



STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@ct.gov

Web Site: portal.ct.gov/csc

VIA ELECTRONIC MAIL

December 14, 2021

John Coleman
Project Manager
Centerline Communications, LLC
750 W. Center Street, Suite 301
West Bridgewater, MA 02379
jcoleman@clinellc.com

RE: **EM-VER-064-210929** – Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 305 West Service Road, Hartford, Connecticut.

Dear Mr. Coleman:

The Connecticut Siting Council (Council) is in receipt of your correspondence of December 1, 2021 submitted in response to the Council's November 9, 2021 notification of an incomplete request for exempt modification with regard to the above-referenced matter.

The submission renders the request for exempt modification complete and the Council will process the request in accordance with the Federal Communications Commission 60-day timeframe.

Thank you for your attention and cooperation.

Sincerely,

A handwritten signature in black ink, appearing to read "Melanie Bachman".

Melanie Bachman
Executive Director

MAB/CW/laf

From: John Coleman <jcoleman@clinellc.com>

Sent: Wednesday, December 1, 2021 7:06 PM

To: CSC-DL Siting Council <Siting.Council@ct.gov>

Cc: Sharon Bateman <sbateman@clinellc.com>

Subject: EM-VER-0-210929 / VZW Exempt Modification filing / WEST SERVICE ROAD (302466 / 13668983) / HARTFORD NORTH CT / 467518 / Corrections Filing

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

CDC – DL Siting Council,

Please find attached the electronic copy in response to the Incomplete Memo with the original filing for Verizon Wireless' Exempt Modification at its 305 West Service Rd, Hartford, CT monopole tower facility Hartford North CT in Hartford.

Attached

- EM-VER-064-210929
- Corrections filing with requested documents

Should you need any further information concerning this request, please reach out to me at any time. I appreciate your consideration.

John Coleman



John Coleman | Project Manager

750 W Center St, Suite 301 | West Bridgewater, MA 02379

Mobile: 240.615.7389

jcoleman@clinellc.com | www.centerlinecommunications.com

John Coleman, Project Manager
c/o Cellco Partnership d/b/a Verizon Wireless
Centerline Communications, LLC
750 West Center Street, Floor 3
West Bridgewater, MA 02379
Mobile: (240) 615 -7389
JColeman@clinellc.com

November 30, 2021

Melanie A. Bachman
Acting Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

RE: EM-VER-064-210929 – Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 305 West Service Road, Hartford, CT.

Dear Ms. Bachman,

In response to the Council's Incomplete Letter to modify an existing telecommunications facility dated November 9, 2021 for the afore mentioned site, please see the following attachments as outlined below per Councils request:

1. Original Facility Approval obtained from the City of Hartford.
2. The Original Filing sent to the CSC on 9/29/2021 – Notice of Exempt Modification // Site: HARTFORD NORTH CT (ATC: 302466) Cellco Partnership d/b/a/ Verizon Wireless.

This list completes the items listed in the afore mentioned Letter of Incompleteness. I appreciate your time and consideration.

Sincerely,
John Coleman

John Coleman, Project Manager
c/o Cellco Partnership d/b/a Verizon Wireless
Centerline Communications, LLC
750 West Center Street, Floor 3
West Bridgewater, MA 02379
Mobile: (240) 615 -7389
JColeman@clinellc.com

From: [Paul Ashworth](#)
To: [Tanner, Jim](#); [Berschet, Paige](#); [John Coleman](#)
Subject: RE: 302466 / WEST SERVICE ROAD / 305 W. SERVICE ROAD, HARTFORD, CT / VERIZON APPLICATION FOR CSC FILING REQUIREMENTS
Date: Wednesday, December 1, 2021 3:04:40 PM
Attachments: [305WestService_OriginalTowerCO_2000.pdf](#)
[305WService_TowerConstructionPlans_1998.pdf](#)

Hello,

These are the only approval documents I could find for the cell tower at 305 West Service. Please find attached: a certificate of occupancy for the cell tower from the year 2000; and, stamped constructions plans for the tower dated 1998.

I hope that helps,

Paul Ashworth

Senior Planner

City of Hartford - Department of Development Services

Planning & Zoning Division

he/him

260 Constitution Plaza, 1st Floor

Desk: 860-757-9055

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Please be advised that unless it is expressly stated, this correspondence does not constitute a zoning permit, certificate of zoning compliance, certification of a legal nonconforming use, or other approval within the Division's jurisdiction. If a permit or approval is desired, an application, application fee, and all required supporting documentation must be submitted to the Zoning Administrator in accordance with the Hartford Zoning Regulations. Please visit <https://link.edgepilot.com/s/92c3d074/OxhqCC-pXkecE3EWacjRKw?u=http://www.hartfordct.gov/dds> and click on "Our Services" to begin the application process.

Make an appointment online: https://link.edgepilot.com/s/a34a8cfb/ZhnP5xaNcE_zujW8oVzDOO?u=https://developmentservices.setmore.com/

From: Tanner, Jim
Sent: Tuesday, November 30, 2021 4:16 PM
To: Paul Ashworth <Paul.Ashworth@hartford.gov>; Berschet, Paige <Paige.Berschet@hartford.gov>
Subject: FW: 302466 / WEST SERVICE ROAD / 305 W. SERVICE ROAD, HARTFORD, CT / VERIZON APPLICATION FOR CSC FILING REQUIREMENTS

From: John Coleman <jcoleman@clinellc.com>
Sent: Tuesday, November 30, 2021 2:24 PM
To: Tanner, Jim <James.Tanner@hartford.gov>
Subject: 302466 / WEST SERVICE ROAD / 305 W. SERVICE ROAD, HARTFORD, CT / VERIZON

APPLICATION FOR CSC FILING REQUIREMENTS

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe. Please contact the helpdesk at 860-757-9411 if you have any questions.

Mr. Tanner,

Centerline Communications working on behalf of Verizon Wireless will be filing with the CSC to obtain their approval. I have accessed the CSC website and the original tower approval filing for this site for is not available. A copy of the package to be submitted has already been received by your office. I have attached our drawings as reference to the location of the tower and information on what we will be doing there once we have obtained CSC approval and associated permits.

Per CSC requirements for filing I need to either obtain a copy of the original tower approval from your department or obtain a reply to this e-mail that the City of Hartford no longer has a copy of this approval.

I would greatly appreciate a copy of the original approval if you have one or a response to this e-mail so that we can submit this correction. If you have any questions, please feel free to reach out to me at any time.

Thank you and have a nice day.

John



John Coleman | Project Manager
750 W Center St, Suite 301 | West Bridgewater, MA 02379
Mobile: 240.615.7389
jcoleman@clinellc.com |
[https://link.edgepilot.com/s/454da977/ssWeevNIC0O6oE2SB_l-gw?](https://link.edgepilot.com/s/454da977/ssWeevNIC0O6oE2SB_l-gw?u=http://www.centerlinecommunications.com/)
[u=http://www.centerlinecommunications.com/](http://www.centerlinecommunications.com/)

Links contained in this email have been replaced. If you click on a link in the email above, the link will be analyzed for known threats. If a known threat is found, you will not be able to proceed to the destination. If suspicious content is detected, you will see a warning.

BUREAU OF LICENSES AND PERMITS
CITY OF HARTFORD

No 13070

CERTIFICATE OF OCCUPANCY

Zone I-2

Dated June 16, 19xx 2000

THIS IS TO CERTIFY THAT building at 305 West Service Road
as constructed under Permit No. B 19995170 HC 12/15/99 conforms substantially to the
requirements of the Building Code and the Zone Ordinance of the City of Hartford and is hereby approved for occupancy
as indicated below.

Approved for occupancy Telecommunication Tower

Use Group Business

Joseph Heves a j b Building Supervisor

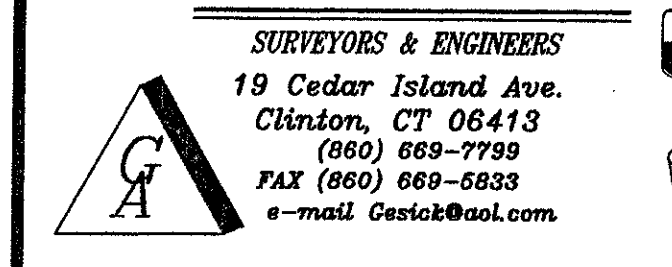
Notice: — If this certificate is lost or destroyed, a duplicate should be immediately obtained from the Department of Licenses and
Inspections. Any change or extension of the use herein approved requires a new certificate of occupancy.
Copies of this certificate may be obtained at the Department of Licenses and Inspections at a charge of seventy-five cents each.

Receipt No.

0000011715

100.00 Check

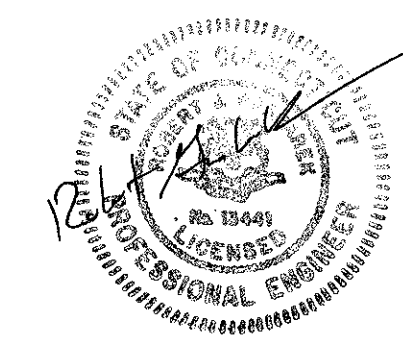
06 16 00



DATE: 08/03/98 DRAWN BY: RJG
SCALE: AS SHOWN

REVISIONS		
#	DATE	DESCRIPTION

NEXTEL COMMUNICATIONS OF THE MID-ATLANTIC, INC.
 100 CORPORATE PLACE
 ROCKY HILL, CONNECTICUT 06067
 (860) 513-5400 FAX (860) 513 5444



NEXTEL COMMUNICATIONS OF THE MID-ATLANTIC, INC.

CT-0767 HARTFORD NORTH 305 WEST SERVICE ROAD HARTFORD, CONNECTICUT

Drawing Index

DRAWING	TITLE
T1	TITLE SHEET & INDEX
S1	EXISTING CONDITIONS
C1	COMPREHENSIVE SITE PLAN
C2	SITE PLAN
C3	SITE DETAILS
C4	GENERAL NOTES & EROSION CONTROL NARRATIVE
E-1	ELECTRICAL SITE/GROUNDING PLAN
E-2	ELECTRICAL DETAILS & NOTES
E-3	ELECTRICAL DETAILS & NOTES
E-4	ELECTRICAL DETAILS & NOTES
ES-1	ELECTRICAL SPECIFICATIONS

CT-0767 HARTFORD NORTH
 305 West Service Road
 Hartford, Connecticut

NEXTEL Site:

G&A PROJ # 98-082

Sheet title:
Title Sheet & Index

DRAWING NUMBER: **T-1**

LEGEND

EXISTING		PROPOSED
(TYPE) STORM SEWER	FENCE	(TYPE) STORM SEWER
(TYPE) SANITARY SEWER	STORM SEWER	(TYPE) SANITARY SEWER
(TYPE) WATER LINE	SANITARY SEWER	(TYPE) WATER LINE
(TYPE) GAS LINE	WATER LINE	(TYPE) GAS LINE
UNDERGROUND ELECTRIC	GAS LINE	UNDERGROUND ELECTRIC
UNDERGROUND TELEPHONE	UNDERGROUND ELECTRIC	UNDERGROUND TELEPHONE
OVERHEAD WIRES	UNDERGROUND TELEPHONE	OVERHEAD TELEPHONE
250	OVERHEAD ELECTRIC	OVERHEAD ELECTRIC
202	5' OR 10' CONTOUR LINE	5' OR 10' CONTOUR LINE
120.5 OR 120.5 X	1' OR 2' CONTOUR LINE	1' OR 2' CONTOUR LINE
	SPOT ELEVATION	SPOT ELEVATION
	DITCH OR SWALE	DITCH OR SWALE
	STREAM OR RIVER	STREAM OR RIVER
	LAKE OR POND	LAKE OR POND
	PRIMARY PROPERTY OR R.O.W.	PRIMARY PROPERTY OR R.O.W.
	PROPERTY LINE	PROPERTY LINE
	EASEMENT	EASEMENT
□	CATCH BASIN	CATCH BASIN
○	MANHOLE	MANHOLE
⊕	HYDRANT	HYDRANT
⊕	WATER VALVE	WATER VALVE
⊕	UTILITY POLE	UTILITY POLE
* ⊕ *	LIGHT POLE, LAMP POST	LIGHT POLE, LAMP POST
⊕	SIGN	SIGN
⊕	TELEPHONE PEDESTAL	TELEPHONE PEDESTAL
⊕	IRON ROD, PIN, OR PIPE	IRON ROD, PIN, OR PIPE
⊕	CONCRETE MONUMENT	CONCRETE MONUMENT
—	CURB	CURB
—	ASPHALT PAVEMENT	ASPHALT PAVEMENT
⊕	TEST PIT	TEST PIT
⊕	SOIL BORING	SOIL BORING
⊕	BORING #	BORING #
□	BUILDING	BUILDING
⊕	TREES, SHRUBS, BUSHES	TREES, SHRUBS, BUSHES
—	MATCH LINE	MATCH LINE
—	SILT FENCE	SILT FENCE
001	DETAIL IDENTIFICATION	DETAIL IDENTIFICATION
CI	SHEET NO. WHERE DETAIL IS LOCATED	SHEET NO. WHERE DETAIL IS LOCATED
	OR THE DWG. IT IS CALLED OUT.	OR THE DWG. IT IS CALLED OUT.

SURVEY LEGEND

SYM.	DESCRIPTION	SYM.	DESCRIPTION
•	PROPERTY CORNER	—	CONTOUR
●	IP/DH TO SET	—	INDEX CONTOUR
⊕	MONUMENT TO SET	—	PROPERTY LINE
⊕	BENCH MARK	NTS	NOT TO SCALE
x 22	SPOT ELEV		
—	TREELINE		
—	WETLANDS		

PROJECT SUMMARY
APPLICANT/LESSEE:
 NEXTEL COMMUNICATIONS OF THE MID-ATLANTIC, INC.
 100 CORPORATE PLACE
 ROCKY HILL, CT 06067
 CONTACT: JIM MCWILLIAMS
 (860) 513-5400

PROPERTY OWNER(S):
 JIM RUSSO (860) 246-4724
 305 WEST SERVICE ROAD ASSOCIATES, LLC
 305 WEST SERVICE ROAD
 HARTFORD, CT

PROJECT DESCRIPTION:
 THE PROJECT CONSISTS OF THE CONSTRUCTION, INSTALLATION AND OPERATION OF ANTENNAS AND ASSOCIATED EQUIPMENT SHELTER FOR AN UNMANNED WIRELESS COMMUNICATIONS SERVICES FACILITY. THIS SYSTEM WILL BOTH TRANSMIT AND RECEIVE RADIO SIGNALS FOR A REGIONAL WIRELESS NETWORK.

ELECTRICAL AND TELEPHONE UTILITIES SHALL BE INSTALLED TO SERVICE THE SITE. NO WATER OR SEWER SERVICES FOR THE FACILITY ARE REQUIRED.

THE SITE WILL BE ENCLOSED WITHIN A 6' (SIX) HIGH CHAIN LINK FENCE.

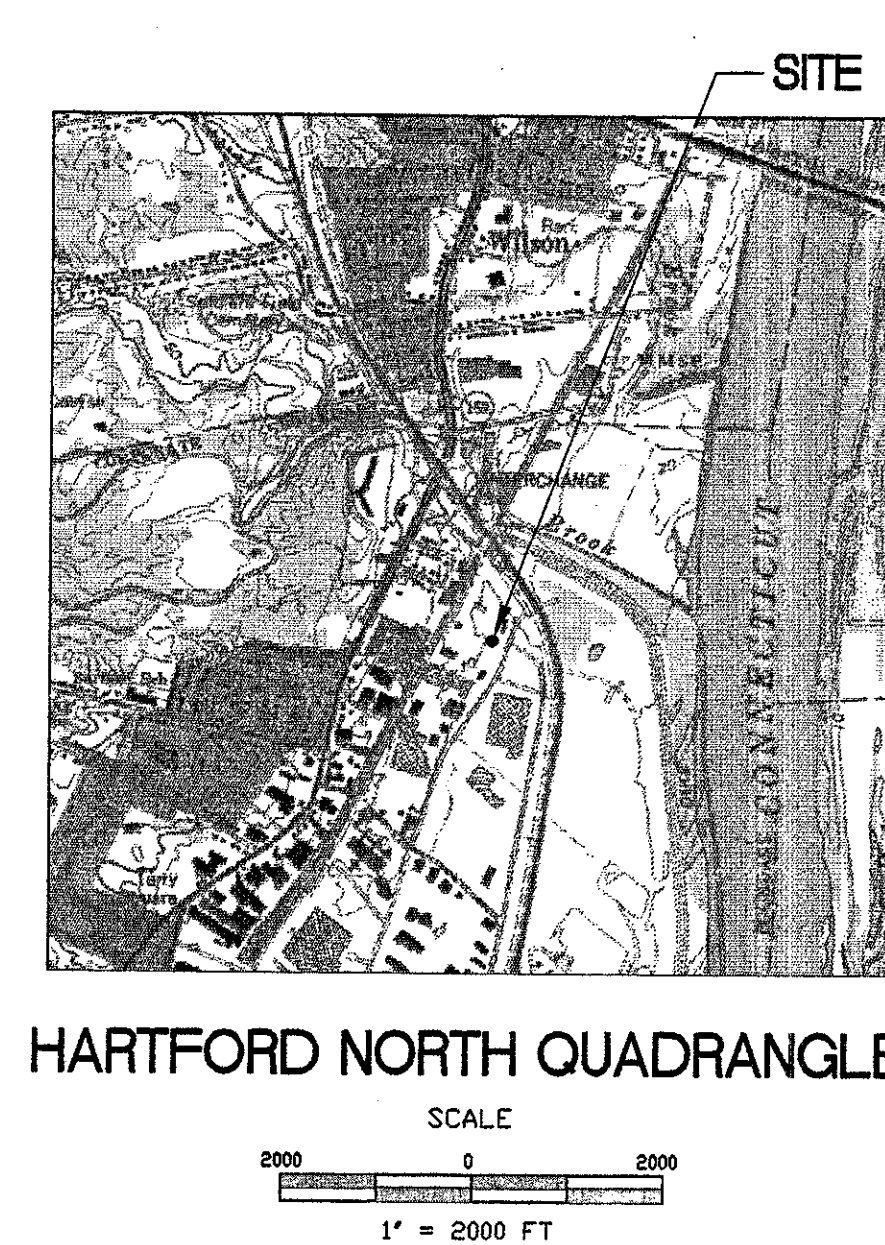
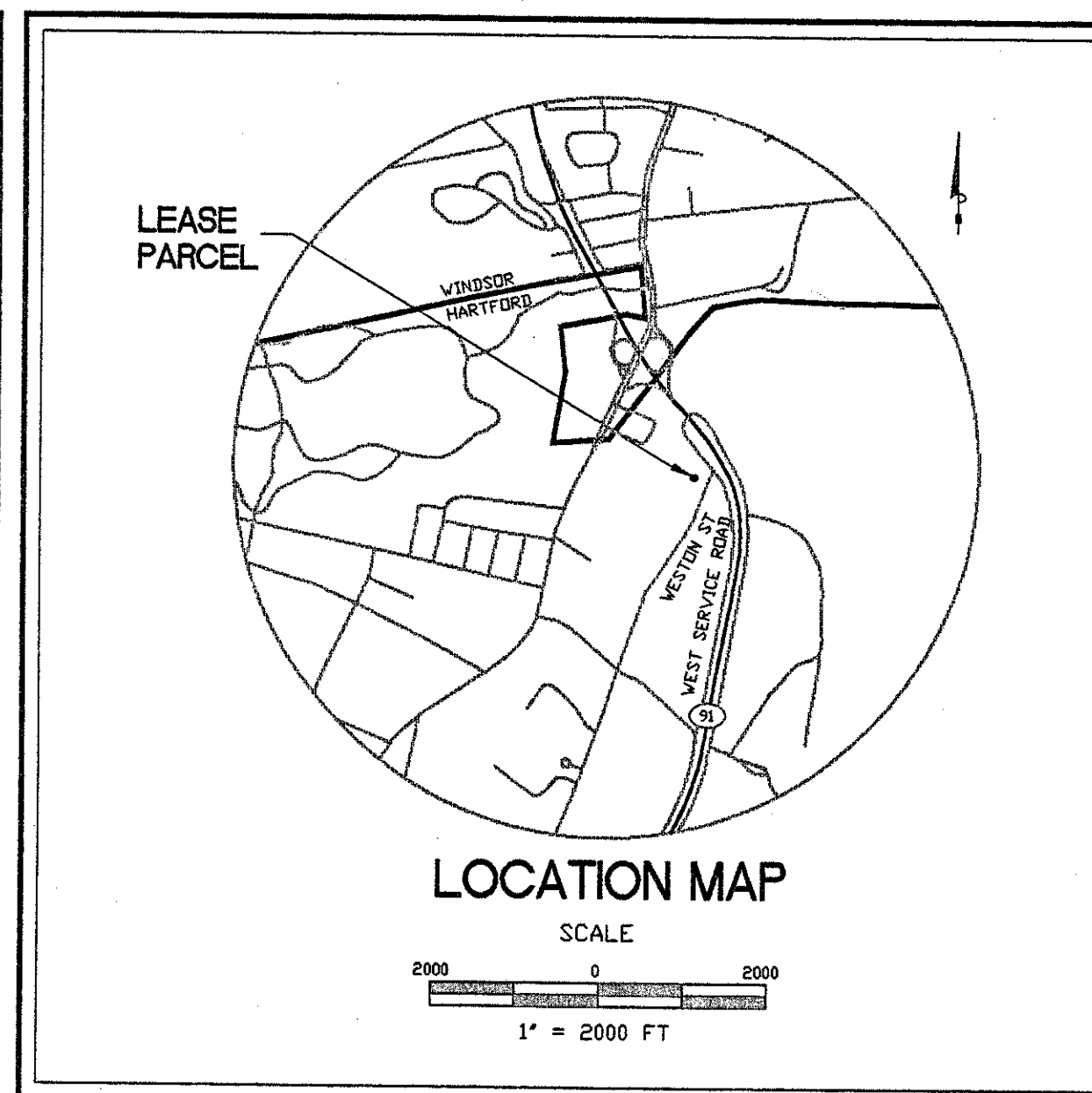
ELECTRIC UTILITY: NORTHEAST UTILITIES
 "CALL BEFORE YOU DIG" 800-922-4455
 CL&P CONTACT PERSON - DANIEL WING (860) 280-2351

TELEPHONE UTILITY: SOUTHERN NEW ENGLAND TELEPHONE (SNET)

LEASE PARCEL INFORMATION	
ADDRESS	305 WEST SERVICE ROAD HARTFORD, CT
CURRENT OWNER	305 WEST SERVICE ROAD ASSOCIATES, LLC.
DEED	VOL. 3960/282
ASSESSORS ID	MAP 644, BLOCK 6, LOT 7
FLOOD ZONE	ZONE X
ZONE	I-2
AREA OF LEASE PARCEL	2499.98 SQ FT, 0.05739 ACRES +/-

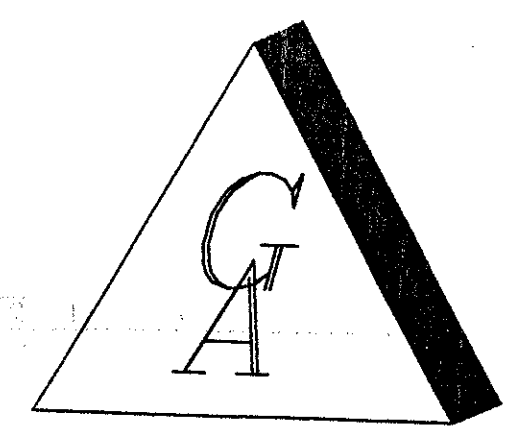
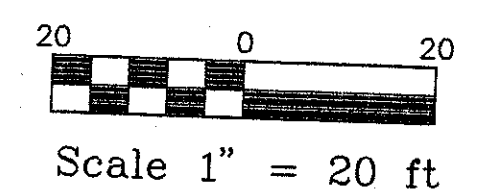
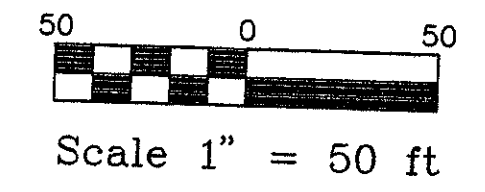
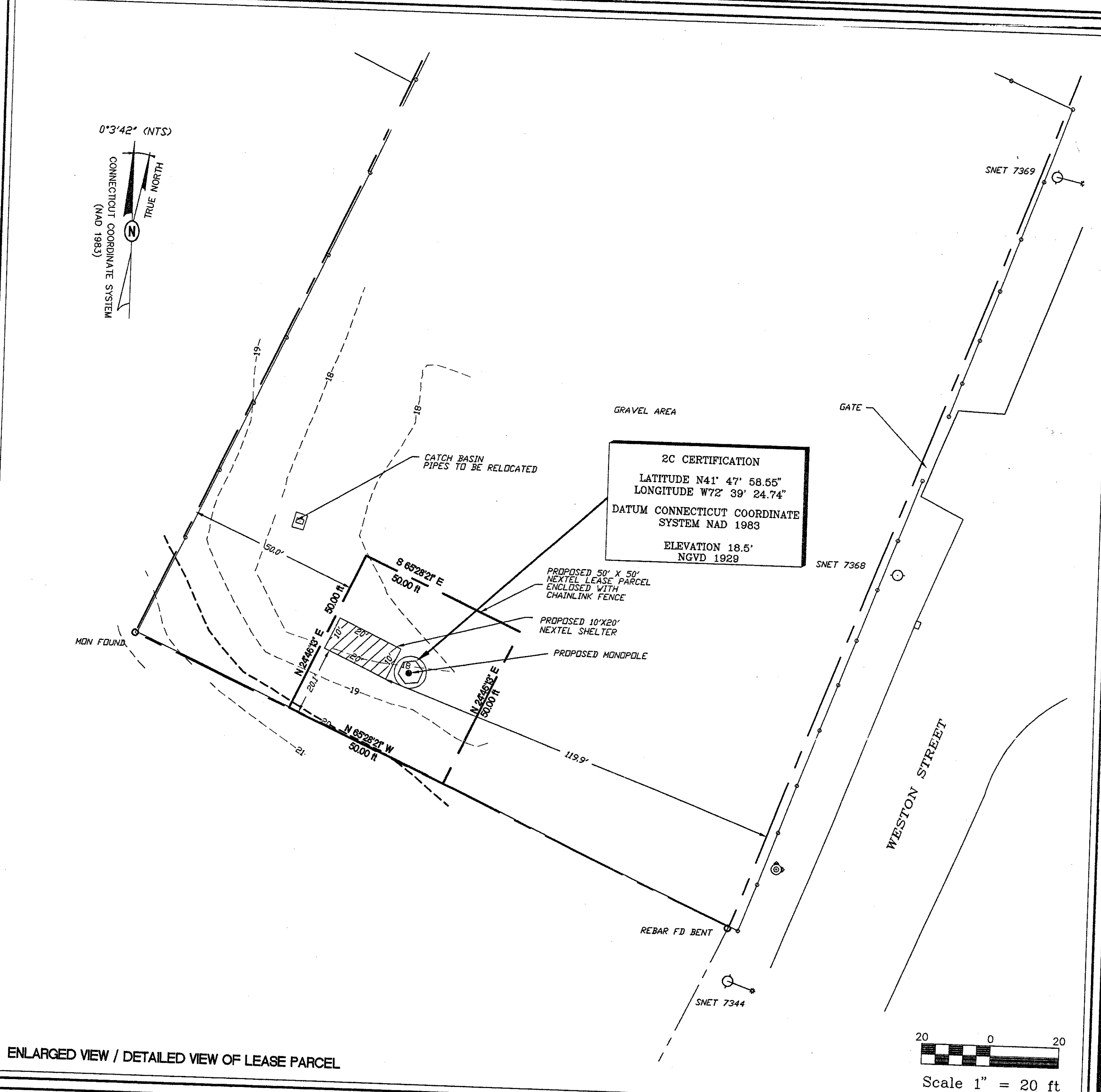
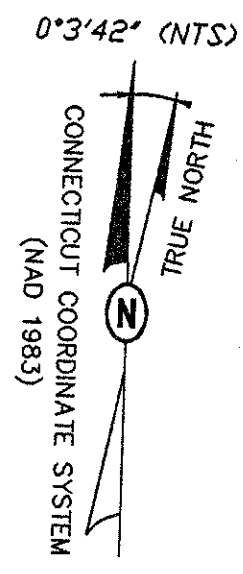
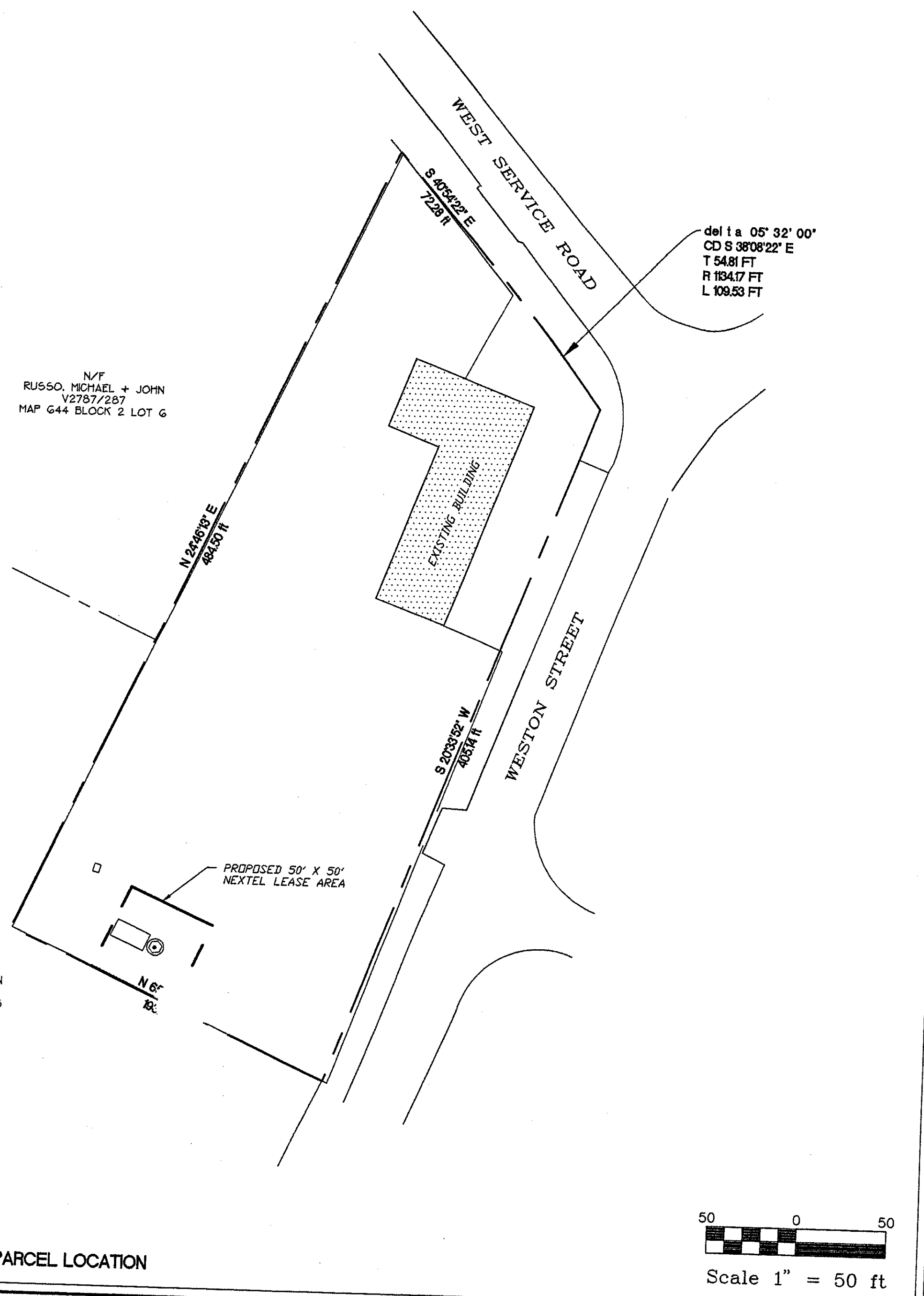
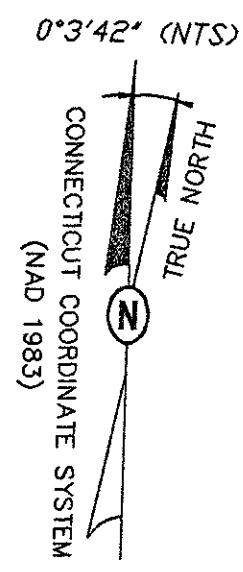
ZONING REQUIREMENTS:

FRONT YARD SETBACK:	NA
SIDE YARD SETBACK:	NA
REAR YARD SETBACK:	NA
MINIMUM LOT FRONTAGE:	NA
MAXIMUM LOT COVERAGE %:	NA
MINIMUM LOT AREA:	NA
LEASE/DEVELOPMENT AREA:	NA



SIGNATURE BLOCK FOR PLANNING BOARD CHAIRMAN:
 SITE PLAN # _____
 DATE APPROVED: _____

PLANNING AND ZONING COMMISSION CHAIRMAN: _____
 DATE: _____



SURVEYORS & ENGINEERS

REVISIONS	
#	DATE
1	03/17/88
2	MOVED LEASE PARCEL

NEXTEL COMMUNICATIONS OF THE MID-ATLANTIC, INC.
 100 CORPORATE PLACE
 ROCKY HILL, CONNECTICUT 06067
 (860) 513-5400 FAX (860) 513 5444

CT-0767 HARTFORD NORTH
305 WEST SERVICE ROAD
HARTFORD, CONN.

Nextel Project #

Nextel Project #
 CT - 0767 Hartford North

Existing Conditions of
 305 West Service Road
 Hartford, Connecticut
 Prepared for
 Nextel Communications
 of The Mid-Atlantic, Inc.

August 3, 1998

S-1

LEASE PARCEL INFORMATION	
ADDRESS	305 WEST SERVICE ROAD HARTFORD, CT
CURRENT OWNER	305 WEST SERVICE ROAD ASSOCIATES, LLC.
DEED	VOL 3960/282
ASSESSORS ID	MAP 644, BLOCK 6, LOT 7
FLOOD ZONE	ZONE X
ZONE	1-2
AREA OF LEASE PARCEL	2499.98 SQ FT , 0.05739 ACRES +/-

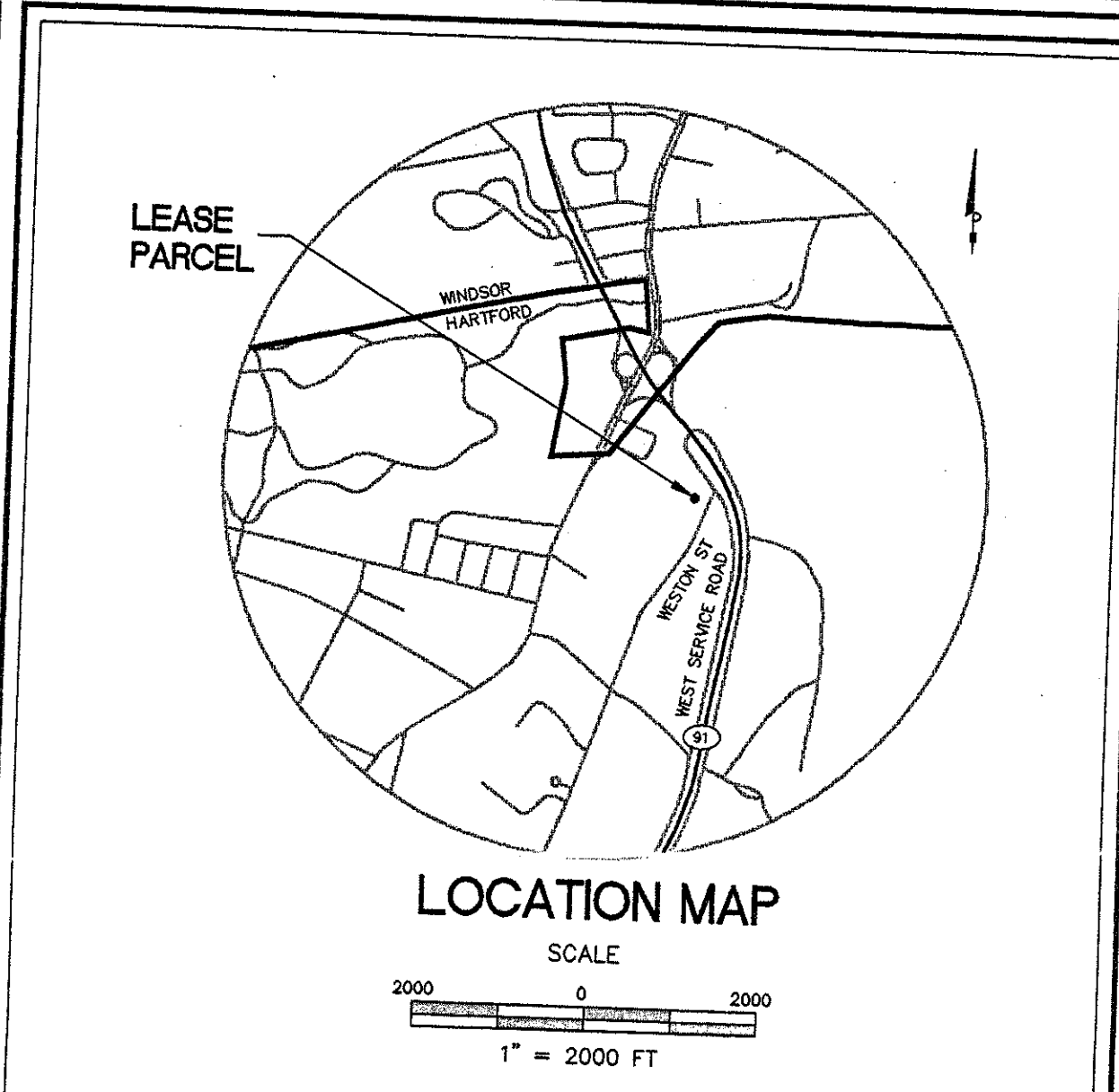
LEGEND			
SYM.	DESCRIPTION	SYM.	DESCRIPTION
●	PROPERTY CORNER	---	CONTOUR
○	IP/DH TO SET	---	INDEX CONTOUR
■	MONUMENT TO SET	---	PROPERTY LINE
⊕	BENCH MARK	NTS	NOT TO SCALE
x 1/2	SPOT ELEV		
~	TREELINE		
▲▲▲	WETLANDS		

REFERENCE MAPS

- "PROPERTY OF RUSCO BROTHERS INC. SERVICE ROAD (WEST BRANCH) HARTFORD, CONNECTICUT PREPARED BY G. JENSEN, MILLER DATED DEC. 1967 SCALE T=40"

NOTES

- THIS SURVEY AND MAP HAS BEEN PREPARED IN ACCORDANCE WITH SECTIONS 20-300b-1 THRU 20-300b-20 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES - "MINIMUM STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ENDORSED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. IT IS A PROPERTY SURVEY BASED ON AN INDEPENDENT RESURVEY CONFORMING TO A-2 HORIZONTAL ACCURACY AND T-2 TOPOGRAPHIC ACCURACY AND INTENDED TO DEPICT AND NOTE THE POSITION OF A PROPOSED LEASE PARCEL WITH RESPECT TO EXISTING STRUCTURES ON PARCEL.
- NORTH IS BASED ON REFERENCE MAP #1
- ELEVATIONS BASED ON THE CONNECTICUT COORDINATE SYSTEM (NAD 1983)
- BASE MAPPING PREPARED BY GESICK & ASSOCIATES P.C. FROM A AUG. 1, 1988 FIELD SURVEY.
- SUBJECT TO AN ACCURATE UP-TO-DATE ABSTRACT OF TITLE.
- PARCEL LOCATED WITHIN FLOOD ZONE X PER COMMUNITY PANEL #095080 00058 DATED DEC. 4, 1986.
- SUBJECT TO ALL RIGHTS, EASEMENTS, COVENANTS OR RESTRICTIONS OF RECORD.



To the best of my knowledge and belief this map is substantially correct as noted hereon.

Donald L. Gesick Jr.
 Donald L. Gesick Jr. J.S. Reg. No. 18417

SURVEYORS CERTIFICATION

Gesick & Associates P.C.
 SURVEYORS & ENGINEERS
 19 Cedar Island Ave.
 Clinton, CT 06413
 (860) 669-7799
 FAX (860) 669-5833
 e-mail Gesick@aol.com

DATE: 08/03/98 DRAWN BY: RJG

SCALE: AS SHOWN

REVISIONS

#	DATE	DESCRIPTION	INITIAL
1.	08/17/98	LDC MOVED 50'	RJG

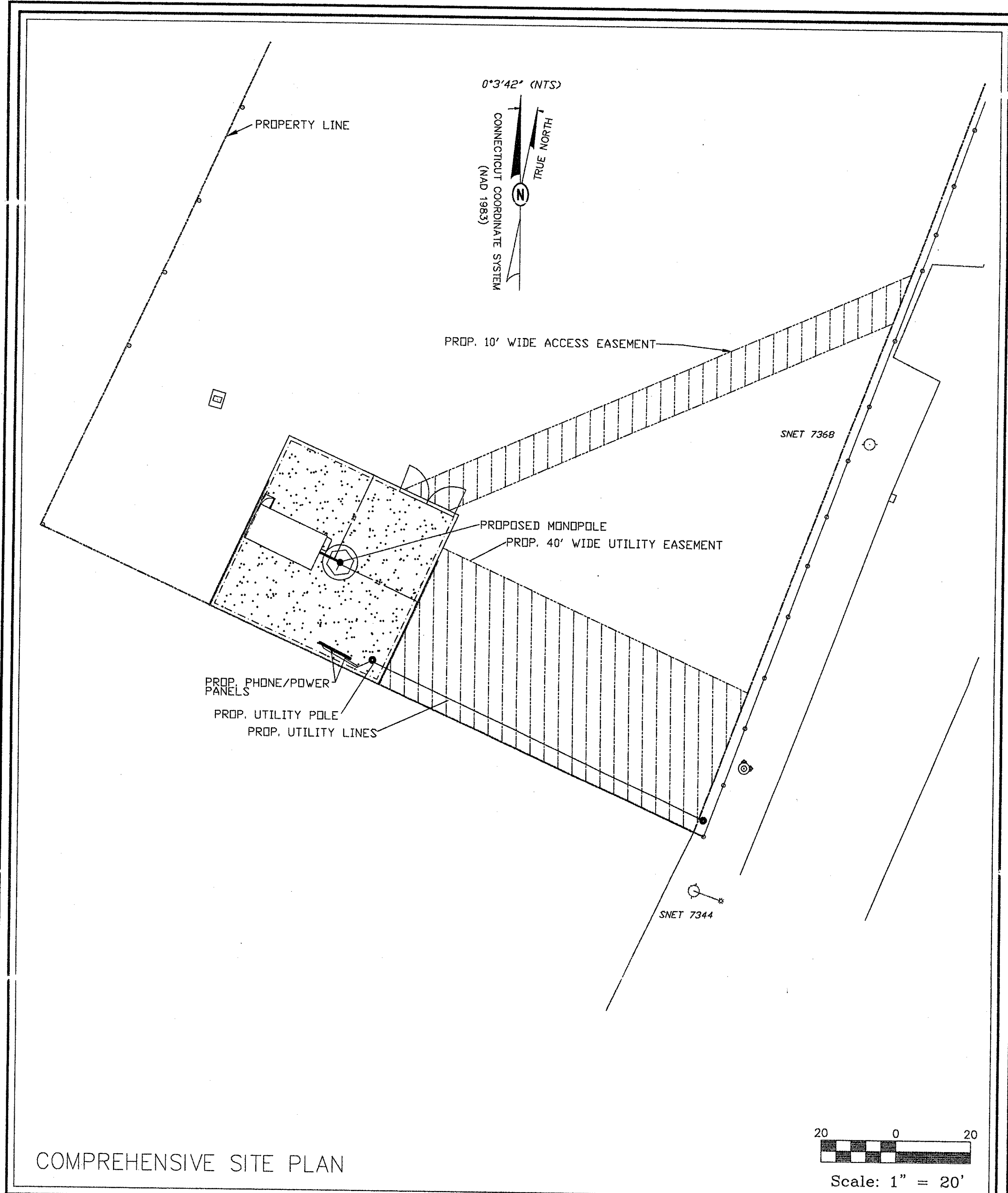
NEXTEL COMMUNICATIONS OF THE MID-ATLANTIC, INC.
 100 CORPORATE PLACE
 ROCKY HILL, CONNECTICUT 06067
 (860) 513-5400 FAX (860) 513 5444

NEXTEL COMMUNICATIONS SITE:
#0767 HARTFORD NORTH
305 WEST SERVICE ROAD
HARTFORD, CONNECTICUT

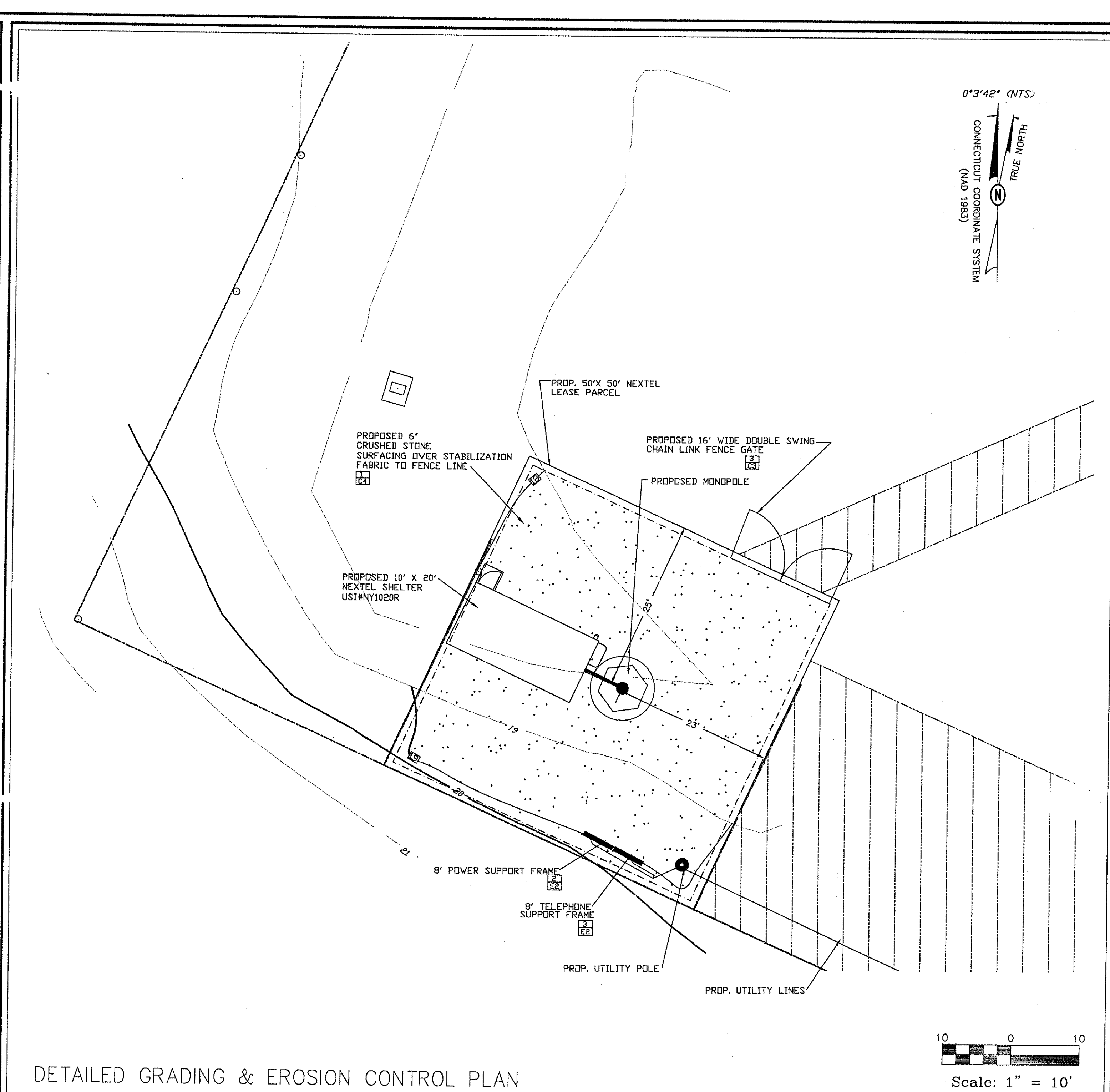
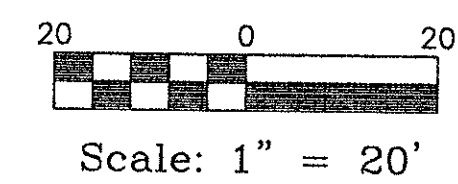
G&A PROJECT #98-082B

Sheet title:
Comprehensive Site Plan

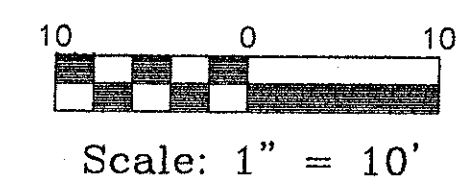
DRAWING NUMBER: **C-1**



COMPREHENSIVE SITE PLAN



DETAILED GRADING & EROSION CONTROL PLAN



ACCESS EASEMENT GENERAL NOTES:

- ACCESS DRIVE TO BE IMPROVED TO A MINIMUM OF 10' IN WIDTH. THE ACCESS SHALL BE MAINTAINED AND OR IMPROVED TO ALLOW CONSTRUCTION AND MAINTENANCE EQUIPMENT TO THE SITE. GRADES OF THE ACCESS SHALL MATCH EXISTING GRADES WITH MINOR GRADE MODIFICATIONS.
- WHERE ACCESS DRIVE REQUIRES IMPROVEMENTS DETERMINED BY THE OWNERS CONSTRUCTION REPRESENTATIVE IN THE FIELD THE ACCESS SHALL BE IMPROVED TO BE 10' IN WIDTH. CONSTRUCTION SHALL CONSIST OF A MINIMUM OF 6" OF COMPACTED GRAVEL MATERIAL OVER A GEOTEXTILE FABRIC WITH A MINIMUM 150 MIL THICKNESS. THE DRIVE SHALL BE INSTALLED TO MATCH EXISTING GRADE WITH MINOR GRADE MODIFICATIONS.
- GRAVEL MATERIAL SHALL BE AN EVENLY GRADED MIXTURE OF PROCESSED CRUSHED STONE WITH 100% PASSING THE A 1-1/2" SIEVE AND NOT MORE THAN 5 PERCENT PASSING A NO. 4 SIEVE OR AS OTHERWISE SHOWN ON THE CONTRACT DRAWINGS.
- CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES SHALL BE IN CONFORMANCE WITH THE STATE OF CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.
- THE SUBGRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
- AUTHORIZATION FOR ACCESS TO AND WORK WITHIN PUBLIC ROAD R.O.W. SHALL BE OBTAINED BY THE CONTRACTOR. THE CONTRACTOR SHALL ADHERE TO ALL SPECIAL REQUIREMENTS SPECIFIED IN THE AUTHORIZATION.

REFERENCE MAPS

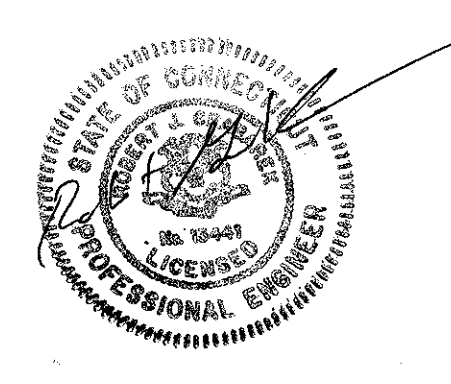
- "PROPERTY OF RUSSO BROTHERS INC. SERVICE ROAD (WEST BRANCH) HARTFORD, CONNECTICUT" PREPARED BY CLOSE, JENSEN, MILLER DATED DEC. 1987 SCALE 1"=40'

NOTES

- THIS SURVEY AND MAP HAS BEEN PREPARED IN ACCORDANCE WITH SECTIONS 20-300b-1 THRU 20-300b-20 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES - "MINIMUM STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ENDORSED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. IT IS A PROPERTY SURVEY BASED ON AN INDEPENDENT RESURVEY CONFORMING TO 4-2 HORIZONTAL ACCURACY AND T-2 TOPOGRAPHIC ACCURACY AND INTENDED TO IDENTIFY AND NOTE THE POSITION OF A PROPOSED LEASE PARCEL WITH RESPECT TO EXISTING STRUCTURES ON PARCEL
- NORTH IS BASED ON REFERENCE MAP #1
- ELEVATIONS BASED ON THE CONNECTICUT COORDINATE SYSTEM (NAD 1983)
- BASE MAPPING PREPARED BY GESICK & ASSOCIATES P.C. FROM A AUG 1, 1988 FIELD SURVEY.
- SUBJECT TO AN ACCURATE UP-TO-DATE ABSTRACT OF TITLE.
- PARCEL LOCATED WITHIN FLOOD ZONE X PER COMMUNITY PANEL J05090 0005B DATED DEC 4, 1996.
- SUBJECT TO ALL RIGHTS, EASEMENTS, COVENANTS OR RESTRICTIONS OF RECORD.
- UNDERGROUND UTILITIES SHOWN FROM ACTUAL FIELD LOCATION IF POSSIBLE. EXACT LOCATION MAY DIFFER FROM THAT SHOWN. OTHER UTILITIES MAY EXIST.

SITE WORK GENERAL NOTES:

- RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
- THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE PCS EQUIPMENT AND TOWER AREAS.
- THE SUBGRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
- ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR PIER DRILLING AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING ENGINEER.
- ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF AN ENGINEER.
- THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE BUILDING OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, FERTILIZED, AND SEEDED.
- CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH STATE AND LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL, AND COORDINATED WITH THE LOCAL CODE ENFORCEMENT OFFICE.
- UTILITY EASEMENT SHALL BE MAINTAINED BY LOCAL UTILITY. MAXIMUM WIDTH SHALL BE 40 FEET.
- ACTUAL LOCATIONS OF EXISTING UTILITIES ARE TO BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO THE INITIATION OF THE SITE WORK.



GENERAL NOTES & SPECIFICATIONS

- IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE ALL PLAN SHEETS AND SPECIFICATIONS AND COORDINATE HIS WORK WITH THE WORK OF ALL OTHER CONTRACTORS TO ENSURE THAT WORK PROGRESSION IS NOT INTERRUPTED.
- THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING A NEAT AND ORDERLY SITE, YARD AND GROUNDS, REMOVE AND DISPOSE OFF SITE ALL RUBBISH, WASTE MATERIALS, LITTER, AND ALL FOREIGN SUBSTANCES. REMOVE PETRO-CHEMICAL SPILLS, STAINS AND OTHER FOREIGN DEPOSITS. RAKE GROUNDS TO A SMOOTH EVEN-TEXTURED SURFACE.
- THE PLANS SHOW SOME KNOWN SUBSURFACE STRUCTURES, ABOVE-GROUND STRUCTURES AND/OR UTILITIES BELIEVED TO EXIST IN THE WORKING AREA, EXACT LOCATION OF WHICH MAY VARY FROM THE LOCATIONS INDICATED. IN PARTICULAR, THE CONTRACTOR IS WARNED THAT THE EXACT OR EVEN APPROXIMATE LOCATION OF SUCH PIPELINES, SUBSURFACE STRUCTURES AND/OR UTILITIES IN THE AREA MAY BE SHOWN OR MAY NOT BE SHOWN; AND IT SHALL BE HIS RESPONSIBILITY TO PROCEED WITH GREAT CARE IN EXECUTING ANY WORK. 48 HOURS BEFORE YOU DIG, DRILL OR BLAST, CALL 1-800-282-7411.
- THE OWNER OR OWNER'S REPRESENTATIVE SHALL BE NOTIFIED IN WRITING OF ANY CONDITIONS THAT VARY FROM THOSE SHOWN ON THE PLANS. THE CONTRACTOR'S WORK SHALL NOT VARY FROM THE PLANS WITHOUT THE EXPRESSED WRITTEN APPROVAL OF THE OWNER OR OWNER'S REPRESENTATIVE.
- THE CONTRACTOR IS INSTRUCTED TO COOPERATE WITH ANY AND ALL OTHER CONTRACTORS PERFORMING WORK ON THIS JOB SITE DURING THE PERFORMANCE OF THIS CONTRACT.
- THE CONTRACTOR SHALL RESTORE ALL PUBLIC OR PRIVATE PROPERTY DAMAGED OR REMOVED TO AT LEAST AS GOOD OF CONDITION AS BEFORE DISTURBED AS DETERMINED BY THE OWNER OR OWNER'S REPRESENTATIVE.
- THE CONTRACTOR SHALL COMPLY WITH ALL REQUIRED PERMITS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING, AND INCURRING THE COST OF ALL REQUIRED PERMITS, INSPECTIONS, CERTIFICATES, ETC.
- THE CONTRACTOR SHALL PROTECT EXISTING PROPERTY LINE MONUMENTATION. ANY MONUMENTATION DISTURBED OR DESTROYED, AS JUDGED BY THE OWNER OR OWNER'S REPRESENTATIVE SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE UNDER THE SUPERVISION OF A LICENSED LAND SURVEYOR.
- ALL TRENCH EXCAVATION AND ANY REQUIRED SHEETING AND SHORING SHALL BE DONE IN ACCORDANCE WITH OSHA REGULATIONS FOR CONSTRUCTION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING AND THE MAINTENANCE OF SURFACE DRAINAGE DURING THE COURSE OF WORK.
- ALL UTILITY WORK INVOLVING CONNECTIONS TO EXISTING SYSTEMS SHALL BE COORDINATED WITH THE OWNER OR OWNER'S REPRESENTATIVE AND THE UTILITY OWNER. NOTIFY THE OWNER OR OWNER'S REPRESENTATIVE AND THE UTILITY OWNER BEFORE EACH AND EVERY CONNECTION TO EXISTING SYSTEMS IS MADE.
- MAINTAIN FLOW FOR ALL EXISTING UTILITIES.
- ALL SITE FILL SHALL MEET SELECTED FILL STANDARDS AS DEFINED BY THE OWNER OR OWNER'S REPRESENTATIVE ON THE DRAWINGS.
- CONTRACTOR SHALL GRADE ALL AREAS ON THE SITE TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE EQUIPMENT PAD AND THE TOWER.
- ALL IMPROVEMENTS TO CONFORM WITH LOCAL, STATE & FEDERAL CONSTRUCTION STANDARDS AND SPECIFICATIONS.

