

# at&t

## SEA BRIGHT BOROUGH HALL W-5867

FA: 14651797  
1167 OCEAN AVE  
SEA BRIGHT, NJ 07760  
NEW SITE BUILD



New Cingular Wireless PCS, LLC  
One AT&T Way  
Bedminster, NJ 07921



SEA BRIGHT  
BOROUGH HALL  
W-5867

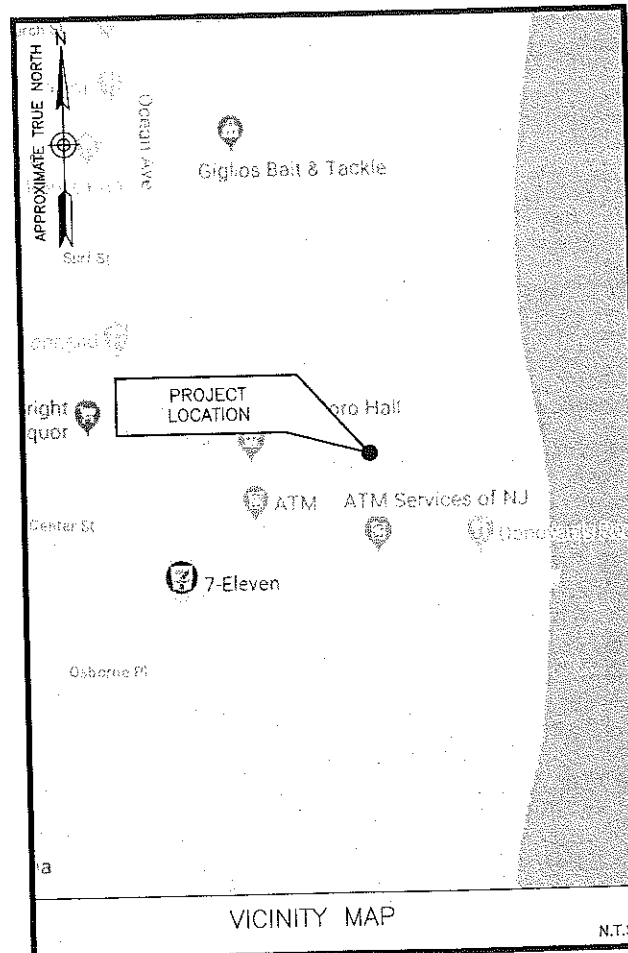
### CONSTRUCTION DRAWINGS

D	01/05/21	ISSUED FOR REVIEW
D	12/04/20	ISSUED FOR REVIEW
C	12/30/19	ISSUED FOR REVIEW
B	10/30/19	ISSUED FOR REVIEW
A	10/22/19	ISSUED FOR REVIEW



Dewberry Engineers Inc.

800 PARSIPPANY ROAD  
SUITE 301  
PARSIPPANY, NJ 07054  
PHONE: 973.739.9400  
FAX: 973.739.9710  
COA 24GA28047600



**SITE COORDINATES:**  
LATITUDE: 40°-21'-35.41" N  
LONGITUDE: 73°-58'-23.23" W  
DATUM: NAD 83

**ELEVATION DATA**  
A.M.S.L.: 7.9'±  
DATUM: NAVD 88

**ANTENNA ELEVATION (TO C.L. OF ANTENNAS)**  
AT&T ALPHA/BETA SECTORS: 85°-0"± A.G.L.  
AT&T GAMMA SECTOR: 55°-0"± A.G.L.

**ELEVATION (TO TOP OF MONOPOLE)**  
ELEVATION = 110'± A.G.L.

**ELEVATION (TO TOP OF DECORATIVE BALL)**  
ELEVATION = 112'-2"± A.G.L.

SITE INFORMATION

**SITE NAME:**  
SEA BRIGHT BOROUGH HALL W-5867

**SITE ADDRESS:**  
1167 OCEAN AVE  
SEA BRIGHT, NJ 07760  
MONMOUTH COUNTY

**TAX MAP DESIGNATION:**  
BLOCK: 20 LOT: 7

**ZONING DESIGNATION:**  
B-1 (M)

**TOWER OWNER:**  
BOROUGH OF SEA BRIGHT  
1099 OCEAN AVENUE  
SEA BRIGHT, NJ 07760

**APPLICANT:**  
NEW CINGULAR WIRELESS AT&T  
1 AT&T WAY  
BEDMINSTER, NJ 07921

PROJECT INFORMATION

THE PROJECT CONSISTS OF:  
THE INSTALLATION OF (3) ANTENNAS & (12) QUADPLEXERS WITHIN AN EXTENDED CONCEALMENT MONOPOLE. THE INSTALLATION OF (2) EQUIPMENT CABINETS, (1) NATURAL GAS GENERATOR, (12) RRH'S, (12) QUADPLEXERS, (2) DC12 SURGE ARRESTORS, (2) FIBER MANAGEMENT BOXES & POWER/TELECOM PANELS INSTALLED ON AN ELEVATED EQUIPMENT PLATFORM WITH A LOUVERED SCREENWALL. THE INSTALLATION OF (2) GPS ANTENNAS MOUNTED TO THE LOUVERED SCREENWALL. THE INSTALLATION OF ASSOCIATED POWER, FIBER, GROUND CONDUITS & NATURAL GAS PIPING FOR A COMPLETE INSTALLATION.

PROJECT DESCRIPTION

**SITE ACQUISITION:**  
ALEX MOSS  
AIROSMITH DEVELOPMENT  
PHONE: (201) 290-4680

**PROJECT MANAGER:**  
WILLIAM STONE  
AIROSMITH DEVELOPMENT  
PHONE: (518) 210-0495

**ENGINEER:**  
BRYAN HUFF  
DEWBERRY ENGINEERS INC.  
PHONE: (973) 576-0147

CONTACT INFORMATION

THIS DOCUMENT WAS DEVELOPED TO REFLECT A SPECIFIC SITE AND ITS SITE CONDITIONS AND IS NOT TO BE USED FOR ANOTHER SITE OR WHEN OTHER CONDITIONS PERTAIN. REUSE OF THIS DOCUMENT IS AT THE SOLE RISK OF THE USER.

A.D.A. COMPLIANCE:  
FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION.

SHEET NUMBER	DESCRIPTION
T-1	TITLE SHEET
G-1	GENERAL NOTES
C-1	COMPOUND PLAN
C-2	SOUTHEAST ELEVATION & EQUIPMENT PLAN
C-3	DETAILED EQUIPMENT ELEVATIONS
C-4	CONSTRUCTION DETAILS I
C-5	LOUVERED SCREENWALL DETAILS
C-6	EQUIPMENT DETAILS
C-7	EQUIPMENT MOUNTING DETAILS
C-8	ANTENNA & RRH DETAILS & NOTES
C-9	PROPOSED ANTENNA PLANS
C-10	COLOR CODING, PLUMBING DIAGRAM & B.O.M.
S-1	EQUIPMENT PLATFORM STRUCTURAL PLAN
S-2	PLATFORM STRUCTURAL DETAILS I
S-3	PLATFORM STRUCTURAL DETAILS II
S-4	FENCE LAYOUT & CONNECTION DETAILS
E-1	ELECTRICAL RISER DIAGRAM & ELECTRICAL NOTES
E-2	GROUNDING PLAN & GROUNDING NOTES
E-3	GROUNDING DETAILS
P-1	GENERAL PLUMBING NOTES
P-2	GAS RISER DIAGRAM & PLUMBING DETAILS
P-3	NATURAL GAS GENERATOR DETAILS
P-4	NATURAL GAS BOOSTER DETAILS

SHEET INDEX

*David E. Revette*  
DAVID E. REVETTE, P.E.  
NJ LICENSE NO. 24GE05408600

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER TO ALTER THIS DOCUMENT.

DRAWN BY: FG  
REVIEWED BY: BSH  
CHECKED BY: DER  
PROJECT NUMBER: 50110598  
JOB NUMBER: 50110611  
SITE ADDRESS:

1167 OCEAN AVE  
SEA BRIGHT, NJ 07760  
MONMOUTH COUNTY

SHEET TITLE  
TITLE SHEET  
SHEET NUMBER

T-1

DIRECTIONS FROM 1 AT&T WAY, BEDMINSTER, NJ:

GET ON I-287 S FROM AT&T WAY AND HEAD SOUTH TOWARD AT&T WAY, TURN SLIGHT RIGHT ONTO AT&T WAY AND MERGE ONTO US-202 S/US-206 S, USE THE RIGHT LANE TO TAKE INTERSTATE 287 S RAMP TO INTERSTATE 78, MERGE ONTO I-287 S, KEEP LEFT TO CONTINUE ON NJ-440 N, TAKE THE GARDEN STATE PARKWAY S EXIT, MERGE ONTO GARDEN STATE PKWY, USE THE MIDDLE 2 LANES TO KEEP LEFT AT THE FORK AND STAY ON GARDEN STATE PKWY, KEEP RIGHT AT THE FORK TO STAY ON GARDEN STATE PKWY, TAKE EXIT 109 FOR COUNTY RD 520 TOWARD RED BANK/LINCROFT, CONTINUE ON COUNTY RD 520/NEWMAN SPRINGS RD, TAKE RUMSON RD TO WAYNE ST IN SEA BRIGHT, TURN LEFT ONTO COUNTY RD 520/NEWMAN SPRINGS RD, TURN LEFT ONTO NJ-35 N/BROAD ST, CONTINUE STRAIGHT ONTO BROAD ST, TURN RIGHT ONTO PINCKNEY RD, TURN RIGHT ONTO BRANCH AVE, TURN LEFT ONTO RUMSON RD, CONTINUE ONTO SHREWSBURY RIVER BRIDGE, TURN RIGHT ONTO OCEAN AVE, TURN LEFT ONTO E CENTER ST, E CENTER ST TURNS LEFT AND BECOMES WAYNE ST, DESTINATION WILL BE ON THE LEFT.



NEW JERSEY ONE CALL  
PHONE #: (800) 272-1000  
WWW.NJ1-CALL.ORG

## GENERAL CONSTRUCTION NOTES:

- ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH AT&T SPECIFICATIONS.
- CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" (811) FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
- CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
- 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 OR 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.
- CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
- CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, 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.
- CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE AT&T CONSTRUCTION MANAGERS.
- WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR WILL NOTIFY ENGINEER, AT&T PROJECT CONSTRUCTION MANAGER, AND LANDLORD IMMEDIATELY.
- CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
- CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
- CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH LANDLORD AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
- CONTRACTOR SHALL FURNISH AT&T WITH THREE AS-BUILT SETS OF DRAWINGS EACH UPON COMPLETION OF WORK.
- ANTENNAS AND CABLES ARE TYPICALLY PROVIDED BY AT&T. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH AT&T PROJECT MANAGERS TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED BY AT&T. ALL ITEMS NOT PROVIDED BY AT&T SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED BY AT&T.
- PRIOR TO SUBMISSION OF BID, CONTRACTOR WILL COORDINATE WITH AT&T PROJECT MANAGERS TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY AT&T. ALL REQUIRED PERMITS NOT OBTAINED BY AT&T MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
- CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH AT&T SPECIFICATIONS AND REQUIREMENTS.
- CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
- UNLESS OTHERWISE NOTED AT&T SHALL PROVIDE ALL REQUIRED RF MATERIAL FOR CONTRACTOR TO INSTALL, INCLUDING ANTENNAS, TMA'S, RRH'S, BIAS-T'S, COMBINERS, PDU, DC BLOCKS, SURGE ARRESTORS, OVP'S, GPS ANTENNA, GPS SURGE ARRESTOR, COAXIAL CABLE.
- PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL VERIFY ALL EQUIPMENT TO BE PROVIDED BY AT&T FOR INSTALLATION BY CONTRACTOR.
- ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO AT&T SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
- 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.
- CONTRACTOR SHALL NOTIFY DEWBERRY 48 HOURS IN ADVANCE OF POURING CONCRETE, OR BACKFILLING TRENCHES, SEALING ROOF AND WALL PENETRATIONS & POST DOWNS, FINISHING NEW WALLS OR FINAL ELECTRICAL CONNECTIONS FOR ENGINEER REVIEW.
- 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.
- CONTRACTOR SHALL FOLLOW THE APPROVED WORK PLAN FOR THE SITE AND HAVE WORKERS THAT ARE OSHA APPROVED FOR ANY WORK WHICH INVOLVES THE SOIL OR GROUNDWATER.
- ALL WORK TO BE COMPLETED BY CONTRACTOR UNLESS NOTED OTHERWISE.
- SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH UL LISTED D FIRE CODE APPROVED MATERIALS.
- REPAIR ANY DAMAGE DURING CONSTRUCTION TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE CONSTRUCTION MANAGER AND LANDLORD.
- ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT
- SHIM NEW SILLS, AS NECESSARY, TO LEVEL AND PLUMB WALL.
- ALL DISRUPTIVE WORK AND WORK WITHIN TENANTS SPACES TO BE COORDINATED WITH BUILDING REPRESENTATIVE

## CONCRETE AND REINFORCING STEEL NOTES:

- DESIGN AND CONSTRUCTION OF ALL CONCRETE ELEMENTS SHALL CONFORM TO THE LATEST EDITIONS OF ALL APPLICABLE CODES INCLUDING: ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", AND ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".
- MIX DESIGN SHALL BE APPROVED BY OWNER'S REPRESENTATIVE AND SUBMITTED TO ENGINEER 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.
- THE FOLLOWING MATERIALS SHALL BE USED:  
PORTLAND CEMENT: ASTM C-150, TYPE 1 OR 2  
REINFORCEMENT: ASTM A-185, PLAIN STEEL WELDED WIRE FABRIC  
REINFORCEMENT BARS: ASTM A615, GRADE 60, DEFORMED  
NORMAL WEIGHT AGGREGATE: ASTM C-33  
WATER: DRINKABLE  
ADMIXTURES: NON-CHLORIDE CONTAINING
- MINIMUM CONCRETE COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS (UNLESS OTHERWISE NOTED):  
A. CONCRETE CAST AGAINST EARTH: 3"  
B. ALL OTHER CONCRETE: 2"
- A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE IN ACCORDANCE WITH ACI 301 SECTION 4.2.4, UNLESS NOTED OTHERWISE.
- INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR SHALL BE PER MANUFACTURER'S 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 TACK WELD 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.
- REINFORCEMENT SHALL BE COLD BENT WHENEVER BENDING IS REQUIRED.
- DO NOT PLACE CONCRETE IN WATER, ICE, OR ON FROZEN GROUND.
- DO NOT ALLOW REINFORCEMENT, CONCRETE OR SUBBASE TO FREEZE DURING CONCRETE CURING AND SETTING PERIOD, OR FOR A MINIMUM OF 3 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.
- UNLESS OTHERWISE NOTED:  
A. ALL REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60.  
B. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
- SPLICING OF REINFORCEMENT IS PERMITTED ONLY AT LOCATIONS SHOWN IN THE CONTRACT DRAWINGS OR AS ACCEPTED BY THE ENGINEER. UNLESS OTHERWISE SHOWN OR NOTED REINFORCING STEEL SHALL BE SPLICED TO DEVELOP ITS FULL TENSILE CAPACITY (CLASS A) IN ACCORDANCE WITH ACI 318.
- REINFORCING BAR DEVELOPMENT LENGTHS, AS COMPUTED IN ACCORDANCE WITH ACI 318, FORM THE BASIS FOR BAR EMBEDMENT LENGTHS AND BAR SPLICED LENGTHS SHOWN IN THE DRAWINGS. APPLY APPROPRIATE MODIFICATION FACTORS FOR TOP STEEL, BAR SPACING, COVER AND THE LIKE.
- DETAILING OF REINFORCING STEEL SHALL CONFORM TO "ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI 315).
- ALL SLAB CONSTRUCTION SHALL BE CAST MONOLITHICALLY WITHOUT HORIZONTAL CONSTRUCTION JOINTS, UNLESS SHOWN IN THE CONTRACT DRAWINGS.
- LOCATION OF ALL CONSTRUCTION JOINTS ARE SUBJECT TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, CONFORMANCE WITH ACI 318, AND ACCEPTANCE OF THE ENGINEER. DRAWINGS SHOWING LOCATION OF DETAILS OF THE PROPOSED CONSTRUCTION JOINTS SHALL BE SUBMITTED WITH REINFORCING STEEL PLACEMENT DRAWINGS.
- SPLICES OF WWF, AT ALL SPLICED EDGES, SHALL BE SUCH THAT THE OVERLAP MEASURED BETWEEN OUTERMOST CROSS WIRES OF EACH FABRIC SHEET IS NOT LESS THAN THE SPACING OF THE CROSS WIRE PLUS 2 INCHES, NOR LESS THAN 8".
- BAR SUPPORTS SHALL BE ALL-GALVANIZED METAL WITH PLASTIC TIPS.
- ALL REINFORCEMENT SHALL BE SECURELY TIED IN PLACE TO PREVENT DISPLACEMENT BY CONSTRUCTION TRAFFIC OR CONCRETE. TIE WIRE SHALL BE 16 GAUGE CONFORMING TO ASTM A82

## STRUCTURAL NOTES:

- AS REQUIRED UNDER THE STRUCTURAL STANDARD FOR ANTENNA SUPPORTING STRUCTURES AND ANTENNA, TIA/EIA-222-H, AT&T SHALL PROVIDE A STRUCTURAL ANALYSIS OF THE TOWER PREPARED BY A LICENSED STRUCTURAL ENGINEER CERTIFYING THAT THE EXISTING TOWER AND ANY REQUIRED IMPROVEMENTS AND REINFORCEMENTS HAVE SUFFICIENT CAPACITY TO SUPPORT ALL EXISTING AND PROPOSED ANTENNAS, SUPPORTS AND APPURTENANCES AND COMPLIES WITH THE CURRENT STATE BUILDING CODE AND EIA/TIA CRITERIA. THE CONTRACTOR IS RESPONSIBLE TO CONFIRM THAT ANY IMPROVEMENTS AND REINFORCEMENTS REQUIRED BY THE STRUCTURAL ANALYSIS CERTIFICATION ARE PROPERLY INSTALLED PRIOR TO THE ADDITION OF ANTENNAS, SUPPORTS AND APPURTENANCES PROPOSED ON THESE DRAWINGS OR OTHERWISE NOTED IN THE STRUCTURAL ANALYSIS.
- FOR STRUCTURAL MODIFICATIONS REQUIRING FIELD WELDING, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS AND IMPLEMENTING ALL INDUSTRY STANDARDS FOR PROTECTION OF ALL EXISTING PROPERTY AND PERSONNEL FOR DAMAGE OR HARM. ALL PROPERTY DAMAGED DURING CONSTRUCTION OF THIS PROJECT SHALL BE REPLACED OR REPAIRED TO THE SATISFACTION OF THE OWNER.

