00	0.81
14.00	5,319,027	85,121	1,595,708	81,923	0.01	0.80	0.04	0.00	0.82
12.00	5,369,640	86,541	1,610,892	83,490	0.01	0.81	0.04	0.00	0.82
10.00	5,420,253	87,968	1,626,076	85,071	0.01	0.81	0.04	0.00	0.82
9.00	5,445,560	88,685	1,633,668	85,867	0.01	0.81	0.04	0.00	0.82
4.00	5,572,094	92,293	1,671,628	89,904	0.01	0.82	0.04	0.00	0.83
0.00	5,673,320	95,210	1,701,996	93,200	0.01	0.83	0.04	0.00	0.84

Forces and Moments for Pole in the Local Element Coordinate System

Loading Case ICE + WIND

Dist. From Base (ft)	Mx (in-kips)	My (in-kips)	Resultant Mx & My (in-kips)	Torsion (in-kips)	Shear X-Dir. (lbs)	Shear Y-Dir. (lbs)	Resultant Shear (lbs)	Axial (lbs)
134.00	0	0	0	0	6	8	10	28
132.50	1	0	1	0	32	38	50	195
131.00	2	-1	2	0	58	69	90	363
131.00	2	-1	2	0	2725	3248	4240	10181
129.00	80	-67	104	0	2760	3289	4294	10410
127.00	159	-134	208	0	2795	3331	4349	10643
127.00	160	-134	208	1	2856	3404	4444	10917
126.25	190	-160	248	1	2870	3420	4465	11005
126.25	190	-160	248	1	2869	3419	4464	11008
124.00	283	-238	370	1	2908	3465	4524	11279
120.00	452	-379	590	1	2982	3554	4639	11772
120.00	452	-379	590	1	5599	6673	8711	21602
119.00	532	-446	694	1	5611	6686	8729	21732
114.00	937	-786	1223	1	5707	6801	8878	22379
114.00	937	-786	1223	1	5693	6785	8857	22390
110.00	1265	-1061	1651	1	5772	6878	8979	22927
110.00	1265	-1061	1651	2	8396	10005	13061	33040
109.00	1385	-1162	1808	2	8412	10025	13087	33180
108.75	1415	-1187	1847	2	8417	10031	13095	33214
108.75	1415	-1187	1847	2	8400	10010	13068	33228
104.00	1989	-1669	2596	2	8474	10099	13183	33909
102.75	2141	-1796	2794	2	8500	10129	13223	34088
102.75	2141	-1796	2794	2	8483	10109	13197	34102
100.00	2475	-2077	3231	2	8540	10177	13285	34504
100.00	2475	-2077	3231	2	11020	13132	17143	44364
99.00	2633	-2209	3437	2	11025	13139	17152	44521
97.50	2870	-2408	3746	2	11057	13176	17201	44745
97.50	2870	-2408	3746	2	11024	13137	17150	44767
94.00	3424	-2873	4469	2	11070	13192	17222	45316
93.50	3503	-2939	4573	2	11081	13205	17238	45393
93.50	3503	-2939	4573	2	11067	13188	17216	45401
91.25	3860	-3239	5039	2	11125	13257	17306	46231
91.25	3860	-3239	5039	2	11108	13238	17281	46245
90.00	4059	-3406	5298	2	11141	13277	17331	46712
90.00	4059	-3406	5299	3	11195	13341	17416	46988
89.00	4219	-3540	5508	3	11212	13362	17443	47370
88.25	4340	-3641	5665	3	11211	13361	17441	47665
85.08	4849	-4069	6330	3	11284	13447	17554	48432
85.08	4849	-4069	6330	3	11261	13420	17519	48448
84.00	5024	-4215	6558	3	11266	13426	17526	48725

Forces and Moments for Pole in the Local Element Coordinate System

Loading Case ICE + WIND

Dist. From Base (ft)	Mx (in-kips)	My (in-kips)	Resultant Mx & My (in-kips)	Torsion (in-kips)	Shear X-Dir. (lbs)	Shear Y-Dir. (lbs)	Resultant Shear (lbs)	Axial (lbs)
81.42	5441	-4565	7103	3	11296	13462	17573	49385
78.83	5859	-4917	7649	3	11356	13533	17667	50039
78.83	5859	-4917	7649	3	11312	13481	17598	50068
74.00	6645	-5576	8675	3	11386	13569	17713	51342
72.58	6876	-5770	8976	3	11419	13609	17765	51717
72.58	6876	-5770	8976	3	11394	13578	17725	51733
70.00	7298	-6124	9527	3	11454	13651	17820	52425
70.00	7298	-6124	9527	4	11492	13695	17878	52705
69.00	7463	-6262	9742	4	11491	13694	17877	52989
66.33	7902	-6631	10316	4	11554	13769	17974	53719
66.33	7902	-6631	10316	4	11520	13729	17922	53739
64.00	8288	-6954	10819	4	11532	13743	17941	54409
60.08	8936	-7498	11665	4	11624	13853	18084	55518
60.08	8936	-7498	11665	4	11589	13812	18030	55538
59.00	9116	-7649	11900	4	11589	13811	18029	55862
56.42	9545	-8009	12460	4	11613	13839	18066	56630
53.83	9975	-8370	13022	4	11673	13911	18160	57390
53.83	9975	-8370	13022	4	11634	13865	18099	57411
51.00	10448	-8767	13639	4	11700	13944	18202	58257
51.00	10448	-8767	13639	4	11672	13911	18159	58271
50.00	10615	-8907	13857	4	11699	13943	18201	58895
50.00	10615	-8907	13858	6	11741	13992	18265	59163
49.00	10784	-9048	14077	6	11750	14003	18280	59799
47.58	11022	-9249	14388	6	11788	14048	18339	60693
47.58	11022	-9249	14388	6	11757	14011	18290	60710
44.58	11528	-9673	15049	6	11810	14074	18373	62639
44.00	11627	-9756	15178	6	11804	14068	18364	62846
42.00	11965	-10040	15619	6	11850	14122	18436	63532
42.00	11965	-10040	15619	6	11813	14079	18378	63551
39.00	12473	-10466	16283	6	11844	14115	18426	64609
36.92	12827	-10763	16744	6	11891	14171	18499	65342
36.92	12827	-10763	16744	6	11854	14126	18441	65361
34.00	13323	-11179	17391	6	11872	14149	18470	66419
30.75	13876	-11643	18114	6	11944	14234	18582	67593
30.75	13876	-11643	18114	6	11914	14198	18534	67610
30.00	14004	-11751	18281	6	11930	14218	18560	67883
30.00	14004	-11751	18281	6	11965	14259	18614	68140
29.00	14176	-11895	18505	6	11945	14235	18583	68524
24.50	14947	-12542	19512	6	12042	14351	18733	70193
24.50	14947	-12542	19512	6	12003	14304	18673	70212

BY VALMONT INDUSTRIES FOR:
 Design Id: 584934-P1

BARRETT OUTDOOR 134.0' POLE, SITE: DOCK SHOPPING CENTER - STRATFORD, C

DATE 07/26/2023
 IMPAX 26.1.29.7

Forces and Moments for Pole in the Local Element Coordinate System

Loading Case ICE + WIND

Dist. From Base (ft)	Mx (in-kips)	My (in-kips)	Resultant Mx & My (in-kips)	Torsion (in-kips)	Shear X-Dir. (lbs)	Shear Y-Dir. (lbs)	Resultant Shear (lbs)	Axial (lbs)
24.00	15033	-12614	19624	6	11971	14267	18624	70417
19.00	15893	-13336	20747	6	12029	14336	18714	72332
18.25	16022	-13444	20915	6	12045	14354	18738	72620
18.25	16022	-13444	20915	6	12006	14308	18677	72638
14.00	16754	-14058	21871	6	12040	14349	18731	74306
12.00	17099	-14348	22321	6	12078	14394	18790	75091
12.00	17099	-14348	22321	6	12047	14357	18741	75105
10.00	17444	-14637	22772	6	12085	14402	18801	75896
10.00	17445	-14638	22772	7	12101	14422	18826	76142
9.00	17618	-14783	22998	7	12073	14388	18783	76558
4.00	18484	-15510	24130	7	12097	14417	18820	78587
0.00	19179	-16093	25036	7	12173	14508	18938	80198

BY VALMONT INDUSTRIES
 Design Id: 584934-P1

FOR:

BARRETT OUTDOOR 134.0' POLE, SITE: DOCK SHOPPING CENTER - STRATFORD, C

DATE 07/26/2023

IMPAX 26.1.29.7

Deflections for Pole

Loading Case ICE + WIND

Distance From Base (ft)	Defl. X-Dir (in)	Defl. Y-Dir (in)	Defl. Resultant X & Y (in)	Defl. Z-Dir (in)	Rotation (deg.)
134.00	24.1	28.7	37.5	0.6	2.42
132.50	23.6	28.1	36.7	0.6	2.42
132.50	23.6	28.1	36.7	0.6	2.42
131.00	23.1	27.5	35.9	0.6	2.42
131.00	23.1	27.5	35.9	0.6	2.42
129.00	22.5	26.8	34.9	0.6	2.42
127.00	21.8	26.0	33.9	0.6	2.42
127.00	21.8	26.0	33.9	0.6	2.42
126.25	21.6	25.7	33.5	0.6	2.41
126.25	21.6	25.7	33.5	0.6	2.41
124.00	20.8	24.8	32.4	0.5	2.40
120.00	19.5	23.3	30.4	0.5	2.38
120.00	19.5	23.3	30.4	0.5	2.38
119.00	19.2	22.9	29.9	0.5	2.37
114.00	17.6	21.0	27.4	0.4	2.32
114.00	17.6	21.0	27.4	0.4	2.32
110.00	16.4	19.6	25.5	0.4	2.27
110.00	16.4	19.6	25.5	0.4	2.27
109.00	16.1	19.2	25.1	0.4	2.25
108.75	16.0	19.1	24.9	0.4	2.25
108.75	16.0	19.1	24.9	0.4	2.25
104.00	14.6	17.4	22.7	0.3	2.16
102.75	14.3	17.0	22.2	0.3	2.13
102.75	14.3	17.0	22.2	0.3	2.13
100.00	13.5	16.1	21.0	0.3	2.07
100.00	13.5	16.1	21.0	0.3	2.07
99.00	13.2	15.7	20.5	0.3	2.05
97.50	12.8	15.2	19.9	0.3	2.01
97.50	12.8	15.2	19.9	0.3	2.01
94.00	11.9	14.1	18.5	0.2	1.92
93.50	11.7	14.0	18.3	0.2	1.90
93.50	11.7	14.0	18.3	0.2	1.90
91.25	11.2	13.3	17.4	0.2	1.86
91.25	11.2	13.3	17.4	0.2	1.86
90.00	10.9	12.9	16.9	0.2	1.84
90.00	10.9	12.9	16.9	0.2	1.84
89.00	10.6	12.6	16.5	0.2	1.82
88.25	10.4	12.4	16.2	0.2	1.81
85.08	9.7	11.5	15.0	0.2	1.75
85.08	9.7	11.5	15.0	0.2	1.75
84.00	9.4	11.2	14.6	0.2	1.72
81.42	8.8	10.5	13.7	0.2	1.67
78.83	8.3	9.8	12.8	0.1	1.62

BY VALMONT INDUSTRIES
 Design Id: 584934-P1
 Deflections for Pole

FOR: BARRETT OUTDOOR 134.0' POLE, SITE: DOCK SHOPPING CENTER - STRATFORD, C

DATE 07/26/2023
 IMPAX 26.1.29.7

Loading Case ICE + WIND

Distance From Base (ft)	Defl. X-Dir (in)	Defl. Y-Dir (in)	Defl. Resultant X & Y (in)	Defl. Z-Dir (in)	Rotation (deg.)
78.83	8.3	9.8	12.8	0.1	1.62
74.00	7.2	8.6	11.3	0.1	1.51
72.58	6.9	8.3	10.8	0.1	1.48
72.58	6.9	8.3	10.8	0.1	1.48
70.00	6.4	7.7	10.0	0.1	1.43
70.00	6.4	7.7	10.0	0.1	1.43
69.00	6.3	7.5	9.7	0.1	1.40
66.33	5.8	6.9	9.0	0.1	1.35
66.33	5.8	6.9	9.0	0.1	1.35
64.00	5.3	6.4	8.3	0.1	1.29
60.08	4.7	5.6	7.3	0.1	1.20
60.08	4.7	5.6	7.3	0.1	1.20
59.00	4.5	5.4	7.0	0.1	1.18
56.42	4.1	4.9	6.4	0.1	1.12
53.83	3.7	4.4	5.8	0.1	1.06
53.83	3.7	4.4	5.8	0.1	1.06
51.00	3.3	4.0	5.2	0.0	1.00
51.00	3.3	4.0	5.2	0.0	1.00
50.00	3.2	3.8	5.0	0.0	0.98
50.00	3.2	3.8	5.0	0.0	0.98
49.00	3.1	3.7	4.8	0.0	0.96
47.58	2.9	3.4	4.5	0.0	0.93
47.58	2.9	3.4	4.5	0.0	0.93
44.58	2.5	3.0	3.9	0.0	0.87
44.00	2.5	2.9	3.8	0.0	0.85
42.00	2.2	2.7	3.5	0.0	0.81
42.00	2.2	2.7	3.5	0.0	0.81
39.00	1.9	2.3	3.0	0.0	0.75
36.92	1.7	2.0	2.7	0.0	0.71
36.92	1.7	2.0	2.7	0.0	0.71
34.00	1.5	1.7	2.3	0.0	0.65
30.75	1.2	1.4	1.8	0.0	0.58
30.75	1.2	1.4	1.8	0.0	0.58
30.00	1.1	1.3	1.8	0.0	0.57
30.00	1.1	1.3	1.8	0.0	0.57
29.00	1.1	1.3	1.6	0.0	0.55
24.50	0.7	0.9	1.2	0.0	0.46
24.50	0.7	0.9	1.2	0.0	0.46
24.00	0.7	0.9	1.1	0.0	0.45
19.00	0.4	0.5	0.7	0.0	0.35
18.25	0.4	0.5	0.6	0.0	0.34