GENERAL NOTES

- ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
- DO NOT CHANGE SIZE NOR SPACING OF STRUCTURAL ELEMENTS.
- DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
- THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
- DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
- INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE OWNER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING.
- EACH CONTRACTOR SHALL COOPERATE WITH THE OWNER'S REPRESENTATIVE, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.

STRUCTURAL STEEL

- STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
- ALL EXTERIOR STEEL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH SPECIFICATION ASTM A36 UNLESS OTHERWISE NOTED. GALVANIZING SHALL BE PERFORMED AFTER SHOP FABRICATION TO THE GREATEST EXTENT POSSIBLE. ALL DINGS, SCRAPES, MARS, AND WELDS IN THE GALVANIZED AREAS SHALL BE REPAIRED BY FIELD TOUCH-UP PRIOR TO COMPLETION OF THE WORK.
- DO NOT PLACE HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
- CONNECTIONS:
 - ALL WELDING SHALL BE DONE USING MANUFACTURER APPROVED METHODS. WELDING SHALL CONFORM TO AISC AND AWS D1.1. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION", 9TH EDITION. AT THE COMPLETION OF WELDING, ALL DAMAGE TO GALVANIZED COATING SHALL BE REPAIRED.
 - BOLTED CONNECTIONS SHALL USE BEARING TYPE GALVANIZED ASTM A325 BOLTS (3/4" DIA) AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
 - CONNECTION DESIGN BY FABRICATOR WILL BE SUBJECT TO REVIEW AND APPROVAL BY ENGINEER.

CONCRETE

- DESIGN AND CONSTRUCTION OF ALL CONCRETE ELEMENTS SHALL CONFORM TO THE LATEST EDITIONS OF THE FOLLOWING APPLICABLE CODES: ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS"; ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE";
- MIX DESIGN SHALL BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO PLACING CONCRETE.
- CONCRETE SHALL BE NORMAL WEIGHT, 6% AIR ENTRAINED (±1.5%) WITH A MAXIMUM 4" SLUMP, AND HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI UNLESS OTHERWISE NOTED.
- MAXIMUM AGGREGATE SIZE SHALL BE 1".
- THE FOLLOWING MATERIALS SHALL BE USED:

PORTLAND CEMENT:	ASTM C 150, TYPE I
REINFORCEMENT:	ASTM A 185
NORMAL WEIGHT AGGREGATE:	ASTM C 33
WATER:	DRINKABLE
ADMIXTURES:	NON-CHLORIDE CONTAINING
- REINFORCING DETAILS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 315.
- REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO.
- THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:

CONCRETE CAST AGAINST EARTH.....	3 IN.
CONCRETE EXPOSED TO EARTH OR WEATHER:	
#6 AND LARGER	2 IN.
#5 AND SMALLER & WWF	1 1/2 IN.
- A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
- INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURERS WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL WHEN DRILLING HOLES IN CONCRETE.
- ADMIXTURES SHALL CONFORM TO THE APPROPRIATE ASTM STANDARD AS REFERENCED IN ACI-301.
- DO NOT WELD OR TACKWELD REINFORCING STEEL.
- ALL DOWELS, ANCHOR BOLTS, EMBEDDED STEEL, ELECTRICAL CONDUITS, PIPE SLEEVES, GROUNDS AND ALL OTHER EMBEDDED ITEMS AND FORMED DETAILS SHALL BE IN PLACE BEFORE START OF CONCRETE PLACEMENT.
- LOCATE ADDITIONAL CONSTRUCTION JOINTS REQUIRED TO FACILITATE CONSTRUCTION AS ACCEPTABLE TO ENGINEER. PLACE REINFORCEMENT CONTINUOUSLY THROUGH JOINT.
- REINFORCEMENT SHALL BE COLD BENT WHENEVER BENDING IS REQUIRED.
- PLACE CONCRETE IN A UNIFORM MANNER TO PREVENT THE FORMATION OF COLD JOINTS AND OTHER PLANES OF WEAKNESS. VIBRATE THE CONCRETE TO FULLY EMBED REINFORCING. DO NOT USE VIBRATORS TO TRANSPORT CONCRETE THROUGH CHUTES OR FORMWORK.
- DO NOT PLACE CONCRETE IN WATER, ICE, OR ON FROZEN GROUND.
- DO NOT ALLOW CONCRETE OR SUBBASE TO FREEZE DURING CONCRETE CURING AND SETTING PERIOD, OR FOR A MINIMUM OF 14 DAYS AFTER PLACEMENT.
- FOR COLD-WEATHER AND HOT-WEATHER CONCRETE PLACEMENT, CONFORM TO APPLICABLE ACI CODES AND RECOMMENDATIONS. IN EITHER CASE, MATERIALS CONTAINING CHLORIDE, CALCIUM, SALTS, ETC. SHALL NOT BE USED. PROTECT FRESH CONCRETE FROM WEATHER FOR 7 DAYS MINIMUM.
- CONCRETE SHALL BE RUBBED TO A ROUGH GROUT FINISH. PADS SHALL BE SEALED BY STEEL TROWEL.

EXCAVATION & GRADING NOTES:

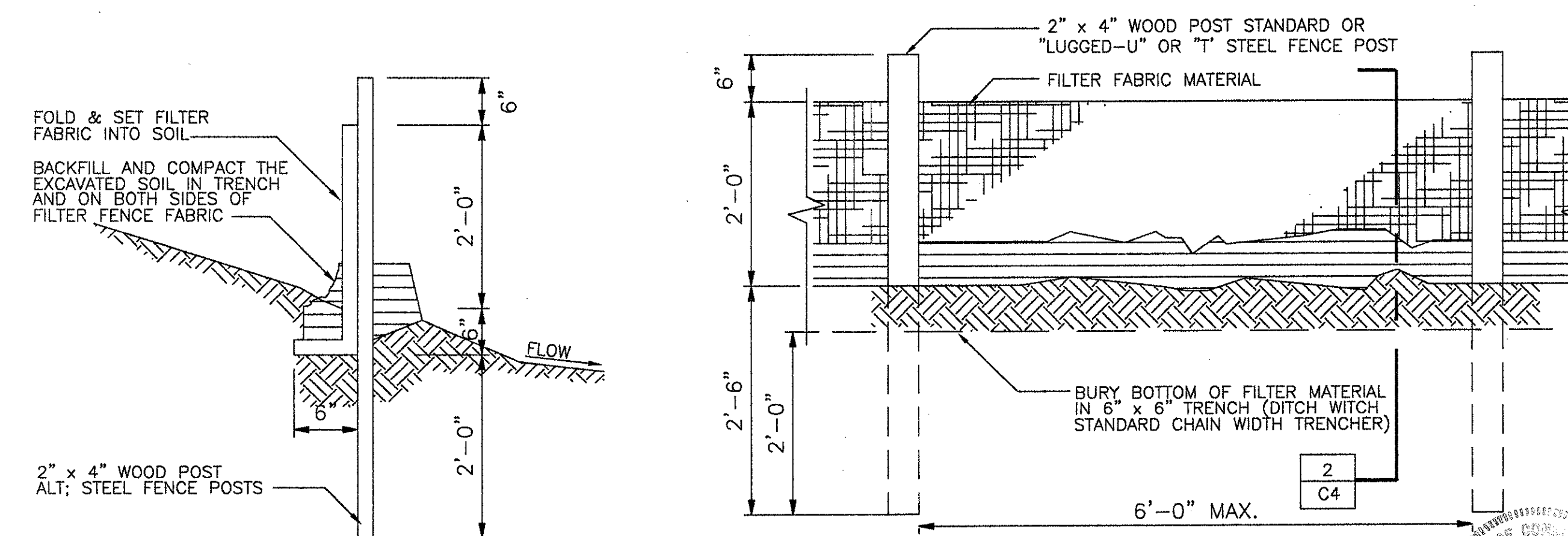
- ALL EXCAVATIONS ON WHICH CONCRETE IS TO BE PLACED SHALL BE SUBSTANTIALLY HORIZONTAL ON UNDISTURBED AND UNFROZEN SOIL AND BE FREE FROM LOOSE MATERIAL AND EXCESS GROUNDWATER. DEWATERING FOR EXCESS GROUNDWATER SHALL BE PROVIDED IF REQUIRED.
- CONCRETE FOUNDATIONS SHALL NOT BE PLACED ON ORGANIC MATERIAL. IF SOUND SOIL IS NOT REACHED AT THE DESIGNATED EXCAVATION DEPTH, THE UNSATISFACTORY SOIL SHALL BE EXCAVATED TO ITS FULL DEPTH AND EITHER BE REPLACED WITH MECHANICALLY COMPACTED GRANULAR MATERIAL OR THE EXCAVATION BE FILLED WITH CONCRETE OF THE SAME QUALITY SPECIFIED FOR THE FOUNDATION.
- ANY EXCAVATION OVER THE REQUIRED DEPTH SHALL BE FILLED WITH EITHER MECHANICALLY COMPACTED GRANULAR MATERIAL OR CONCRETE OF THE SAME QUALITY SPECIFIED FOR THE FOUNDATION. CRUSHED STONE MAY BE USED TO STABILIZE THE BOTTOM OF THE EXCAVATION. STONE, IF USED, SHALL NOT BE USED AS COMPILING CONCRETE THICKNESS.
- AFTER COMPLETION OF THE FOUNDATION AND OTHER CONSTRUCTION BELOW GRADE, AND BEFORE BACKFILLING, ALL EXCAVATIONS SHALL BE CLEAN OF UNSUITABLE MATERIAL SUCH AS VEGETATION, TRASH, DEBRIS, AND SO FORTH.
- BACKFILLING SHALL:
 - USE APPROVED MATERIALS CONSISTING OF EARTH, LOAM, SANDY CLAY, SAND AND GRAVEL, OR SOFT SHALE;
 - BE FREE FROM CLODS OR STONES OVER 2-1/2" MAXIMUM DIMENSIONS
 - BE PLACED IN 6" LAYERS AND COMPACTED TO 95% STANDARD PROCTOR EXCEPT IN GRASSED/LANDSCAPED AREAS, WHERE 90% STANDARD PROCTOR IS REQUIRED.
- FILL PREPARATION: REMOVE ALL VEGETATION, TOPSOIL, DEBRIS, WET AND UNSATISFACTORY SOIL MATERIALS, OBSTRUCTIONS, AND DELETERIOUS MATERIALS FROM GROUND SURFACE PRIOR TO PLACING FILLS. PLOW, STRIP, OR BREAK UP SLOPED SURFACES STEEPER THAN 1 VERTICAL TO 4 HORIZONTAL SO FILL MATERIAL WILL BOND WITH EXISTING SURFACE. WHEN SUBGRADE OR EXISTING GROUND SURFACE TO RECEIVE FILL HAS A DENSITY LESS THAN THAT REQUIRED FOR FILL, BREAK UP GROUND SURFACE TO DEPTH REQUIRED, PULVERIZE, MOISTURE-CONDITION OR AERATE SOIL AND RECOMPACT TO REQUIRED DENSITY.
- PROTECT EXISTING GRAVEL SURFACING AND SUBGRADE IN AREAS WHERE EQUIPMENT LOADS WILL OPERATE. USE PLANKING OR OTHER SUITABLE MATERIALS DESIGNED TO SPREAD EQUIPMENT LOADS. REPAIR DAMAGE TO EXISTING GRAVEL SURFACING OR SUBGRADE WHERE SUCH DAMAGE IS DUE TO THE CONTRACTOR'S OPERATIONS. DAMAGED GRAVEL SURFACING SHALL BE RESTORED TO MATCH THE ADJACENT UNDAMAGED GRAVEL SURFACING AND SHALL BE OF THE SAME THICKNESS.
- REPLACE EXISTING GRAVEL SURFACING ON AREAS FROM WHICH GRAVEL SURFACING IS REMOVED DURING CONSTRUCTION OPERATIONS. GRAVEL SURFACING SHALL BE REPLACED TO MATCH EXISTING ADJACENT GRAVEL SURFACING AND SHALL BE OF THE SAME THICKNESS. SURFACES OF GRAVEL SURFACING SHALL BE FREE FROM CORRUGATIONS AND WAVES. EXISTING GRAVEL SURFACING MAY BE EXCAVATED SEPARATELY AND REUSED IF INJURIOUS AMOUNTS OF EARTH, ORGANIC MATTER, OR OTHER DELETERIOUS MATERIALS ARE REMOVED PRIOR TO REUSE. FURNISH ALL ADDITIONAL GRAVEL RESURFACING MATERIAL AS REQUIRED. BEFORE GRAVEL SURFACING IS REPLACED, SUBGRADE SHALL BE GRADED TO CONFORM TO REQUIRED SUBGRADE ELEVATIONS, AND LOOSE OR DISTURBED MATERIALS SHALL BE THOROUGHLY COMPACTED. DEPRESSIONS IN THE SUBGRADE SHALL BE FILLED AND COMPACTED WITH APPROVED SELECTED MATERIAL. GRAVEL SURFACING MATERIAL MAY BE USED FOR FILLING DEPRESSIONS IN THE SUBGRADE, SUBJECT TO ENGINEER'S APPROVAL.
- DAMAGE TO EXISTING STRUCTURES AND UTILITIES RESULTING FROM CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED / REPLACED TO OWNER'S SATISFACTION AT CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL COORDINATE THE CONSTRUCTION SCHEDULE WITH PROPERTY OWNER SO AS TO AVOID INTERRUPTIONS TO PROPERTY OWNER'S OPERATIONS.
- ENSURE POSITIVE DRAINAGE DURING AND AFTER COMPLETION OF CONSTRUCTION.
- ALL CUT AND FILL SLOPES SHALL BE 3 : 1 MAXIMUM, UNLESS OTHERWISE NOTED.
- REMOVE ALL ORGANICS, ROCKS GREATER THAN 3", UNUSED FILL AND OTHER DEBRIS TO AN AREA OFF SITE IN A LEGAL MANNER.

EROSION & SEDIMENT CONTROL NARRATIVE:

- ADDITIONAL EROSION CONTROL MEASURES WILL BE EMPLOYED WHERE DETERMINED NECESSARY BY ACTUAL SITE CONDITIONS.
- PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITY, THE LIMITS OF LAND DISTURBANCE SHALL BE CLEARLY AND ACCURATELY DEMARCATED WITH STAKES, RIBBONS, OR OTHER APPROPRIATE MEANS.
- THE CONSTRUCTION OF THE SITE WILL INITIATE WITH THE INSTALLATION OF EROSION CONTROL MEASURES SUFFICIENT TO CONTROL SEDIMENT DEPOSITS AND EROSION. CONTRACTOR SHALL CALL LOCAL MUNICIPAL REPRESENTATIVE FOR AN INSPECTION OF SOIL EROSION CONTROL MEASURES PRIOR TO BEGINNING GRADING ACTIVITY. ALL SEDIMENT CONTROL WILL BE MAINTAINED UNTIL ALL UPSTREAM GROUND WITHIN THE CONSTRUCTION AREA HAS BEEN COMPLETELY STABILIZED. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM THAT SHOWN ON THE PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE FINAL PROPOSED DRAINAGE PATTERNS. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
- EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR ELECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
- THE CONTRACTOR SHALL REMOVE ACCUMULATED SILT WHEN THE SILT IS WITHIN 12" OF THE TOP OF THE SILT FENCE.
- FAILURE TO INSTALL, OPERATE OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB SITE UNTIL SUCH MEASURES ARE CORRECTED.
- SILT BARRIERS TO BE PLACED AT DOWNSTREAM TOE OF ALL CUT AND FILL SLOPES.
- ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 7 DAYS SHALL BE STABILIZED WITH SEEDING.
- SEEDING: SEEDBED PREPARATION: AREA TO BE SEEDDED SHALL BE LOOSE AND FRAGILE TO A DEPTH OF AT LEAST 3". THE TOP LAYER SHALL BE LOOSENEED BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING OCCURS. IN LIEU OF SOIL TEST RESULTS, APPLY 50 LBS. OF DOLOMITIC LIMESTONE AND 25 LBS. OF 10-10-10 FERTILIZER PER 1,000 SQUARE FEET. HARROW OR DISK LIME AND FERTILIZER INTO THE SOIL TO A DEPTH OF AT LEAST 3" ON SLOPES FLATTER THAN 3:1. SEEDING: APPLY 50 LBS. PER ACRE OF COMMON BERMUDA & WINTER RYE. APPLY SEED UNIFORMLY WITH A CYCLONE SEEDING DRILL, CULPACKER SEEDER OR HYDROSEEDER (SLURRY INCLUDES SEEDS AND FERTILIZER RECOMMENDED ON STEEP SLOPES ONLY) ON A MOIST, FIRM SEEDBED. MAXIMUM SEED DEPTH SHOULD BE 1/2" IN CLAY SOILS AND 1/2" IN SANDY SOILS WHEN USING OTHER THAN THE HYDROSEEDER METHOD. IRRIGATE UNTIL VEGETATION IS FIRMLY ESTABLISHED IF SOIL MOISTURE IS NOT SUFFICIENT TO SUPPORT ADEQUATE GROWTH.
- CONTRACTOR SHALL REMOVE ALL EROSION & SEDIMENT CONTROL MEASURES AFTER COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER.
- THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES.
- ALL CUT AND FILL SLOPES MUST BE SURFACED ROUGHENED AND VEGETATED WITHIN SEVEN (7) DAYS OF THEIR CONSTRUCTION.
- ALL FILL SLOPES WILL HAVE SILT FENCE AT TOE OF SLOPES.
- CONTROL MEASURES WILL BE CHECKED DAILY AND ANY DEFICIENCIES WILL BE CORRECTED BY THE END OF EACH DAY. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY AFTER ON-SITE INSPECTION BY THE ISSUING AUTHORITY.
- THE ONLY MATERIAL TO BE BURIED ON-SITE IS VEGETATIVE MATERIAL. CONSTRUCTION WASTE MAY NEITHER BE BURNED NOR BURIED AND MUST BE TAKEN TO A STATE APPROVED LANDFILL.

ACTIVITY SCHEDULE				
	WEEK 1	WEEK 2	WEEK 3	WEEK 4
PROJECT CONSTRUCTION				
CLEARING, GRUBBING, AND GRADING				
MAINTAINING EROSION CONTROL MEASURES				
GRASSING				
REMOVING EROSION CONTROL MEASURES				
FINAL LANDSCAPING, GRASSING				

THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES SHALL TAKE PLACE PRIOR TO OR CONCURRENT WITH LAND DISTURBING ACTIVITIES.



NOTE: FABRIC SHALL RETAIN 85% OF SOIL, BASED ON SIEVE ANALYSIS, BUT NOT FINER THAN OPENING SIZE 70.

ALTERNATE: USE PREMANUFACTURED SILT FENCE.

2 SILT FENCE SECTION
C4 ... TO SCALE

1 SILT FENCE ELEVATION
C4 NOT TO SCALE

Gesick & Associates P.C.

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DATE: 08/03/98 DRAWN BY: RJG

SCALE: AS SHOWN

REVISIONS

#	DATE	DESCRIPTION	INITIAL
1	08/16/98	MISC. DETAILS	RJG

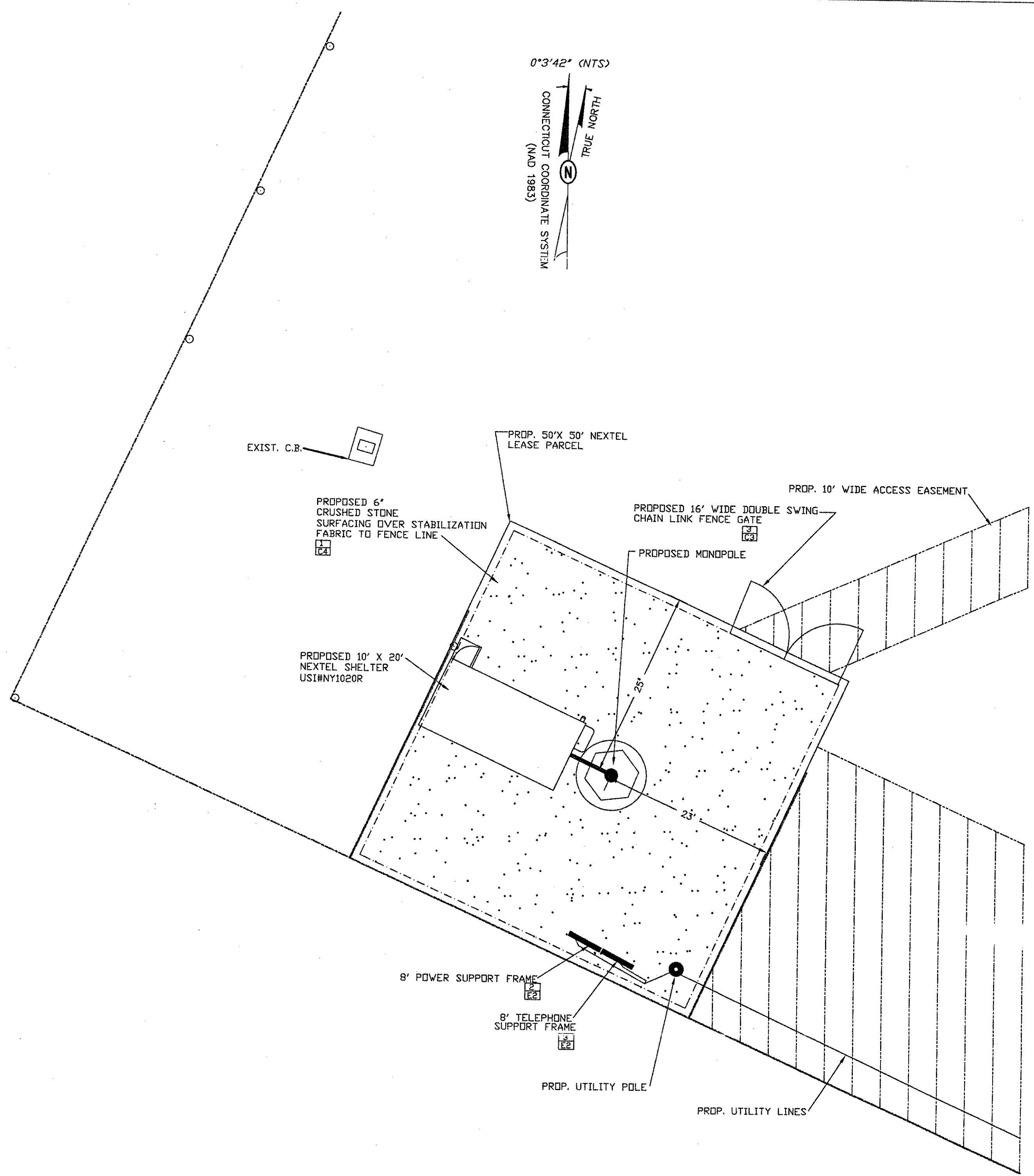
NEXTEL COMMUNICATIONS OF THE MID-ATLANTIC, INC.
 100 CORPORATE PLACE
 ROCKY HILL, CONNECTICUT 06067
 (860) 513-5400 FAX (860) 513-5444

NEXTEL COMMUNICATIONS SITE:
 #0767 HARTFORD NORTH
 305 WEST SERVICE ROAD
 HARTFORD, CONNECTICUT

G&A PROJECT #98-082B

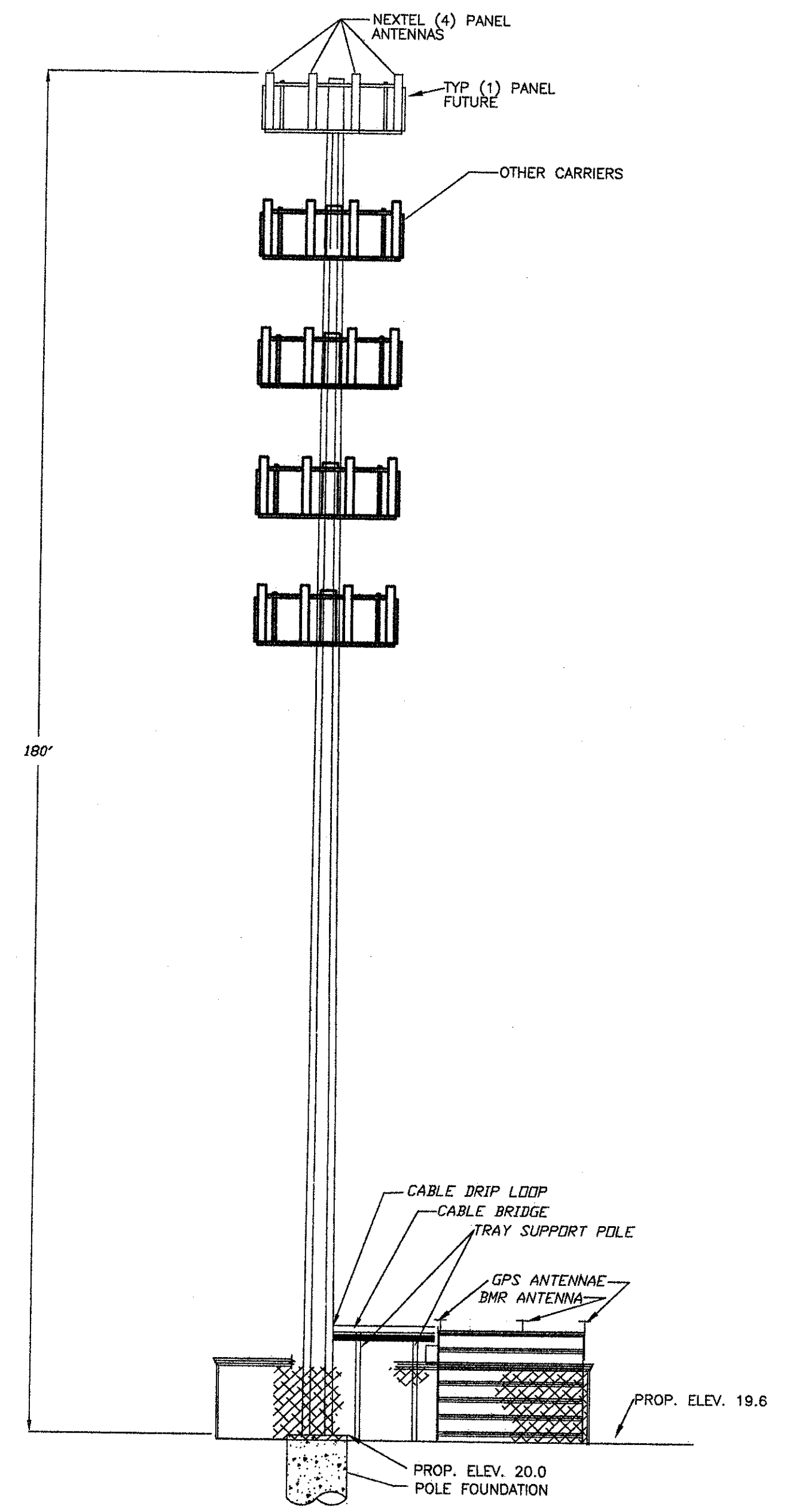
Sheet title:
General Notes & Erosion Control Narrative

DRAWING NUMBER: **C-4**



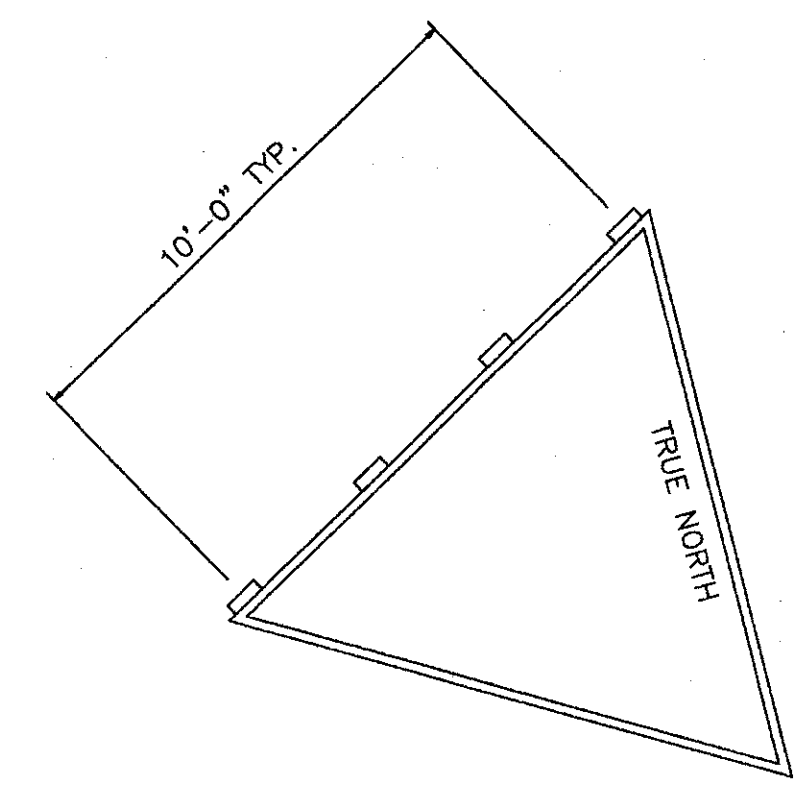
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SITE LAYOUT



1 MONOPOLE TOWER DETAIL
2 NOT TO SCALE

ANTENNA DETAILS



PLAN ANTENNA PLAN

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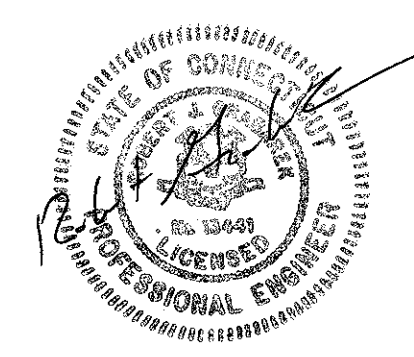
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1.	08/16/98	MISC. DETAILS	RJG

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G&A PROJECT #98-082B



Sheet title:
Site Plan & Elevations

DATE: 08/03/98 DRAWN BY: RJG
 SCALE: AS SHOWN

REVISIONS		
#	DATE	DESCRIPTION

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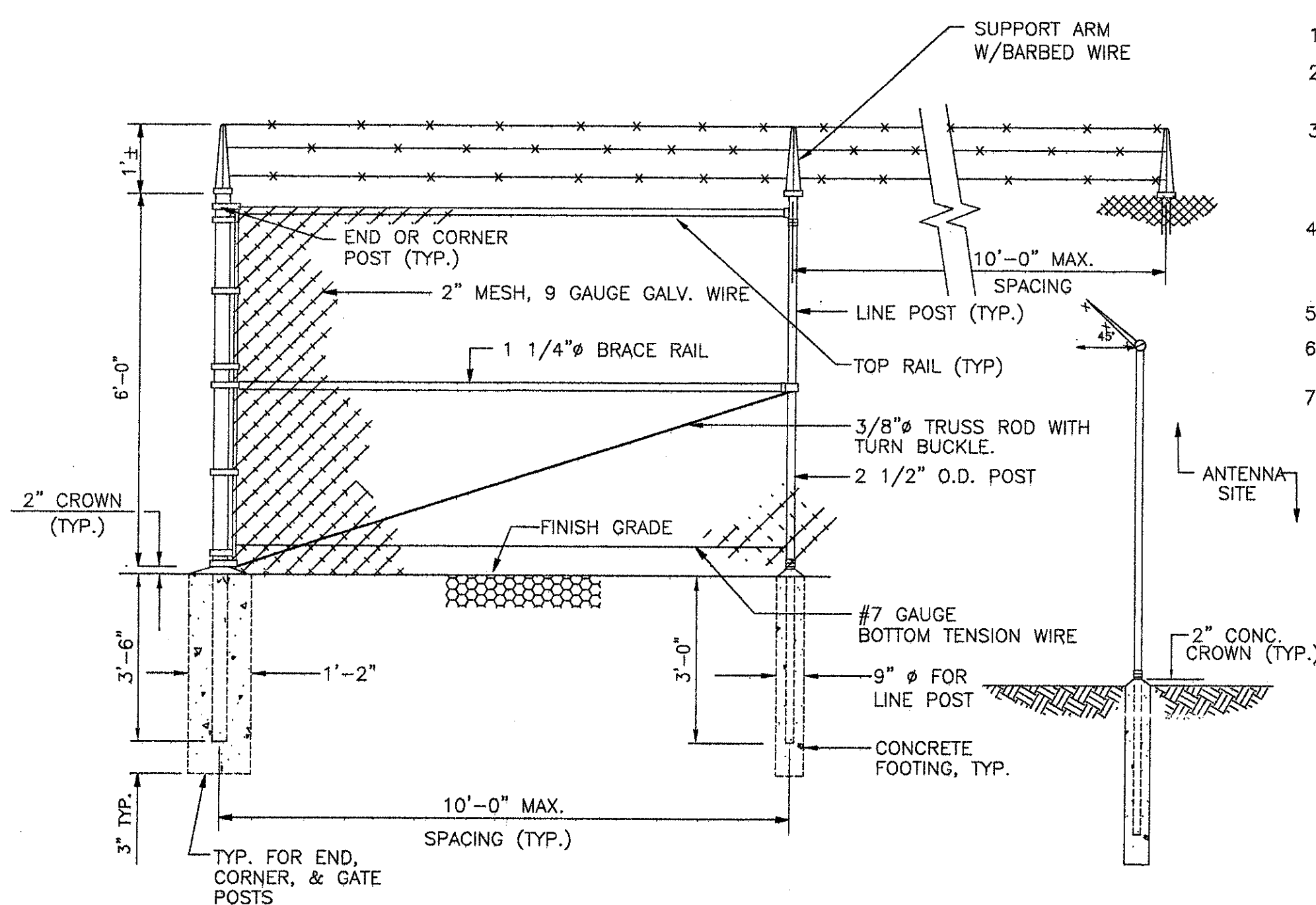
NEXTEL COMMUNICATIONS SITE:
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Sheet title:
 SITE DETAILS

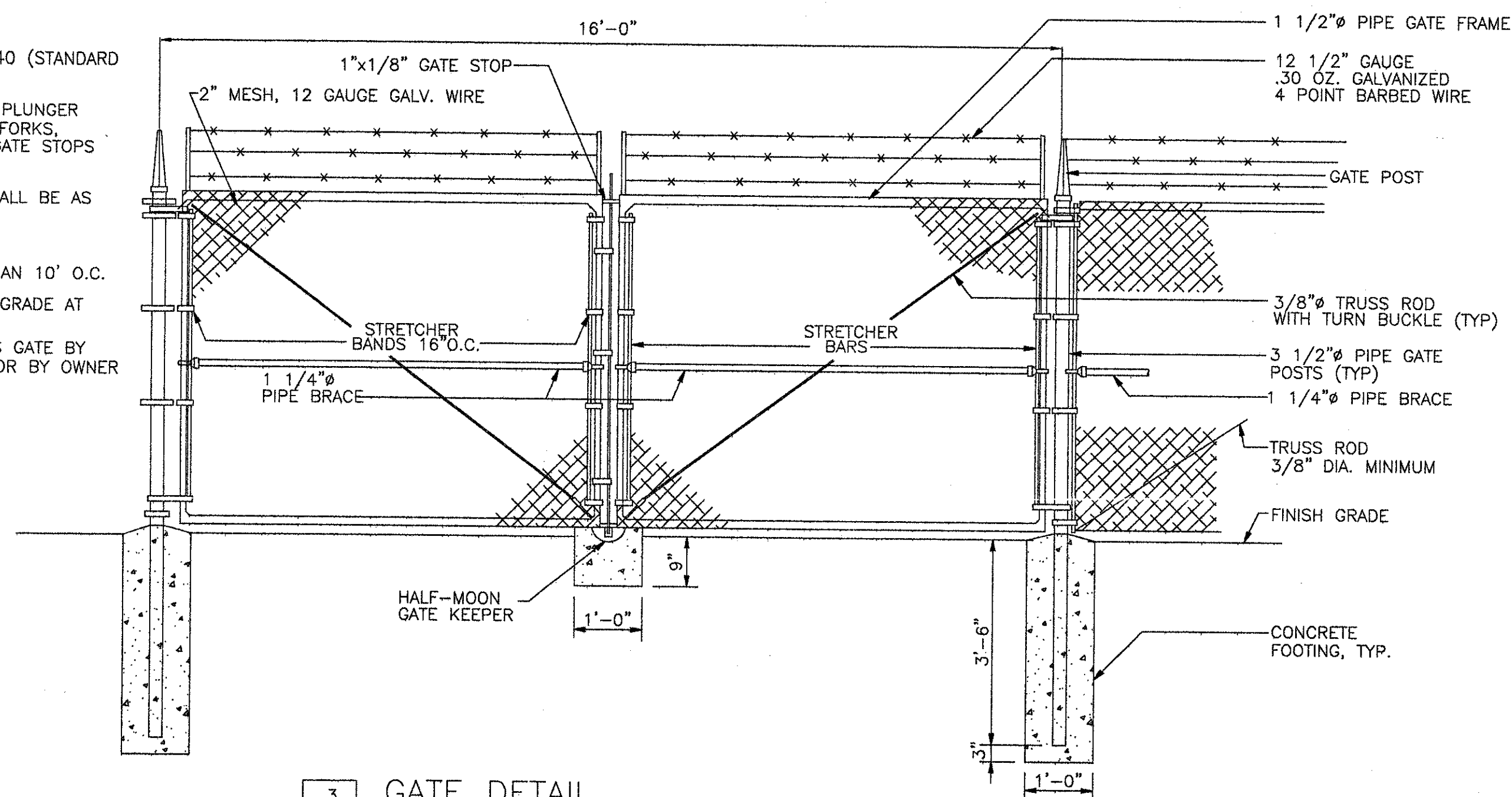
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FENCE NOTES:

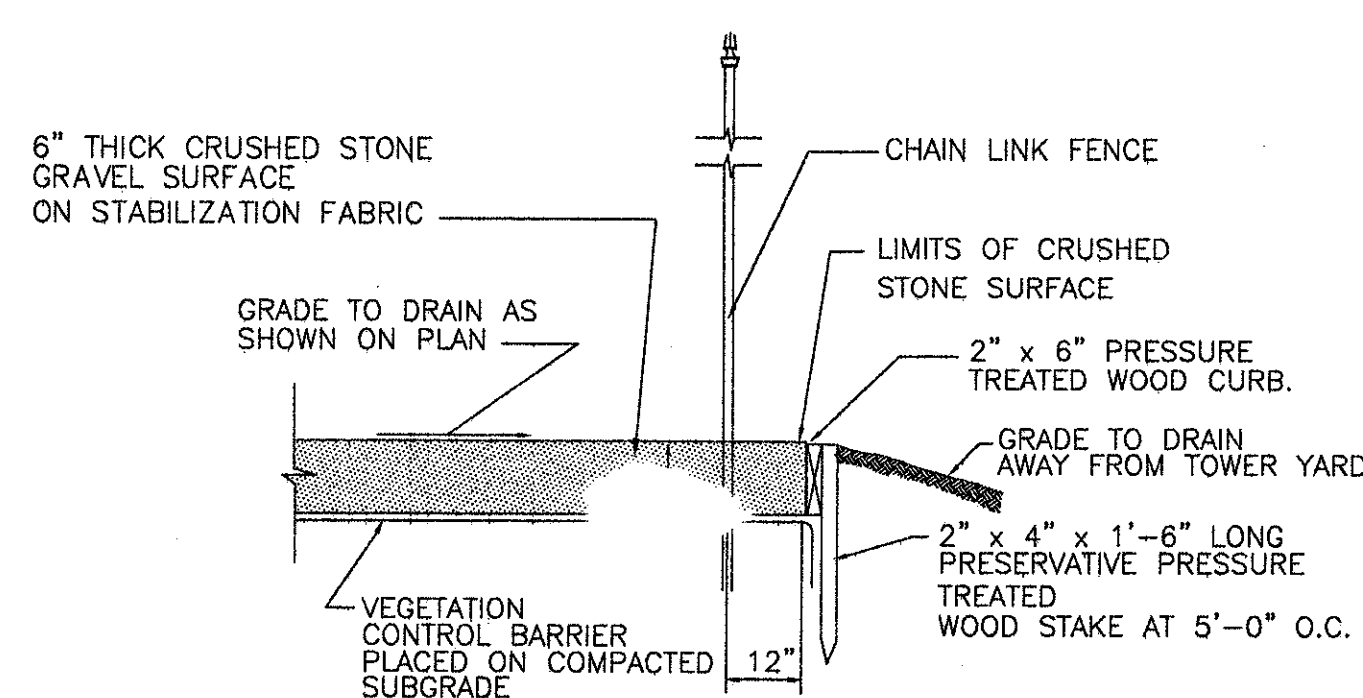
- FENCING MATERIALS SHALL BE OF GALVANIZED STEEL.
- POST, BRACES AND GATE FRAMES SHALL BE SCHEDULE 40 (STANDARD WEIGHT) PIPE. SIZES SPECIFIED ARE NOMINAL DIAMETER.
- DOUBLE SWING GATE SHALL BE PROVIDED WITH TUBULAR PLUNGER BAR, 1 LOCK KEEPER, 1 LOCK KEEPER GUIDE, 2 LATCH FORKS, 2 FORK CATCHES, 1 CATCH FOR PLUNGER BAR, AND 2 GATE STOPS LOCATED AS DIRECTED BY THE ENGINEER.
- POSTS, CAPS AND OTHER NECESSARY FENCE FITTINGS SHALL BE AS MANUFACTURED BY THE FENCE MANUFACTURER OR EQUAL HINGES SHALL BE OF GALVANIZED STEEL.
- POSTS SHALL BE SPACED EQUIDISTANT BUT NOT MORE THAN 10' O.C.
- BOTTOM OF FENCE SHALL BE NO MORE THAN 3" ABOVE GRADE AT ANY SECTION.
- "HARK" MONITORING SYSTEM TO BE INSTALLED AT ACCESS GATE BY CONTRACTOR. SYSTEM SHALL BE SUPPLIED TO CONTRACTOR BY OWNER AND ENERGIZED BY A "HARK" FIELD REPRESENTATIVE.



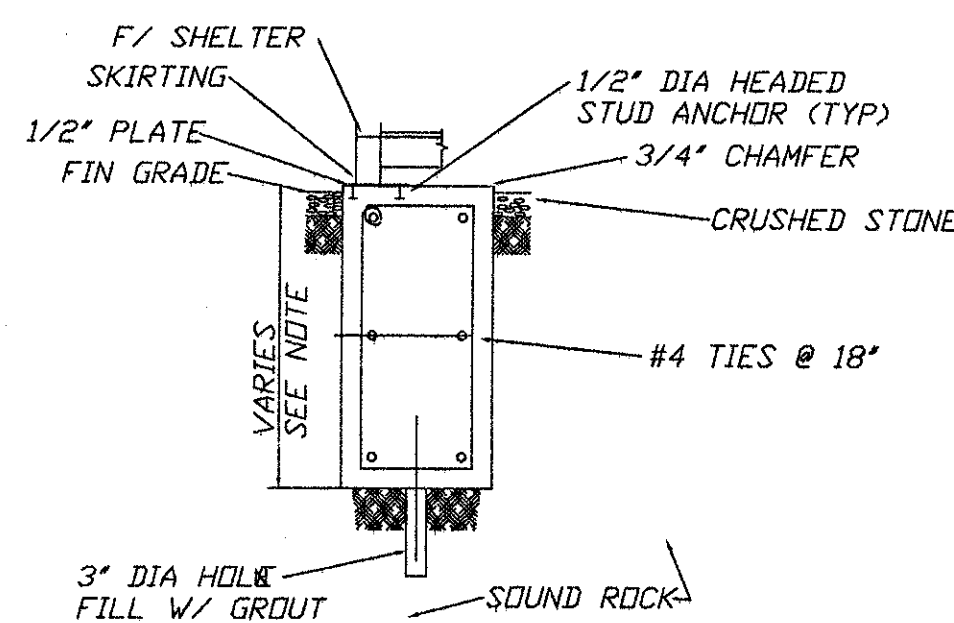
2 FENCE DETAIL
 C3 NOT TO SCALE



3 GATE DETAIL
 C3 NOT TO SCALE

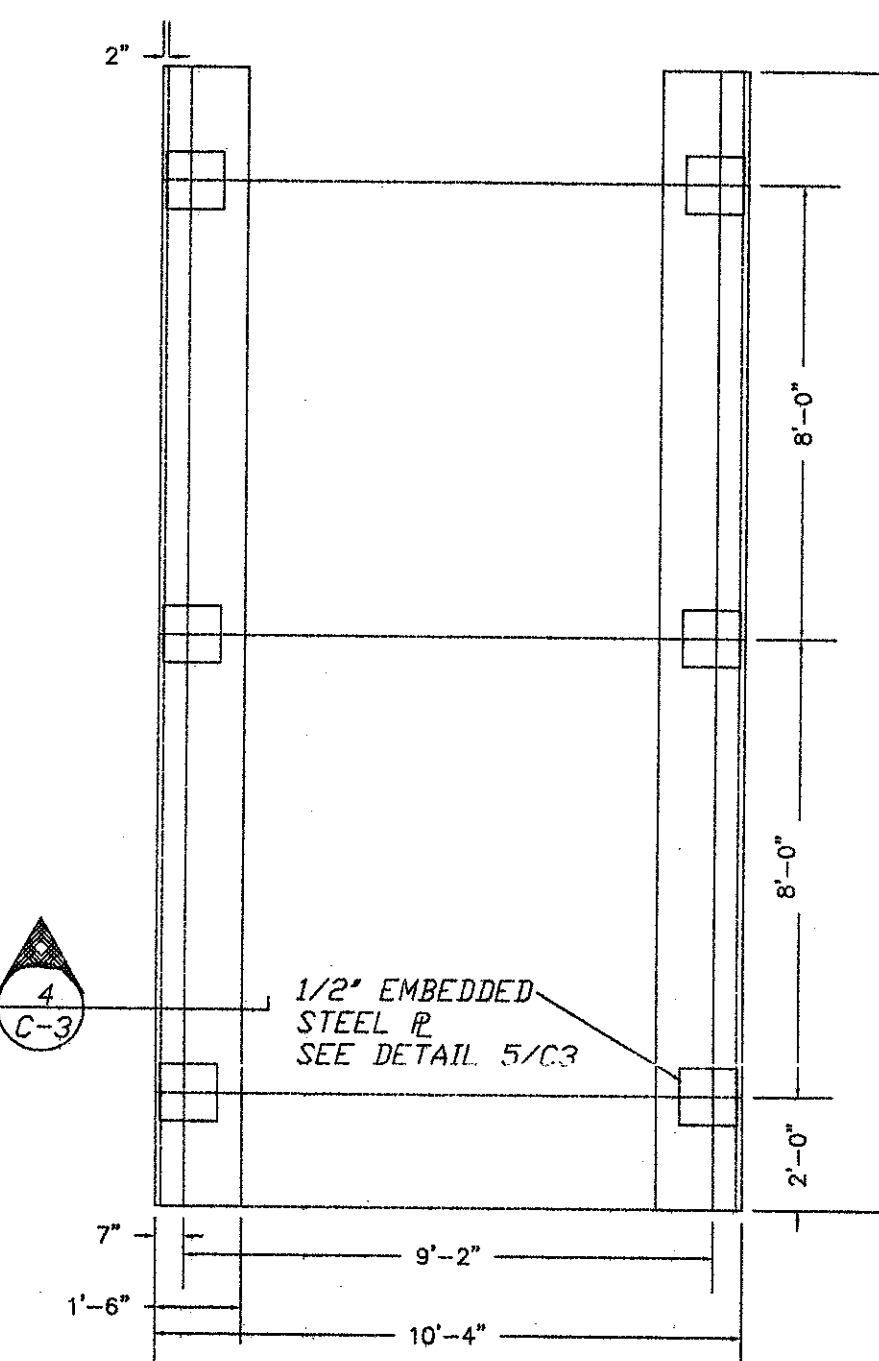


1 SECTION THROUGH TOWER YARD
 C3 NOT TO SCALE

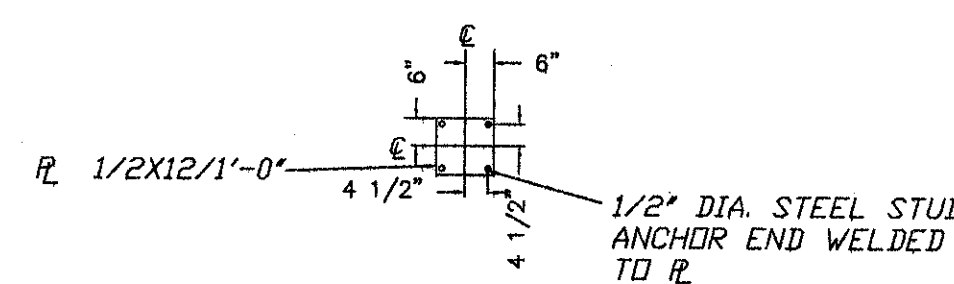


NOTE:
 IF ROCK IS NOT ENCOUNTERED, THE GRADE BEAM SHALL EXTEND A MINIMUM OF 4'-0" DEEP

5 SECTION
 C3 NOT TO SCALE



4 FOUNDATION PLAN
 C3 NOT TO SCALE



6 DETAIL
 C3 NOT TO SCALE

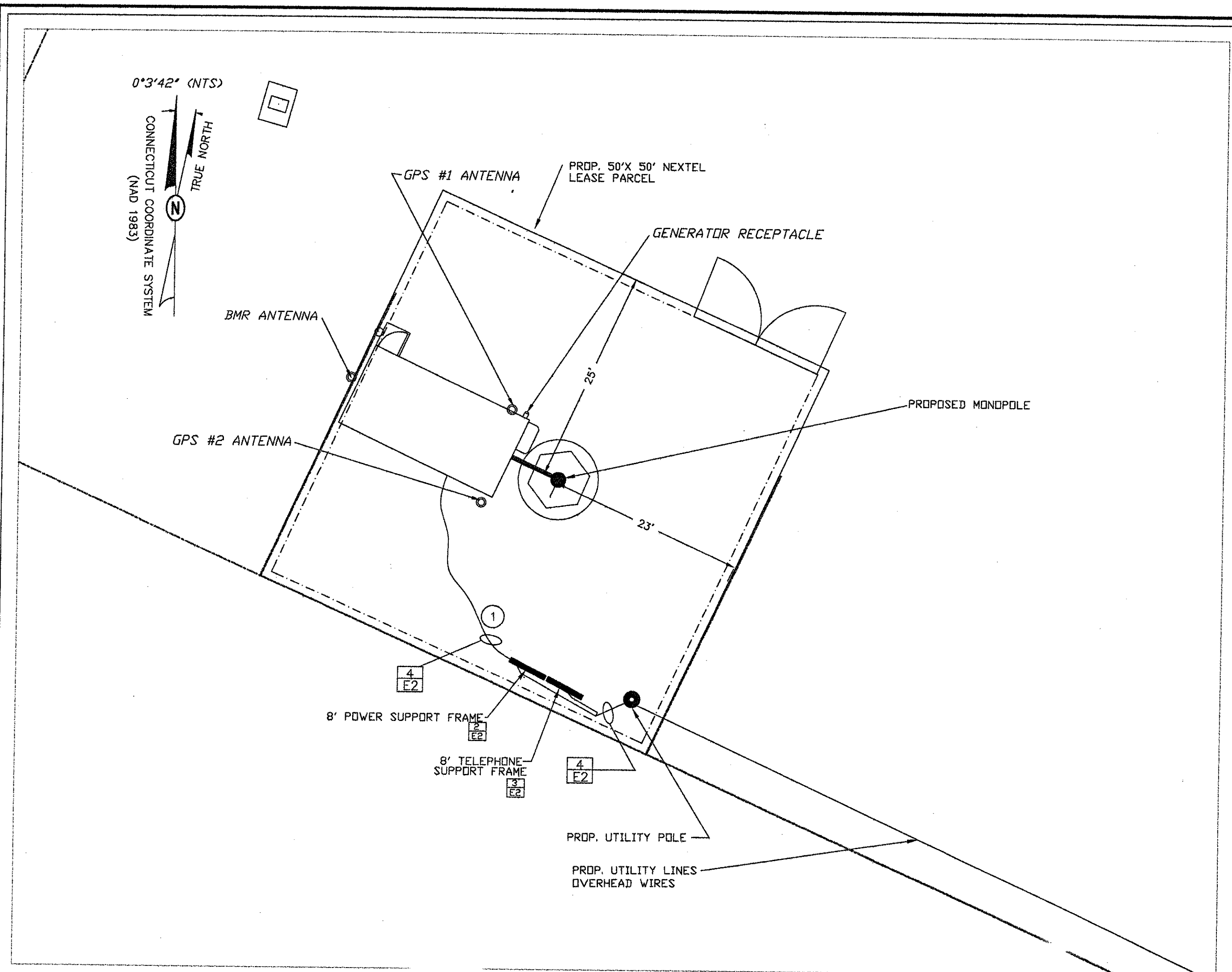


G&A PROJECT #98-082B

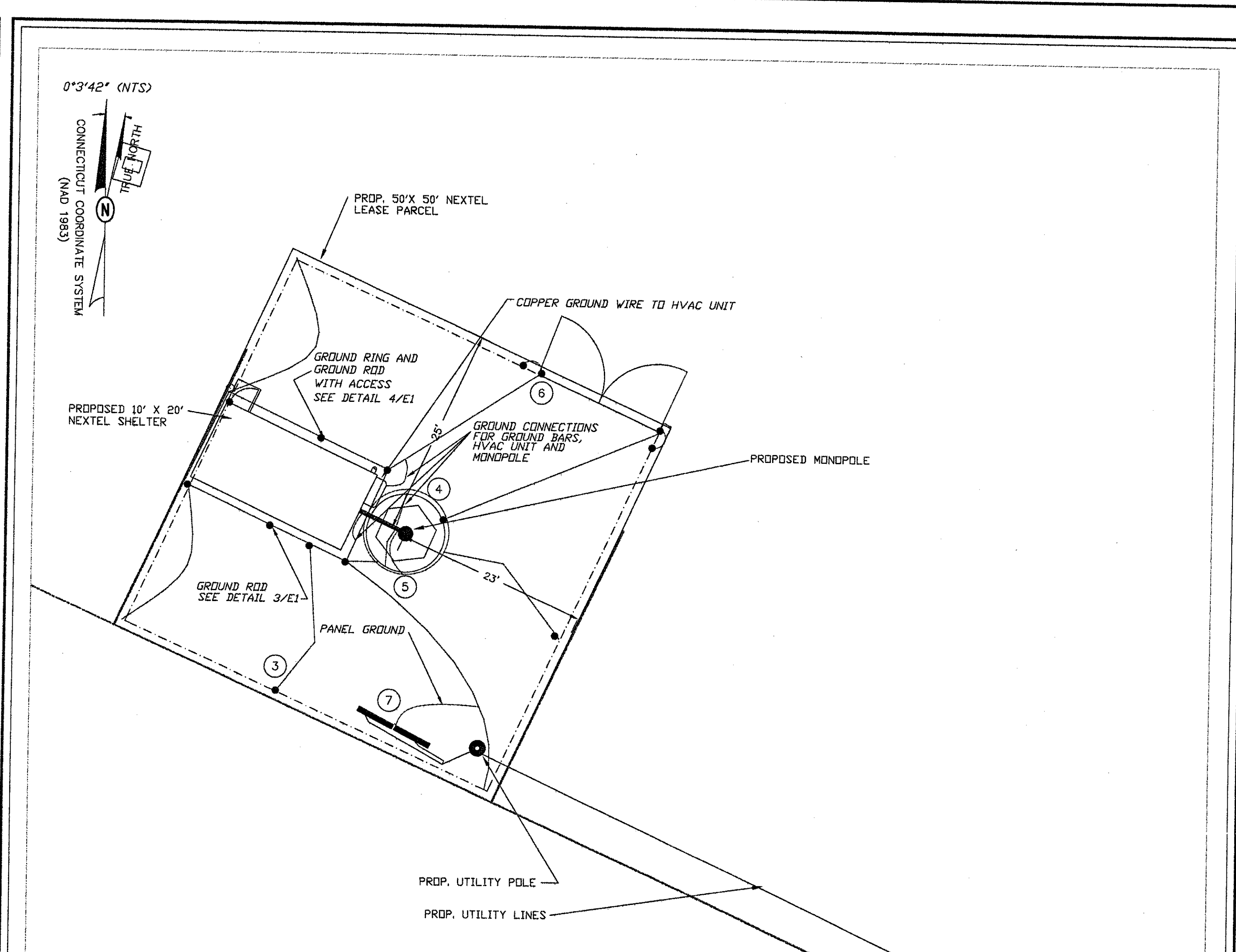
DATE: 08/03/98 DRAWN BY: RJG
 SCALE: AS SHOWN

#	DATE	DESCRIPTION	INITIAL
1	8/18/98	LEASE MOVED 50'	RJG

NEXTEL COMMUNICATIONS OF THE MID-ATLANTIC, INC.
 100 CORPORATE PLACE
 ROCKY HILL, CONNECTICUT 06067
 (860) 513-5400 FAX (860) 513 5444



1 ELECTRICAL SITE PLAN
 E1 1"=10'

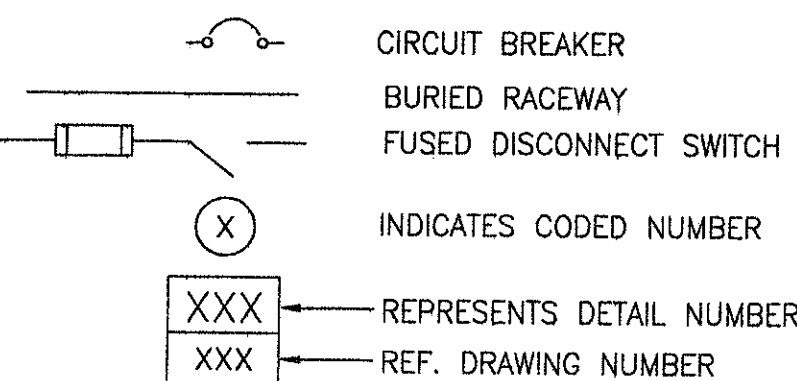


2 SITE GROUNDING PLAN
 E1 SCALE: 1"= 10'

ELECTRICAL SITE PLAN
 CODED DRAWING NOTES:

- ① RUN CONDUIT UNDERGROUND. STUB UP POWER AND TELEPHONE CONDUITS AND CAP AT UTILITY POLE AS DIRECTED BY UTILITY COMPANY.
- ② RECEPTACLE MOUNTED TO TELEPHONE BACKBOARD.
- ④ EXTEND AND CONNECT TO PANELBOARD. REFER TO 1/E2.