## GROUNDING NOTES:

- GROUNDING SHALL COMPLY WITH NEC ART. 250.
- GROUND CONDUCTORS SHALL BE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR INDOOR USE.
- ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
- ROUTE GROUNDING CONNECTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NOT BE BENT AT RIGHT ANGLE. ALWAYS MAKE 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 6" RADIUS WHEN NECESSARY.
- CONNECTIONS TO GROUND BAR SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
- TEST COMPLETED GROUND SYSTEM AND RECORD RESISTANCE VALUES FOR PROJECT CLOSE-OUT DOCUMENTATION. GROUND RESISTANCE SHALL NOT EXCEED 5 OHMS.
- GROUND CONDUCTORS BETWEEN MGB AND WATERMAIN SHALL BE #2/0. BONDING JUMPERS FROM METALLIC SURFACES SHALL BE #2 MINIMUM. ALL GROUND CONDUCTORS AND BONDING JUMPERS SHALL BE SOFT DRAWN ANNEALED, TINNED, BARE STRANDED COPPER WIRE. COAXIAL CABLES SHALL BE GROUNDED AT A MINIMUM OF TWO LOCATIONS USING AT&T PROVIDED GROUNDING KITS. EXACT LOCATIONS SHALL BE FINALIZED IN THE FIELD BY THE CONSTRUCTION MANAGER.
- ALL GROUNDING TO BE INSTALLED PER THE LATEST VERSION OF THE AT&T SPECIFICATION ATT-TP-76416 - GROUNDING AND BONDING REQUIREMENTS FOR NETWORK FACILITIES.

## FOUNDATION NOTES:

FOUNDATION DESIGN IS BASED ON THE GEOTECHNICAL TEST BORINGS PERFORMED BY CRAIG TEST BORING, DATED 06/24/2016.

- DEEP FOUNDATION TYPE: TIMBER PILE (ASTM D25)  
SOUTHERN YELLOW PINE NO. 2 OR APPROVED EQUAL 12" BUTT
- PILE CAPACITY: ULTIMATE COMPRESSIVE CAPACITY: 20 TONS  
ALLOWABLE COMPRESSIVE CAPACITY: 10 TONS  
LATERAL LOAD - FREE HEAD CONDITION: 1.5 TONS
- INSTALLATION CRITERIA: FINISHED GRADE: EL. 0 (A.G.L.)  
ESTIMATED TIP ELEVATION: -15  
MINIMUM TIP ELEVATION: -10
- PRIOR TO MOBILIZING PILE DRIVING EQUIPMENT, SUBMIT TO THE ENGINEER A WAVE EQUATION ANALYSIS DEMONSTRATING THE ADEQUACY OF THE PROPOSED DRIVING SYSTEM TO INSTALL THE PILES TO THE REQUIRED DEPTHS AND TO PENETRATION RATES NOT LESS THAN 3 BLOWS PER INCH AND NOT GREATER THAN 10 BLOWS PER INCH, WITHOUT OVERSTRESSING THE PILE.



New Cingular Wireless PCS, LLC  
One AT&T Way  
Bedminster, NJ 07921



SEA BRIGHT  
BOROUGH HALL  
W-5867

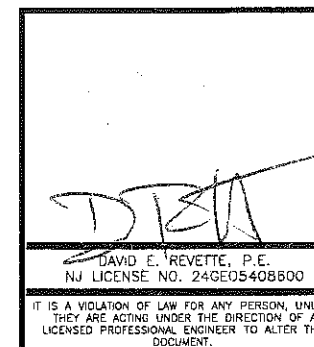
## CONSTRUCTION DRAWINGS

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Dewberry Engineers Inc.

500 PARSIPPANY ROAD  
SUITE 301  
PARSIPPANY, NJ 07054  
PHONE: 973.739.9400  
FAX: 973.739.9710  
COA 24GA28047600



DRAWN BY: FG

REVIEWED BY: BSH

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PROJECT NUMBER: 50110598

JOB NUMBER: 50110611

SITE ADDRESS:

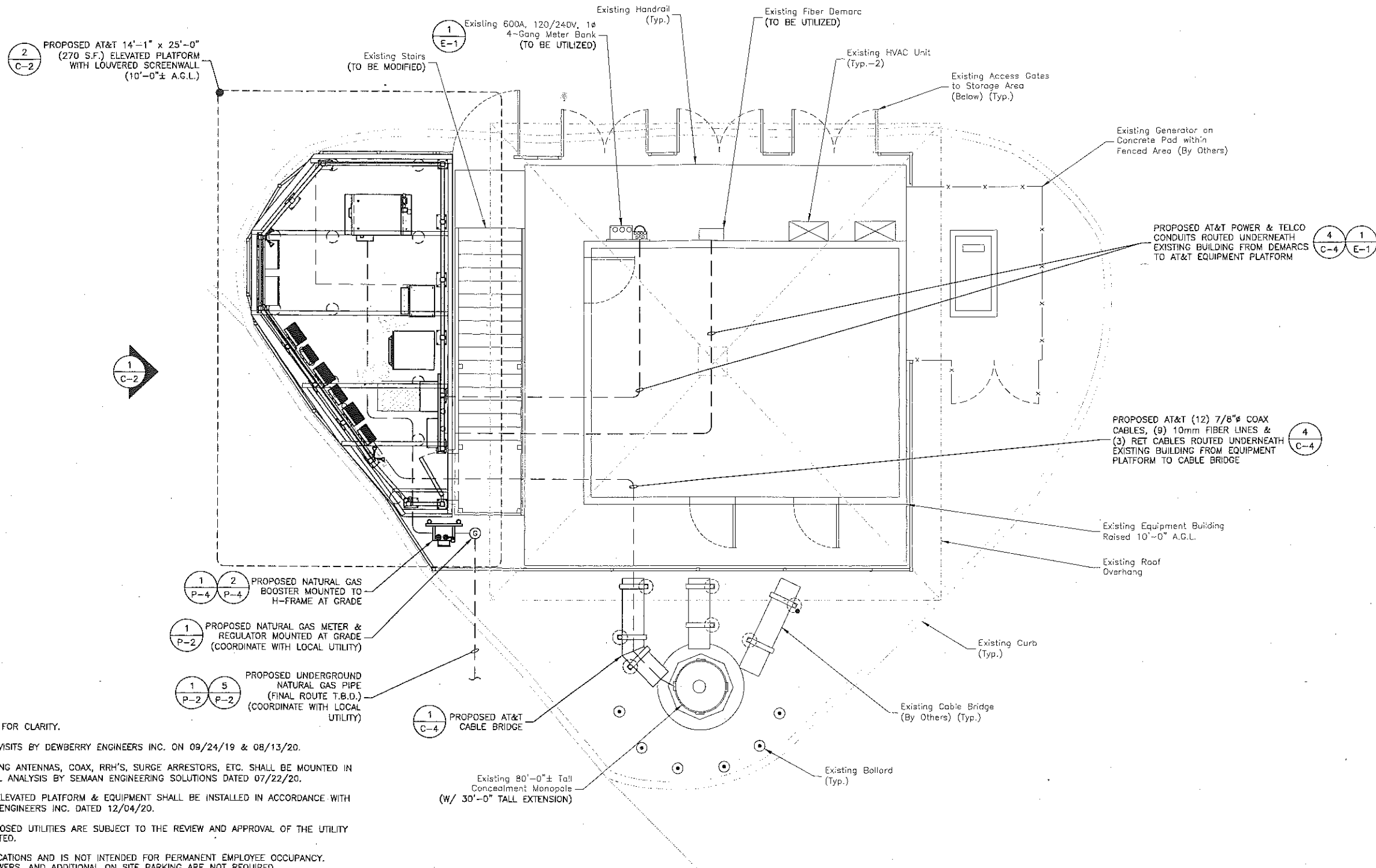
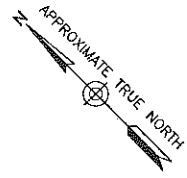
1167 OCEAN AVE  
SEA BRIGHT, NJ 07760  
MONMOUTH COUNTY

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

G-1



**NOTES:**

1. NOT ALL EXISTING INFORMATION IS SHOWN FOR CLARITY.
2. OVERALL SITE PLAN INFO BASED ON SITE VISITS BY DEWBERRY ENGINEERS INC. ON 09/24/19 & 08/13/20.
3. ALL PROPOSED TOWER EQUIPMENT INCLUDING ANTENNAS, COAX, RRH'S, SURGE ARRESTORS, ETC. SHALL BE MOUNTED IN ACCORDANCE WITH THE TOWER STRUCTURAL ANALYSIS BY SEMAAN ENGINEERING SOLUTIONS DATED 07/22/20.
4. LOCATION & INSTALLATION OF PROPOSED ELEVATED PLATFORM & EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE STRUCTURAL ANALYSIS BY DEWBERRY ENGINEERS INC. DATED 12/04/20.
5. THE LOCATIONS OF THE APPLICANT'S PROPOSED UTILITIES ARE SUBJECT TO THE REVIEW AND APPROVAL OF THE UTILITY COMPANIES AND MAY NEED TO BE RELOCATED.
6. THE PROPOSED USE IS FOR TELECOMMUNICATIONS AND IS NOT INTENDED FOR PERMANENT EMPLOYEE OCCUPANCY. THEREFORE, POTABLE WATER, SANITARY SEWERS, AND ADDITIONAL ON SITE PARKING ARE NOT REQUIRED.
7. THE FACILITY SHALL BE VISITED ON THE AVERAGE OF ONCE A MONTH FOR MAINTENANCE AND SHALL BE CONTINUOUSLY MONITORED FROM A REMOTE FACILITY FOR BOTH FIRE AND INTRUSION.
8. THE FACILITIES ARE REMOTELY OPERATED AND CONTROLLED, AND AS SUCH, ARE NORMALLY UNMANNED. A COMPUTERIZED EQUIPMENT AND FACILITY ALARM SYSTEM CONTINUOUSLY MONITORS AN EXTENSIVE NUMBER OF OPERATING AND BUILDING FUNCTIONS. UNPLANNED EVENTS WILL TRIGGER ALARM REPORTS TO AT&T HEADQUARTERS, RANGING FROM ROUTINE REPORTS TO IMMEDIATE ACTIVATION OF LOCAL PERSONNEL OR EMERGENCY SERVICES, 24 HOURS A DAY.
9. ALL MATERIALS, WORKMANSHIP AND CONSTRUCTION FOR THE SITE IMPROVEMENTS SHOWN HEREIN SHALL BE IN ACCORDANCE WITH:
  - 9.1. CURRENT PREVAILING MUNICIPAL AND/OR STATE SPECIFICATIONS, STANDARDS AND REQUIREMENTS.
  - 9.2. CURRENT PREVAILING UTILITY COMPANY AUTHORITY SPECIFICATIONS, STANDARDS AND REQUIREMENTS.
10. CONTRACTOR SHALL COORDINATE & COMPLY WITH EXISTING UTILITY COMPANIES' REQUIREMENTS.
11. BASED ON FLOOD INSURANCE RATE MAP (FIRM), MAP NUMBER 34025C0201G, PANEL 201 OF 457, MONMOUTH COUNTY, NEW JERSEY, EFFECTIVE DATE: JUNE 20, 2018, THE SUBJECT PROPERTY IS LOCATED WITHIN ZONE AE (SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD) WITH A BASE FLOOD ELEVATION OF 9 FEET.
12. THE APPLICANT, OR HIS REPRESENTATIVE, IS TO DESIGNATED AN INDIVIDUAL RESPONSIBLE FOR CONSTRUCTION SITE SAFETY DURING THE COURSE OF THE SITE IMPROVEMENTS PURSUANT TO N.J.A.C. 5:23-2.21 (E) OF THE N.J. UNIFORM CONSTRUCTION CODE AND CRT 1926.32 (5) (OSHA COMPETENT PERSON).
13. CONTRACTOR TO BE RESPONSIBLE FOR TRAFFIC CONTROL MEASURES AND SIGNAGE DURING CONSTRUCTION. COORDINATE WITH AT&T & OWNER.
14. CONTRACTOR TO VERIFY ALL UNDERGROUND UTILITIES PRIOR TO COMMENCING ANY SITE WORK ACTIVITIES.

**COMPOUND PLAN**  
 SCALE: 1/8"=1' FOR 11"x17"  
 1/4"=1' FOR 22"x34"  
 0' 2' 4' 8'



New Cingular Wireless PCS, LLC  
 One AT&T Way  
 Bedminster, NJ 07921



**SEA BRIGHT  
 BOROUGH HALL  
 W-5867**

CONSTRUCTION DRAWINGS		
0	01/05/21	ISSUED FOR REVIEW
D	12/04/20	ISSUED FOR REVIEW
C	12/30/19	ISSUED FOR REVIEW
B	10/30/19	ISSUED FOR REVIEW
A	10/22/19	ISSUED FOR REVIEW

**Dewberry**<sup>®</sup>  
 Dewberry Engineers Inc.  
 600 PARSIPPANY ROAD  
 SUITE 301  
 PARSIPPANY, NJ 07054  
 PHONE: 973.739.9400  
 FAX: 973.739.9710  
 COA 24GA26047600

*David E. Revette*  
 DAVID E. REVETTE, P.E.  
 NJ LICENSE NO. 246E05408600  
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DRAWN BY: FG  
 REVIEWED BY: BSH  
 CHECKED BY: DER  
 PROJECT NUMBER: 50110598  
 JOB NUMBER: 50110611  
 SITE ADDRESS:

1167 OCEAN AVE  
 SEA BRIGHT, NJ 07760  
 MONMOUTH COUNTY.

SHEET TITLE: COMPOUND PLAN  
 SHEET NUMBER: C-1



New Cingular Wireless PCS, LLC  
One AT&T Way  
Bedminster, NJ 07921



SEA BRIGHT  
BOROUGH HALL  
W-5867

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PARSIPPANY, NJ 07054  
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COA 24GA28047800

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REVIEWED BY:	BSH
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PROJECT NUMBER:	50110598
JOB NUMBER:	50110611
SITE ADDRESS:	

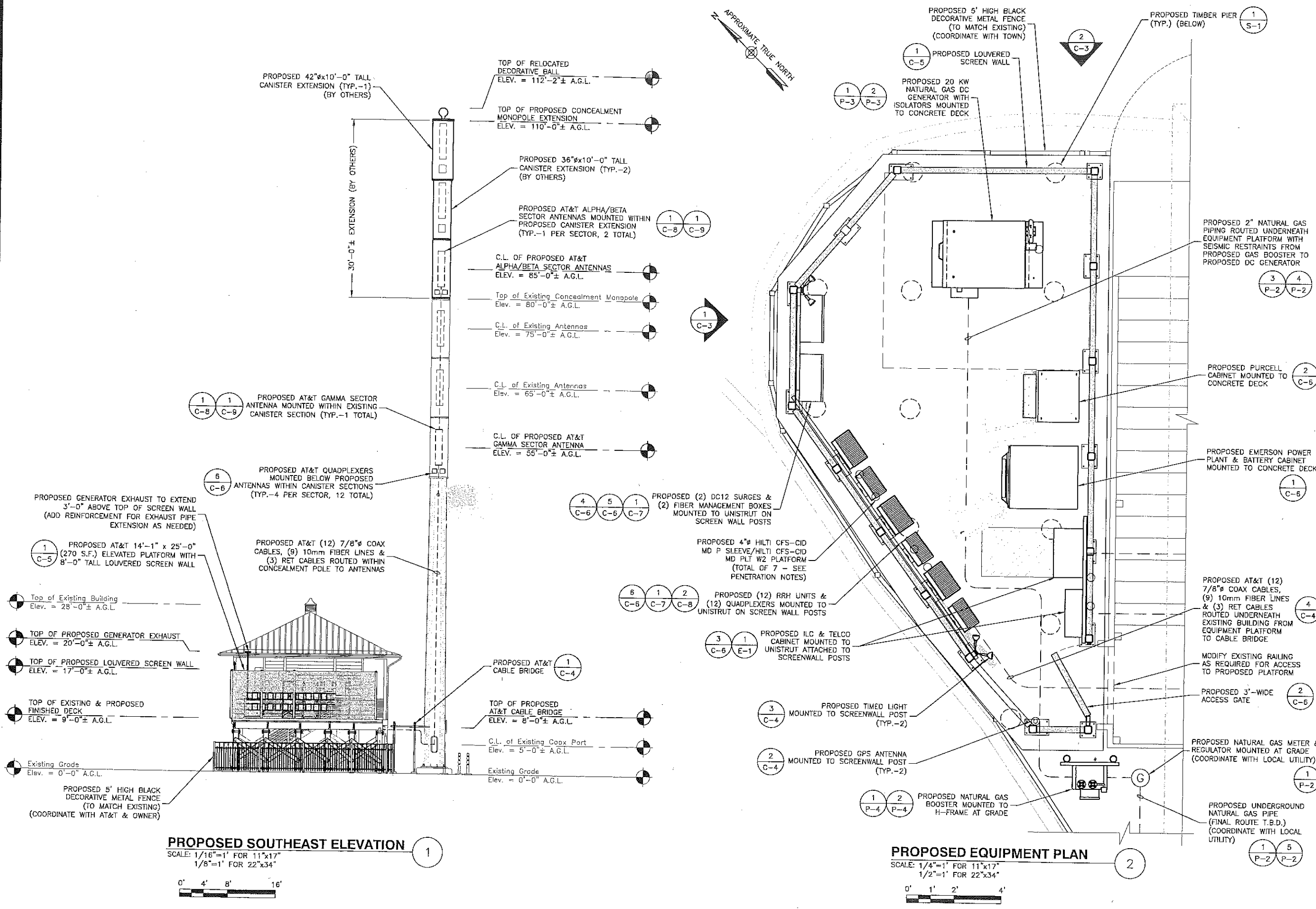
1167 OCEAN AVE  
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MONMOUTH COUNTY