BY VALMONT INDUSTRIES
Design Id: 584934-P1
Deflections for Pole

FOR: BARRETT OUTDOOR 134.0' POLE, SITE: DOCK SHOPPING CENTER - STRATFORD, C

DATE 07/26/2023
IMPAX 26.1.29.7

Loading Case ICE + WIND

Distance			Defl.		
From	Defl.	Defl.	Resultant	Defl.	Rotation
Base	X-Dir	Y-Dir	X & Y	Z-Dir	(deg.)
(ft)	(in)	(in)	(in)	(in)	
18.25	0.4	0.5	0.6	0.0	0.34
14.00	0.2	0.3	0.4	0.0	0.26
12.00	0.2	0.2	0.3	0.0	0.22
12.00	0.2	0.2	0.3	0.0	0.22
10.00	0.1	0.1	0.2	0.0	0.18
10.00	0.1	0.1	0.2	0.0	0.18
9.00	0.1	0.1	0.2	0.0	0.16
4.00	0.0	0.0	0.0	0.0	0.07
0.00	0.0	0.0	0.0	0.0	0.00

Loading Case ICE + WIND

Distance From Base (ft)	Nominal Axial Strength (lbs)	Nominal Flexural Strength (in-kips)	Nominal Shear Strength (lbs)	Nominal Torsional Strength (in-kips)	Axial Interaction Term	Flexural Interaction Term	Shear Interaction Term	Torsion Interaction Term	Combined Stress Interaction
134.00	1,224,922	9,095	367,476	8,689	0.00	0.00	0.00	0.00	0.01
132.50	1,243,902	9,381	373,170	8,961	0.00	0.00	0.00	0.00	0.01
131.00	1,262,882	9,671	378,864	9,236	0.01	0.00	0.01	0.00	0.01
129.00	1,288,188	10,064	386,456	9,610	0.01	0.01	0.01	0.00	0.02
127.00	1,313,495	10,413	394,048	9,991	0.01	0.02	0.01	0.00	0.03
126.25	1,322,985	10,546	396,895	10,136	0.01	0.03	0.01	0.00	0.04
124.00	1,351,455	10,945	405,437	10,577	0.01	0.04	0.01	0.00	0.05
120.00	1,402,068	11,667	420,621	11,384	0.02	0.06	0.02	0.00	0.07
119.00	1,414,722	11,849	424,417	11,591	0.02	0.07	0.02	0.00	0.08
114.00	1,477,989	12,774	443,397	12,651	0.02	0.11	0.02	0.00	0.12
110.00	1,528,602	13,528	458,581	13,532	0.02	0.14	0.03	0.00	0.16
109.00	1,541,255	13,718	462,377	13,757	0.02	0.15	0.03	0.00	0.17
108.75	1,544,419	13,766	463,326	13,813	0.02	0.15	0.03	0.00	0.17
104.00	1,604,522	14,679	481,357	14,910	0.02	0.20	0.03	0.00	0.22
102.75	1,620,339	14,922	486,102	15,205	0.02	0.21	0.03	0.00	0.23
100.00	1,655,135	15,460	496,541	15,865	0.03	0.23	0.04	0.00	0.26
99.00	1,667,789	15,656	500,337	16,108	0.03	0.24	0.04	0.00	0.28
97.50	1,686,769	15,952	506,031	16,477	0.03	0.26	0.04	0.00	0.29
94.00	1,731,056	16,647	519,317	17,354	0.03	0.30	0.04	0.00	0.33
93.50	1,737,382	16,746	521,215	17,481	0.03	0.30	0.04	0.00	0.33
93.50	2,978,367	30,644	893,510	29,356	0.02	0.17	0.02	0.00	0.18
91.25	3,028,190	31,685	908,457	30,346	0.02	0.18	0.02	0.00	0.19
90.00	3,055,869	32,271	916,761	30,903	0.02	0.18	0.02	0.00	0.20
89.00	3,078,012	32,743	923,404	31,353	0.02	0.19	0.02	0.00	0.20
88.25	3,094,620	33,100	928,386	31,692	0.02	0.19	0.02	0.00	0.21
85.08	3,164,740	34,626	949,422	33,144	0.02	0.20	0.02	0.00	0.22
84.00	3,188,729	35,156	956,619	33,649	0.02	0.21	0.02	0.00	0.22
81.42	3,245,933	36,437	973,780	34,867	0.02	0.22	0.02	0.00	0.23
78.83	3,303,136	37,740	990,941	36,107	0.02	0.23	0.02	0.00	0.24
74.00	3,410,163	40,240	1,023,049	38,484	0.02	0.24	0.02	0.00	0.26
72.58	3,441,532	40,988	1,032,460	39,196	0.02	0.24	0.02	0.00	0.26
70.00	3,498,736	42,370	1,049,621	40,509	0.02	0.25	0.02	0.00	0.27
69.00	3,520,879	42,911	1,056,264	41,024	0.02	0.25	0.02	0.00	0.27
66.33	3,579,928	44,370	1,073,979	42,411	0.02	0.26	0.02	0.00	0.28
64.00	3,631,596	45,667	1,089,479	43,644	0.02	0.26	0.02	0.00	0.28
60.08	3,718,324	47,887	1,115,497	45,754	0.02	0.27	0.02	0.00	0.29
59.00	3,742,313	48,510	1,122,694	46,346	0.02	0.27	0.02	0.00	0.29
56.42	3,799,517	50,012	1,139,855	47,774	0.02	0.28	0.02	0.00	0.29
53.83	3,856,720	51,537	1,157,016	49,223	0.02	0.28	0.02	0.00	0.30
51.00	3,919,460	53,236	1,175,838	50,838	0.02	0.28	0.02	0.00	0.30

Loading Case ICE + WIND

Distance From Base (ft)	Nominal Axial Strength (lbs)	Nominal Flexural Strength (in-kips)	Nominal Shear Strength (lbs)	Nominal Torsional Strength (in-kips)	Axial Interaction Term	Flexural Interaction Term	Shear Interaction Term	Torsion Interaction Term	Combined Stress Interaction
51.00	4,382,679	58,146	1,314,804	55,619	0.01	0.26	0.02	0.00	0.28
50.00	4,407,985	58,823	1,322,396	56,263	0.01	0.26	0.02	0.00	0.28
49.00	4,433,292	59,504	1,329,988	56,911	0.01	0.26	0.02	0.00	0.28
47.58	4,469,143	60,476	1,340,743	57,835	0.02	0.26	0.02	0.00	0.28
44.58	4,545,063	62,560	1,363,519	59,817	0.02	0.27	0.01	0.00	0.28
44.00	4,559,825	62,969	1,367,948	60,206	0.02	0.27	0.01	0.00	0.28
42.00	4,610,439	64,383	1,383,132	61,550	0.02	0.27	0.01	0.00	0.29
39.00	4,686,359	66,532	1,405,908	63,594	0.02	0.27	0.01	0.00	0.29
36.92	4,739,081	68,046	1,421,724	65,033	0.02	0.27	0.01	0.00	0.29
34.00	4,812,892	70,194	1,443,868	67,074	0.02	0.28	0.01	0.00	0.29
30.75	4,895,139	72,626	1,468,542	69,386	0.02	0.28	0.01	0.00	0.29
30.00	4,914,119	73,193	1,474,236	69,925	0.02	0.28	0.01	0.00	0.29
29.00	4,939,426	73,953	1,481,828	70,647	0.02	0.28	0.01	0.00	0.29
24.50	5,053,306	77,420	1,515,992	73,942	0.02	0.28	0.01	0.00	0.30
24.00	5,065,959	77,810	1,519,788	74,313	0.02	0.28	0.01	0.00	0.30
19.00	5,192,493	81,605	1,557,748	78,072	0.02	0.28	0.01	0.00	0.30
18.25	5,211,473	82,129	1,563,442	78,644	0.02	0.28	0.01	0.00	0.30
14.00	5,319,027	85,121	1,595,708	81,923	0.02	0.29	0.01	0.00	0.30
12.00	5,369,640	86,541	1,610,892	83,490	0.02	0.29	0.01	0.00	0.30
10.00	5,420,253	87,968	1,626,076	85,071	0.02	0.29	0.01	0.00	0.30
9.00	5,445,560	88,685	1,633,668	85,867	0.02	0.29	0.01	0.00	0.30
4.00	5,572,094	92,293	1,671,628	89,904	0.02	0.29	0.01	0.00	0.31
0.00	5,673,320	95,210	1,701,996	93,200	0.02	0.29	0.01	0.00	0.31

Forces and Moments for Pole in the Local Element Coordinate System

Loading Case T+S

Dist. From Base (ft)	Mx (in-kips)	My (in-kips)	Resultant Mx & My (in-kips)	Torsion (in-kips)	Shear X-Dir. (lbs)	Shear Y-Dir. (lbs)	Resultant Shear (lbs)	Axial (lbs)
134.00	0	0	0	0	2	2	3	14
132.50	0	0	0	0	16	19	25	110
132.50	0	0	0	0	18	21	28	110
131.00	1	-1	1	0	33	39	51	208
131.00	1	-1	1	0	1647	1963	2562	4304
129.00	48	-40	63	0	1667	1986	2593	4437
127.00	96	-81	125	0	1687	2010	2624	4572
127.00	96	-81	126	1	1729	2060	2690	4661
126.25	115	-96	150	1	1736	2069	2701	4712
126.25	115	-96	150	1	1739	2072	2705	4714
124.00	171	-144	223	1	1762	2099	2741	4871
120.00	273	-229	356	1	1805	2150	2807	5158
120.00	273	-229	356	1	3393	4044	5279	9260
119.00	322	-270	420	1	3402	4054	5293	9335
114.00	567	-476	740	1	3458	4122	5380	9712
114.00	567	-476	740	1	3458	4121	5380	9717
110.00	766	-643	1000	1	3505	4177	5453	10030
110.00	766	-643	1000	1	5104	6083	7941	14226
109.00	839	-704	1096	1	5115	6096	7958	14306
108.75	858	-720	1120	1	5118	6100	7963	14327
108.75	858	-720	1120	1	5117	6098	7961	14333
104.00	1207	-1013	1576	1	5170	6161	8042	14728
102.75	1300	-1091	1697	1	5185	6179	8066	14833
102.75	1300	-1091	1697	1	5185	6179	8066	14839
100.00	1504	-1262	1964	1	5219	6220	8120	15074
100.00	1504	-1262	1964	1	6735	8026	10477	19186
99.00	1601	-1343	2090	1	6743	8036	10491	19276
97.50	1746	-1465	2279	1	6763	8059	10521	19407
97.50	1746	-1465	2279	1	6757	8052	10511	19416
94.00	2085	-1749	2722	1	6795	8098	10571	19734
93.50	2134	-1790	2785	1	6802	8106	10581	19779
93.50	2134	-1790	2785	1	6798	8101	10575	19782
91.25	2353	-1974	3071	1	6832	8142	10629	20340
91.25	2353	-1974	3071	1	6832	8142	10628	20347
90.00	2475	-2077	3231	1	6851	8165	10658	20660
90.00	2475	-2077	3231	2	6893	8215	10724	20754
89.00	2574	-2160	3360	2	6906	8231	10744	21009
88.25	2648	-2222	3457	2	6913	8238	10754	21204
85.08	2962	-2486	3867	2	6958	8292	10824	21720
85.08	2962	-2486	3867	2	6954	8287	10818	21727

