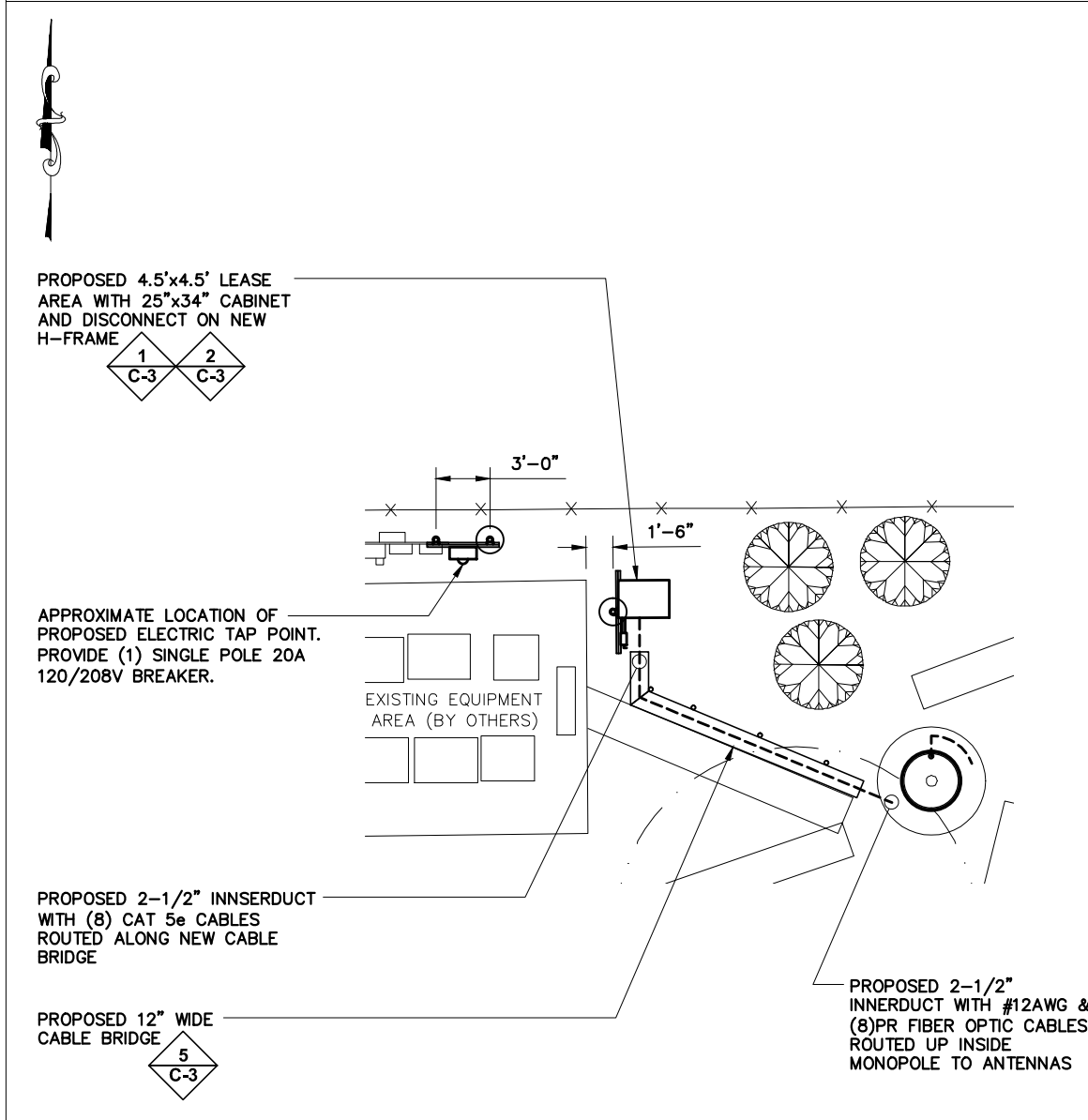
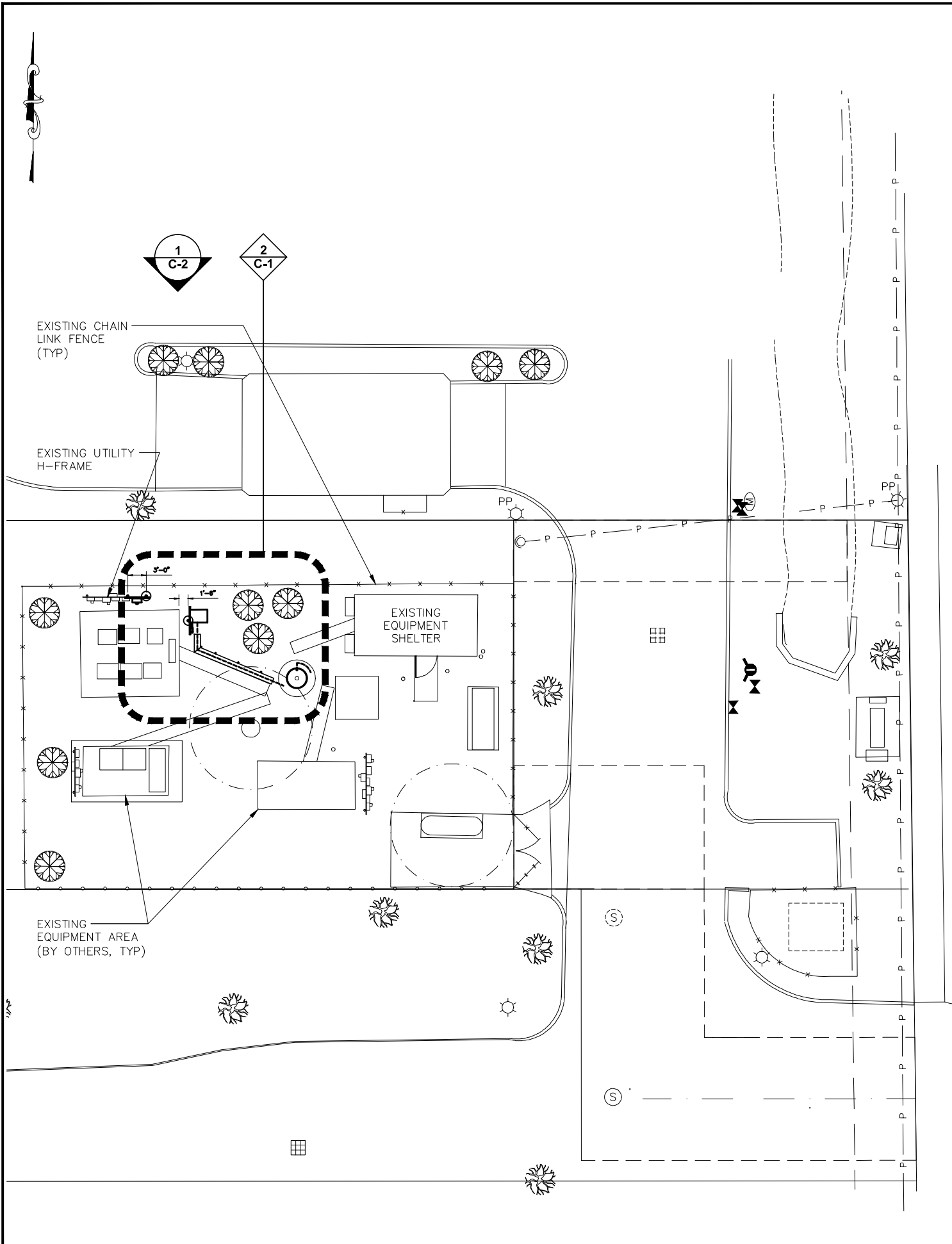


GENERAL NOTES

GENERAL NOTES:

1. THE PROPOSED PROJECT CONSISTS OF A NEW AOPTIX ANTENNA AT THE 132 FT ELEVATION OF AN EXISTING 152 FT MONOPOLE. A SINGLE CABINET APPROXIMATELY 2 FT x 3 FT WILL BE PLACED INSIDE THE EXISTING COMPOUND NEAR THE BASE OF THE EXISTING TOWER.
2. THE PROPOSED FACILITY IS NOT INTENDED FOR PERMANENT EMPLOYEES. A RADIO TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE PER MONTH FOR ROUTINE MAINTENANCE. POTABLE WATER, SANITARY SEWERS AND ADDITIONAL SITE PARKING ARE NOT REQUIRED.
3. CONNECTION TO ELECTRICAL AND TELEPHONE UTILITIES TO BE DETERMINED BY THE APPROPRIATE UTILITY COMPANY.
4. THIS SET OF PLANS HAS BEEN PREPARED FOR THE PURPOSES OF MUNICIPAL AND AGENCY REVIEW AND APPROVAL. THIS SET OF PLANS SHALL NOT BE UTILIZED AS CONSTRUCTION DOCUMENTS UNTIL ALL DRAWINGS HAVE BEEN REVISED TO INDICATE "ISSUED FOR CONSTRUCTION."
5. ALL MATERIALS, WORKMANSHIP AND CONSTRUCTION FOR THE SITE IMPROVEMENTS SHOWN HEREON SHALL BE IN ACCORDANCE WITH:
 - A. CURRENT PREVAILING MUNICIPAL AND/OR COUNTY AUTHORITY SPECIFICATIONS, STANDARDS AND REQUIREMENTS.
 - B. CURRENT PREVAILING UTILITY COMPANY AUTHORITY SPECIFICATIONS, STANDARDS AND REQUIREMENTS.
6. INFORMATION SHOWN ON THIS DRAWING IS BASED ON DRAWING PROVIDED BY AMERICAN TOWER DATED OCTOBER 21, 2011 ENTITLED "SITE NUMBER 302653, SITE NAME COPPOLA FLORIDA". THE UNDERSIGNED HAS NOT VERIFIED ANY DIMENSIONS AND HAS NOT PERFORMED A SURVEY OF THE PROPERTY. THIS PLAN IS SUBJECT TO THE EASEMENTS AND RESTRICTIONS THAT A PROPERTY SURVEY OR TITLE SEARCH MAY REVEAL.
7. THE LOCATION OF UNDERGROUND UTILITIES HAS NOT BEEN RESEARCHED. PRIOR TO CONSTRUCTION THE CONTRACTOR MUST LOCATE ALL ABOVE AND BELOW GROUND UTILITIES WITHIN THE INFLUENCE OF CONSTRUCTION. THE CONTRACTOR MUST CALL SUNSHINE 811 IN ACCORDANCE WITH CHAPTER 556 OF FLORIDA STATUES.
8. NO CHANGE IN GRADING OR DRAINAGE IS PROPOSED FOR THIS SITE.



1 COMPOUND PLAN
11x17 SCALE: 1"= 20' 24x36 SCALE: 1"= 10'

2 EQUIPMENT PLAN
11x17 SCALE: 1"= 10' 24x36 SCALE: 1"= 5'

REV.	DATE	REVISION DESCRIPTION	DRAWN BY	CHKD. BY
1	10/7/13	REVISED PER CLIENT COMMENTS	CLM	PML
0	9/24/13	INITIAL SUBMISSION	CLM	PML



CONSULTING ENGINEERS, LLC

369 SOUTH RIVERSIDE DRIVE
NEPTUNE, NJ 07753

PHONE: 908-770-4105

FL LICENSE: 63709

PREPARED FOR:



ANOVA TECHNOLOGIES

205 NORTH MICHIGAN AVE, SUITE 4230
CHICAGO, IL 60601
TELEPHONE: 312-540-9594

DRAWN BY:	CLM
CHECKED BY:	PML
DATE:	9/24/13

SITE INFORMATION:

6933 NW 39 AVENUE
POMPANO BEACH, FL 33073-2107
BROWARD COUNTY
PROPERTY ID: 159

TITLE:

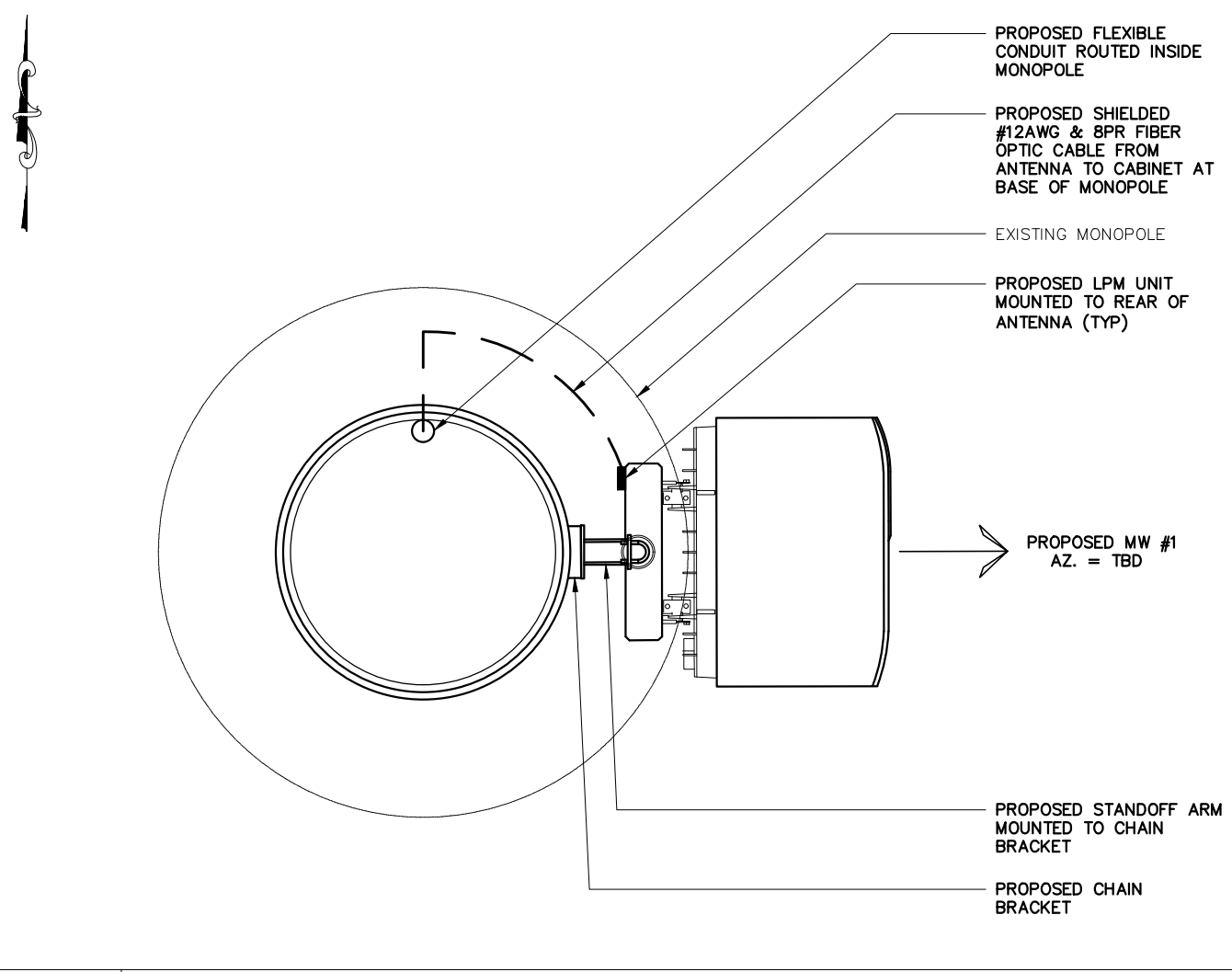
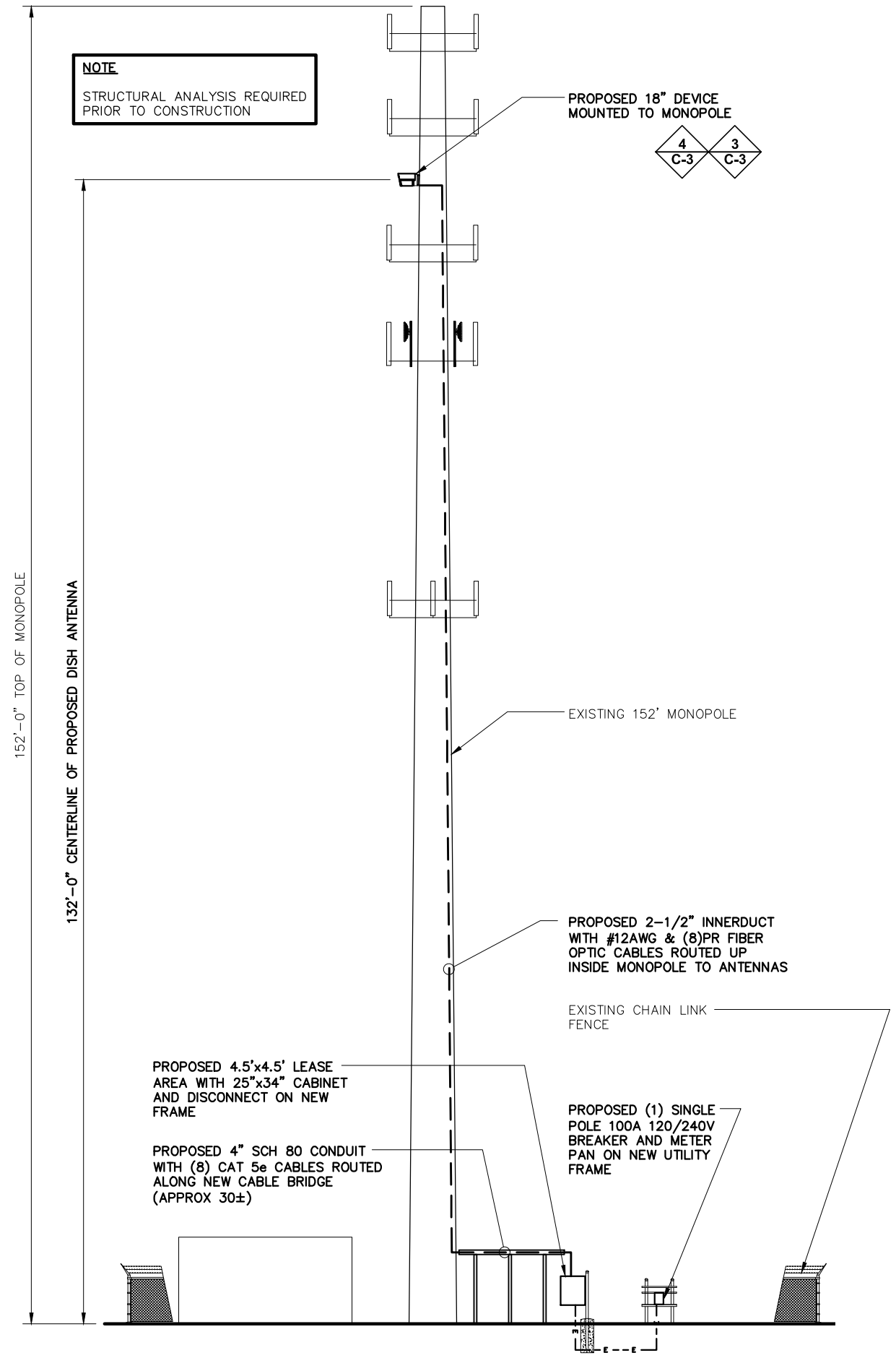
COMPOUND PLAN
& EQUIPMENT PLAN

SHEET:

C-1

REVISION #
1

NOTE
STRUCTURAL ANALYSIS REQUIRED
PRIOR TO CONSTRUCTION



2 ANTENNA PLAN

11x17 SCALE: 1/2" = 1'-0" 24x36 SCALE: 1" = 1'-0"

BILL OF MATERIALS					
	ANTENNA 1	ANTENNA 2	ANTENNA 3	ANTENNA 4	-
AZIMUTH	TBD	N/A	N/A	N/A	-
ANTENNA HEIGHT (FT)	132 ±	N/A	N/A	N/A	-
CABLE LENGTH (FT)	180' ±	N/A	N/A	N/A	-
NO. OF ANTENNAS	1	N/A	N/A	N/A	-
POWER CABLE**	HW15301202	N/A	N/A	N/A	-
FIBER CABLE	8PR FIBER	N/A	N/A	N/A	-

*EXACT AZIMUTH TO BE DETERMINED WITHIN SPECIFIED RANGE
** SHIELDED 12 AWG WITH 2 CONDUCTORS & DRAIN WIRE. 7 STRANDED AS MANUFACTURED BY HOUSTON WIRE & CABLE COMPANY PART# HW15301202

3 BILL OF MATERIALS

11x17 SCALE: NTS 24x36 SCALE: NTS

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CONSULTING ENGINEERS, LLC
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Peter M. Longo
 PROFESSIONAL ENGINEER

FL LICENSE: 63709
 PREPARED FOR:

 205 NORTH MICHIGAN AVE, SUITE 4230
 CHICAGO, IL 60601
 TELEPHONE: 312-540-9594

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DATE:	9/24/13

SITE INFORMATION:
 6933 NW 39 AVENUE
 POMPANO BEACH, FL 33073-2107
 BROWARD COUNTY
PROPERTY ID: 159

TITLE:
 ELEVATION & ANTENNA
 MOUNTING PLAN

SHEET:
C-2
 REVISION #
1

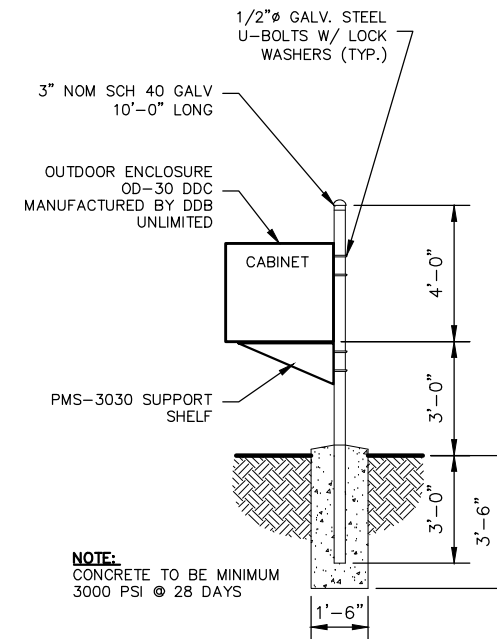
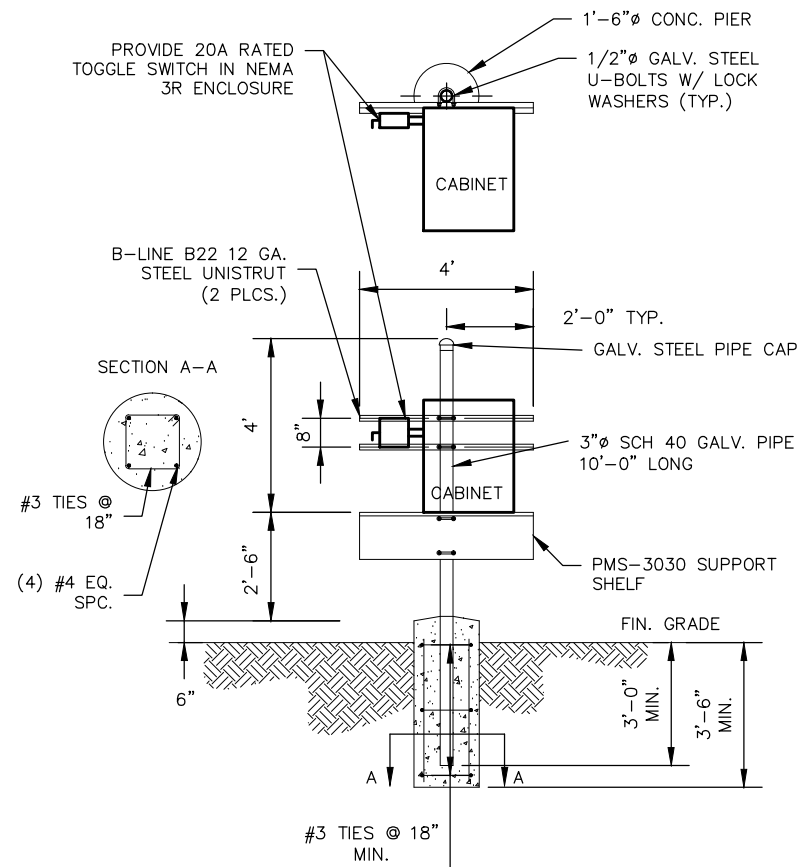
1 ELEVATION