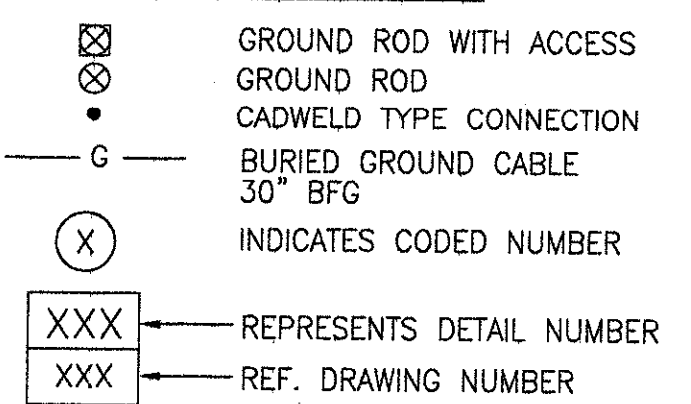
ELECTRICAL SYMBOLS



SITE GROUNDING PLAN
 CODED DRAWING NOTES:

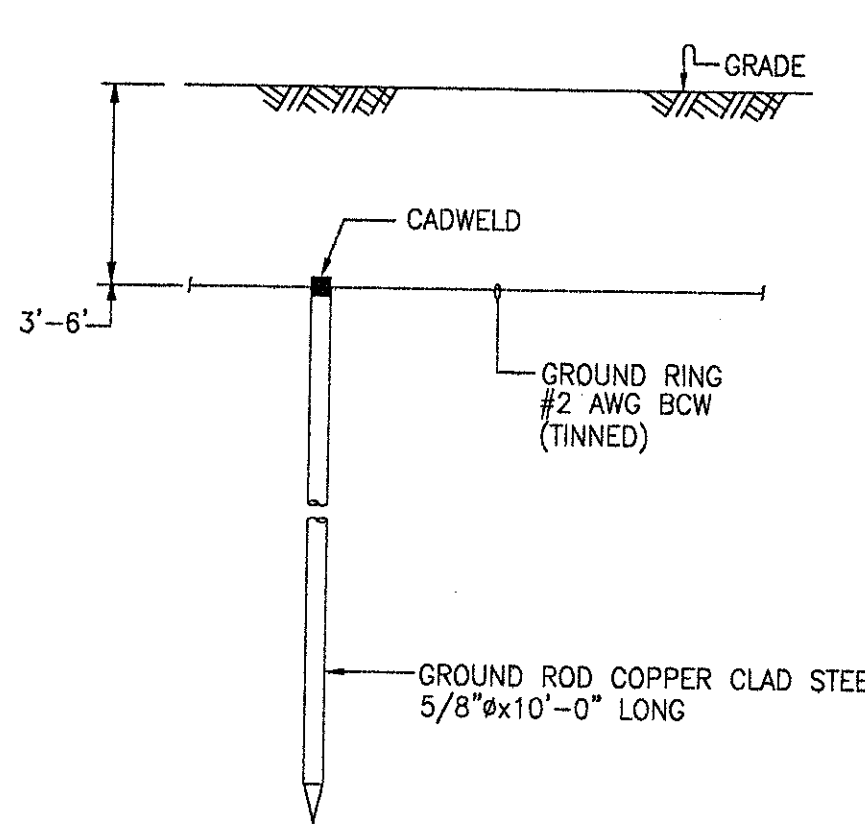
- ① GROUND RING (MIN. 1'-6" FROM OUTSIDE EDGE OF TOWER FOUNDATION)
- ② CONNECT SERVICE DISCONNECTING MEANS TO GROUND ROD.
- ③ CONNECT FENCE TO GROUND RING. TYPICAL 4 PLACES.
- ④ CONNECT TOWER BASE TO GROUND ROD IN TOWER RING (TYP. FOR 3). CADWELD TO TOWER BASE PLATE OR GROUNDING LUG PROVIDED BY TOWER MANUFACTURER. DO NOT CADWELD TO HOLLOW TUBULAR TOWER.
- ⑤ CONNECT MAIN REBAR IN TOWER FOUNDATION TO GROUND RING. PROVIDE JUMPER FROM REBAR TO TOWER STEEL.
- ⑥ CONNECT GATE TO GATE POST (TYP. FOR 2) WITH 4/0 WELDING CABLE THAT HAS BEEN CRIMPED ON EACH END WITH A CAP FOR THE CADWELD PROCESS. LENGTH SHALL ALLOW FULL SWING OF GATE. CONNECT GATE POSTS TO GROUND ROD.
- ⑦ CONNECT EQUIPMENT FRAME TO GROUND RING.

GROUNDING SYMBOLS

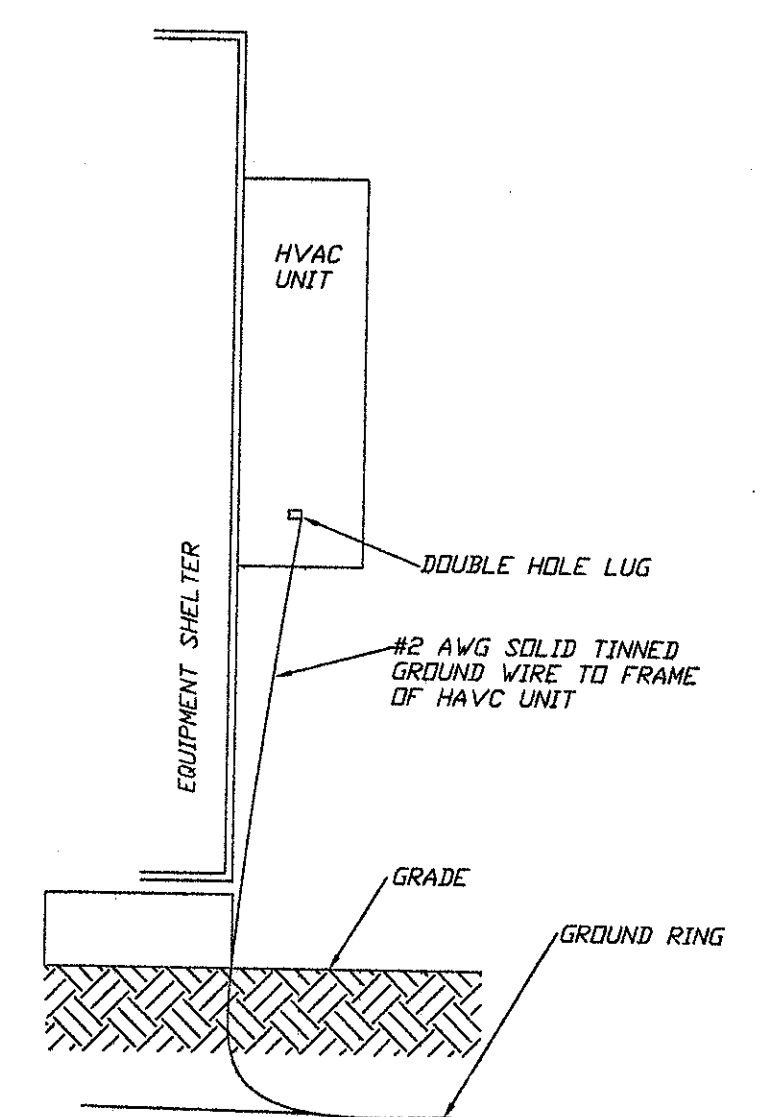


ABBREVIATIONS

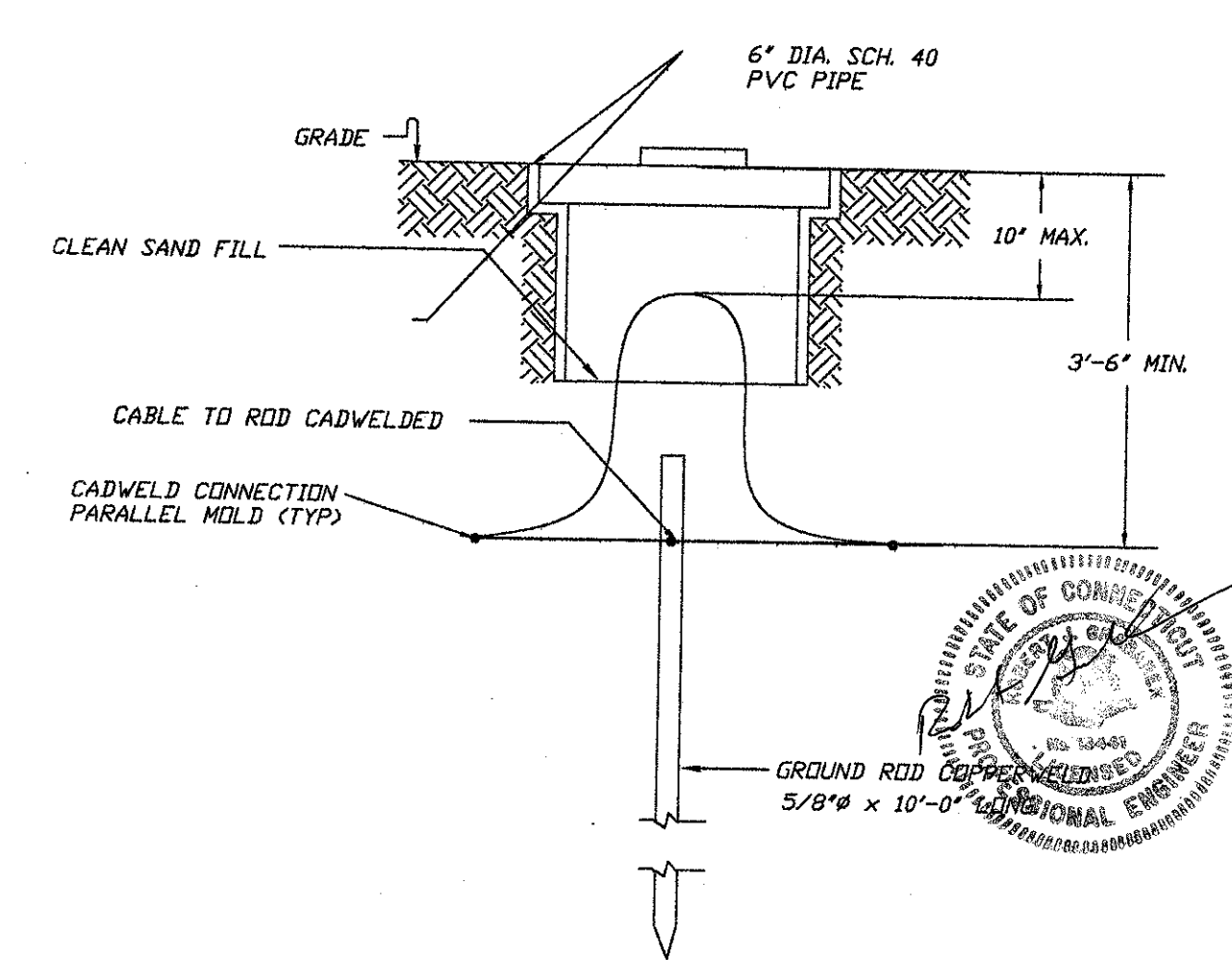
- AWG AMERICAN WIRE GAUGE
- BFG BELOW FINISH GRADE
- C CONDUIT
- CAB CABINET
- DWG DRAWING
- G GROUND
- PVC POLYVINYL CHLORIDE
- RGS RIGID GALVANIZED STEEL
- SS STAINLESS STEEL
- SST SELF SUPPORTING TOWER
- TYP. TYPICAL



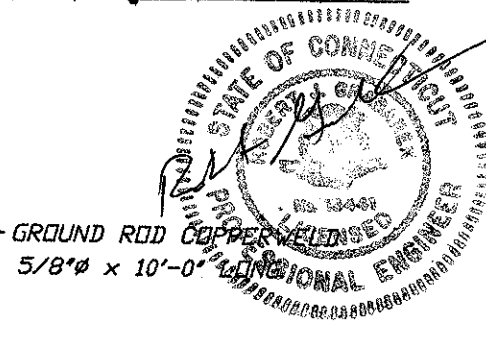
3 COPPER-CLAD STEEL GROUND ROD
 E1 NOT TO SCALE



5 HVAC UNIT GROUND
 E1 NOT TO SCALE



4 GROUND ROD WITH ACCESS
 E1 NOT TO SCALE



NEXTEL COMMUNICATIONS SITE:

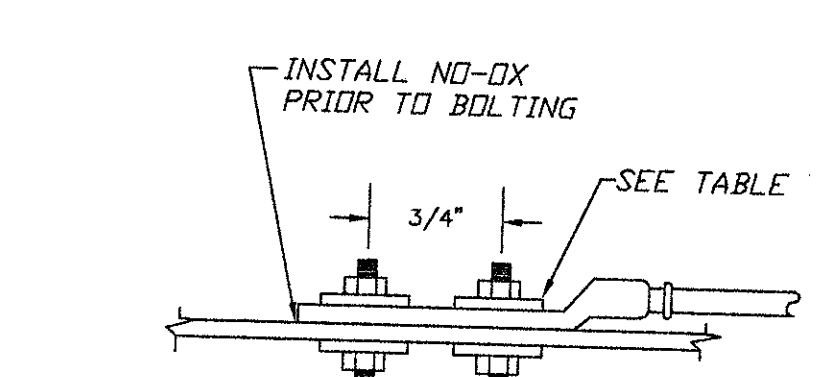
#0767 HARTFORD NORTH
 305 WEST SERVICE ROAD
 HARTFORD, CONNECTICUT

Sheet title:
 Electrical Site & Grounding Plan

GENERAL NOTES

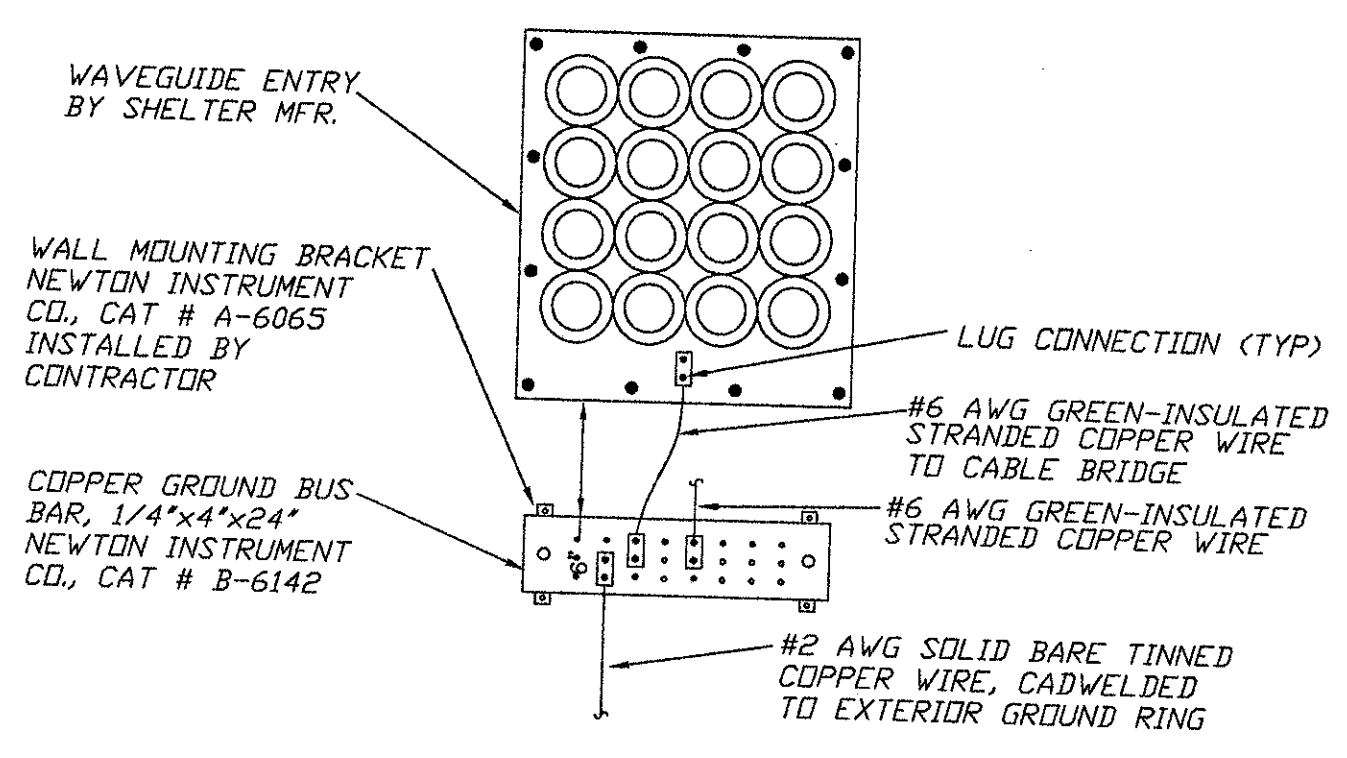
1. INSPECTIONS
 - A. GENERAL: DURING AND UPON COMPLETION OF THE WORK, ARRANGE AND PAY ALL ASSOCIATED INSPECTIONS OF ALL ELECTRICAL WORK INSTALLED UNDER THIS CONTRACT IN ACCORDANCE WITH THE CONDITIONS OF THE CONTRACT. INSTALLATION SHALL COMPLY WITH APPLICABLE LAWS AND ORDINANCES, UTILITY COMPANY REQUIREMENTS, AND THE LATEST EDITION OF NEC, NFC, NEMA, OSHA, SBC, AND UL.
 - B. INSPECTIONS REQUIRED: AS PER THE LAWS AND REGULATIONS OF THE LOCAL AND/OR STATE AGENCIES HAVING JURISDICTION AT THE PROJECT SITE.
 - C. INSPECTION AGENCY: APPROVED BY THE LOCAL AND/OR STATE AGENCIES HAVING JURISDICTION AT THE PROJECT SITE.
 - D. CERTIFICATES: SUBMIT ALL REQUIRED INSPECTION CERTIFICATES.
2. HANGERS AND SUPPORTS
 - A. MATERIALS: ALL HANGERS, SUPPORTS, FASTENERS AND HARDWARE SHALL BE ZINC COATED OR OF EQUIVALENT CORROSION RESISTANCE BY TREATMENT OR INHERENT PROPERTY, AND SHALL BE MANUFACTURED PRODUCTS DESIGNED FOR THE APPLICATION. PRODUCTS FOR OUTDOOR USE SHALL BE HOT DIP GALVANIZED.
 - B. TYPES: HANGERS, STRAPS, RISER SUPPORTS, CLAMPS, U-CHANNEL, THREADED RODS, ETC. AS INDICATED OR REQUIRED.
 - C. INSTALLATION: RIGIDLY SUPPORT AND SECURE ALL MATERIALS, RACEWAY AND EQUIPMENT TO BUILDING STRUCTURE USING HANGERS, SUPPORTS AND FASTENERS SUITABLE FOR THE USE. MATERIALS AND LOADS ENCOUNTERED. PROVIDE ALL NECESSARY HARDWARE. PROVIDE CONDUIT SUPPORTS AT MAXIMUM 5 FT. O.C.
 - D. STRUCTURAL MEMBERS: DO NOT CUT, DRILL, OR WELD ANY STRUCTURAL MEMBER EXCEPT AS SPECIFICALLY APPROVED BY THE ENGINEER.
 - E. MISCELLANEOUS SUPPORTS: PROVIDE ANY ADDITIONAL STRUCTURAL SUPPORT STEEL BRACKETS, ANGLES, FASTENERS AND HARDWARE AS REQUIRED TO ADEQUATELY SUPPORT ALL ELECTRICAL MATERIALS AND EQUIPMENT.
 - F. ONE HOLE STRAPS SHALL NOT BE USED FOR CONDUITS LARGER THAN 3/4 INCH.
3. ENCLOSURES
 - A. NEMA 3R
4. HOLES, SLEEVES AND OPENINGS
 - A. GENERAL: PROVIDE ALL HOLES, SLEEVES, AND OPENINGS REQUIRED FOR THE COMPLETION OF WORK AND RESTORE ALL SURFACES DAMAGED TO MATCH SURROUNDING SURFACES.
 - B. CONDUIT PENETRATIONS: SIZE CORE DRILLED HOLES SO THAT AN ANNULAR SPACE OF NOT LESS THAN 1/4" AND NOT MORE THAN 1" IS LEFT AROUND THE CONDUIT, PIPE, ETC. WHEN OPENINGS ARE CUT IN LIEU OF CORE DRILLED. PROVIDE SLEEVE IN ROUGH OPENING. SIZE SLEEVES TO PROVIDE AN ANNULAR SPACE OF NOT LESS THAN 1/4" AND NOT MORE THAN 1" AROUND THE CONDUIT, PIPE, ETC. PATCH AROUND SLEEVE TO MATCH SURROUNDING SURFACE.
5. CUTTING AND PATCHING
 - A. GENERAL: PROVIDE ALL CUTTING, DRILLING, FITTING AND PATCHING NECESSARY FOR ACCOMPLISHING THE WORK. THIS INCLUDES ANY AND ALL WORK NECESSARY TO UNCOVER WORK TO PROVIDE FOR THE INSTALLATION OF ALL TIMED WORK, REMOVE AND REPLACE DEFECTIVE WORK AND WORK NOT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
 - B. REPAIRS: REPAIR ANY AND ALL DAMAGE TO WORK OF OTHER TRADES CAUSED BY CUTTING AND PATCHING OPERATIONS, USING SKILLED MECHANICS OF THE TRADES INVOLVED.
6. RACEWAY SYSTEMS
 - A. ALL ABOVE GRADE CONDUIT AND ALL CONDUIT ELBOWS SHALL BE RIGID GALVANIZED STEEL UNLESS NOTED OTHERWISE. ALL BELOW GRADE CONDUIT (EXCEPT ELBOWS) SHALL BE SCHEDULE 40 PVC. TOWER LIGHT CIRCUIT FROM CONTROLLER TO LIGHTS SHALL BE SCHEDULE 40 PVC. RACEWAY BURIAL DEPTH SHALL BE AS PER NEC. USE CLEAN SAND BACKFILL FOR ALL BURIED RACEWAY SYSTEMS.
7. CONDUCTORS

USE 98% CONDUCTIVITY COPPER WITH TYPE XHHW-2 INSULATION, 600 VOLT, COLOR CODED. USE SOLID CONDUCTORS FOR WIRE UP TO AND INCLUDING NO. 8 AWG, STRANDED CONDUCTORS FOR WIRE LARGER THAN NO. 8. USE PRESSURE-TYPE INSULATED TWIST-ON CONNECTORS FOR NO. 10 AWG AND SMALLER, SOLDERLESS MECHANICAL TERMINAL LUGS FOR NO. 8 AWG AND LARGER.
8. ELECTRIC SERVICE
 - A. GENERAL: COMPLY WITH AND COORDINATE ALL REQUIREMENTS OF THE UTILITY COMPANY.
 - B. SHORT CIRCUIT RATINGS: PROVIDE EQUIPMENT WITH HIGHER FAULT CURRENT RATINGS AS NEEDED TO MATCH UTILITY COMPANY AVAILABLE FAULT CURRENT.
 - C. PROVIDE PULL BOXES AS REQUIRED BY THE UTILITY COMPANY.
9. TELEPHONE SERVICE
 - A. GENERAL: INSTALLATION SHALL BE IN ACCORDANCE WITH TELEPHONE UTILITY COMPANY'S RULES AND REGULATIONS.
10. GROUNDING SYSTEM
 - A. INSTALLATION: INSTALL AS INDICATED ON THE DRAWINGS AND AS REQUIRED. CONTRACTOR'S REPRESENTATIVE WILL INSPECT CADWELDS. MEGGER TESTS SHALL BE PERFORMED BY THE CONTRACTOR PRIOR TO BURIAL. RESULTS ARE TO BE SUBMITTED TO THE OWNERS REPRESENTATIVE. A MAXIMUM OF 5 OHMS RESISTANCE IS REQUIRED. USE CLEAN SAND AND CLAY BACKFILL FOR BURIED GROUND CONDUCTORS
11. CHECKOUT, TESTING AND ADJUSTING
 - A. CORRECTION/REPLACEMENT: AFTER TESTING BY CONTRACTOR, CONTRACTOR SHALL CORRECT ANY DEFICIENCIES AND REPLACE MATERIALS AND EQUIPMENT SHOWN TO BE DEFECTIVE OR UNABLE TO PERFORM AT DESIGN OR RATED CAPACITY.
 - B. POWER CONDUCTORS: CONTRACTOR SHALL CONDUCT A CONTINUITY & INSULATION TEST ON CONDUCTORS BETWEEN SERVICE DISCONNECT SWITCH & POWER CABINET.
 - C. WHEN SITE POWER IS DERIVED FROM 3 PHASE SOURCE LOAD READINGS WILL BE TAKEN AND RECORDED TO MAINTAIN A BALANCED LOAD AT THE PRIMARY SOURCE. RECORDS SHALL BE TURNED TO THE OWNER'S REPRESENTATIVE.

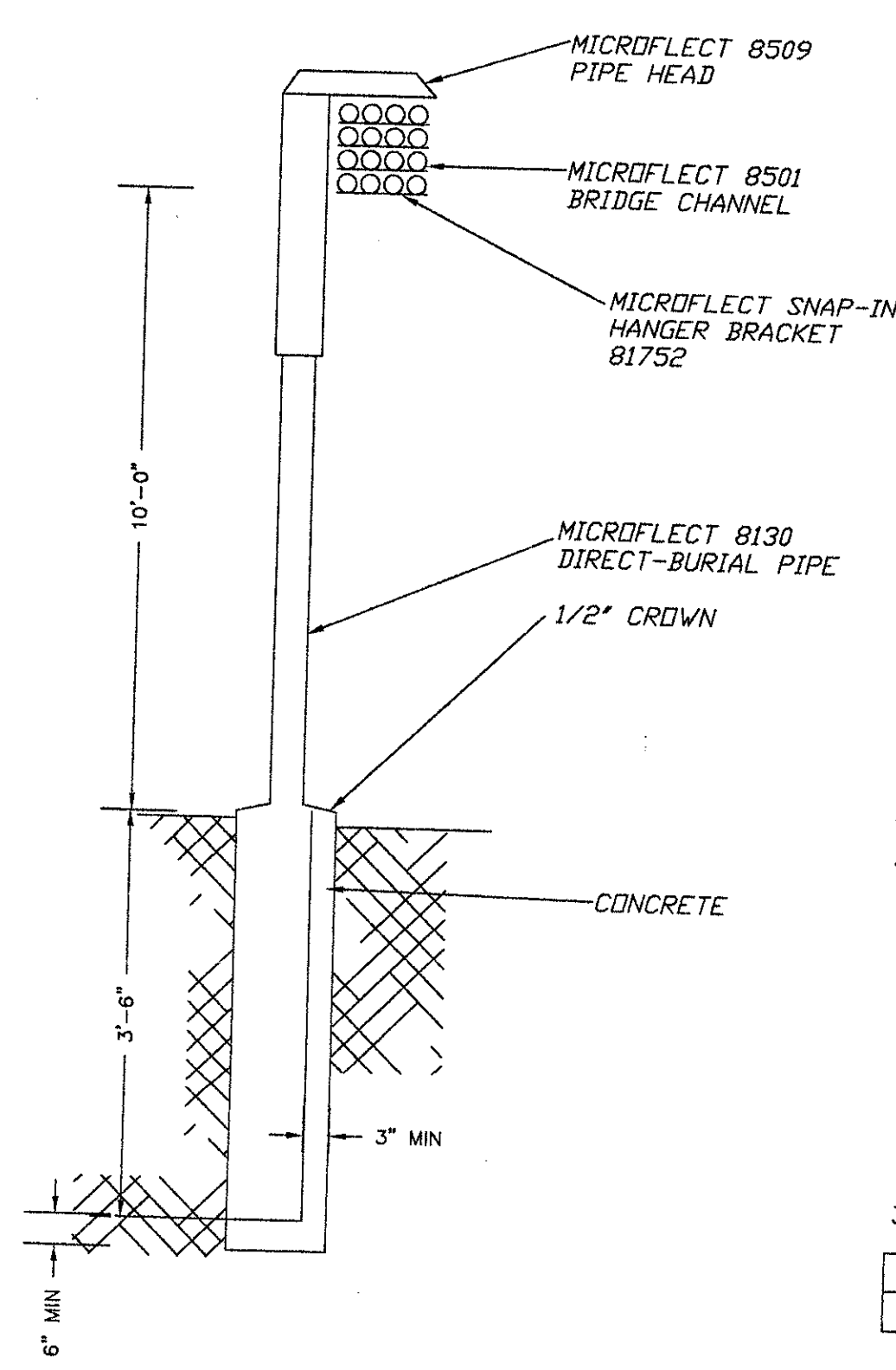


WIRE SIZE	LUG #	BOLT SIZE
#2	YA2C-2TC14E2	1/4" - 20NCx3/4"
#6	YA6C-2TC14E2	1/4" - 20NCx3/4"

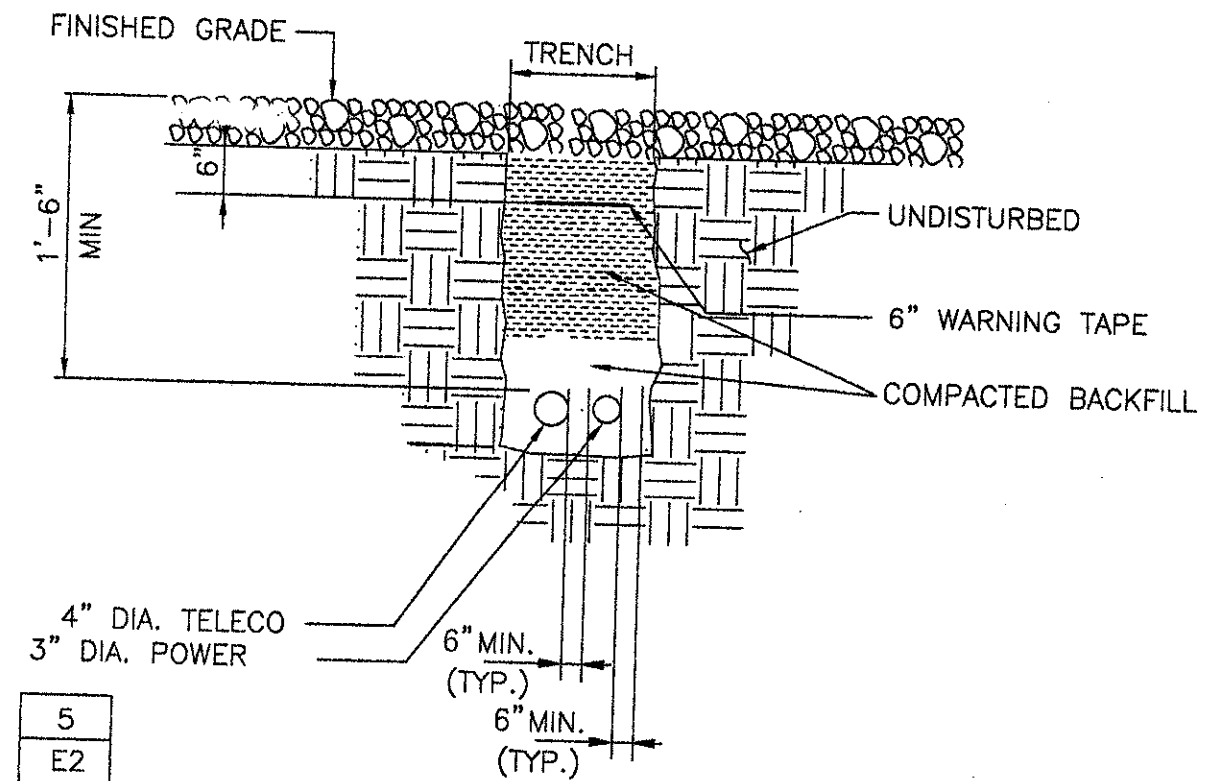
7 LUG GROUND CONNECTION
E2 NOT TO SCALE



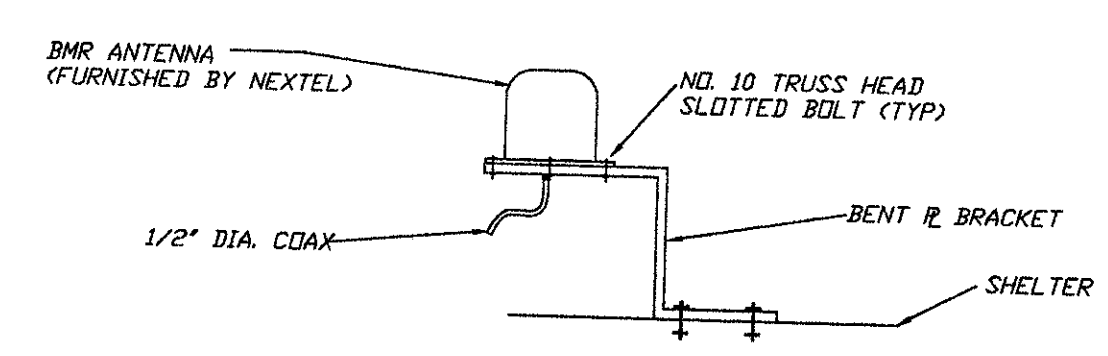
6 EXTERIOR GROUND BAR
E2 NOT TO SCALE



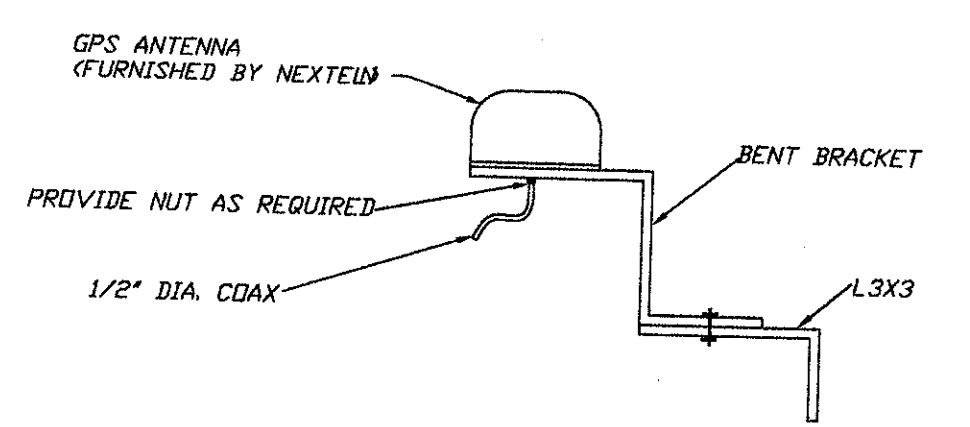
5 CABLE BRIDGE DETAIL
E2 NOT TO SCALE



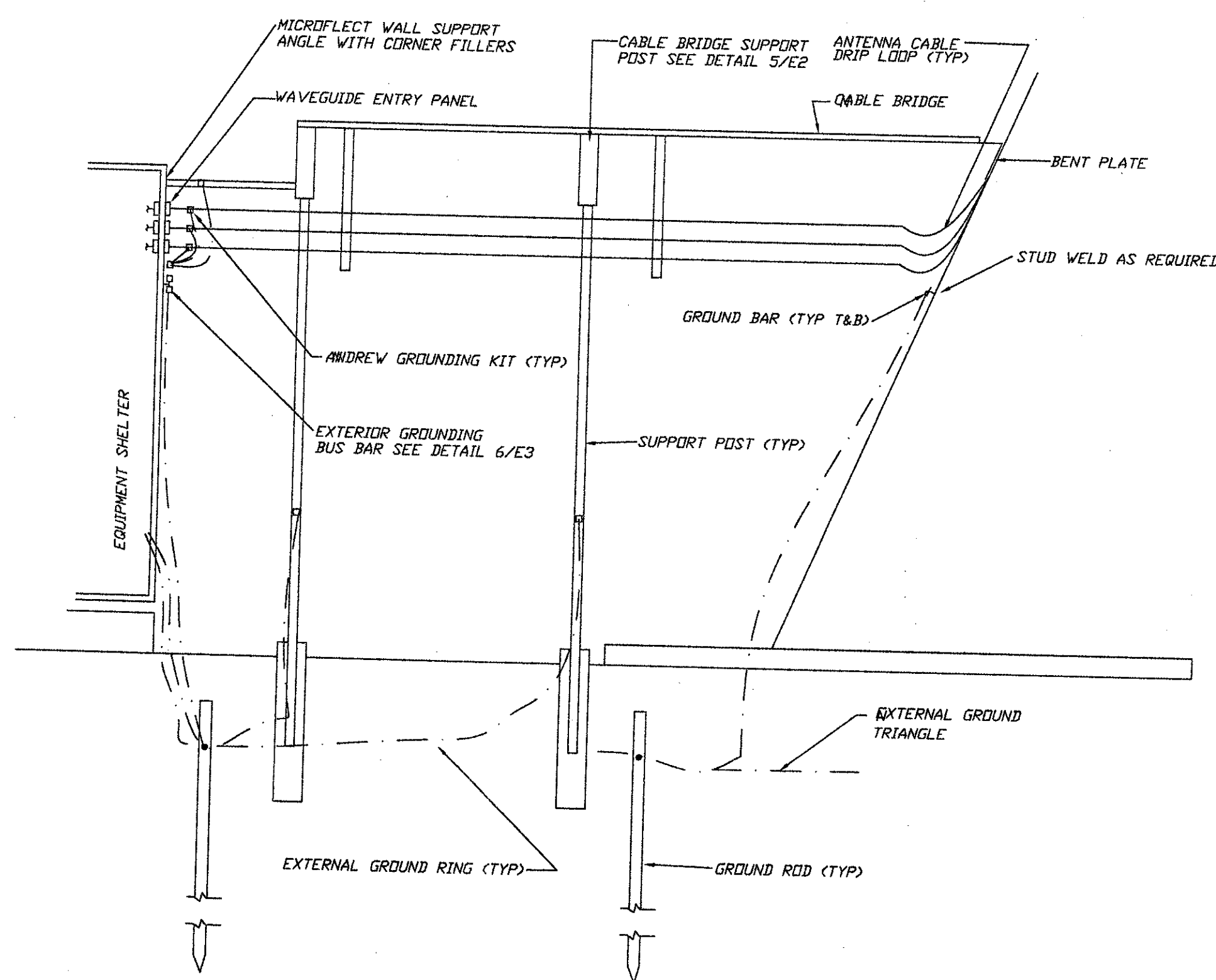
4 UNDERGROUND CONDUIT(S) ELECTRIC/TELEPHONE
NO SCALE



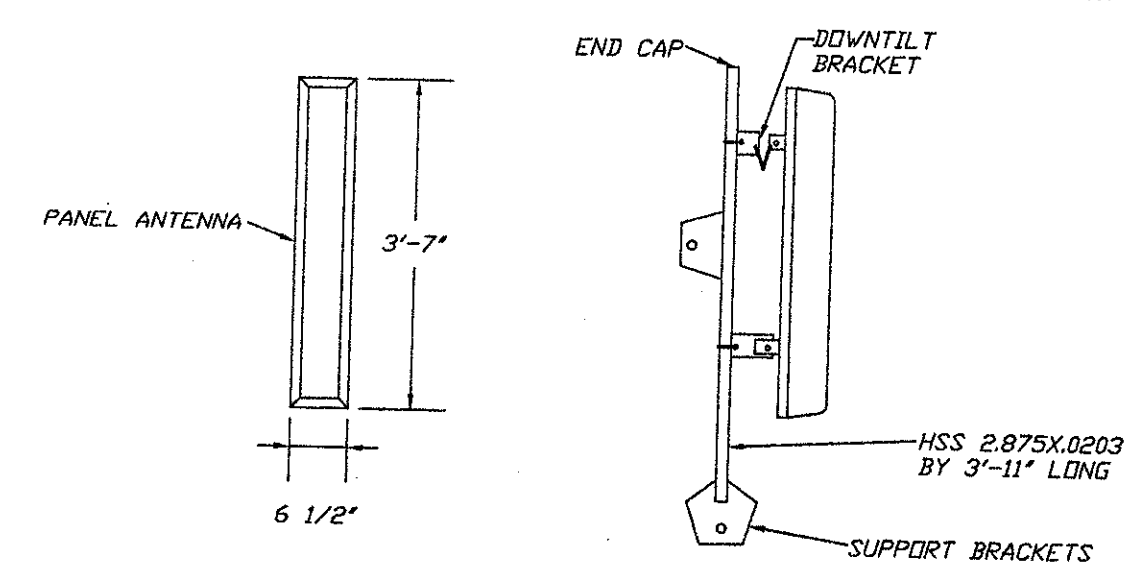
1 BMR ANTENNA MOUNT
E2 NOT TO SCALE



2 GPS ANTENNA MOUNT
E2 NOT TO SCALE



8 CABLE BRIDGE GROUNDING ELEVATION
E2 NOT TO SCALE



3 ANTENNA MOUNTING DETAILS
E2 NOT TO SCALE

1. SEPARATION DIMENSION TO BE VERIFIED WITH LOCAL UTILITY CO. REQUIREMENTS
2. CONDUIT TO BE SCH. 40 PVC UNLESS OTHERWISE REQUIRED BY LOCAL UTILITY

NOTES

1. CONTRACTOR TO SUPPLY WATT-HOUR METER SOCKET. LOCAL UTILITY TO PROVIDE METERS. CONTRACTOR TO COORDINATE AND/OR INSTALL IN ACCORDANCE WITH UTILITY REQUIREMENTS.
2. WIREWAY SHALL BE NEMA 3R GALVANIZED SHEET STEEL WITH HASP FOR PADLOCK.
3. ALL NEW STRUCTURAL STEEL SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A123 G90 AFTER FABRICATION.
4. FIELD ABRASIONS SHALL BE TOUCH UP PAINTED WITH ZINC RICH GALVANIZING REPAIR PAINT IN ACCORDANCE WITH ASTM A780.
5. BOLT 4"x8"x3/4" PRESSURE TREATED PLYWOOD BACKBOARD TO TELEPHONE SUPPORT FRAME. PROVIDE PRIMER COAT AND TWO COATS GRAY EXTERIOR ENAMEL TO PLYWOOD.
6. PROVIDE 200LB. TEST PULL WIRES IN EACH TELEPHONE AND POWER CONDUIT. STUB CONDUITS INTO ENCLOSURE AND LABEL.
7. PROVIDE 4"x3"x12"D. NEMA 3R LOCKABLE STEEL ENCLOSURE ("SUN WEST" OR EQUAL) FOR TELEPHONE CABLE TERMINATION.
8. PROVIDE 4" SQ.X2"D. WP BOX ON BACKBOARD. EXTEND 1#6G. FROM GROUND RING INTO BOX, LEAVE 10' FT. COILED WIRE IN BOX FOR FUTURE USE.
9. PROVIDE WEATHERPROOF GFI 20A/125VOLT RECEPTACLE ABOVE FINISHED GRADE, MOUNT TO BACKBOARD.
10. ALL EXPOSED ENDS OF CONDUITS SHALL HAVE WEATHER PROOF CAPS NOT DUCT TAPE.

Gesick & Associates P.C.
SURVEYORS & ENGINEERS
19 Cedar Island Ave.
Clinton, CT 06413
(860) 889-7789
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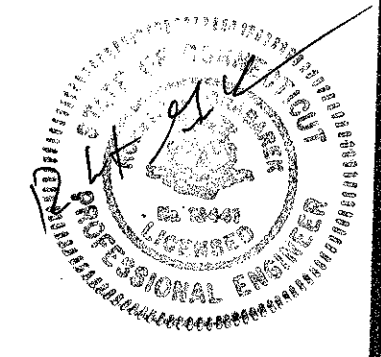
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SCALE: AS SHOWN

REVISIONS		
#	DATE	DESCRIPTION

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100 CORPORATE PLACE
ROCKY HILL, CONNECTICUT 06067
(860) 513-5400 FAX (860) 513-5444

NEXTEL COMMUNICATIONS SITE:
#0767 HARTFORD NORTH
305 WEST SERVICE ROAD
HARTFORD, CONNECTICUT
G&A PROJECT #98-082B

Sheet title:
Electrical
Details & Notes



3/21/99
3/21/99

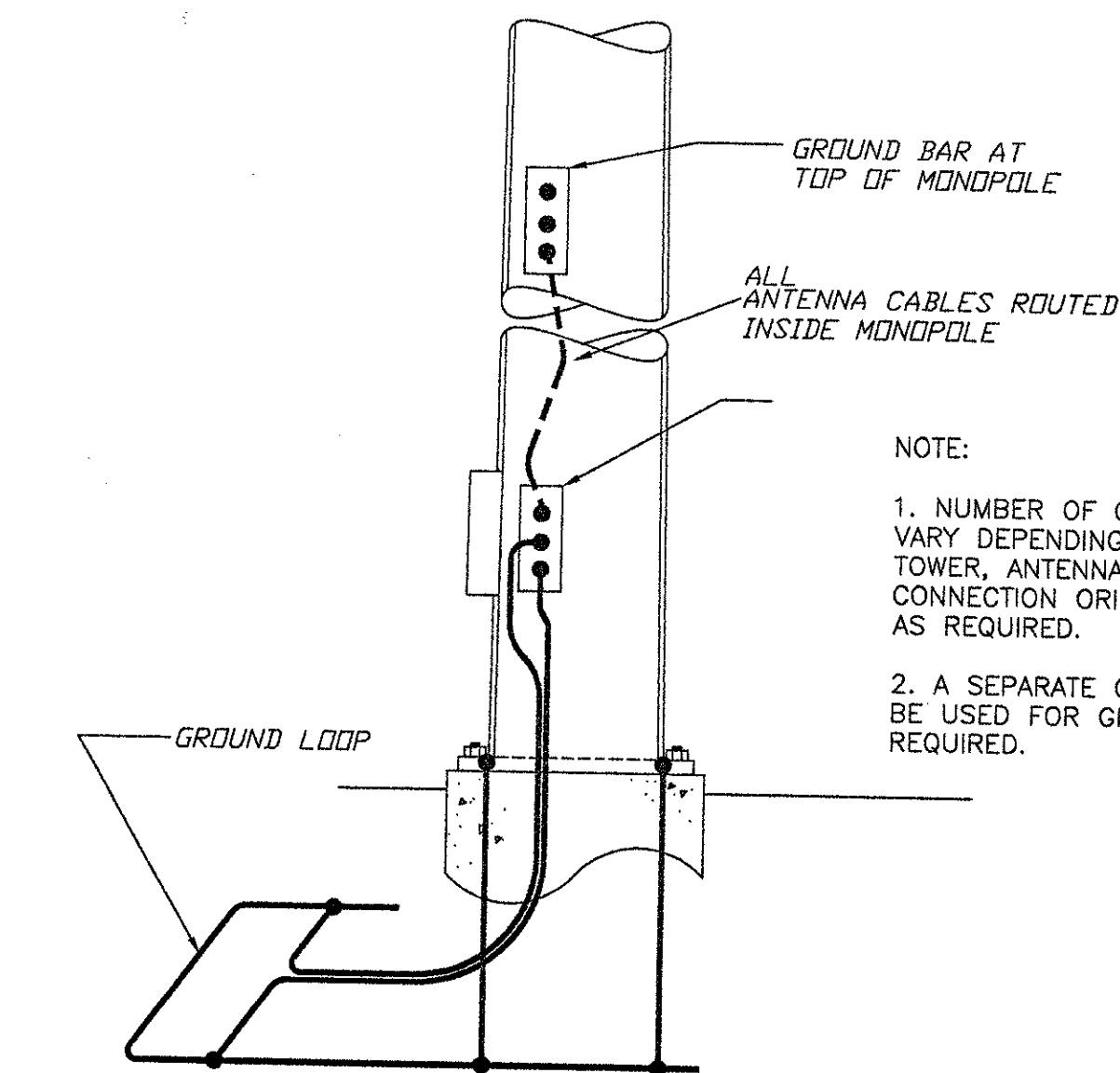
REVISIONS

#	DATE	DESCRIPTION	INITIAL
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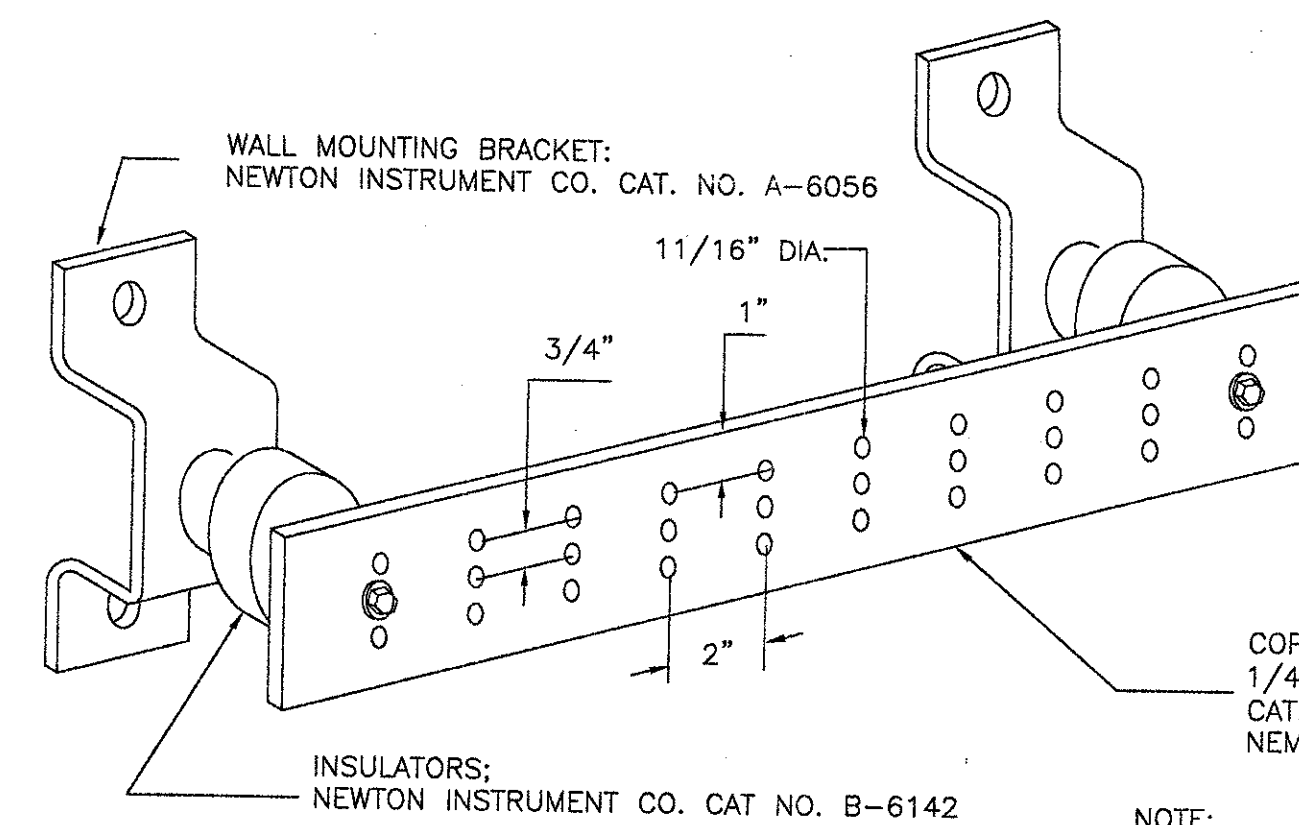
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 ROCKY HILL, CONNECTICUT 06067
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INCOMING POWER AND TELEPHONE SERVICE NOTES:

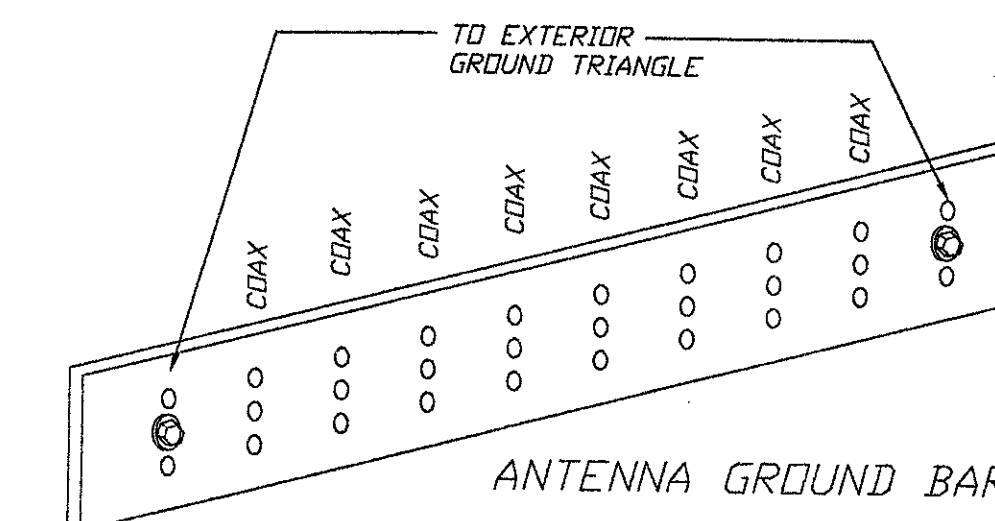
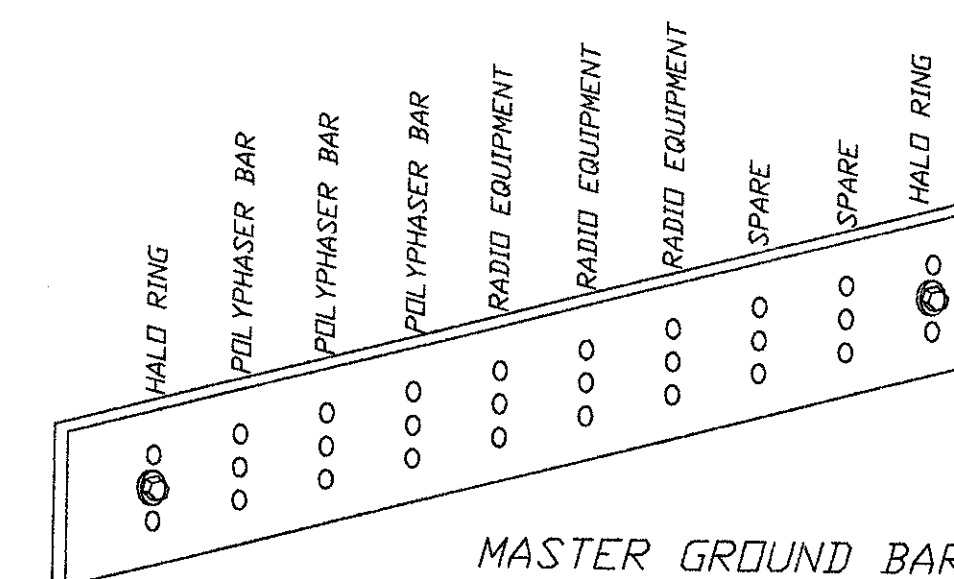
1. THE LOCATIONS SHOWN FOR THE RISER POLE, CONNECTION TO EXISTING UTILITIES, AND INCOMING POWER AND TELEPHONE SERVICES IS FOR CONCEPT ONLY. THE CONTRACTOR SHALL COORDINATE THE ACTUAL LOCATION WITH SNET, THE OWNER AND CL&P (CONNECTICUT LIGHT AND POWER).
2. THE CONTRACTOR IS RESPONSIBLE FOR MAKING ARRANGEMENTS WITH CL&P AND SNET RELATIVE TO A TIMELY INSTALLATION OF THE INCOMING POWER AND TELEPHONE SERVICES. THE OWNER WILL OBTAIN AN ELECTRIC SERVICE ORDER (ESO) FOR THIS SITE FROM CL&P AND SNET PRIOR TO THE CONTRACTOR INITIATING ANY WORK ON-SITE.
3. THE INCOMING ELECTRIC SERVICE SHALL BE INSPECTED BY THE AUTHORITY HAVING JURISDICTION AND A CERTIFICATE OF SUCH INSPECTION SHALL BE FURNISHED TO THE OWNER WITH A COPY FORWARDED TO CL&P.
4. ANY CL&P CHARGES ASSOCIATED WITH THIS SITE SHALL BE PAID FOR BY THE OWNER.
5. FOR INCOMING UNDERGROUND TELEPHONE SERVICE, THE CONTRACTOR SHALL INSTALL THE CONDUITS INCLUDING PULL WIRES BETWEEN THE RISER POLE AND THE POWER PROTECTION CABINET (PPC). THE CONTRACTOR SHALL PROVIDE PRECAST PULL-BOXES INCLUSIVE OF THE PRECAST COVERS OF THE TYPE AND AS REQUIRED BY SNET. THE MAXIMUM DISTANCE BETWEEN BOXES CAN NOT EXCEED 200'. AT THE PROPOSED RISER POLE EXTEND THE TELEPHONE CONDUIT UP THE POLE APPROXIMATELY 8' UP THE POLE AND SEAL.
6. THE CONTRACTOR SHALL COORDINATE THE METER REQUIREMENTS WITH CL&P AND THE OWNER.
7. THE INCOMING ELECTRIC SERVICES SHALL BE INSTALLED IN CONFORMANCE WITH CL&P STANDARDS (LATEST EDITION).
8. THIS SITE MAY CONTAIN CRITICAL UNDERGROUND ELECTRIC AND TELEPHONE SERVICES IN THE VICINITY OF THE NEW UNDERGROUND SERVICES AND THE EQUIPMENT SUPPORTS. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DISRUPTION OF THESE EXISTING FACILITIES. THE CONTRACTOR SHALL ALSO CONTACT CL&P AND SNET, AND ALL THE APPROPRIATE AGENCIES PRIOR TO EXCAVATION AT THIS SITE.