Forces and Moments for Pole in the Local Element Coordinate System

Loading Case T+S

Dist. From Base (ft)	Mx (in-kips)	My (in-kips)	Resultant Mx & My (in-kips)	Torsion (in-kips)	Shear X-Dir. (lbs)	Shear Y-Dir. (lbs)	Resultant Shear (lbs)	Axial (lbs)
84.00	3070	-2576	4008	2	6964	8299	10834	21910
81.42	3328	-2792	4344	2	6993	8334	10879	22349
78.83	3587	-3010	4682	2	7031	8379	10938	22790
78.83	3587	-3010	4682	2	7023	8369	10925	22803
74.00	4075	-3419	5319	2	7084	8442	11020	23656
72.58	4219	-3540	5507	2	7105	8467	11053	23909
72.58	4219	-3540	5507	2	7100	8461	11045	23916
70.00	4482	-3761	5850	2	7139	8507	11106	24383
70.00	4482	-3761	5850	3	7175	8551	11162	24479
69.00	4584	-3847	5985	3	7183	8560	11175	24667
66.33	4859	-4077	6343	3	7224	8609	11238	25160
66.33	4859	-4077	6343	3	7216	8600	11226	25169
64.00	5101	-4280	6658	3	7240	8628	11263	25616
60.08	5508	-4622	7190	3	7300	8700	11356	26366
60.08	5508	-4622	7190	3	7292	8690	11344	26375
59.00	5621	-4716	7337	3	7301	8701	11358	26590
56.42	5891	-4943	7691	3	7330	8735	11403	27105
53.83	6163	-5171	8045	3	7370	8783	11465	27620
53.83	6163	-5171	8045	3	7360	8772	11451	27630
51.00	6462	-5422	8435	3	7404	8824	11519	28204
51.00	6462	-5422	8435	3	7396	8814	11506	28209
50.00	6568	-5511	8574	3	7413	8834	11532	28643
50.00	6568	-5511	8574	4	7448	8877	11588	28738
49.00	6675	-5601	8713	4	7460	8891	11606	29178
47.58	6826	-5728	8911	4	7485	8920	11644	29800
47.58	6826	-5728	8911	4	7477	8911	11632	29808
44.58	7148	-5998	9331	4	7520	8962	11699	31147
44.00	7211	-6050	9413	4	7523	8965	11703	31289
42.00	7426	-6231	9694	4	7553	9002	11751	31767
42.00	7426	-6231	9694	4	7544	8991	11737	31775
39.00	7751	-6504	10118	4	7578	9031	11789	32509
36.92	7977	-6694	10413	4	7610	9069	11839	33020
36.92	7977	-6694	10413	4	7601	9058	11825	33029
34.00	8295	-6960	10829	4	7630	9093	11871	33763
30.75	8651	-7259	11293	4	7679	9151	11946	34585
30.75	8651	-7259	11293	4	7672	9143	11936	34593
30.00	8733	-7328	11400	4	7683	9157	11953	34785
30.00	8733	-7328	11401	4	7715	9194	12002	34880
29.00	8844	-7421	11545	4	7716	9196	12004	35144
24.50	9342	-7839	12196	4	7782	9274	12107	36316

BY VALMONT INDUSTRIES FOR:
 Design Id: 584934-P1

BARRETT OUTDOOR 134.0' POLE, SITE: DOCK SHOPPING CENTER - STRATFORD, C

DATE 07/26/2023
 IMPAX 26.1.29.7

Forces and Moments for Pole in the Local Element Coordinate System

Loading Case T+S

Dist. From Base (ft)	Mx (in-kips)	My (in-kips)	Resultant Mx & My (in-kips)	Torsion (in-kips)	Shear X-Dir. (lbs)	Shear Y-Dir. (lbs)	Resultant Shear (lbs)	Axial (lbs)
24.50	9342	-7839	12196	4	7771	9262	12090	36325
24.00	9398	-7886	12268	4	7765	9254	12080	36464
19.00	9956	-8354	12996	4	7821	9321	12168	37808
18.25	10040	-8424	13106	4	7832	9334	12184	38012
18.25	10040	-8424	13106	4	7821	9320	12167	38020
14.00	10517	-8825	13729	4	7863	9370	12232	39195
12.00	10742	-9014	14023	4	7889	9402	12274	39752
12.00	10742	-9014	14023	4	7881	9392	12260	39759
10.00	10968	-9203	14318	4	7907	9424	12302	40322
10.00	10968	-9203	14318	5	7930	9450	12337	40418
9.00	11082	-9299	14466	5	7927	9448	12333	40709
4.00	11651	-9776	15209	5	7971	9499	12401	42157
0.00	12108	-10160	15806	5	8026	9565	12486	43330

Deflections for Pole

Loading Case T+S

Distance From Base (ft)	Defl. X-Dir (in)	Defl. Y-Dir (in)	Defl. Resultant X & Y (in)	Defl. Z-Dir (in)	Rotation (deg.)
134.00	14.9	17.8	23.2	0.2	1.49
132.50	14.6	17.4	22.8	0.2	1.49
132.50	14.6	17.4	22.8	0.2	1.49
131.00	14.3	17.1	22.3	0.2	1.49
131.00	14.3	17.1	22.3	0.2	1.49
129.00	13.9	16.6	21.7	0.2	1.49
127.00	13.5	16.1	21.1	0.2	1.49
127.00	13.5	16.1	21.1	0.2	1.49
126.25	13.4	16.0	20.8	0.2	1.49
126.25	13.4	16.0	20.8	0.2	1.49
124.00	12.9	15.4	20.1	0.2	1.48
120.00	12.1	14.5	18.9	0.2	1.47
120.00	12.1	14.5	18.9	0.2	1.47
119.00	11.9	14.2	18.6	0.2	1.46
114.00	11.0	13.1	17.1	0.2	1.43
114.00	11.0	13.1	17.1	0.2	1.43
110.00	10.2	12.2	15.9	0.2	1.40
110.00	10.2	12.2	15.9	0.2	1.40
109.00	10.0	11.9	15.6	0.1	1.39
108.75	10.0	11.9	15.5	0.1	1.39
108.75	10.0	11.9	15.5	0.1	1.39
104.00	9.1	10.8	14.2	0.1	1.33
102.75	8.9	10.6	13.8	0.1	1.32
102.75	8.9	10.6	13.8	0.1	1.32
100.00	8.4	10.0	13.1	0.1	1.28
100.00	8.4	10.0	13.1	0.1	1.28
99.00	8.2	9.8	12.8	0.1	1.27
97.50	8.0	9.5	12.4	0.1	1.24
97.50	8.0	9.5	12.4	0.1	1.24
94.00	7.4	8.8	11.5	0.1	1.19
93.50	7.3	8.7	11.4	0.1	1.18
93.50	7.3	8.7	11.4	0.1	1.18
91.25	7.0	8.3	10.8	0.1	1.15
91.25	7.0	8.3	10.8	0.1	1.15
90.00	6.8	8.1	10.5	0.1	1.14
90.00	6.8	8.1	10.5	0.1	1.14
89.00	6.6	7.9	10.3	0.1	1.13
88.25	6.5	7.7	10.1	0.1	1.12
85.08	6.0	7.2	9.4	0.1	1.08
85.08	6.0	7.2	9.4	0.1	1.08
84.00	5.9	7.0	9.1	0.1	1.07
81.42	5.5	6.6	8.6	0.1	1.04
78.83	5.2	6.1	8.0	0.1	1.00

Deflections for Pole

Loading Case T+S

Distance From Base (ft)	Defl. X-Dir (in)	Defl. Y-Dir (in)	Defl. Resultant X & Y (in)	Defl. Z-Dir (in)	Rotation (deg.)
78.83	5.2	6.1	8.0	0.1	1.00
74.00	4.5	5.4	7.0	0.1	0.94
72.58	4.3	5.2	6.8	0.0	0.92
72.58	4.3	5.2	6.8	0.0	0.92
70.00	4.0	4.8	6.3	0.0	0.89
70.00	4.0	4.8	6.3	0.0	0.89
69.00	3.9	4.7	6.1	0.0	0.87
66.33	3.6	4.3	5.6	0.0	0.84
66.33	3.6	4.3	5.6	0.0	0.84
64.00	3.3	4.0	5.2	0.0	0.81
60.08	2.9	3.5	4.6	0.0	0.75
60.08	2.9	3.5	4.6	0.0	0.75
59.00	2.8	3.4	4.4	0.0	0.74
56.42	2.6	3.1	4.0	0.0	0.70
53.83	2.3	2.8	3.6	0.0	0.66
53.83	2.3	2.8	3.6	0.0	0.66
51.00	2.1	2.5	3.3	0.0	0.62
51.00	2.1	2.5	3.3	0.0	0.62
50.00	2.0	2.4	3.1	0.0	0.61
50.00	2.0	2.4	3.1	0.0	0.61
49.00	1.9	2.3	3.0	0.0	0.60
47.58	1.8	2.2	2.8	0.0	0.58
47.58	1.8	2.2	2.8	0.0	0.58
44.58	1.6	1.9	2.5	0.0	0.54
44.00	1.5	1.8	2.4	0.0	0.53
42.00	1.4	1.7	2.2	0.0	0.51
42.00	1.4	1.7	2.2	0.0	0.51
39.00	1.2	1.4	1.9	0.0	0.47
36.92	1.1	1.3	1.7	0.0	0.44
36.92	1.1	1.3	1.7	0.0	0.44
34.00	0.9	1.1	1.4	0.0	0.41
30.75	0.7	0.9	1.2	0.0	0.37
30.75	0.7	0.9	1.2	0.0	0.37
30.00	0.7	0.8	1.1	0.0	0.36
30.00	0.7	0.8	1.1	0.0	0.36
29.00	0.7	0.8	1.0	0.0	0.34
24.50	0.5	0.6	0.7	0.0	0.29
24.50	0.5	0.6	0.7	0.0	0.29
24.00	0.4	0.5	0.7	0.0	0.28
19.00	0.3	0.3	0.4	0.0	0.22
18.25	0.3	0.3	0.4	0.0	0.21

BY VALMONT INDUSTRIES
Design Id: 584934-P1
Deflections for Pole

FOR: BARRETT OUTDOOR 134.0' POLE, SITE: DOCK SHOPPING CENTER - STRATFORD, C

DATE 07/26/2023
IMPAX 26.1.29.7

Loading Case T+S

Distance	Defl.	Defl.	Defl.	Defl.	
From	X-Dir	Y-Dir	Resultant	Z-Dir	Rotation
Base	(in)	(in)	X & Y	(in)	(deg.)
18.25	0.3	0.3	0.4	0.0	0.21
14.00	0.2	0.2	0.2	0.0	0.16
12.00	0.1	0.1	0.2	0.0	0.14
12.00	0.1	0.1	0.2	0.0	0.14
10.00	0.1	0.1	0.1	0.0	0.11
10.00	0.1	0.1	0.1	0.0	0.11
9.00	0.1	0.1	0.1	0.0	0.10
4.00	0.0	0.0	0.0	0.0	0.05
0.00	0.0	0.0	0.0	0.0	0.00

Stresses for Pole

Loading Case T+S

Distance From Base (ft)	Nominal Axial Strength (lbs)	Nominal Flexural Strength (in-kips)	Nominal Shear Strength (lbs)	Nominal Torsional Strength (in-kips)	Axial Interaction Term	Flexural Interaction Term	Shear Interaction Term	Torsion Interaction Term	Combined Stress Interaction
134.00	1,224,922	9,095	367,476	8,689	0.00	0.00	0.00	0.00	0.01
132.50	1,243,902	9,381	373,170	8,961	0.00	0.00	0.00	0.00	0.01
131.00	1,262,882	9,671	378,864	9,236	0.00	0.00	0.01	0.00	0.01
129.00	1,288,188	10,064	386,456	9,610	0.00	0.01	0.01	0.00	0.01
127.00	1,313,495	10,413	394,048	9,991	0.00	0.01	0.01	0.00	0.02
126.25	1,322,985	10,546	396,895	10,136	0.00	0.02	0.01	0.00	0.02
124.00	1,351,455	10,945	405,437	10,577	0.00	0.02	0.01	0.00	0.03
120.00	1,402,068	11,667	420,621	11,384	0.01	0.03	0.01	0.00	0.04
119.00	1,414,722	11,849	424,417	11,591	0.01	0.04	0.01	0.00	0.05
114.00	1,477,989	12,774	443,397	12,651	0.01	0.06	0.01	0.00	0.07
110.00	1,528,602	13,528	458,581	13,532	0.01	0.08	0.02	0.00	0.09
109.00	1,541,255	13,718	462,377	13,757	0.01	0.09	0.02	0.00	0.10
108.75	1,544,419	13,766	463,326	13,813	0.01	0.09	0.02	0.00	0.10
104.00	1,604,522	14,679	481,357	14,910	0.01	0.12	0.02	0.00	0.13
102.75	1,620,339	14,922	486,102	15,205	0.01	0.13	0.02	0.00	0.14
100.00	1,655,135	15,460	496,541	15,865	0.01	0.14	0.02	0.00	0.15
99.00	1,667,789	15,656	500,337	16,108	0.01	0.15	0.02	0.00	0.16
97.50	1,686,769	15,952	506,031	16,477	0.01	0.16	0.02	0.00	0.17
94.00	1,731,056	16,647	519,317	17,354	0.01	0.18	0.02	0.00	0.19
93.50	1,737,382	16,746	521,215	17,481	0.01	0.18	0.02	0.00	0.20
93.50	2,978,367	30,644	893,510	29,356	0.01	0.10	0.01	0.00	0.11
91.25	3,028,190	31,685	908,457	30,346	0.01	0.11	0.01	0.00	0.12
90.00	3,055,869	32,271	916,761	30,903	0.01	0.11	0.01	0.00	0.12
89.00	3,078,012	32,743	923,404	31,353	0.01	0.11	0.01	0.00	0.12
88.25	3,094,620	33,100	928,386	31,692	0.01	0.12	0.01	0.00	0.12
85.08	3,164,740	34,626	949,422	33,144	0.01	0.12	0.01	0.00	0.13
84.00	3,188,729	35,156	956,619	33,649	0.01	0.13	0.01	0.00	0.13
81.42	3,245,933	36,437	973,780	34,867	0.01	0.13	0.01	0.00	0.14
78.83	3,303,136	37,740	990,941	36,107	0.01	0.14	0.01	0.00	0.15
74.00	3,410,163	40,240	1,023,049	38,484	0.01	0.15	0.01	0.00	0.15
72.58	3,441,532	40,988	1,032,460	39,196	0.01	0.15	0.01	0.00	0.16
70.00	3,498,736	42,370	1,049,621	40,509	0.01	0.15	0.01	0.00	0.16
69.00	3,520,879	42,911	1,056,264	41,024	0.01	0.15	0.01	0.00	0.16
66.33	3,579,928	44,370	1,073,979	42,411	0.01	0.16	0.01	0.00	0.17
64.00	3,631,596	45,667	1,089,479	43,644	0.01	0.16	0.01	0.00	0.17
60.08	3,718,324	47,887	1,115,497	45,754	0.01	0.17	0.01	0.00	0.17
59.00	3,742,313	48,510	1,122,694	46,346	0.01	0.17	0.01	0.00	0.18
56.42	3,799,517	50,012	1,139,855	47,774	0.01	0.17	0.01	0.00	0.18
53.83	3,856,720	51,537	1,157,016	49,223	0.01	0.17	0.01	0.00	0.18
51.00	3,919,460	53,236	1,175,838	50,838	0.01	0.18	0.01	0.00	0.18