11x17 SCALE: 1/16" = 1'-0" 24x36 SCALE: 1/8" = 1'-0"

OD-30DDC
30" H x 34" D (30 RU) Outdoor Enclosure



	*Section Starting & Ending Points	Vertical Height Per section	Effective Depth For Each Section
Top	26.75" – 30.98"	3.25"	30.50"
	26.57" – 26.75"	.18"	29.50"
	21.00" – 26.57"	5.57"	30.50"
Center	9.00" – 21.00"	12.00"	28.75"
	3.43" – 9.00"	5.57"	30.50"
	3.25" – 3.43"	.18"	29.50"
	0.00" – 3.25"	3.25"	30.50"



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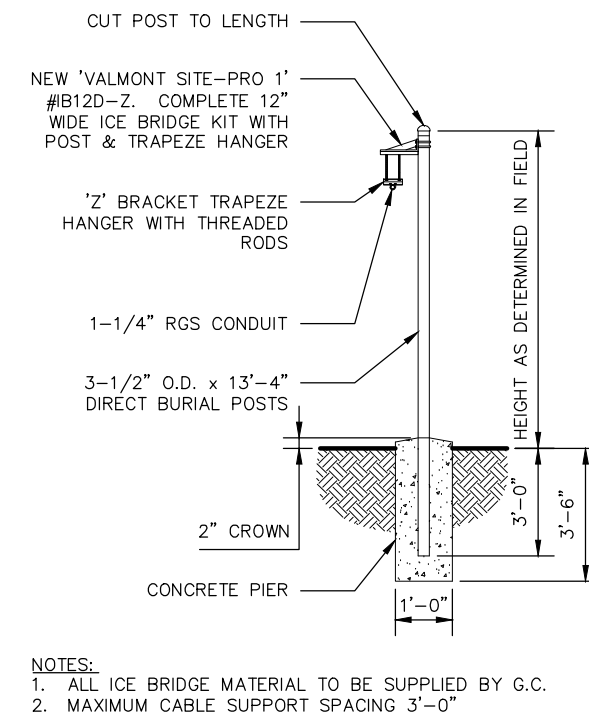
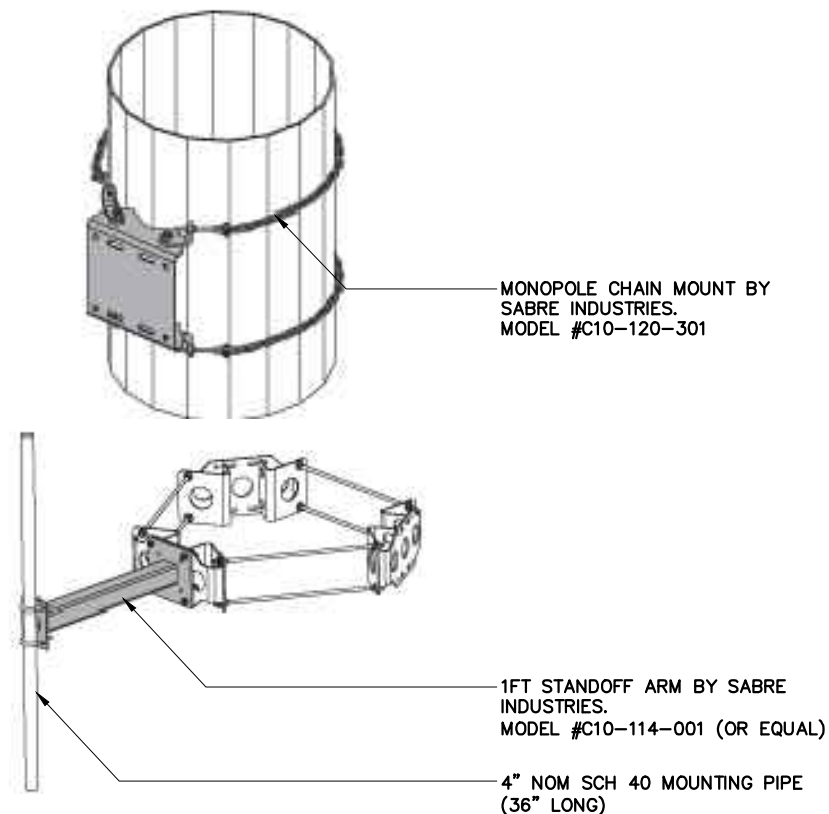
Peter M. Longo
PROFESSIONAL ENGINEER

1 EQUIPMENT CABINET DETAIL

11x17 SCALE: NTS 24x36 SCALE: NTS

2 EQUIPMENT MOUNTING DETAIL

11x17 SCALE: NTS 24x36 SCALE: NTS



3 ANTENNA DETAIL

11x17 SCALE: NTS 24x36 SCALE: NTS

4 ANTENNA MOUNTING DETAIL

11x17 SCALE: NTS 24x36 SCALE: NTS

5 ICE BRIDGE DETAIL

11x17 SCALE: NTS 24x36 SCALE: NTS

FL LICENSE: 63709

PREPARED FOR:

ANOVA TECHNOLOGIES
205 NORTH MICHIGAN AVE, SUITE 4230
CHICAGO, IL 60601
TELEPHONE: 312-540-9594

DRAWN BY: CLM
CHECKED BY: PML
DATE: 9/24/13

SITE INFORMATION:

6933 NW 39 AVENUE
POMPANO BEACH, FL 33073-2107
BROWARD COUNTY
PROPERTY ID: 159

TITLE:
CONSTRUCTION DETAILS

SHEET:

C-3 REVISION # 1

GENERAL NOTES

1. WORK SHALL COMPLY WITH ALL APPLICABLE CODES, ORDINANCES AND REGULATIONS. ALL NECESSARY LICENSES, CERTIFICATES, ETC., REQUIRED BY AUTHORITY HAVING JURISDICTION SHALL BE PROCURED AND PAID FOR BY CONTRACTOR.

2. THE GENERAL CONTRACTOR AND EACH SUBCONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING DIMENSIONS AND CONDITIONS AT THE JOB SITE THAT COULD AFFECT THE WORK UNDER THIS CONTRACT. ALL MANUFACTURERS RECOMMEND SPECIFICATIONS, EXPECT THOSE SPECIFICATIONS HEREIN, WHERE MOST STRINGENT SHALL BE COMPLIED WITH.