2 GROUNDING - MONOPOLE DETAIL
 E3 NO SCALE



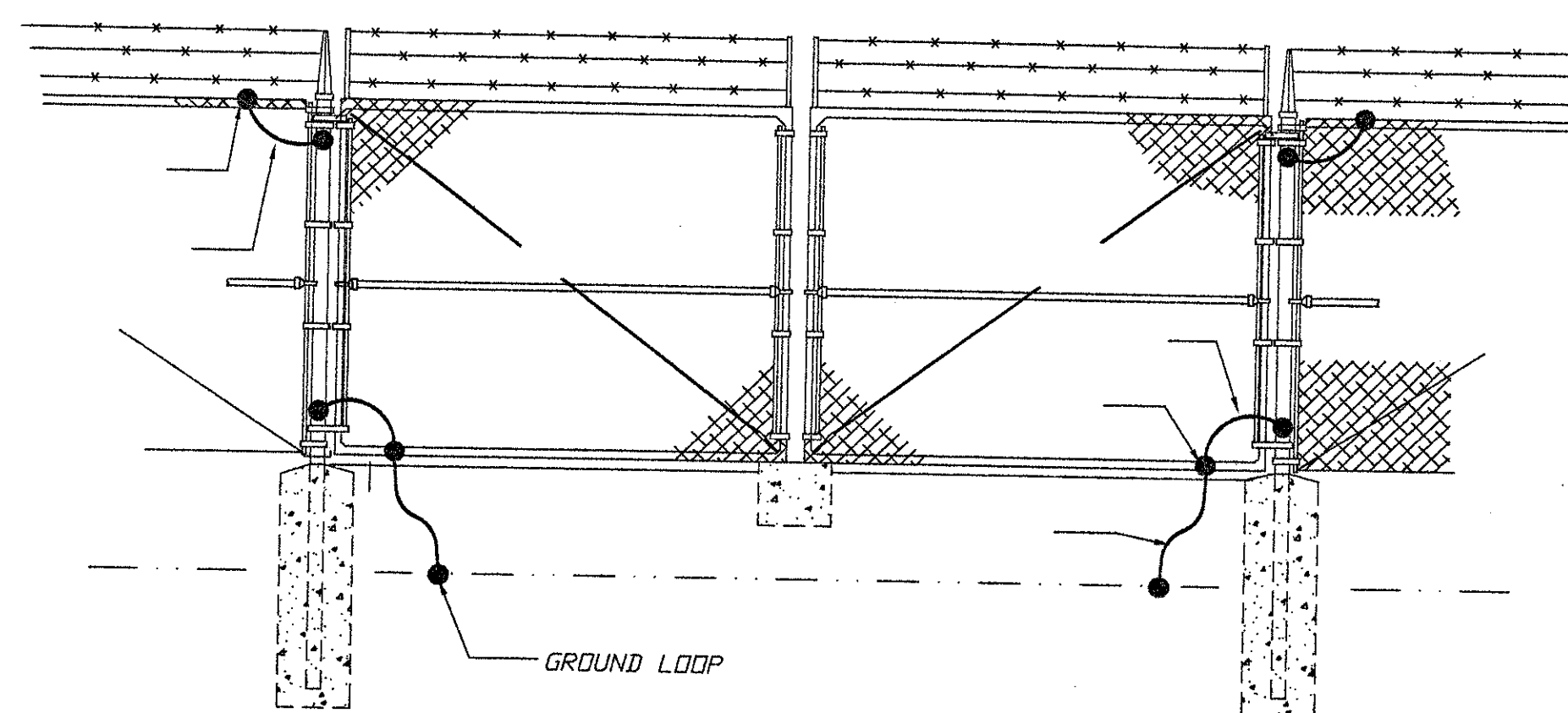
6 GROUND BAR DETAIL
 E3 NO SCALE



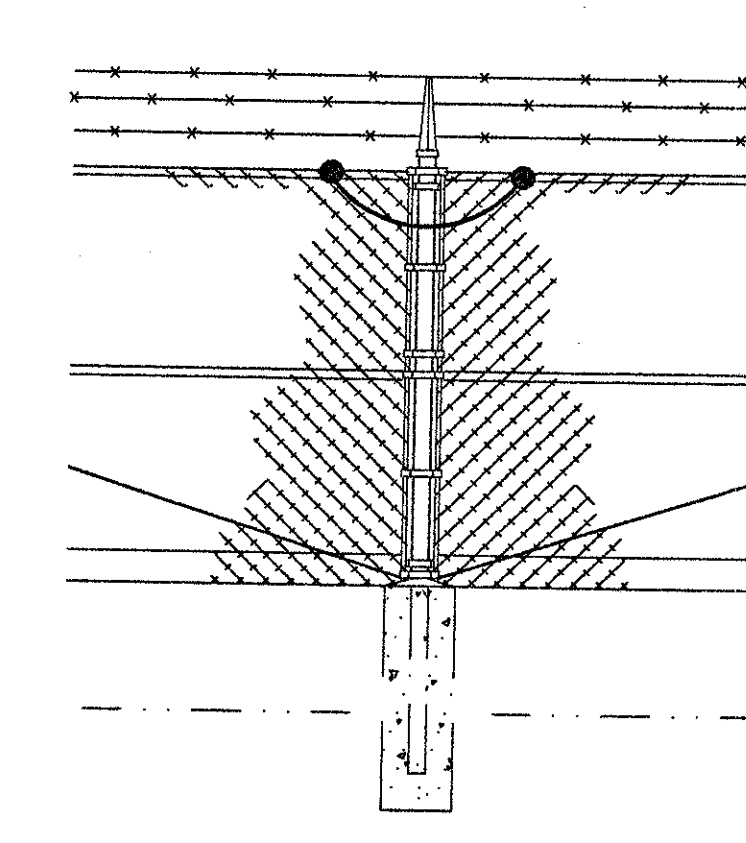
ANTENNA GROUND BAR DETAIL

CELL SITE GROUNDING INSTALLATION NOTES:

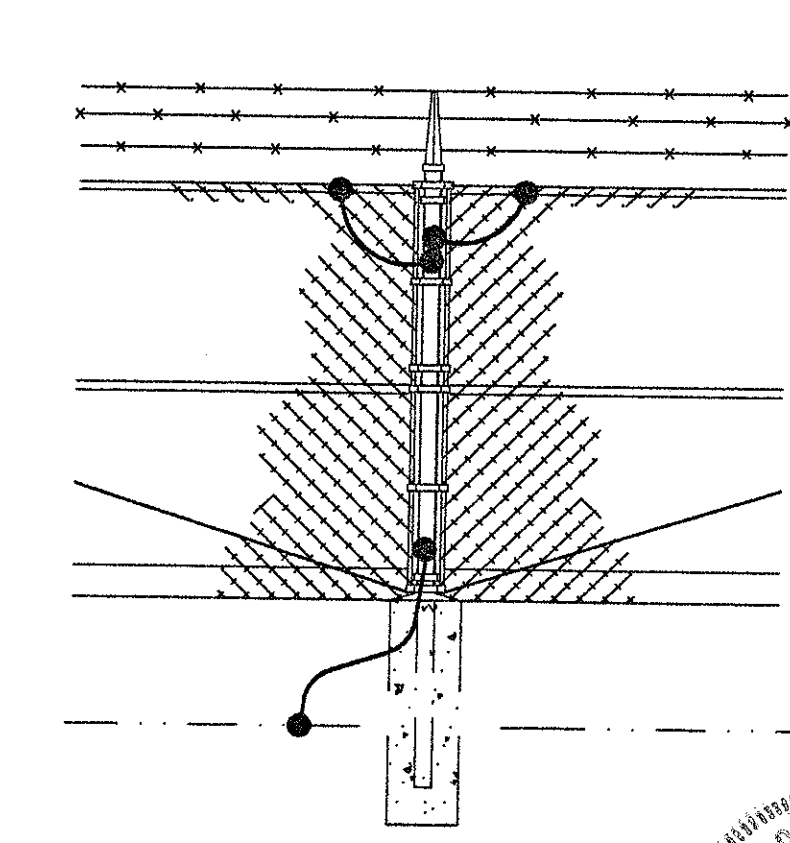
1. ALL METAL CONDUIT FOR THE GROUNDING OF DOWN CONDUCTORS SHALL BE BONDED TO THE GROUND SYSTEM AT BOTH ENDS.
2. KOPR-SHIELD ANTI-OXIDATION COMPOUND SHALL BE USED ON ALL GROUNDING CONNECTIONS.
3. ALL UNDERGROUND GROUNDING CONNECTIONS SHALL BE MADE BY THE CADWELD PROCESS.
4. ALL CADWELDS SHALL BE INSTALLED USING THE PROPER CONNECTION/MOLD AND MATERIALS FOR THE PARTICULAR CONNECTION AND/OR APPLICATION.
5. ALL BOLTED GROUNDING CONNECTIONS SHALL BE INSTALLED WITH A LOCK WASHER UNDER THE NUT. HARDWARE FOR THE BOLTED CONNECTION SHALL BE A MINIMUM OF 3/8" DIAMETER AND SHALL BE STAINLESS STEEL.
6. GROUNDING WIRE SHALL NOT BE INSTALLED OR ROUTED THROUGH HOLES IN ANY METAL OBJECTS OR SUPPORTS TO PRECLUDE HAVING A "CHOKE" POINT.
7. FERROUS METAL CLIPS WHICH COMPLETELY SURROUND THE GROUNDING CONDUCTOR SHALL NOT BE USED. CLIPS OF THE FOLLOWING MATERIALS AND TYPES MAY BE USED TO FASTEN AND SUPPORT THE GROUNDING CONDUCTORS.
 A: PLASTIC CLIPS
 B: METAL CLIPS THAT DO NOT COMPLETELY SURROUND THE GROUNDING CONDUCTOR
8. STANDARD BUSS BARS (CIGBES AND MIGBS) SHALL BE FURNISHED AND INSTALLED. THEY SHALL NOT BE FABRICATED OR MODIFIED IN THE FIELD.
9. THE GROUNDING CONNECTION TO THE POWER AND TELCO CABINETS SHALL BE MADE BY CONNECTING THE CONDUCTOR FROM THE GROUND RING TO THE BUSS BAR IN EACH COMPARTMENT.
10. ALL GROUNDING WIRES SHALL BE INSTALLED WITHOUT LOOPS (PIGTAILS) AND SHARP BEND RADIUS.



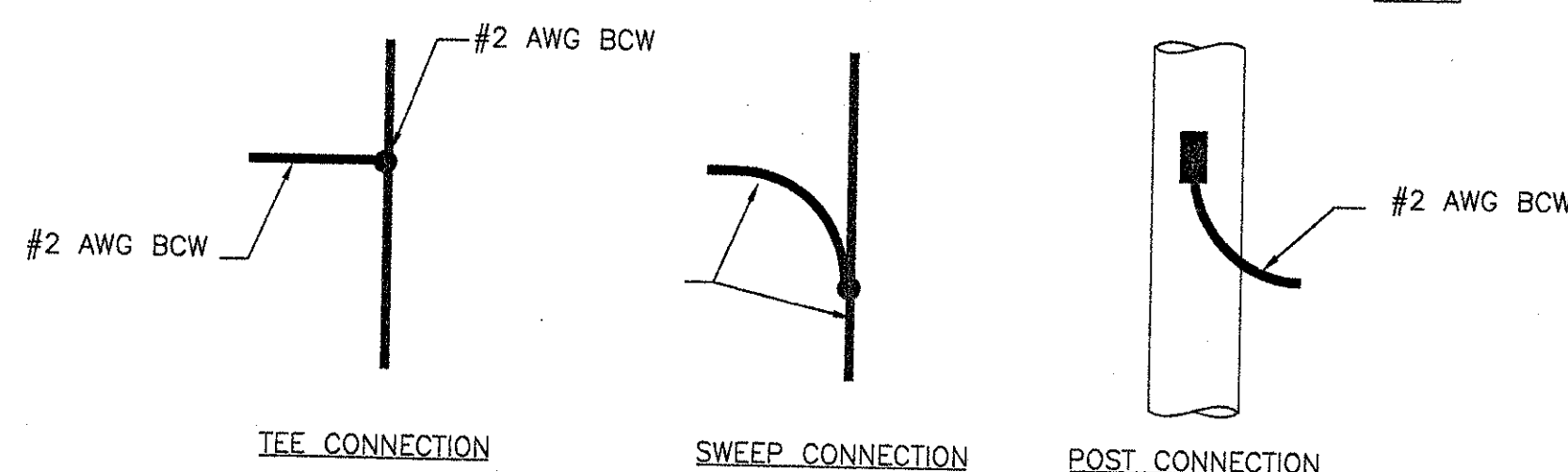
5 FENCE GATE GROUNDING
 E3 NO SCALE



4 FENCE GROUNDING
 E3 NO SCALE



- NOTE:
1. VERTICAL POSTS SHALL BE BONDED TO THE RING AT EACH CORNER AND AT EACH GATE POST. AS A MINIMUM ONE VERTICAL POST SHALL BE BONDED TO THE GROUND RING IN EVERY 100 FOOT STRAIGHT RUN OF FENCE.
 2. HORIZONTAL POLES SHALL BE BONDED TO EACH OTHER.
 3. BOND EACH HORIZONTAL POLE/BRAVE TO EACH OTHER AND TO EACH VERTICAL POST THAT IS BONDED TO THE EXTERIOR GROUND RING.



- NOTE:
1. THE #2 AWG BCW, FROM THE RING GROUND SHALL BE CADWELDED TO THE POST ABOVE GRADE.
 2. BOND EACH HORIZONTAL POLE/BRAVE TO EACH OTHER AND TO EACH VERTICAL POLE BONDED TO THE EXTERIOR GROUND RING.
 3. GATE JUMPER SHALL BE #4/0 AWG WELDING CABLE OR FLEXIBLE BONDING TYPE WITH SLEEVES ON EACH END DESIGNED FOR EXOTHERMIC WELDING.
 4. GATE JUMPER SHALL BE INSTALLED SO THAT IT WILL NOT BE SUBJECTED TO DAMAGING STRAIN WHEN GATE IS FULLY OPEN IN EITHER DIRECTION.

NEXTEL COMMUNICATIONS SITE:
 #0767 HARTFORD NORTH
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 HARTFORD, CONNECTICUT

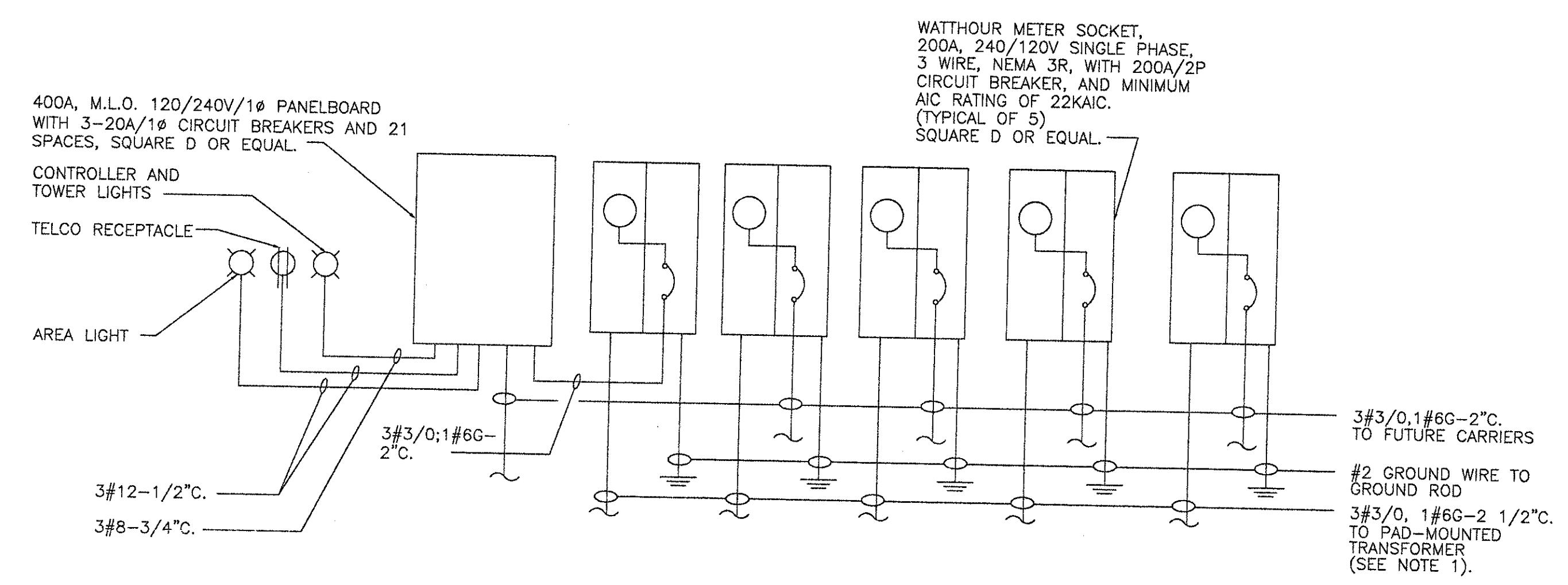
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 Electrical
 Details & Notes

DATE: 08/03/98 DRAWN BY: RJG
 SCALE: AS SHOWN

REVISIONS			
#	DATE	DESCRIPTION	INITIAL
1.			

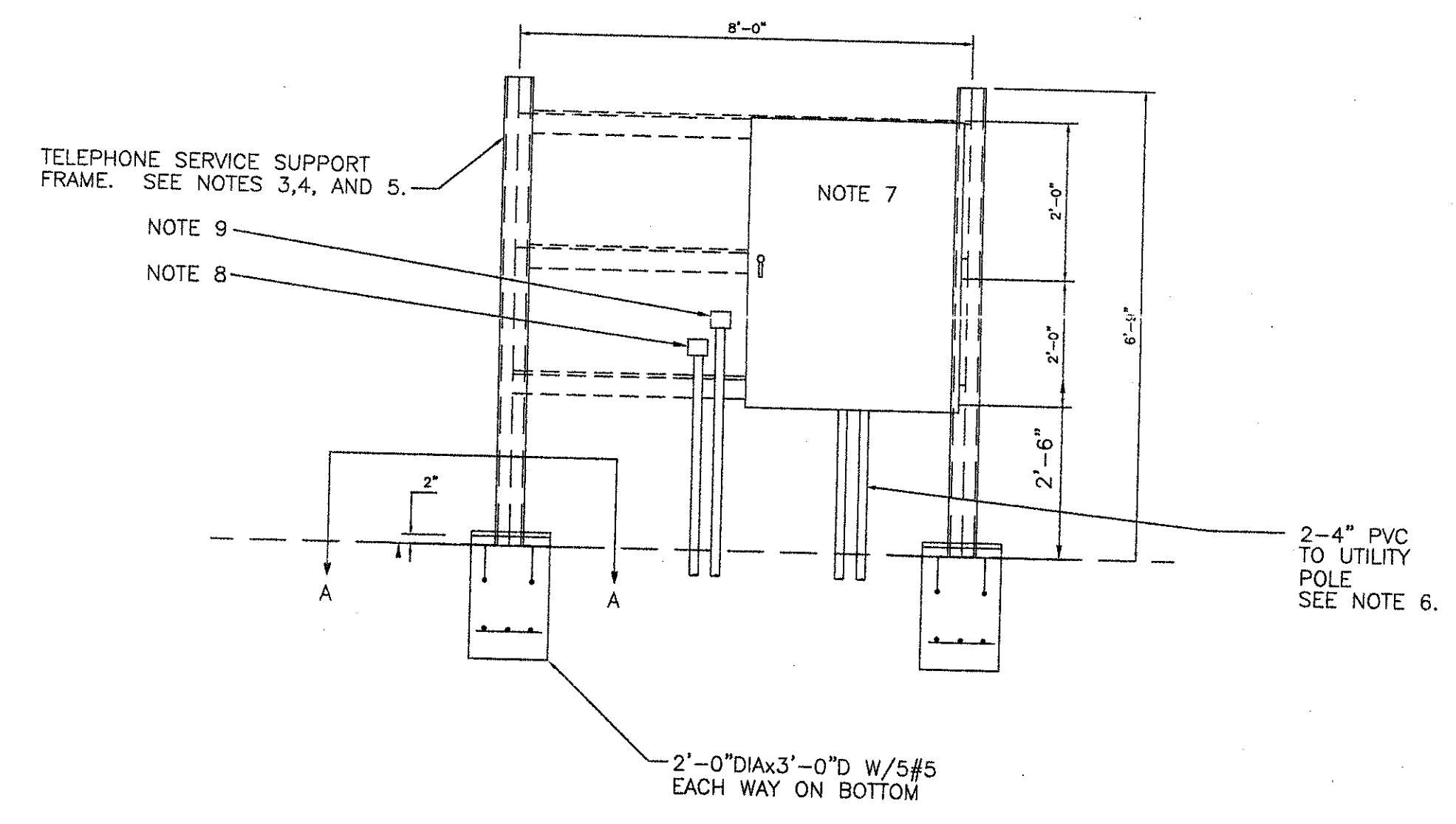
NEXTEL COMMUNICATIONS OF THE MID-ATLANTIC, INC.
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NEXTEL COMMUNICATIONS SITE:
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 HARTFORD, CONNECTICUT
 G&A PROJECT #98-002B



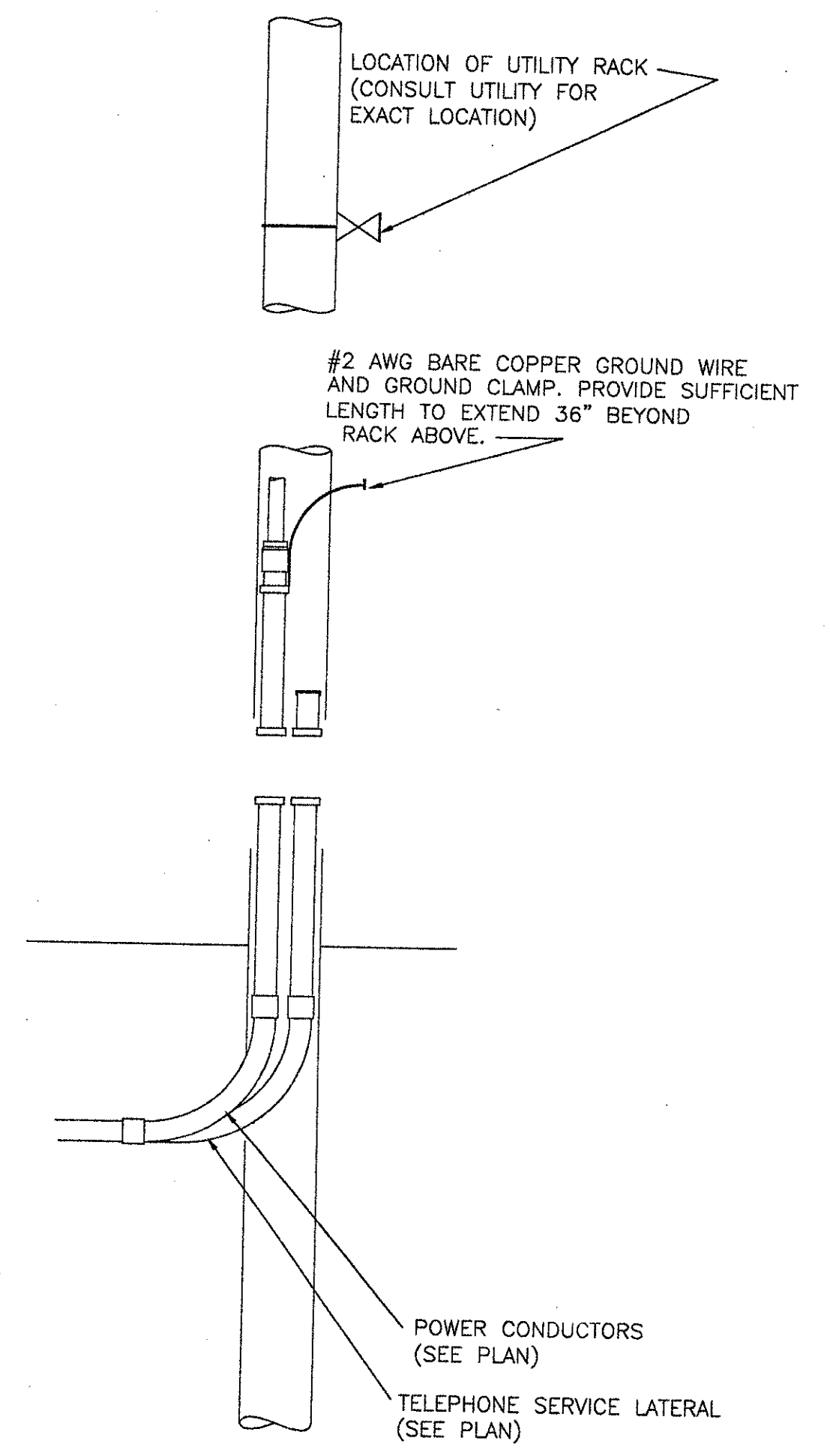
1 ONE-LINE DIAGRAM
 E4 NOT TO SCALE

1. PROVIDE SERVICE AS INDICATED IF SERVICE IS PROVIDED FROM PAD-MOUNTED TRANSFORMER. IF SERVICE IS FROM POLE-MOUNTED TRANSFORMER, PROVIDE CONDUCTORS AS INDICATED UNDERGROUND TO A FLUSH-IN-GRADE ELECTRIC PULLBOX (QUAZITE COMPOSITE OR EQUAL) SIZED PER NEC. PROVIDE 4".C. WITH PULLWIRE FROM PULLBOX TO UTILITY POLE AND EXTEND UP POLE AS DIRECTED BY UTILITY COMPANY. POWER CO. SHALL PROVIDE CONDUCTORS FROM POLE-MOUNTED TRANSFORMER TO PULLBOX.

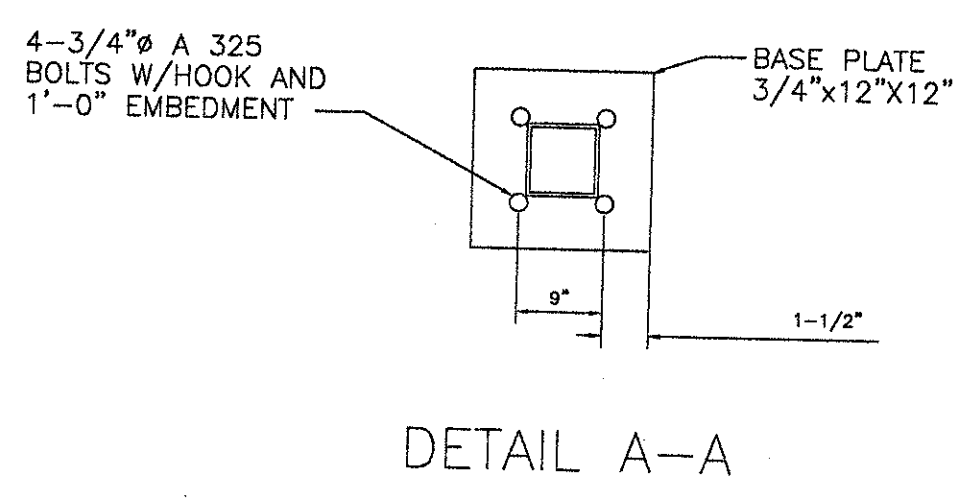


2 TELEPHONE SUPPORT FRAME DETAIL
 E4 NOT TO SCALE

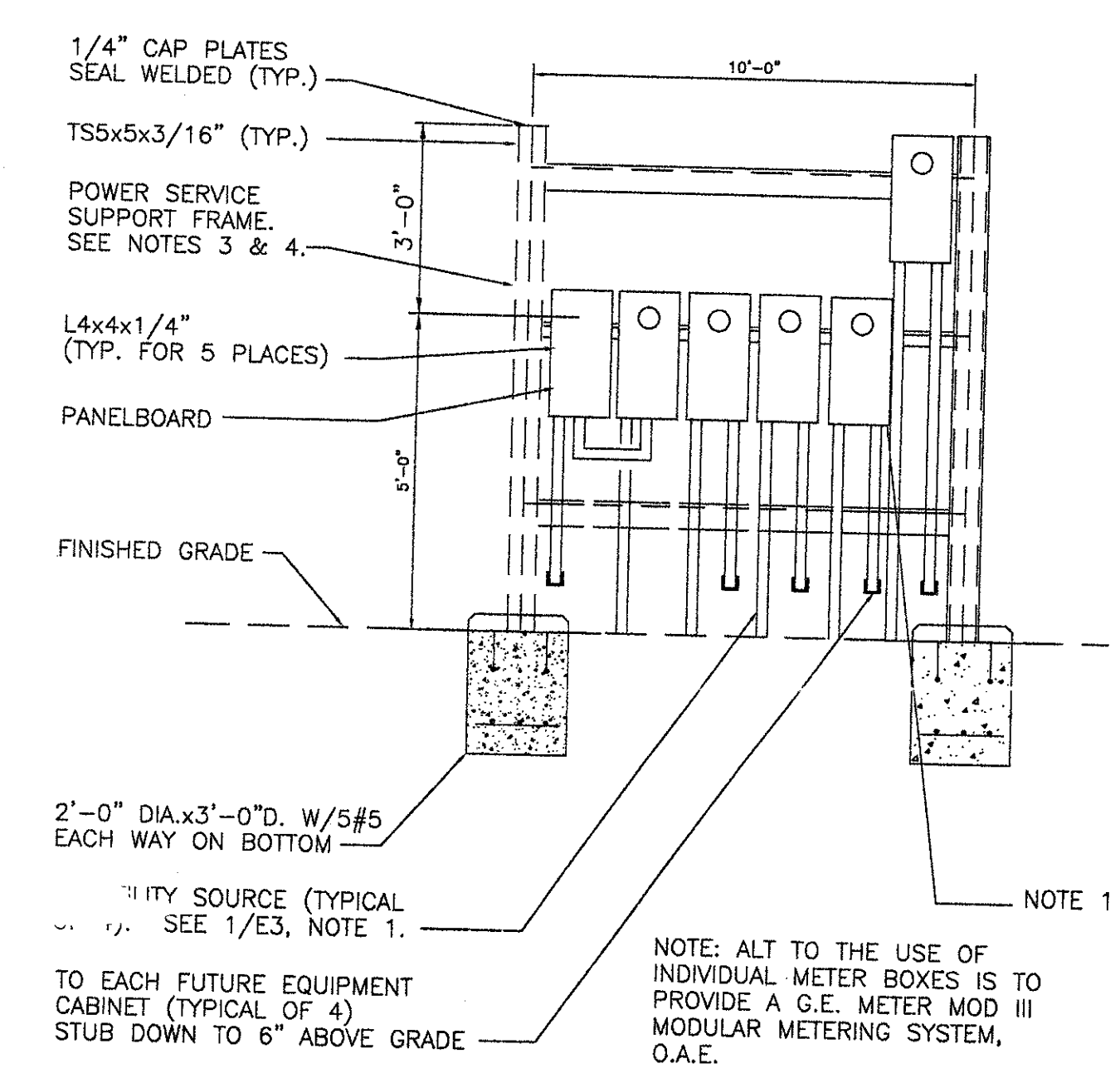
NOTE: ENCLOSURE SHALL FACE FENCE.



4 INCOMING SERVICE POLE RISER
 E4 NOT TO SCALE

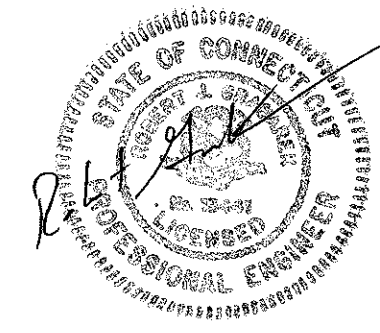


DETAIL A-A



3 POWER SUPPORT FRAME DETAIL
 E4 NOT TO SCALE

NOTE: METERS SHALL FACE FENCE. REFER TO 1/E2 FOR CONDUCTOR AND CONDUIT SIZES



Sheet title:
 Electrical Details & Notes

MJ Umali, Site Acquisition Consultant
c/o Cellco Partnership d/b/a Verizon Wireless
Centerline Communications, LLC
750 West Center Street, Floor 3
West Bridgewater, MA 02379
Mobile: (978) 568-7906
MUmali@centerlinecommunications.com

September 21, 2021

Melanie A. Bachman
Acting Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

**RE: Notice of Exempt Modification // Site: HARTFORD NORTH CT (ATC: 302466)
305 W. Service Road, Hartford, CT 06120
N 41.7995 // W 72.6567**

Dear Ms. Bachman,

Cellco Partnership d/b/a Verizon Wireless currently maintains 9 antennas at the 115-ft level on the existing 147.9-foot monopole tower, located at 305 W. Service Road, Hartford, CT. The tower is owned by American Tower. The property is also owned by 305 West Services Rd Assoc LLC. Verizon Wireless now intends to remove 3 antennas and install 3 new ones for the LTE (3700 MHz) replacements for its 5G upgrade. Altogether updating leased equipment rights, as reflected by the final configuration outlined in the structural analysis and proposed hereby.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Luke Bronin, Mayor of Hartford, its Director of Planning, Aimee Chambers, the tower owner, American Tower, and the property owner, 305 West Services Rd Assoc LLC.

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2). Enclosed to accommodate this filing are construction drawings dated August 6, 2021, by CLS Engineering, PLLC., a structural analysis dated July 6, 2021, by A.T. Engineering, PLLC., and a structural mount analysis by Maser Consulting Connecticut date July 2, 2021, and radio frequency (RF) analysis table showing worst-case ,RF emission calculation by Verizon Wireless RF Design Engineering.

1. The proposed modifications will not result in an increase in the height of the existing structure.

2. The proposed modifications will not require the extension of the site boundary.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the new antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading, as shown in the attached structural analysis by A.T. Engineering, PLLC, dated July 6, 2021, and a structural mount analysis by Maser Consulting Connecticut, dated July 2, 2021, pursuant to certain conditions defined therein. Design and engineering are fully illustrated within final construction drawings, signed and stamped dated August 6, 2021.

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

Sincerely,

MJ Umali

MJ Umali, Site Acquisition Consultant
c/o Cellco Partnership d/b/a Verizon Wireless
Centerline Communications, LLC
750 West Center Street, Floor 3
West Bridgewater, MA 02379
Mobile: (978) 568-7906
MUmali@centerlinecommunications.com

Attachments

cc: Luke Bronin, Mayor of Hartford – Chief Elected Official
Aimee Chambers, Director of Planning - as P&Z official
American Tower Corporation - as tower owner
305 West Services Rd Assoc LLC. - as ground owner

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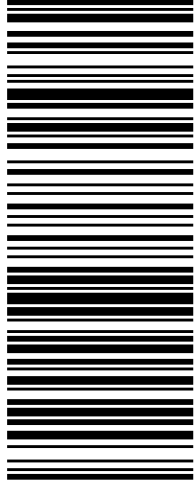

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<p style="text-align: right;">1 OF 1</p> <p style="text-align: center;">1 LBS</p> <p>MIJMAIL 9785687906 CENTERLINE COMMUNICATIONS, LLC 750 WEST CENTER STREET WEST BRIDGEWATER MA 02379</p> <p>SHIP TO: LUKE BRONIN, MAYOR CITY OF HARTFORD ROOM 200 550 MAIN STREET HARTFORD CT 06103-2913</p>	<p style="font-size: 2em;">CT 061 9-03</p> 	<p style="font-size: 1.5em;">UPS GROUND</p> <p>TRACKING #: 1Z 9Y4 503 03 0474 5587</p> 	<p style="text-align: center;">BILLING: P/P</p> <p style="text-align: center;">  </p> <p>Reference # 1: 302466 Reference # 2: West Service Road <small>CT 06220, 18, WINT, NV50 35, 0A 08/2021 *</small></p>
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Proof of Delivery

Dear Customer,

This notice serves as proof of delivery for the shipment listed below.

Tracking Number

1Z9Y45030304745587

Weight

1.00 LBS

Service

UPS Ground

Shipped / Billed On

08/31/2021

Delivered On

09/28/2021 10:03 A.M.

Delivered To

550 MAIN ST
HARTFORD, CT, 06103, US

Received By

REL 305

Left At

Met Customer

Reference Number(s)

WEST SERVICE ROAD, 302466

Thank you for giving us this opportunity to serve you. Details are only available for shipments delivered within the last 120 days. Please print for your records if you require this information after 120 days.

Sincerely,

UPS

Tracking results provided by UPS: 09/28/2021 10:57 A.M. EST

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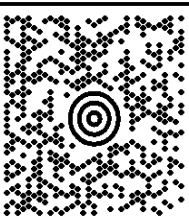
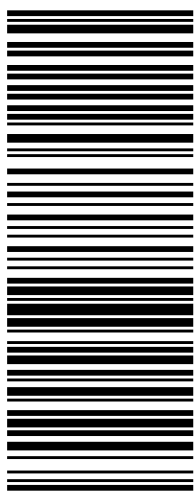

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<p style="text-align: right;">1 OF 1</p> <p style="text-align: center;">1 LBS</p> <p>MIJUMALT 9785687906 CENTERLINE COMMUNICATIONS, LLC 750 WEST CENTER STREET WEST BRIDGEWATER MA 02379</p> <p>SHIP TO: 305 WEST SERVICES RD ASSOC LLC 305 W. SERVICE ROAD HARTFORD CT 06120-1207</p>	<p style="font-size: 2em; font-weight: bold;">CT 061 9-03</p>  	<p style="font-size: 1.5em; font-weight: bold;">UPS GROUND</p> <p>TRACKING #: 1Z 9Y4 503 03 0678 5601</p> 	<p style="text-align: center;">BILLING: P/P</p> <p style="text-align: center;">  </p> <p>Reference # 1: 302466 Reference # 2: West Service Road <small>CT 06120-1207</small> WNT NV50 35.0A 08/2021 *</p>
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Your shipment from



CENTERLINE SITE ACQUISITION

Estimated delivery

Tuesday, September 28 between 10:45 A.M. - 1:45 P.M.



Label Created



Shipped



Out for Delivery



Delivery

Ship To

305 WEST SERVICES RD ASSOC LLC
305 W. SERVICE ROAD
HARTFORD, CT 061201207 US

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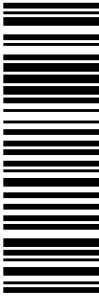
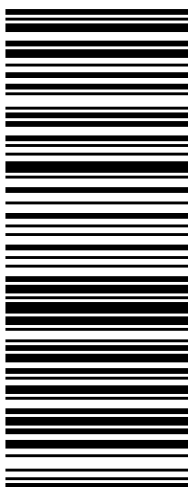

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<p style="text-align: right;">1 OF 1</p> <p style="text-align: center;">5 LBS</p> <p>MIJUMALT 9785687906 CENTERLINE COMMUNICATIONS, LLC 750 WEST CENTER STREET WEST BRIDGEWATER MA 02379</p> <p>SHIP TO: LAND MANAGEMENT 7814287250 AMERICAN TOWER CORPORATION 10 PRESIDENTIAL WAY WOBURN MA 01801-1053</p>	<p style="font-size: 2em; font-weight: bold;">MA 018 9-04</p> 	<p style="font-size: 1.5em; font-weight: bold;">UPS GROUND</p> <p>TRACKING #: 1Z 9Y4 503 03 3888 3267</p> 	<p style="text-align: center;">BILLING: P/P</p> <div style="text-align: right;">  </div> <p style="font-size: 0.8em;">CS 22.0.18. WNTNV50 33.0A 08/2021*</p>
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AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure : 147.9 ft Monopole
ATC Site Name : West Service Road, CT
ATC Asset Number : 302466
Engineering Number : 13668983_C3_04
Proposed Carrier : VERIZON WIRELESS
Carrier Site Name : HARTFORD NORTH CT
Carrier Site Number : 467518
Site Location : 305 W. Service Rd.
Hartford, CT 06120-0001
41.799500,-72.656700
County : Hartford
Date : July 6, 2021
Max Usage : 69%
Result : Pass



Prepared By:
Kyle MacPetrie
Structural Engineer I

Reviewed By:

COA: PEC.0001553



Table of Contents

Introduction	1
Supporting Documents	1
Analysis	1
Conclusion.....	1
Existing and Reserved Equipment.....	2
Equipment to be Removed.....	2
Proposed Equipment	2
Standard Conditions	3
Calculations	Attached



Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 147.9 ft monopole to reflect the change in loading by .

Supporting Documents

Tower Drawings	FWT Job #18053, dated September 10, 1998
Foundation Drawing	FWT Job #18054, dated September 10, 1998
Geotechnical Report	Gibble Norden Champion Project #98134.09, dated September 8, 1998

Analysis

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

Basic Wind Speed:	117 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 1 1/2" radial ice concurrent
Code:	ANSI/TIA-222-H / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category:	C
Risk Category:	II
Topographic Factor Procedure:	Method 1
Topographic Category:	1
Crest Height (H):	0 ft
Spectral Response:	$S_s = 0.19, S_1 = 0.05$
Site Class:	D - Stiff Soil

Conclusion

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

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



Existing and Reserved Equipment

Elev. ¹ (ft)	Qty	Equipment	Mount Type	Lines	Carrier
151.0	8	Andrew DB844H90E-XY	Triangular Platform with Handrails	(12) 1 1/4" Coax	SPRINT NEXTEL
	4	Andrew 844G65VTZASX			
138.0	9	Generic 48" x 4" Panel	Triangular Low Profile Platform	(9) 1 5/8" Coax	AT&T MOBILITY
125.0	3	Ericsson Air6449 B41	T-Arm	(3) 1 1/4" (1.25"-31.8mm) Fiber (1) 1 5/8" (1.63"-41.3mm) Fiber (12) 1 5/8" Coax	T-MOBILE
	3	Ericsson AIR 21, 1.3M, B2A B4P (91.5 lbs)			
	3	Ericsson AIR32 B66Aa/B2a			
	3	Ericsson RRUS 4415 B25			
	3	RFS APXVAARR24_43-U-NA20			
	3	Ericsson KRY 112 144/1			
	3	Ericsson Radio 4449 B71 B85A			
115.0	6	Commscope SBNHH-1D65B	Triangular Low Profile Platform	(2) 1 5/8" (1.63"-41.3mm) Fiber (6) 1 5/8" Coax	VERIZON WIRELESS
107.0	1	Antel BCD-87010 ___ 25	Stand-Off	(1) 7/8" Coax	SENSUS USA INC.
100.0	3	Commscope NNVV-65B-R4	T-Arm	(3) 1 1/4" Hybriflex Cable	CLEARWIRE CORPORATION
	3	Alcatel-Lucent 1900MHz RRH (65MHz) w/ solar shield			
	6	Alcatel-Lucent RRH2x50-08			
90.0	1	Generic 18" x 18" x 4" Junction Box	T-Arm	(1) 1.7" (43.2mm) Hybrid (2) 1/2" Coax (2) 2" conduit (6) 5/16" (0.31"-7.9mm) Coax	CLEARWIRE CORPORATION
	3	Nokia 2.5G MAA - AAHC(64T64R)			
	2	Andrew VHLP2-18			
	3	NextNet BTS-2500			
	2	DragonWave A-ANT-18G-3-C			
	2	DragonWave Horizon Compact			

Equipment to be Removed

Elev. ¹ (ft)	Qty	Equipment	Mount Type	Lines	Carrier
115.0	3	Samsung PCS/AWS Dual Band RRH	-	-	VERIZON WIRELESS
	3	Samsung 700/850MHz Dual Band RRH			
	6	Amphenol Antel BXA-70063-6CF-EDIN-X			
	1	RFS DB-T1-6Z-8AB-OZ			
	1	Raycap RVZDC-6627-PF-48			

Proposed Equipment

Elev. ¹ (ft)	Qty	Equipment	Mount Type	Lines	Carrier
115.0	2	Raycap RCMDC-6627-PF-48	Triangular Low Profile Platform		VERIZON WIRELESS
	3	Samsung B5/B13 RRH-BR04C			
	3	Samsung B2/B66A RRH-BR049			
	3	Samsung MT6407-77A			
	2	Amphenol Antel BXA-70063-6CF-EDIN-4			
	1	Amphenol Antel BXA-70063-6CF-EDIN-2			

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



Standard Conditions

All engineering services performed by A.T. Engineering Service, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

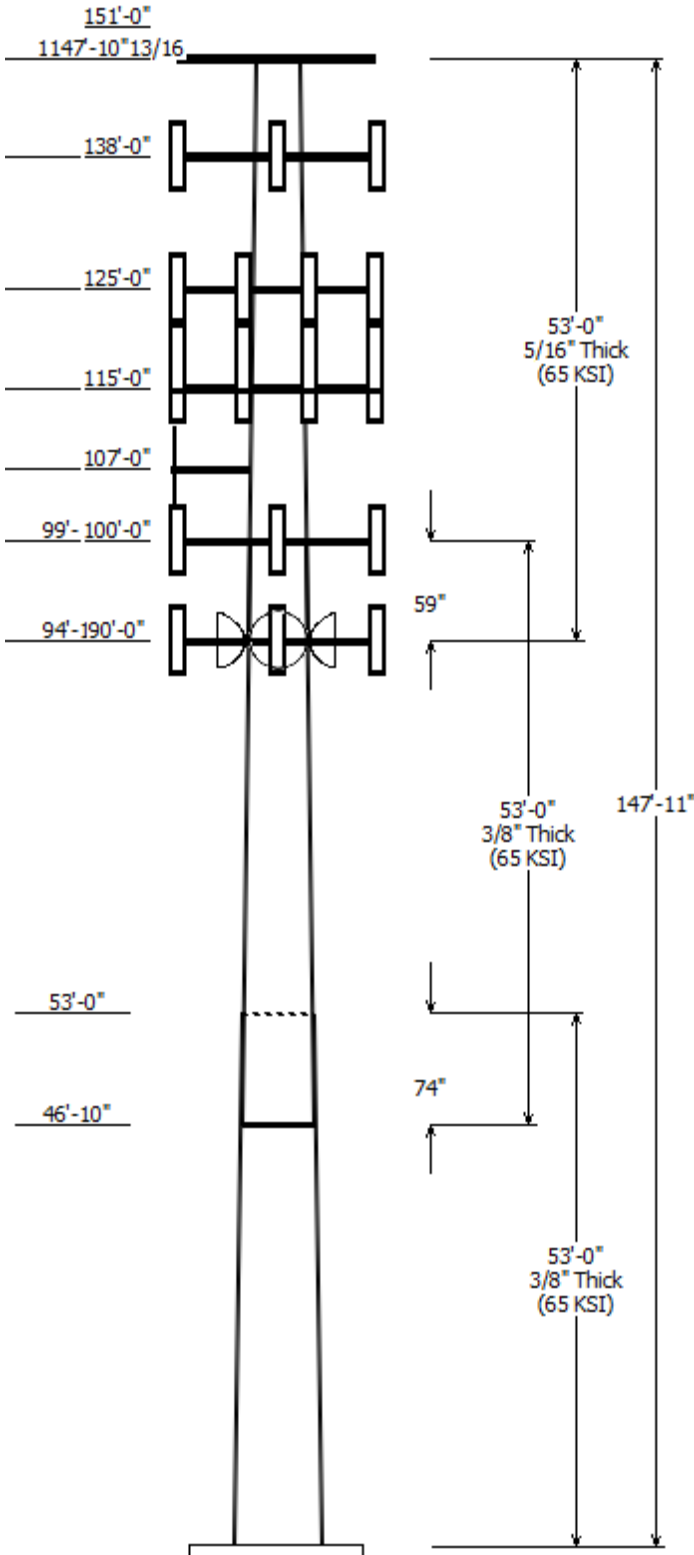
It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

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

Unless explicitly agreed by both the client and A.T. Engineering Service, PLLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Service, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.