Loading Case T+S

Distance From Base (ft)	Nominal Axial Strength (lbs)	Nominal Flexural Strength (in-kips)	Nominal Shear Strength (lbs)	Nominal Torsional Strength (in-kips)	Axial Interaction Term	Flexural Interaction Term	Shear Interaction Term	Torsion Interaction Term	Combined Stress Interaction
51.00	4,382,679	58,146	1,314,804	55,619	0.01	0.16	0.01	0.00	0.17
50.00	4,407,985	58,823	1,322,396	56,263	0.01	0.16	0.01	0.00	0.17
49.00	4,433,292	59,504	1,329,988	56,911	0.01	0.16	0.01	0.00	0.17
47.58	4,469,143	60,476	1,340,743	57,835	0.01	0.16	0.01	0.00	0.17
44.58	4,545,063	62,560	1,363,519	59,817	0.01	0.17	0.01	0.00	0.17
44.00	4,559,825	62,969	1,367,948	60,206	0.01	0.17	0.01	0.00	0.17
42.00	4,610,439	64,383	1,383,132	61,550	0.01	0.17	0.01	0.00	0.18
39.00	4,686,359	66,532	1,405,908	63,594	0.01	0.17	0.01	0.00	0.18
36.92	4,739,081	68,046	1,421,724	65,033	0.01	0.17	0.01	0.00	0.18
34.00	4,812,892	70,194	1,443,868	67,074	0.01	0.17	0.01	0.00	0.18
30.75	4,895,139	72,626	1,468,542	69,386	0.01	0.17	0.01	0.00	0.18
30.00	4,914,119	73,193	1,474,236	69,925	0.01	0.17	0.01	0.00	0.18
29.00	4,939,426	73,953	1,481,828	70,647	0.01	0.17	0.01	0.00	0.18
24.50	5,053,306	77,420	1,515,992	73,942	0.01	0.18	0.01	0.00	0.18
24.00	5,065,959	77,810	1,519,788	74,313	0.01	0.18	0.01	0.00	0.18
19.00	5,192,493	81,605	1,557,748	78,072	0.01	0.18	0.01	0.00	0.19
18.25	5,211,473	82,129	1,563,442	78,644	0.01	0.18	0.01	0.00	0.19
14.00	5,319,027	85,121	1,595,708	81,923	0.01	0.18	0.01	0.00	0.19
12.00	5,369,640	86,541	1,610,892	83,490	0.01	0.18	0.01	0.00	0.19
10.00	5,420,253	87,968	1,626,076	85,071	0.01	0.18	0.01	0.00	0.19
9.00	5,445,560	88,685	1,633,668	85,867	0.01	0.18	0.01	0.00	0.19
4.00	5,572,094	92,293	1,671,628	89,904	0.01	0.18	0.01	0.00	0.19
0.00	5,673,320	95,210	1,701,996	93,200	0.01	0.18	0.01	0.00	0.19

Forces and Moments for Pole in the Local Element Coordinate System

Loading Case	Seismic								
Dist. From			Resultant	Torsion	Shear	Shear	Resultant	Axial	
Base	Mx	My	Mx & My	(in-kips)	X-Dir.	Y-Dir.	Shear	(lbs)	
(ft)	(in-kips)	(in-kips)	(in-kips)		(lbs)	(lbs)	(lbs)		
134.00	0	0	0	0	1	1	1	17	
132.50	0	0	0	0	5	6	8	137	
131.00	0	0	0	0	10	12	15	259	
131.00	0	0	0	0	203	242	315	5437	
129.00	6	-5	8	0	209	249	325	5602	
127.00	12	-10	16	0	215	256	334	5771	
127.00	12	-10	16	0	219	261	340	5883	
126.25	15	-12	19	0	221	263	344	5947	
126.25	15	-12	19	0	221	263	344	5949	
124.00	22	-18	29	0	228	271	354	6144	
120.00	35	-30	46	0	239	285	372	6501	
120.00	35	-30	46	0	402	480	626	11684	
119.00	41	-34	53	0	405	483	630	11775	
114.00	70	-59	92	0	419	499	652	12244	
114.00	70	-59	92	0	418	499	651	12246	
110.00	95	-79	124	0	429	512	668	12636	
110.00	95	-80	124	0	570	679	887	17930	
109.00	103	-86	134	0	573	682	891	18029	
108.75	105	-88	137	0	573	683	892	18054	
108.75	105	-88	137	0	573	683	891	18058	
104.00	144	-121	188	0	584	696	909	18543	
102.75	155	-130	202	0	587	700	913	18674	
102.75	155	-130	202	0	587	699	912	18678	
100.00	178	-149	232	0	593	707	923	18970	
100.00	178	-149	232	0	707	843	1101	24148	
99.00	188	-158	246	0	709	845	1103	24256	
97.50	203	-171	266	0	713	849	1109	24419	
97.50	203	-171	266	0	712	848	1107	24422	
94.00	239	-201	312	0	718	856	1118	24810	
93.50	244	-205	319	0	719	857	1119	24866	
93.50	244	-205	319	0	719	857	1119	24866	
91.25	268	-225	349	0	732	873	1139	25560	
91.25	268	-225	349	0	732	872	1138	25565	
90.00	281	-236	367	0	739	880	1149	25955	
90.00	281	-236	367	0	740	882	1152	26071	
89.00	292	-245	381	0	746	889	1160	26386	
88.25	300	-251	391	0	749	893	1166	26623	
85.08	334	-280	436	0	760	906	1182	27266	
85.08	334	-280	436	0	759	905	1181	27268	
84.00	346	-290	451	0	762	908	1185	27491	

Forces and Moments for Pole in the Local Element Coordinate System

Loading Case Seismic

Dist. From Base (ft)	Mx (in-kips)	My (in-kips)	Resultant Mx & My (in-kips)	Torsion (in-kips)	Shear X-Dir. (lbs)	Shear Y-Dir. (lbs)	Resultant Shear (lbs)	Axial (lbs)
81.42	374	-314	488	0	769	917	1197	28030
78.83	402	-338	525	0	777	926	1209	28578
78.83	402	-338	525	0	775	924	1206	28584
74.00	457	-383	596	0	788	939	1226	29636
72.58	473	-397	617	0	792	943	1232	29950
72.58	473	-397	617	0	791	942	1230	29953
70.00	502	-421	655	0	797	950	1241	30534
70.00	502	-421	655	0	798	951	1241	30650
69.00	513	-431	670	0	799	953	1244	30878
66.33	544	-456	710	0	806	960	1254	31492
66.33	544	-456	710	0	804	959	1251	31494
64.00	571	-479	745	0	808	963	1257	32040
60.08	616	-517	805	0	816	973	1270	32974
60.08	616	-517	805	0	815	971	1268	32976
59.00	629	-528	821	0	816	972	1269	33238
56.42	659	-553	861	0	819	976	1275	33870
53.83	690	-579	900	0	824	982	1282	34512
53.83	690	-579	900	0	822	980	1279	34515
51.00	723	-607	944	0	827	986	1286	35229
51.00	723	-607	944	0	826	984	1285	35229
50.00	735	-617	959	0	829	988	1290	35770
50.00	735	-617	960	0	829	988	1290	35885
49.00	747	-627	975	0	832	991	1294	36429
47.58	764	-641	997	0	836	996	1300	37203
47.58	764	-641	997	0	835	995	1298	37206
44.58	800	-671	1044	0	842	1003	1310	38867
44.00	807	-677	1053	0	842	1003	1310	39040
42.00	831	-697	1085	0	844	1006	1314	39634
42.00	831	-697	1085	0	843	1005	1311	39637
39.00	867	-728	1132	0	845	1007	1314	40542
36.92	892	-749	1165	0	847	1010	1318	41179
36.92	892	-749	1165	0	845	1008	1315	41181
34.00	928	-778	1211	0	846	1009	1317	42085
30.75	967	-812	1263	0	849	1012	1321	43109
30.75	967	-812	1263	0	848	1010	1319	43113
30.00	976	-819	1274	0	848	1011	1320	43351
30.00	976	-819	1275	0	848	1010	1319	43467
29.00	989	-829	1290	0	847	1009	1317	43787
24.50	1043	-875	1362	0	849	1012	1321	45246
24.50	1043	-875	1362	0	848	1010	1319	45248

BY VALMONT INDUSTRIES FOR:
 Design Id: 584934-P1

BARRETT OUTDOOR 134.0' POLE, SITE: DOCK SHOPPING CENTER - STRATFORD, C

DATE 07/26/2023
 IMPAX 26.1.29.7

Forces and Moments for Pole in the Local Element Coordinate System

Loading Case Seismic

Dist. From Base (ft)	Mx (in-kips)	My (in-kips)	Resultant Mx & My (in-kips)	Torsion (in-kips)	Shear X-Dir. (lbs)	Shear Y-Dir. (lbs)	Resultant Shear (lbs)	Axial (lbs)
24.00	1049	-880	1370	0	846	1008	1316	45413
19.00	1110	-931	1449	0	846	1008	1316	47077
18.25	1119	-939	1460	0	846	1009	1317	47330
18.25	1119	-939	1460	0	845	1007	1314	47333
14.00	1170	-982	1528	0	843	1005	1312	48785
12.00	1194	-1002	1559	0	844	1006	1313	49479
12.00	1194	-1002	1559	0	842	1004	1310	49482
10.00	1218	-1022	1590	0	843	1004	1311	50182
10.00	1219	-1022	1591	0	842	1003	1309	50298
9.00	1231	-1033	1606	0	839	1000	1306	50651
4.00	1291	-1083	1685	0	836	997	1301	52439
0.00	1338	-1123	1747	0	837	997	1301	53899

Deflections for Pole

Loading Case Seismic

Distance From Base (ft)	Defl. X-Dir (in)	Defl. Y-Dir (in)	Defl. Resultant X & Y (in)	Defl. Z-Dir (in)	Rotation (deg.)
134.00	1.7	2.0	2.6	0.0	0.17
132.50	1.6	2.0	2.6	0.0	0.17
132.50	1.6	2.0	2.6	0.0	0.17
131.00	1.6	1.9	2.5	0.0	0.17
131.00	1.6	1.9	2.5	0.0	0.17
129.00	1.6	1.9	2.4	0.0	0.17
127.00	1.5	1.8	2.4	0.0	0.17
127.00	1.5	1.8	2.4	0.0	0.17
126.25	1.5	1.8	2.3	0.0	0.17
126.25	1.5	1.8	2.3	0.0	0.17
124.00	1.5	1.7	2.3	0.0	0.17
120.00	1.4	1.6	2.1	0.0	0.17
120.00	1.4	1.6	2.1	0.0	0.17
119.00	1.3	1.6	2.1	0.0	0.17
114.00	1.2	1.5	1.9	0.0	0.16
114.00	1.2	1.5	1.9	0.0	0.16
110.00	1.1	1.4	1.8	0.0	0.16
110.00	1.1	1.4	1.8	0.0	0.16
109.00	1.1	1.3	1.7	0.0	0.16
108.75	1.1	1.3	1.7	0.0	0.16
108.75	1.1	1.3	1.7	0.0	0.16
104.00	1.0	1.2	1.6	0.0	0.15
102.75	1.0	1.2	1.5	0.0	0.15
102.75	1.0	1.2	1.5	0.0	0.15
100.00	0.9	1.1	1.5	0.0	0.14
100.00	0.9	1.1	1.5	0.0	0.14
99.00	0.9	1.1	1.4	0.0	0.14
97.50	0.9	1.1	1.4	0.0	0.14
97.50	0.9	1.1	1.4	0.0	0.14
94.00	0.8	1.0	1.3	0.0	0.13
93.50	0.8	1.0	1.3	0.0	0.13
93.50	0.8	1.0	1.3	0.0	0.13
91.25	0.8	0.9	1.2	0.0	0.13
91.25	0.8	0.9	1.2	0.0	0.13
90.00	0.8	0.9	1.2	0.0	0.13
90.00	0.8	0.9	1.2	0.0	0.13
89.00	0.7	0.9	1.1	0.0	0.13
88.25	0.7	0.9	1.1	0.0	0.13
85.08	0.7	0.8	1.0	0.0	0.12
85.08	0.7	0.8	1.0	0.0	0.12
84.00	0.7	0.8	1.0	0.0	0.12
81.42	0.6	0.7	1.0	0.0	0.12
78.83	0.6	0.7	0.9	0.0	0.11