SHEET TITLE

SOUTHEAST ELEVATION  
& EQUIPMENT PLAN

SHEET NUMBER

C-2





New Circular Wireless PCS, LLC  
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**SEA BRIGHT  
BOROUGH HALL  
W-5867**

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SUITE 301  
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FAX: 973.739.9710  
COA 24GA28047600

*DR*

DAVID E. REVETTE, P.E.  
NJ LICENSE NO. 24GE05408600

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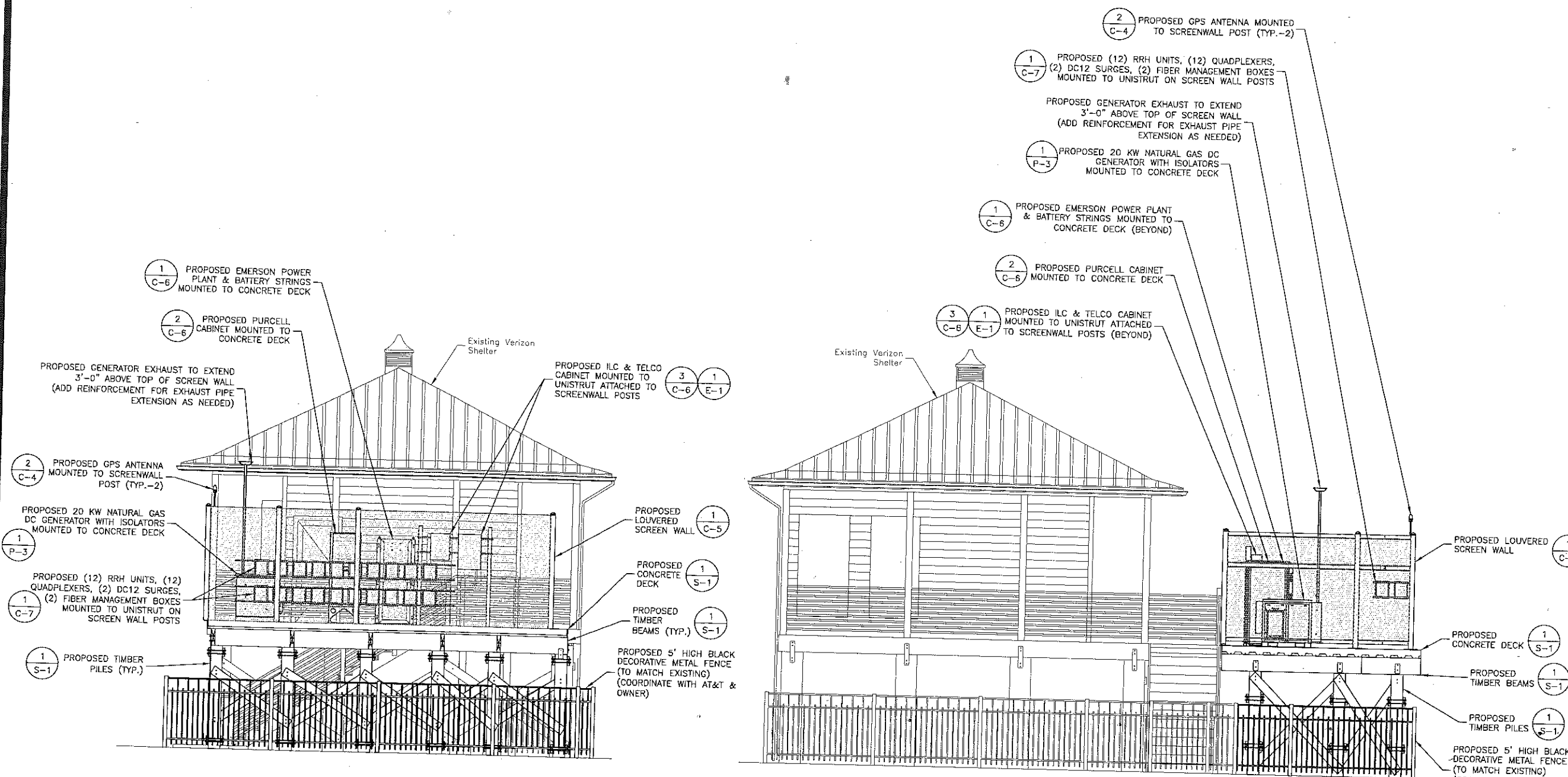
1167 OCEAN AVE  
SEA BRIGHT, NJ 07760  
MONMOUTH COUNTY

SHEET TITLE

DETAILED EQUIPMENT ELEVATIONS

SHEET NUMBER

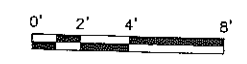
C-3

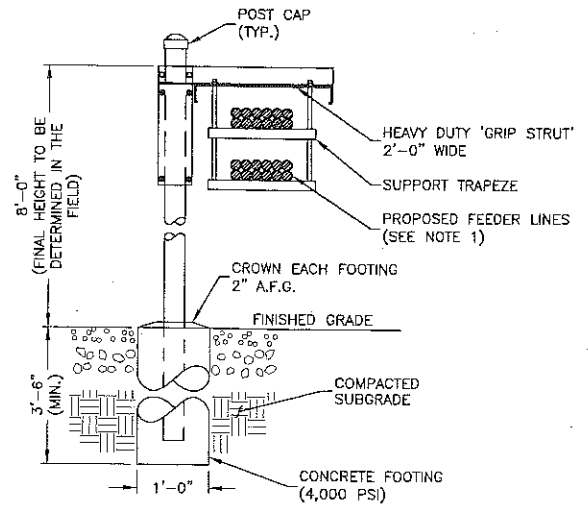


**SOUTHEAST EQUIPMENT ELEVATION** 1  
SCALE: 1/8"=1' FOR 11"x17"  
1/4"=1' FOR 22"x34"



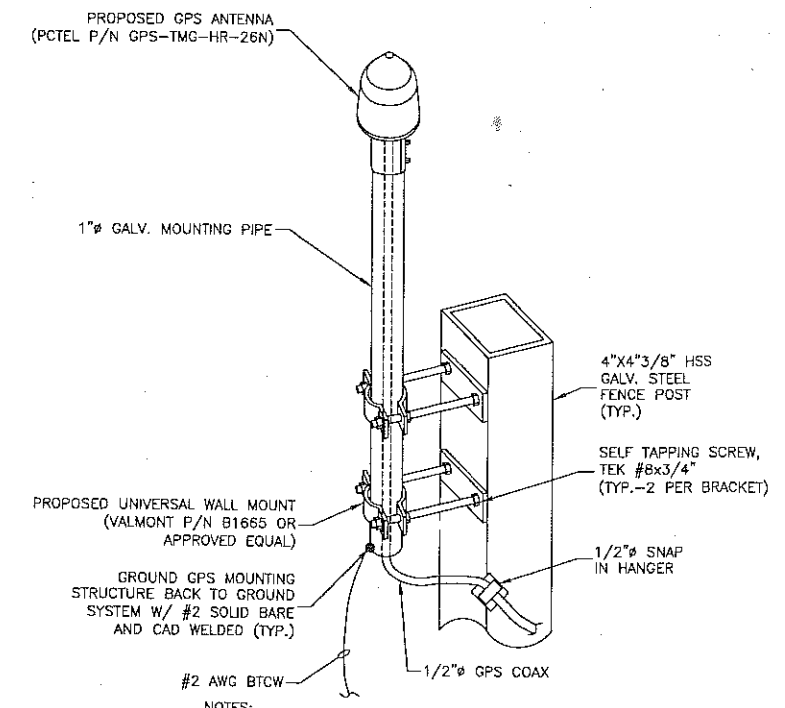
**SOUTHWEST EQUIPMENT ELEVATION** 2  
SCALE: 1/8"=1' FOR 11"x17"  
1/4"=1' FOR 22"x34"





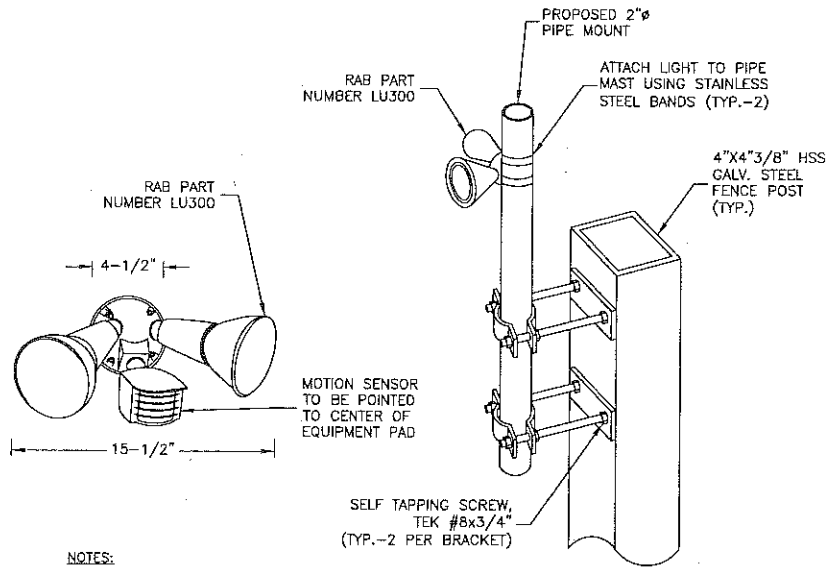
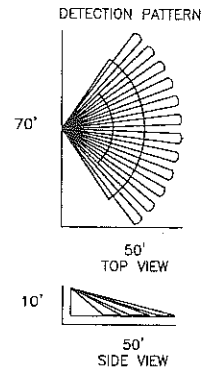
- NOTES:**
- CABLE BRIDGE SHALL BE SITE PRO 1 24" GRIP-SPAN ICE BRIDGE KIT WITH Z-BRACKET TRAPEZE P/N: IB24D-216Z FOR UP TO 14 LINES & P/N IB24D-216Z2 FOR 15-28 LINES OR APPROVED EQUAL.
  - ALL COMPONENTS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
  - CONTRACTOR SHALL DETERMINE REQUIRED QUANTITY OF ALL CABLE BRIDGE COMPONENTS.
  - SNAP-IN HANGERS, SPLICE KITS, HINGE KITS, EXTENSION KITS, STIFFENERS, AND OTHER MISCELLANEOUS HARDWARE SHALL BE PROVIDED BY THE CONTRACTOR AS REQUIRED.
  - CABLE BRIDGE SHALL BE ROUTED TO ACCOMMODATE THE MINIMUM BENDING RADIUS OF THE COAXIAL CABLE.
  - CABLE BRIDGE COMPONENTS SHOWN ARE SCHEMATIC, CONSULT MANUFACTURER FOR EXACT AND CURRENT SPECIFICATIONS.

**CABLE BRIDGE DETAIL**  
SCALE: N.T.S. 1



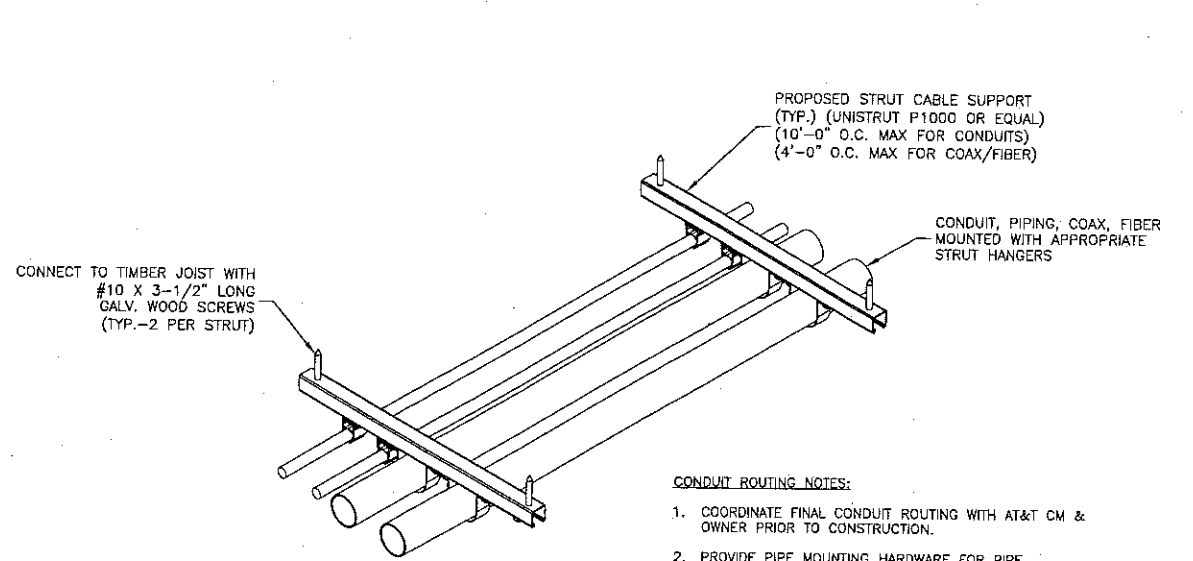
- NOTES:**
- INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
  - MAINTAIN 10' HORIZONTAL SEPARATION BETWEEN PROPOSED GPS ANTENNAS.

**GPS MOUNTING DETAIL**  
SCALE: N.T.S. 2



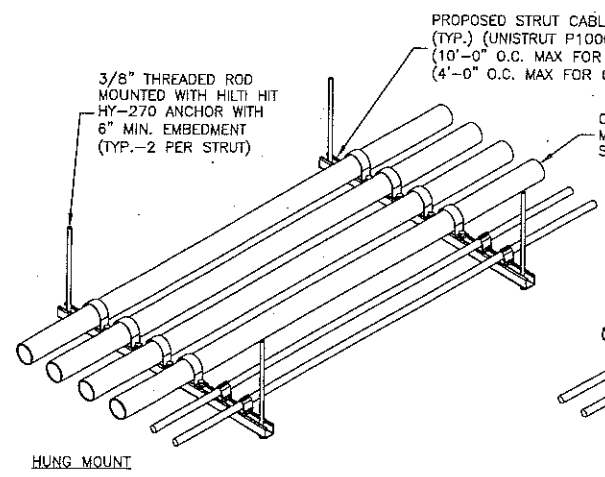
- NOTES:**
- TIME ADJUSTMENT TO BE SET SO THAT @ 10 MINUTES OF NO MOVEMENT, FLOODLIGHT SHALL TURN OFF.
  - LIGHT TO BE MANUFACTURED BY RAB (OR APPROVED EQUAL).
  - PROVIDE EXTERIOR ELECTRICAL BOX AND MOUNTING HARDWARE AS REQUIRED.

**TIMED LIGHT DETAIL**  
SCALE: N.T.S. 3



- CONDUIT ROUTING NOTES:**
- COORDINATE FINAL CONDUIT ROUTING WITH AT&T CM & OWNER PRIOR TO CONSTRUCTION.
  - PROVIDE PIPE MOUNTING HARDWARE FOR PIPE CONNECTIONS TO STRUT.
  - GROUND STEEL CONDUIT.
  - DO NOT BLOCK EXISTING VALVES, SPRINKLERS OR EQUIPMENT ACCESS LOCATIONS.
  - DETAIL IS SCHEMATIC. NUMBER & ORIENTATION VARIES.
  - CONTRACTOR TO IDENTIFY ALL CONDUIT PENETRATIONS, TURNS, PULL BOXES, EXPANSION JOINTS & VERIFY ROUTE W/CM & LANDLORD PRIOR TO CONSTRUCTION.

**CONDUIT SUPPORT TO TIMBER JOIST FRAMING**  
SCALE: N.T.S. 4



- CONDUIT ROUTING NOTES:**
- COORDINATE FINAL CONDUIT ROUTING WITH AT&T CM & OWNER PRIOR TO CONSTRUCTION.
  - PROVIDE PIPE MOUNTING HARDWARE FOR PIPE CONNECTIONS TO STRUT.
  - GROUND STEEL CONDUIT.
  - DO NOT BLOCK EXISTING VALVES, SPRINKLERS OR EQUIPMENT ACCESS LOCATIONS.
  - DETAIL IS SCHEMATIC. NUMBER & ORIENTATION VARIES.
  - CONTRACTOR TO IDENTIFY ALL CONDUIT PENETRATIONS, TURNS, PULL BOXES, EXPANSION JOINTS & VERIFY ROUTE W/CM & LANDLORD PRIOR TO CONSTRUCTION.