3. THE CONTRACTOR SHALL VERIFY THAT NO CONFLICTS EXIST BETWEEN THE LOCATIONS OF ANY AND ALL MECHANICAL, PLUMBING OR STRUCTURAL ELEMENTS AND THAT ALL REQUIRED CLEARANCES FOR INSTALLATION AND MAINTENANCE ARE MET. NOTIFY THE CONSULTANTS OF ANY CONFLICTS. THE CONSULTANT HAS THE RIGHT TO MAKE MINOR MODIFICATIONS IN THE DESIGN OF THE CONTRACT WITHOUT THE CONTRACTOR GETTING ADDITIONAL COMPENSATION.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY CLEAN UP OF ALL TRADES AND REMOVE ALL DEBRIS FROM THE CONSTRUCTION SITE. AT THE COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL THOROUGHLY CLEAN THE BUILDING, SITE AND ANY OTHER SURROUNDING AREAS TO BETTER THAN NEW CONDITION.

5. THE CONTRACTOR IS RESPONSIBLE FOR ADEQUATELY BRACING AND PROTECTING ALL WORK DURING CONSTRUCTION AGAINST DAMAGE, BREAKAGE, COLLAPSE, ETC. ACCORDING TO APPLICABLE CODES, STANDARDS, AND GOOD CONSTRUCTION PRACTICES.

6. WHERE ONE DETAIL IS SHOWN FOR ONE CONDITION, IT SHALL APPLY FOR ALL LIKE OR SIMILAR CONDITIONS, EVEN THOUGH NOT SPECIFICALLY MARKED ON THE DRAWINGS OR REFERRED TO IN THE SPECIFICATIONS, UNLESS NOTED OTHERWISE.

7. WHERE NEW PAVING, CONCRETE SIDEWALKS. OR PATHS MEET EXISTING CONSTRUCTION, THE CONTRACTOR SHALL MEET THE EXISTING PITCH, GRADE AND ELEVATION SO THE ENTIRE STRUCTURE SHALL HAVE A SMOOTH TRANSITION.

B. THE GENERAL CONTRACTOR SHALL OBTAIN WRITTEN CONFORMATION OF EXPECTED DATE OF COMPLETION OF THE POWER CONNECTION FROM THE POWER COMPANY.

9. THESE PLANS WERE PREPARED TO BE SUBMITTED TO GOVERNMENTAL BUILDING AUTHORITIES FOR REVIEW FOR COMPLIANCE WITH APPLICABLE CODES AND IT IS THE SOLE RESPONSIBILITY OF THE OWNER AND/OR CONTRACTOR TO BUILD ACCORDING TO APPLICABLE BUILDING CODES.

10. IF CONTRACTOR OR SUBCONTRACTOR FIND IT NECESSARY TO DEVIATE FROM ORIGINAL APPROVED PLANS, THEN IT IS THE CONTRACTOR AND SUBCONTRACTORS RESPONSIBILITY TO PROVIDE THE ENGINEER WITH (4) COPIES OF THE PROPOSED CHANGES FOR HIS APPROVAL BEFORE PROCEEDING WITH WORK. IN ADDITION THE CONTRACTOR AND SUBCONTRACTORS SHALL BE RESPONSIBLE FOR PROCURING ALL NECESSARY APPROVALS FROM THE BUILDING AUTHORITIES FOR THE PROPOSED CHANGES BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR AND SUBCONTRACTORS SHALL BE RESPONSIBLE FOR PROCURING ALL NECESSARY INSPECTIONS AND APPROVALS FROM BUILDING AUTHORITIES DURING THE EXECUTION OF THE WORK.

11. IN EVERY EVENT, THESE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS SHALL BE INTERPRETED TO BE A MINIMUM ACCEPTABLE MEANS OF CONSTRUCTION BUT THIS SHALL NOT RELIEVE THE CONTRACTOR, OR SUBCONTRACTOR, AND/OR SUPPLIER/MANUFACTURER FROM PROVIDING A COMPLETE AND CORRECT JOB WHEN ADDITIONAL ITEMS ARE REQUIRED TO THE MINIMUM SPECIFICATION. IF ANY ITEMS NEED TO EXCEED THESE MINIMUM SPECIFICATIONS TO PROVIDE A COMPLETE, ADEQUATE AND SAFE WORKING CONDITION, THEN IT SHALL BE THE DEEMED AND UNDERSTOOD TO BE INCLUDED IN THE DRAWINGS. FOR EXAMPLE: IF AN ITEM AND/OR PIECE OF EQUIPMENT REQUIRES A LARGER WIRE SIZE (I.E. ELECTRICAL WIRE) STRONGER OR LARGER PIPING, INCREASED QUALITY (I.E. STRUCTURAL ELEMENTS), REDUCED SPACING AND/OR INCREASED LENGTH (I.E. BOLT LENGTHS, BAR LENGTHS) THEN IT SHALL BE DEEMED AND UNDERSTOOD TO BE INCLUDED IN THE BID/PROPOSAL. THESE DOCUMENTS ARE MEANT TO BE A GUIDE AND ALL ITEMS REASONABLY INFERRED SHALL BE DEEMED TO BE INCLUDED.

12. THESE CONTRACT DOCUMENTS AND SPECIFICATIONS SHALL NOT BE CONSTRUCTED TO CREATE A CONTRACTUAL RELATIONSHIP OF ANY KIND BETWEEN THE ENGINEER AND THE CONTRACTOR.

GROUNDING GENERAL NOTES

1. ENGAGE AN INDEPENDENT ELECTRICAL TESTING FIRM TO TEST AND VERIFY THAT IMPEDANCE DOES NOT EXCEED FIVE OHMS TO GROUND BY MEANS OF "FALL OF POTENTIAL TEST," WITNESSED BY APPLICANT'S REPRESENTATIVE.

2. GROUNDING CONNECTIONS SHALL BE EXOTHERMIC ("CADWELDS") TO TOWER, FENCE POSTS, GROUND RODS, GROUND RING WIRE, AND WAVEGUIDE BRIDGE ELEMENTS UNLESS NOTED OTHERWISE. CLEAN SURFACES TO SHINY METAL. WHERE GROUND WIRES ARE CADWELDED TO GALVANIZED SURFACES, SPRAY CADWELD WITH GALVANIZING PAINT.

3. GROUND RODS SHALL BE SPACED AT LOCATIONS SHOWN ON PLAN (SEE G-1) INTERCONNECTED WITH #2 AWG SOLID BARE TINNED COPPER WIRE 36" BELOW GRADE. DRIVE TOP OF RODS TO 36" DEPTH.

4. ALL GROUND CONDUCTORS SHALL BE #2 AWG SOLID BARE TINNED COPPER WIRE UNLESS OTHERWISE SPECIFIED.

5. GROUNDING CONNECTIONS TO GROUND BARS ARE TO BE TWO-HOLE BRASS MECHANICAL CONNECTORS WITH STAINLESS STEEL HARDWARE (INCLUDING SCREW SET.) CLEAN GROUND BAR TO SHINY METAL. AFTER MECHANICAL CONNECTION, TREAT WITH PROTECTIVE ANTIOXIDANT COATING.

6. GROUND COAXIAL CABLE SHIELDS AT BOTH ENDS WITH MANUFACTURER'S GROUNDING KITS.

7. ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE. BEND GROUNDING LEADS WITH A MINIMUM 8" RADIUS.

8. BOND WAVEGUIDE POSTS TO GROUNDING ELECTRODE SYSTEM WITH CADWELDS AND #2 AWG SOLID BARE TINNED COPPER WIRE.

9. EXOTHERMIC WELDS SHALL BE PARALLEL TYPE. CADWELD TYPES PG, PT, PH, PC, ND, NT1, NX1, NC ACCEPTABLE.

10. EACH GROUNDING CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END IDENTIFYING ITS ORIGIN AND DESTINATION.

11. IF REQUIRED, GROUND BAR AT BASE OF TOWER SHALL BE 1/4"X 4"X 18". CADWELD #2 BARE SOLID TINNED COPPER WIRE TO BAR AT TWO BOTTOM CORNERS FOR CONNECTION TO TOWER GROUND RING. MOUNT GROUND BAR ON TOWER.