Deflections for Pole

Loading Case Seismic

Distance From Base (ft)	Defl. X-Dir (in)	Defl. Y-Dir (in)	Defl. Resultant X & Y (in)	Defl. Z-Dir (in)	Rotation (deg.)
78.83	0.6	0.7	0.9	0.0	0.11
74.00	0.5	0.6	0.8	0.0	0.11
72.58	0.5	0.6	0.8	0.0	0.10
72.58	0.5	0.6	0.8	0.0	0.10
70.00	0.4	0.5	0.7	0.0	0.10
70.00	0.4	0.5	0.7	0.0	0.10
69.00	0.4	0.5	0.7	0.0	0.10
66.33	0.4	0.5	0.6	0.0	0.09
66.33	0.4	0.5	0.6	0.0	0.09
64.00	0.4	0.4	0.6	0.0	0.09
60.08	0.3	0.4	0.5	0.0	0.08
60.08	0.3	0.4	0.5	0.0	0.08
59.00	0.3	0.4	0.5	0.0	0.08
56.42	0.3	0.3	0.4	0.0	0.08
53.83	0.3	0.3	0.4	0.0	0.07
53.83	0.3	0.3	0.4	0.0	0.07
51.00	0.2	0.3	0.4	0.0	0.07
51.00	0.2	0.3	0.4	0.0	0.07
50.00	0.2	0.3	0.3	0.0	0.07
50.00	0.2	0.3	0.3	0.0	0.07
49.00	0.2	0.3	0.3	0.0	0.07
47.58	0.2	0.2	0.3	0.0	0.06
47.58	0.2	0.2	0.3	0.0	0.06
44.58	0.2	0.2	0.3	0.0	0.06
44.00	0.2	0.2	0.3	0.0	0.06
42.00	0.2	0.2	0.2	0.0	0.06
42.00	0.2	0.2	0.2	0.0	0.06
39.00	0.1	0.2	0.2	0.0	0.05
36.92	0.1	0.1	0.2	0.0	0.05
36.92	0.1	0.1	0.2	0.0	0.05
34.00	0.1	0.1	0.2	0.0	0.05
30.75	0.1	0.1	0.1	0.0	0.04
30.75	0.1	0.1	0.1	0.0	0.04
30.00	0.1	0.1	0.1	0.0	0.04
30.00	0.1	0.1	0.1	0.0	0.04
29.00	0.1	0.1	0.1	0.0	0.04
24.50	0.1	0.1	0.1	0.0	0.03
24.50	0.1	0.1	0.1	0.0	0.03
24.00	0.0	0.1	0.1	0.0	0.03
19.00	0.0	0.0	0.0	0.0	0.02
18.25	0.0	0.0	0.0	0.0	0.02

BY VALMONT INDUSTRIES
Design Id: 584934-P1
Deflections for Pole

FOR: BARRETT OUTDOOR 134.0' POLE, SITE: DOCK SHOPPING CENTER - STRATFORD, C

DATE 07/26/2023
IMPAX 26.1.29.7

Loading Case Seismic

Distance	Defl.	Defl.	Defl.	Defl.	
From	X-Dir	Y-Dir	Resultant	Z-Dir	Rotation
Base	(in)	(in)	X & Y	(in)	(deg.)
18.25	0.0	0.0	0.0	0.0	0.02
14.00	0.0	0.0	0.0	0.0	0.02
12.00	0.0	0.0	0.0	0.0	0.02
12.00	0.0	0.0	0.0	0.0	0.02
10.00	0.0	0.0	0.0	0.0	0.01
10.00	0.0	0.0	0.0	0.0	0.01
9.00	0.0	0.0	0.0	0.0	0.01
4.00	0.0	0.0	0.0	0.0	0.01
0.00	0.0	0.0	0.0	0.0	0.00

Loading Case Seismic

Distance From Base (ft)	Nominal Axial Strength (lbs)	Nominal Flexural Strength (in-kips)	Nominal Shear Strength (lbs)	Nominal Torsional Strength (in-kips)	Axial Interaction Term	Flexural Interaction Term	Shear Interaction Term	Torsion Interaction Term	Combined Stress Interaction
134.00	1,224,922	9,095	367,476	8,689	0.00	0.00	0.00	0.00	0.01
132.50	1,243,902	9,381	373,170	8,961	0.00	0.00	0.00	0.00	0.01
131.00	1,262,882	9,671	378,864	9,236	0.00	0.00	0.00	0.00	0.01
129.00	1,288,188	10,064	386,456	9,610	0.00	0.00	0.00	0.00	0.01
127.00	1,313,495	10,413	394,048	9,991	0.00	0.00	0.00	0.00	0.01
126.25	1,322,985	10,546	396,895	10,136	0.00	0.00	0.00	0.00	0.01
124.00	1,351,455	10,945	405,437	10,577	0.01	0.00	0.00	0.00	0.01
120.00	1,402,068	11,667	420,621	11,384	0.01	0.00	0.00	0.00	0.01
119.00	1,414,722	11,849	424,417	11,591	0.01	0.01	0.00	0.00	0.01
114.00	1,477,989	12,774	443,397	12,651	0.01	0.01	0.00	0.00	0.02
110.00	1,528,602	13,528	458,581	13,532	0.01	0.01	0.00	0.00	0.02
109.00	1,541,255	13,718	462,377	13,757	0.01	0.01	0.00	0.00	0.02
108.75	1,544,419	13,766	463,326	13,813	0.01	0.01	0.00	0.00	0.02
104.00	1,604,522	14,679	481,357	14,910	0.01	0.01	0.00	0.00	0.03
102.75	1,620,339	14,922	486,102	15,205	0.01	0.02	0.00	0.00	0.03
100.00	1,655,135	15,460	496,541	15,865	0.02	0.02	0.00	0.00	0.03
99.00	1,667,789	15,656	500,337	16,108	0.02	0.02	0.00	0.00	0.03
97.50	1,686,769	15,952	506,031	16,477	0.02	0.02	0.00	0.00	0.03
94.00	1,731,056	16,647	519,317	17,354	0.02	0.02	0.00	0.00	0.04
93.50	1,737,382	16,746	521,215	17,481	0.02	0.02	0.00	0.00	0.04
93.50	2,978,367	30,644	893,510	29,356	0.01	0.01	0.00	0.00	0.02
91.25	3,028,190	31,685	908,457	30,346	0.01	0.01	0.00	0.00	0.02
90.00	3,055,869	32,271	916,761	30,903	0.01	0.01	0.00	0.00	0.02
89.00	3,078,012	32,743	923,404	31,353	0.01	0.01	0.00	0.00	0.02
88.25	3,094,620	33,100	928,386	31,692	0.01	0.01	0.00	0.00	0.02
85.08	3,164,740	34,626	949,422	33,144	0.01	0.01	0.00	0.00	0.02
84.00	3,188,729	35,156	956,619	33,649	0.01	0.01	0.00	0.00	0.02
81.42	3,245,933	36,437	973,780	34,867	0.01	0.01	0.00	0.00	0.02
78.83	3,303,136	37,740	990,941	36,107	0.01	0.02	0.00	0.00	0.03
74.00	3,410,163	40,240	1,023,049	38,484	0.01	0.02	0.00	0.00	0.03
72.58	3,441,532	40,988	1,032,460	39,196	0.01	0.02	0.00	0.00	0.03
70.00	3,498,736	42,370	1,049,621	40,509	0.01	0.02	0.00	0.00	0.03
69.00	3,520,879	42,911	1,056,264	41,024	0.01	0.02	0.00	0.00	0.03
66.33	3,579,928	44,370	1,073,979	42,411	0.01	0.02	0.00	0.00	0.03
64.00	3,631,596	45,667	1,089,479	43,644	0.01	0.02	0.00	0.00	0.03
60.08	3,718,324	47,887	1,115,497	45,754	0.01	0.02	0.00	0.00	0.03
59.00	3,742,313	48,510	1,122,694	46,346	0.01	0.02	0.00	0.00	0.03
56.42	3,799,517	50,012	1,139,855	47,774	0.01	0.02	0.00	0.00	0.03
53.83	3,856,720	51,537	1,157,016	49,223	0.01	0.02	0.00	0.00	0.03
51.00	3,919,460	53,236	1,175,838	50,838	0.01	0.02	0.00	0.00	0.03

Loading Case Seismic

Distance From Base (ft)	Nominal Axial Strength (lbs)	Nominal Flexural Strength (in-kips)	Nominal Shear Strength (lbs)	Nominal Torsional Strength (in-kips)	Axial Interaction Term	Flexural Interaction Term	Shear Interaction Term	Torsion Interaction Term	Combined Stress Interaction
51.00	4,382,679	58,146	1,314,804	55,619	0.01	0.02	0.00	0.00	0.03
50.00	4,407,985	58,823	1,322,396	56,263	0.01	0.02	0.00	0.00	0.03
49.00	4,433,292	59,504	1,329,988	56,911	0.01	0.02	0.00	0.00	0.03
47.58	4,469,143	60,476	1,340,743	57,835	0.01	0.02	0.00	0.00	0.03
44.58	4,545,063	62,560	1,363,519	59,817	0.01	0.02	0.00	0.00	0.03
44.00	4,559,825	62,969	1,367,948	60,206	0.01	0.02	0.00	0.00	0.03
42.00	4,610,439	64,383	1,383,132	61,550	0.01	0.02	0.00	0.00	0.03
39.00	4,686,359	66,532	1,405,908	63,594	0.01	0.02	0.00	0.00	0.03
36.92	4,739,081	68,046	1,421,724	65,033	0.01	0.02	0.00	0.00	0.03
34.00	4,812,892	70,194	1,443,868	67,074	0.01	0.02	0.00	0.00	0.03
30.75	4,895,139	72,626	1,468,542	69,386	0.01	0.02	0.00	0.00	0.03
30.00	4,914,119	73,193	1,474,236	69,925	0.01	0.02	0.00	0.00	0.03
29.00	4,939,426	73,953	1,481,828	70,647	0.01	0.02	0.00	0.00	0.03
24.50	5,053,306	77,420	1,515,992	73,942	0.01	0.02	0.00	0.00	0.03
24.00	5,065,959	77,810	1,519,788	74,313	0.01	0.02	0.00	0.00	0.03
19.00	5,192,493	81,605	1,557,748	78,072	0.01	0.02	0.00	0.00	0.03
18.25	5,211,473	82,129	1,563,442	78,644	0.01	0.02	0.00	0.00	0.03
14.00	5,319,027	85,121	1,595,708	81,923	0.01	0.02	0.00	0.00	0.03
12.00	5,369,640	86,541	1,610,892	83,490	0.01	0.02	0.00	0.00	0.03
10.00	5,420,253	87,968	1,626,076	85,071	0.01	0.02	0.00	0.00	0.03
9.00	5,445,560	88,685	1,633,668	85,867	0.01	0.02	0.00	0.00	0.03
4.00	5,572,094	92,293	1,671,628	89,904	0.01	0.02	0.00	0.00	0.03
0.00	5,673,320	95,210	1,701,996	93,200	0.01	0.02	0.00	0.00	0.03

Forces and Moments for Pole in the Local Element Coordinate System

Loading Case Seismic 2

Dist. From Base (ft)	Mx (in-kips)	My (in-kips)	Resultant Mx & My (in-kips)	Torsion (in-kips)	Shear X-Dir. (lbs)	Shear Y-Dir. (lbs)	Resultant Shear (lbs)	Axial (lbs)
134.00	0	0	0	0	1	1	1	12
132.50	0	0	0	0	5	6	8	94
131.00	0	0	0	0	10	12	15	178
131.00	0	0	0	0	199	238	310	3735
129.00	6	-5	8	0	205	245	319	3848
127.00	12	-10	16	0	211	252	329	3964
127.00	12	-10	16	0	215	256	335	4041
126.25	14	-12	19	0	217	259	338	4085
126.25	14	-12	19	0	217	259	338	4087
124.00	21	-18	28	0	224	267	348	4221
120.00	35	-29	45	0	235	280	366	4466
120.00	35	-29	45	0	395	471	615	8026
119.00	40	-34	53	0	398	474	619	8089
114.00	69	-58	90	0	412	491	640	8411
114.00	69	-58	90	0	411	490	640	8413
110.00	93	-78	121	0	422	503	656	8681
110.00	93	-78	122	0	560	667	871	12317
109.00	101	-85	132	0	562	670	875	12386
108.75	103	-87	135	0	563	671	876	12403
108.75	103	-87	135	0	563	671	875	12406
104.00	142	-119	185	0	574	684	893	12739
102.75	152	-128	199	0	577	688	898	12829
102.75	152	-128	199	0	577	687	897	12831
100.00	175	-147	228	0	583	695	907	13032
100.00	175	-147	228	0	695	828	1081	16589
99.00	185	-155	241	0	697	830	1084	16663
97.50	200	-168	261	0	700	835	1089	16776
97.50	200	-168	261	0	699	834	1088	16777
94.00	235	-197	307	0	707	842	1099	17044
93.50	240	-201	313	0	708	843	1101	17083
93.50	240	-201	313	0	707	843	1100	17083
91.25	263	-221	343	0	720	858	1120	17559
91.25	263	-221	343	0	720	858	1120	17563
90.00	276	-232	360	0	727	866	1131	17831
90.00	276	-232	360	0	728	868	1133	17910
89.00	287	-240	374	0	734	874	1142	18127
88.25	294	-247	384	0	737	879	1147	18290
85.08	328	-275	428	0	748	891	1163	18731
85.08	328	-275	428	0	747	891	1163	18733
84.00	340	-285	443	0	750	894	1167	18886