**CONDUIT SUPPORT TO CONCRETE DECK**  
SCALE: N.T.S. 5



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Bedminster, NJ 07921



**SEA BRIGHT  
BOROUGH HALL  
W-5867**

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**Dewberry Engineers Inc.**  
600 PARSIPPANY ROAD  
SUITE 301  
PARSIPPANY, NJ 07054  
PHONE: 973.739.9400  
FAX: 973.739.9710  
COA 24GA28047600

*DRB*  
DAVID E. REVETTE, P.E.  
NJ LICENSE NO. 24GE05408600  
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JOB NUMBER:	50110611
SITE ADDRESS:	

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MONMOUTH COUNTY

SHEET TITLE

CONSTRUCTION  
DETAILS I

SHEET NUMBER

C-4



New Cingular Wireless PCS, LLC  
One AT&T Way  
Bedminster, NJ 07921



SEA BRIGHT  
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W-5867

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PROJECT NUMBER: 50110598

JOB NUMBER: 50110611

SITE ADDRESS:

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MONMOUTH COUNTY

SHEET TITLE

LOUVERED  
SCREENWALL DETAILS

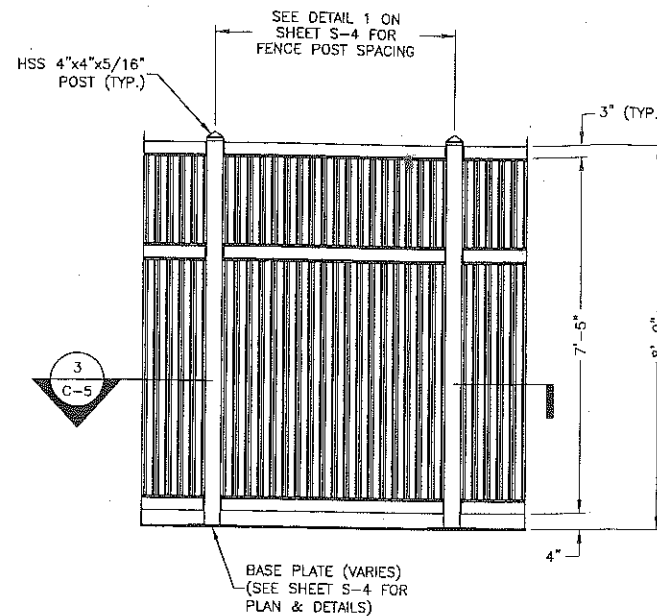
SHEET NUMBER

C-5

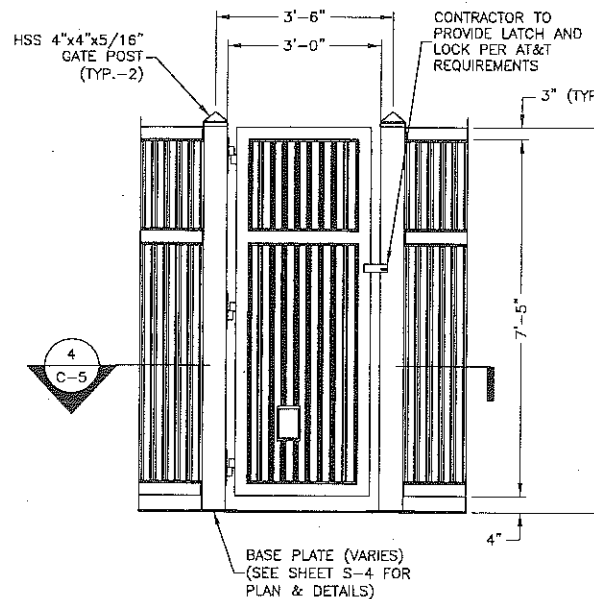
GATE SPECIFICATIONS	
MANUFACTURER:	AMETCO
MODEL:	VENETIAN 100
COLOR:	COORDINATE WITH AT&T & OWNER
HEIGHT:	8'-0"
% OPENING:	18.93%

NOTES:

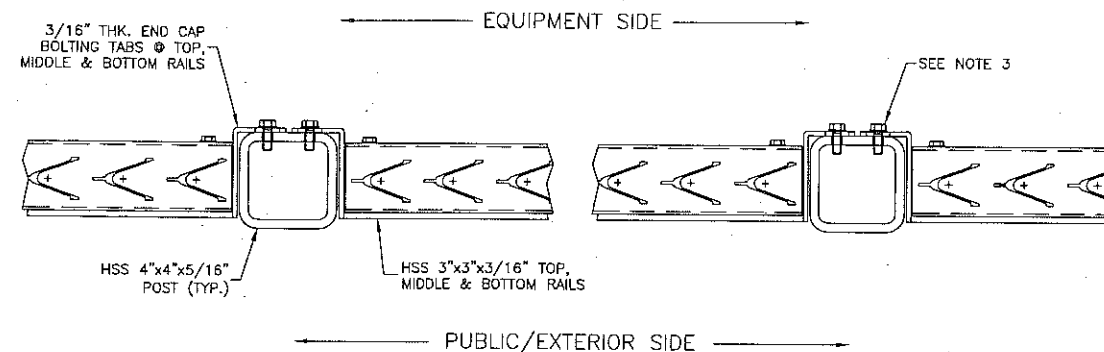
- PROPOSED ACCESS GATE TO HAVE AT&T APPROVED LOCK SYSTEM.
- POST TO BE HOT DIP GALVANIZED WITH POWDER POLYESTER PAINT COAT. COORDINATE COLOR WITH AT&T & OWNER.
- ALL BOLTED CONNECTIONS SHALL UTILIZE TAMPER PROOF SECURITY BOLTS.
- LOUVERS TO HAVE VERTICAL ORIENTATION AND HAVE 100% VISIBILITY BLOCK.
- INSTALL FENCING PER MANUFACTURER RECOMMENDATIONS.
- AMETCO:  
TEL: 440-951-4300  
WWW.AMETCO.COM
- FENCE SHOP DRAWINGS SHALL BE REVIEWED BY DEWBERRY.



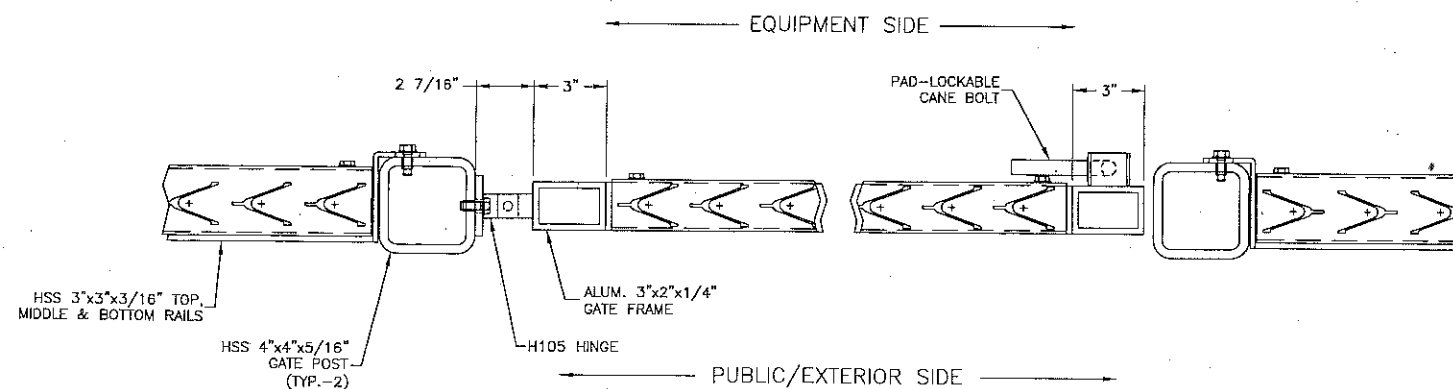
**SCREENWALL DETAIL 1**  
SCALE: 1/4"=1' FOR 11"x17"  
1/2"=1' FOR 22"x34"  
0' 1' 2' 4'



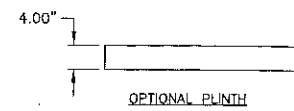
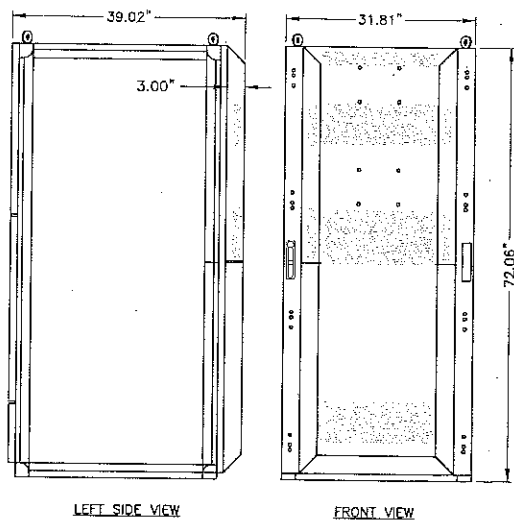
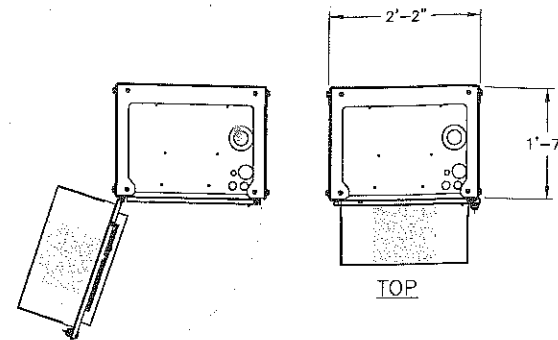
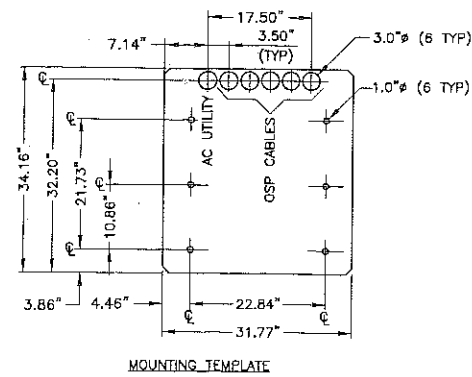
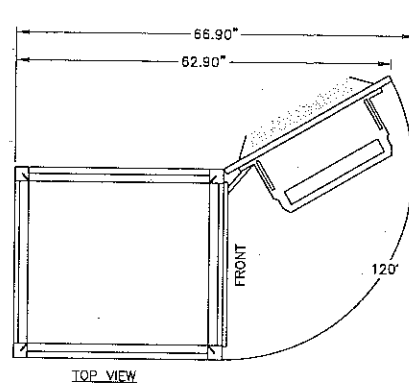
**SCREENWALL GATE DETAIL 2**  
SCALE: 1/4"=1' FOR 11"x17"  
1/2"=1' FOR 22"x34"  
0' 1' 2' 4'



**SCREENWALL SECTION 3**  
SCALE: 1 1/2"=1' FOR 11"x17"  
3"=1' FOR 22"x34"  
0' 3" 6" 9"



**GATE SECTION 4**  
SCALE: 1 1/2"=1' FOR 11"x17"  
3"=1' FOR 22"x34"  
0' 3" 6" 9"



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

**CLEARANCES**  
 FRONT 36"  
 LEFT AND RIGHT 12"  
 REAR 12"

**FOOTPRINT**  
 SQUARE FOOTAGE 7.21 SQ FT

**NOTES:**

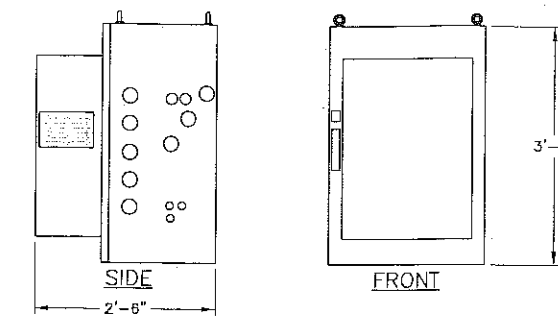
- CONTRACTOR TO COORDINATE AND VERIFY WITH AT&T THE NUMBER OF BATTERY STRINGS REQUIRED.
- INSTALL CABINET PER MANUFACTURER RECOMMENDATIONS.
- CABINET MUST BE BOLTED TO CONCRETE SLAB AT ALL (4) CORNERS W/ 1/2" HILTI-HY 200 W/ HIT-Z RODS WITH 3.5" EMBEDMENT.

**POWER PLANT**

**EMERSON OUTDOOR NETSURE 512 DC POWER PLANT**

SCALE: N.T.S.

1



PURCELL CABINET	
MANUFACTURER:	PURCELL
MODEL:	FLX21-2520
DIMENSIONS:	40.0"Hx26.0"Wx30.0"D
WEIGHT:	312 LBS
SQUARE FOOTAGE:	5.42 SQ. FT.

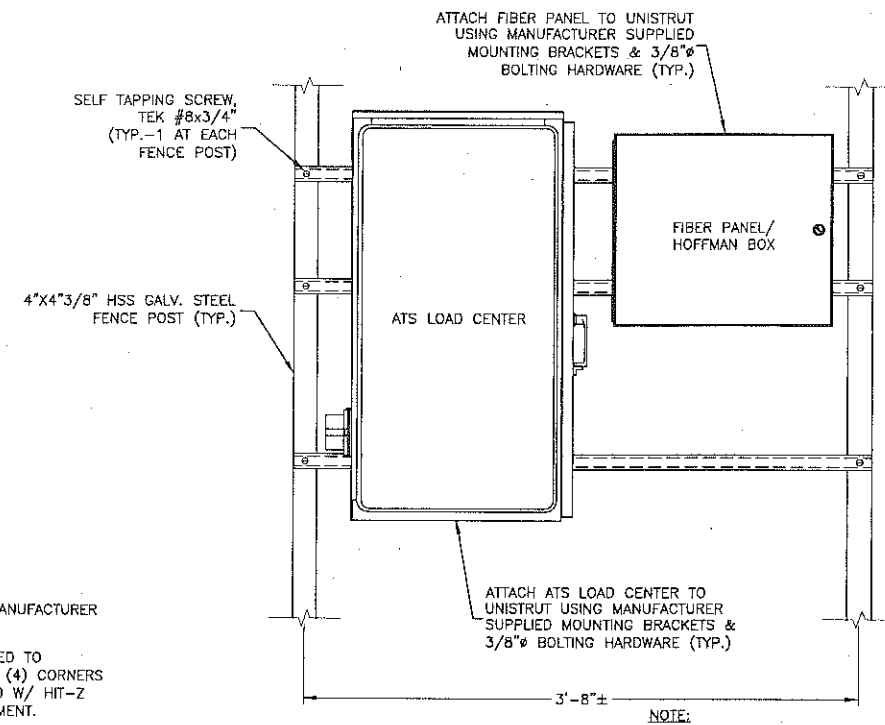
**NOTES:**

- INSTALL CABINET PER MANUFACTURER RECOMMENDATIONS.
- CABINET MUST BE BOLTED TO CONCRETE SLAB AT ALL (4) CORNERS W/ 1/2" HILTI-HY 200 W/ HIT-Z RODS WITH 3.5" EMBEDMENT.

**FLX 21-2520 PURCELL DETAIL**

SCALE: N.T.S.

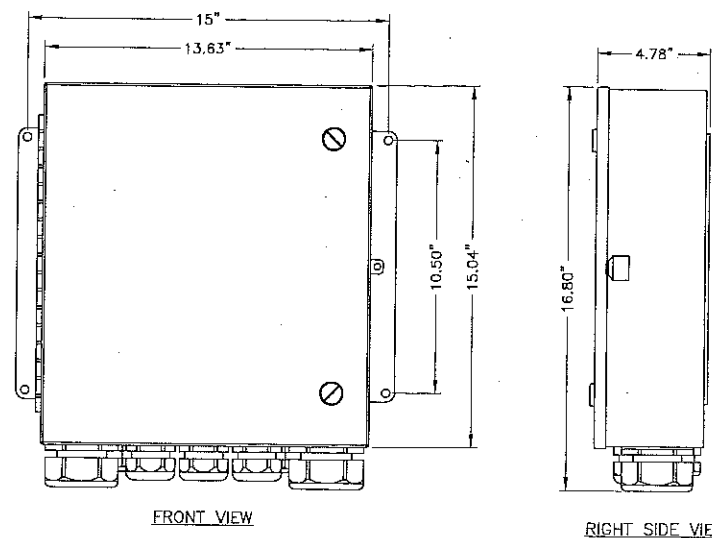
2



**ELECTRICAL & TELCO PANEL DETAIL**

SCALE: N.T.S.

3



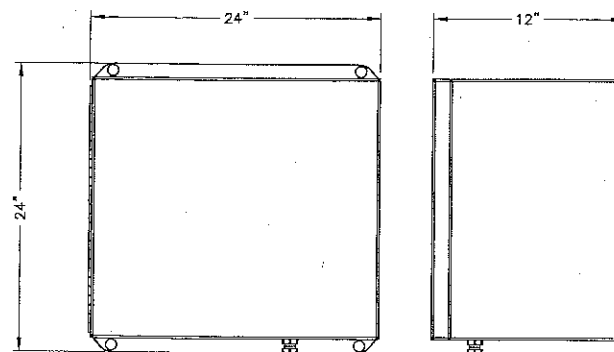
FRONT VIEW

RIGHT SIDE VIEW

**DC12-48-60-0-25E DETAIL**

SCALE: N.T.S.

4



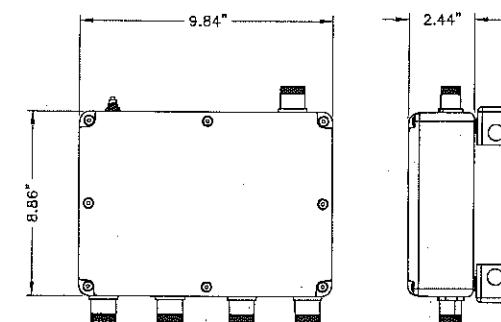
**NOTES:**

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

**FIBER MANAGEMENT BOX**

SCALE: N.T.S.

5



QUADPLEXER	
MANUFACTURER:	COMMSCOPE
MODEL NUMBER:	COX782123-DS-43
DIMENSIONS:	8.86"Hx9.84"Wx2.44"D
WEIGHT:	10.36 LBS

**NOTES:**

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

**QUADPLEXER DETAIL**

SCALE: N.T.S.