Job Information	
Client : VERIZON WIRELESS	Code: ANSI/TIA-222-H
Pole : 302466	
Location : West Service Road, CT	
Description :	Risk Category : II
Shape : 18 Sides	Exposure : C
Height : 147.92 (ft)	Topo Method : Method 1
Base Elev (ft): 0.00	Topographic Category : 1
Taper: 0.214564in/ft)	

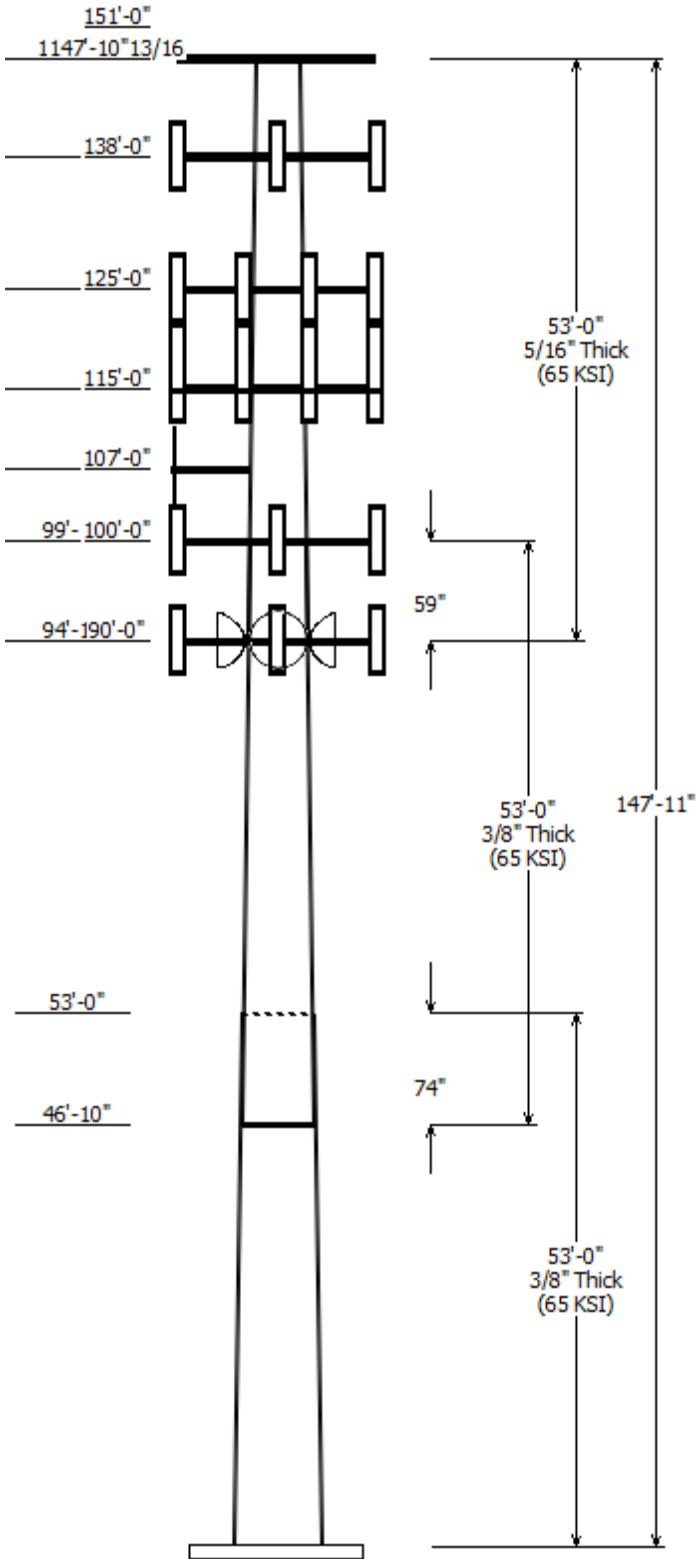


Sections Properties						
Shaft Section	Length (ft)	Diameter (in)		Thick Joint (in)	Overlap Length (in)	Steel Grade
		Across Top	Flats Bottom			
1	53.000	45.20	56.58	0.375	0.000	18 Sides 65
2	53.000	35.90	47.28	0.375 Slip Joint	74.000	18 Sides 65
3	53.000	26.21	37.58	0.313 Slip Joint	59.000	18 Sides 65

Discrete Appurtenance			
Attach Elev (ft)	Force Elev (ft)	Qty	Description
151.000	151.000	4	Andrew 844G65VTZASX
151.000	151.000	8	Andrew DB844H90E-XY
147.900	147.900	1	Flat Platform w/ Handrails
138.000	138.000	1	Flat Low Profile Platform
138.000	138.000	9	Generic 48" x 4" Panel
125.000	125.000	3	Round T-Arm
125.000	125.000	3	RFS APXVAARR24_43-U-NA20
125.000	125.000	3	Ericsson AIR32 B66Aa/B2a
125.000	125.000	3	Ericsson AIR 21, 1.3M, B2A B4P
125.000	125.000	3	Ericsson Air6449 B41
125.000	125.000	3	Ericsson RRUS 4415 B25
125.000	125.000	3	Ericsson Radio 4449 B71 B85A
125.000	126.000	3	Ericsson KRY 112 144/1
115.000	115.000	1	Generic Flat Low Profile Platf
115.000	116.000	6	Commscope SBNHH-1D65B
115.000	115.000	2	Amphenol Antel BXA-70063-
115.000	115.000	1	Amphenol Antel BXA-70063-
115.000	115.000	3	Samsung MT6407-77A
115.000	115.000	2	Raycap RCMD-6627-PF-48
115.000	115.000	3	Samsung B5/B13 RRH-BR04C
115.000	115.000	3	Samsung B2/B66A RRH-BR049
107.000	107.000	1	Generic Flat Stand-Off
107.000	107.000	1	Antel BCD-87010 ___ 25
100.000	100.000	3	Generic Round T-Arm
100.000	100.000	3	Alcatel-Lucent 1900MHz RRH
100.000	100.000	6	Alcatel-Lucent RRH2x50-08
100.000	100.000	3	Commscope NNVV-65B-R4
90.000	90.000	3	Generic Round T-Arm
90.000	90.000	2	DragonWave A-ANT-18G-3-C
90.000	90.000	2	Andrew VHLP2-18
90.000	90.000	3	Nokia 2.5G MAA -
90.000	90.000	1	Generic 18" x 18" x 4" Junctio
90.000	90.000	3	NextNet BTS-2500
90.000	90.000	2	DragonWave Horizon Compact

Linear Appurtenance			
Elev (ft)		Description	Exposed To Wind
From	To		
5.000	90.000	1.7" (43.2mm)	No
5.000	90.000	1/2" Coax	Yes
5.000	90.000	2" conduit	Yes
5.000	90.000	5/16" (0.31"-	No

5.000	100.0	1 1/4" Hybriflex	No
5.000	107.0	7/8" Coax	Yes
5.000	115.0	1 5/8" (1.63"-	Yes
5.000	115.0	1 5/8" Coax	Yes
5.000	125.0	1 1/4" (1.25"-	Yes
5.000	125.0	1 5/8" (1.63"-	Yes
5.000	125.0	1 5/8" Coax	No
5.000	138.0	1 5/8" Coax	No
5.000	151.0	1 1/4" Coax	No

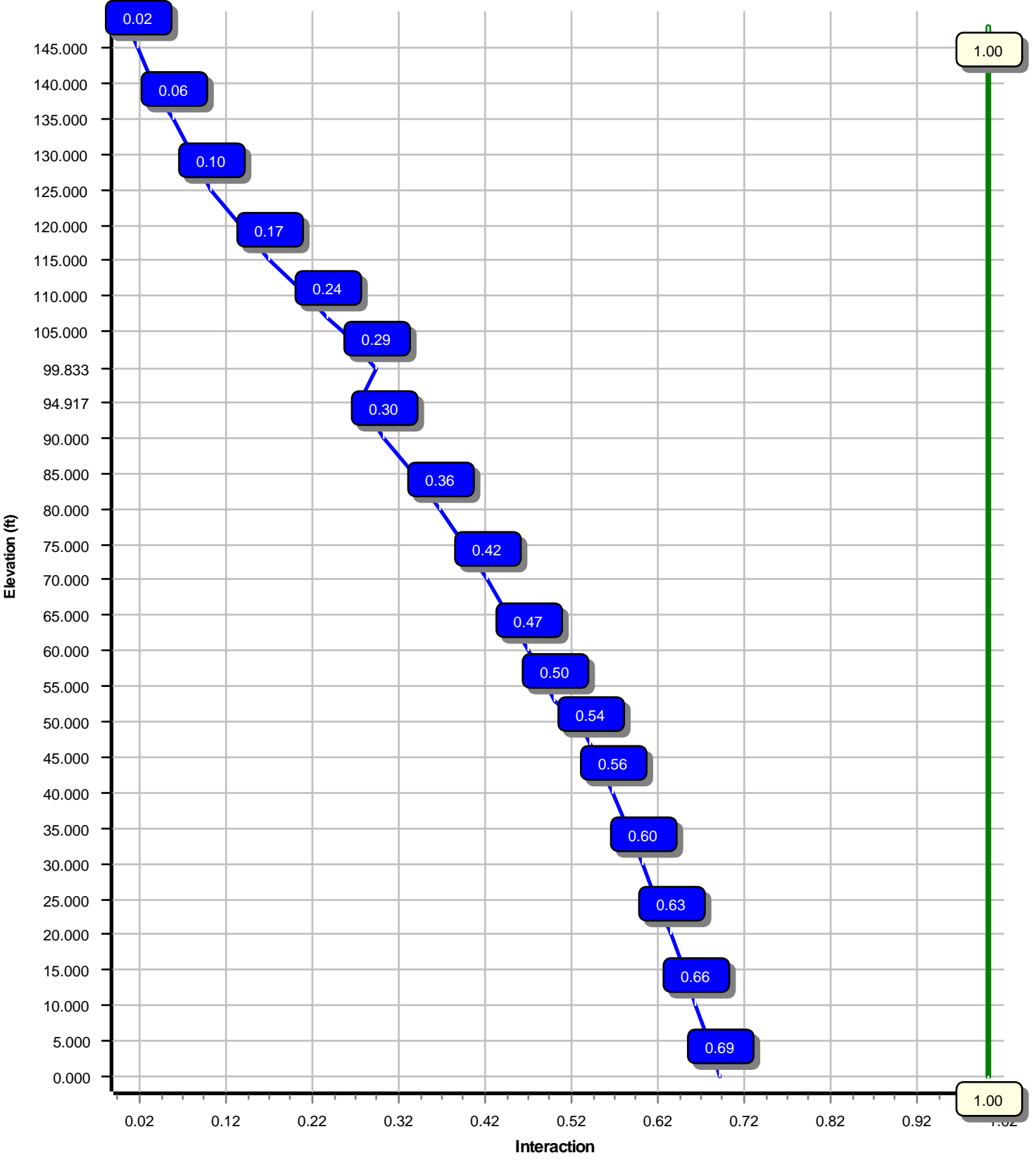


Load Cases	
1.2D + 1.0W	117 mph with No Ice
0.9D + 1.0W	117 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 1.50 in Radial Ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	Serviceability 60 mph

Reactions			
Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.0W	3399.15	33.15	52.74
0.9D + 1.0W	3365.01	33.13	39.54
1.2D + 1.0Di + 1.0Wi	998.64	9.69	82.93
1.2D + 1.0Ev + 1.0Eh	153.36	1.32	53.14
0.9D - 1.0Ev + 1.0Eh	151.45	1.32	36.88
1.0D + 1.0W	794.99	7.80	43.99

Dish Deflections			
Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
1.0D + 1.0W	90.00	7.000	0.711
1.0D + 1.0W	90.00	7.000	0.711

Load Case : 1.2D + 1.0W
Max Ratio 68.85% at 0.0 ft



Site Number: 302466

Code: ANSI/TIA-222-H

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Site Name: West Service Road, CT

Engineering Number: 13668983_C3_04

7/6/2021 2:55:36 PM

Customer: VERIZON WIRELESS

Analysis Parameters

Location :	Hartford County, CT	Height (ft) :	147.9167
Code :	ANSI/TIA-222-H	Base Diameter (in) :	56.58
Shape :	18 Sides	Top Diameter (in) :	26.22
Pole Type :	Taper	Taper (in/ft) :	0.215
Pole Manufacturer :	FWT	Rotation (deg) :	0.00
Kd (non-service) :	0.95	Ke :	1.00

Ice & Wind Parameters

Exposure Category:	C	Design Wind Speed Without Ice:	117 mph
Risk Category:	II	Design Wind Speed With Ice:	50 mph
Topographic Factor Procedure:	Method 1	Operational Wind Speed:	60 mph
Topographic Category:	1	Design Ice Thickness:	1.50 in
Crest Height:	0 ft	HMSL:	20.00 ft

Seismic Parameters

Analysis Method:	Equivalent Lateral Force Method		
Site Class:	D - Stiff Soil		
Period Based on Rayleigh Method (sec):	2.15		
T _L (sec):	6	p:	1
S _s :	0.186	S ₁ :	0.055
F _a :	1.600	F _v :	2.400
S _{ds} :	0.198	S _{d1} :	0.088
		C _s :	0.030
		C _s Max:	0.030
		C _s Min:	0.030

Load Cases

1.2D + 1.0W	117 mph with No Ice
0.9D + 1.0W	117 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 1.50 in Radial Ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	Serviceability 60 mph

Site Number: 302466

Code: ANSI/TIA-222-H

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Site Name: West Service Road, CT

Engineering Number: 13668983_C3_04

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Customer: VERIZON WIRELESS

Shaft Section Properties

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Slip Joint Len (in)	Weight (lb)	Bottom						Top						
							Dia (in)	Elev (ft)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Taper (in/ft)
1-18	53.000	0.3750	65		0.00	10,844	56.58	0.00	66.90	26698.9	24.84	150.88	45.20	53.00	53.36	13550.7	19.49	120.55	0.214564
2-18	53.000	0.3750	65	Slip	74.00	8,848	47.28	46.83	55.83	15518.8	20.47	126.08	35.90	99.83	42.29	6747.0	15.12	95.76	0.214564
3-18	53.000	0.3125	65	Slip	59.00	5,651	37.58	94.92	36.97	6490.8	19.45	120.28	26.21	147.92	25.69	2178.3	13.03	83.89	0.214564
Shaft Weight						25,343													

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	Ka	Vert Ecc (ft)	Weight (lb)	No Ice EPAa (sf)	Orientation Factor	Weight (lb)	Ice EPAa (sf)	Orientation Factor
151.00	Andrew DB844H90E-XY	8	0.75	0.000	14.00	3.615	0.73	124.47	3.921	0.73
151.00	Andrew 844G65VTZASX	4	0.75	0.000	16.00	5.310	0.71	171.78	6.311	0.71
147.90	Flat Platform w/ Handrails	1	1.00	0.000	2,000.00	42.400	1.00	3,420.69	63.365	1.00
138.00	Generic 48" x 4" Panel	9	0.80	0.000	20.00	2.080	0.67	59.33	3.636	0.67
138.00	Flat Low Profile Platform	1	1.00	0.000	1,500.00	26.100	1.00	2,143.13	45.051	1.00
125.00	Ericsson KRY 112 144/1	3	0.80	1.000	11.00	0.351	0.50	21.57	0.750	0.50
125.00	Ericsson Radio 4449 B71 B85A	3	0.80	0.000	75.00	1.650	0.50	134.05	2.484	0.50
125.00	Ericsson RRUS 4415 B25	3	0.80	0.000	46.00	1.842	0.50	94.15	2.723	0.50
125.00	Ericsson Air6449 B41	3	0.80	0.000	104.00	5.682	0.63	237.82	7.241	0.63
125.00	Ericsson AIR 21, 1.3M, B2A B4P	3	0.80	0.000	91.50	6.037	0.70	234.47	8.143	0.70
125.00	Ericsson AIR32 B66Aa/B2a	3	0.80	0.000	132.20	6.510	0.71	288.93	8.661	0.71
125.00	Round T-Arm	3	0.75	0.000	250.00	9.700	0.67	455.23	17.796	0.67
125.00	RFS APXVAARR24_43-U-NA20	3	0.80	0.000	127.90	20.243	0.63	513.40	23.885	0.63
115.00	Samsung B2/B66A RRH-BR049	3	0.80	0.000	84.40	1.875	0.50	146.51	2.754	0.50
115.00	Samsung B5/B13 RRH-BR04C	3	0.80	0.000	70.30	1.875	0.50	125.99	2.754	0.50
115.00	Raycap RCMDC-6627-PF-48	2	0.80	0.000	32.00	4.056	0.79	155.74	5.385	0.79
115.00	Samsung MT6407-77A	3	0.80	0.000	81.60	4.709	0.61	180.84	6.188	0.61
115.00	Amphenol Antel BXA-70063-6CF-	1	0.80	0.000	17.00	7.569	1.00	161.09	10.254	1.00
115.00	Amphenol Antel BXA-70063-6CF-	2	0.80	0.000	17.00	7.569	0.75	161.09	10.254	0.75
115.00	Commscope SBNHH-1D65B	6	0.80	1.000	50.70	8.173	0.69	221.58	10.928	0.69
115.00	Generic Flat Low Profile Platform	1	1.00	0.000	1,875.00	26.100	1.00	2,663.51	44.689	1.00
107.00	Antel BCD-87010 ___ 25	1	1.00	0.000	26.50	2.900	1.00	155.88	6.583	1.00
107.00	Generic Flat Stand-Off	1	1.00	0.000	187.50	6.300	1.00	316.45	9.316	1.00
100.00	Alcatel-Lucent RRH2x50-08	6	0.80	0.000	52.90	1.701	0.50	109.92	2.531	0.50
100.00	Alcatel-Lucent 1900MHz RRH	3	0.80	0.000	60.00	2.583	0.50	148.72	3.655	0.50
100.00	Generic Round T-Arm	3	0.75	0.000	312.50	9.700	0.67	563.86	17.632	0.67
100.00	Commscope NNVV-65B-R4	3	0.80	0.000	77.40	12.271	0.64	319.16	14.969	0.64
90.00	DragonWave Horizon Compact	2	0.80	0.000	10.60	0.721	0.50	31.95	1.261	0.50
90.00	NextNet BTS-2500	3	0.80	0.000	35.00	1.817	0.50	79.03	2.687	0.50
90.00	Generic 18" x 18" x 4" Junction	1	0.80	0.000	21.00	2.700	0.50	75.55	3.720	0.50
90.00	Nokia 2.5G MAA - AAHC(64T64R)	3	0.80	0.000	103.60	4.203	0.64	210.64	5.476	0.64
90.00	Andrew VHLP2-18	2	1.00	0.000	27.00	4.680	1.00	119.73	5.887	1.00
90.00	DragonWave A-ANT-18G-3-C	2	1.00	0.000	49.60	9.018	1.00	224.80	10.688	1.00
90.00	Generic Round T-Arm	3	0.75	0.000	312.50	9.700	0.67	560.55	17.528	0.67
Totals	Num Loadings:34									
		101			12,801.70			27,473.56		

Linear Appurtenance Properties

Load Case Azimuth (deg) :

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Dia (in)	Coax Wt (lb/ft)	Max Coax / Flat	Dist Between Rows (in)	Dist Between Cols (in)	Dist Azimuth (deg)	Dist Exposed From Face (in)	Dist Exposed To Wind Carrier
5.00	151.00	12	1 1/4" Coax	1.55	0.63	N	0	0.00	0	0.00	N SPRINT NEXTEL
5.00	138.00	9	1 5/8" Coax	1.98	0.82	N	0	0.00	0	0.00	N AT&T MOBILITY
5.00	125.00	3	1 1/4" (1.25"- 31.8mm)	1.25	1.05	N	2	0.50	50	0.50	Y T-MOBILE
5.00	125.00	1	1 5/8" (1.63"-41.3mm)	1.63	1.61	N	1	0.50	35	0.50	Y T-MOBILE

Site Number: 302466

Code: ANSI/TIA-222-H

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Site Name: West Service Road, CT

Engineering Number: 13668983_C3_04

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Customer: VERIZON WIRELESS

5.00	125.00	12	1 5/8" Coax	1.98	0.82	N	0	0.00	0.00	0	0.00	N	T-MOBILE
5.00	115.00	2	1 5/8" (1.63"-41.3mm)	1.63	1.61	N	2	0.50	0.50	130	0.50	Y	VERIZON WIRELESS
5.00	115.00	6	1 5/8" Coax	1.98	0.82	N	6	0.50	0.50	160	0.50	Y	VERIZON WIRELESS
5.00	107.00	1	7/8" Coax	1.09	0.33	N	1	0.50	0.50	345	0.50	Y	SENSUS USA INC.
5.00	100.00	3	1 1/4" Hybriflex Cable	1.54	1.00	N	0	0.00	0.00	0	0.00	N	CLEARWIRE
5.00	90.00	1	1.7" (43.2mm) Hybrid	1.70	1.78	N	0	0.00	0.00	0	0.00	N	CLEARWIRE
5.00	90.00	2	1/2" Coax	0.63	0.15	N	2	0.50	0.50	190	0.50	Y	CLEARWIRE
5.00	90.00	2	2" conduit	2.38	3.65	N	2	0.50	0.50	200	0.50	Y	CLEARWIRE
5.00	90.00	6	5/16" (0.31"-7.9mm)	0.31	0.05	N	0	0.00	0.00	0	0.00	N	CLEARWIRE

Segment Properties (Max Len : 5. ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in ³)	Z (in ³)	Weight (lb)
0.00		0.3750	56.580	66.895	26,698.9	24.84	150.88	72.2	929.4	0.0	0.0
5.00		0.3750	55.507	65.618	25,199.0	24.34	148.02	72.8	894.2	0.0	1,127.3
10.00		0.3750	54.434	64.341	23,756.4	23.83	145.16	73.4	859.6	0.0	1,105.6
15.00		0.3750	53.361	63.065	22,369.9	23.33	142.30	74.0	825.7	0.0	1,083.8
20.00		0.3750	52.288	61.788	21,038.5	22.82	139.44	74.6	792.5	0.0	1,062.1
25.00		0.3750	51.216	60.511	19,760.9	22.32	136.57	75.2	760.0	0.0	1,040.4
30.00		0.3750	50.143	59.234	18,536.2	21.81	133.71	75.7	728.1	0.0	1,018.7
35.00		0.3750	49.070	57.957	17,363.1	21.31	130.85	76.3	696.9	0.0	996.9
40.00		0.3750	47.997	56.680	16,240.6	20.81	127.99	76.9	666.5	0.0	975.2
45.00		0.3750	46.924	55.403	15,167.5	20.30	125.13	77.5	636.6	0.0	953.5
46.83	Bot - Section 2	0.3750	46.531	54.935	14,786.3	20.12	124.08	77.7	625.9	0.0	344.2
50.00		0.3750	45.851	54.126	14,142.8	19.80	122.27	78.1	607.5	0.0	1,184.8
53.00	Top - Section 1	0.3750	45.958	54.253	14,242.2	19.85	122.55	78.1	610.4	0.0	1,106.4
55.00		0.3750	45.529	53.742	13,843.8	19.64	121.41	78.3	598.9	0.0	367.5
60.00		0.3750	44.456	52.465	12,880.3	19.14	118.55	78.9	570.7	0.0	903.5
65.00		0.3750	43.383	51.188	11,962.6	18.64	115.69	79.5	543.1	0.0	881.8
70.00		0.3750	42.310	49.912	11,089.5	18.13	112.83	80.1	516.2	0.0	860.1
75.00		0.3750	41.237	48.635	10,260.0	17.63	109.97	80.7	490.0	0.0	838.3
80.00		0.3750	40.165	47.358	9,472.9	17.12	107.11	81.3	464.5	0.0	816.6
85.00		0.3750	39.092	46.081	8,727.1	16.62	104.24	81.9	439.7	0.0	794.9
90.00		0.3750	38.019	44.804	8,021.6	16.11	101.38	82.4	415.6	0.0	773.2
94.92	Bot - Section 3	0.3750	36.964	43.548	7,365.9	15.62	98.57	82.6	392.5	0.0	739.1
95.00		0.3750	36.946	43.527	7,355.1	15.61	98.52	82.6	392.1	0.0	22.8
99.83	Top - Section 2	0.3125	36.534	35.926	5,955.2	18.85	116.91	79.2	321.1	0.0	1,305.1
100.0		0.3125	36.498	35.890	5,937.6	18.83	116.79	79.3	320.4	0.0	20.4
105.0		0.3125	35.425	34.826	5,425.0	18.23	113.36	80.0	301.6	0.0	601.6
107.0		0.3125	34.996	34.401	5,228.5	17.98	111.99	80.2	294.3	0.0	235.6
110.0		0.3125	34.353	33.762	4,942.7	17.62	109.93	80.7	283.4	0.0	347.9
115.0		0.3125	33.280	32.698	4,490.0	17.01	106.50	81.4	265.7	0.0	565.4
120.0		0.3125	32.207	31.634	4,065.8	16.41	103.06	82.1	248.6	0.0	547.3
125.0		0.3125	31.134	30.570	3,669.1	15.80	99.63	82.6	232.1	0.0	529.2
130.0		0.3125	30.061	29.506	3,299.2	15.20	96.20	82.6	216.2	0.0	511.1
135.0		0.3125	28.989	28.442	2,955.0	14.59	92.76	82.6	200.8	0.0	493.0
138.0		0.3125	28.345	27.804	2,760.4	14.23	90.70	82.6	191.8	0.0	287.1
140.0		0.3125	27.916	27.378	2,635.6	13.99	89.33	82.6	186.0	0.0	187.8
145.0		0.3125	26.843	26.314	2,340.0	13.38	85.90	82.6	171.7	0.0	456.8
147.9		0.3125	26.221	25.697	2,179.2	13.03	83.91	82.6	163.7	0.0	256.6
147.9		0.3125	26.217	25.693	2,178.3	13.03	83.89	82.6	163.7	0.0	1.5
25,342.5											

Load Case: 1.2D + 1.0W	117 mph with No Ice	23 Iterations
Gust Response Factor :1.10		
Dead Load Factor :1.20		
Wind Load Factor :1.00		

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		232.3	0.0					0.0	0.0	232.3	0.0	0.0	0.0
5.00		496.4	1,352.7					0.0	0.0	496.4	1,352.7	0.0	0.0
10.00		523.0	1,326.7					0.0	304.1	523.0	1,630.8	0.0	0.0
15.00		520.7	1,300.6					0.0	304.1	520.7	1,604.7	0.0	0.0
20.00		532.2	1,274.5					0.0	304.1	532.2	1,578.7	0.0	0.0
25.00		546.6	1,248.5					0.0	304.1	546.6	1,552.6	0.0	0.0
30.00		556.3	1,222.4					0.0	304.1	556.3	1,526.5	0.0	0.0
35.00		562.4	1,196.3					0.0	304.1	562.4	1,500.5	0.0	0.0
40.00		565.9	1,170.3					0.0	304.1	565.9	1,474.4	0.0	0.0
45.00		387.5	1,144.2					0.0	304.1	387.5	1,448.3	0.0	0.0
46.83	Bot - Section 2	286.5	413.0					0.0	111.5	286.5	524.5	0.0	0.0
50.00		355.2	1,421.8					0.0	192.6	355.2	1,614.4	0.0	0.0
53.00	Top - Section 1	287.7	1,327.6					0.0	182.5	287.7	1,510.1	0.0	0.0
55.00		401.4	441.0					0.0	121.7	401.4	562.6	0.0	0.0
60.00		570.9	1,084.2					0.0	304.1	570.9	1,388.3	0.0	0.0
65.00		566.6	1,058.1					0.0	304.1	566.6	1,362.3	0.0	0.0
70.00		561.3	1,032.1					0.0	304.1	561.3	1,336.2	0.0	0.0
75.00		555.1	1,006.0					0.0	304.1	555.1	1,310.1	0.0	0.0
80.00		548.1	979.9					0.0	304.1	548.1	1,284.1	0.0	0.0
85.00		540.3	953.9					0.0	304.1	540.3	1,258.0	0.0	0.0
90.00	Appurtenance(s)	527.5	927.8	2,369.6	0.0	0.0	1,858.4	0.0	304.1	2,897.1	3,090.4	0.0	0.0
94.92	Bot - Section 3	263.8	886.9					0.0	242.0	263.8	1,128.9	0.0	0.0
95.00		259.2	27.4					0.0	4.1	259.2	31.5	0.0	0.0
99.83	Top - Section 2	263.5	1,566.1					0.0	237.9	263.5	1,803.9	0.0	0.0
100.00	Appurtenance(s)	267.3	24.4	1,882.8	0.0	0.0	2,000.5	0.0	8.2	2,150.1	2,033.2	0.0	0.0
105.00		360.5	721.9					0.0	228.1	360.5	950.0	0.0	0.0
107.00	Appurtenance(s)	253.4	282.7	432.2	0.0	0.0	256.8	0.0	91.2	685.6	630.7	0.0	0.0
110.00		399.3	417.5					0.0	135.6	399.3	553.1	0.0	0.0
115.00	Appurtenance(s)	490.2	678.5	4,048.4	0.0	1,293.5	3,603.7	0.0	226.1	4,538.6	4,508.3	0.0	0.0
120.00		478.7	656.7					0.0	177.2	478.7	834.0	0.0	0.0
125.00	Appurtenance(s)	466.7	635.0	3,867.3	0.0	20.5	3,015.4	0.0	177.2	4,334.0	3,827.6	0.0	0.0
130.00		454.4	613.3					0.0	89.6	454.4	702.9	0.0	0.0
135.00		355.4	591.6					0.0	89.6	355.4	681.2	0.0	0.0
138.00	Appurtenance(s)	217.6	344.5	1,790.9	0.0	0.0	2,016.0	0.0	53.8	2,008.5	2,414.3	0.0	0.0
140.00		297.2	225.3					0.0	18.1	297.2	243.5	0.0	0.0
145.00		330.3	548.1					0.0	45.4	330.3	593.5	0.0	0.0
147.90		119.9	307.9					0.0	26.3	119.9	334.3	0.0	0.0
147.92		0.7	1.8					0.0	0.2	0.7	1.9	0.0	0.0
Totals:										29,793.2	50,182.9	0.00	0.00

Load Case: 1.2D + 1.0W

117 mph with No Ice

23 Iterations

Gust Response Factor :1.10

Dead Load Factor :1.20

Wind Load Factor :1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-52.74	-33.15	0.00	-3,399.15	0.00	3,399.15	4,345.86	1,174.01	5,959.72	5,031.69	0.00	0.00	0.688
5.00	-51.29	-32.81	0.00	-3,233.42	0.00	3,233.42	4,297.95	1,151.60	5,734.40	4,880.60	0.10	-0.18	0.675
10.00	-49.56	-32.43	0.00	-3,069.38	0.00	3,069.38	4,248.67	1,129.19	5,513.42	4,730.12	0.38	-0.35	0.661
15.00	-47.86	-32.05	0.00	-2,907.23	0.00	2,907.23	4,198.03	1,106.78	5,296.78	4,580.35	0.84	-0.53	0.647
20.00	-46.19	-31.64	0.00	-2,746.99	0.00	2,746.99	4,146.02	1,084.37	5,084.48	4,431.38	1.50	-0.71	0.632
25.00	-44.54	-31.22	0.00	-2,588.77	0.00	2,588.77	4,092.65	1,061.97	4,876.53	4,283.29	2.34	-0.89	0.616
30.00	-42.93	-30.77	0.00	-2,432.69	0.00	2,432.69	4,037.92	1,039.56	4,672.92	4,136.18	3.38	-1.07	0.600
35.00	-41.35	-30.31	0.00	-2,278.84	0.00	2,278.84	3,981.83	1,017.15	4,473.65	3,990.14	4.60	-1.26	0.582
40.00	-39.79	-29.83	0.00	-2,127.30	0.00	2,127.30	3,924.37	994.74	4,278.72	3,845.25	6.01	-1.44	0.564
45.00	-38.29	-29.49	0.00	-1,978.14	0.00	1,978.14	3,865.54	972.33	4,088.13	3,701.62	7.61	-1.62	0.545
46.83	-37.73	-29.25	0.00	-1,924.08	0.00	1,924.08	3,843.63	964.11	4,019.34	3,649.29	8.25	-1.68	0.538
50.00	-36.07	-28.91	0.00	-1,831.47	0.00	1,831.47	3,805.35	949.92	3,901.89	3,559.34	9.40	-1.80	0.525
53.00	-34.52	-28.63	0.00	-1,744.73	0.00	1,744.73	3,811.38	952.14	3,920.15	3,573.37	10.57	-1.90	0.498
55.00	-33.92	-28.28	0.00	-1,687.47	0.00	1,687.47	3,786.98	943.18	3,846.70	3,516.80	11.38	-1.98	0.490
60.00	-32.47	-27.75	0.00	-1,546.06	0.00	1,546.06	3,725.02	920.77	3,666.10	3,376.39	13.54	-2.14	0.468
65.00	-31.05	-27.22	0.00	-1,407.29	0.00	1,407.29	3,661.69	898.36	3,489.85	3,237.53	15.87	-2.31	0.444
70.00	-29.67	-26.69	0.00	-1,271.18	0.00	1,271.18	3,597.00	875.95	3,317.94	3,100.32	18.38	-2.47	0.419
75.00	-28.32	-26.15	0.00	-1,137.74	0.00	1,137.74	3,530.95	853.54	3,150.37	2,964.84	21.04	-2.62	0.393
80.00	-26.99	-25.61	0.00	-1,006.99	0.00	1,006.99	3,463.54	831.13	2,987.14	2,831.19	23.86	-2.77	0.364
85.00	-25.71	-25.07	0.00	-878.94	0.00	878.94	3,394.76	808.72	2,828.25	2,699.44	26.84	-2.91	0.334
90.00	-22.72	-22.07	0.00	-753.59	0.00	753.59	3,324.61	786.31	2,673.70	2,569.71	29.96	-3.04	0.301
94.92	-21.58	-21.77	0.00	-645.10	0.00	645.10	3,235.43	764.28	2,525.97	2,430.01	33.16	-3.17	0.273
95.00	-21.55	-21.53	0.00	-643.28	0.00	643.28	3,233.85	763.90	2,523.50	2,427.62	33.21	-3.17	0.272
99.83	-19.74	-21.18	0.00	-539.24	0.00	539.24	2,561.72	630.50	2,062.81	1,907.75	36.48	-3.28	0.291
100.00	-17.81	-18.94	0.00	-535.71	0.00	535.71	2,559.96	629.88	2,058.74	1,904.54	36.59	-3.28	0.289
105.00	-16.86	-18.55	0.00	-441.02	0.00	441.02	2,506.38	611.20	1,938.49	1,808.92	40.09	-3.40	0.251
107.00	-16.25	-17.84	0.00	-403.93	0.00	403.93	2,484.57	603.73	1,891.40	1,771.07	41.53	-3.44	0.235
110.00	-15.70	-17.43	0.00	-350.42	0.00	350.42	2,451.44	592.53	1,821.86	1,714.73	43.71	-3.50	0.212
115.00	-11.47	-12.63	0.00	-261.99	0.00	261.99	2,395.13	573.85	1,708.85	1,622.06	47.43	-3.59	0.167
120.00	-10.65	-12.12	0.00	-198.82	0.00	198.82	2,337.45	555.18	1,599.45	1,531.01	51.23	-3.67	0.135
125.00	-7.10	-7.55	0.00	-138.22	0.00	138.22	2,271.21	536.51	1,493.68	1,437.09	55.10	-3.72	0.100
130.00	-6.43	-7.06	0.00	-100.47	0.00	100.47	2,192.15	517.83	1,391.52	1,338.31	59.02	-3.77	0.078
135.00	-5.77	-6.66	0.00	-65.19	0.00	65.19	2,113.10	499.16	1,292.98	1,243.04	62.99	-3.81	0.055
138.00	-3.49	-4.49	0.00	-45.21	0.00	45.21	2,065.67	487.95	1,235.60	1,187.57	65.39	-3.82	0.040
140.00	-3.27	-4.18	0.00	-36.22	0.00	36.22	2,034.04	480.48	1,198.06	1,151.29	66.99	-3.83	0.033
145.00	-2.70	-3.81	0.00	-15.31	0.00	15.31	1,954.99	461.81	1,106.76	1,063.05	71.01	-3.85	0.016
147.90	-0.12	-1.38	0.00	-4.25	0.00	4.25	1,909.14	450.98	1,055.46	1,013.49	73.34	-3.85	0.004
147.92	0.00	-1.37	0.00	-4.23	0.00	4.23	1,908.87	450.91	1,055.17	1,013.21	73.36	-3.85	0.004

Load Case: 0.9D + 1.0W	117 mph with No Ice (Reduced DL)	23 Iterations
Gust Response Factor :1.10		
Dead Load Factor :0.90		
Wind Load Factor :1.00		

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		232.3	0.0					0.0	0.0	232.3	0.0	0.0	0.0
5.00		496.4	1,014.6					0.0	0.0	496.4	1,014.6	0.0	0.0
10.00		523.0	995.0					0.0	228.1	523.0	1,223.1	0.0	0.0
15.00		520.7	975.5					0.0	228.1	520.7	1,203.6	0.0	0.0
20.00		532.2	955.9					0.0	228.1	532.2	1,184.0	0.0	0.0
25.00		546.6	936.3					0.0	228.1	546.6	1,164.5	0.0	0.0
30.00		556.3	916.8					0.0	228.1	556.3	1,144.9	0.0	0.0
35.00		562.4	897.2					0.0	228.1	562.4	1,125.3	0.0	0.0
40.00		565.9	877.7					0.0	228.1	565.9	1,105.8	0.0	0.0
45.00		387.5	858.1					0.0	228.1	387.5	1,086.2	0.0	0.0
46.83	Bot - Section 2	286.5	309.8					0.0	83.6	286.5	393.4	0.0	0.0
50.00		355.2	1,066.3					0.0	144.5	355.2	1,210.8	0.0	0.0
53.00	Top - Section 1	287.7	995.7					0.0	136.9	287.7	1,132.6	0.0	0.0
55.00		401.4	330.7					0.0	91.2	401.4	422.0	0.0	0.0
60.00		570.9	813.2					0.0	228.1	570.9	1,041.3	0.0	0.0
65.00		566.6	793.6					0.0	228.1	566.6	1,021.7	0.0	0.0
70.00		561.3	774.0					0.0	228.1	561.3	1,002.2	0.0	0.0
75.00		555.1	754.5					0.0	228.1	555.1	982.6	0.0	0.0
80.00		548.1	734.9					0.0	228.1	548.1	963.0	0.0	0.0
85.00		540.3	715.4					0.0	228.1	540.3	943.5	0.0	0.0
90.00	Appurtenance(s)	527.5	695.8	2,369.6	0.0	0.0	1,393.8	0.0	228.1	2,897.1	2,317.8	0.0	0.0
94.92	Bot - Section 3	263.8	665.2					0.0	181.5	263.8	846.6	0.0	0.0
95.00		259.2	20.5					0.0	3.1	259.2	23.6	0.0	0.0
99.83	Top - Section 2	263.5	1,174.5					0.0	178.4	263.5	1,352.9	0.0	0.0
100.00	Appurtenance(s)	267.3	18.3	1,882.8	0.0	0.0	1,500.4	0.0	6.2	2,150.1	1,524.9	0.0	0.0
105.00		360.5	541.4					0.0	171.0	360.5	712.5	0.0	0.0
107.00	Appurtenance(s)	253.4	212.0	432.2	0.0	0.0	192.6	0.0	68.4	685.6	473.0	0.0	0.0
110.00		399.3	313.1					0.0	101.7	399.3	414.9	0.0	0.0
115.00	Appurtenance(s)	490.2	508.8	4,048.4	0.0	1,293.5	2,702.8	0.0	169.6	4,538.6	3,381.2	0.0	0.0
120.00		478.7	492.5					0.0	132.9	478.7	625.5	0.0	0.0
125.00	Appurtenance(s)	466.7	476.3	3,867.3	0.0	20.5	2,261.5	0.0	132.9	4,334.0	2,870.7	0.0	0.0
130.00		454.4	460.0					0.0	67.2	454.4	527.2	0.0	0.0
135.00		355.4	443.7					0.0	67.2	355.4	510.9	0.0	0.0
138.00	Appurtenance(s)	217.6	258.4	1,790.9	0.0	0.0	1,512.0	0.0	40.3	2,008.5	1,810.7	0.0	0.0
140.00		297.2	169.0					0.0	13.6	297.2	182.6	0.0	0.0
145.00		330.3	411.1					0.0	34.0	330.3	445.1	0.0	0.0
147.90		119.9	231.0					0.0	19.7	119.9	250.7	0.0	0.0
147.92		0.7	1.3					0.0	0.1	0.7	1.4	0.0	0.0
Totals:										29,793.2	37,637.1	0.00	0.00

Load Case: 0.9D + 1.0W

117 mph with No Ice (Reduced DL)

23 Iterations

Gust Response Factor :1.10

Dead Load Factor :0.90

Wind Load Factor :1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-39.54	-33.13	0.00	-3,365.01	0.00	3,365.01	4,345.86	1,174.01	5,959.72	5,031.69	0.00	0.00	0.679
5.00	-38.43	-32.75	0.00	-3,199.39	0.00	3,199.39	4,297.95	1,151.60	5,734.40	4,880.60	0.09	-0.17	0.665
10.00	-37.11	-32.33	0.00	-3,035.66	0.00	3,035.66	4,248.67	1,129.19	5,513.42	4,730.12	0.37	-0.35	0.651
15.00	-35.81	-31.91	0.00	-2,874.00	0.00	2,874.00	4,198.03	1,106.78	5,296.78	4,580.35	0.84	-0.53	0.637
20.00	-34.54	-31.48	0.00	-2,714.44	0.00	2,714.44	4,146.02	1,084.37	5,084.48	4,431.38	1.48	-0.71	0.622
25.00	-33.28	-31.02	0.00	-2,557.07	0.00	2,557.07	4,092.65	1,061.97	4,876.53	4,283.29	2.32	-0.88	0.606
30.00	-32.05	-30.54	0.00	-2,401.99	0.00	2,401.99	4,037.92	1,039.56	4,672.92	4,136.18	3.34	-1.06	0.590
35.00	-30.84	-30.05	0.00	-2,249.29	0.00	2,249.29	3,981.83	1,017.15	4,473.65	3,990.14	4.55	-1.24	0.572
40.00	-29.66	-29.55	0.00	-2,099.03	0.00	2,099.03	3,924.37	994.74	4,278.72	3,845.25	5.95	-1.42	0.554
45.00	-28.52	-29.20	0.00	-1,951.27	0.00	1,951.27	3,865.54	972.33	4,088.13	3,701.62	7.53	-1.60	0.535
46.83	-28.09	-28.94	0.00	-1,897.74	0.00	1,897.74	3,843.63	964.11	4,019.34	3,649.29	8.15	-1.66	0.528
50.00	-26.84	-28.60	0.00	-1,806.09	0.00	1,806.09	3,805.35	949.92	3,901.89	3,559.34	9.30	-1.78	0.515
53.00	-25.67	-28.32	0.00	-1,720.28	0.00	1,720.28	3,811.38	952.14	3,920.15	3,573.37	10.45	-1.88	0.489
55.00	-25.21	-27.96	0.00	-1,663.64	0.00	1,663.64	3,786.98	943.18	3,846.70	3,516.80	11.25	-1.95	0.481
60.00	-24.11	-27.42	0.00	-1,523.86	0.00	1,523.86	3,725.02	920.77	3,666.10	3,376.39	13.38	-2.12	0.459
65.00	-23.04	-26.88	0.00	-1,386.78	0.00	1,386.78	3,661.69	898.36	3,489.85	3,237.53	15.69	-2.28	0.436
70.00	-21.99	-26.33	0.00	-1,252.40	0.00	1,252.40	3,597.00	875.95	3,317.94	3,100.32	18.16	-2.43	0.411
75.00	-20.96	-25.79	0.00	-1,120.74	0.00	1,120.74	3,530.95	853.54	3,150.37	2,964.84	20.79	-2.59	0.385
80.00	-19.96	-25.25	0.00	-991.79	0.00	991.79	3,463.54	831.13	2,987.14	2,831.19	23.57	-2.73	0.357
85.00	-18.99	-24.71	0.00	-865.55	0.00	865.55	3,394.76	808.72	2,828.25	2,699.44	26.51	-2.87	0.327
90.00	-16.77	-21.73	0.00	-742.02	0.00	742.02	3,324.61	786.31	2,673.70	2,569.71	29.59	-3.00	0.295
94.92	-15.92	-21.44	0.00	-635.17	0.00	635.17	3,235.43	764.28	2,525.97	2,430.01	32.75	-3.12	0.267
95.00	-15.89	-21.19	0.00	-633.39	0.00	633.39	3,233.85	763.90	2,523.50	2,427.62	32.80	-3.13	0.267
99.83	-14.53	-20.87	0.00	-530.95	0.00	530.95	2,561.72	630.50	2,062.81	1,907.75	36.02	-3.23	0.285
100.00	-13.11	-18.65	0.00	-527.47	0.00	527.47	2,559.96	629.88	2,058.74	1,904.54	36.14	-3.24	0.283
105.00	-12.40	-18.27	0.00	-434.21	0.00	434.21	2,506.38	611.20	1,938.49	1,808.92	39.59	-3.35	0.246
107.00	-11.95	-17.57	0.00	-397.67	0.00	397.67	2,484.57	603.73	1,891.40	1,771.07	41.00	-3.40	0.230
110.00	-11.54	-17.16	0.00	-344.97	0.00	344.97	2,451.44	592.53	1,821.86	1,714.73	43.16	-3.46	0.207
115.00	-8.42	-12.43	0.00	-257.89	0.00	257.89	2,395.13	573.85	1,708.85	1,622.06	46.82	-3.54	0.163
120.00	-7.81	-11.93	0.00	-195.72	0.00	195.72	2,337.45	555.18	1,599.45	1,531.01	50.57	-3.62	0.132
125.00	-5.22	-7.42	0.00	-136.08	0.00	136.08	2,271.21	536.51	1,493.68	1,437.09	54.39	-3.67	0.097
130.00	-4.72	-6.94	0.00	-98.97	0.00	98.97	2,192.15	517.83	1,391.52	1,338.31	58.26	-3.72	0.076
135.00	-4.23	-6.55	0.00	-64.28	0.00	64.28	2,113.10	499.16	1,292.98	1,243.04	62.18	-3.75	0.054
138.00	-2.55	-4.43	0.00	-44.62	0.00	44.62	2,065.67	487.95	1,235.60	1,187.57	64.54	-3.77	0.039
140.00	-2.39	-4.12	0.00	-35.77	0.00	35.77	2,034.04	480.48	1,198.06	1,151.29	66.12	-3.78	0.032
145.00	-1.97	-3.76	0.00	-15.16	0.00	15.16	1,954.99	461.81	1,106.76	1,063.05	70.08	-3.79	0.015
147.90	-0.07	-1.38	0.00	-4.25	0.00	4.25	1,909.14	450.98	1,055.46	1,013.49	72.39	-3.80	0.004
147.92	0.00	-1.37	0.00	-4.23	0.00	4.23	1,908.87	450.91	1,055.17	1,013.21	72.40	-3.80	0.004

Load Case: 1.2D + 1.0Di + 1.0Wi	50 mph with 1.50 in Radial Ice	22 Iterations
Gust Response Factor :1.10	Ice Dead Load Factor :1.00	
Dead Load Factor :1.20		Ice Importance Factor :1.00
Wind Load Factor :1.00		

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		77.1	0.0					0.0	0.0	77.1	0.0	0.0	0.0
5.00		160.0	1,764.1					0.0	0.0	160.0	1,764.1	0.0	0.0
10.00		164.5	1,778.2					0.0	503.6	164.5	2,281.8	0.0	0.0
15.00		164.3	1,767.2					0.0	514.3	164.3	2,281.6	0.0	0.0
20.00		168.3	1,748.1					0.0	521.8	168.3	2,269.9	0.0	0.0
25.00		173.3	1,724.7					0.0	527.7	173.3	2,252.3	0.0	0.0
30.00		176.7	1,698.6					0.0	532.5	176.7	2,231.1	0.0	0.0
35.00		179.1	1,670.7					0.0	536.6	179.1	2,207.3	0.0	0.0
40.00		180.5	1,641.5					0.0	540.2	180.5	2,181.6	0.0	0.0
45.00		123.8	1,611.2					0.0	543.4	123.8	2,154.6	0.0	0.0
46.83	Bot - Section 2	91.6	584.2					0.0	200.0	91.6	784.2	0.0	0.0
50.00		113.7	1,719.5					0.0	346.3	113.7	2,065.8	0.0	0.0
53.00	Top - Section 1	92.2	1,607.8					0.0	329.0	92.2	1,936.8	0.0	0.0
55.00		128.8	626.9					0.0	219.9	128.8	846.8	0.0	0.0
60.00		183.5	1,541.5					0.0	551.3	183.5	2,092.8	0.0	0.0
65.00		182.5	1,508.6					0.0	553.6	182.5	2,062.2	0.0	0.0
70.00		181.2	1,475.3					0.0	555.7	181.2	2,031.0	0.0	0.0
75.00		179.6	1,441.6					0.0	557.7	179.6	1,999.3	0.0	0.0
80.00		177.8	1,407.6					0.0	559.6	177.8	1,967.1	0.0	0.0
85.00		175.7	1,373.3					0.0	561.3	175.7	1,934.6	0.0	0.0
90.00	Appurtenance(s)	172.0	1,338.6	609.8	0.0	0.0	3,412.2	0.0	563.0	781.7	5,313.8	0.0	0.0
94.92	Bot - Section 3	86.1	1,282.4					0.0	427.6	86.1	1,710.0	0.0	0.0
95.00		84.7	34.2					0.0	7.3	84.7	41.5	0.0	0.0
99.83	Top - Section 2	86.1	1,952.7					0.0	421.4	86.1	2,374.0	0.0	0.0
100.00	Appurtenance(s)	87.6	37.8	507.8	0.0	0.0	3,776.7	0.0	14.5	595.4	3,829.0	0.0	0.0
105.00		118.3	1,112.3					0.0	419.0	118.3	1,531.2	0.0	0.0
107.00	Appurtenance(s)	83.3	437.6	136.4	0.0	0.0	496.0	0.0	167.9	219.7	1,101.4	0.0	0.0
110.00		131.6	646.3					0.0	244.9	131.6	891.2	0.0	0.0
115.00	Appurtenance(s)	162.0	1,049.8	1,079.6	0.0	315.9	6,284.8	0.0	408.9	1,241.5	7,743.5	0.0	0.0
120.00		158.7	1,018.4					0.0	231.1	158.7	1,249.5	0.0	0.0
125.00	Appurtenance(s)	155.3	986.7	970.5	0.0	8.0	5,940.6	0.0	231.4	1,125.8	7,158.7	0.0	0.0
130.00		151.8	954.9					0.0	89.6	151.8	1,044.6	0.0	0.0
135.00		119.1	923.0					0.0	89.6	119.1	1,012.7	0.0	0.0
138.00	Appurtenance(s)	73.2	539.8	566.6	0.0	0.0	2,868.9	0.0	53.8	639.7	3,462.6	0.0	0.0
140.00		100.3	353.9					0.0	18.1	100.3	372.1	0.0	0.0
145.00		111.7	858.8					0.0	45.4	111.7	904.1	0.0	0.0
147.90		40.7	484.7					0.0	26.3	40.7	511.0	0.0	0.0
147.92		0.2	2.8					0.0	0.2	0.2	2.9	0.0	0.0
								Totals:		8,867.60	77,598.8	0.00	0.00

Site Number: 302466

Code: ANSI/TIA-222-H

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Site Name: West Service Road, CT

Engineering Number: 13668983_C3_04

7/6/2021 2:55:43 PM

Customer: VERIZON WIRELESS

Load Case: 1.2D + 1.0Di + 1.0Wi

50 mph with 1.50 in Radial Ice

22 Iterations

Gust Response Factor :1.10

Ice Dead Load Factor :1.00

Dead Load Factor :1.20

Ice Importance Factor :1.00

Wind Load Factor :1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-82.93	-9.69	0.00	-998.64	0.00	998.64	4,345.86	1,174.01	5,959.72	5,031.69	0.00	0.00	0.218
5.00	-81.16	-9.61	0.00	-950.17	0.00	950.17	4,297.95	1,151.60	5,734.40	4,880.60	0.03	-0.05	0.214
10.00	-78.87	-9.51	0.00	-902.15	0.00	902.15	4,248.67	1,129.19	5,513.42	4,730.12	0.11	-0.10	0.209
15.00	-76.58	-9.41	0.00	-854.60	0.00	854.60	4,198.03	1,106.78	5,296.78	4,580.35	0.25	-0.16	0.205
20.00	-74.30	-9.30	0.00	-807.54	0.00	807.54	4,146.02	1,084.37	5,084.48	4,431.38	0.44	-0.21	0.200
25.00	-72.04	-9.19	0.00	-761.02	0.00	761.02	4,092.65	1,061.97	4,876.53	4,283.29	0.69	-0.26	0.195
30.00	-69.80	-9.07	0.00	-715.08	0.00	715.08	4,037.92	1,039.56	4,672.92	4,136.18	0.99	-0.32	0.190
35.00	-67.59	-8.94	0.00	-669.75	0.00	669.75	3,981.83	1,017.15	4,473.65	3,990.14	1.35	-0.37	0.185
40.00	-65.40	-8.80	0.00	-625.08	0.00	625.08	3,924.37	994.74	4,278.72	3,845.25	1.77	-0.42	0.179
45.00	-63.24	-8.70	0.00	-581.08	0.00	581.08	3,865.54	972.33	4,088.13	3,701.62	2.24	-0.47	0.173
46.83	-62.45	-8.63	0.00	-565.13	0.00	565.13	3,843.63	964.11	4,019.34	3,649.29	2.42	-0.49	0.171
50.00	-60.38	-8.53	0.00	-537.80	0.00	537.80	3,805.35	949.92	3,901.89	3,559.34	2.76	-0.53	0.167
53.00	-58.44	-8.45	0.00	-512.20	0.00	512.20	3,811.38	952.14	3,920.15	3,573.37	3.11	-0.56	0.159
55.00	-57.59	-8.35	0.00	-495.31	0.00	495.31	3,786.98	943.18	3,846.70	3,516.80	3.35	-0.58	0.156
60.00	-55.49	-8.19	0.00	-453.57	0.00	453.57	3,725.02	920.77	3,666.10	3,376.39	3.98	-0.63	0.149
65.00	-53.43	-8.03	0.00	-412.63	0.00	412.63	3,661.69	898.36	3,489.85	3,237.53	4.67	-0.68	0.142
70.00	-51.39	-7.86	0.00	-372.50	0.00	372.50	3,597.00	875.95	3,317.94	3,100.32	5.40	-0.72	0.135
75.00	-49.39	-7.69	0.00	-333.19	0.00	333.19	3,530.95	853.54	3,150.37	2,964.84	6.18	-0.77	0.126
80.00	-47.42	-7.52	0.00	-294.72	0.00	294.72	3,463.54	831.13	2,987.14	2,831.19	7.01	-0.81	0.118
85.00	-45.48	-7.35	0.00	-257.10	0.00	257.10	3,394.76	808.72	2,828.25	2,699.44	7.89	-0.85	0.109
90.00	-40.18	-6.52	0.00	-220.34	0.00	220.34	3,324.61	786.31	2,673.70	2,569.71	8.80	-0.89	0.098
94.92	-38.47	-6.41	0.00	-188.31	0.00	188.31	3,235.43	764.28	2,525.97	2,430.01	9.74	-0.93	0.089
95.00	-38.42	-6.34	0.00	-187.77	0.00	187.77	3,233.85	763.90	2,523.50	2,427.62	9.76	-0.93	0.089
99.83	-36.05	-6.23	0.00	-157.13	0.00	157.13	2,561.72	630.50	2,062.81	1,907.75	10.72	-0.96	0.097
100.00	-32.23	-5.58	0.00	-156.09	0.00	156.09	2,559.96	629.88	2,058.74	1,904.54	10.75	-0.96	0.095
105.00	-30.70	-5.44	0.00	-128.21	0.00	128.21	2,506.38	611.20	1,938.49	1,808.92	11.78	-1.00	0.083
107.00	-29.60	-5.21	0.00	-117.32	0.00	117.32	2,484.57	603.73	1,891.40	1,771.07	12.20	-1.01	0.078
110.00	-28.71	-5.08	0.00	-101.69	0.00	101.69	2,451.44	592.53	1,821.86	1,714.73	12.84	-1.03	0.071
115.00	-20.99	-3.70	0.00	-75.99	0.00	75.99	2,395.13	573.85	1,708.85	1,622.06	13.93	-1.05	0.056
120.00	-19.74	-3.53	0.00	-57.48	0.00	57.48	2,337.45	555.18	1,599.45	1,531.01	15.05	-1.07	0.046
125.00	-12.60	-2.27	0.00	-39.83	0.00	39.83	2,271.21	536.51	1,493.68	1,437.09	16.18	-1.09	0.033
130.00	-11.56	-2.10	0.00	-28.48	0.00	28.48	2,192.15	517.83	1,391.52	1,338.31	17.33	-1.10	0.027
135.00	-10.55	-1.96	0.00	-17.98	0.00	17.98	2,113.10	499.16	1,292.98	1,243.04	18.49	-1.11	0.019
138.00	-7.10	-1.26	0.00	-12.09	0.00	12.09	2,065.67	487.95	1,235.60	1,187.57	19.20	-1.12	0.014
140.00	-6.73	-1.15	0.00	-9.58	0.00	9.58	2,034.04	480.48	1,198.06	1,151.29	19.67	-1.12	0.012
145.00	-5.83	-1.02	0.00	-3.83	0.00	3.83	1,954.99	461.81	1,106.76	1,063.05	20.84	-1.12	0.007
147.90	-1.72	-0.32	0.00	-0.88	0.00	0.88	1,909.14	450.98	1,055.46	1,013.49	21.53	-1.13	0.002
147.92	0.00	-0.28	0.00	-0.87	0.00	0.87	1,908.87	450.91	1,055.17	1,013.21	21.53	-1.13	0.001

Load Case: 1.0D + 1.0W	Serviceability 60 mph	22 Iterations
Gust Response Factor :1.10		
Dead Load Factor :1.00		
Wind Load Factor :1.00		

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		54.7	0.0					0.0	0.0	54.7	0.0	0.0	0.0
5.00		116.8	1,127.3					0.0	0.0	116.8	1,127.3	0.0	0.0
10.00		123.1	1,105.6					0.0	253.5	123.1	1,359.0	0.0	0.0
15.00		122.5	1,083.8					0.0	253.5	122.5	1,337.3	0.0	0.0
20.00		125.2	1,062.1					0.0	253.5	125.2	1,315.6	0.0	0.0
25.00		128.6	1,040.4					0.0	253.5	128.6	1,293.8	0.0	0.0
30.00		130.9	1,018.7					0.0	253.5	130.9	1,272.1	0.0	0.0
35.00		132.3	996.9					0.0	253.5	132.3	1,250.4	0.0	0.0
40.00		133.1	975.2					0.0	253.5	133.1	1,228.7	0.0	0.0
45.00		91.2	953.5					0.0	253.5	91.2	1,206.9	0.0	0.0
46.83	Bot - Section 2	67.4	344.2					0.0	92.9	67.4	437.1	0.0	0.0
50.00		83.6	1,184.8					0.0	160.5	83.6	1,345.3	0.0	0.0
53.00	Top - Section 1	67.7	1,106.4					0.0	152.1	67.7	1,258.4	0.0	0.0
55.00		94.4	367.5					0.0	101.4	94.4	468.9	0.0	0.0
60.00		134.3	903.5					0.0	253.5	134.3	1,157.0	0.0	0.0
65.00		133.3	881.8					0.0	253.5	133.3	1,135.2	0.0	0.0
70.00		132.1	860.1					0.0	253.5	132.1	1,113.5	0.0	0.0
75.00		130.6	838.3					0.0	253.5	130.6	1,091.8	0.0	0.0
80.00		129.0	816.6					0.0	253.5	129.0	1,070.1	0.0	0.0
85.00		127.1	794.9					0.0	253.5	127.1	1,048.3	0.0	0.0
90.00	Appurtenance(s)	124.1	773.2	557.6	0.0	0.0	1,548.7	0.0	253.5	681.7	2,575.3	0.0	0.0
94.92	Bot - Section 3	62.1	739.1					0.0	201.6	62.1	940.7	0.0	0.0
95.00		61.0	22.8					0.0	3.4	61.0	26.2	0.0	0.0
99.83	Top - Section 2	62.0	1,305.1					0.0	198.2	62.0	1,503.3	0.0	0.0
100.00	Appurtenance(s)	62.9	20.4	443.0	0.0	0.0	1,667.1	0.0	6.8	505.9	1,694.3	0.0	0.0
105.00		84.8	601.6					0.0	190.1	84.8	791.6	0.0	0.0
107.00	Appurtenance(s)	59.6	235.6	101.7	0.0	0.0	214.0	0.0	76.0	161.3	525.6	0.0	0.0
110.00		94.0	347.9					0.0	113.0	94.0	461.0	0.0	0.0
115.00	Appurtenance(s)	115.3	565.4	952.6	0.0	304.4	3,003.1	0.0	188.4	1,068.0	3,756.9	0.0	0.0
120.00		112.6	547.3					0.0	147.7	112.6	695.0	0.0	0.0
125.00	Appurtenance(s)	109.8	529.2	910.0	0.0	4.8	2,512.8	0.0	147.7	1,019.8	3,189.7	0.0	0.0
130.00		106.9	511.1					0.0	74.7	106.9	585.8	0.0	0.0
135.00		83.6	493.0					0.0	74.7	83.6	567.7	0.0	0.0
138.00	Appurtenance(s)	51.2	287.1	421.4	0.0	0.0	1,680.0	0.0	44.8	472.6	2,011.9	0.0	0.0
140.00		69.9	187.8					0.0	15.1	69.9	202.9	0.0	0.0
145.00		77.7	456.8					0.0	37.8	77.7	494.6	0.0	0.0
147.90		28.2	256.6					0.0	21.9	28.2	278.5	0.0	0.0
147.92		0.2	1.5					0.0	0.1	0.2	1.6	0.0	0.0
Totals:										7,010.42	41,819.0	0.00	0.00

Site Number: 302466

Code: ANSI/TIA-222-H

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Site Name: West Service Road, CT