Forces and Moments for Pole in the Local Element Coordinate System

Loading Case Seismic 2

Dist. From Base (ft)	Mx (in-kips)	My (in-kips)	Resultant Mx & My (in-kips)	Torsion (in-kips)	Shear X-Dir. (lbs)	Shear Y-Dir. (lbs)	Resultant Shear (lbs)	Axial (lbs)
81.42	368	-308	480	0	758	903	1179	19257
78.83	396	-332	516	0	765	912	1191	19633
78.83	396	-332	516	0	764	911	1189	19637
74.00	449	-377	586	0	777	926	1208	20360
72.58	465	-390	607	0	780	930	1214	20576
72.58	465	-390	607	0	780	929	1213	20578
70.00	494	-414	644	0	786	937	1223	20977
70.00	494	-414	645	0	787	938	1224	21056
69.00	505	-424	659	0	789	940	1227	21213
66.33	535	-449	699	0	795	947	1237	21635
66.33	535	-449	699	0	794	946	1235	21637
64.00	562	-471	733	0	798	951	1241	22012
60.08	607	-509	792	0	806	961	1254	22653
60.08	607	-509	792	0	805	959	1252	22655
59.00	619	-520	808	0	806	961	1254	22835
56.42	649	-545	847	0	810	965	1260	23269
53.83	679	-570	886	0	814	971	1267	23710
53.83	679	-570	886	0	813	969	1265	23712
51.00	712	-598	930	0	818	975	1272	24203
51.00	712	-598	930	0	817	974	1271	24203
50.00	724	-607	945	0	820	977	1276	24574
50.00	724	-607	945	0	820	978	1276	24653
49.00	736	-617	960	0	823	981	1280	25027
47.58	752	-631	982	0	827	986	1287	25559
47.58	752	-631	982	0	826	985	1285	25561
44.58	788	-661	1029	0	833	993	1297	26702
44.00	795	-667	1038	0	834	994	1297	26821
42.00	819	-687	1069	0	836	997	1301	27229
42.00	819	-687	1069	0	835	995	1299	27231
39.00	855	-717	1116	0	837	998	1303	27853
36.92	880	-738	1148	0	840	1001	1306	28290
36.92	880	-738	1148	0	838	999	1304	28292
34.00	915	-768	1194	0	840	1001	1306	28913
30.75	954	-800	1245	0	842	1004	1310	29616
30.75	954	-800	1245	0	841	1003	1309	29619
30.00	963	-808	1257	0	842	1003	1310	29783
30.00	963	-808	1257	0	842	1003	1310	29862
29.00	975	-818	1273	0	841	1002	1309	30082
24.50	1029	-864	1344	0	844	1005	1313	31084
24.50	1029	-864	1344	0	843	1004	1311	31086

BY VALMONT INDUSTRIES FOR:
 Design Id: 584934-P1

BARRETT OUTDOOR 134.0' POLE, SITE: DOCK SHOPPING CENTER - STRATFORD, C

DATE 07/26/2023
 IMPAX 26.1.29.7

Forces and Moments for Pole in the Local Element Coordinate System

Loading Case Seismic 2

Dist. From Base (ft)	Mx (in-kips)	My (in-kips)	Resultant Mx & My (in-kips)	Torsion (in-kips)	Shear X-Dir. (lbs)	Shear Y-Dir. (lbs)	Resultant Shear (lbs)	Axial (lbs)
24.00	1035	-869	1351	0	841	1003	1309	31199
19.00	1095	-919	1430	0	842	1003	1310	32343
18.25	1105	-927	1442	0	842	1004	1310	32517
18.25	1105	-927	1442	0	841	1002	1308	32518
14.00	1156	-970	1509	0	840	1002	1308	33516
12.00	1180	-990	1540	0	841	1002	1308	33993
12.00	1180	-990	1540	0	840	1001	1307	33995
10.00	1204	-1010	1571	0	840	1001	1307	34476
10.00	1204	-1010	1571	0	839	1000	1306	34556
9.00	1216	-1020	1587	0	838	999	1304	34798
4.00	1276	-1070	1665	0	836	996	1301	36027
0.00	1324	-1111	1728	0	836	996	1301	37030

Deflections for Pole

Loading Case Seismic 2

Distance From Base (ft)	Defl. X-Dir (in)	Defl. Y-Dir (in)	Defl. Resultant X & Y (in)	Defl. Z-Dir (in)	Rotation (deg.)
134.00	1.7	2.0	2.6	0.0	0.17
132.50	1.6	1.9	2.5	0.0	0.17
132.50	1.6	1.9	2.5	0.0	0.17
131.00	1.6	1.9	2.5	0.0	0.17
131.00	1.6	1.9	2.5	0.0	0.17
129.00	1.5	1.8	2.4	0.0	0.17
127.00	1.5	1.8	2.3	0.0	0.17
127.00	1.5	1.8	2.3	0.0	0.17
126.25	1.5	1.8	2.3	0.0	0.17
126.25	1.5	1.8	2.3	0.0	0.17
124.00	1.4	1.7	2.2	0.0	0.17
120.00	1.3	1.6	2.1	0.0	0.16
120.00	1.3	1.6	2.1	0.0	0.16
119.00	1.3	1.6	2.1	0.0	0.16
114.00	1.2	1.4	1.9	0.0	0.16
114.00	1.2	1.4	1.9	0.0	0.16
110.00	1.1	1.3	1.7	0.0	0.16
110.00	1.1	1.3	1.7	0.0	0.16
109.00	1.1	1.3	1.7	0.0	0.15
108.75	1.1	1.3	1.7	0.0	0.15
108.75	1.1	1.3	1.7	0.0	0.15
104.00	1.0	1.2	1.6	0.0	0.15
102.75	1.0	1.2	1.5	0.0	0.15
102.75	1.0	1.2	1.5	0.0	0.15
100.00	0.9	1.1	1.4	0.0	0.14
100.00	0.9	1.1	1.4	0.0	0.14
99.00	0.9	1.1	1.4	0.0	0.14
97.50	0.9	1.0	1.4	0.0	0.14
97.50	0.9	1.0	1.4	0.0	0.14
94.00	0.8	1.0	1.3	0.0	0.13
93.50	0.8	1.0	1.3	0.0	0.13
93.50	0.8	1.0	1.3	0.0	0.13
91.25	0.8	0.9	1.2	0.0	0.13
91.25	0.8	0.9	1.2	0.0	0.13
90.00	0.7	0.9	1.2	0.0	0.13
90.00	0.7	0.9	1.2	0.0	0.13
89.00	0.7	0.9	1.1	0.0	0.12
88.25	0.7	0.9	1.1	0.0	0.12
85.08	0.7	0.8	1.0	0.0	0.12
85.08	0.7	0.8	1.0	0.0	0.12
84.00	0.6	0.8	1.0	0.0	0.12
81.42	0.6	0.7	0.9	0.0	0.11
78.83	0.6	0.7	0.9	0.0	0.11

Deflections for Pole

Loading Case Seismic 2

Distance From Base (ft)	Defl. X-Dir (in)	Defl. Y-Dir (in)	Defl. Resultant X & Y (in)	Defl. Z-Dir (in)	Rotation (deg.)
78.83	0.6	0.7	0.9	0.0	0.11
74.00	0.5	0.6	0.8	0.0	0.10
72.58	0.5	0.6	0.7	0.0	0.10
72.58	0.5	0.6	0.7	0.0	0.10
70.00	0.4	0.5	0.7	0.0	0.10
70.00	0.4	0.5	0.7	0.0	0.10
69.00	0.4	0.5	0.7	0.0	0.10
66.33	0.4	0.5	0.6	0.0	0.09
66.33	0.4	0.5	0.6	0.0	0.09
64.00	0.4	0.4	0.6	0.0	0.09
60.08	0.3	0.4	0.5	0.0	0.08
60.08	0.3	0.4	0.5	0.0	0.08
59.00	0.3	0.4	0.5	0.0	0.08
56.42	0.3	0.3	0.4	0.0	0.08
53.83	0.3	0.3	0.4	0.0	0.07
53.83	0.3	0.3	0.4	0.0	0.07
51.00	0.2	0.3	0.4	0.0	0.07
51.00	0.2	0.3	0.4	0.0	0.07
50.00	0.2	0.3	0.3	0.0	0.07
50.00	0.2	0.3	0.3	0.0	0.07
49.00	0.2	0.3	0.3	0.0	0.07
47.58	0.2	0.2	0.3	0.0	0.06
47.58	0.2	0.2	0.3	0.0	0.06
44.58	0.2	0.2	0.3	0.0	0.06
44.00	0.2	0.2	0.3	0.0	0.06
42.00	0.2	0.2	0.2	0.0	0.06
42.00	0.2	0.2	0.2	0.0	0.06
39.00	0.1	0.2	0.2	0.0	0.05
36.92	0.1	0.1	0.2	0.0	0.05
36.92	0.1	0.1	0.2	0.0	0.05
34.00	0.1	0.1	0.2	0.0	0.04
30.75	0.1	0.1	0.1	0.0	0.04
30.75	0.1	0.1	0.1	0.0	0.04
30.00	0.1	0.1	0.1	0.0	0.04
30.00	0.1	0.1	0.1	0.0	0.04
29.00	0.1	0.1	0.1	0.0	0.04
24.50	0.1	0.1	0.1	0.0	0.03
24.50	0.1	0.1	0.1	0.0	0.03
24.00	0.0	0.1	0.1	0.0	0.03
19.00	0.0	0.0	0.0	0.0	0.02
18.25	0.0	0.0	0.0	0.0	0.02

BY VALMONT INDUSTRIES
Design Id: 584934-P1
Deflections for Pole

FOR: BARRETT OUTDOOR 134.0' POLE, SITE: DOCK SHOPPING CENTER - STRATFORD, C

DATE 07/26/2023
IMPAX 26.1.29.7

Loading Case Seismic 2

Distance	Defl.	Defl.	Defl.	Defl.	
From	X-Dir	Y-Dir	Resultant	Z-Dir	Rotation
Base	(in)	(in)	X & Y	(in)	(deg.)
18.25	0.0	0.0	0.0	0.0	0.02
14.00	0.0	0.0	0.0	0.0	0.02
12.00	0.0	0.0	0.0	0.0	0.02
12.00	0.0	0.0	0.0	0.0	0.02
10.00	0.0	0.0	0.0	0.0	0.01
10.00	0.0	0.0	0.0	0.0	0.01
9.00	0.0	0.0	0.0	0.0	0.01
4.00	0.0	0.0	0.0	0.0	0.00
0.00	0.0	0.0	0.0	0.0	0.00