6



New Cingular Wireless PCS, LLC  
 One AT&T Way  
 Bedminster, NJ 07921



**SEA BRIGHT  
 BOROUGH HALL  
 W-5867**

**CONSTRUCTION DRAWINGS**

REV	DATE	DESCRIPTION
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 MONMOUTH COUNTY

SHEET TITLE

EQUIPMENT  
 DETAILS

SHEET NUMBER

C-6





New Cingular Wireless PCS, LLC  
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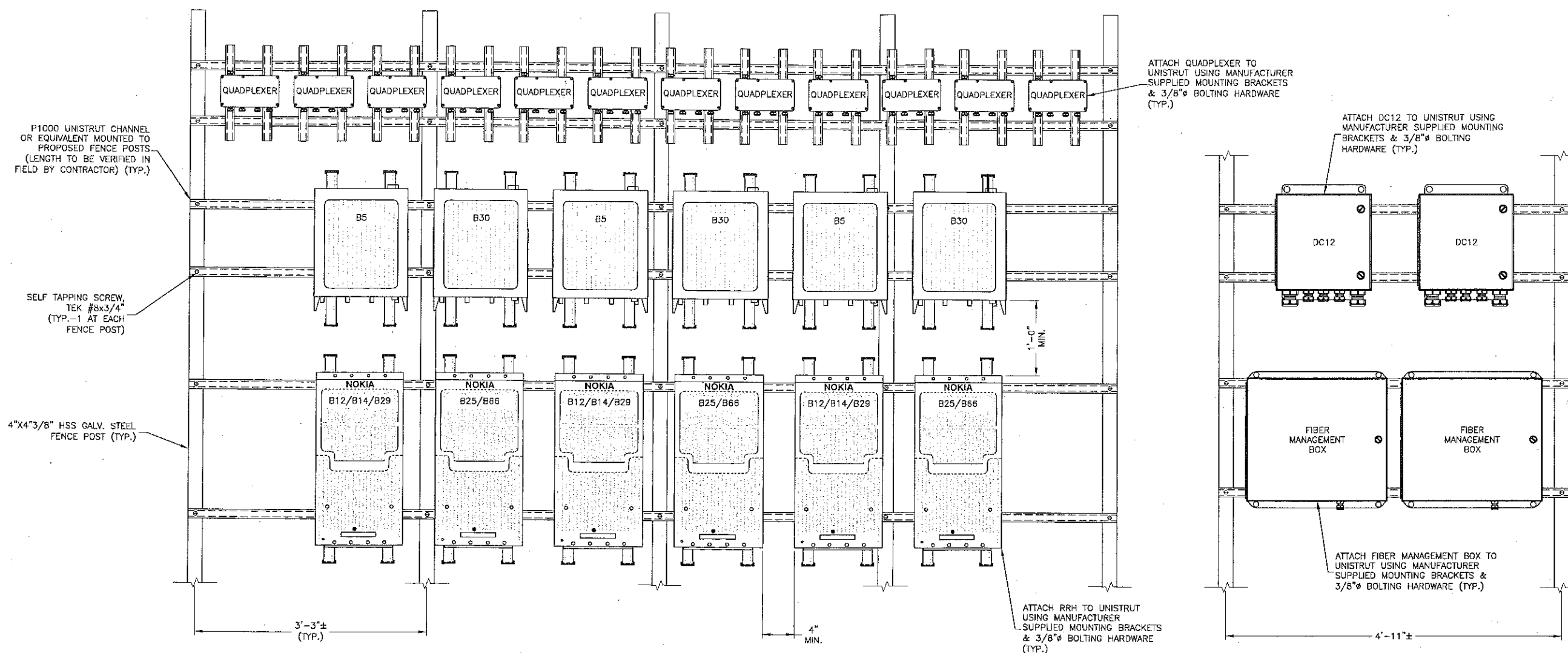
1167 OCEAN AVE  
SEA BRIGHT, NJ 07760  
MONMOUTH COUNTY,

SHEET TITLE

EQUIPMENT MOUNTING DETAILS

SHEET NUMBER

C-7



NOTES:

1. MANUFACTURER VIA AT&T SUPPLIES THE RRH. CONTRACTOR SHALL SUPPLY ALL OTHER MATERIALS AND INSTALL ALL MOUNTING HARDWARE. ALU INSTALLS RRH AND MAKES CABLE TERMINATIONS.
2. MOUNT EQUIPMENT TO UNISTRUT WITH 3/8" UNISTRUT BOLTING HARDWARE AND SPRING NUTS. TYPICAL FOUR PER BRACKET. CONTRACTOR SHALL SUPPLY.
3. NO PAINTING OF THE RRH OR SOLAR SHIELD ALLOWED.

EQUIPMENT MOUNTING DETAILS

SCALE: N.T.S.

1



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MONMOUTH COUNTY

SHEET TITLE

ANTENNA & RRH  
DETAILS & NOTES

SHEET NUMBER

C-8

**GENERAL CONSTRUCTION NOTES:**

- IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ANTENNA, TMAS, DIPLEXERS, AND COAX CONFIGURATION, MAKE AND MODELS PRIOR TO INSTALLATION.
- ALL CONNECTIONS FOR HANGERS, SUPPORTS, BRACING, ETC. SHALL BE INSTALLED PER TOWER MANUFACTURER'S RECOMMENDATIONS.
- CONTRACTOR SHALL REFERENCE THE TOWER STRUCTURAL ANALYSIS/DESIGN DRAWINGS FOR DIRECTIONS ON CABLE DISTRIBUTION/ROUTING.
- ALL OUTDOOR RF CONNECTORS/CONNECTIONS SHALL BE WEATHERPROOFED, EXCEPT THE RET CONNECTORS, USING BUTYL TAPE AFTER INSTALLATION AND FINAL CONNECTIONS ARE MADE. BUTYL TAPE SHALL HAVE A MINIMUM OF ONE-HALF TAPE WIDTH OVERLAP ON EACH TURN AND EACH LAYER SHALL BE WRAPPED THREE TIMES. WEATHERPROOFING SHALL BE SMOOTH WITHOUT BUCKLING. BUTYL BLEEDING IS NOT ALLOWED.
- IF REQUIRED TO PAINT ANTENNAS AND/OR COAX:
  - TEMPERATURE SHALL BE ABOVE 50° F.
  - PAINT COLOR MUST BE APPROVED BY BUILDING OWNER/LANDLORD.
  - FOR REGULATED TOWERS, FAA/FCC APPROVED PAINT IS REQUIRED.
  - DO NOT PAINT OVER COLOR CODING OR ON EQUIPMENT MODEL NUMBERS.

**GENERAL GROUNDING NOTES:**

- ALL CABLES SHALL BE GROUNDED WITH COAXIAL CABLE GROUNDING KITS. FOLLOW THE MANUFACTURER'S RECOMMENDATIONS.
  - GROUNDED AT THE ANTENNA LEVEL.
  - GROUNDED AT MID LEVEL, TOWERS WHICH ARE OVER 200'-0", ADDITIONAL CABLE GROUNDING REQUIRED.
  - GROUNDED AT BASE OF TOWER PRIOR TO TURNING HORIZONTAL.
  - GROUNDED OUTSIDE THE EQUIPMENT SHELTER AT ENTRY PORT.
  - GROUNDED INSIDE THE EQUIPMENT SHELTER AT THE ENTRY PORT.
- ALL PROPOSED GROUNDING BAR DOWNLEADS ARE TO BE TERMINATED TO THE EXISTING ADJACENT GROUNDING BAR DOWNLEADS A MINIMUM DISTANCE OF 4'-0" BELOW GROUNDING BAR. TERMINATIONS MAY BE EXOTHERMIC OR COMPRESSION.

**GENERAL NOTES:**

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ANTENNA AND THE COAX CONFIGURATION IS THE CORRECT MAKE AND MODELS, PRIOR TO INSTALLATION.
- DISTANCE FROM RRH TO SURGE ARRESTOR TO BE A MAXIMUM OF 5 METERS.
- ALL CONNECTIONS FOR HANGERS, SUPPORTS, BRACING, ETC. SHALL BE INSTALLED PER TOWER MANUFACTURER'S SPECIFICATION AND RECOMMENDATIONS.
- CONTRACTOR SHALL REFERENCE THE TOWER STRUCTURAL ANALYSIS/DESIGN DRAWINGS FOR DIRECTIONS ON CABLE DISTRIBUTION/ROUTING.

**ANTENNA MOUNTING NOTES:**

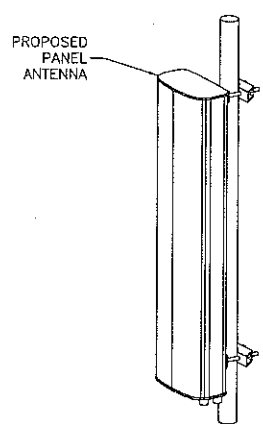
- DESIGN AND CONSTRUCTION OF ANTENNA SUPPORTS SHALL CONFORM TO CURRENT ANSI/TIA-222 OR APPLICABLE LOCAL CODES.
- ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS NOTED OTHERWISE.
- ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS NOTED OTHERWISE.
- DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED BY COLD GALVANIZING IN ACCORDANCE WITH ASTM A780.
- ALL ANTENNA MOUNTS SHALL BE INSTALLED WITH LOCK NUTS, DOUBLE NUTS AND SHALL BE TORQUED TO MANUFACTURER'S RECOMMENDATIONS.
- CONTRACTOR SHALL INSTALL ANTENNA PER MANUFACTURER'S RECOMMENDATION FOR INSTALLATION AND GROUNDING.
- ALL UNUSED PORTS ON ANY ANTENNAS SHALL BE TERMINATED WITH A 50-OHM LOAD TO ENSURE ANTENNAS PERFORM AS DESIGNED.
- PRIOR TO SETTING ANTENNA AZIMUTHS AND DOWNTILTS, ANTENNA CONTRACTOR SHALL CHECK THE ANTENNA MOUNT FOR TIGHTNESS AND ENSURE THAT THEY ARE PLUMB. ANTENNA AZIMUTHS SHALL BE SET FROM TRUE NORTH AND BE ORIENTED WITHIN +/- 5% AS DEFINED BY THE RFDS. ANTENNA DOWNTILTS SHALL BE WITHIN +/- 0.5% AS DEFINED BY THE RFDS. REFER TO ND-00246.
- JUMPERS FROM THE TMA'S MUST TERMINATE TO OPPOSITE POLARIZATION'S IN EACH SECTOR.
- CONTRACTOR SHALL RECORD THE SERIAL #, SECTOR, AND POSITION OF EACH ACTUATOR INSTALLED AT THE ANTENNAS AND PROVIDE THE INFORMATION TO AT&T.
- TMA'S SHALL BE MOUNTED ON PIPE DIRECTLY BEHIND ANTENNAS AS CLOSE TO ANTENNA AS FEASIBLE IN A VERTICAL POSITION.
- ANTENNAS SHALL HAVE A 4'-0" MIN CENTER TO CENTER HORIZONTAL SEPARATION.

**TORQUE REQUIREMENTS:**

- ALL RF CONNECTIONS SHALL BE TIGHTENED BY A TORQUE WRENCH.
  - RF CONNECTION. BOTH SIDES OF THE CONNECTOR.
  - GROUNDED AND ANTENNA HARDWARE ON THE NUT SIDE STARTING FROM THE THREADS TO THE SOLID SURFACE. EXAMPLE OF SOLID SURFACE: GROUND BAR, ANTENNA BRACKET METAL.
- ALL 8M ANTENNA HARDWARE SHALL BE TIGHTENED TO 9 LB-FT (12 NM).
- ALL 12M ANTENNA HARDWARE SHALL BE TIGHTENED TO 43 LB-FT (58 NM).
- ALL GROUNDING HARDWARE SHALL BE TIGHTENED UNTIL THE LOCK WASHER COLLAPSES AND THE GROUNDING HARDWARE IS NO LONGER LOOSE.
- ALL DIN TYPE CONNECTIONS SHALL BE TIGHTENED TO 18-22 LB-FT (24.4 - 29.8 NM).
- ALL N TYPE CONNECTIONS SHALL BE TIGHTENED TO 15-20 LB-IN (1.7 - 2.3 NM).

**FIBER & POWER CABLE MOUNTING NOTES:**

- THE FIBER OPTIC TRUNK CABLES SHALL BE INSTALLED INTO CONDUITS, CHANNEL CABLE TRAYS, OR CABLE TRAY. WHEN INSTALLING FIBER OPTIC TRUNK CABLES INTO A CABLE TRAY SYSTEM, THEY SHALL BE INSTALLED INTO AN INTER DUCT AND A PARTITION BARRIER SHALL BE INSTALLED BETWEEN THE 800 VOLT CABLES AND THE INTER DUCT IN ORDER TO SEGREGATE CABLE TYPES. OPTIC FIBER TRUNK CABLES SHALL HAVE APPROVED CABLE RESTRAINTS EVERY (60) SIXTY FEET AND SECURELY FASTENED TO THE CABLE TRAY SYSTEM. NFPA 70 (NEC) ARTICLE 770 RULES SHALL APPLY.
- THE TYPE TC-ER CABLES SHALL BE INSTALLED INTO CONDUITS, CHANNEL CABLE TRAYS, OR CABLE TRAY AND SHALL BE SECURED AT INTERVALS NOT EXCEEDING (6) SIX FEET. AN EXCEPTION; WHERE TYPE TC-ER CABLES ARE NOT SUBJECT TO PHYSICAL DAMAGE, CABLES SHALL BE PERMITTED TO MAKE A TRANSITION BETWEEN CONDUITS, CHANNEL CABLE TRAYS, OR CABLE TRAY WHICH ARE SERVING UTILIZATION EQUIPMENT OR DEVICES, A DISTANCE (6) SIX FEET SHALL NOT BE EXCEEDED WITHOUT CONTINUOUS SUPPORTING. NFPA 70 (NEC) ARTICLES 336 AND 392 RULES SHALL APPLY.
- WHEN INSTALLING OPTIC FIBER TRUNK CABLES OR TYPE TC-ER CABLES INTO CONDUITS, NFPA 70 (NEC) ARTICLE 300 RULES SHALL APPLY.



ANTENNA SPECIFICATIONS	
MANUFACTURER	COMMSCOPE
MODEL NUMBER	SBJAH4-1D65B-DL
DIMENSIONS (HxWxD)	72.0" x 13.8" x 8.2"
WEIGHT	58.4 LBS

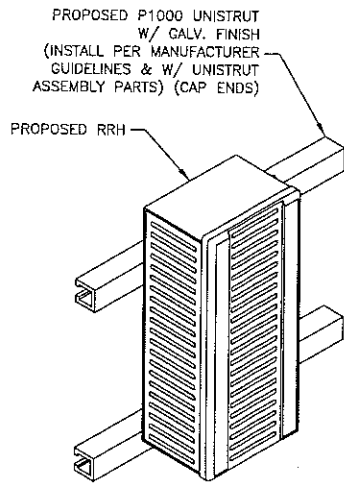
**NOTES:**

- MOUNT ANTENNA PER MANUFACTURER'S RECOMMENDATIONS.
- WEIGHT DOES NOT INCLUDE MOUNTING BRACKETS.

**ANTENNA PIPE MOUNT DETAIL**

SCALE: N.T.S.

1



RRH SPECIFICATIONS	
MANUFACTURER	NOKIA
MODEL NUMBER	AIRSCALE RRH B25/66 (AHFIB)
DIMENSIONS (HxWxD)	28.7" x 15.4" x 9.4"
WEIGHT	88.2 LBS

RRH SPECIFICATIONS	
MANUFACTURER	NOKIA
MODEL NUMBER	AIRSCALE RRH B14/12/29 (AHLBBA)
DIMENSIONS (HxWxD)	30.7" x 17.3" x 11.2"
WEIGHT	101.2 LBS

RRH SPECIFICATIONS	
MANUFACTURER	NOKIA
MODEL NUMBER	AIRSCALE RRH B30 (AHNA)
DIMENSIONS (HxWxD)	13.7" x 12.5" x 6.3"
WEIGHT	39.0 LBS

RRH SPECIFICATIONS	
MANUFACTURER	NOKIA
MODEL NUMBER	AIRSCALE RRH B5 (AHCA)
DIMENSIONS (HxWxD)	13.3" x 11.6" x 8.5"
WEIGHT	36.8 LBS

**NOTES:**

- MOUNT REMOTE RADIO HEAD PER MANUFACTURER'S RECOMMENDATIONS.
- SIZES INCLUDE SOLAR SHIELD.
- CONTRACTOR TO VERIFY THAT PROPOSED RRH UNITS HAVE ADEQUATE CLEARANCE PER MANUFACTURER'S RECOMMENDATIONS. ADJUST SPACING ON UNISTRUT TO ACCOMMODATE.

**REMOTE RADIO HEAD DETAILS**

SCALE: N.T.S.

2



New Cingular Wireless PCS, LLC  
One AT&T Way  
Bedminster, NJ 07921



**SEA BRIGHT  
BOROUGH HALL  
W-5867**

**CONSTRUCTION DRAWINGS**

0	01/05/21	ISSUED FOR REVIEW
D	12/04/20	ISSUED FOR REVIEW
C	12/30/19	ISSUED FOR REVIEW
B	10/30/19	ISSUED FOR REVIEW
A	10/22/19	ISSUED FOR REVIEW



**Dewberry Engineers Inc.**  
600 PARSIPPANY ROAD  
SUITE 301  
PARSIPPANY, NJ 07054  
PHONE: 973.739.9400  
FAX: 973.739.9710  
COA 24GA28047600

*[Signature]*  
DAVID E. REVETTE, P.E.  
NJ LICENSE NO. 24GE05408600  
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DRAWN BY:	FG
REVIEWED BY:	BSH
CHECKED BY:	DER
PROJECT NUMBER:	50110598
JOB NUMBER:	50110611
SITE ADDRESS:	