12. SERVICE ENTRANCE GROUND ROD SHALL BE 5/8" X 1' 0" -0" COPPER CLAD STEEL BURIED 36" BELOW GRADE.

IMPORTANT NOTICE

1. THE EXISTING CONDITIONS REPRESENTED HEREIN ARE BASED ON VISUAL OBSERVATION AND INFORMATION PROVIDED BY OTHERS. CONTRACTORS AND THEIR SUBCONTRACTORS SHALL VISIT THE SITE AND VERIFY ALL EXISTING CONDITIONS AS REQUIRED FOR PROPER EXECUTION OF PROJECT. REPORT ANY CONFLICTS OR DISCREPANCIES TO THE CONSULTANT PRIOR TO CONSTRUCTION.

STEEL NOTES

1. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS - ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN INCLUDING THE COMMENTARY AND THE AISC CODE FOR STANDARD PRACTICE.

2. STRUCTURAL STEEL PLATES AND SHAPES SHALL CONFORM TO ASTM A36. ALL STRUCTURAL STEEL PIPES SHALL CONFORM TO ASTM A53 GRADE B. ALL STRUCTURAL STEEL COMPONENTS AND FABRICATED ASSEMBLIES SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.

3. WELDING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN WELDING SOCIETY (AWS). STRUCTURAL WELDING CODE - STEEL WELD ELECTRODES SHALL BE E70XX.

4. ALL THREADED STRUCTURAL FASTENERS FOR ANTENNA SUPPORT ASSEMBLIES SHALL CONFORM TO ASTM A307 OR ASTM A36. ALL STRUCTURAL FASTENERS FOR STRUCTURAL STEEL FRAMING SHALL CONFORM TO ASTM A325. FASTENERS SHALL BE 5/8 INCH MIN. DIAMETER BEARING TYPE CONNECTIONS WITH THREADS INCLUDED IN THE SHEAR PLANE. ALL EXPOSED FASTENERS, NUTS AND WASHERS SHALL BE GALVANIZED UNLESS OTHERWISE NOTED. CONCRETE EXPANSION ANCHORS SHALL BE HILTI KWIK BOLTS UNLESS OTHERWISE NOTED.

ELECTRICAL NOTES

1. SUBMITTAL OF BID INDICATES THAT THE CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED UNDER THIS CONTRACT.

2. CONTRACTOR SHALL PERFORM ALL VERIFICATIONS, OBSERVATION TESTS, AND EXAMINATION WORK PRIOR TO ORDERING OF ANY EQUIPMENT AND THE ACTUAL CONSTRUCTION. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE PROJECT MANAGER LISTING ALL MALFUNCTIONS, FAULTY EQUIPMENT AND DISCREPANCIES.

3. VERIFY HEIGHTS WITH PROJECT MANAGER PRIOR TO INSTALLATION.

4. THESE PLANS ARE DIAGRAMMATIC ONLY, FOLLOW AS CLOSELY AS POSSIBLE.

5. COORDINATE ALL WORK BETWEEN TRADES AND ALL OTHER SCHEDULING AND PROVISIONARY CIRCUMSTANCES SURROUNDING THE PROJECT.

6. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION CONSTRUCTION TOOLS, TRANSPORTATION, ETC., FOR COMPLETE AND FUNCTIONALLY OPERATING SYSTEMS ENERGIZED AND READY FOR USE THROUGHOUT AS INDICATED ON DRAWINGS, AS SPECIFIED HEREIN AND/OR AS OTHERWISE REQUIRED.

7. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN PERFECT CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT. ELECTRICAL MATERIALS SHALL BE LISTED AND APPROVED BY UNDERWRITER'S LABORATORIES AND SHALL BEAR THE INSPECTION LABEL "J" WHERE SUBJECT TO SUCH APPROVAL. MATERIALS SHALL MEET WITH APPROVAL OF ALL GOVERNING BODIES HAVING JURISDICTION OVER THE CONSTRUCTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH ALL CURRENT APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA AND NBFU. ALL MATERIALS AND EQUIPMENT SHALL BE APPROVED FOR THEIR INTENDED USE AND LOCATION.

8. ALL WORK SHALL COMPLY WITH ALL APPLICABLE GOVERNING STATE, COUNTY AND CITY CODES AND OSHA, NFPA, NEC & ASHRAE REQUIREMENTS.

9. ENTIRE JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF JOB ACCEPTANCE. ALL WORK, MATERIAL AND EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE CONTRACTOR.

10. PROPERLY SEAL ALL PENETRATIONS. PROVIDE UL LISTED FIRE-STOPS WHERE PENETRATIONS ARE MADE THROUGH FIRE-RATED ASSEMBLIES. WATER-TIGHT USING SILICONE SEALANT.

11. LOCATE ALL PENETRATIONS SUCH THAT ALL REINFORCEMENT CONTAINED WITHIN THE EXISTING BUILDING CONSTRUCTION REMAINS INTACT AND UNDISTURBED. SUBMIT LOCATING METHOD TO THE PROJECT MANAGER FOR APPROVAL PRIOR TO EXECUTION.

12. DELIVER ALL BROCHURES, OPERATING MANUALS, CATALOGS AND SHOP DRAWINGS TO THE PROJECT MANAGER AT JOB COMPLETION. PROVIDE MAINTENANCE MANUALS FOR MECHANICAL EQUIPMENT. AFFIX MAINTENANCE LABELS TO MECHANICAL EQUIPMENT.

13. ALL CONDUCTORS SHALL BE COPPER. MINIMUM CONDUCTOR SIZE SHALL BE #12 AWG., UNLESS OTHERWISE NOTED. CONDUCTORS SHALL BE TYPE THHN, RATED IN ACCORDANCE WITH NEC 110-14(c).

14. ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING RATING NOT LESS THE MAXIMUM INTERRUPTING CURRENT TO WHICH THEY MAY BE SUBJECTED.

15. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE; ARTICLES 250 & 810 AND THE UTILITY COMPANY STANDARDS.

16. CONDUIT:
a). RIGID CONDUIT SHALL BE U.L. LABEL GALVANIZED ZINC COATED WITH ZINC INTERIOR AND SHALL BE USED WHEN INSTALLED IN OR UNDER CONCRETE SLABS, IN CONTACT WITH THE EARTH, UNDER PUBLIC ROADWAYS, IN MASONRY WALLS OR EXPOSED ON BUILDING EXTERIOR. RIGID CONDUIT IN CONTACT WITH EARTH SHALL BE 1/2 LAPPED WRAPPED WITH HUNTS WRAP PROCESS NO. 3.
b). ELECTRICAL METALLIC TUBING SHALL HAVE U.L. LABEL, FITTINGS SHALL BE GLAND RING COMPRESSION TYPE. EMT SHALL BE USED ONLY FOR INTERIOR RUNS.
c). LIQUID-TIGHT FLEXIBLE METAL CONDUIT SHALL BE U.L. LISTED AND SHALL BE USED AT FINAL CONNECTIONS TO MECHANICAL EQUIPMENT & RECTIFIERS AND WHERE PERMITTED BY CODE. ALL CONDUIT IN EXCESS OF SIX FEET IN LENGTH SHALL CONTAIN A FULL-SIZE GROUND CONDUCTOR.
d). CONDUIT RUNS SHALL BE SURFACE MOUNTED ON CEILINGS OR WALLS UNLESS NOTED OTHERWISE. ALL CONDUIT SHALL RUN PARALLEL OR PERPENDICULAR TO WALLS, FLOOR, CEILING, OR BEAMS. VERIFY EXACT ROUTING OF ALL EXPOSED CONDUIT WITH THE PROJECT MANAGER PRIOR TO INSTALLING.
e). PVC CONDUIT MAY BE PROVIDED ONLY WHERE SHOWN, OR IN UNDERGROUND INSTALLATIONS. PROVIDE UV-RESISTANT CONDUIT WHERE EXPOSED TO THE ATMOSPHERE. PROVIDE GROUND CONDUCTOR IN ALL PVC RUNS; EXCEPT WHERE PERMITTED BY CODE TO OMIT.

17. ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT ENGRAVED PLASTIC LABELS. BACKGROUND SHALL BE BLACK WITH WHITE LETTERS; EXCEPT AS REQUIRED BY CODE TO FOLLOW A DIFFERENT SCHEME.

ELECTRICAL NOTES (CONTINUED)

18. UPON COMPLETION OF WORK, CONDUCT CONTINUITY, SHORT CIRCUIT, AND FALL OF POTENTIAL GROUNDING TESTS FOR APPROVAL. SUBMIT TEST REPORTS TO PROJECT MANAGER. GROUNDING SYSTEM RESISTANCE SHALL NOT EXCEED 5 OHMS. IF THE RESISTANCE VALUE IS EXCEEDED, NOTIFY THE PROJECT MANAGER FOR FURTHER INSTRUCTION ON METHODS FOR REDUCING THE RESISTANCE VALUE.

19. CLEAN PREMISES OF ALL DEBRIS RESULTING FROM WORK AND LEAVE WORK IN A COMPLETE AND UNDAMAGED CONDITION. LEGALLY DISPOSE OF ALL REMOVED, UNUSED AND EXCESS MATERIAL GENERATED BY THE WORK OF THIS CONTRACT. DELIVER ITEMS INDICATED ON THE DRAWINGS TO THE OWNER IN GOOD CONDITION. OBTAIN SIGNED RECEIPT UPON DELIVERY.

20. COORDINATE WITH UTILITY COMPANY FOR CONNECTION OF TEMPORARY AND PERMANENT POWER TO THE SITE. THE TEMPORARY POWER AND ALL HOOKUP COSTS SHALL BE PAID BY THE CONTRACTOR.

21. VERIFY ALL EXISTING CIRCUITRY PRIOR TO REMOVAL AND NEW WORK. MAINTAIN POWER TO ALL OTHER AREAS & CIRCUITS NOT SCHEDULED FOR REMOVAL.

1	10/7/13	REVISED PER CLIENT COMMENTS	CLM	PML	
0	9/24/13	INITIAL SUBMISSION	CLM	PML	
REV.	DATE	REVISION DESCRIPTION	DRAWN BY	CHKD. BY	



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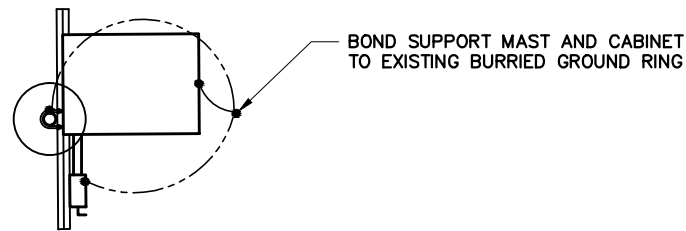
TITLE:

GENERAL NOTES

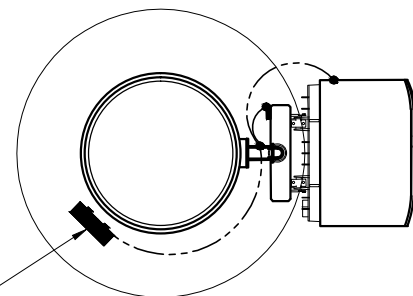
SHEET:

GN-1

REVISION #
1



NEW 6" GROUND BAR BOLTED DIRECT TO MONOPOLE ADJACENT TO ANTENNAS IF REQUIRED (HARGER #GBA1426Z)



1 GROUNDING PLAN

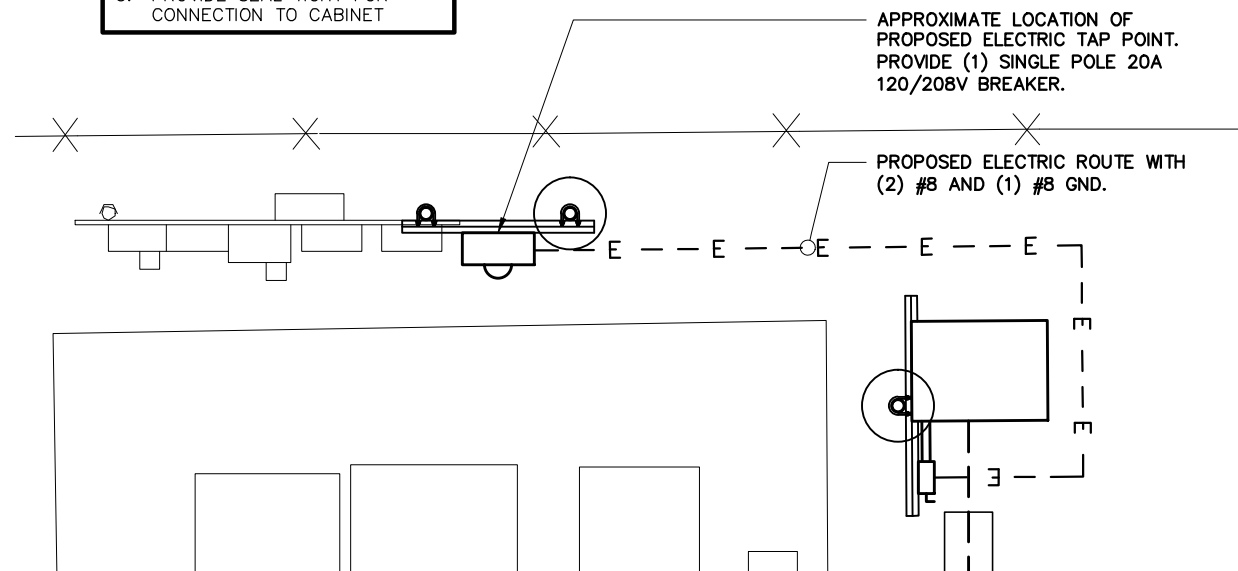
11x17 SCALE: 1/4" = 1'-0" 24x36 SCALE: 1/2" = 1'-0"