Loading Case Seismic 2

Distance From Base (ft)	Nominal Axial Strength (lbs)	Nominal Flexural Strength (in-kips)	Nominal Shear Strength (lbs)	Nominal Torsional Strength (in-kips)	Axial Interaction Term	Flexural Interaction Term	Shear Interaction Term	Torsion Interaction Term	Combined Stress Interaction
134.00	1,224,922	9,095	367,476	8,689	0.00	0.00	0.00	0.00	0.01
132.50	1,243,902	9,381	373,170	8,961	0.00	0.00	0.00	0.00	0.01
131.00	1,262,882	9,671	378,864	9,236	0.00	0.00	0.00	0.00	0.01
129.00	1,288,188	10,064	386,456	9,610	0.00	0.00	0.00	0.00	0.01
127.00	1,313,495	10,413	394,048	9,991	0.00	0.00	0.00	0.00	0.01
126.25	1,322,985	10,546	396,895	10,136	0.00	0.00	0.00	0.00	0.01
124.00	1,351,455	10,945	405,437	10,577	0.00	0.00	0.00	0.00	0.01
120.00	1,402,068	11,667	420,621	11,384	0.01	0.00	0.00	0.00	0.01
119.00	1,414,722	11,849	424,417	11,591	0.01	0.00	0.00	0.00	0.01
114.00	1,477,989	12,774	443,397	12,651	0.01	0.01	0.00	0.00	0.01
110.00	1,528,602	13,528	458,581	13,532	0.01	0.01	0.00	0.00	0.02
109.00	1,541,255	13,718	462,377	13,757	0.01	0.01	0.00	0.00	0.02
108.75	1,544,419	13,766	463,326	13,813	0.01	0.01	0.00	0.00	0.02
104.00	1,604,522	14,679	481,357	14,910	0.01	0.01	0.00	0.00	0.02
102.75	1,620,339	14,922	486,102	15,205	0.01	0.01	0.00	0.00	0.02
100.00	1,655,135	15,460	496,541	15,865	0.01	0.02	0.00	0.00	0.03
99.00	1,667,789	15,656	500,337	16,108	0.01	0.02	0.00	0.00	0.03
97.50	1,686,769	15,952	506,031	16,477	0.01	0.02	0.00	0.00	0.03
94.00	1,731,056	16,647	519,317	17,354	0.01	0.02	0.00	0.00	0.03
93.50	1,737,382	16,746	521,215	17,481	0.01	0.02	0.00	0.00	0.03
93.50	2,978,367	30,644	893,510	29,356	0.01	0.01	0.00	0.00	0.02
91.25	3,028,190	31,685	908,457	30,346	0.01	0.01	0.00	0.00	0.02
90.00	3,055,869	32,271	916,761	30,903	0.01	0.01	0.00	0.00	0.02
89.00	3,078,012	32,743	923,404	31,353	0.01	0.01	0.00	0.00	0.02
88.25	3,094,620	33,100	928,386	31,692	0.01	0.01	0.00	0.00	0.02
85.08	3,164,740	34,626	949,422	33,144	0.01	0.01	0.00	0.00	0.02
84.00	3,188,729	35,156	956,619	33,649	0.01	0.01	0.00	0.00	0.02
81.42	3,245,933	36,437	973,780	34,867	0.01	0.01	0.00	0.00	0.02
78.83	3,303,136	37,740	990,941	36,107	0.01	0.02	0.00	0.00	0.02
74.00	3,410,163	40,240	1,023,049	38,484	0.01	0.02	0.00	0.00	0.02
72.58	3,441,532	40,988	1,032,460	39,196	0.01	0.02	0.00	0.00	0.02
70.00	3,498,736	42,370	1,049,621	40,509	0.01	0.02	0.00	0.00	0.02
69.00	3,520,879	42,911	1,056,264	41,024	0.01	0.02	0.00	0.00	0.02
66.33	3,579,928	44,370	1,073,979	42,411	0.01	0.02	0.00	0.00	0.02
64.00	3,631,596	45,667	1,089,479	43,644	0.01	0.02	0.00	0.00	0.02
60.08	3,718,324	47,887	1,115,497	45,754	0.01	0.02	0.00	0.00	0.03
59.00	3,742,313	48,510	1,122,694	46,346	0.01	0.02	0.00	0.00	0.03
56.42	3,799,517	50,012	1,139,855	47,774	0.01	0.02	0.00	0.00	0.03
53.83	3,856,720	51,537	1,157,016	49,223	0.01	0.02	0.00	0.00	0.03
51.00	3,919,460	53,236	1,175,838	50,838	0.01	0.02	0.00	0.00	0.03

Loading Case Seismic 2

Distance From Base (ft)	Nominal Axial Strength (lbs)	Nominal Flexural Strength (in-kips)	Nominal Shear Strength (lbs)	Nominal Torsional Strength (in-kips)	Axial Interaction Term	Flexural Interaction Term	Shear Interaction Term	Torsion Interaction Term	Combined Stress Interaction
51.00	4,382,679	58,146	1,314,804	55,619	0.01	0.02	0.00	0.00	0.02
50.00	4,407,985	58,823	1,322,396	56,263	0.01	0.02	0.00	0.00	0.02
49.00	4,433,292	59,504	1,329,988	56,911	0.01	0.02	0.00	0.00	0.02
47.58	4,469,143	60,476	1,340,743	57,835	0.01	0.02	0.00	0.00	0.02
44.58	4,545,063	62,560	1,363,519	59,817	0.01	0.02	0.00	0.00	0.02
44.00	4,559,825	62,969	1,367,948	60,206	0.01	0.02	0.00	0.00	0.02
42.00	4,610,439	64,383	1,383,132	61,550	0.01	0.02	0.00	0.00	0.03
39.00	4,686,359	66,532	1,405,908	63,594	0.01	0.02	0.00	0.00	0.03
36.92	4,739,081	68,046	1,421,724	65,033	0.01	0.02	0.00	0.00	0.03
34.00	4,812,892	70,194	1,443,868	67,074	0.01	0.02	0.00	0.00	0.03
30.75	4,895,139	72,626	1,468,542	69,386	0.01	0.02	0.00	0.00	0.03
30.00	4,914,119	73,193	1,474,236	69,925	0.01	0.02	0.00	0.00	0.03
29.00	4,939,426	73,953	1,481,828	70,647	0.01	0.02	0.00	0.00	0.03
24.50	5,053,306	77,420	1,515,992	73,942	0.01	0.02	0.00	0.00	0.03
24.00	5,065,959	77,810	1,519,788	74,313	0.01	0.02	0.00	0.00	0.03
19.00	5,192,493	81,605	1,557,748	78,072	0.01	0.02	0.00	0.00	0.03
18.25	5,211,473	82,129	1,563,442	78,644	0.01	0.02	0.00	0.00	0.03
14.00	5,319,027	85,121	1,595,708	81,923	0.01	0.02	0.00	0.00	0.03
12.00	5,369,640	86,541	1,610,892	83,490	0.01	0.02	0.00	0.00	0.03
10.00	5,420,253	87,968	1,626,076	85,071	0.01	0.02	0.00	0.00	0.03
9.00	5,445,560	88,685	1,633,668	85,867	0.01	0.02	0.00	0.00	0.03
4.00	5,572,094	92,293	1,671,628	89,904	0.01	0.02	0.00	0.00	0.03
0.00	5,673,320	95,210	1,701,996	93,200	0.01	0.02	0.00	0.00	0.03

MINIMUM DEFLECTION RATIO // DEFLECTION LIMIT / DEFLECTION // IS

BY VALMONT INDUSTRIES FOR: BARRETT OUTDOOR 134.0' POLE, SITE: DOCK SHOPPING CENTER - STRATFORD, C DATE 07/26/2023
 Design Id: 584934-P1 IMPAX 26.1.29.7

NUMBER OF BOLTS	DIAMETER (IN.)	LENGTH (IN.)	WEIGHT (KIPS)	SHIPPED AS	PROJECTION LENGTH (IN.)	GALVANIZED LENGTH (IN.)	THREAD SIZE
32	1.750	66.00	2.03	BOLTS, TEMPLATES	10.00	66.00	5-UNC-2A
STEEL SPEC. VALMONT	STEEL SPECIF.	MAXIMUM BOLT FORCE (KIPS)	MAXIMUM BOLT SHEAR FORCE (KIPS)	NOMINAL STRENGTH (KIPS)	STRESS AREA (SQ. IN.)	INTERACTION VALUE	CONFIGURATION OF BOTTOM END
S23	A615	113.93	1.74	142.50	1.90	0.80	THREADED WITH HEAVY HEX HEAD NUT

*** BOLT COORDINATES (IN.) ***

BOLT NO.	X-COORD	Y-COORD	*	BOLT NO.	X-COORD	Y-COORD
1	31.000	0.000	*	2	30.404	6.048
3	28.640	11.863	*	4	25.776	17.223
5	21.920	21.920	*	6	17.223	25.776
7	11.863	28.640	*	8	6.048	30.404
9	0.000	31.000	*			

MAX. BOLT CIRCLE = 62.00 IN.

TEMPLATE DIAMETER = 65.50 IN.

*** BASE PLATE CHARACTERISTICS GOVERNED BY LOADING CASE WIND ***

BASE PLATE DIAMETER (IN.)	BASE PLATE THICKNESS (IN.)	ACTUAL WEIGHT (KIPS)	RAW MATERIAL WEIGHT (KIPS)	POLE DIAM. (MAJOR DIAM.) (IN.)
66.38	2.75	1.58	3.49	55.50
EFFECTIVE PLATE WIDTH (IN.)	PLASTIC SECTION MOD. (CU. IN.)	MOMENT IN BASE PLATE (IN. -K)	PLASTIC MOMENT (IN. -K)	FACTORED RESISTING MOM. (IN. -K)
5.45	10.30	370.26	515.07	463.57
STEEL SPECIF. VALMONT	STEEL SPECIF. OTHER	EFFECTIVE YIELD STRESS (KSI)	STRESS RATIO	
S56	A572	50	0.80	

** LOADS AT POLE BASE IN THE GLOBAL COORDINATE SYSTEM ***** LOADING CASES *****

LOADING CASE IDENTIFICATION	WIND ICE + WIND	T+S	Seismic	Seismic 2]MAX CRITERION-	LOAD CASE
MOMENT ABT. X-AXIS (IN-KIP)	54296	19178	12108	1338	1323]MOMENT ABT. X WIND
MOMENT ABT. Y-AXIS (IN-KIP)	-45559	-16092	-10160	-1123	-1110]MOMENT ABT. Y WIND
SHEAR FORCE (LB.)	55686	18888	12468	1299	1299]RES. MOMENT WIND
VERTICAL FORCE (LB.)	52661	80209	43334	53899	37029]SHEAR FORCE WIND
]BOLT FORCE WIND
]BOLT TENSION WIND



Valmont Structures
28800 Ida Street
Valley, NE 68064
(402) 359-2201
Engineer: CR
Reviewed by: CR

Drilled Pier Foundation Design Calculations



Nathan A
Ross

Date:
2023.07.26
14:46:10 -07'00'

Valmont Order Number: 584934

Customer: Barrett Outdoor

Site: Dock Shopping Center - Stratford, CT

Pole Height: 134 ft (135 ft agl)

Monopole Pier Design

Customer: Barrett Outdoor
 Site: Dock Shopping Center - Stratford
 State: CT
 Project # 584934
 Drawing No. CT584934FP
 Geotechnical Report Langan Project No.: 140199301 dated 12 October 2020 (Reference Bore Log:LB-102)
 Geotechnical Report Water Depth 8 ft
 Run Date: 07-26-23
 Version: 3.11
 Engineer: CR
 Address: Valley
 TIA Revision: H
 Checker: CR
 Seismic Design Category B

Pole Geometry

Pole Height = 134 ft
 Bolt Circle = 62.00 in
 Number of Bolts = 32
 Bolt Diameter = 1.75 in
 Bolt Projection = 10.00 in
 Bolt Length = 66.0 in
 Bottom Template Diameter = 65.5 in

Shrinkage/Temperature Requirement Per TIA Rev H Section 9.6
 AB Clearance = 14.0 in
 Check: **OK**

Pole Loads

Foundation Maximum Stress = 84 %
 Factored Moment = 7031.6 ft-kips
 Factored Shear = 66.29 kips
 Factored Weight = 54.24 kips
 Shear Height = 106.1 ft
 e (col offset) = 1306.8 in
 Moment and Shear increased by maximum stress value.

Anchor Bolt Load

Factored Moment = 70879 in-kips
 Factored Shear = 55.69 kips
 Factored Weight = 54.24 kips
 Plastic Anchor Bolt Force Calculation Method

Anchor Bolt Info

Grade: A615 Gr75
 F_u = 100.0 ksi
 F_y = 75.0 ksi
 Area tensile = 1.90 in²

TIA-G Presumptive Soil Clay
 TIA-H Presumptive Soil Clay
 TIA-G Presumptive Soil Sand
 TIA-H Presumptive Soil Sand

Passive Pressure Calculations

Φ Factor = 0.75

N INPUT

Layer	Depth Start (ft)	Depth End (ft)	c (psf)	φ (degrees)	γ (pcf)	lateral pressure start (psf)	lateral pressure end (psf)	Den x Depth (psf)	Kp	Allowable Overburden	slope (psf/ft)
1	3.5	8	0	32	120	0	1318	540	3.25	1757	
2	8	13	0	32	57.6	1318	2021	288	3.25	2695	
3	13	20	0	32	57.6	2021	3005	403.2	3.85	4742	
4	20	27	0	36	72.6	3557	5025	508.2	4.60	7999	
5	27	41.5	0	40	77.6	6000	9881	1125.2	1.00	2865	
6	0					0	0	0	1.00	2865	
7	0					0	0	0	1.00	2865	
8	0					0	0	0	1.00	2865	
9	0					0	0	0	1.00	2865	
10	0					0	0	0	1.00	2865	

Soil Summary

Level #	Ultimate		ZERO = GROUND LINE		End Prss	Max Moment Depth		Passive Pressure ft	dft = Applied Shear
	ψ Pas Pressure psf Start	ψ Ultimate Pas Press Slope psf/ft	Depth Start (ft)	Depth End (ft)		(ft)	(ft-kips)		
1	0	292.91	3.5	8	1318	11.72			
2	1318	140.60	8	13	2021				
3	2021	140.60	13	20	3005				
4	3557	209.73	20	27	5025	94101	7842		
5	6000	267.66	27	41.5	9881				
6	0	0.00	0	0	0				
7	0	0.00	0	0	0				
8	0	0.00	0	0	0				
9	0	0.00	0	0	0				
10	0	0.00	0	0	0				