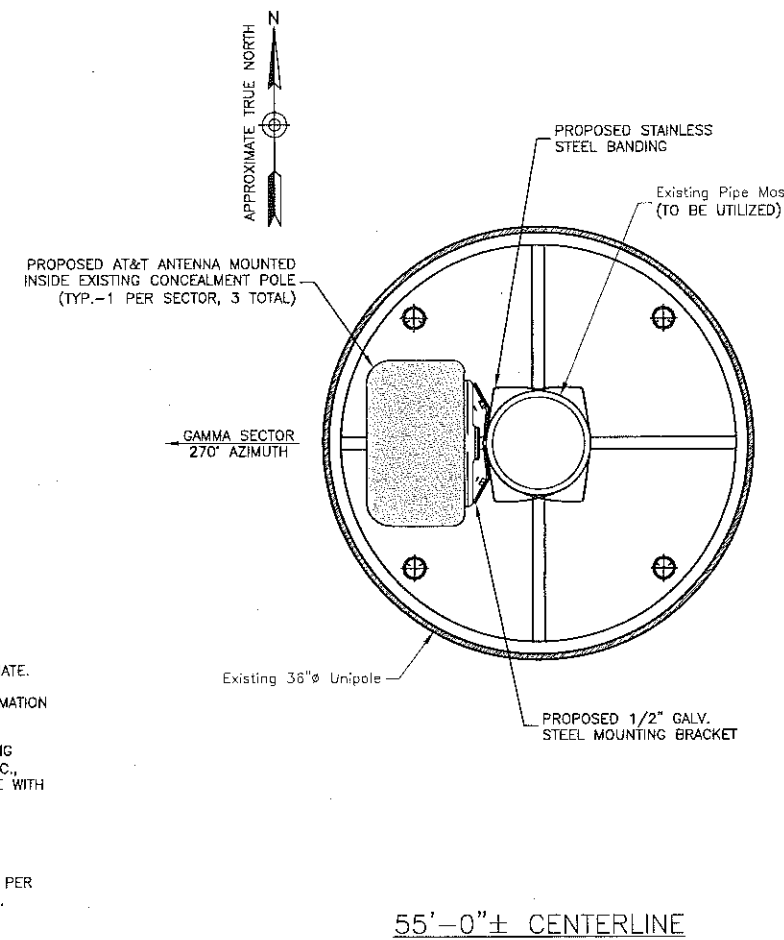
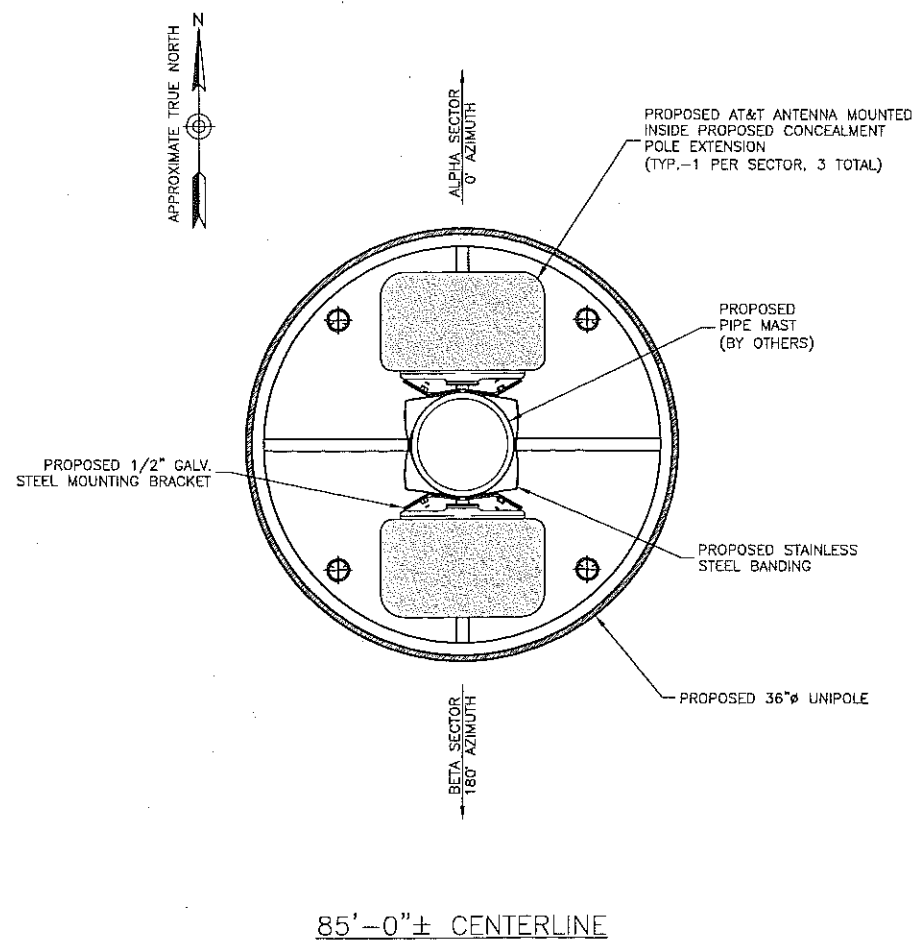
1167 OCEAN AVE  
SEA BRIGHT, NJ 07760  
MONMOUTH COUNTY

SHEET TITLE

PROPOSED ANTENNA  
PLANS

SHEET NUMBER

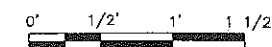
C-9



- NOTES:**
1. NORTH ARROW SHOWN AS APPROXIMATE.
  2. SOME EXISTING & PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
  3. ALL PROPOSED EQUIPMENT INCLUDING ANTENNAS, TMA's, COAX CABLES, ETC., SHALL BE MOUNTED IN ACCORDANCE WITH THE TOWER DESIGN DRAWINGS & STRUCTURAL ANALYSIS BY SEMAAN ENGINEERING SOLUTIONS DATED 07/22/20.
  4. INSTALL ANTENNAS, COAX & MOUNT PER MANUFACTURER'S RECOMMENDATIONS.
  5. CONTRACTOR TO CONFIRM ANTENNA FITMENT PRIOR TO INSTALLATION.

**PROPOSED ANTENNA PLANS** 1

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

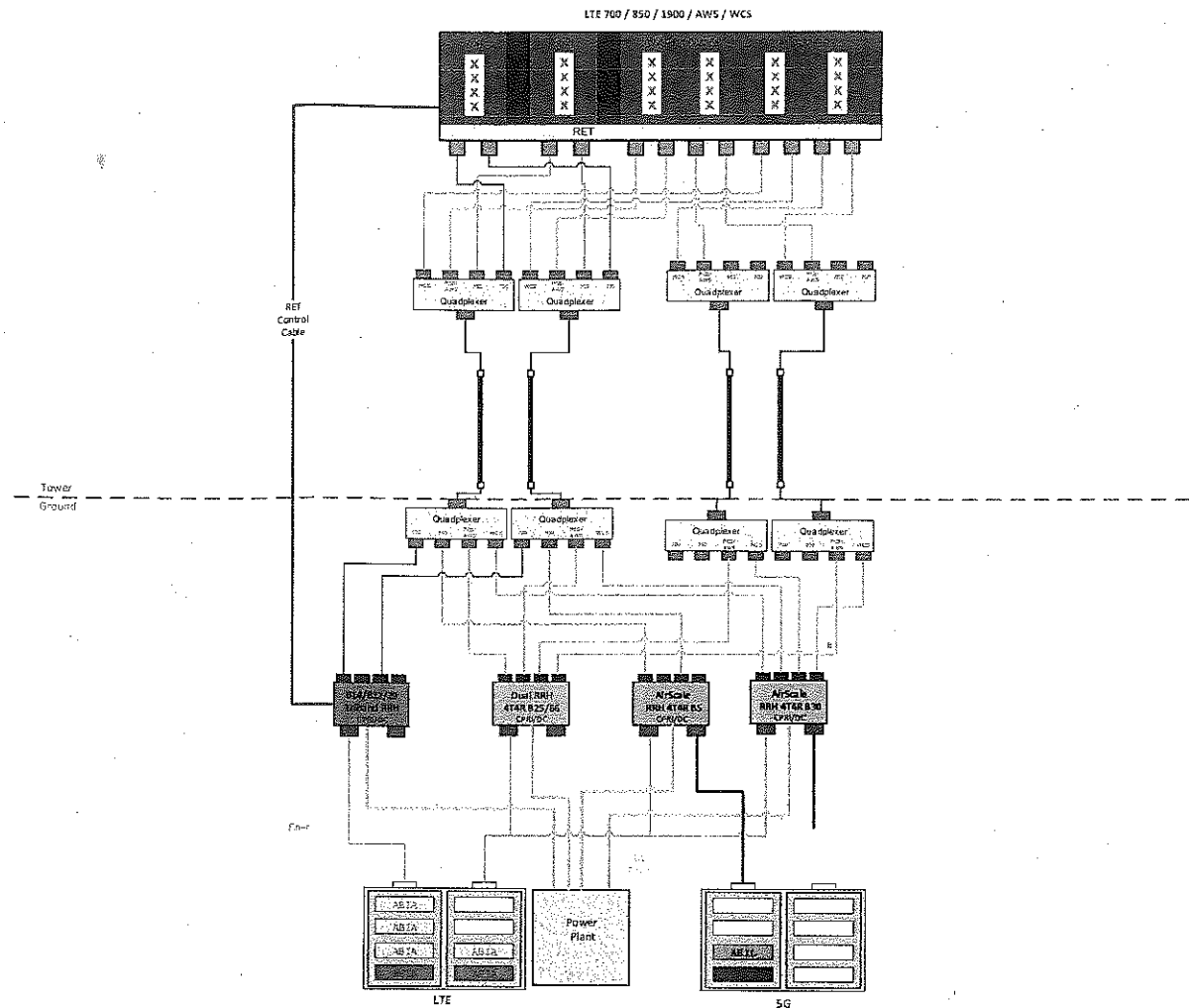


### LTE COLOR KEY

SECTOR COLOR Identifiers	
Alpha = Blue	
Gamma = White	
Beta = Red	
Epsilon = Yellow	

RRH COLOR Identifiers	
D8 700 812/814, green stripe	
D9 825/866, 825 red stripe; 866 blue stripe	
700 825 = one yellow stripe	

TECHNOLOGY IDENTIFIERS	
GSM = Sector identifiers only	
UMTS = One band of Orange Tape	



**NOTES:**

1. RF PLUMBING DIAGRAM BASED ON NWL05867 RFDS VERSION 1.00 DATED 02/11/2020.
2. CONTRACTOR TO VERIFY FINAL RFDS AND CABLE LENGTHS PRIOR TO CONSTRUCTION.

### PLUMBING DIAGRAM

SCALE: N.T.S.

### LTE COLOR CODING KEY

SCALE: N.T.S.

FINAL EQUIPMENT CONFIGURATION										
SECTOR	BAND	ANTENNA	SIZE (INCHES) (LxWxD)	RAD. CENTER	AZIMUTH	MECHANICAL DOWNTILT	QUADPLEXER ON TOWER	RRH AT EQUIPMENT	QUADPLEXER AT EQUIPMENT	COAX/CABLES
ALPHA	LTE 700/850/1900/AWS/WCS	COMMSCOPE SBJAH4-1D65B-DL	72.0x13.8x8.2	85°-0°	0°	0°	(4) CQX782123-DS-43	(1) B14/12/29 AHLBBA (1) B5 AHCA (1) B25/66 AHFIB (1) B30 AHNA	(4) CQX782123-DS-43	(3) 10mm FIBER (4) 7/8" COAX (1) RET CABLE
BETA	LTE 700/850/1900/AWS/WCS	COMMSCOPE SBJAH4-1D65B-DL	72.0x13.8x8.2	85°-0°	180°	0°	(4) CQX782123-DS-43	(1) B14/12/29 AHLBBA (1) B5 AHCA (1) B25/66 AHFIB (1) B30 AHNA	(4) CQX782123-DS-43	(3) 10mm FIBER (4) 7/8" COAX (1) RET CABLE
GAMMA	LTE 700 850/1900/AWS/WCS	COMMSCOPE SBJAH4-1D65B-DL	72.0x13.8x8.2	55°-0°	270°	0°	(4) CQX782123-DS-43	(1) B14/12/29 AHLBBA (1) B5 AHCA (1) B25/66 AHFIB (1) B30 AHNA	(4) CQX782123-DS-43	(3) 10mm FIBER (4) 7/8" COAX (1) RET CABLE

**NOTES:**

1. FINAL EQUIPMENT CONFIGURATION BASED ON NWL05867 RFDS VERSION 1.00 DATED 02/11/2020.
2. CONTRACTOR TO VERIFY FINAL RFDS AND CABLE LENGTHS PRIOR TO CONSTRUCTION.

### FINAL EQUIPMENT CONFIGURATION

SCALE: N.T.S.



New Cingular Wireless PCS, LLC  
One AT&T Way  
Bedminster, NJ 07921



SEA BRIGHT  
BOROUGH HALL  
W-5867

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C	12/30/19	ISSUED FOR REVIEW
B	10/30/19	ISSUED FOR REVIEW
A	10/22/19	ISSUED FOR REVIEW



Dewberry Engineers Inc.  
600 PARSIPPANY ROAD  
SUITE 301  
PARSIPPANY, NJ 07054  
PHONE: 973.739.9400  
FAX: 973.739.9710  
COA 24GA28047600

DAVID E. REVETTE, P.E.  
NJ LICENSE NO. 24GE05408600

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DRAWN BY: FG

REVIEWED BY: BSH

CHECKED BY: DER

PROJECT NUMBER: 50110598

JOB NUMBER: 50110611

SITE ADDRESS:

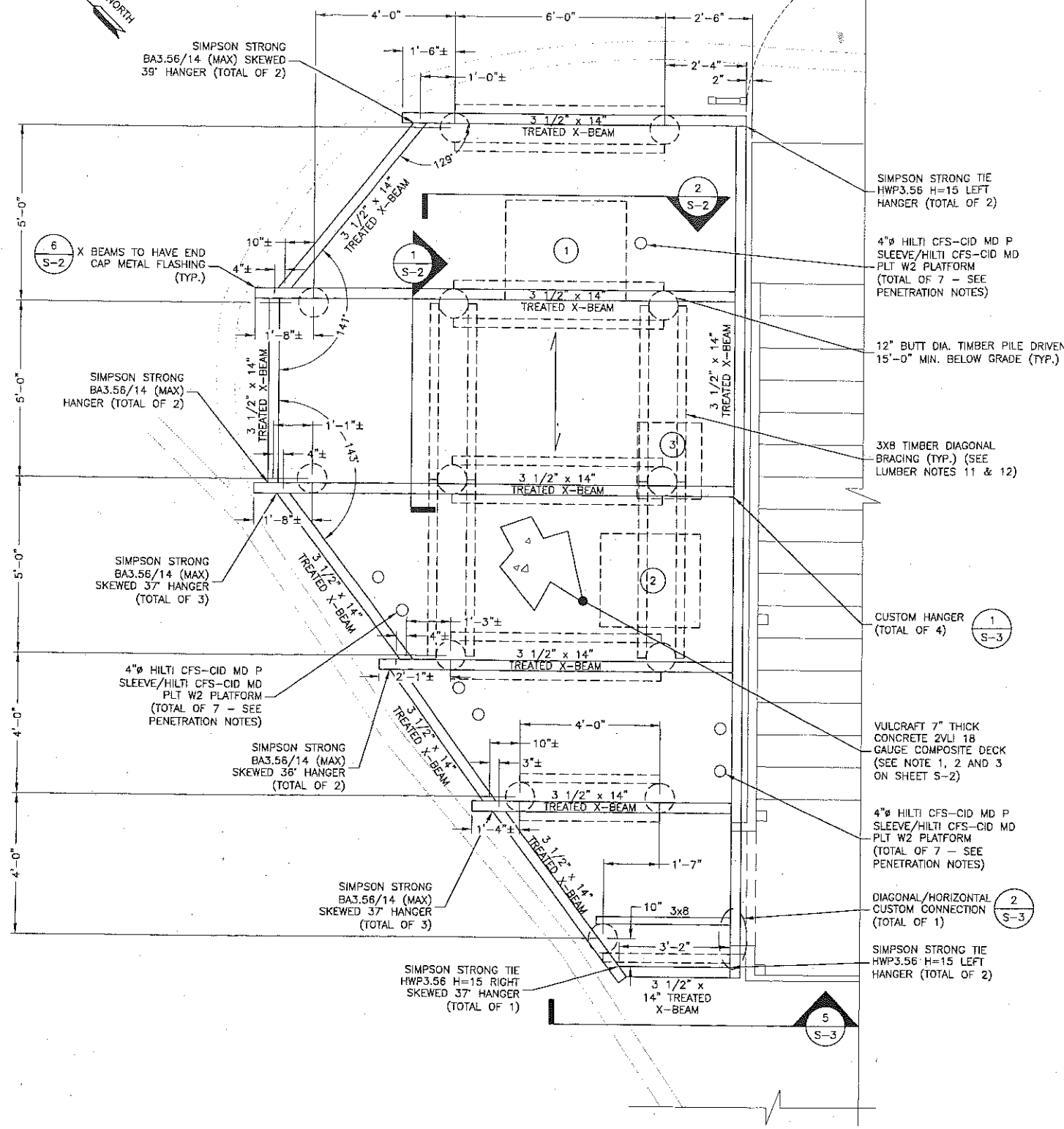
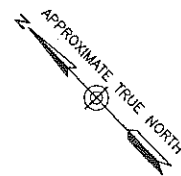
1167 OCEAN AVE  
SEA BRIGHT, NJ 07760  
MONMOUTH COUNTY

SHEET TITLE

COLOR CODING, PLUMBING  
DIAGRAM & B.O.M.