Engineering Number: 13668983_C3_04

7/6/2021 2:55:46 PM

Customer: VERIZON WIRELESS

Load Case: 1.0D + 1.0W

Serviceability 60 mph

22 Iterations

Gust Response Factor :1.10

Dead Load Factor :1.00

Wind Load Factor :1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-43.99	-7.80	0.00	-794.99	0.00	794.99	4,345.86	1,174.01	5,959.72	5,031.69	0.00	0.00	0.168
5.00	-42.86	-7.71	0.00	-756.01	0.00	756.01	4,297.95	1,151.60	5,734.40	4,880.60	0.02	-0.04	0.165
10.00	-41.49	-7.62	0.00	-717.46	0.00	717.46	4,248.67	1,129.19	5,513.42	4,730.12	0.09	-0.08	0.161
15.00	-40.15	-7.52	0.00	-679.38	0.00	679.38	4,198.03	1,106.78	5,296.78	4,580.35	0.20	-0.12	0.158
20.00	-38.83	-7.42	0.00	-641.79	0.00	641.79	4,146.02	1,084.37	5,084.48	4,431.38	0.35	-0.17	0.154
25.00	-37.53	-7.31	0.00	-604.69	0.00	604.69	4,092.65	1,061.97	4,876.53	4,283.29	0.55	-0.21	0.150
30.00	-36.26	-7.21	0.00	-568.11	0.00	568.11	4,037.92	1,039.56	4,672.92	4,136.18	0.79	-0.25	0.146
35.00	-35.00	-7.09	0.00	-532.09	0.00	532.09	3,981.83	1,017.15	4,473.65	3,990.14	1.08	-0.29	0.142
40.00	-33.77	-6.98	0.00	-496.62	0.00	496.62	3,924.37	994.74	4,278.72	3,845.25	1.41	-0.34	0.138
45.00	-32.56	-6.90	0.00	-461.74	0.00	461.74	3,865.54	972.33	4,088.13	3,701.62	1.78	-0.38	0.133
46.83	-32.12	-6.84	0.00	-449.10	0.00	449.10	3,843.63	964.11	4,019.34	3,649.29	1.93	-0.39	0.131
50.00	-30.77	-6.76	0.00	-427.45	0.00	427.45	3,805.35	949.92	3,901.89	3,559.34	2.20	-0.42	0.128
53.00	-29.51	-6.69	0.00	-407.17	0.00	407.17	3,811.38	952.14	3,920.15	3,573.37	2.47	-0.44	0.122
55.00	-29.04	-6.61	0.00	-393.79	0.00	393.79	3,786.98	943.18	3,846.70	3,516.80	2.66	-0.46	0.120
60.00	-27.88	-6.48	0.00	-360.76	0.00	360.76	3,725.02	920.77	3,666.10	3,376.39	3.16	-0.50	0.114
65.00	-26.74	-6.36	0.00	-328.35	0.00	328.35	3,661.69	898.36	3,489.85	3,237.53	3.71	-0.54	0.109
70.00	-25.63	-6.23	0.00	-296.57	0.00	296.57	3,597.00	875.95	3,317.94	3,100.32	4.29	-0.58	0.103
75.00	-24.53	-6.10	0.00	-265.42	0.00	265.42	3,530.95	853.54	3,150.37	2,964.84	4.92	-0.61	0.097
80.00	-23.46	-5.98	0.00	-234.91	0.00	234.91	3,463.54	831.13	2,987.14	2,831.19	5.58	-0.65	0.090
85.00	-22.41	-5.85	0.00	-205.03	0.00	205.03	3,394.76	808.72	2,828.25	2,699.44	6.27	-0.68	0.083
90.00	-19.84	-5.15	0.00	-175.79	0.00	175.79	3,324.61	786.31	2,673.70	2,569.71	7.00	-0.71	0.074
94.92	-18.90	-5.08	0.00	-150.48	0.00	150.48	3,235.43	764.28	2,525.97	2,430.01	7.75	-0.74	0.068
95.00	-18.87	-5.02	0.00	-150.06	0.00	150.06	3,233.85	763.90	2,523.50	2,427.62	7.76	-0.74	0.068
99.83	-17.37	-4.94	0.00	-125.80	0.00	125.80	2,561.72	630.50	2,062.81	1,907.75	8.52	-0.77	0.073
100.00	-15.68	-4.42	0.00	-124.97	0.00	124.97	2,559.96	629.88	2,058.74	1,904.54	8.55	-0.77	0.072
105.00	-14.89	-4.33	0.00	-102.88	0.00	102.88	2,506.38	611.20	1,938.49	1,808.92	9.37	-0.79	0.063
107.00	-14.36	-4.16	0.00	-94.23	0.00	94.23	2,484.57	603.73	1,891.40	1,771.07	9.70	-0.80	0.059
110.00	-13.90	-4.07	0.00	-81.75	0.00	81.75	2,451.44	592.53	1,821.86	1,714.73	10.21	-0.82	0.053
115.00	-10.16	-2.95	0.00	-61.11	0.00	61.11	2,395.13	573.85	1,708.85	1,622.06	11.08	-0.84	0.042
120.00	-9.47	-2.83	0.00	-46.38	0.00	46.38	2,337.45	555.18	1,599.45	1,531.01	11.97	-0.86	0.034
125.00	-6.29	-1.76	0.00	-32.25	0.00	32.25	2,271.21	536.51	1,493.68	1,437.09	12.87	-0.87	0.025
130.00	-5.71	-1.64	0.00	-23.45	0.00	23.45	2,192.15	517.83	1,391.52	1,338.31	13.79	-0.88	0.020
135.00	-5.14	-1.55	0.00	-15.22	0.00	15.22	2,113.10	499.16	1,292.98	1,243.04	14.72	-0.89	0.015
138.00	-3.14	-1.05	0.00	-10.57	0.00	10.57	2,065.67	487.95	1,235.60	1,187.57	15.28	-0.89	0.010
140.00	-2.94	-0.98	0.00	-8.47	0.00	8.47	2,034.04	480.48	1,198.06	1,151.29	15.65	-0.89	0.009
145.00	-2.44	-0.89	0.00	-3.58	0.00	3.58	1,954.99	461.81	1,106.76	1,063.05	16.59	-0.90	0.005
147.90	-0.17	-0.33	0.00	-1.00	0.00	1.00	1,909.14	450.98	1,055.46	1,013.49	17.13	-0.90	0.001
147.92	0.00	-0.32	0.00	-0.99	0.00	0.99	1,908.87	450.91	1,055.17	1,013.21	17.14	-0.90	0.001

Equivalent Lateral Forces Method Analysis

Spectral Response Acceleration for Short Period (S_s):	0.19
Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.05
Long-Period Transition Period (T_L):	6
Importance Factor (I_E):	1.00
Site Coefficient F_a :	1.60
Site Coefficient F_v :	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.20
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.09
Seismic Response Coefficient (C_s):	0.03
Upper Limit C_s	0.03
Lower Limit C_s	0.03
Period based on Rayleigh Method (sec):	2.15
Redundancy Factor (p):	1.00
Seismic Force Distribution Exponent (k):	1.83
Total Unfactored Dead Load:	44.00 k
Seismic Base Shear (E):	1.32 k

Load Case 1.2D + 1.0Ev + 1.0Eh

Seismic

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
37	147.91	2	15	0.000	0	2
36	146.45	279	2,500	0.016	21	345
35	142.50	495	4,223	0.026	35	613
34	139.00	203	1,655	0.010	14	252
33	136.50	332	2,620	0.016	22	411
32	132.50	568	4,244	0.027	35	704
31	127.50	586	4,083	0.026	34	726
30	122.50	677	4,385	0.027	36	839
29	117.50	695	4,173	0.026	35	862
28	112.50	754	4,181	0.026	35	934
27	108.50	461	2,393	0.015	20	571
26	106.00	312	1,550	0.010	13	386
25	102.50	792	3,704	0.023	31	981
24	99.92	27	121	0.001	1	34
23	97.42	1,503	6,411	0.040	53	1,864
22	94.96	26	107	0.001	1	33
21	92.46	941	3,647	0.023	30	1,166
20	87.50	1,027	3,599	0.023	30	1,273
19	82.50	1,048	3,301	0.021	27	1,300
18	77.50	1,070	3,006	0.019	25	1,327
17	72.50	1,092	2,715	0.017	22	1,353
16	67.50	1,114	2,431	0.015	20	1,380
15	62.50	1,135	2,153	0.013	18	1,407
14	57.50	1,157	1,885	0.012	16	1,434
13	54.00	469	681	0.004	6	581

12	51.50	1,258	1,677	0.011	14	1,560
11	48.42	1,345	1,601	0.010	13	1,668
10	45.92	437	472	0.003	4	542
9	42.50	1,207	1,132	0.007	9	1,496
8	37.50	1,229	917	0.006	8	1,523
7	32.50	1,250	719	0.005	6	1,550
6	27.50	1,272	539	0.003	4	1,577
5	22.50	1,294	380	0.002	3	1,604
4	17.50	1,316	244	0.002	2	1,631
3	12.50	1,337	134	0.001	1	1,658
2	7.50	1,359	54	0.000	0	1,685
1	2.50	1,127	6	0.000	0	1,397
Andrew DB844H90E-XY	147.92	112	1,024	0.006	8	139
Andrew 844G65VTZASX	147.92	64	585	0.004	5	79
Flat Platform w/ Han	147.90	2,000	18,277	0.115	151	2,479
Generic 48" x 4" Pan	138.00	180	1,449	0.009	12	223
Flat Low Profile Pla	138.00	1,500	12,079	0.076	100	1,860
Ericsson KRY 112 144	125.00	33	222	0.001	2	41
Ericsson Radio 4449	125.00	225	1,512	0.009	13	279
Ericsson RRUS 4415 B	125.00	138	928	0.006	8	171
Ericsson Air6449 B41	125.00	312	2,097	0.013	17	387
Ericsson AIR 21, 1.3	125.00	275	1,845	0.012	15	340
Ericsson AIR32 B66Aa	125.00	397	2,666	0.017	22	492
Round T-Arm	125.00	750	5,042	0.032	42	930
RFS APXVAARR24_43-U-	125.00	384	2,579	0.016	21	476
Samsung B2/B66A RRH-	115.00	253	1,462	0.009	12	314
Samsung B5/B13 RRH-B	115.00	211	1,218	0.008	10	261
Raycap RCMDC-6627-PF	115.00	64	369	0.002	3	79
Samsung MT6407-77A	115.00	245	1,413	0.009	12	303
Amphenol Antel BXA-7	115.00	17	98	0.001	1	21
Amphenol Antel BXA-7	115.00	34	196	0.001	2	42
Commscope SBNHH-1D65	115.00	304	1,756	0.011	15	377
Generic Flat Low Pro	115.00	1,875	10,825	0.068	90	2,324
Antel BCD-87010 ____	107.00	26	134	0.001	1	33
Generic Flat Stand-O	107.00	188	949	0.006	8	232
Alcatel-Lucent RRH2x	100.00	317	1,420	0.009	12	393
Alcatel-Lucent 1900M	100.00	180	805	0.005	7	223
Generic Round T-Arm	100.00	938	4,194	0.026	35	1,162
Commscope NNVV-65B-R	100.00	232	1,039	0.007	9	288
DragonWave Horizon C	90.00	21	78	0.000	1	26
NextNet BTS-2500	90.00	105	388	0.002	3	130
Generic 18" x 18" x	90.00	21	78	0.000	1	26
Nokia 2.5G MAA - AAH	90.00	311	1,147	0.007	9	385
Andrew VHLP2-18	90.00	54	199	0.001	2	67
DragonWave A-ANT-18G	90.00	99	366	0.002	3	123
Generic Round T-Arm	90.00	938	3,460	0.022	29	1,162
		43,995	159,558	1.000	1,320	54,540

Load Case 0.9D - 1.0Ev + 1.0Eh

Seismic (Reduced DL)

Segment	Height Above Base (ft)	Weight (lb)	W _z (lb-ft)	C _{vx}	Horizontal Force (lb)	Vertical Force (lb)
37	147.91	2	15	0.000	0	1
36	146.45	279	2,500	0.016	21	240
35	142.50	495	4,223	0.026	35	425
34	139.00	203	1,655	0.010	14	175
33	136.50	332	2,620	0.016	22	286
32	132.50	568	4,244	0.027	35	488
31	127.50	586	4,083	0.026	34	504
30	122.50	677	4,385	0.027	36	582
29	117.50	695	4,173	0.026	35	598

28	112.50	754	4,181	0.026	35	648
27	108.50	461	2,393	0.015	20	397
26	106.00	312	1,550	0.010	13	268
25	102.50	792	3,704	0.023	31	681
24	99.92	27	121	0.001	1	23
23	97.42	1,503	6,411	0.040	53	1,293
22	94.96	26	107	0.001	1	23
21	92.46	941	3,647	0.023	30	809
20	87.50	1,027	3,599	0.023	30	883
19	82.50	1,048	3,301	0.021	27	902
18	77.50	1,070	3,006	0.019	25	921
17	72.50	1,092	2,715	0.017	22	939
16	67.50	1,114	2,431	0.015	20	958
15	62.50	1,135	2,153	0.013	18	977
14	57.50	1,157	1,885	0.012	16	995
13	54.00	469	681	0.004	6	403
12	51.50	1,258	1,677	0.011	14	1,083
11	48.42	1,345	1,601	0.010	13	1,157
10	45.92	437	472	0.003	4	376
9	42.50	1,207	1,132	0.007	9	1,038
8	37.50	1,229	917	0.006	8	1,057
7	32.50	1,250	719	0.005	6	1,076
6	27.50	1,272	539	0.003	4	1,094
5	22.50	1,294	380	0.002	3	1,113
4	17.50	1,316	244	0.002	2	1,132
3	12.50	1,337	134	0.001	1	1,150
2	7.50	1,359	54	0.000	0	1,169
1	2.50	1,127	6	0.000	0	970
Andrew DB844H90E-XY	147.92	112	1,024	0.006	8	96
Andrew 844G65VTZASX	147.92	64	585	0.004	5	55
Flat Platform w/ Han	147.90	2,000	18,277	0.115	151	1,721
Generic 48" x 4" Pan	138.00	180	1,449	0.009	12	155
Flat Low Profile Pla	138.00	1,500	12,079	0.076	100	1,290
Ericsson KRY 112 144	125.00	33	222	0.001	2	28
Ericsson Radio 4449	125.00	225	1,512	0.009	13	194
Ericsson RRUS 4415 B	125.00	138	928	0.006	8	119
Ericsson Air6449 B41	125.00	312	2,097	0.013	17	268
Ericsson AIR 21, 1.3	125.00	275	1,845	0.012	15	236
Ericsson AIR32 B66Aa	125.00	397	2,666	0.017	22	341
Round T-Arm	125.00	750	5,042	0.032	42	645
RFS APXVAARR24_43-U-	125.00	384	2,579	0.016	21	330
Samsung B2/B66A RRH-	115.00	253	1,462	0.009	12	218
Samsung B5/B13 RRH-B	115.00	211	1,218	0.008	10	181
Raycap RCMD-6627-PF	115.00	64	369	0.002	3	55
Samsung MT6407-77A	115.00	245	1,413	0.009	12	211
Amphenol Antel BXA-7	115.00	17	98	0.001	1	15
Amphenol Antel BXA-7	115.00	34	196	0.001	2	29
Commscope SBNHH-1D65	115.00	304	1,756	0.011	15	262
Generic Flat Low Pro	115.00	1,875	10,825	0.068	90	1,613
Antel BCD-87010 ____	107.00	26	134	0.001	1	23
Generic Flat Stand-O	107.00	188	949	0.006	8	161
Alcatel-Lucent RRH2x	100.00	317	1,420	0.009	12	273
Alcatel-Lucent 1900M	100.00	180	805	0.005	7	155
Generic Round T-Arm	100.00	938	4,194	0.026	35	807
Commscope NNVV-65B-R	100.00	232	1,039	0.007	9	200
DragonWave Horizon C	90.00	21	78	0.000	1	18
NextNet BTS-2500	90.00	105	388	0.002	3	90
Generic 18" x 18" x	90.00	21	78	0.000	1	18
Nokia 2.5G MAA - AAH	90.00	311	1,147	0.007	9	267
Andrew VHLP2-18	90.00	54	199	0.001	2	46
DragonWave A-ANT-18G	90.00	99	366	0.002	3	85
Generic Round T-Arm	90.00	938	3,460	0.022	29	807
		43,995	159,558	1.000	1,320	37,850

Load Case 1.2D + 1.0Ev + 1.0Eh

Seismic

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-53.14	-1.32	0.00	-153.36	0.00	153.36	4,345.86	1,174.01	5,959.72	5,031.69	0.00	0.00	0.043
5.00	-51.46	-1.33	0.00	-146.74	0.00	146.74	4,297.95	1,151.60	5,734.40	4,880.60	0.00	-0.01	0.042
10.00	-49.80	-1.33	0.00	-140.10	0.00	140.10	4,248.67	1,129.19	5,513.42	4,730.12	0.02	-0.02	0.041
15.00	-48.17	-1.34	0.00	-133.42	0.00	133.42	4,198.03	1,106.78	5,296.78	4,580.35	0.04	-0.02	0.041
20.00	-46.56	-1.34	0.00	-126.73	0.00	126.73	4,146.02	1,084.37	5,084.48	4,431.38	0.07	-0.03	0.040
25.00	-44.99	-1.34	0.00	-120.02	0.00	120.02	4,092.65	1,061.97	4,876.53	4,283.29	0.11	-0.04	0.039
30.00	-43.44	-1.34	0.00	-113.30	0.00	113.30	4,037.92	1,039.56	4,672.92	4,136.18	0.15	-0.05	0.038
35.00	-41.91	-1.34	0.00	-106.59	0.00	106.59	3,981.83	1,017.15	4,473.65	3,990.14	0.21	-0.06	0.037
40.00	-40.42	-1.33	0.00	-99.90	0.00	99.90	3,924.37	994.74	4,278.72	3,845.25	0.28	-0.07	0.036
45.00	-39.87	-1.33	0.00	-93.22	0.00	93.22	3,865.54	972.33	4,088.13	3,701.62	0.35	-0.07	0.036
46.83	-38.21	-1.32	0.00	-90.78	0.00	90.78	3,843.63	964.11	4,019.34	3,649.29	0.38	-0.08	0.035
50.00	-36.65	-1.31	0.00	-86.60	0.00	86.60	3,805.35	949.92	3,901.89	3,559.34	0.43	-0.08	0.034
53.00	-36.07	-1.30	0.00	-82.67	0.00	82.67	3,811.38	952.14	3,920.15	3,573.37	0.49	-0.09	0.033
55.00	-34.63	-1.29	0.00	-80.06	0.00	80.06	3,786.98	943.18	3,846.70	3,516.80	0.52	-0.09	0.032
60.00	-33.22	-1.27	0.00	-73.61	0.00	73.61	3,725.02	920.77	3,666.10	3,376.39	0.62	-0.10	0.031
65.00	-31.84	-1.26	0.00	-67.24	0.00	67.24	3,661.69	898.36	3,489.85	3,237.53	0.73	-0.11	0.029
70.00	-30.49	-1.24	0.00	-60.95	0.00	60.95	3,597.00	875.95	3,317.94	3,100.32	0.85	-0.12	0.028
75.00	-29.16	-1.21	0.00	-54.78	0.00	54.78	3,530.95	853.54	3,150.37	2,964.84	0.97	-0.12	0.027
80.00	-27.86	-1.18	0.00	-48.72	0.00	48.72	3,463.54	831.13	2,987.14	2,831.19	1.11	-0.13	0.025
85.00	-26.59	-1.16	0.00	-42.80	0.00	42.80	3,394.76	808.72	2,828.25	2,699.44	1.25	-0.14	0.024
90.00	-23.50	-1.07	0.00	-37.02	0.00	37.02	3,324.61	786.31	2,673.70	2,569.71	1.39	-0.14	0.021
94.92	-23.47	-1.07	0.00	-31.74	0.00	31.74	3,235.43	764.28	2,525.97	2,430.01	1.54	-0.15	0.020
95.00	-21.61	-1.02	0.00	-31.66	0.00	31.66	3,233.85	763.90	2,523.50	2,427.62	1.55	-0.15	0.020
99.83	-21.57	-1.02	0.00	-26.74	0.00	26.74	2,561.72	630.50	2,062.81	1,907.75	1.70	-0.15	0.022
100.00	-18.53	-0.92	0.00	-26.57	0.00	26.57	2,559.96	629.88	2,058.74	1,904.54	1.70	-0.15	0.021
105.00	-18.14	-0.90	0.00	-21.99	0.00	21.99	2,506.38	611.20	1,938.49	1,808.92	1.87	-0.16	0.019
107.00	-17.30	-0.87	0.00	-20.18	0.00	20.18	2,484.57	603.73	1,891.40	1,771.07	1.94	-0.16	0.018
110.00	-16.37	-0.84	0.00	-17.56	0.00	17.56	2,451.44	592.53	1,821.86	1,714.73	2.04	-0.17	0.017
115.00	-11.79	-0.65	0.00	-13.37	0.00	13.37	2,395.13	573.85	1,708.85	1,622.06	2.22	-0.17	0.013
120.00	-10.95	-0.61	0.00	-10.14	0.00	10.14	2,337.45	555.18	1,599.45	1,531.01	2.40	-0.17	0.011
125.00	-7.11	-0.42	0.00	-7.09	0.00	7.09	2,271.21	536.51	1,493.68	1,437.09	2.58	-0.18	0.008
130.00	-6.40	-0.39	0.00	-4.97	0.00	4.97	2,192.15	517.83	1,391.52	1,338.31	2.77	-0.18	0.007
135.00	-5.99	-0.36	0.00	-3.03	0.00	3.03	2,113.10	499.16	1,292.98	1,243.04	2.96	-0.18	0.005
138.00	-3.66	-0.23	0.00	-1.94	0.00	1.94	2,065.67	487.95	1,235.60	1,187.57	3.07	-0.18	0.003
140.00	-3.04	-0.19	0.00	-1.48	0.00	1.48	2,034.04	480.48	1,198.06	1,151.29	3.15	-0.18	0.003
145.00	-2.70	-0.17	0.00	-0.50	0.00	0.50	1,954.99	461.81	1,106.76	1,063.05	3.34	-0.18	0.002
147.90	0.00	0.00	0.00	0.00	0.00	0.00	1,909.14	450.98	1,055.46	1,013.49	3.45	-0.18	0.000
147.92	0.00	0.00	0.00	0.00	0.00	0.00	1,908.87	450.91	1,055.17	1,013.21	3.45	-0.18	0.000

Load Case 0.9D - 1.0Ev + 1.0Eh

Seismic (Reduced DL)

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
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Site Number: 302466

Code: ANSI/TIA-222-H

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Site Name: West Service Road, CT

Engineering Number: 13668983_C3_04

7/6/2021 2:55:47 PM

Customer: VERIZON WIRELESS

0.00	-36.88	-1.32	0.00	-151.45	0.00	151.45	4,345.86	1,174.01	5,959.72	5,031.69	0.00	0.00	0.039
5.00	-35.71	-1.33	0.00	-144.84	0.00	144.84	4,297.95	1,151.60	5,734.40	4,880.60	0.00	-0.01	0.038
10.00	-34.56	-1.33	0.00	-138.21	0.00	138.21	4,248.67	1,129.19	5,513.42	4,730.12	0.02	-0.02	0.037
15.00	-33.43	-1.33	0.00	-131.57	0.00	131.57	4,198.03	1,106.78	5,296.78	4,580.35	0.04	-0.02	0.037
20.00	-32.31	-1.33	0.00	-124.91	0.00	124.91	4,146.02	1,084.37	5,084.48	4,431.38	0.07	-0.03	0.036
25.00	-31.22	-1.33	0.00	-118.24	0.00	118.24	4,092.65	1,061.97	4,876.53	4,283.29	0.11	-0.04	0.035
30.00	-30.14	-1.33	0.00	-111.58	0.00	111.58	4,037.92	1,039.56	4,672.92	4,136.18	0.15	-0.05	0.034
35.00	-29.09	-1.33	0.00	-104.94	0.00	104.94	3,981.83	1,017.15	4,473.65	3,990.14	0.21	-0.06	0.034
40.00	-28.05	-1.32	0.00	-98.31	0.00	98.31	3,924.37	994.74	4,278.72	3,845.25	0.27	-0.07	0.033
45.00	-27.67	-1.32	0.00	-91.72	0.00	91.72	3,865.54	972.33	4,088.13	3,701.62	0.34	-0.07	0.032
46.83	-26.51	-1.30	0.00	-89.30	0.00	89.30	3,843.63	964.11	4,019.34	3,649.29	0.37	-0.08	0.031
50.00	-25.43	-1.29	0.00	-85.17	0.00	85.17	3,805.35	949.92	3,901.89	3,559.34	0.43	-0.08	0.031
53.00	-25.03	-1.29	0.00	-81.30	0.00	81.30	3,811.38	952.14	3,920.15	3,573.37	0.48	-0.09	0.029
55.00	-24.03	-1.27	0.00	-78.73	0.00	78.73	3,786.98	943.18	3,846.70	3,516.80	0.52	-0.09	0.029
60.00	-23.06	-1.26	0.00	-72.37	0.00	72.37	3,725.02	920.77	3,666.10	3,376.39	0.62	-0.10	0.028
65.00	-22.10	-1.24	0.00	-66.09	0.00	66.09	3,661.69	898.36	3,489.85	3,237.53	0.72	-0.11	0.026
70.00	-21.16	-1.22	0.00	-59.90	0.00	59.90	3,597.00	875.95	3,317.94	3,100.32	0.84	-0.11	0.025
75.00	-20.24	-1.19	0.00	-53.82	0.00	53.82	3,530.95	853.54	3,150.37	2,964.84	0.96	-0.12	0.024
80.00	-19.34	-1.16	0.00	-47.87	0.00	47.87	3,463.54	831.13	2,987.14	2,831.19	1.09	-0.13	0.022
85.00	-18.45	-1.13	0.00	-42.05	0.00	42.05	3,394.76	808.72	2,828.25	2,699.44	1.23	-0.13	0.021
90.00	-16.31	-1.05	0.00	-36.37	0.00	36.37	3,324.61	786.31	2,673.70	2,569.71	1.37	-0.14	0.019
94.92	-16.29	-1.05	0.00	-31.19	0.00	31.19	3,235.43	764.28	2,525.97	2,430.01	1.52	-0.15	0.018
95.00	-15.00	-1.00	0.00	-31.10	0.00	31.10	3,233.85	763.90	2,523.50	2,427.62	1.52	-0.15	0.017
99.83	-14.97	-1.00	0.00	-26.28	0.00	26.28	2,561.72	630.50	2,062.81	1,907.75	1.67	-0.15	0.020
100.00	-12.86	-0.90	0.00	-26.11	0.00	26.11	2,559.96	629.88	2,058.74	1,904.54	1.68	-0.15	0.019
105.00	-12.59	-0.89	0.00	-21.61	0.00	21.61	2,506.38	611.20	1,938.49	1,808.92	1.84	-0.16	0.017
107.00	-12.01	-0.86	0.00	-19.83	0.00	19.83	2,484.57	603.73	1,891.40	1,771.07	1.91	-0.16	0.016
110.00	-11.36	-0.82	0.00	-17.26	0.00	17.26	2,451.44	592.53	1,821.86	1,714.73	2.01	-0.16	0.015
115.00	-8.18	-0.64	0.00	-13.15	0.00	13.15	2,395.13	573.85	1,708.85	1,622.06	2.18	-0.17	0.012
120.00	-7.60	-0.60	0.00	-9.97	0.00	9.97	2,337.45	555.18	1,599.45	1,531.01	2.36	-0.17	0.010
125.00	-4.93	-0.42	0.00	-6.97	0.00	6.97	2,271.21	536.51	1,493.68	1,437.09	2.54	-0.17	0.007
130.00	-4.44	-0.38	0.00	-4.89	0.00	4.89	2,192.15	517.83	1,391.52	1,338.31	2.73	-0.18	0.006
135.00	-4.16	-0.36	0.00	-2.98	0.00	2.98	2,113.10	499.16	1,292.98	1,243.04	2.91	-0.18	0.004
138.00	-2.54	-0.23	0.00	-1.91	0.00	1.91	2,065.67	487.95	1,235.60	1,187.57	3.02	-0.18	0.003
140.00	-2.11	-0.19	0.00	-1.45	0.00	1.45	2,034.04	480.48	1,198.06	1,151.29	3.10	-0.18	0.002
145.00	-1.87	-0.17	0.00	-0.49	0.00	0.49	1,954.99	461.81	1,106.76	1,063.05	3.29	-0.18	0.001
147.90	0.00	0.00	0.00	0.00	0.00	0.00	1,909.14	450.98	1,055.46	1,013.49	3.40	-0.18	0.000
147.92	0.00	0.00	0.00	0.00	0.00	0.00	1,908.87	450.91	1,055.17	1,013.21	3.40	-0.18	0.000

Site Number: 302466

Code: ANSI/TIA-222-H

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Site Name: West Service Road, CT

Engineering Number: 13668983_C3_04

7/6/2021 2:55:47 PM

Customer: VERIZON WIRELESS

Analysis Summary

Load Case	Reactions						Max Usage	
	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.0W	33.15	0.00	52.74	0.00	0.00	3399.15	0.00	0.69
0.9D + 1.0W	33.13	0.00	39.54	0.00	0.00	3365.01	0.00	0.68
1.2D + 1.0Di + 1.0Wi	9.69	0.00	82.93	0.00	0.00	998.64	0.00	0.22
1.2D + 1.0Ev + 1.0Eh	1.32	0.00	53.14	0.00	0.00	153.36	0.00	0.04
0.9D - 1.0Ev + 1.0Eh	1.32	0.00	36.88	0.00	0.00	151.45	0.00	0.04
1.0D + 1.0W	7.80	0.00	43.99	0.00	0.00	794.99	0.00	0.17



Maser Consulting Connecticut
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Antenna Mount Analysis Report and PMI Requirements

Mount ReAnalysis-VZW

SMART Tool Project #: 10079717
Maser Consulting Connecticut Project #: 21777452A REV 1

July 2, 2021

Site Information

Site ID: 467518-VZW / HARTFORD N CT
Site Name: HARTFORD N CT
Carrier Name: Verizon Wireless
Address: 305 West Service Rd
Hartford, Connecticut 06120
Hartford County
Latitude: 41.798055°
Longitude: -72.655833°

Structure Information

Tower Type: 180-Ft Self Support
Mount Type: 14.00-Ft Platform

FUZE ID # 16274265

Analysis Results

Platform: 97.7% Pass

***Contractor PMI Requirements:

Included at the end of this MA report

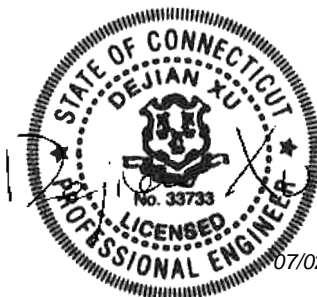
Available & Submitted via portal at <https://pmi.vzwsmart.com>

Contractor - Please Review Specific Site PMI Requirements Upon Award

Requirements also Noted on Mount Modification Drawings

Requirements may also be Noted on A & E drawings

Report Prepared By: Jared Adkins



07/02/2021

Executive Summary:

The objective of this report is to determine the capacity of the antenna support mount at the subject facility for the final wireless telecommunications configuration, per the applicable codes and standards. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

This analysis is inclusive of the mount structure only and does not address the structural capacity of the supporting structure. This mounting frame was not analyzed as an anchor attachment point for fall protection. All climbing activities are required to have a fall protection plan completed by a competent person.

Sources of Information:

Document Type	Remarks
<i>Radio Frequency Data Sheet (RFDS)</i>	<i>Verizon RFDS, Site ID: 324054, dated March 16, 2021</i>
<i>Mount Mapping Report</i>	<i>RKS Design & Engineering LLC., Site ID: ATC:302466 Dated March 29, 2021</i>
<i>Previous Construction Drawings</i>	<i>American Tower Corp., Site ID: 302466, dated August 28, 2018</i>
<i>Closeout Photos</i>	<i>Dated May 7, 2021</i>

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT} : 117 mph Ice Wind Speed (3-sec. Gust): 50 mph Design Ice Thickness: 1.50 in Risk Category: II Exposure Category: C Topographic Category: 1 Topographic Feature Considered: N/A Topographic Method: N/A Ground Elevation Factor, K_e : 0.999
Seismic Parameters:	S_s : 0.186 S_1 : 0.055
Maintenance Parameters:	Wind Speed (3-sec. Gust): 30 mph Maintenance Live Load, L_v : 250 lbs. Maintenance Live Load, L_m : 500 lbs.
Analysis Software:	RISA-3D (V17)

Final Loading Configuration:

The following equipment has been considered for the analysis of the mount:

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
113.50	115.00	6	Commscope	SBNHH-1D65B	Retained
		2	Amphenol Antel	BXA-70063-6CF-EDIN-4	
		1	Amphenol Antel	BXA-70063-6CF-EDIN-2	
		3	Samsung	B2/B66A RRH-BR049	
		3	Samsung	B5/B13 RRH-BR04C	
		1	Raycap	RRFDC-3315-PF-48	
		3	Samsung	MT6407-77A	Added

The recent mount mapping reported existing OVP units. It is acceptable to install up to any three (3) of the OVP model numbers listed below as required at any location other than the mount face without affecting the structural capacity of the mount. If OVP units are installed on the mount face, a mount re-analysis may be required unless replacing an existing OVP.

Model Number	Ports	AKA
DB-B1-6C-12AB-0Z	6	OVP-6
RVZDC-6627-PF-48	12	OVP-12

Standard Conditions:

1. All engineering services are performed on the basis that the information provided to Maser Consulting Connecticut and used in this analysis is current and correct. The existing equipment loading has been applied at locations determined from the supplied documentation. Any deviation from the loading locations specified in this report shall be communicated to Maser Consulting Connecticut to verify deviation will not adversely impact the analysis.
2. Mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer’s specifications.

Obvious safety and structural issues/deficiencies noticed at the time of the mount mapping and reported in the Mount Mapping Report are assumed to be corrected and documented as part of the PMI process and are not considered in the mount analysis.

The mount analysis and the mount mapping are not a condition assessment of the mount. Proper maintenance and condition assessments are still required post analysis.

3. For mount analyses completed from other data sources (including new replacement mounts) and not specifically mapped by Maser Consulting Connecticut, the mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer’s specifications.
4. All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.
5. The mount was checked up to, and including, the bolts that fasten it to the mount collar/attachment and threaded rod connections in collar members if applicable. Local deformation and interaction between the mount collar/attachment and the supporting tower structure are outside the scope of this analysis.

6. All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. Maser Consulting Connecticut is not responsible for the conclusion, opinions, and recommendations made by others based on the information supplied.
7. Structural Steel Grades have been assumed as follows, if applicable, unless otherwise noted in this analysis:
 - o Channel, Solid Round, Angle, Plate ASTM A36 (Gr. 36)
 - o HSS (Rectangular) ASTM 500 (Gr. B-46)
 - o Pipe ASTM A53 (Gr. B-35)
 - o Threaded Rod F1554 (Gr. 36)
 - o Bolts ASTM A325

Discrepancies between in-field conditions and the assumptions listed above may render this analysis invalid unless explicitly approved by Maser Consulting Connecticut.

Analysis Results:

Component	Utilization %	Pass/Fail
Standoff	44.6%	Pass
Grating Angle	10.8%	Pass
Cross Members	47.6%	Pass
Face Horizontal	97.7%	Pass
Mount Pipe	44.9%	Pass
MOD Support Rail	42.8%	Pass
MOD Face Vertical	6.7%	Pass
Connection Check	93.5%	Pass

Structure Rating – (Controlling Utilization of all Components)	97.7%
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Recommendation:

The existing mount is **SUFFICIENT** for the final loading configuration and do not require modifications.

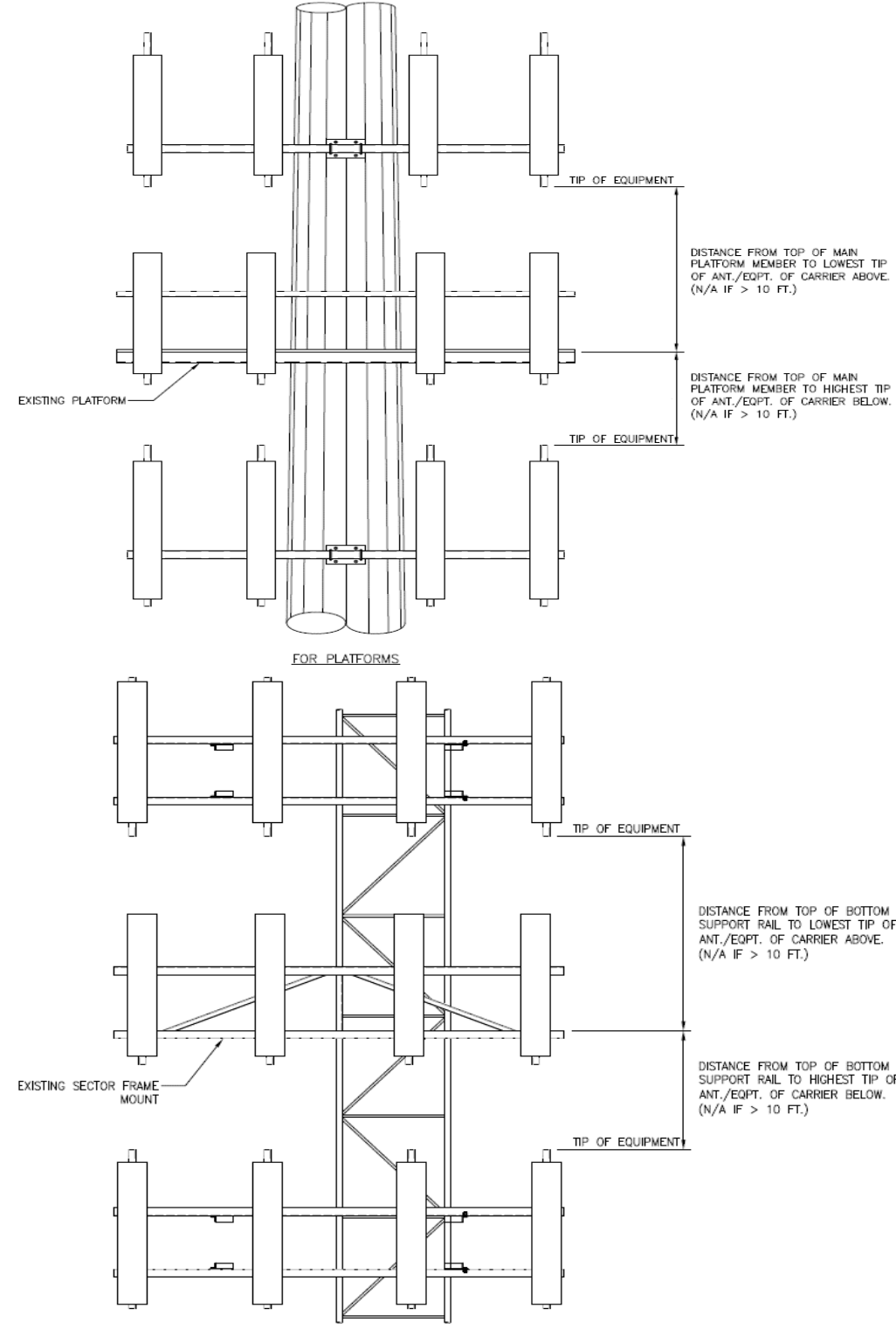
ANSI/ASSP rigging plan review services compliant with the requirements of ANSI/TIA 322 are available for a Construction Class IV site or other, if required. Separate review fees will apply.

Attachments:

1. Mount Photos
2. Mount Mapping Report (for reference only)
3. Analysis Calculations
- 4. Contractor Required Post Installation Inspection (PMI) Report Deliverables**
5. Antenna Placement Diagrams
6. TIA 222-H Wind Speed Usage Letter



Mount Azimuth (Degree) for Each Sector				Tower Leg Azimuth (Degree) for Each Sector		Sector B										
Sector A:	30.00	Deg	Leg A:		Deg	Ant _{1a}	B66a RRH 4X45	11.80	7.20	26.00		118.5	13.00	-6.80		164
Sector B:	150.00	Deg	Leg B:		Deg	Ant _{1b}	SBNHH-1D65B	12.00	7.00	72.00		116.917	32.00	10.50	150.00	16, 164
Sector C:	270.00	Deg	Leg C:		Deg	Ant _{1c}										
Sector D:		Deg	Leg D:		Deg	Ant _{2a}	B13 RRH4X30	12.00	7.50	21.00		117.708	22.50	-7.00		165
Climbing Facility Information						Ant _{2b}	BXA-70063-6CF-EDIN	11.20	5.20	71.00		116.792	33.50	9.50	150.00	16, 165
Location:	90.00	Deg	N/A			Ant _{2c}										
Climbing Facility	Corrosion Type:		N/A			Ant _{3a}										
	Access:		Climbing path was unobstructed.			Ant _{3b}	SBNHH-1D65B	12.00	7.00	72.00		116.917	32.00	8.50	150.00	16, 166
	Condition:		Good condition.			Ant _{3c}										
						Ant _{4a}										
						Ant _{4b}	BXA-70063-6CF-EDIN	11.20	5.20	71.00		116.667	35.00	8.50	150.00	16, 166, 167
						Ant _{4c}										
						Ant _{5a}										
						Ant _{5b}										
						Ant _{5c}										
						Ant on Standoff										
						Ant on Standoff										
						Ant on Tower										
						Ant on Tower										
Sector C																
						Ant _{1a}	B66a RRH 4X45	11.80	7.20	26.00		118.5	13.00	-6.80		168
						Ant _{1b}	SBNHH-1D65B	12.00	7.00	72.00		116.917	32.00	10.50	260.00	22, 168
						Ant _{1c}										
						Ant _{2a}	B13 RRH4X30	12.00	7.50	21.00		117.708	22.50	-7.00		169
						Ant _{2b}	BXA-70063-6CF-EDIN	11.20	5.20	71.00		116.792	33.50	9.50	270.00	22, 169
						Ant _{2c}										
						Ant _{3a}										
						Ant _{3b}	SBNHH-1D65B	12.00	7.00	72.00		116.917	32.00	8.50	270.00	22, 170
						Ant _{3c}										
						Ant _{4a}										
						Ant _{4b}	BXA-70063-6CF-EDIN	11.20	5.20	71.00		116.667	35.00	8.50	260.00	22, 171
						Ant _{4c}										
						Ant _{5a}										
						Ant _{5b}										
						Ant _{5c}										
						Ant on Standoff										
						Ant on Standoff										
						Ant on Tower										
						Ant on Tower										
Sector D																
						Ant _{1a}										
						Ant _{1b}										
						Ant _{1c}										
						Ant _{2a}										
						Ant _{2b}										
						Ant _{2c}										
						Ant _{3a}										
						Ant _{3b}										
						Ant _{3c}										
						Ant _{4a}										
						Ant _{4b}										
						Ant _{4c}										
						Ant _{5a}										
						Ant _{5b}										
						Ant _{5c}										
						Ant on Standoff										
						Ant on Standoff										
						Ant on Tower										
						Ant on Tower										



Observed Safety and Structural Issues During the Mount Mapping		
Issue #	Description of Issue	Photo #

1	COAX TOTAL (18): (12) FH 1 5/8, (6) 1.55"Ø	
2		
3		
4		
5		
6		
7		
8		

Mapping Notes

1. Please report any visible structural or safety issues observed on the antenna mounts (Damaged members, loose connections, tilting mounts, safety climb issues, etc.)
2. If the thickness of the existing pipes or tubing can't be obtained from a general tool (such as Caliper), please use an ultrasonic measurement tool (thickness gauge) to measure the thickness.
3. Please create all required detail sketches of the mounts and insert them into the "Sketches" tab.
4. Please measure and enter the bolt sizes and types under the Members Box in the spreadsheet of the mount type.
5. Take and label the photos of the tower, mounts, connections, antennas and all measurements. Minimum 50 photos are required.
6. Please measure and report the size and length of all existing antenna mounting pipes.
7. Please measure and report the antenna information for all sectors.
8. Don't delete or rearrange any sheet or contents of any sheet from this mapping form.

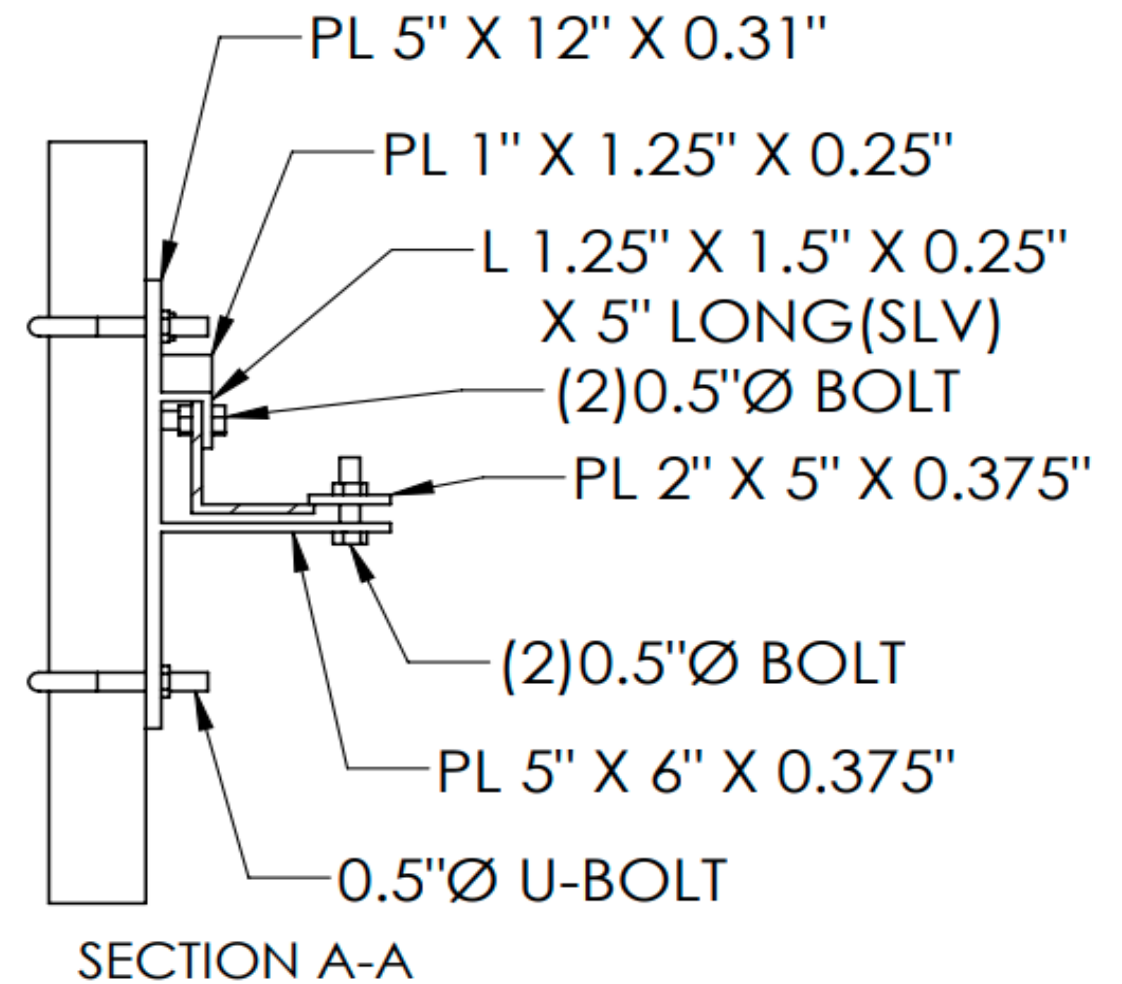
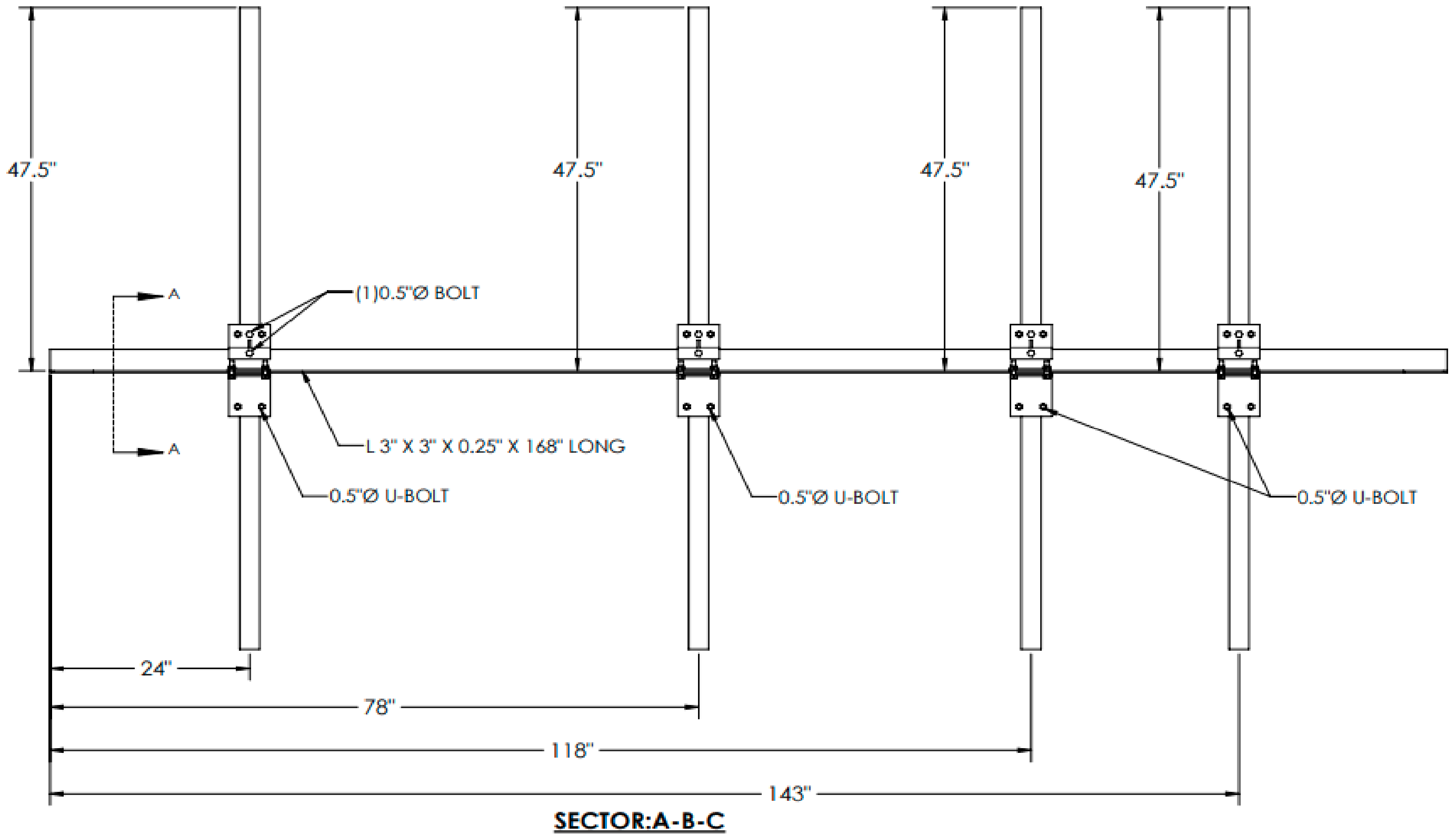
Standard Conditions

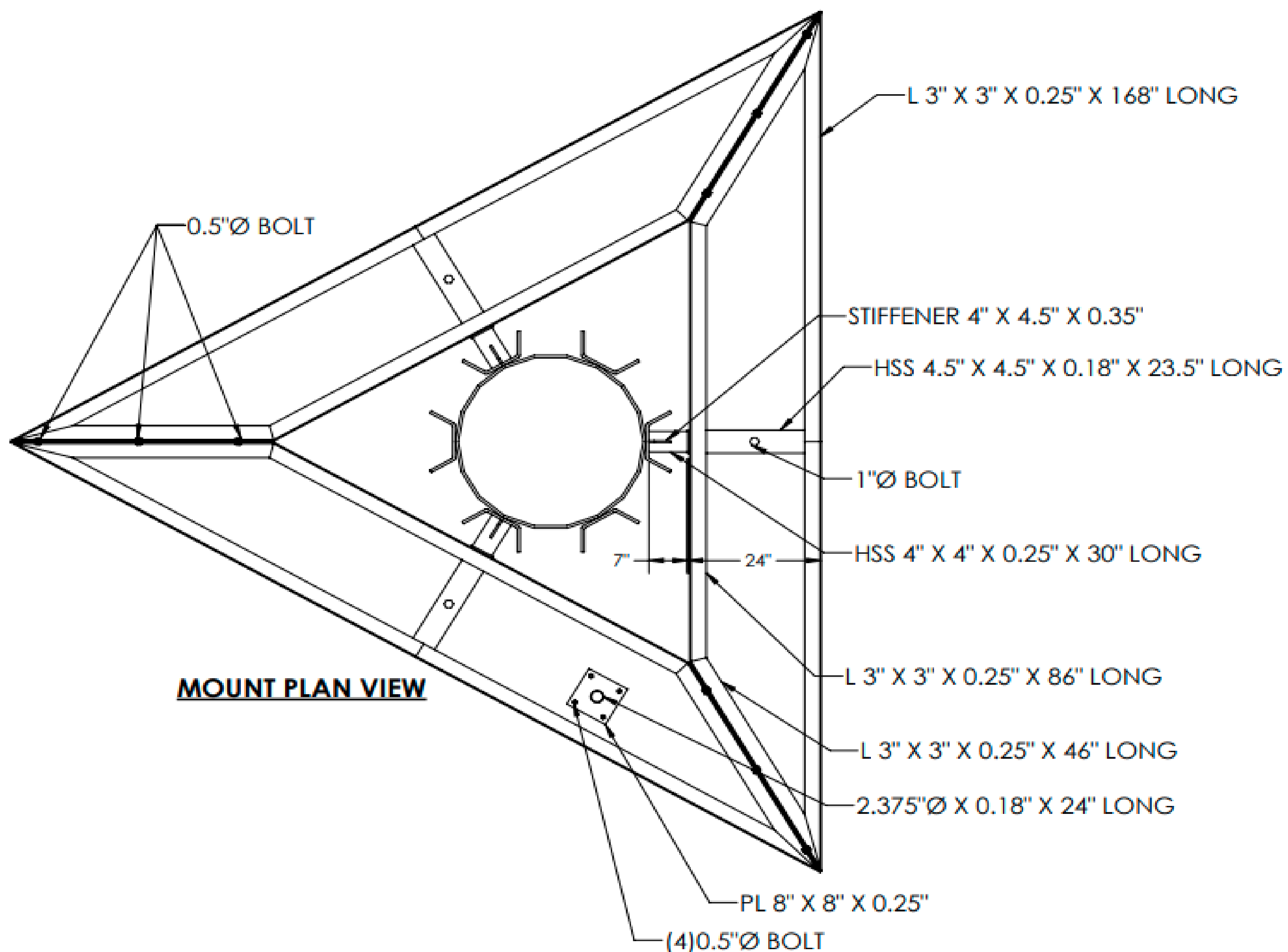
1. Obvious safety and structural issues/deficiencies noticed at the time of the mount mapping are to be reported in this mapping. However, this mount mapping is not a condition assessment of the mount.

Antenna Mount Mapping Form (PATENT PENDING)			FCC #
			1279925
Tower Owner:	ATC	Mapping Date:	3/29/2021
Site Name:	ATC: UNKNOWN, VZW: Hartford N Ct.	Tower Type:	Monopole
Site Number or ID:	ATC: 302466	Tower Height (Ft.):	180
Mapping Contractor:	RKS Design & Engineering LLC.	Mount Elevation (Ft.):	115.75

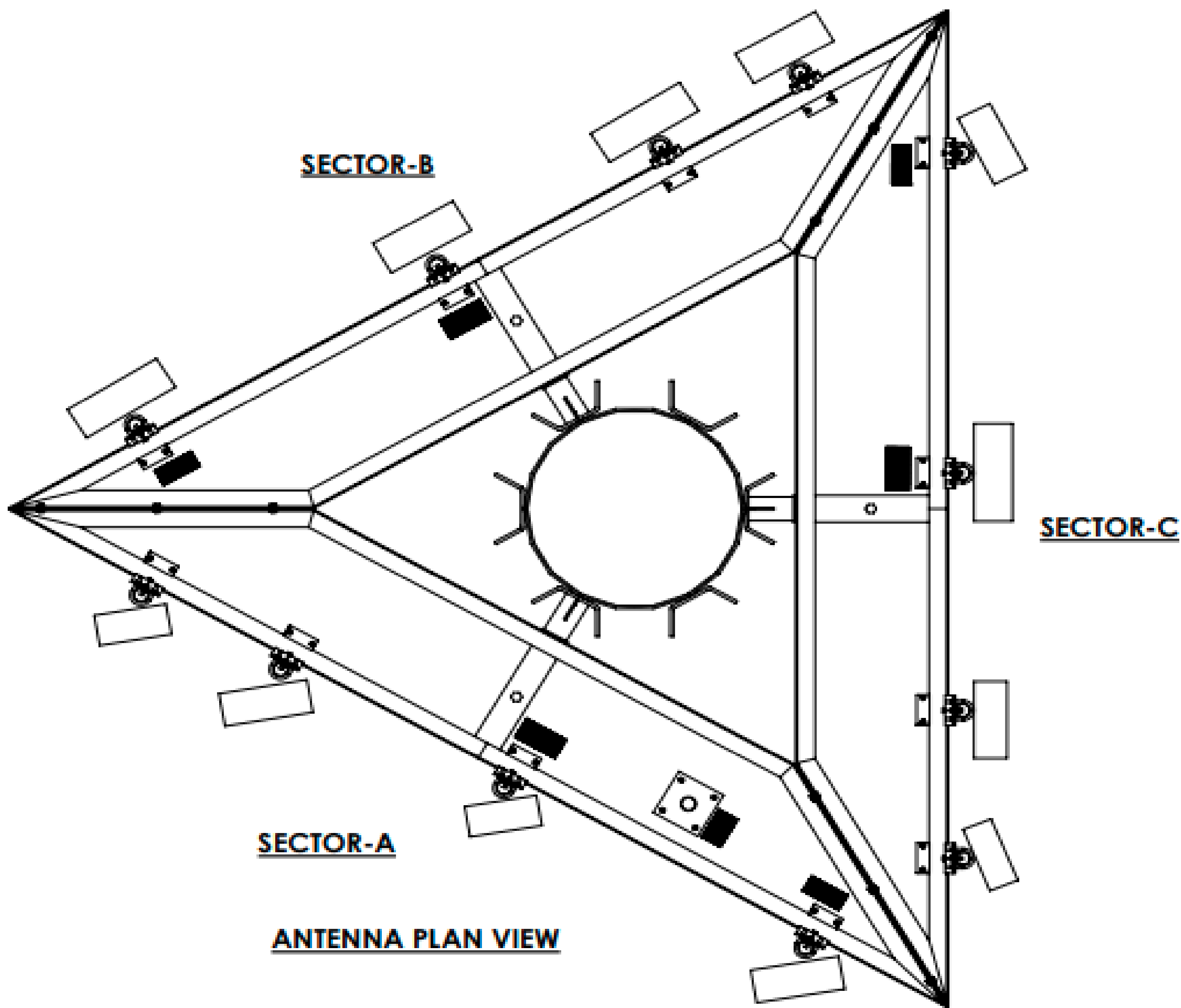
This antenna mapping form is the property of TES and under **PATENT PENDING**. The formation contained herein is considered confidential in nature and is to be used only for the specific customer it was intended for. Reproduction, transmission, publication, modification or disclosure by any method is prohibited except by express written permission of TES. All means and methods are the responsibility of the contractor and the work shall be compliant with ANSI/ASSE A 10.48, OSHA, FCC, FAA and other safety requirements that may apply. TES is not warranting the usability of the safety climb as it must be assessed prior to each use in compliance with OSHA requirements.