Footing Concrete Geometry

Cap Height (Above Ground Line) = 0.5 ft
 Diameter Pier = 7.5 ft
 Length (below ground) = 41.5 ft
 Concrete Volume = 68.7 yd³
 Spacing = 31.88 in
 L/D Ratio = 5.5
 Anchor Bolt Radius (to outer face)
 Template Radius
 Inner Edge of Hook/Rebar

Summation of shear and passive pressure forces to find LID: ΣF_v = 0

Load Inflection-Point Depth (LID) = 31.89 ft

Summation of moments about LID: ΣM_{LT} = RM_{total} - OTM >= 0

OTM = 9178.9 ft-kips
 Shear_{applied} = 66.3 kips
 Weight = 54.2 kips
 Resisting RM_{total} = 9441
 Shear_{resisting} = 66.68
 Soil FS above allowable = 1.03 = RM_{total}/OTM
 = 1.01 = resisting V/applied V

Foundation Load Properties

Level #	Passive Pressure		Zero = Ground Line		About Load Inflection Point				V _{max} kips
	psf Start	Pas Press Slope psf/ft	Depth Start (ft)	Depth End (ft)	Forces Constant kips	Forces Slope kips	Moments Constant ft-kips	Moments Slope ft-kips	
1	0	293	3.5	8.0	0.0	22.2	0	565	619.43
2	1318	141	8.0	13.0	49.4	13.2	1057	271	
3	2021	141	13.0	20.0	106.1	25.8	1633	367	
4	3557	210	20.0	27.0	186.7	38.5	1567	278	
5	6000	268	27.0	31.9	220.0	24.0	538	39	
6	7308	268	31.9	41.5	-526.7	-92.7	2531	594	

Footing Reinforcement Requirements

Tie Bar # 4
 Tie Vertical Spacing 1.00 ft
 Number of Ties 44
 Area Ties 0.40 in²
 MP_Tc 4 in
 MP_Rin 39.9 in
 MP_Asteel 48.1 in²
 MP_Esteel 29000 ksi
 MP_Isteel 38221 in⁴
 EI 1108400251 in²*lbf
 S 959 in³
 M₀ 94101 in-kips
 ΦM_n 98834 in-kip
 Bars Per Bundle 1
 Vertical Bar # 10
 Bar Count 38
 Φ_{shear} 0.85
 Φ_{flexure} 0.9
 MP_Fty_T&V 60 ksi
 MP_Fty_T&V_ALL 54 ksi
 Shaft Bending CSR 0.95
 ΦVs 120.6 kips
 5.32 in
 6.83 ft
 79.75 in
 1.27 in

Ties OK = Seismic Ties? No
 12"
 Area of Tie Cut by Vertical Section (2*Area of the tie)
 Thickness of Concrete Cover
 Radius of Vertical Rebar
 Total Area of Vertical Bars
 Young's Modulus
 Rebar Moment of Inertia
 E*I
 Rebar Section Modulus
 Applied Maximum Moment at Depth of Zero Shear on Pier
 Factored Moment Strength of Pier
 OK Bar Quantity Area Check
 26 = Min # based on area (0.005)
 Strength Reduction Factor for Capacity Of Steel Shear
 Strength Reduction Factor for Capacity Of Steel Flexure
 Rebar Fty Grade 60
 Rebar Fty Allowable Pier Design includes PHI_Steel
 Applied Maximum Moment / Factored Moment Strength
 Factored Steel Shear Strength
 Vertical Rebar Horiz Spacing
 Diameter of hoops
 Diameter of vertical rebar circle
 Diameter of Vertical Rebar

Pier Shear Check

f'_c 4500 psi Concrete compression properties
 d 5.91 ft Distance from extreme com fiber to cent of tension reaction group

Calculate the Concrete Shear Strength

$$V_c = 2 * (f'_c)^{0.5} * b_w * d = 856 \text{ kips} \quad 22.5.5.1$$

Given:

$$b_w = 90 \text{ in} \quad \text{diameter}$$

$$d = 70.9 \text{ in}$$

$$\Phi_c = 0.85$$

$$\Phi_c V_c = 728 \text{ Kips}$$

Cross-Sectional Dimension Check

$$\Phi * (V_c + 8 * \sqrt{f'_c} * b_w * d) \geq V_u$$

$$2912 \text{ kips} \geq 619.4 \text{ kips} \quad 22.5.1.2$$

Calculate the Reinforcement Shear Strength

#4 horizontal ties at 12" spacing

$$V_s = \frac{A_v * f_y * d}{s} \quad 22.5.10.5.3$$

Given:

$$A_v = 0.4 \text{ in}^2$$

$$f_y = 60 \text{ ksi}$$

$$d = 5.91 \text{ Ft}$$

$$s = 1 \text{ Ft}$$

$$\Phi_s = 0.85$$

$$\Phi_s V_s = 120.6 \text{ Kips}$$

The Maximum Shear in the Pier occurs at Reaction Inflection Point 31.9'

$$\Phi * (V_s + V_c) \geq V_u \quad 22.5.10.1$$

$$\begin{array}{rcl} \Phi V_c & + & \Phi V_s > V_u \\ 727.8 \text{ Kips} & + & 120.6 \text{ Kips} > 619.4 \text{ kips} \\ & & 848.4 \text{ Kips} > 619.4 \text{ kips} \end{array}$$

====> **OK**

Anchor Bolt Embedment Check

Development Length Demand	$L_{d_min} =$	12 in	25.4.2.1
Casting Location Factor	$\psi_t =$	1	25.4.2.4
Coating Factor	$\psi_e =$	1	25.4.2.4
	Epoxy	N	
	$\psi_t \psi_e =$	1	25.4.2.4
Size Factor	$\psi_s =$	1	25.4.2.4
Concrete Weight Factor	$\lambda =$	1	25.4.2.4
	$c_b =$	4.64	25.4.2.4
Transverse Reinforcement Index	$k_{tr} =$	0	25.4.2.3
Confinement Term	$c' =$	2.5000	25.4.2.3
Rebar Development Length in Tension	$L_d =$	34.1 in	25.4.2.2
		2 in	
	Pullout Angle	35 deg	17.4
Anchor Bolt Embedment in Concrete	$A_{b_e} =$	56 in	
Available Development Length	$L_{da} =$	45.8 in	
Required Development Length	$L_{d_{reqd}} =$	22.54 in	
Check Anchor Engagement		OK	
Excess Reinforcement Ratio		0.661	25.4.10.1
Minimum Rebar Ratio		0.005	16.3.4
Minimum Anchor Bolt Embedment		17.7 in	TIA Rev H 9.6
Check Anchor Bolt Length		OK	
Embedment Length		56.00 in	
25 Times Diameter		43.75 in	
Concrete Pryout Check Required		No	TIA Rev H 9.6



Site: Dock Shopping Center - Stratford, CT
 Dwg: CT584934FP

By:	CR	Drilled Pier Analysis
Check:	CR	Pole Structure
Date:	07-26-23	Customer: Barrett Outdoor

Pullout Strength of Anchor in Tension

17.4.3

Net bearing area of the headed stud(s) or anchor bolt(s)
 Pullout strength in tension of a single headed stud or bolt
 Assumes the anchor is located in a region of concrete member
 where analysis indicates no cracking at service load levels.

$$N_{pn} = \psi_{c,e} N_p$$

$$A_{bg} = 4.144 \text{ in}^2$$

$$N_p = A_{bg} 8 f'_c$$

$$\psi_{c,p} = 1.4$$

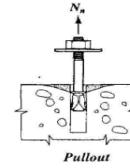
$$N_p = 149.2 \text{ kips}$$

$$\phi = 0.75$$

$$N_{pn} = 208.9 \text{ kips}$$

$$\phi N_p = 156.6 \text{ kips}$$

$$N_u = 113.93 \text{ kips}$$



Maximum bolt force from pole analysis

$\phi N_p > N_u$ Check **OK**

Concrete Side-Face Blowout Strength of Headed Anchor in Tension

17.4.4

Single Anchor:

$$N_{sb} = 160 c A_{bg}^{1/2} f'_c^{1/2}$$

Distance from center of anchor shaft to edge of concrete $C = C_{a1} = 14.0 \text{ in}$
 Distance from center of anchor shaft to edge of concrete in direction orthogonal to $C = C_{a1}$. $C_{a2} = 48.2 \text{ in}$

$$C_{a2}/C_{a1} = 3.44$$

Use 3.00

Seismic Factor 0.75
 $\phi = 0.75$
 Factor = 1.00
 $N_{sb} = 305.9 \text{ kips}$
 $\phi N_{sb} = 172.1 \text{ kips}$

$\phi N_{sb} > N_u$ Check **OK**



Multiple Anchors:

$$N_{sbq} = (1 + S/6c_{a1}) N_{sb}$$

Spacing of the outer anchors along the edge of the group. $S_o = 6.09 \text{ in}$

Effective anchor embedment depth $h_{ef} = 56 \text{ in}$
 The largest edge distance $C_{a,max} = 48.2 \text{ in}$
 Number of edges surrounding anchor or group of anchors edges 2
 Controlling length $L_{ef} = 56 \text{ in}$

$$N_{sbq} = 328.1 \text{ kips}$$

$$\phi N_{sbq} = 184.5 \text{ kips}$$

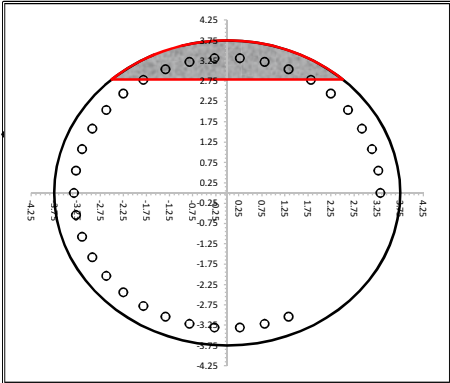
$\phi N_{sbq} > N_u$ Check **OK**



Site: Dock Shopping Center - Stratford, CT Dwg: CT584934FP	By: CR	Drilled Pier Analysis
	Check: CR	Pole Structure
	Date: 07-26-23	Customer: Barrett Outdoor

MAXIMUM FACTORED MOMENT OF A CIRCULAR SECTION

Reinforcement Yield Strength	60	ksi
Reinforcement Modulus of Elasticity	29000	ksi
Axial Load (Negative for Compression)	-54.2382	kips
Limiting Compressive Strain	0.003	in/in
Reinforcement Yield Strain	0.00207	in/in
Pier Diameter	7.50	ft
Vertical Rebar Diameter	1.270	in
Vertical Rebar Quantity	38	
Vertical Rebar Area	1.2668	in ²
Tie Rebar Diameter	0.500	in
Concrete Clear Cover	4.0	in
Rebar Cage Diameter (to Center of Vertical Bars)	79.730	in
Concrete Compressive Strength	4500	psi
Distance From Extre Edge to Neutral Axis	13.93	in
ACI Factor per Table 22.2.2.4.3 (β_1)	0.8250	
Depth of Equivalent Stress Block	11.5	in
Distance from Centroid to Neutral Axis	31.1	in
Angle from Centroid to Compression Zone	41.9	deg
Area of Concrete in Compression	473.6	in ²
Distance from Centroid of Concrete in Compression to Centroid of Pier	38.2	in
Concrete Compression Force	1783	kips
Total Reinforcement Forces	-1728	kips
Axial Load	-54.2382	kips
Sum of Axial Forces	-1783	kips
Sum of Forces in Concrete	0.000	kips
Moment of Concrete in Compression	5668	ft-kips
Total Reinforcement Moment	3483	ft-kips
Nominal Strength of Column	9151	ft-kips
Tensile Strain in Extreme Layer of Reinforcement	-0.0152	in/in
ACI Strength Reduction Factor	0.900	
Factored Moment Strength of Column	98834	in-kips



OK

ACI 318-14 21.2.2



Site: Dock Shopping Center - Strat Dwg: CT584934FP	By:	CR	Drilled Pier Analysis
	Check:	CR	Pole Structure
	Date:	26-07-2023	Customer: Barrett Outdoor

Uplift Check

Project: **584934**
 Date: **26-07-2023**
 Uplift Adhesion Value = **7200** psf
 Depth of Soil Heave = **14.5** ft
 Diameter of Pier = **7.5** ft
 Pier Depth = **41.5** ft
 Φ Factor = **0.75**

Depth Start (ft)	Depth End (ft)	Ultimate Skin Friction	Skin Friction Resisting
27	41.5	14400	3689801

Uplift Force = 2459867 lbs

Concrete Unit Weight = 150 pcf
 Dead Load Factor = 0.9
 Foundation Downward Force = 247511 lbs
 Dead Load of Structure = **43335** lbs
 Structure Downward Force = 39002 lbs
 Total Skin Friction Resistance = 3689801 lbs
 Total Downward Force = 3976313

CSR 0.62 **OK**



Site: Dock Shopping Center - Stra	By: CR	Drilled Pier Analysis
Dwg: CT584934FP	Check: CR	Pole Structure
	Date: 26-07-2023	Customer: Barrett Outdoor