SHEET NUMBER

C-10



**PLATFORM STRUCTURAL PLAN**

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



**LUMBER NOTES:**

- ALL WORKMANSHIP AND MATERIAL SHALL CONFORM TO THESE DRAWINGS AND THE REQUIREMENTS OF THE 2018 INTERNATIONAL BUILDING CODE, NJ EDITION, AND LOCAL REQUIREMENTS.
- ALL WOOD SHALL BE FASTENED AS SHOWN ON THESE DRAWINGS WHERE THE CONNECTION IS NOT DETAILED, THE CONNECTION MUST CONFORM WITH THE FASTENING SCHEDULE AS SHOWN IN THE 2018 IBC, NJ EDITION.
- WOOD SHALL BE IDENTIFIED BY THE SPECIFIC GRADE MARK OF THE SOUTHERN PINE INSPECTION BUREAU AND THE WEST COAST LUMBER INSPECTION BUREAU.
- PLYWOOD SHALL BE IDENTIFIED BY THE SPECIFIC GRADE MARK OF THE AMERICAN PLYWOOD ASSOCIATION.
- PRESERVATIVE TREATMENT SHALL BE IN ACCORDANCE WITH THE STANDARDS OF THE AMERICAN WOOD PRESERVERS ASSOCIATION.
- MOISTURE CONTENT FOR ALL WOOD MATERIAL SHALL NOT EXCEED 19%.
- ALL WOOD AND PLYWOOD SHALL BE FREE OF ROT, HIGH MOISTURE CONTENT, INSECT INFESTATION, WAKES, SHAKES, WARPS, ETC.
- ALL MATERIAL SHALL BE PROPERLY DELIVERED TO THE SITE AND STORED ABOVE GROUND, PROTECTED FROM THE WEATHER.
- WOOD SCREWS - GALVANIZED, SIZE AND LENGTH SHOWN ON DRAWINGS.
- NAILS - GALVANIZED, COMMON WIRE.
- DIAGONAL BRACE MEMBERS SHALL BE SOUTHERN PINE TIMBER No. 1 OR APPROVED EQUAL (G=0.55).
- 3X8 DIAGONAL BRACE BOLT CONNECTIONS SHALL MEET THE FOLLOWING CRITERIA  
A. 1.5" MIN EDGE DISTANCE  
B. 5" MIN END DISTANCE OF 3X8  
C. 3.5" MIN VERTICAL BOLT SPACING

**SLAB PENETRATION NOTES:**

- DISTANCE BETWEEN HILTI SLEEVE LOCATIONS SHALL BE A MINIMUM OF 8"
- DISTANCE BETWEEN HILTI SLEEVE LOCATIONS AND FENCE BASE PLATE SHALL BE A MINIMUM OF 5"
- HILTI SLEEVES SHALL BE PLACED SO THEY ARE JUST WITHIN THE FENCE PERIMETER
- ALL HILTI SLEEVES TO BE INSTALLED PER HILTI RECOMMENDATIONS

**SIMPSON STRONG TIE HANGER NOTES:**

- ALL HANGERS TO BE HOT DIP GALVANIZED
- ALL HANGERS TO BE INSTALLED PER SIMPSON STRONG TIE RECOMMENDATIONS.
- CARRIED MEMBER TO BE BEVEL CUT WHERE SKEWED HANGERS ARE USED, PER SIMPSON STRONG TIE RECOMMENDATIONS
- CONTRACTOR TO VERIFY AND CONFIRM HANGER SKEW
- BA3.56/14 (MAX) HANGERS TO BE FASTENED WITH:  
A) (6) 16d COMMON (0.165" X 3.5") NAILS IN TOP  
B) (6) 16d COMMON (0.165" X 3.5") NAILS IN FACE  
C) (8) 10d COMMON (0.148" X 1.5") NAILS IN JOIST
- HWP3.56 H=14 HANGERS TO BE FASTENED WITH:  
A) (8) 16d COMMON (0.185" X 3.5") NAILS IN TOP  
B) (6) 16d COMMON (0.165" X 3.5") NAILS IN FACE  
C) (8) 10d COMMON (0.148" X 1.5") NAILS IN JOIST

**X-BEAM NOTES:**

- X BEAMS MANUFACTURED BY ROSSBORO (888) 393 2304
- X-BEAMS TO BE TREATED WITH HI-CLEAR II

SIMPSON STRONG TIE HANGER INVENTORY	
ITEM	QT
HWP3.56 H=14 LEFT	2
HWP3.56 H=14 RIGHT SKEWED 37°	1
BA3.56/14 (MAX) SKEWED 37°	3
BA3.56/14 (MAX) SKEWED 36°	2
BA3.56/14 (MAX) SKEWED 39°	2
BA3.56/14 (MAX)	2

DESIGN SPECIFICATIONS:	MODEL	QUANTITY*	WEIGHT
1. EQUIPMENT	20KW DC GENERATOR	1	849 LBS
2. EQUIPMENT	DC POWER PLANT CABINET	1	2300 LBS
3. EQUIPMENT	FLX PURCELL CABINET	1	312 LBS
4. EQUIPMENT	RRH/DC SURGE RACK	1	1067 LBS
5. EQUIPMENT	PPC/TELCO RACK	1	150 LBS
TOTAL EQUIPMENT DEAD LOAD			= 4678 LBS

**NOTE:**

- LOCATION & INSTALLATION OF PROPOSED ELEVATED PLATFORM & EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE STRUCTURAL ANALYSIS BY DEWBERRY ENGINEERS INC. DATED 12/04/20.



New Cingular Wireless PCS, LLC  
One AT&T Way  
Bedminster, NJ 07921



**SEA BRIGHT  
BOROUGH HALL  
W-5867**

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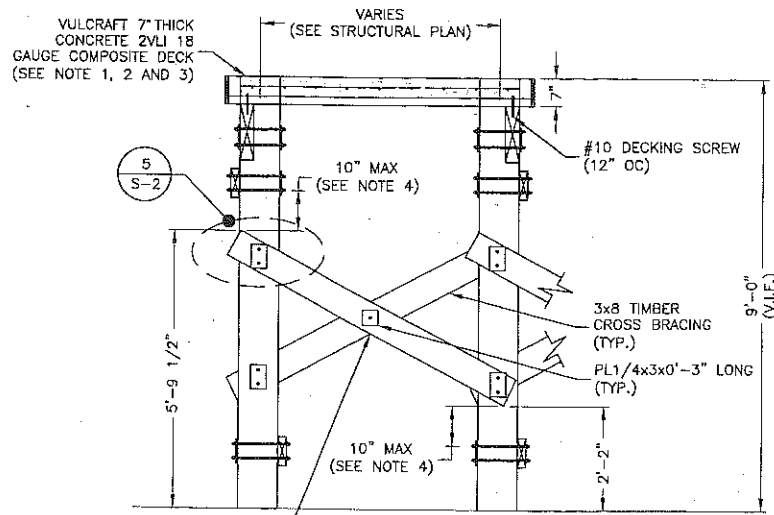
**Dewberry Engineers Inc.**  
600 PARSIPPANY ROAD  
SUITE 301  
PARSIPPANY, NJ 07054  
PHONE: 973.739.9400  
FAX: 973.739.9710  
COA 24GA28047600

Signature of David E. Revette, P.E.  
DAVID E. REVETTE, P.E.  
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REVIEWED BY: BSH  
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PROJECT NUMBER: 50110598  
JOB NUMBER: 50110611  
SITE ADDRESS:

1167 OCEAN AVE  
SEA BRIGHT, NJ 07760  
MONMOUTH COUNTY

SHEET TITLE: EQUIPMENT PLATFORM STRUCTURAL PLAN  
SHEET NUMBER:



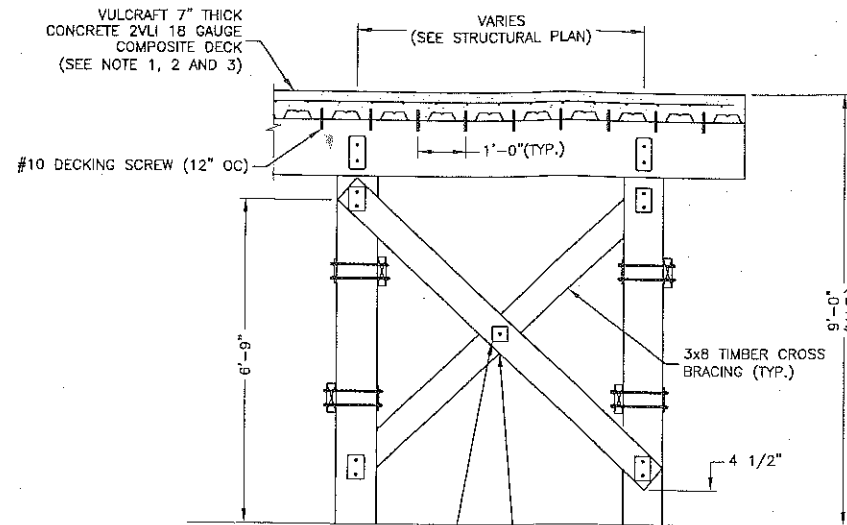
PROVIDE SOLID WOOD BLOCKING AT INTERSECTIONS OF WOOD BRACES, SECURE USING 3/4" THRU BOLTS (TYP.)

NOTES:

- VULCRAFT METAL DECK WITH G90 GALVANIZED COATING
- TOP OF CONCRETE DECK PROTECTED WITH SILOXA-TEK 8500 PENETRATING CONCRETE SEALER
- 16 GAUGE POUR STOP TO BE USED AROUND PERIMETER OF RAISED PLATFORM
- CONTRACTOR TO MINIMIZE BRACING SPACING PER FIELD CONDITIONS. MINIMUM OF 4" AND MAXIMUM OF 10"

**TIMBER PILE BRACING DETAIL 1**

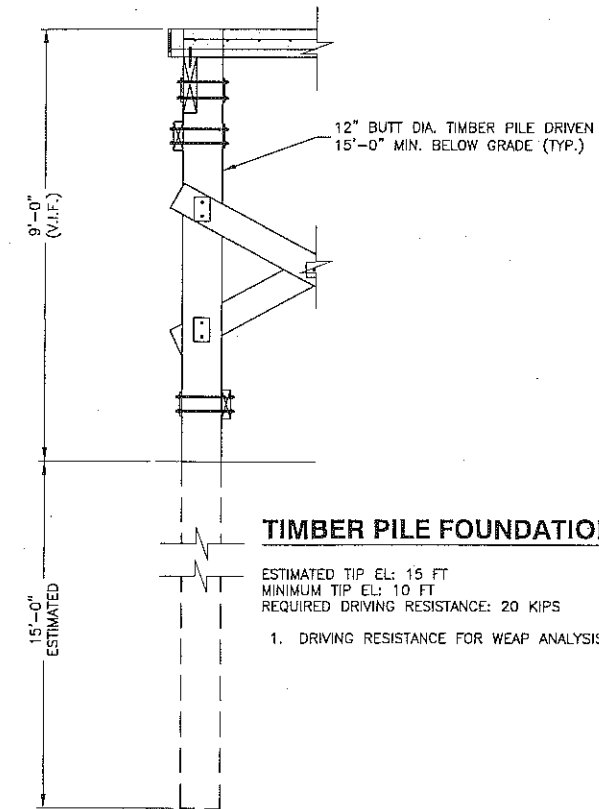
SCALE: 1/4"=1' FOR 11"x17"  
1/2"=1' FOR 22"x34"



PROVIDE SOLID WOOD BLOCKING AT INTERSECTIONS OF WOOD BRACES, SECURE USING 3/4" THRU BOLTS (TYP.)

**TIMBER PILE BRACING DETAIL 2**

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

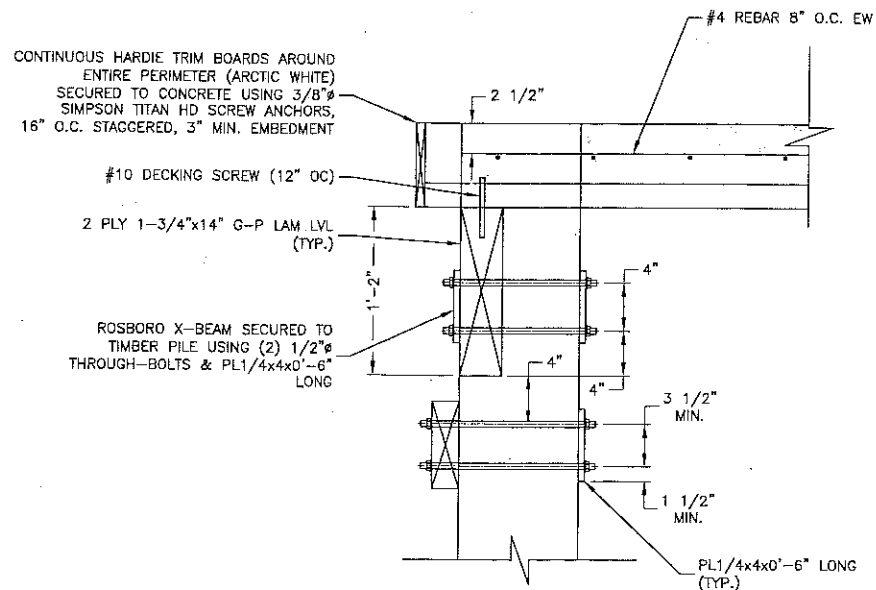


**TIMBER PILE FOUNDATION NOTES:**

- ESTIMATED TIP EL: 15 FT  
MINIMUM TIP EL: 10 FT  
REQUIRED DRIVING RESISTANCE: 20 KIPS
- DRIVING RESISTANCE FOR WEAP ANALYSIS: 20 KIPS

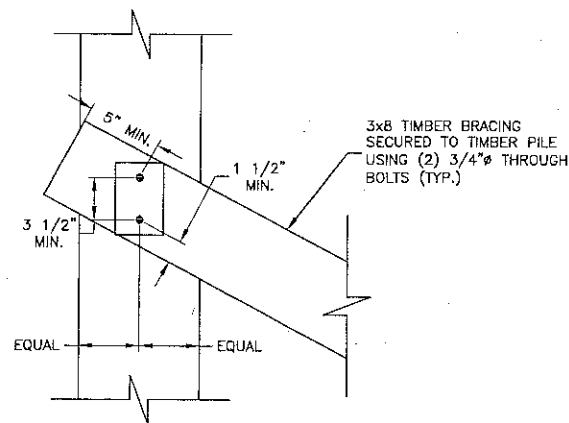
**TIMBER PILE DETAIL 3**

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



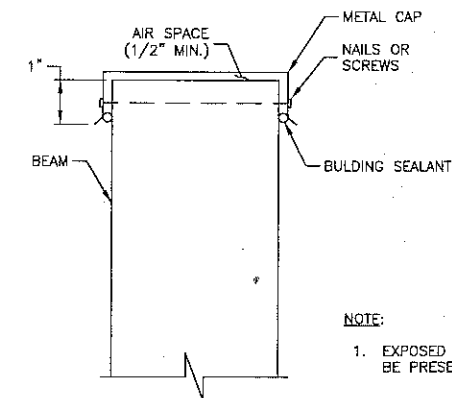
**TIMBER PILE FRAMING DETAIL 4**

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



**TIMBER PILE BRACING DETAIL 5**

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



**END CAP FOR EXPOSED BEAMS OR VERTICAL MEMBERS DETAIL 6**

SCALE: N.T.S.

- NOTE:
- EXPOSED SECTION OF BEAM MUST BE PRESERVATIVELY TREATED



New Cingular Wireless PCS, LLC  
One AT&T Way  
Bedminster, NJ 07921



**SEA BRIGHT  
BOROUGH HALL  
W-5867**

**CONSTRUCTION DRAWINGS**

O	01/05/21	ISSUED FOR REVIEW
D	12/04/20	ISSUED FOR REVIEW
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B	10/30/19	ISSUED FOR REVIEW
A	10/22/19	ISSUED FOR REVIEW



Dewberry Engineers Inc.  
600 PARSIPPANY ROAD  
SUITE 301  
PARSIPPANY, NJ 07054  
PHONE: 973.739.9400  
FAX: 973.739.9710  
COA 24GA28047600

*DR*

DAVID E. REVETTE, P.E.  
NJ LICENSE NO. 24CE0540B600

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JOB NUMBER:	50110611
SITE ADDRESS:	

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MONMOUTH COUNTY

SHEET TITLE

PLATFORM  
STRUCTURAL DETAILS I

SHEET NUMBER



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Dewberry Engineers Inc.  
600 PARSIPPANY ROAD  
SUITE 301  
PARSIPPANY, NJ 07054  
PHONE: 973.739.8400  
FAX: 973.739.9710  
COA 24GA26047800

*David E. Revette*  
DAVID E. REVETTE, P.E.  
NJ LICENSE NO. 24GE05408600  
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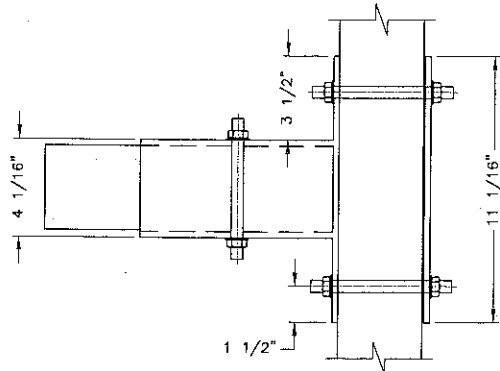
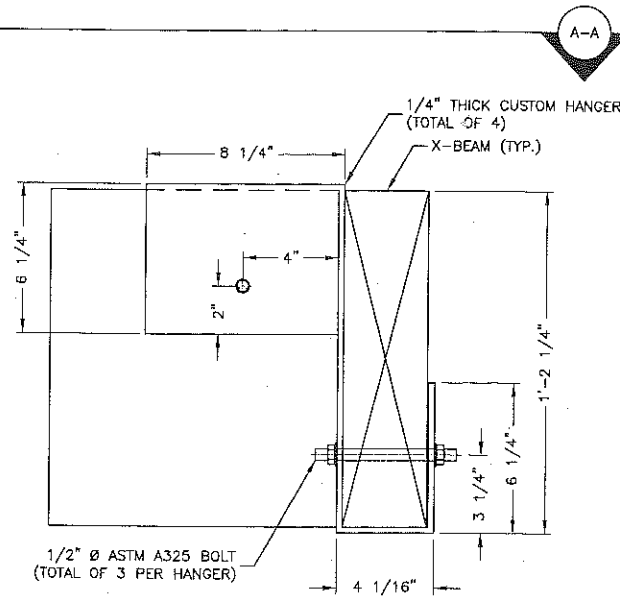
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MONMOUTH COUNTY