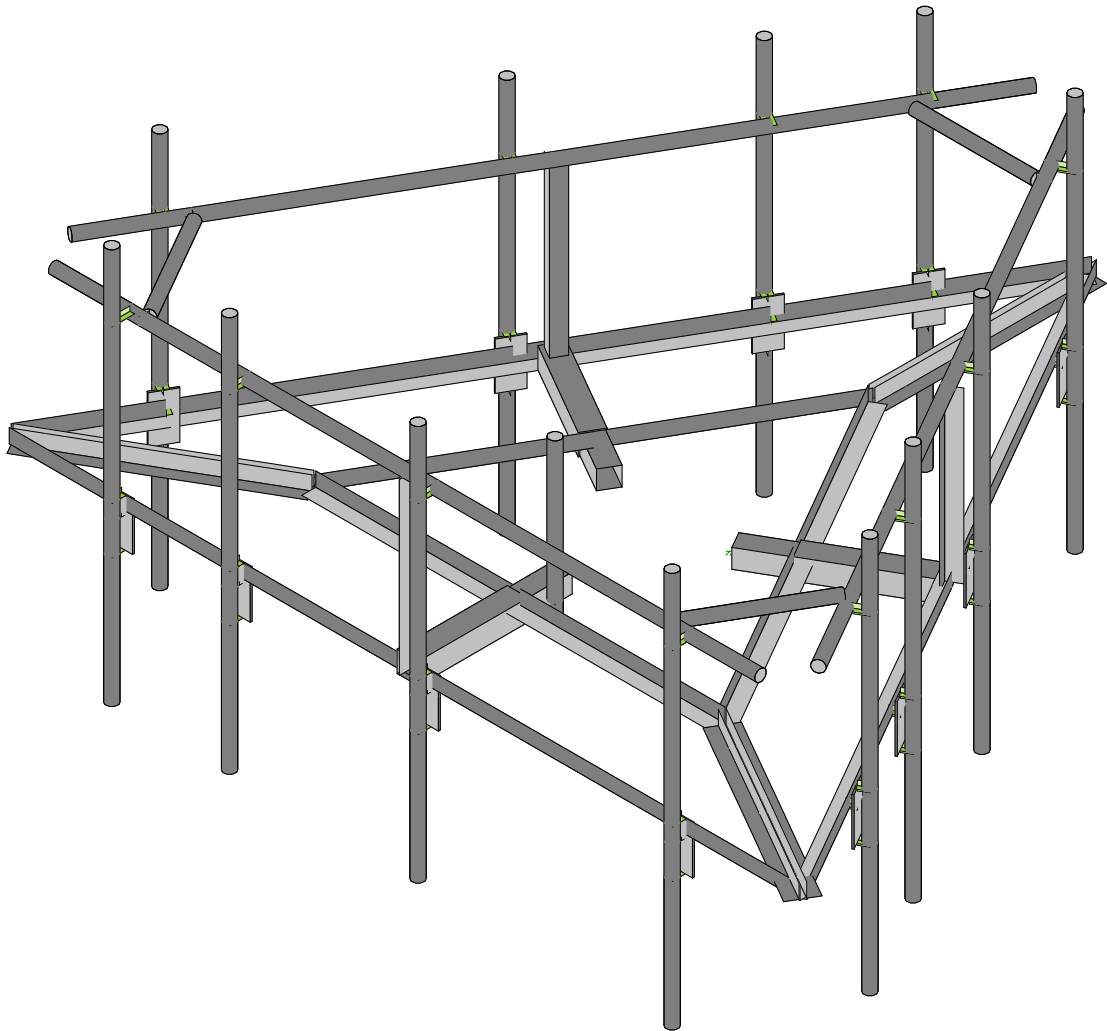
Please Insert Sketches of the Antenna Mount



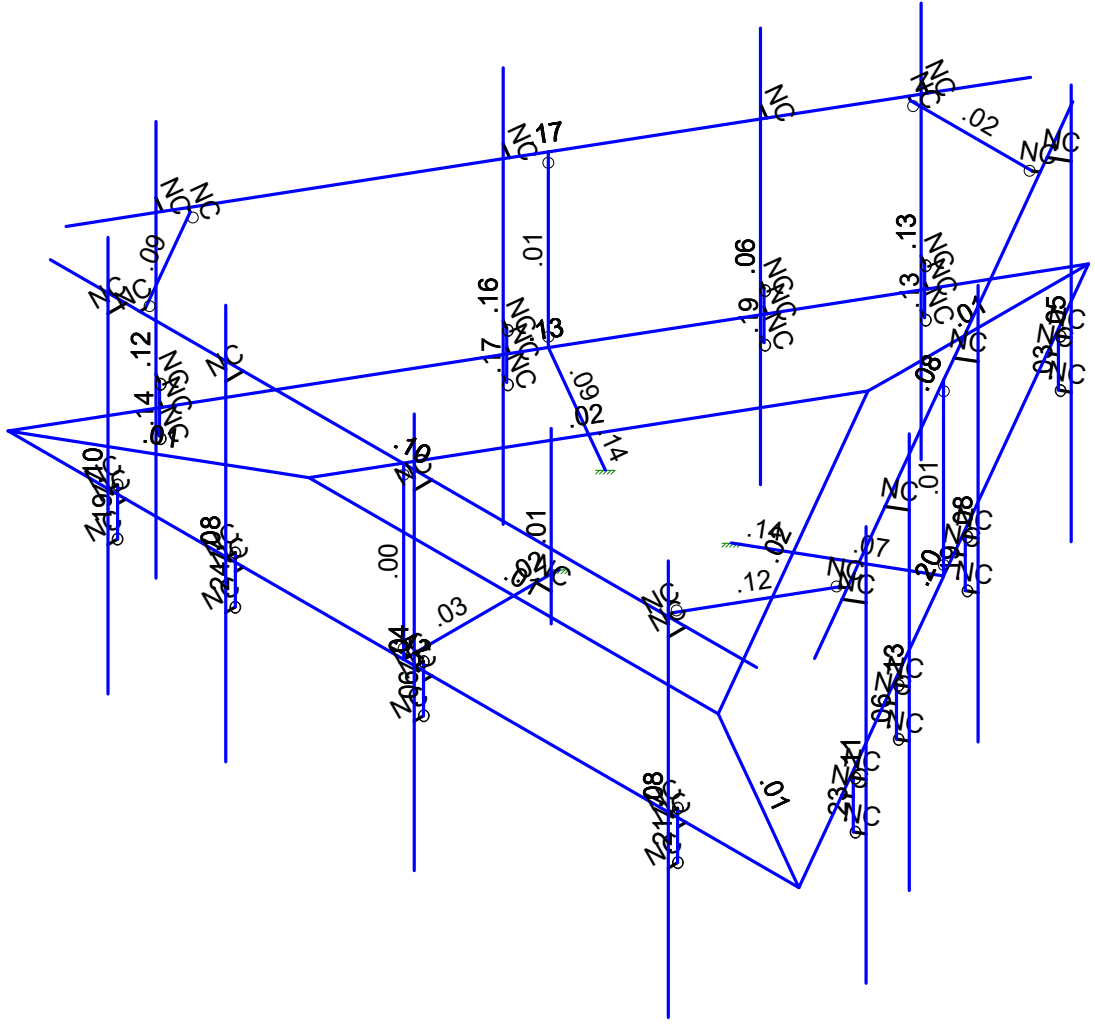
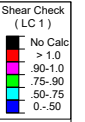


MOUNT PLAN VIEW





Maser Consulting	467518-VZW_MT_LO_H	SK - 2
		July 2, 2021 at 12:41 PM
		467518-VZW_MT_LO_H-MSKI.r3d



Member Shear Checks Displayed
Results for LC 1, 1.2D+1.0Wo (0 Deg)

Maser Consulting		SK - 4
	467518-VZW_MT_LO_H	July 2, 2021 at 12:42 PM
		467518-VZW_MT_LO_H-MSKI.r3d

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I Î	T ÚHÇ	Z	FHÈ I	FÌ
I Ī	T ÚHÇ	Tç	ÈÈI	FÌ
I Ì	T ÚHÓ	Ý	ÈÈH	FÌ
I J	T ÚHÓ	Z	FFÈ Ì	FÌ
I €	T ÚHÓ	Tç	ÈÈI	FÌ
I F	T ÚHÓ	Ý	ÈÈH	FÌ
I G	T ÚHÓ	Z	FFÈ Ì	FÌ
I H	T ÚHÓ	Tç	ÈÈI	FÌ
I I	T ÚÇÈ	Ý	ÈÈÍ	FÌ
I Í	T ÚÇÈ	Z	FHÈ HG	FÌ
I Ī	T ÚÇÈ	Tç	ÈÈI	FÌ
I Ì	T ÚGÓ	Ý	ÈÈG	FÌ
I I	T ÚGÓ	Z	FÈÈ Ĝ	FÌ
I J	T ÚGÓ	Tç	ÈÈI	FÌ
I €	T ÚGÓ	Ý	ÈÈG	FÌ
I F	T ÚGÓ	Z	FÈÈ Ĝ	FÌ
I G	T ÚGÓ	Tç	ÈÈI	FÌ
I H	UXÚ	Ý	ÈÈG H	Ì
I I	UXÚ	Z	FÌÈ Ì	Ì
I Í	UXÚ	Tç	È	Ì
I Î	T ÚFÇÈ	Ý	ÈÈF	FÌ
I Ī	T ÚFÇÈ	Z	FÌÈ H	FÌ
I Ì	T ÚFÇÈ	Tç	ÈÈI	FÌ
I J	T ÚFÇÈ	Ý	ÈÈF	Ì€
I €	T ÚFÇÈ	Z	FÌÈ H	Ì€
I F	T ÚFÇÈ	Tç	ÈÈI	Ì€
I G	T ÚFÓ	Ý	ÈÈÈ	FÌ
I H	T ÚFÓ	Z	FÈÈ Í	FÌ
I I	T ÚFÓ	Tç	ÈÈI	FÌ
I Í	T ÚFÓ	Ý	ÈÈÈ	Ì€
I Î	T ÚFÓ	Z	FÈÈ Í	Ì€
I Ī	T ÚFÓ	Tç	ÈÈI	Ì€
I Ì	T ÚFÓ	Ý	ÈÈÈ	FÌ
I J	T ÚFÓ	Z	FÈÈ Í	FÌ
I €	T ÚFÓ	Tç	ÈÈI	FÌ
I F	T ÚFÓ	Ý	ÈÈÈ	Ì€
I G	T ÚFÓ	Z	FÈÈ Í	Ì€
I H	T ÚFÓ	Tç	ÈÈI	Ì€



Ô{ } əˆ K T æ ʌ/ ʌŌ{ } • ˆ | ǎ *
 Ô • ǎ } ʌ! K
 R ǎ ʌ ˆ { ʌ ʌ! K
 T [ʌ ʌ/ ʌ ǎ ǎ ʌ K I I I I I F I È X Z Y ' T V ' Š U ' P

R | ʌ Ğ Ğ Ğ F
 F G H Ā Ú T
 Ō @ & ʌ ʌ / ʌ Ō K ' ' ' '

A Ya Vyf 8 jghf vi hYX @ UXg ʁ6 @ ((: Ghfi Wh fyK c `fi \$ 8 Yj Hf 17 cbhpi YXL

	T ^ (ʌ ʌ / ʌ ǎ ʌ ʌ)	Ō ʌ ʌ / ʌ ǎ ʌ ʌ)	Ú ǎ ʌ / ʌ ǎ ʌ ʌ)	ǎ ʌ ʌ / ʌ ǎ ʌ ʌ)	ǎ ʌ ʌ / ʌ ǎ ʌ ʌ)	ǎ ʌ ʌ / ʌ ǎ ʌ ʌ)	ǎ ʌ ʌ / ʌ ǎ ʌ ʌ)
İ	Tİ	Y	I Ę H	I Ę H	€	ǎ F Ę Ę	
İ	Tİ	Z	€	€	€	ǎ F Ę Ę	
J	Tİ	Y	I Ę H	I Ę H	€	ǎ F Ę Ę	
F€	Tİ	Z	€	€	€	ǎ F Ę Ę	
FF	Tİ Ğ	Y	€	€	€	ǎ F Ę Ę	
FG	Tİ Ğ	Z	€	€	€	ǎ F Ę Ę	
FH	Tİ Ğ	Y	€	€	€	ǎ F Ę Ę	
FI	Tİ Ğ	Z	€	€	€	ǎ F Ę Ę	
FÍ	T GH Ğ	Y	F I Ę J I	F I Ę J I	€	ǎ F Ę Ę	
FÎ	T GH Ğ	Z	€	€	€	ǎ F Ę Ę	
FÏ	T H Ğ Ğ	Y	F I Ę J I	F I Ę J I	€	ǎ F Ę Ę	
FÌ	T H Ğ Ğ	Z	€	€	€	ǎ F Ę Ę	
FJ	T İ İ	Y	H Ę FG	H Ę FG	€	ǎ F Ę Ę	
G€	T İ İ	Z	€	€	€	ǎ F Ę Ę	
GF	T İ İ	Y	H Ę FG	H Ę FG	€	ǎ F Ę Ę	
GG	T İ İ	Z	€	€	€	ǎ F Ę Ę	
GH	T F I	Y	G Ę İ I	G Ę İ I	€	ǎ F Ę Ę	
G	T F I	Z	€	€	€	ǎ F Ę Ę	
G	T F I	Y	G Ę İ I	G Ę İ I	€	ǎ F Ę Ę	
G	T F I	Z	€	€	€	ǎ F Ę Ę	
G	T Ú Ğ Ğ	Y	J Ę I	J Ę I	€	ǎ F Ę Ę	
G	T Ú Ğ Ğ	Z	€	€	€	ǎ F Ę Ę	
GJ	T İ İ	Y	F J Ę İ F	F J Ę İ F	€	ǎ F Ę Ę	
H€	T İ İ	Z	€	€	€	ǎ F Ę Ę	
HF	T Ú I Ğ	Y	J Ę I	J Ę I	€	ǎ F Ę Ę	
HG	T Ú I Ğ	Z	€	€	€	ǎ F Ę Ę	
HH	T İ İ	Y	F J Ę İ F	F J Ę İ F	€	ǎ F Ę Ę	
HI	T İ İ	Z	€	€	€	ǎ F Ę Ę	
HÍ	T Ú H Ğ Ğ	Y	J Ę I	J Ę I	€	ǎ F Ę Ę	
HÎ	T Ú H Ğ Ğ	Z	€	€	€	ǎ F Ę Ę	
HÏ	T İ İ	Y	F J Ę İ F	F J Ę İ F	€	ǎ F Ę Ę	
HÌ	T İ İ	Z	€	€	€	ǎ F Ę Ę	
HJ	T Ú F Ğ Ğ	Y	J Ę I	J Ę I	€	ǎ F Ę Ę	
I€	T Ú F Ğ Ğ	Z	€	€	€	ǎ F Ę Ę	
IF	T İ Ę	Y	F J Ę İ F	F J Ę İ F	€	ǎ F Ę Ę	
IG	T İ Ę	Z	€	€	€	ǎ F Ę Ę	
IH	T Ú Ğ Ō	Y	J Ę I	J Ę I	€	ǎ F Ę Ę	
II	T Ú Ğ Ō	Z	€	€	€	ǎ F Ę Ę	
IÍ	T H I	Y	Ī Ę J	Ī Ę J	€	ǎ F Ę Ę	
IÎ	T H I	Z	€	€	€	ǎ F Ę Ę	
IÏ	T Ú I Ō	Y	J Ę I	J Ę I	€	ǎ F Ę Ę	
IÌ	T Ú I Ō	Z	€	€	€	ǎ F Ę Ę	
IJ	T I H	Y	Ī Ę J	Ī Ę J	€	ǎ F Ę Ę	
Í€	T I H	Z	€	€	€	ǎ F Ę Ę	
ÍF	T Ú H Ō	Y	J Ę I	J Ę I	€	ǎ F Ę Ę	
ÍG	T Ú H Ō	Z	€	€	€	ǎ F Ę Ę	
ÍH	T İ Ğ Ğ	Y	Ī Ę J	Ī Ę J	€	ǎ F Ę Ę	
ÍI	T İ Ğ Ğ	Z	€	€	€	ǎ F Ę Ę	
ÍÎ	T Ú F Ō	Y	J Ę I	J Ę I	€	ǎ F Ę Ę	
ÍÏ	T Ú F Ō	Z	€	€	€	ǎ F Ę Ę	
Î	T Í H	Y	Ī Ę J	Ī Ę J	€	ǎ F Ę Ę	
Î	T Í H	Z	€	€	€	ǎ F Ę Ę	

A Ya Vyf'8 jgfh]Vi hyX'@ UXg'f6 @ (* : Gfi Wñ fy'K c'fñ) \$ 8 Y ½f7 cb]bi YXL

	T^ { à^/Áæ^ }	Öá^&ç)	ÚçéÁ æ) á á^ ŽaD(È) áÁ æ) á á^ ŽaD(È) ÚçéÁ &ç) Ž È á	Ò) áÁ &ç) Ž È á		
îH	T Ú Í Ô	Ý	Ì È ÇÇ	Ì È ÇÇ	€	À FEE
ïI	T Ú Í Ô	Z	Ì È Ç	Ì È Ç	€	À FEE
îî	T Î H	Ý	H È Î Í	H È Î Í	€	À FEE
ïï	T Î H	Z	Ì È JH	Ì È JH	€	À FEE
îï	T Ú H Ô	Ý	Ì È ÇÇ	Ì È ÇÇ	€	À FEE
ïï	T Ú H Ô	Z	Ì È Ç	Ì È Ç	€	À FEE
îJ	T Î Í Ô	Ý	H È Î Í	H È Î Í	€	À FEE
ï€	T Î Í Ô	Z	Ì È JH	Ì È JH	€	À FEE
îF	T Ú F Ô	Ý	Ì È ÇÇ	Ì È ÇÇ	€	À FEE
ïG	T Ú F Ô	Z	Ì È Ç	Ì È Ç	€	À FEE
îH	T Î H	Ý	H È Î Í	H È Î Í	€	À FEE
ïI	T Î H	Z	Ì È JH	Ì È JH	€	À FEE
îî	T Ì €	Ý	H È Î Î	H È Î Î	€	À FEE
ïï	T Ì €	Z	Ì È Ç	Ì È Ç	€	À FEE
îï	T F È È	Ý	Ì È ÇÇ	Ì È ÇÇ	€	À FEE
ïï	T F È È	Z	F H Ç È Ç	F H Ç È Ç	€	À FEE
îJ	T F È F	Ý	Ì È ÇÇ	Ì È ÇÇ	€	À FEE
ï€	T F È F	Z	F H Ç È Ç	F H Ç È Ç	€	À FEE
îF	T F È G	Ý	Ì È ÇÇ	Ì È ÇÇ	€	À FEE
ïG	T F È G	Z	F H Ç È Ç	F H Ç È Ç	€	À FEE
îH	T F È J	Ý	€	€	€	À FEE
ïI	T F È J	Z	€	€	€	À FEE
îî	T F F È	Ý	G È Í G	G È Í G	€	À FEE
ïï	T F F È	Z	Ì È H	Ì È H	€	À FEE
îï	T F F F	Ý	G È Í G	G È Í G	€	À FEE
ïï	T F F F	Z	Ì È H	Ì È H	€	À FEE
îJ	T F È Ç È	Ý	€	€	€	À FEE
J€	T F È Ç È	Z	€	€	€	À FEE
JF	T F È Ç È	Ý	H È Î Î	H È Î Î	€	À FEE
JG	T F È Ç È	Z	Ì È Ç	Ì È Ç	€	À FEE
JH	T F È Ó	Ý	€	€	€	À FEE
JI	T F È Ó	Z	€	€	€	À FEE
Jí	T F È Ó	Ý	Ì È Ç Î	Ì È Ç Î	€	À FEE
Jï	T F È Ó	Z	F G È Î	F G È Î	€	À FEE
Jî	UXÚ	Ý	H È Î	H È Î	€	À FEE
Jï	UXÚ	Z	Ì È Î Î	Ì È Î Î	€	À FEE

A Ya Vyf'8 jgfh]Vi hyX'@ UXg'f6 @ (+ : Gfi Wñ fy'K c'fñ) \$ 8 Y ½

	T^ { à^/Áæ^ }	Öá^&ç)	ÚçéÁ æ) á á^ ŽaD(È) áÁ æ) á á^ ŽaD(È) ÚçéÁ &ç) Ž È á	Ò) áÁ &ç) Ž È á		
F	T F	Ý	€	€	€	À FEE
G	T F	Z	€	€	€	À FEE
H	T G	Ý	€	€	€	À FEE
I	T G	Z	€	€	€	À FEE
Í	T Í	Ý	€	€	€	À FEE
Î	T Í	Z	€	€	€	À FEE
Ï	T Î	Ý	€	€	€	À FEE
Ì	T Î	Z	F G È Î	F G È Î	€	À FEE
J	T Î	Ý	€	€	€	À FEE
F€	T Î	Z	F G È Î	F G È Î	€	À FEE
FF	T Î Ç È	Ý	€	€	€	À FEE
FG	T Î Ç È	Z	F J È Í F	F J È Í F	€	À FEE

A Ya Vyf'8]ghf]Vi hyX'@ UXg'f6 @' (, : 'Gfi Wh fy'K c''f&%\$ 8 Y] t'f' cbljbi YXL

	T { à^/Áæ^ ^	Öä^&ç	ÚæóÁ æ } á à^/Áæ^ ^	á à^/Áæ^ ^	ÚæóÁ æ } á à^/Áæ^ ^	Öä^&ç	ÚæóÁ æ } á à^/Áæ^ ^
FÍ	T GHOE	Y	Ë ÈJ	Ë ÈJ	€	À FEE	
FÌ	T GHOE	Z	FGH I	FGH I	€	À FEE	
FĪ	T HJOE	Y	€	€	€	À FEE	
FÌ	T HJOE	Z	€	€	€	À FEE	
FJ	T ÍÍ	Y	Ë ÈÉ	Ë ÈÉ	€	À FEE	
GE	T ÍÍ	Z	HÉG	HÉG	€	À FEE	
GF	T ÍÍ	Y	Ë ÈG	Ë ÈG	€	À FEE	
GG	T ÍÍ	Z	FGH FH	FGH FH	€	À FEE	
GH	T FÍ	Y	Ë ÈH I	Ë ÈH I	€	À FEE	
G	T FÍ	Z	GHI I	GHI I	€	À FEE	
GĪ	T FÍ	Y	Ë ÈF I	Ë ÈF I	€	À FEE	
GÌ	T FÍ	Z	JÉ I	JÉ I	€	À FEE	
GĚ	T ÚGOE	Y	Ë ÈGG	Ë ÈGG	€	À FEE	
GĚ	T ÚGOE	Z	Ì ÈÈ	Ì ÈÈ	€	À FEE	
GJ	T ÍÍ	Y	Ë ÈH I	Ë ÈH I	€	À FEE	
HE	T ÍÍ	Z	Í ÈJH	Í ÈJH	€	À FEE	
HF	T ÚIOE	Y	Ë ÈGG	Ë ÈGG	€	À FEE	
HG	T ÚIOE	Z	Ì ÈÈ	Ì ÈÈ	€	À FEE	
HH	T ÍÍ	Y	Ë ÈH I	Ë ÈH I	€	À FEE	
H	T ÍÍ	Z	Í ÈJH	Í ÈJH	€	À FEE	
HĪ	T ÚHOE	Y	Ë ÈGG	Ë ÈGG	€	À FEE	
HÌ	T ÚHOE	Z	Ì ÈÈ	Ì ÈÈ	€	À FEE	
HĪ	T ÍÍ	Y	Ë ÈH I	Ë ÈH I	€	À FEE	
HÌ	T ÍÍ	Z	Í ÈJH	Í ÈJH	€	À FEE	
HJ	T ÚFOE	Y	Ë ÈGG	Ë ÈGG	€	À FEE	
I €	T ÚFOE	Z	Ì ÈÈ	Ì ÈÈ	€	À FEE	
IF	T Í€	Y	Ë ÈH I	Ë ÈH I	€	À FEE	
IG	T Í€	Z	Í ÈJH	Í ÈJH	€	À FEE	
IH	T ÚGÓ	Y	Ë ÈGG	Ë ÈGG	€	À FEE	
II	T ÚGÓ	Z	Ì ÈÈ	Ì ÈÈ	€	À FEE	
IĪ	T H	Y	Ë ÈH I	Ë ÈH I	€	À FEE	
IÌ	T H	Z	Í ÈJH	Í ÈJH	€	À FEE	
IĚ	T ÚIO	Y	Ë ÈGG	Ë ÈGG	€	À FEE	
IĚ	T ÚIO	Z	Ì ÈÈ	Ì ÈÈ	€	À FEE	
IJ	T IH	Y	Ë ÈH I	Ë ÈH I	€	À FEE	
I€	T IH	Z	Í ÈJH	Í ÈJH	€	À FEE	
IF	T ÚHÓ	Y	Ë ÈGG	Ë ÈGG	€	À FEE	
IG	T ÚHÓ	Z	Ì ÈÈ	Ì ÈÈ	€	À FEE	
IH	T ÍIOE	Y	Ë ÈH I	Ë ÈH I	€	À FEE	
IÌ	T ÍIOE	Z	Í ÈJH	Í ÈJH	€	À FEE	
IĪ	T ÚFÓ	Y	Ë ÈGG	Ë ÈGG	€	À FEE	
IÌ	T ÚFÓ	Z	Ì ÈÈ	Ì ÈÈ	€	À FEE	
IĪ	T ÍH	Y	Ë ÈH I	Ë ÈH I	€	À FEE	
IÌ	T ÍH	Z	Í ÈJH	Í ÈJH	€	À FEE	
IJ	T ÚGÓ	Y	Ë ÈGG	Ë ÈGG	€	À FEE	
I€	T ÚGÓ	Z	Ì ÈÈ	Ì ÈÈ	€	À FEE	
IF	T ÍÍ	Y	Ë ÈH	Ë ÈH	€	À FEE	
IG	T ÍÍ	Z	FÍ ÈÍ H	FÍ ÈÍ H	€	À FEE	
IH	T ÚIO	Y	Ë ÈGG	Ë ÈGG	€	À FEE	
IÌ	T ÚIO	Z	Ì ÈÈ	Ì ÈÈ	€	À FEE	
IĪ	T ÍH	Y	Ë ÈH	Ë ÈH	€	À FEE	
IÌ	T ÍH	Z	FÍ ÈÍ H	FÍ ÈÍ H	€	À FEE	

A Ya Vyf'8]g]f]Vi hYX' @ UXg'f6 @ ' +%. 'Gfi Wñ fY'K a ''f% \$'8 Y] ŁŁf' c b]i YXL

	T^{ à^/Áæ^}	Öá^&çá}	ÚçæÁ æ} æ à^ ŽaD(È) áÁ æ} æ à^ ŽaD(È) ÚçæÁ &çá} Ž Ā á	ÚçæÁ æ} æ à^ ŽaD(È) áÁ æ} æ à^ ŽaD(È) ÚçæÁ &çá} Ž Ā á	ÚçæÁ æ} æ à^ ŽaD(È) áÁ æ} æ à^ ŽaD(È) ÚçæÁ &çá} Ž Ā á	ÚçæÁ æ} æ à^ ŽaD(È) áÁ æ} æ à^ ŽaD(È) ÚçæÁ &çá} Ž Ā á
Íí	TÎH	Ý	€	€	€	Ă FEE
Îî	TÎH	Z	F	F	€	Ă FEE
Ïï	TÛHÔ	Ý	€	€	€	Ă FEE
Ïì	TÛHÔ	Z	ÈÈ	ÈÈ	€	Ă FEE
Ĵĵ	TĪĪŌ	Ý	€	€	€	Ă FEE
Ĵ€	TĪĪŌ	Z	F	F	€	Ă FEE
ĴF	TÛFÔ	Ý	€	€	€	Ă FEE
ĴG	TÛFÔ	Z	ÈÈ	ÈÈ	€	Ă FEE
ĴH	TÎH	Ý	€	€	€	Ă FEE
ĴI	TÎH	Z	F	F	€	Ă FEE
ĴÍ	TÌ€	Ý	€	€	€	Ă FEE
ĴĪ	TÌ€	Z	ÈÈ	ÈÈ	€	Ă FEE
ĴĬ	TFEE	Ý	€	€	€	Ă FEE
ĴĬ	TFEE	Z	FEEG	FEEG	€	Ă FEE
ĴĴ	TFEĴ	Ý	€	€	€	Ă FEE
Ĵ€	TFEĴ	Z	FEEG	FEEG	€	Ă FEE
ĴF	TFEG	Ý	€	€	€	Ă FEE
ĴG	TFEG	Z	FEEG	FEEG	€	Ă FEE
ĴH	TFEJ	Ý	€	€	€	Ă FEE
ĴI	TFEJ	Z	ÈFG	ÈFG	€	Ă FEE
ĴÍ	TFEÈ	Ý	€	€	€	Ă FEE
ĴĪ	TFEÈ	Z	ÈFG	ÈFG	€	Ă FEE
ĴĬ	TFFF	Ý	€	€	€	Ă FEE
ĴĬ	TFFF	Z	ÈIJ	ÈIJ	€	Ă FEE
ĴĴ	TFEœ	Ý	€	€	€	Ă FEE
Ĵ€	TFEœ	Z	ÈÍG	ÈÍG	€	Ă FEE
ĴF	TFEœ	Ý	€	€	€	Ă FEE
ĴG	TFEœ	Z	ÈÍG	ÈÍG	€	Ă FEE
ĴH	TFEÓ	Ý	€	€	€	Ă FEE
ĴI	TFEÓ	Z	ÈG	ÈG	€	Ă FEE
ĴÍ	TFEÓ	Ý	€	€	€	Ă FEE
ĴĪ	TFEÓ	Z	ÈG	ÈG	€	Ă FEE
ĴĬ	UXÚ	Ý	€	€	€	Ă FEE
ĴĬ	UXÚ	Z	ÈĴI	ÈĴI	€	Ă FEE

A Ya Vyf'8]g]f]Vi hYX' @ UXg'f6 @ ' +&. 'Gfi Wñ fY'K a ''f% \$'8 Y] ŁŁf'

	T^{ à^/Áæ^}	Öá^&çá}	ÚçæÁ æ} æ à^ ŽaD(È) áÁ æ} æ à^ ŽaD(È) ÚçæÁ &çá} Ž Ā á	ÚçæÁ æ} æ à^ ŽaD(È) áÁ æ} æ à^ ŽaD(È) ÚçæÁ &çá} Ž Ā á	ÚçæÁ æ} æ à^ ŽaD(È) áÁ æ} æ à^ ŽaD(È) ÚçæÁ &çá} Ž Ā á	ÚçæÁ æ} æ à^ ŽaD(È) áÁ æ} æ à^ ŽaD(È) ÚçæÁ &çá} Ž Ā á
F	TF	Ý	ÈÈJF	ÈÈJF	€	Ă FEE
G	TF	Z	ÈĪ	ÈĪ	€	Ă FEE
H	TG	Ý	ÈÈFJ	ÈÈFJ	€	Ă FEE
I	TG	Z	ÈÈ	ÈÈ	€	Ă FEE
Í	TÍ	Ý	ÈÈHÍ	ÈÈHÍ	€	Ă FEE
Î	TÍ	Z	ÈÈH	ÈÈH	€	Ă FEE
Ï	TÎ	Ý	ÈÈHÍ	ÈÈHÍ	€	Ă FEE
Ï	TÎ	Z	ÈÈH	ÈÈH	€	Ă FEE
J	TĪ	Ý	ÈÈHU	ÈÈHU	€	Ă FEE
J€	TĪ	Z	ÈÈH	ÈÈH	€	Ă FEE
FF	TĪœ	Ý	ÈÈ	ÈÈ	€	Ă FEE
FG	TĪœ	Z	ÈÈHF	ÈÈHF	€	Ă FEE
FH	TĪœ	Ý	ÈÈ	ÈÈ	€	Ă FEE
FI	TĪœ	Z	ÈÈHF	ÈÈHF	€	Ă FEE

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Ï€	T ÌÌÓ	Z	FÈÈ	€	Ä FEE
ÏF	T ÚFÔ	Ý	ËÈ	€	Ä FEE
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ÏI	T ÌH	Z	FÈÈ	€	Ä FEE
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ÏÏ	T FÈ€	Ý	ËÈF	€	Ä FEE
ÏÏ	T FÈ€	Z	ÈÌ	€	Ä FEE
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JI	T FÈFÓ	Z	ÈHF	€	Ä FEE
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JÏ	UXÚ	Ý	ËËÌ	€	Ä FEE
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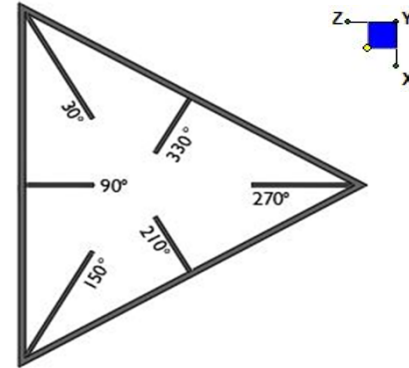
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HC	TÍÍ	Z	€	€
HD	TÍÍ	Ý	€	€
HE	TÍÍ	Z	€	€
HF	TÍÍ	Ý	€	€
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HI	TÍÍ	Z	€	€
HJ	TÍÍ	Ý	€	€
HK	TÍÍ	Z	€	€
HL	TÍÍ	Ý	€	€
HM	TÍÍ	Z	€	€
HN	TÍÍ	Ý	€	€
HO	TÍÍ	Z	€	€
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HT	TÍÍ	Ý	€	€
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HV	TÍÍ	Ý	€	€
HW	TÍÍ	Z	€	€
HX	TÍÍ	Ý	€	€
HY	TÍÍ	Z	€	€
HZ	TÍÍ	Ý	€	€
IA	TÍÍ	Z	€	€
IB	TÍÍ	Ý	€	€
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IH	TÍÍ	Ý	€	€
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IJ	TÍÍ	Ý	€	€
IK	TÍÍ	Z	€	€
IL	TÍÍ	Ý	€	€
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IV	TÍÍ	Ý	€	€
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IY	TÍÍ	Z	€	€
IZ	TÍÍ	Ý	€	€



I. Mount-to-Tower Connection Check

RISA Model Data

Nodes (labeled per RISA)	Orientation (per graphic of typical platform)
N2	90
N33	330
N30	210



TYPICAL PLATFORM

Tower Connection Bolt Checks

Any moment resistance?:

Bolt Quantity per Reaction:

d_x (in) (Delta X of typ. bolt config. sketch) :

d_y (in) (Delta Y of typ. bolt config. sketch) :

Bolt Type:

Bolt Diameter (in):

Required Tensile Strength (kips):

Required Shear Strength (kips):

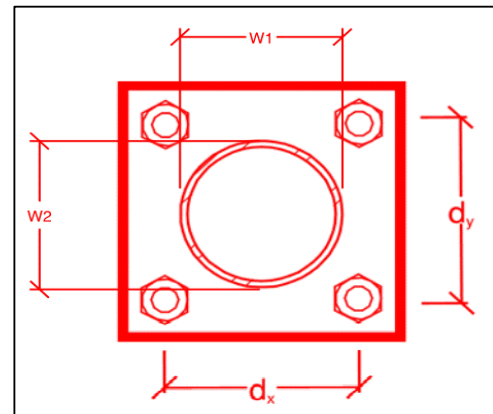
Tensile Strength / bolt (kips):

Shear Strength / bolt (kips):

Tensile Capacity Overall:

Shear Capacity Overall:

no
2
A325N
0.5
0.8
3.0
13.3
8.0
3.1%*
18.6%



*Note: Tension reduction not required if tension or shear capacity < 30%

Tower Connection Plate and Weld Check

Connecting Standoff Member Shape:

Plate Width (in):

Plate Height (in):

W1 (in):

W2 (in):

Fy (ksi, plate):

t_{plate} (in):

Weld Size (1/16 in):

$\Phi \cdot R_n$ (kip/in):

Required Weld Strength (kip/in):

Plate Bending Capacity:

Weld Capacity:

Rect
0
0
4
4
36
0.5
3
4.18
3.91
#N/A
93.5%

Max Plate Bending Strengths

$M_{u_{xx}}$ (kip-in) :	#N/A
$\Phi \cdot M_{n_{xx}}$ (kip-in) :	0.0
$M_{u_{yy}}$ (kip-in) :	#N/A
$\Phi \cdot M_{n_{yy}}$ (kip-in) :	0.0

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – **Passing Mount Analysis**

Purpose – to provide Maser Consulting Connecticut the proper documentation in order to complete the required Mount Desktop review of the Post Modification Inspection Report.

- Contractor is responsible for making certain the photos provided as noted below provide confirmation that the installation was completed in accordance with this Passing Mount Analysis.
- Contractor shall relay any data that can impact the performance of the mount, this includes safety issues.



Base Requirements:







- Any special photos outside of the standard requirements will be indicated on the passing MA
- Verification that loading is as communicated in the Passing Mount Analysis. NOTE If loading is different than what is conveyed contact Maser Consulting Connecticut immediately.
- Each photo should be time and date stamped
- Photos should be high resolution and submitted in a Zip File and should be organized in the file structure as depicted in Schedule A attached.
- Contractor shall ensure that the safety climb wire rope is supported and not adversely impacted by the install of the modification components. This may involve the install of wire rope guides, or other items to protect the wire rope.
- The photos in the file structure should be uploaded to <https://pmi.vzsmart.com> as depicted on the drawings








Photo Requirements:


- Base and “During Installation Photos”
 - Base pictures include
 - Photo of Gate Signs showing the tower owner, site name, and number
 - Photo of carrier shelter showing the carrier site name and number if available
 - Photos of the galvanizing compound and/or paint used (if applicable), clearly showing the label and name
 - “During Installation Photos if provided - must be placed only in this folder
- Photos taken at ground level
 - Overall tower structure before and after installation of the equipment modifications
 - Photos of the appropriate mount before and after installation of the modifications; if the mounts are at different rad elevations, pictures must be provided for all elevations that the modifications were installed
- Photos taken at Mount Elevation
 - Photos showing each individual sector before and also after installation of equipment.


Schedule A – Photo & Document File Structure

-  VzW Site Number / Name
 -  Base & “During Installation” Photos

 -  Pre-Installation Photos
 -  Alpha
 -  Beta
 -  Gamma
 -  Ground Level
 -  Tape Drop

 -  Post-Installation Photos
 -  Alpha
 -  Beta
 -  Gamma
 -  Ground Level
 -  Tape Drop
 -  Photos of climbing facility and safety climb – If Present

-  Certifications – Submission of this document including certifications

-  Specific Required Additional Photos

Sector: **A**
 Structure Type: Self Support
 Mount Elev: 113.50

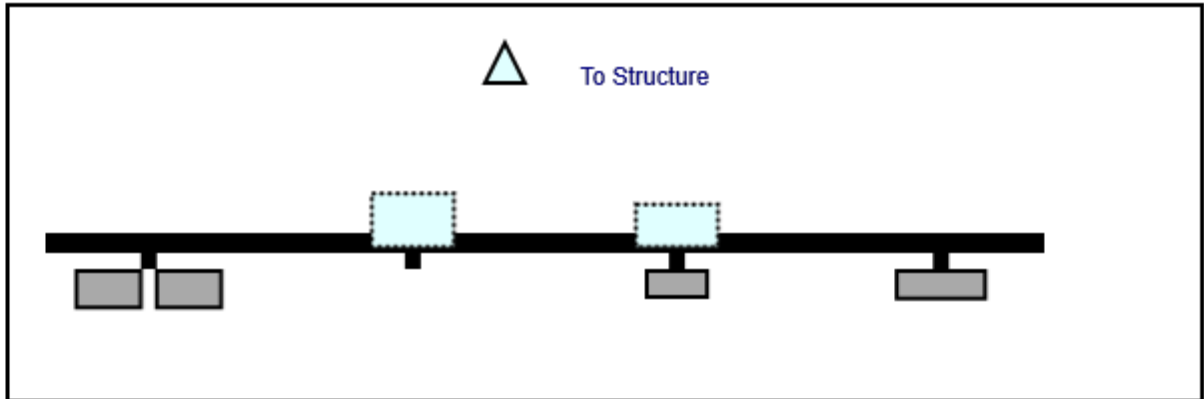
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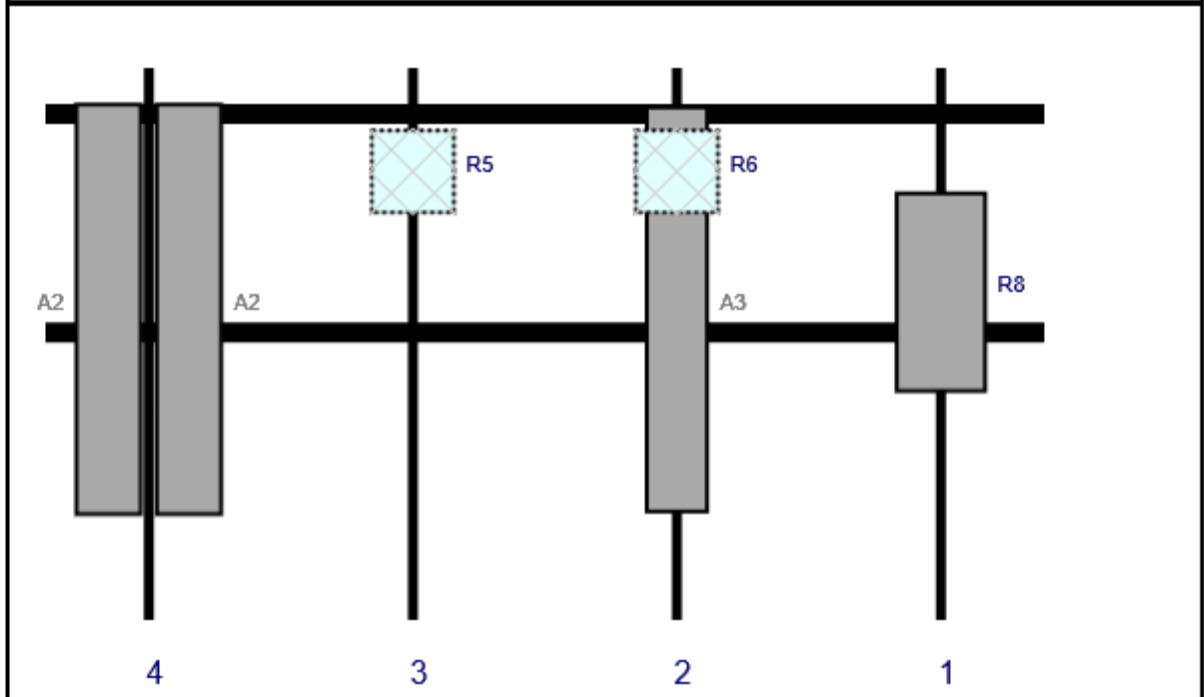
Page: 1




Plan View



Front View
Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
R8	MT6407-77A	35.1	16.1	156	1	a	Front	39	0	Added	
A3	BXA-70063-6CF-EDIN-4	71	11.2	110	2	a	Front	42	0	Retained	03/29/2021
R6	RFV01U-D2A	15	15	110	2	a	Behind	18	0	Retained	03/29/2021
R5	RFV01U-D1A	15	15	64	3	a	Behind	18	0	Retained	03/29/2021
A2	SBNHH-1D65B	72	11.9	18	4	a	Front	42	7	Retained	03/29/2021
A2	SBNHH-1D65B	72	11.9	18	4	b	Front	42	-7	Retained	03/29/2021

Sector: 
 Structure Type: Self Support
 Mount Elev: 113.50

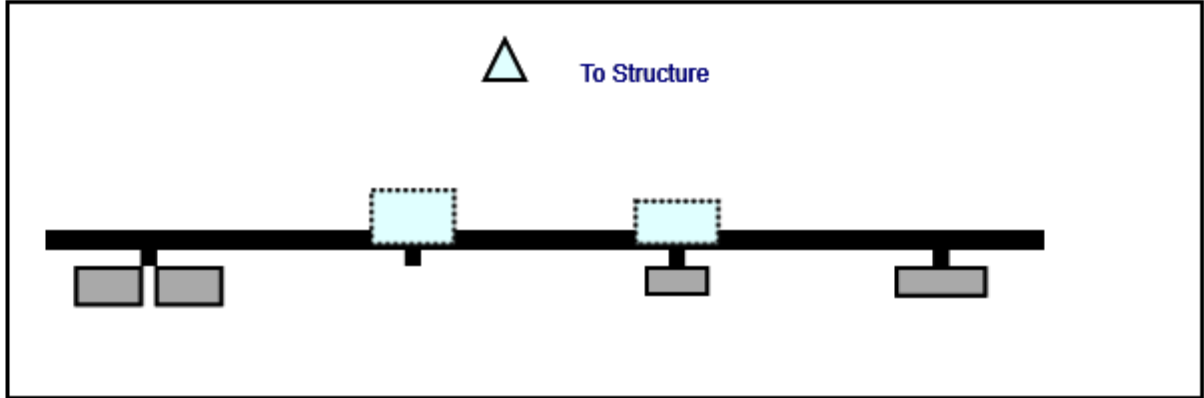
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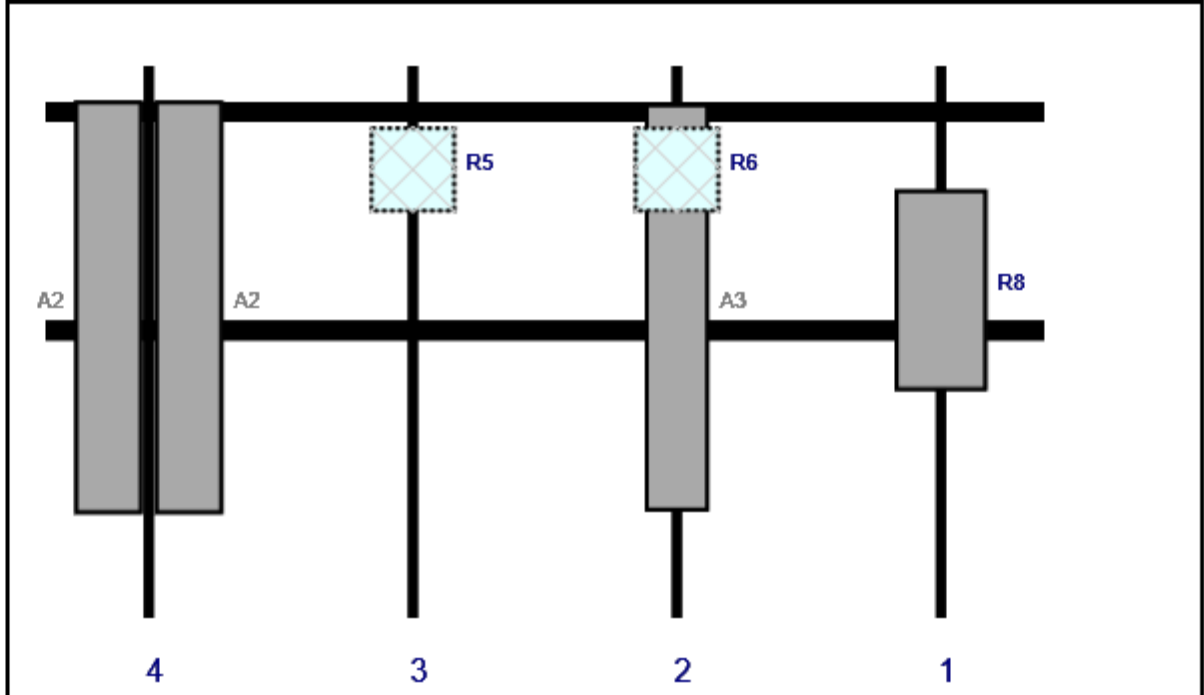
Page: 2



Plan View



Front View
Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
R8	MT6407-77A	35.1	16.1	156	1	a	Front	39	0	Added	
A3	BXA-70063-6CF-EDIN-4	71	11.2	110	2	a	Front	42	0	Retained	03/29/2021
R6	RFV01U-D2A	15	15	110	2	a	Behind	18	0	Retained	03/29/2021
R5	RFV01U-D1A	15	15	64	3	a	Behind	18	0	Retained	03/29/2021
A2	SBNHH-1D65B	72	11.9	18	4	a	Front	42	7	Retained	03/29/2021
A2	SBNHH-1D65B	72	11.9	18	4	b	Front	42	-7	Retained	03/29/2021

Sector: C
 Structure Type: Self Support
 Mount Elev: 113.50

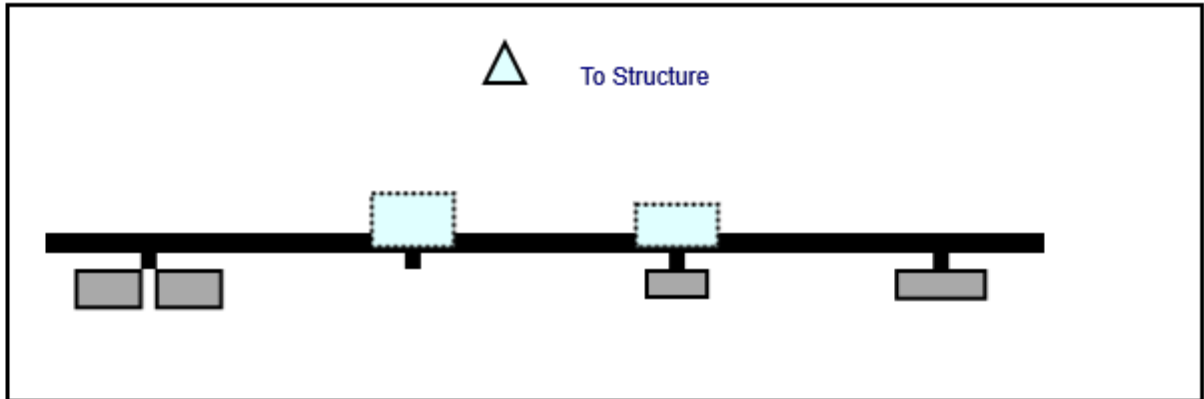
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7/2/2021

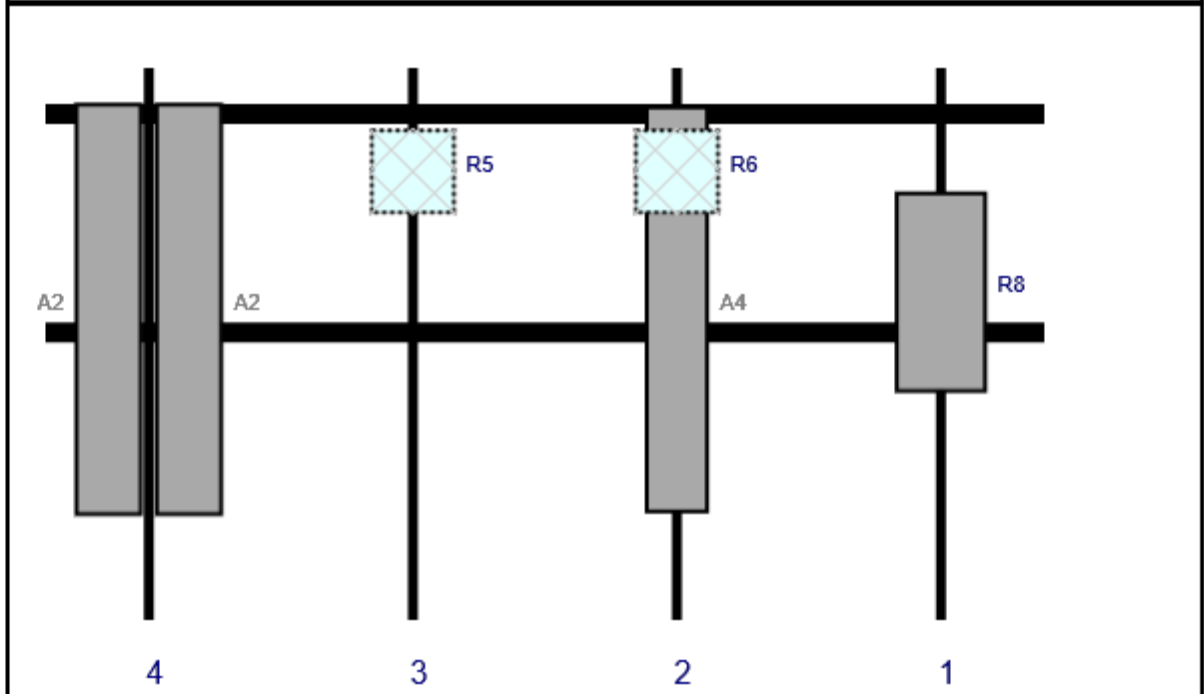
Page: 3



Plan View



Front View
 Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
R8	MT6407-77A	35.1	16.1	156	1	a	Front	39	0	Added	
A4	BXA-70063-6CF-EDIN-2	71	11.2	110	2	a	Front	42	0	Retained	03/29/2021
R6	RFV01U-D2A	15	15	110	2	a	Behind	18	0	Retained	03/29/2021
R5	RFV01U-D1A	15	15	64	3	a	Behind	18	0	Retained	03/29/2021
A2	SBNHH-1D65B	72	11.9	18	4	a	Front	42	7	Retained	03/29/2021
A2	SBNHH-1D65B	72	11.9	18	4	b	Front	42	-7	Retained	03/29/2021

Subject

TIA-222-H Usage

Site Information

Site ID: 467518-VZW / HARTFORD N CT
Site Name: HARTFORD N CT
Carrier Name: Verizon Wireless
Address: 305 WEST SERVICE RD
Hartford, Connecticut 06120
Hartford County
Latitude: 41.798055°
Longitude: -72.655833°

Structure Information

Tower Type: 180.00-Ft Monopole
Mount Type: 14.50-Ft T-Arm

To Whom It May Concern,

We respectfully submit the above referenced Antenna Mount Structural Analysis report in conformance with ANSI/TIA-222-H, Structural Standard for Antenna Supporting Structures and Antennas and Small Wind Turbine Support Structures.

The 2015 International Building Code states that, in Section 3108, telecommunication towers shall be designed and constructed in accordance with the provisions of TIA-222. The TIA-222-H is the latest revision of the TIA-222 Standard, effective as of January 01, 2018.

As with all ANSI standards and engineering best practice is to apply the most current revision of the standard. This ensures the engineer is applying all updates. As an example, the TIA-222-H standard includes updates to bring it in line with the latest AISC and ACI standards and it also incorporates the latest wind speed map by ASCE 7 based on updated studies of the wind data.

The TIA-222-H standard clarifies these specific requirements for the antenna mount analysis such as modeling method, seismic analysis, 30-degree increment wind direction and maintenance loading. Therefore, it is our opinion that TIA-222-H is the most appropriate standard for antenna mount structural analysis and is acceptable for use at this site to ensure the engineer is taking into account the most current engineering standard available.