NOTE

1. INTERIOR WORK SHALL BE EMT
2. EXTERIOR WORK SHALL BE RGS
3. PROVIDE SEAL TIGHT FOR CONNECTION TO CABINET

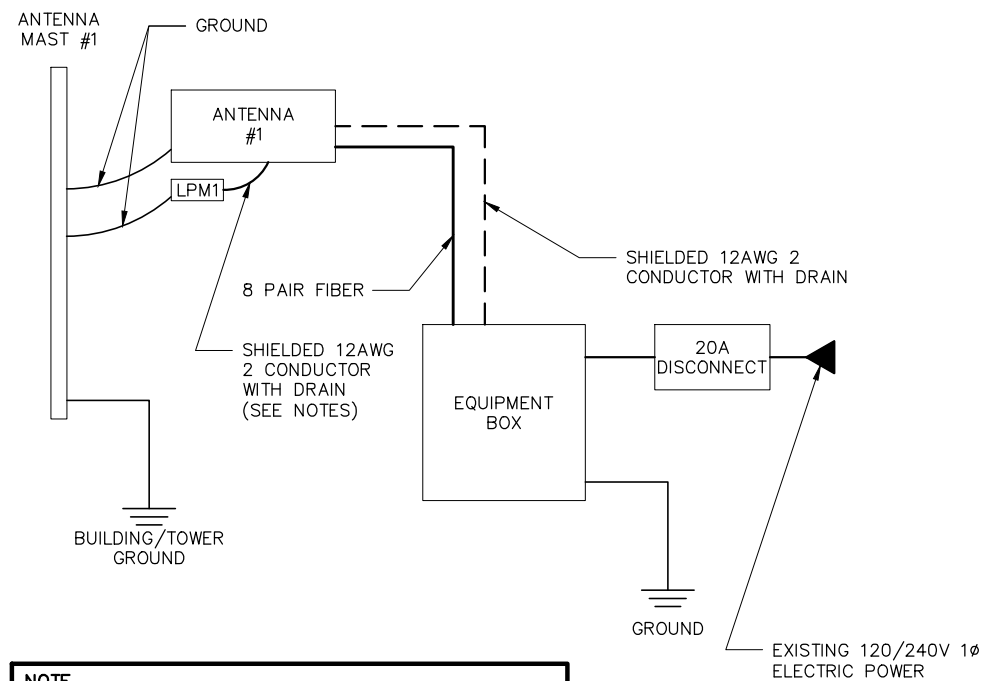
APPROXIMATE LOCATION OF PROPOSED ELECTRIC TAP POINT. PROVIDE (1) SINGLE POLE 20A 120/208V BREAKER.

PROPOSED ELECTRIC ROUTE WITH (2) #8 AND (1) #8 GND.



3 ELECTRICAL PLAN

11x17 SCALE: 1/32" = 1'-0" 24x36 SCALE: 1/16" = 1'-0"



NOTE

1. PROVIDE DRIP LOOP BETWEEN ANTENNA AND LPM
2. MAXIMUM LENGTH 3FT BETWEEN ANTENNA AND LPM
3. SEE BILL OF MATERIALS FOR CABLE SPECIFICATIONS

2 SINGLE LINE DIAGRAM

11x17 SCALE: NTS 24x36 SCALE: NTS



369 SOUTH RIVERSIDE DRIVE
NEPTUNE, NJ 07753

PHONE: 908-770-4105

Peter M. Longo
PROFESSIONAL ENGINEER

FL LICENSE: 63709

PREPARED FOR:



205 NORTH MICHIGAN AVE, SUITE 4230
CHICAGO, IL 60601
TELEPHONE: 312-540-9594

DRAWN BY: CLM

CHECKED BY: PML

DATE: 9/24/13

SITE INFORMATION:

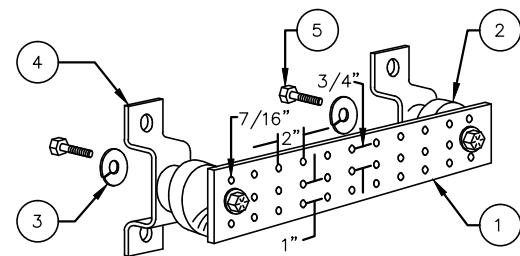
6933 NW 39 AVENUE
POMPANO BEACH, FL 33073-2107
BROWARD COUNTY
PROPERTY ID: 159

TITLE:
GROUNDING & ELECTRICAL
PLAN & DETAILS

SHEET:

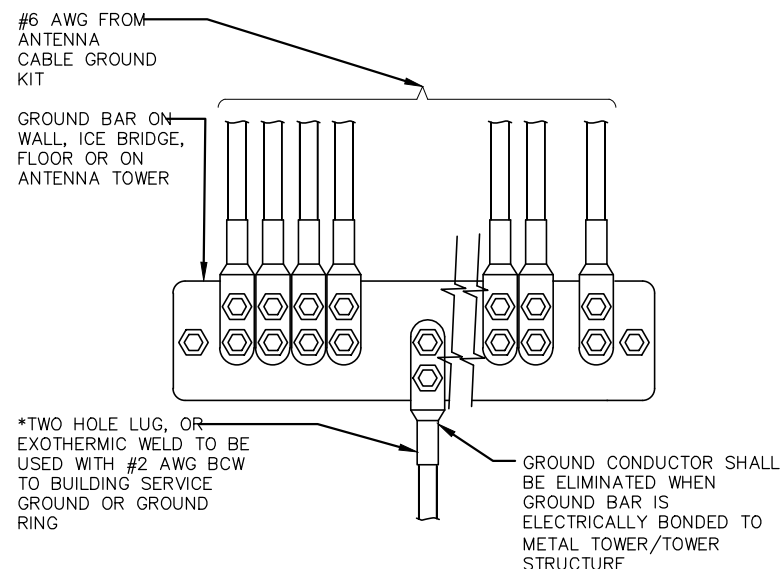
G-1

REVISION #
1

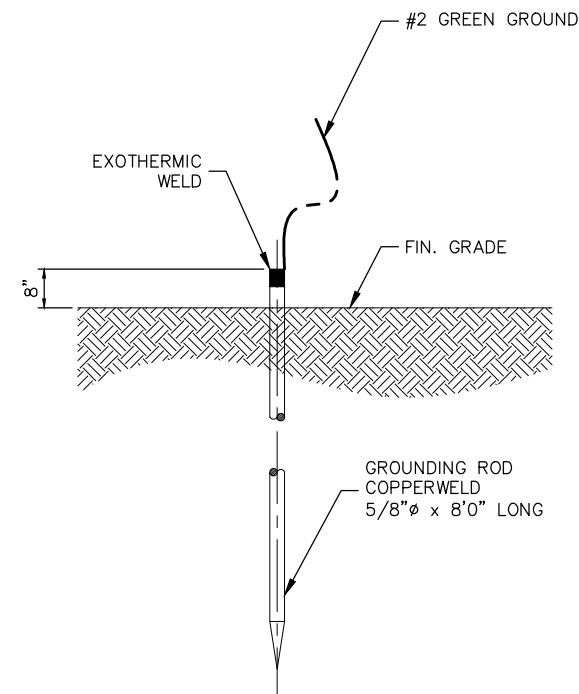


LEGEND

- 1- COPPER GROUND BAR, 1 1/4" X 4" X 20", NEWTON INSTRUMENT CO. CAT. NO. B-6142 OR EQUAL. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION. (ACTUAL GROUND BAR SIZE WILL VARY BASED ON NUMBER OF GROUND CONNECTIONS)
- 2- INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4 OR EQUAL
- 3- 5/8" LOCKWASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8 OR EQUAL
- 4- WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT. NO. A-6056 OR EQUAL
- 5- 5/8-11 X 1" HHCS BOLTS, NEWTON INSTRUMENT CO. CAT. NO. 3012-1 OR EQUAL
- 6- INSULATORS SHALL BE ELIMINATED WHEN BONDING DIRECTLY TO TOWER/TOWER STRUCTURE. CONNECTION TO TOWER/TOWER STRUCTURE SHALL BE PER MANUFACTURERS RECOMMENDATIONS.



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



1 GROUND BAR DETAIL

11x17 SCALE: NTS 24x36 SCALE: NTS

2 GROUND WIRE TO BAR DETAIL

11x17 SCALE: NTS 24x36 SCALE: NTS

3 GROUND ROD DETAIL

11x17 SCALE: NTS 24x36 SCALE: NTS

REV.	DATE	REVISION DESCRIPTION	DRAWN BY	CHKD. BY
1	10/7/13	REVISED PER CLIENT COMMENTS	CLM	PML
0	9/24/13	INITIAL SUBMISSION	CLM	PML



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NEPTUNE, NJ 07753

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ANOVA TECHNOLOGIES
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CHICAGO, IL 60601
TELEPHONE: 312-540-9594

DRAWN BY:	CLM
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6933 NW 39 AVENUE
POMPANO BEACH, FL 33073-2107
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TITLE:
GROUNDING DETAILS

SHEET:

G-2

REVISION #
1