Sincerely,



Dejian Xu, PE
Technical Manager

Site Name: **HARTFORD N CT**
 Cumulative Power Density

Operator	Operating Frequency	Number of Trans.	ERP Per Trans.	Total ERP	Distance to Target	Calculated Power Density	Maximum Permissible Exposure*	Fraction of MPE
	(MHz)		(watts)	(watts)	(feet)	(mW/cm ²)	(mW/cm ²)	(%)
VZW 700	751	4	697	2788	115	0.0076	0.5007	1.51%
VZW CDMA	869	2	393	786	115	0.0021	0.5793	0.37%
VZW Cellular	869	4	826	3304	115	0.0090	0.5793	1.55%
VZW PCS	1970	4	1557	6228	115	0.0169	1.0000	1.69%
VZW AWS	2110	4	1540	6160	115	0.0168	1.0000	1.68%
VZW CBAND	3730	4	6531	26124	115	0.0710	1.0000	7.10%
Total Percentage of Maximum Permissible Exposure								13.91%

*Guidelines adopted by the FCC on August 1, 1996, 47 CFR Part 1 based on NCRP Report 86, 1986 and generally on ANSI/IEEE C95.1-1992

**Calculation includes a -10 dB Off Beam Antenna Pattern Adjustment pursuant to Attachments B and C of the Siting Council's November 10, 2015 Memorandum for Exempt Modification filings

MHz = Megahertz

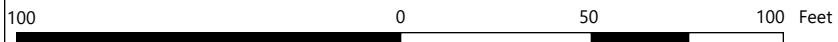
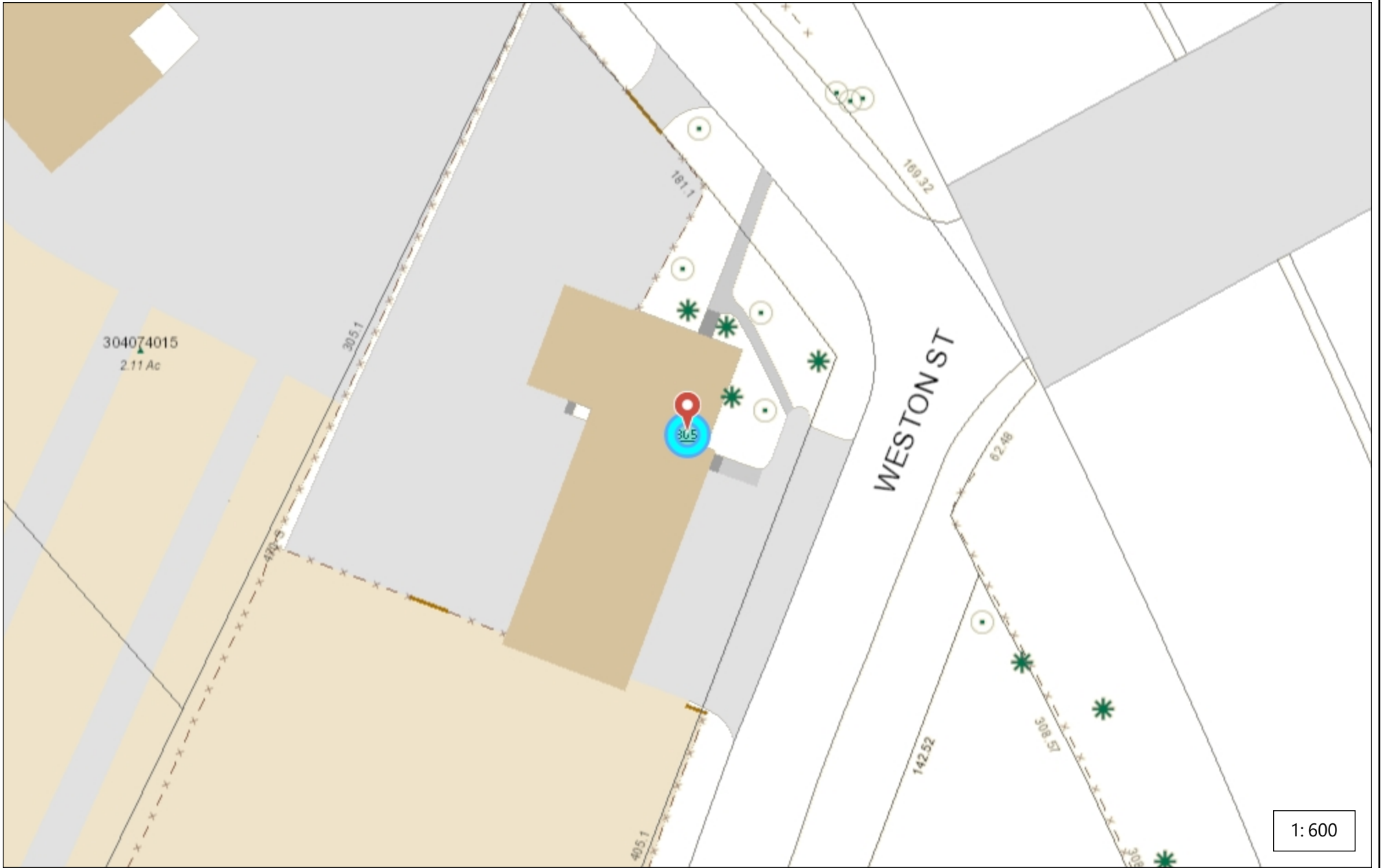
mW/cm² = milliwatts per square centimeter

ERP = Effective Radiated Power

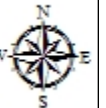
Absolute worst case maximum values used.



City of Hartford - Property Map



The planimetric and topographic information depicted on this map was compiled by The Sanbor Map Company and is based on an aerial flight performed in April 2015. In addition, the City's GIS staff has been updating limited planimetric features on a yearly basis. The intent of this map is to depict a graphical representation of real property information relative to the planimetric features for the City of Hartford and is subject to change as a more accurate survey may disclose. The City of Hartford and the mapping company assume no legal responsibility for the information contained in this data. THIS MAP IS NOT TO BE USED FOR THE TRANSFER OF PROPERTY



Unofficial Property Record Card - Hartford, CT

General Property Data

Parcel ID 304-074-014	Account Number
Prior Parcel ID	Property Location 305 WEST SERVICE RD
Property Owner 305 W SERVICE RD ASSOC LLC	Property Use AUTO REPAIR
Mailing Address 305 W SERVICE RD	Most Recent Sale Date 5/29/1998
City HARTFORD	Legal Reference 03960 0282
Mailing State CT Zip 06120-9555	Grantor
ParcelZoning ID-1	Sale Price 280,000
	Land Area 85,813.000 acres

Current Property Assessment

Card 1 Value	Building Value 23,520	Xtra Features Value 6,300	Land Value 490,140	Total Value 519,960
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Building Description

Building Style AUTO SERVICE	Foundation Type Concrete	Flooring Type CONCRETE
# of Living Units 0	Frame Type Steel	Basement Floor CONCRETE
Year Built 1960	Roof Structure FLAT	Heating Type Warm Air
Building Grade Average	Roof Cover Membrane	Heating Fuel Gas
Building Condition N/A	Siding Conc Block	Air Conditioning 0%
Finished Area (SF) N/A	Interior Walls DRYWALL	# of Bsmt Garages 0
Number Rooms 0	# of Bedrooms 0	# of Full Baths 0
# of 3/4 Baths 0	# of 1/2 Baths 0	# of Other Fixtures 0

Legal Description

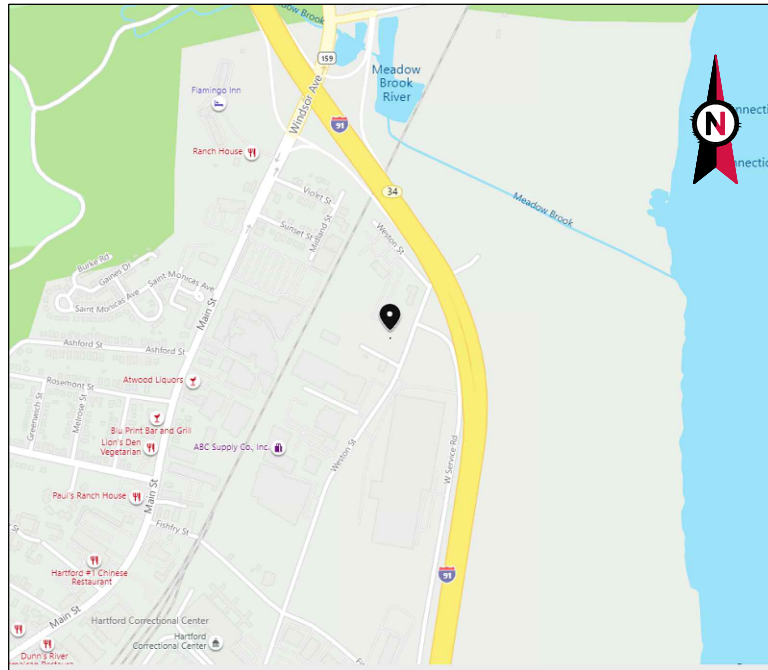
Narrative Description of Property

This property contains 85,813.000 acres of land mainly classified as AUTO REPAIR with a(n) AUTO SERVICE style building, built about 1960 , having Conc Block exterior and Membrane roof cover, with 0 commercial unit(s) and 0 residential unit(s), 0 room(s), 0 bedroom(s), 0 bath(s), 0 half bath(s).

Property Images



Disclaimer: This information is believed to be correct but is subject to change and is not warranted.

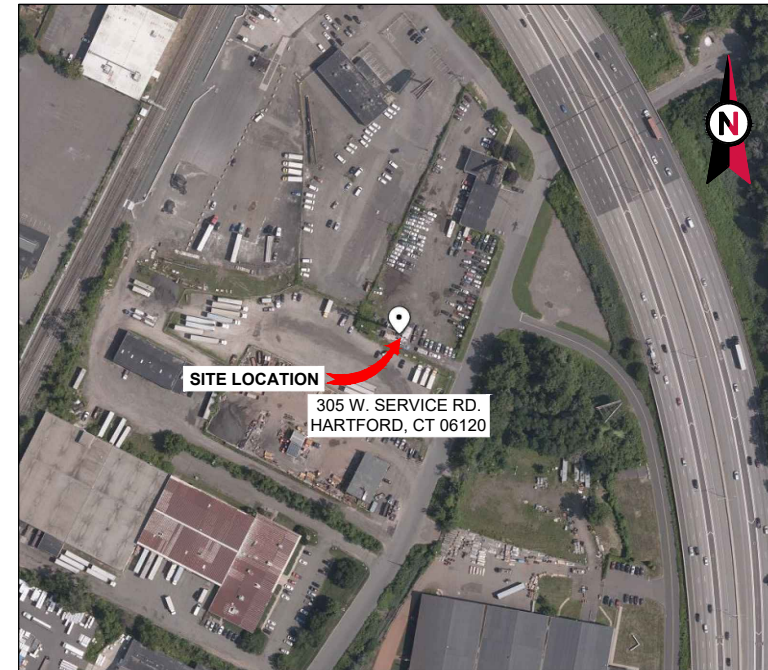


VICINITY MAP



AMERICAN TOWER®

ATC SITE NAME: WEST SERVICE ROAD
 ATC SITE NUMBER: 302466
 VERIZON SITE NAME: HARTFORD NORTH CT
 VERIZON SITE NUMBER: 467518
 SITE ADDRESS: 305 W. SERVICE RD.
 HARTFORD, CT 06120



LOCATION MAP

**VERIZON
 ANTENNA AMENDMENT DRAWINGS**

COMPLIANCE CODE	PROJECT SUMMARY	PROJECT DESCRIPTION	SHEET INDEX				
ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES. 1. 2015 INTERNATIONAL BUILDING CODE (IBC) 2. 2017 NATIONAL ELECTRIC CODE (NEC) 3. 2018 CONNECTICUT STATE BUILDING CODE 4. CITY/COUNTY ORDINANCES	<u>SITE ADDRESS:</u> 305 W. SERVICE RD. HARTFORD, CT 06120 COUNTY: HARTFORD <u>GEOGRAPHIC COORDINATES:</u> LATITUDE: 41.79953889 LONGITUDE: -72.65669722 GROUND ELEVATION: 20' AMSL	THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW: REMOVE (3) ANTENNA(S) INSTALL (6) ANTENNA(S) EXISTING (6) ANTENNA(S), (6) RRH(S), (2) OVP, (6) 1-5/8" COAX CABLE(S), AND (2) 6X12 HYBRID CABLE(S) TO REMAIN	SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
	<u>PROJECT TEAM</u> <u>TOWER OWNER:</u> AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801 <u>ENGINEER:</u> CLS ENGINEERING, PLLC 319 CHAPANOKE RD, SUITE 118 RALEIGH, NC 27603 PH: (405)348-5460 FAX: (405)341-4625 <u>PROPERTY OWNER:</u> 305 WEST SERVICES RD ASSOC LLC 305 W. SERVICE RD. HARTFORD, CT 06120	AC ELECTRICAL POWER DESIGN TO BE PERFORMED BY OTHERS					
<u>UTILITY COMPANIES</u> POWER COMPANY: C. L. & P. PHONE: (800) 286-2000 TELEPHONE COMPANY: AT&T PHONE: (800) 288-2020	<u>APPLICANT:</u> VERIZON WIRELESS	<u>PROJECT NOTES</u> 1. THE FACILITY IS UNMANNED. 2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE. 3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE. 4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED. 5. HANDICAP ACCESS IS NOT REQUIRED.					
	<u>PROJECT LOCATION DIRECTIONS</u> DIRECTIONS FROM NEXTEL WHITE PLAINS OAK OFC: 5 BROADWAY (HWY 119) NORTH TO WESTCHESTER AVE. TO I-287 EAST (CROSS WESTCHESTER EXPWAY) TO I-684 NORTH APPROX. 28 MILES TO I-84 EAST. TAKE I-84 EAST 63.6 MILES TO HIGH ST./HARTFORD EXIT) BEAR LEFT ONTO MAIN ST. FOR 1.8 MILES THEN TURN RIGHT ONTO FISHFREY ST. FOR .2 MILES TURN LEFT ON WESTON ST. .5 MILES AND THEN LEFT ONTO WEST SERVICE RD. SITE IS SOUTHWEST CORNER OF LARGER VACANT LOT AT CURVE OF RD ADJACENT TO KOHLER EQUIP. DISTRUBUTOR.						



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REV.	DESCRIPTION	BY	DATE
A	PRELIM	ASO	06/01/21
0	FOR CONSTRUCTION	ASO	08/06/21

ATC SITE NUMBER:
 302466

 ATC SITE NAME:
 WEST SERVICE ROAD

 VERIZON SITE NAME:
 HARTFORD NORTH CT

 SITE ADDRESS:
 305 W. SERVICE RD.
 HARTFORD, CT 06120

SEAL:

Tyler M. Barker
 CLS Engineering PLLC
 PE # 32402 Exp. 1/31/2022
 COA # PEC.001833 Exp. 8/14/2022

PE# 32402 EXP: 01/31/2022



DATE DRAWN:	08/06/21
ATC JOB NO:	13668983_D1
CUSTOMER ID:	HARTFORD NORTH CT
CUSTOMER #:	467518

TITLE SHEET

SHEET NUMBER:
G-001

REVISION:
0

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GENERAL CONSTRUCTION NOTES:

1. OWNER FURNISHED MATERIALS, VERIZON "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL
 - A. BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)
 - B. AC/TELCO INTERFACE BOX (PPC)
 - C. ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)
 - D. TOWERS, MONOPOLES
 - E. TOWER LIGHTING
 - F. GENERATORS & LIQUID PROPANE TANK
 - G. ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING
 - H. ANTENNAS (INSTALLED BY OTHERS)
 - I. TRANSMISSION LINE
 - J. TRANSMISSION LINE JUMPERS
 - K. TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS
 - L. TRANSMISSION LINE GROUND KITS
 - M. HANGERS
 - N. HOISTING GRIPS
 - O. BTS EQUIPMENT
2. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS, TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IT IS THE POSITION OF VERIZON TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
3. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSII/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
4. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
6. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
7. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
8. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
9. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
11. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
12. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE VERIZON REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE VERIZON REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE VERIZON REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
14. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE VERIZON CONSTRUCTION MANAGER.
15. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
16. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE VERIZON REP AND ENGINEER OF RECORD IMMEDIATELY.
17. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
18. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
19. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH AMERICAN TOWER CORPORATION (ATC) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
20. CONTRACTOR SHALL FURNISH VERIZON AND AMERICAN TOWER CORPORATION (ATC) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH VERIZON REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.

22. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH VERIZON REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY VERIZON MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH VERIZON SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO VERIZON FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO VERIZON SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
26. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
27. CONTRACTOR SHALL NOTIFY VERIZON REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
28. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
29. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
30. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE VERIZON REP. ANY WORK FOUND BY THE VERIZON REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
31. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.
32. VERIZON FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE VERIZON WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATE, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.
33. VERIZON OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OWN OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO VERIZON OR THEIR ARCHITECT/ENGINEER.

SPECIAL CONSTRUCTION

ANTENNA INSTALLATION NOTES:

1. WORK INCLUDED:
 - A. ANTENNA AND COAXIAL CABLES ARE FURNISHED BY VERIZON UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION CONTRACTOR IN TERMS OF COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL AND
 - B. INSTALL ANTENNA AS INDICATE ON DRAWINGS AND VERIZON SPECIFICATIONS.
 - C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS
 - D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE.
 - E. CONTRACTOR SHALL PROVIDE FOUR (4) SETS OF SWEEP TESTS USING ANRITZU-PACKARD 8713B RF SCALAR NETWORK ANALYZER. SUBMIT FREQUENCY DOMAIN REFLECTOMETER(FDR) TESTS RESULTS TO THE PROJECT MANAGER. SWEEP TESTS SHALL BE AS PER ATTACHED RFS "MINIMUM FIELD TESTING RECOMMENDED FOR ANTENNA AND HELIAX COAXIAL CABLE SYSTEMS" DATED 10/5/93. TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING SERVICE AND BE BOUND AND SUBMITTED WITHIN ONE WEEK OF WORK COMPLETION.
 - F. INSTALL COAXIAL CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTIONS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.
 - G. ANTENNA AND COAXIAL CABLE GROUNDING:
2. ALL EXTERIOR #6 GREEDED GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPICE WEATHERPROOFING KIT #221213 OR EQUAL.
3. ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS)

ALL DISCREPANCIES FROM WHAT IS SHOWN ON THESE CONSTRUCTION DRAWINGS SHALL BE COMMUNICATED TO ATC ENGINEERING IMMEDIATELY FOR CORRECTION OR RE-DESIGN. FAILURE TO COMMUNICATE DIRECTLY WITH ATC ENGINEERING OR ANY CHANGES FROM THE DESIGN CONDUCTED WITHOUT PRIOR APPROVAL FROM ATC ENGINEERING SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR.



CLS ENGINEERING
PLLC
319 CHAPANOKE ROAD, SUITE 118, RALEIGH, NC 27603
PH: (405)348-5460 FAX: (405)341-4625

COA# PEC.001833 EXP. 08/14/2022

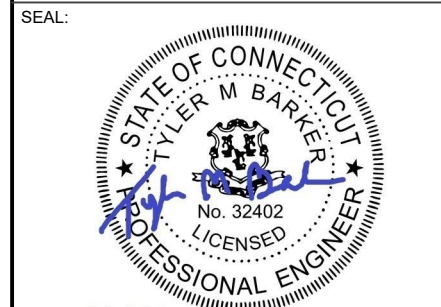
REV.	DESCRIPTION	BY	DATE
A	PRELIM	ASO	06/01/21
0	FOR CONSTRUCTION	ASO	08/06/21

ATC SITE NUMBER:
302466

ATC SITE NAME:
WEST SERVICE ROAD

VERIZON SITE NAME:
HARTFORD NORTH CT

SITE ADDRESS:
305 W. SERVICE RD.
HARTFORD, CT 06120



Tyler M. Barker
CLS Engineering PLLC
PE # 32402 Exp. 1/31/2022
COA # PEC.001833 Exp. 8/14/2022

PE# 32402 EXP: 01/31/2022



DATE DRAWN:	08/06/21
ATC JOB NO:	13668983_D1
CUSTOMER ID:	HARTFORD NORTH CT
CUSTOMER #:	467518

GENERAL NOTES

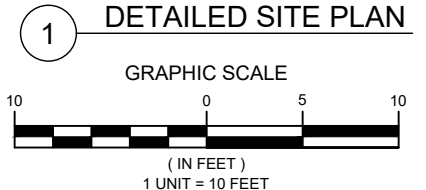
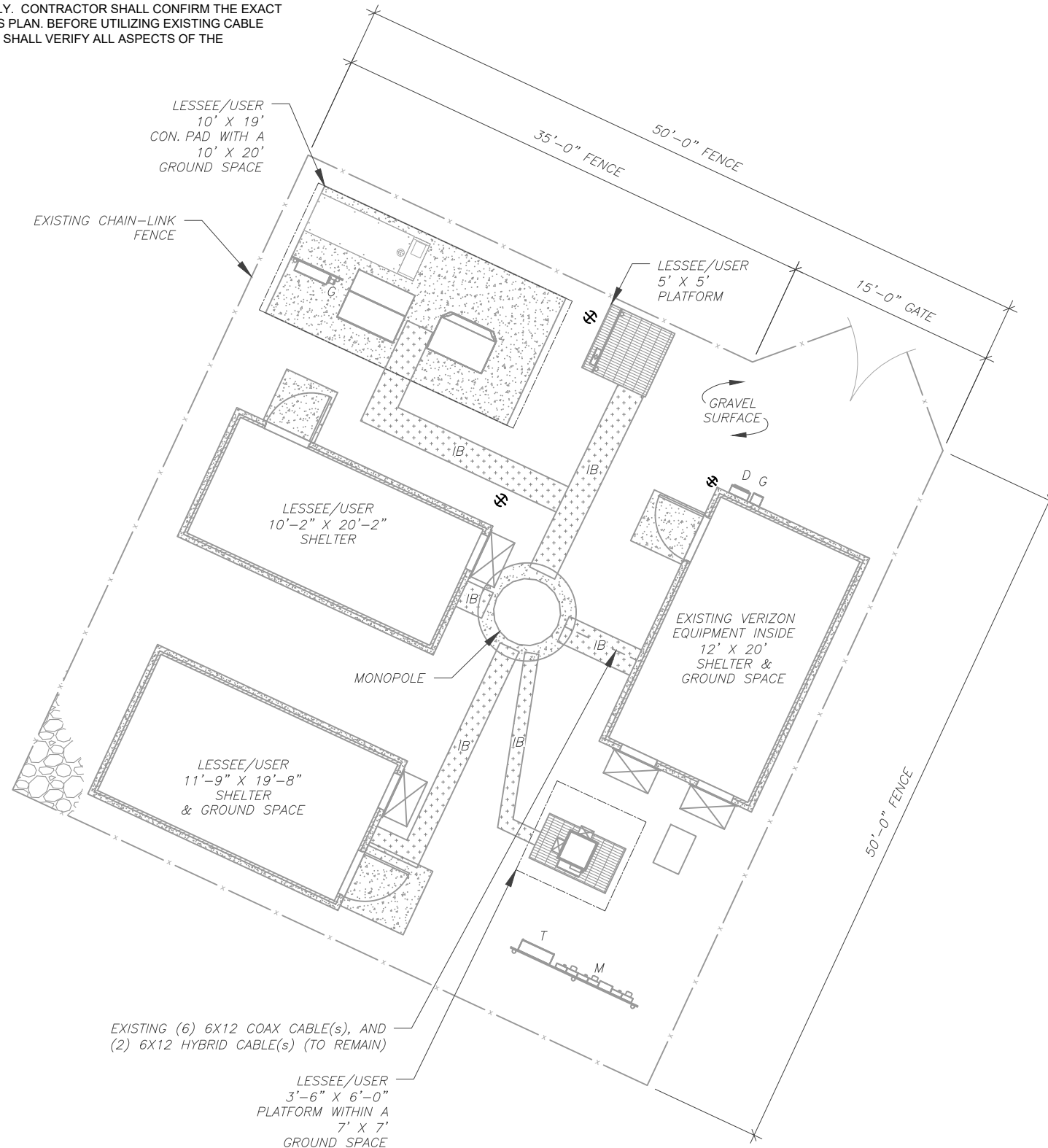
SHEET NUMBER: G-002	REVISION: 0
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SITE PLAN NOTES:

1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.
2. ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.
3. THIS PROJECT INCLUDES NO INSTALL OR MODIFICATION AT GRADE.

LEGEND	
⊗	GROUNDING TEST WELL
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR RECEPTACAL
HH, V	HAND HOLE, VAULT
IB	ICE BRIDGE
K	KENTROX BOX
LC	LIGHTING CONTROL
M	METER
PB	PULL BOX
PP	POWER POLE
T	TELCO
TRN	TRANSFORMER
—x—	CHAINLINK FENCE



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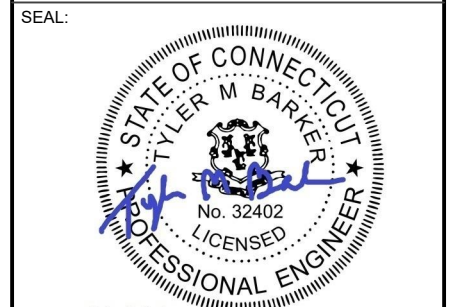
REV.	DESCRIPTION	BY	DATE
A	PRELIM	ASO	06/01/21
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ATC SITE NUMBER:
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 PE # 32402 Exp. 1/31/2022
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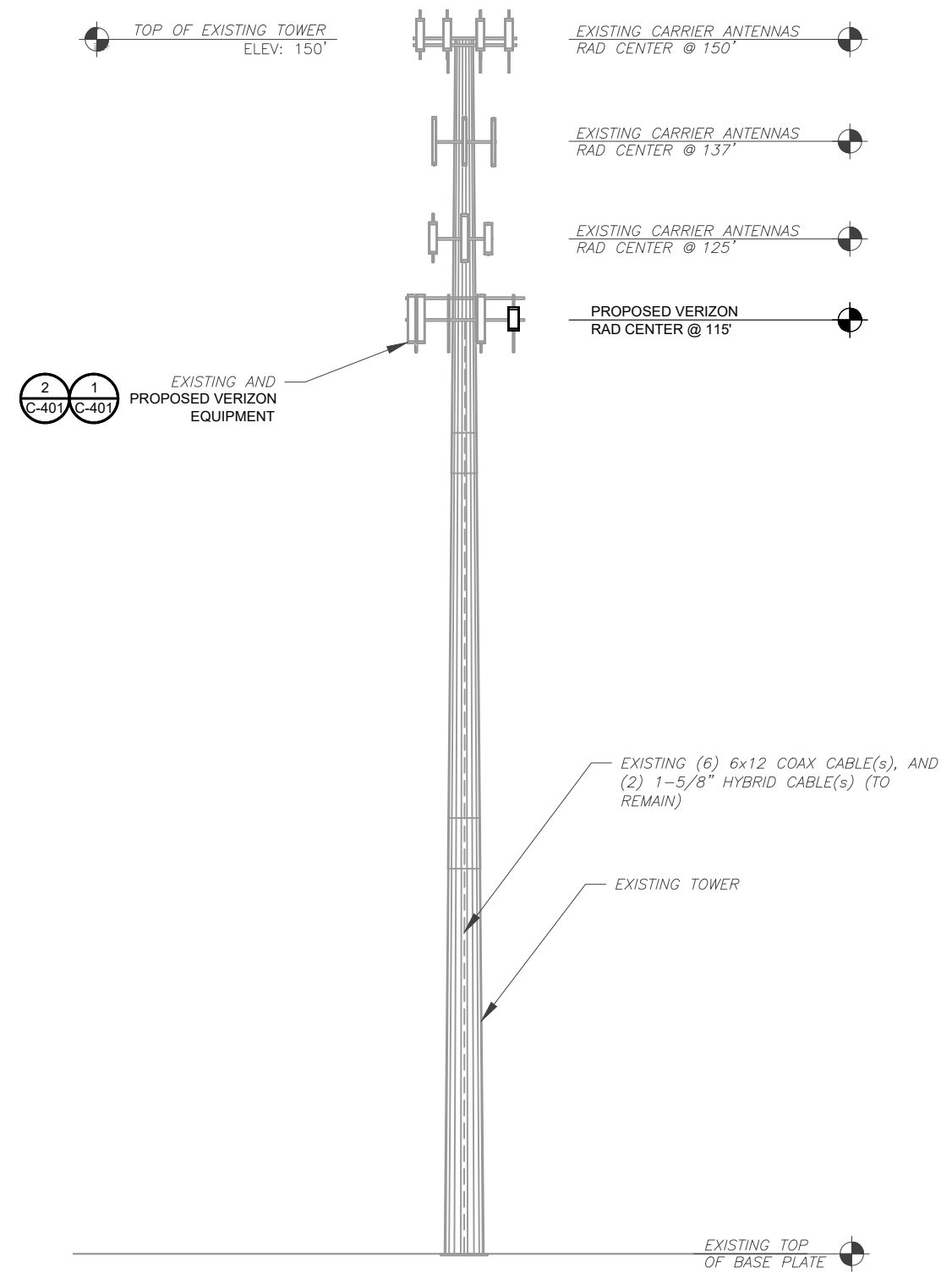
DATE DRAWN:	08/06/21
ATC JOB NO:	13668983_D1
CUSTOMER ID:	HARTFORD NORTH CT
CUSTOMER #:	467518

DETAILED SITE PLAN

SHEET NUMBER:	REVISION:
C-101	0

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PER MOUNT ANALYSIS COMPLETED BY MASER CONSULTING CONNECTICUT, DATED JULY 2, 2021, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING.



- TOWER NOTE:**
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE PROJECT MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS.
 - WHERE APPLICABLE, ALL NEW ANTENNAS, EQUIPMENT, MOUNTS, CABLING, ETC. SHALL BE PAINTED/SOCKED TO MATCH EXISTING EQUIPMENT IN ACCORDANCE WITH FAA, JURISDICTION, AND/OR OTHER LOCAL REQUIREMENTS.
 - ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.
 - TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.)

1 TOWER ELEVATION
SCALE: N.T.S.



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CUSTOMER #:	467518

TOWER ELEVATION

SHEET NUMBER:	REVISION:
C-201	0

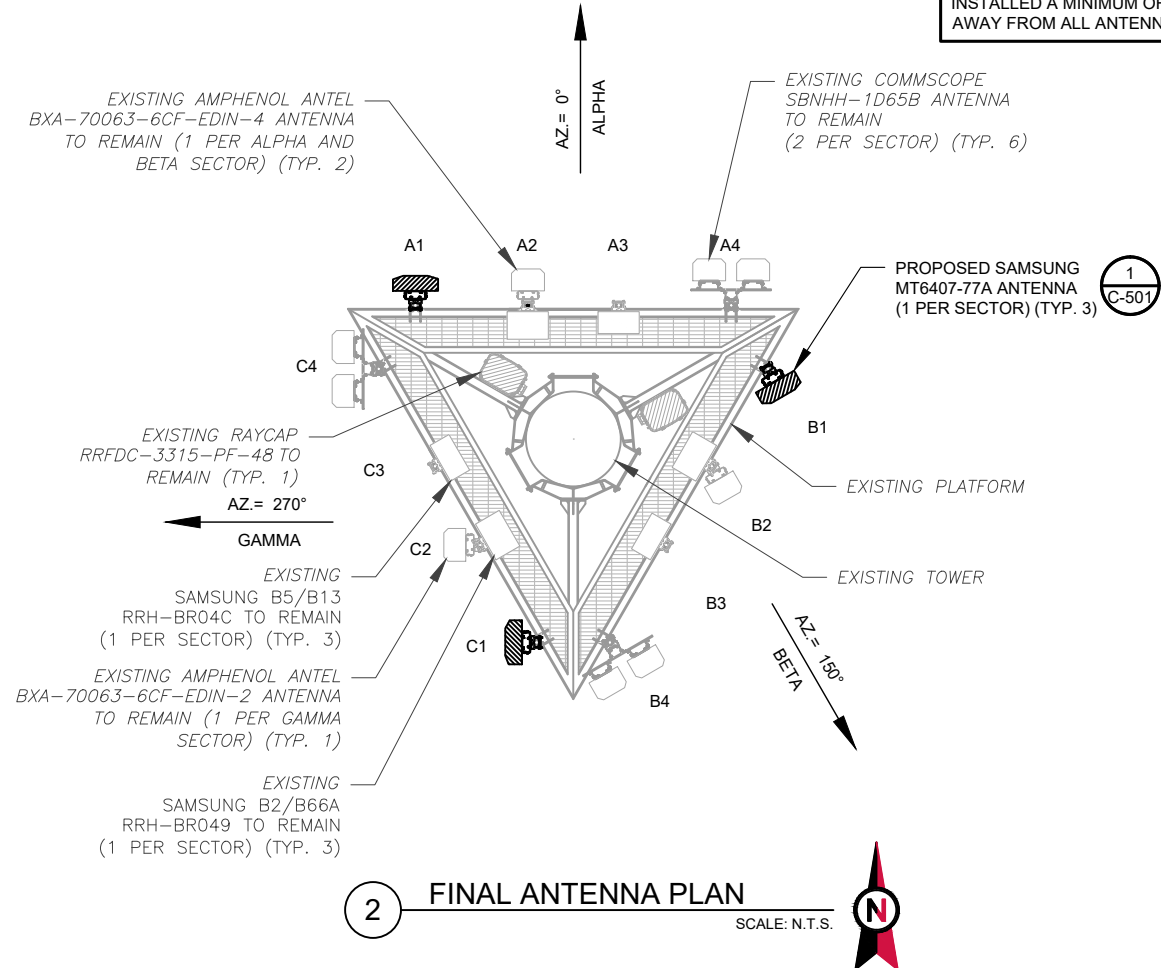
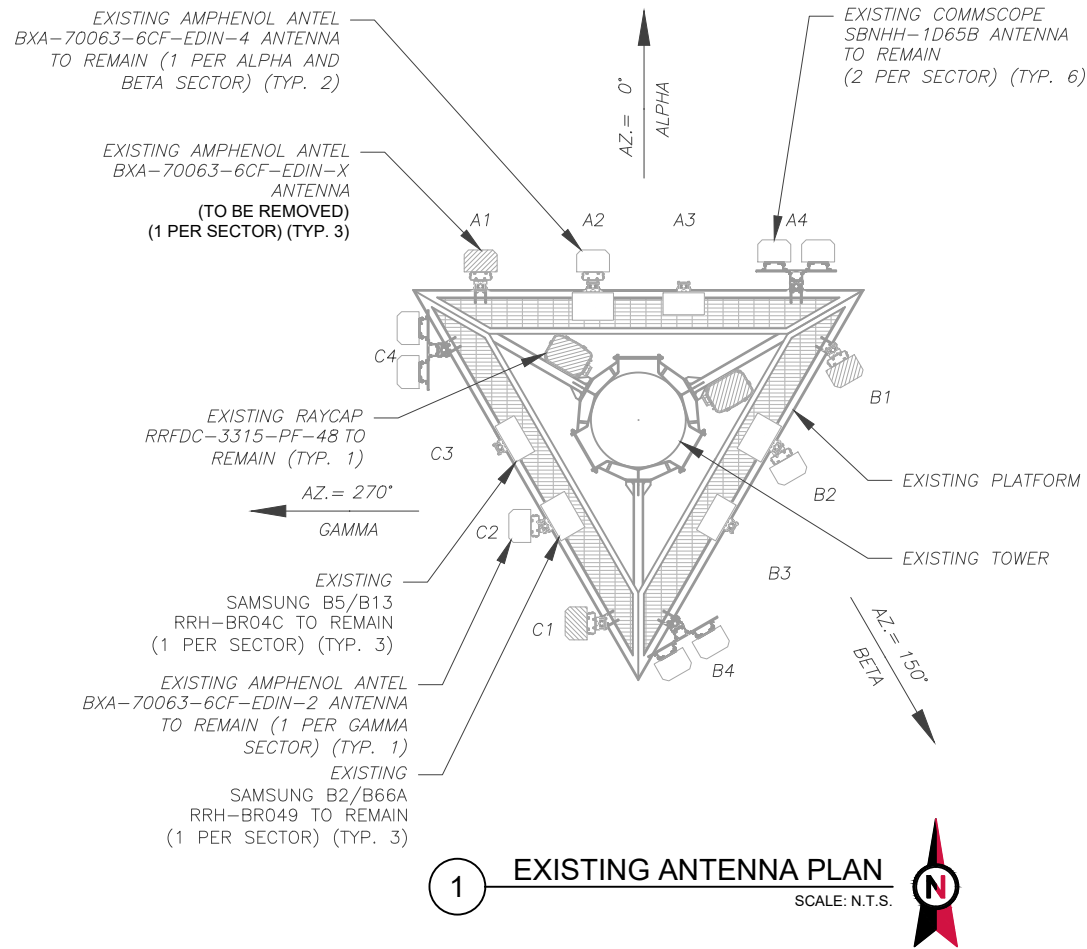
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EXISTING CONFIGURATIONS ARE BASED ON RFDS. CONTRACTOR TO VERIFY EXISTING CONDITIONS

PER MOUNT ANALYSIS COMPLETED BY MASER CONSULTING CONNECTICUT, DATED JULY 2, 2021, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING.

CONTRACTOR SHALL RE-ORIENT ANTENNA MOUNT(S) AS NECESSARY TO ACHIEVE PROPOSED ANTENNA AZIMUTHS

PROPOSED RRUs MUST BE INSTALLED A MINIMUM OF 12" AWAY FROM ALL ANTENNAS



EXISTING ANTENNA SCHEDULE								
LOCATION		ANTENNA SUMMARY					NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT
ALPHA	115'	0°	A1	AMPHENOL ANTEL BXA-70063-6CF-EDIN-X	CDMA 850	0/5	RMV	-
			A2	AMPHENOL ANTEL BXA-70063-6CF-EDIN-4	LTE 850	0/5	RMN	SAMSUNG B2/B66A RRH-BR049
			A3	-	-	-	-	SAMSUNG B5/B13 RRH-BR04C
			A4	COMMSCOPE SBNHH-1D65B	LET 700	0/6	RMN	-
BETA	115'	150°	B1	AMPHENOL ANTEL BXA-70063-6CF-EDIN-X	CDMA 850	0/5	RMV	-
			B2	AMPHENOL ANTEL BXA-70063-6CF-EDIN-4	LTE 850	0/5	RMN	SAMSUNG B2/B66A RRH-BR049
			B3	-	-	-	-	SAMSUNG B5/B13 RRH-BR04C
			B4	COMMSCOPE SBNHH-1D65B	LET 700	0/6	RMN	-
GAMMA	115'	270°	C1	AMPHENOL ANTEL BXA-70063-6CF-EDIN-X	CDMA 850	0/5	RMV	-
			C2	AMPHENOL ANTEL BXA-70063-6CF-EDIN-2	LTE 850	0/5	RMN	SAMSUNG B2/B66A RRH-BR049
			C3	-	-	-	-	SAMSUNG B5/B13 RRH-BR04C
			C4	COMMSCOPE SBNHH-1D65B	LET 700	0/6	RMN	-

NOTES

- CONFIRM WITH VERIZON REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
- CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.

STATUS ABBREVIATIONS

RMV: TO BE REMOVED
RMN: TO REMAIN
REL: TO BE RELOCATED
ADD: TO BE ADDED

CABLE LENGTHS FOR JUMPERS

JUNCTION BOX TO RRU: 15'
RRU TO ANTENNA: 10'

FINAL ANTENNA SCHEDULE								
LOCATION		ANTENNA SUMMARY					NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT
ALPHA	115'	0°	A1	SAMSUNG MT6407-77A	5G L-SUB 6	0/6	ADD	-
			A2	AMPHENOL ANTEL BXA-70063-6CF-EDIN-4	LTE 850	0/5	RMN	SAMSUNG B2/B66A RRH-BR049
			A3	-	-	-	-	SAMSUNG B5/B13 RRH-BR04C
			A4	COMMSCOPE SBNHH-1D65B	LET 700	0/5	RMN	-
BETA	115'	150°	B1	SAMSUNG MT6407-77A	5G L-SUB 6	0/6	ADD	-
			B2	AMPHENOL ANTEL BXA-70063-6CF-EDIN-4	LTE 850	0/5	RMN	SAMSUNG B2/B66A RRH-BR049
			B3	-	-	-	-	SAMSUNG B5/B13 RRH-BR04C
			B4	COMMSCOPE SBNHH-1D65B	LET 700	0/5	RMN	-
GAMMA	115'	270°	C1	SAMSUNG MT6407-77A	5G L-SUB 6	0/6	ADD	-
			C2	AMPHENOL ANTEL BXA-70063-6CF-EDIN-2	LTE 850	0/5	RMN	SAMSUNG B2/B66A RRH-BR049
			C3	-	-	-	-	SAMSUNG B5/B13 RRH-BR04C
			C4	COMMSCOPE SBNHH-1D65B	LET 700	0/5	RMN	-

EXISTING FIBER DISTRIBUTION/OVP BOX		EXISTING CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
(2) RAYCAP RRFDC-3315-PF-48	-	(6) 1-5/8"	(2) 6X12	RMN
-	-	-	-	-

3 EQUIPMENT SCHEDULES

FINAL FIBER DISTRIBUTION / OVP BOX		FINAL CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
(2) RAYCAP RRFDC-3315-PF-48	ADD	(6) 1-5/8"	(2) 6X12	RMN
-	-	-	-	-

319 CHAPANKE ROAD, SUITE 118, RALEIGH, NC 27603
PH: (405)348-5460 FAX: (405)341-4625

COA# PEC.001833 EXP. 08/14/2022

REV.	DESCRIPTION	BY	DATE
A	PRELIM	ASO	06/01/21
0	FOR CONSTRUCTION	ASO	08/06/21

ATC SITE NUMBER: 302466
ATC SITE NAME: WEST SERVICE ROAD
VERIZON SITE NAME: HARTFORD NORTH CT
SITE ADDRESS: 305 W. SERVICE RD. HARTFORD, CT 06120

SEAL:

PE# 32402 EXP: 01/31/2022

DATE DRAWN: 08/06/21
ATC JOB NO: 13668983_D1
CUSTOMER ID: HARTFORD NORTH CT
CUSTOMER #: 467518

ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER: C-401	REVISION: 0
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CLS ENGINEERING
 PLLC
 319 CHAPANOKE ROAD, SUITE 118, RALEIGH, NC 27603
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COA# PEC.001833 EXP. 08/14/2022

REV.	DESCRIPTION	BY	DATE
A	PRELIM	ASO	06/01/21
0	FOR CONSTRUCTION	ASO	08/06/21

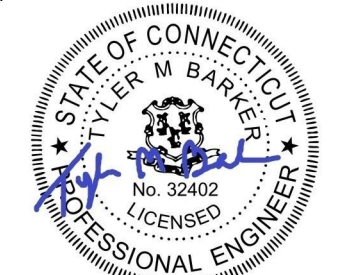
ATC SITE NUMBER:
 302466

ATC SITE NAME:
 WEST SERVICE ROAD

VERIZON SITE NAME:
 HARTFORD NORTH CT

SITE ADDRESS:
 305 W. SERVICE RD.
 HARTFORD, CT 06120

SEAL:



Tyler M. Barker
 CLS Engineering PLLC
 PE # 32402 Exp. 1/31/2022
 COA # PEC.001833 Exp. 8/14/2022
 08/10/2021

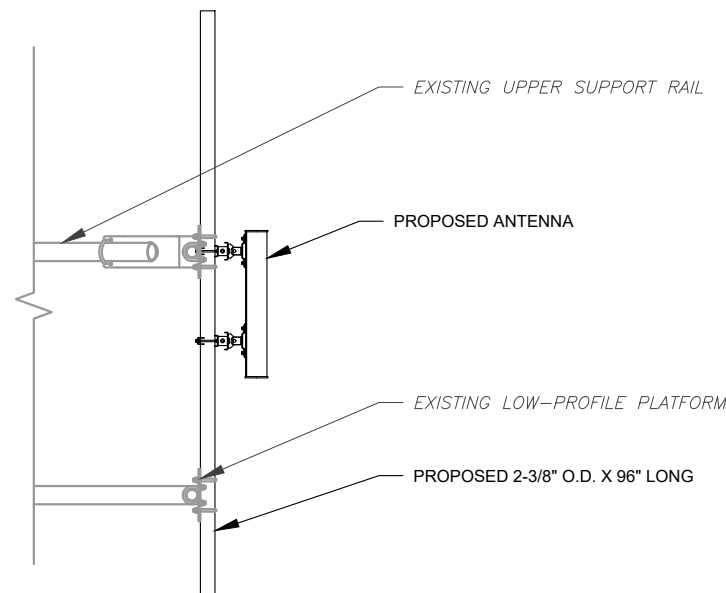
PE# 32402 EXP: 01/31/2022



DATE DRAWN:	08/06/21
ATC JOB NO:	13668983_D1
CUSTOMER ID:	HARTFORD NORTH CT
CUSTOMER #:	467518

**CONSTRUCTION
 DETAILS**

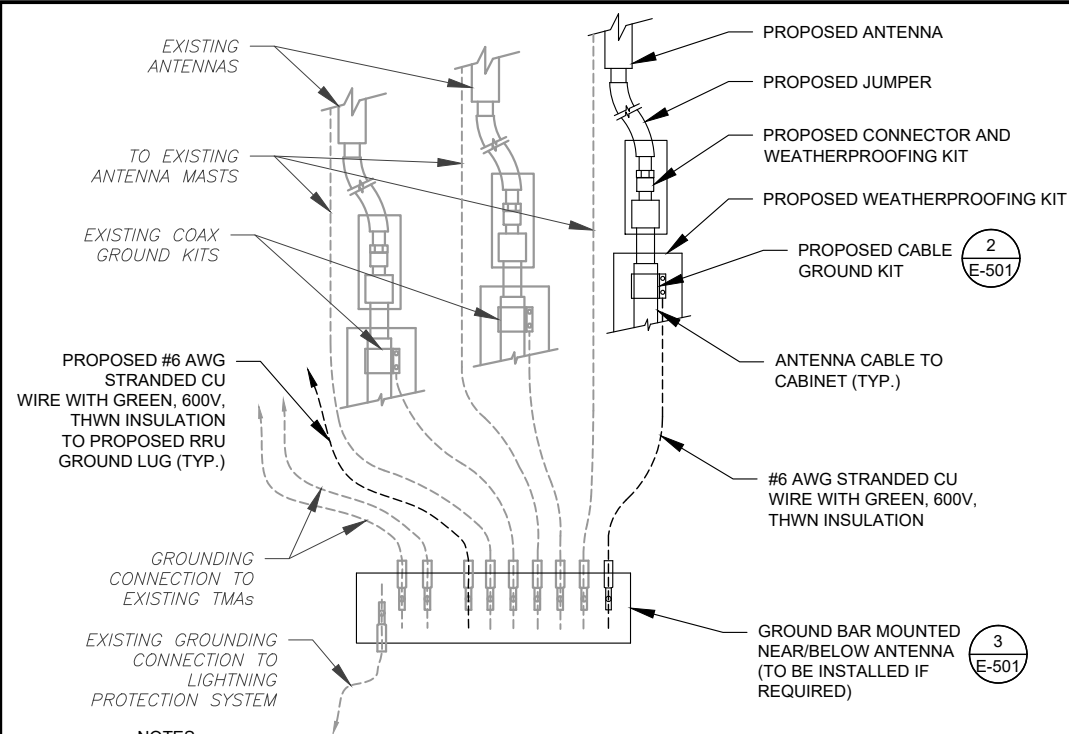
SHEET NUMBER:	REVISION:
C-501	0



1 PROPOSED 5G ANTENNA MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.

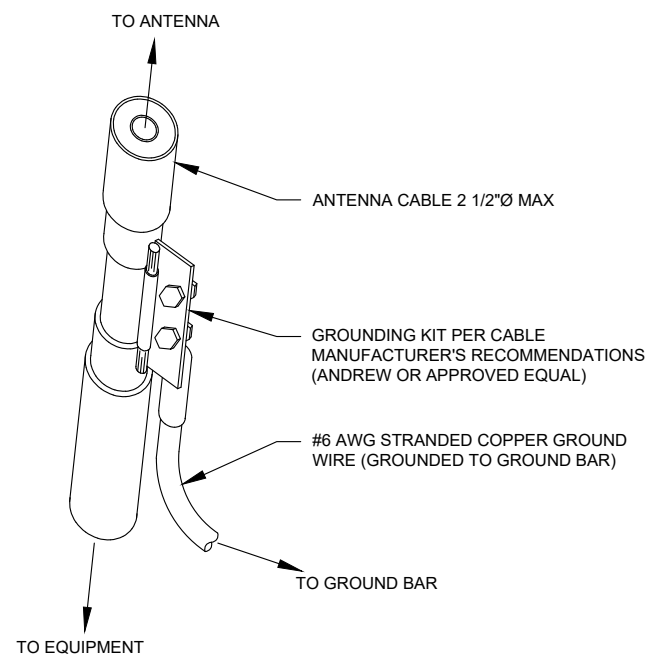
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NOTES:

1. THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
2. SITE GROUNDING SHALL COMPLY WITH VERIZON GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH VERIZON GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT THEY SHALL GOVERN.

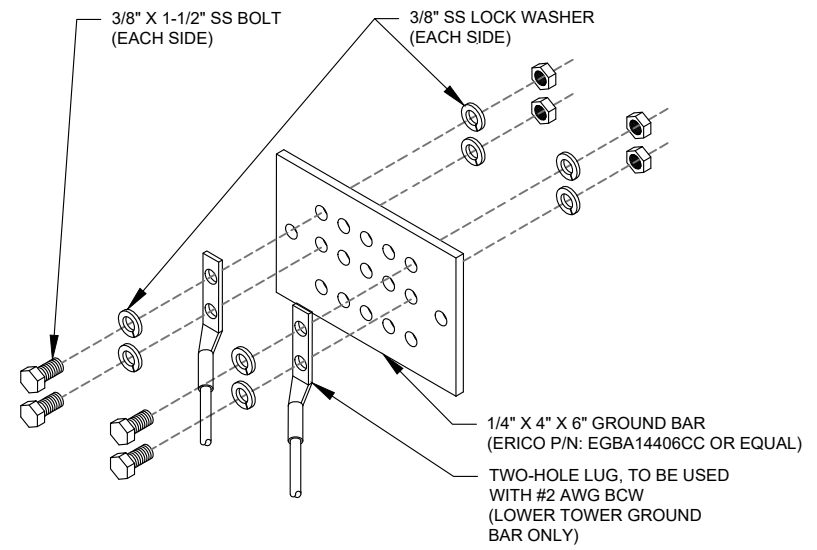
1 TYPICAL ANTENNA GROUNDING DIAGRAM
SCALE: N.T.S.



GROUND KIT NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. CONTRACTOR SHALL PROVIDE WEATHERPROOFING KIT (ANDREW PART NUMBER 221213) AND INSTALL/TAPE PER MANUFACTURER'S SPECIFICATIONS.

2 CABLE GROUND KIT CONNECTION DETAIL
SCALE: N.T.S.



GROUND BAR NOTES:

1. GROUND BAR KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
2. GROUND BAR TO BE BONDED DIRECTLY TO TOWER.

3 TOWER GROUND BAR DETAIL
SCALE: N.T.S.



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COA# PEC.001833 EXP. 08/14/2022

REV.	DESCRIPTION	BY	DATE
A	PRELIM	ASO	06/01/21
0	FOR CONSTRUCTION	ASO	08/06/21

ATC SITE NUMBER:
302466

ATC SITE NAME:
WEST SERVICE ROAD

VERIZON SITE NAME:
HARTFORD NORTH CT

SITE ADDRESS:
305 W. SERVICE RD.
HARTFORD, CT 06120

SEAL:



Tyler M. Barker
CLS Engineering PLLC
PE # 32402 Exp. 1/31/2022
COA # PEC.001833 Exp. 8/14/2022
08/10/2021

PE# 32402 EXP: 01/31/2022



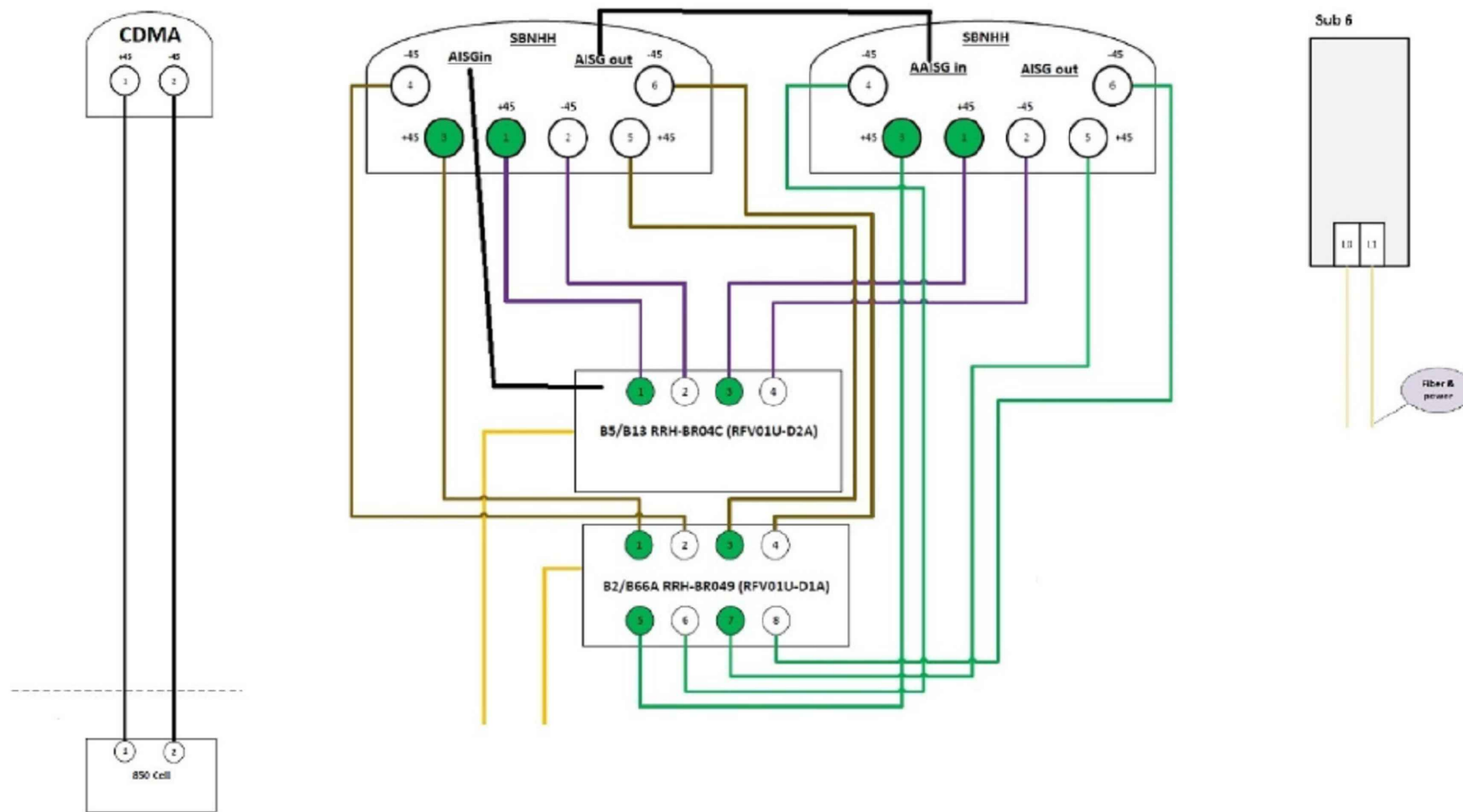
DATE DRAWN:	08/06/21
ATC JOB NO:	13668983_D1
CUSTOMER ID:	HARTFORD NORTH CT
CUSTOMER #:	467518

GROUNDING DETAILS

SHEET NUMBER:
E-501

REVISION:
0

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1 CABINET CONFIGURATION
SCALE: NOT TO SCALE

SUPPLEMENTAL

SHEET NUMBER:
R-601

REVISION:
-



Maser Consulting Connecticut
 2000 Midlantic Drive, Suite 100
 Mt. Laurel, NJ 08054
 (856) 797-0412
 peter.albano@colliersengineering.com

Antenna Mount Analysis Report and PMI Requirements

Mount ReAnalysis-VZW

SMART Tool Project #: 10079717
 Maser Consulting Connecticut Project #: 21777452A REV 1

July 2, 2021

Site Information

Site ID: 467518-VZW / HARTFORD N CT
 Site Name: HARTFORD N CT
 Carrier Name: Verizon Wireless
 Address: 305 West Service Rd
 Hartford, Connecticut 06120
 Hartford County
 Latitude: 41.798055°
 Longitude: -72.655833°

Structure Information

Tower Type: 180-Ft Self Support
 Mount Type: 14.00-Ft Platform

FUZE ID # 16274265

Analysis Results

Platform: 97.7% Pass

***Contractor PMI Requirements:

Included at the end of this MA report
 Available & Submitted via portal at <https://pmi.vzwsmart.com>
 Contractor - Please Review Specific Site PMI Requirements Upon Award
 Requirements also Noted on Mount Modification Drawings
 Requirements may also be Noted on A & E drawings

Report Prepared By: Jared Adkins



SUPPLEMENTAL

SHEET NUMBER: R-602
 REVISION: -