SHEET TITLE

PLATFORM  
STRUCTURAL DETAILS II

SHEET NUMBER

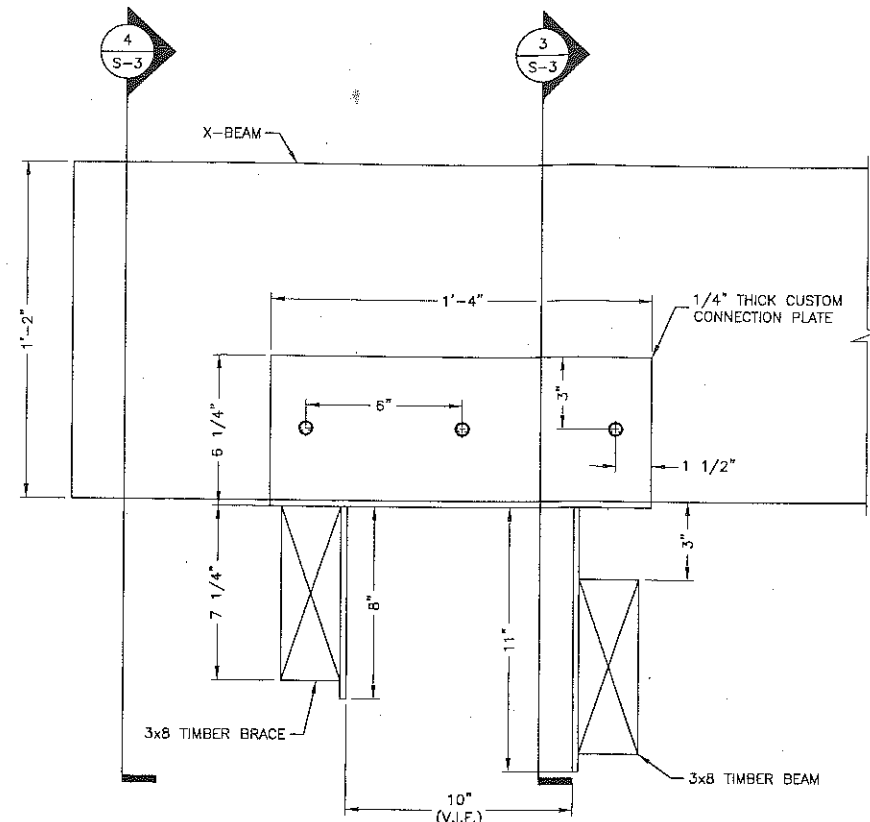
S-3



SECTION A-A

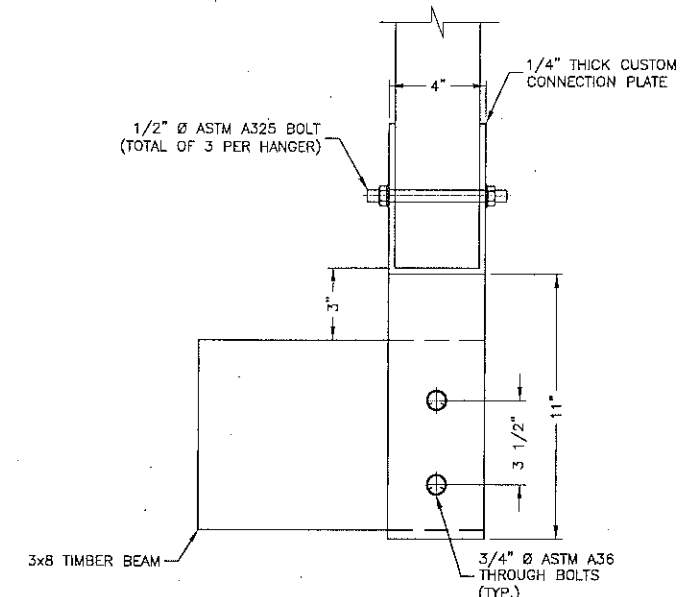
CUSTOM HANGER DETAIL

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



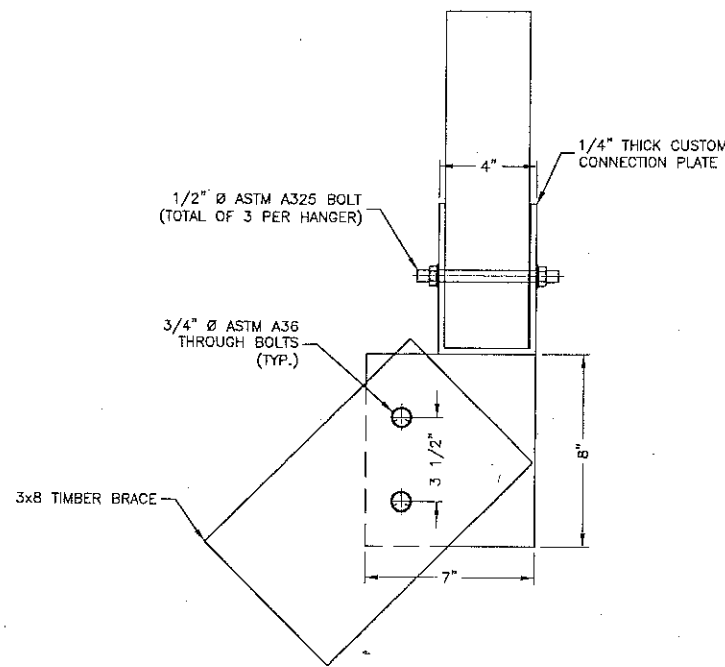
DIAGONAL/HORIZONTAL CUSTOM CONNECTION

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



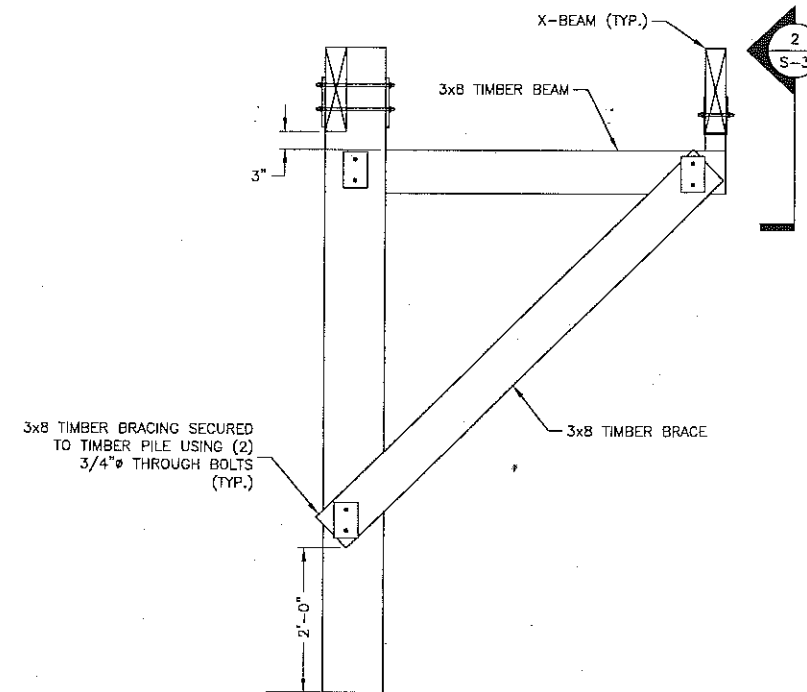
CONNECTION DETAIL

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



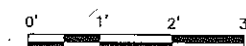
CONNECTION DETAIL

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



X-BEAM CANTILEVER BRACE ELEVATION

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





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800 PARSIPPANY ROAD  
SUITE 301  
PARSIPPANY, NJ 07054  
PHONE: 973.739.9400  
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SHEET TITLE

FENCE LAYOUT &  
CONNECTION DETAILS

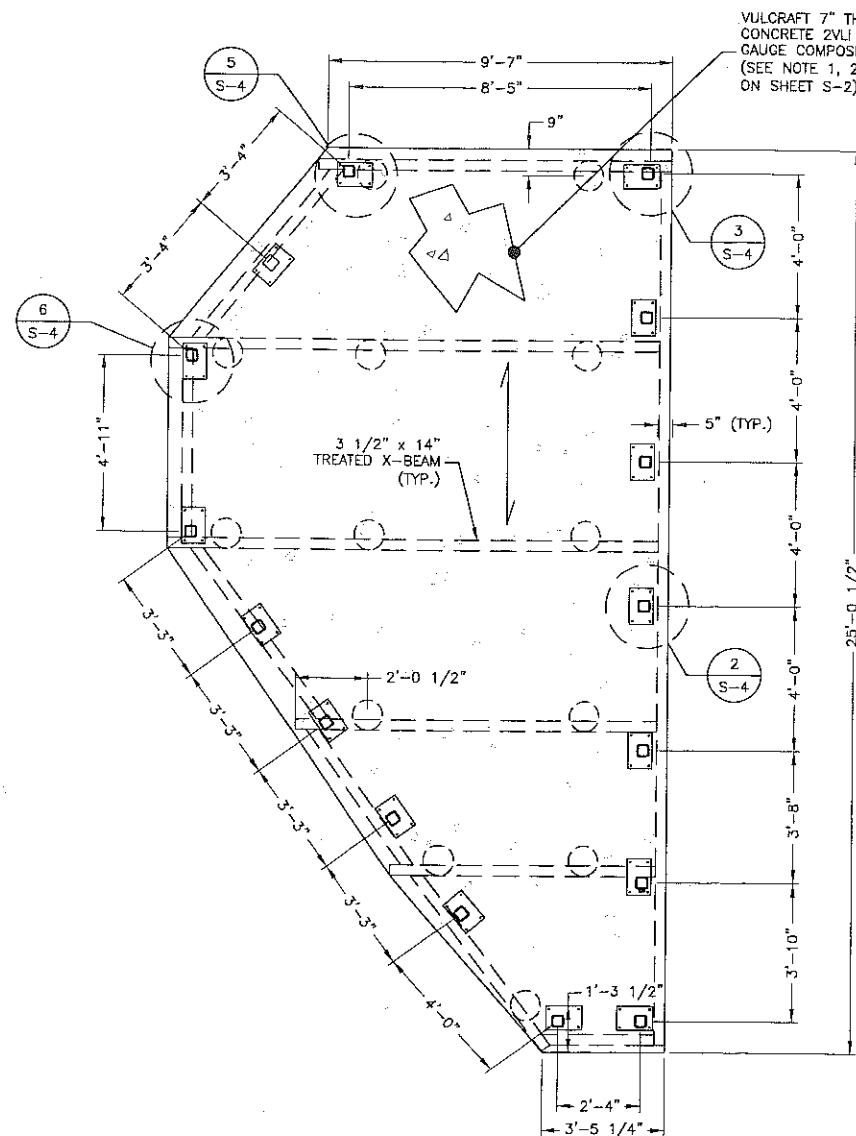
SHEET NUMBER

S-4

**HILTI ANCHOR NOTES:**

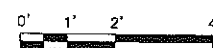
1. DRILLING TYPE - SAFESSET - AUTOMATIC CLEANING ALL DUST SHALL BE REMOVED FROM DRILLED ANCHOR HOLES

VULCRAFT 7" THICK  
CONCRETE 2VLI 18  
GAUGE COMPOSITE DECK  
(SEE NOTE 1, 2 AND 3  
ON SHEET S-2)

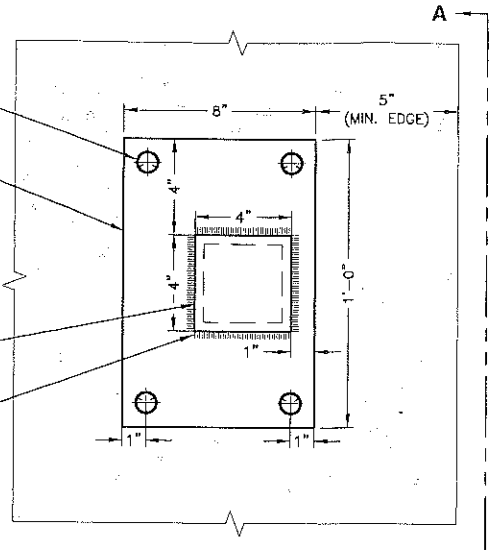


**FENCE & DECK LAYOUT**

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



- 1/2" HILTI-HY 200 W/ HIT-Z RODS WITH 3.5" EMBEDMENT (TYP.-4 PER FENCE POST)
- 8"x12"x3/4" A36 STEEL PLATE (TYP.-1 PER FENCE POST)
- 4"x4"x3/8" HSS GALV. STEEL FENCE POST (TYP.) 5/16"

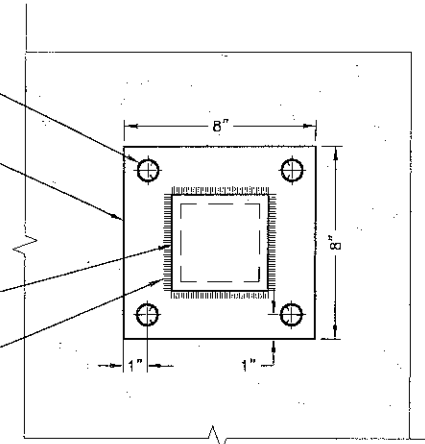


**TYPICAL FENCE POST DETAIL**

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



- 1/2" HILTI-HY 200 W/ HIT-Z RODS WITH 3.5" EMBEDMENT (TYP.-4 PER FENCE POST)
- 8"x12"x3/4" A36 STEEL PLATE (TYP.-1 PER FENCE POST)
- 4"x4"x3/8" HSS GALV. STEEL FENCE POST (TYP.) 5/16"

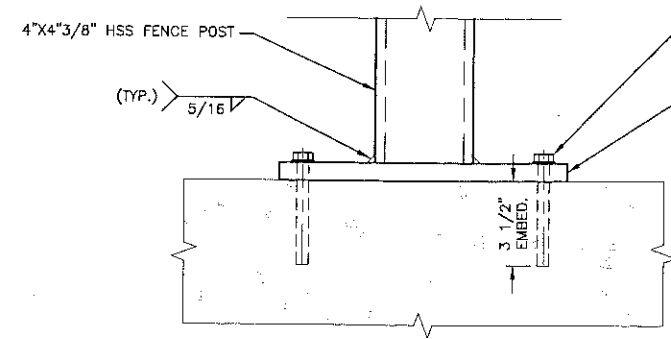


**FENCE POST DETAIL - 1**

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

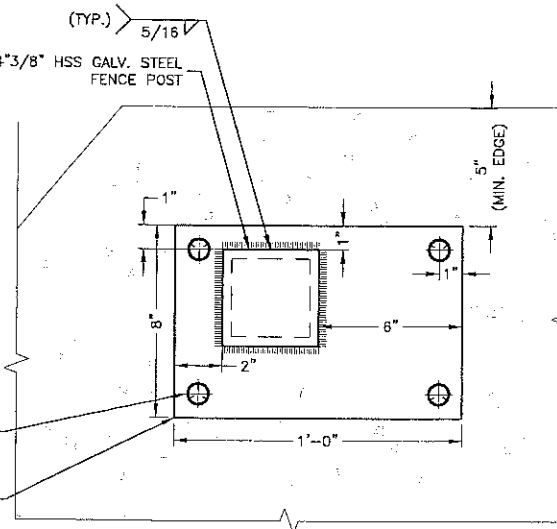


- 1/2" HILTI-HY 200 W/ HIT-Z RODS WITH 3.5" EMBEDMENT (TYP.-4 PER FENCE POST)
- 8"x12"x3/4" A36 STEEL PLATE (TYP.-1 PER FENCE POST)
- 4"x4"x3/8" HSS GALV. STEEL FENCE POST (TYP.) 5/16"



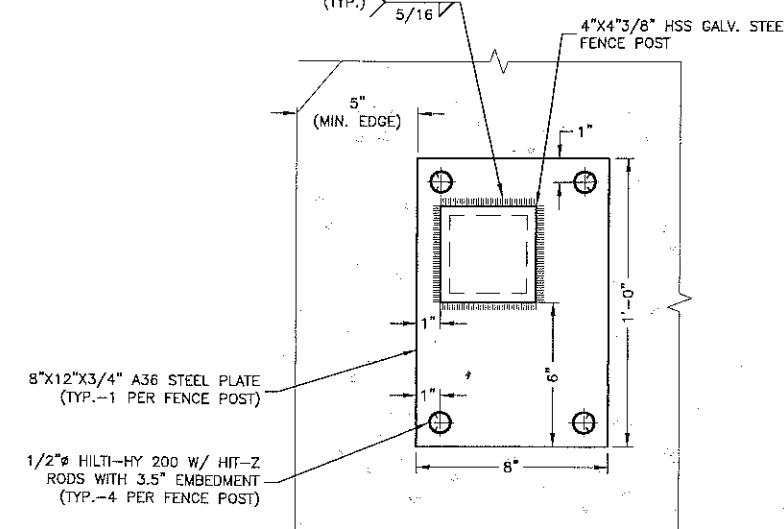
**TYPICAL ELEVATION DETAIL - A**

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



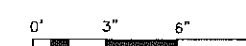
**FENCE POST DETAIL - 2**

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

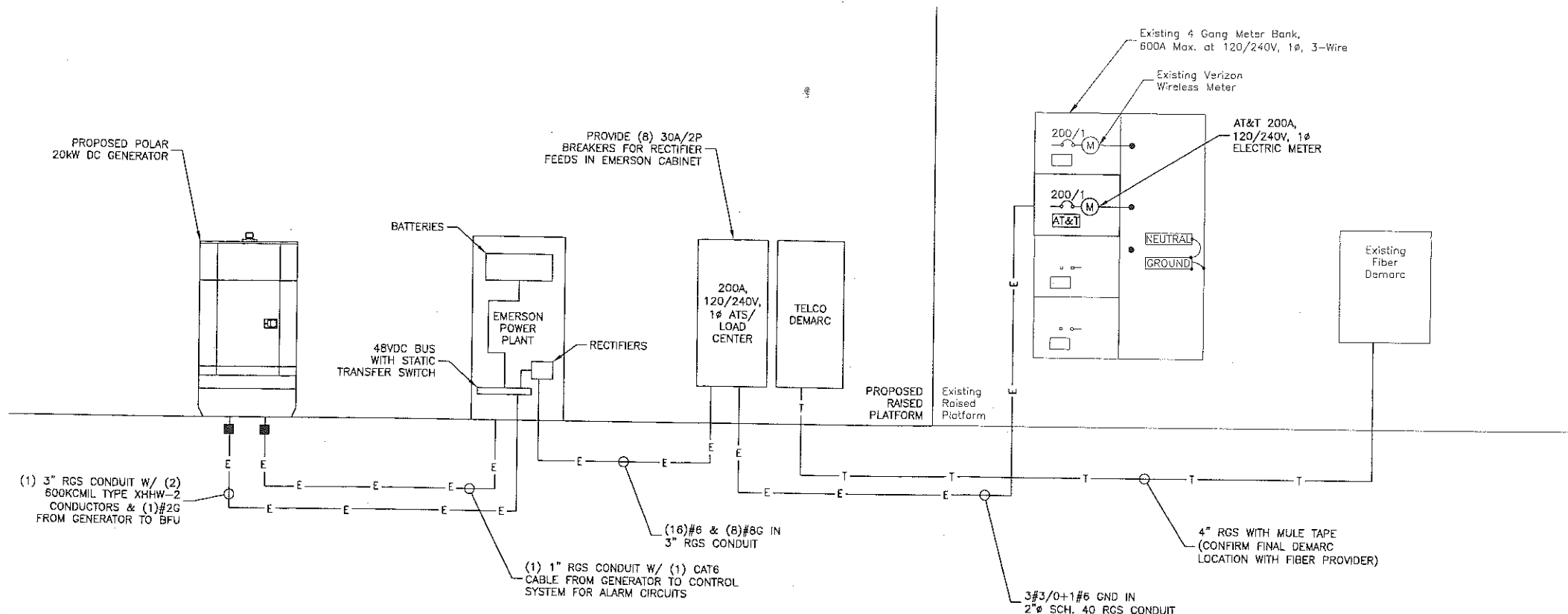


**POST DETAIL - 3**

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







- NOTES:**
1. CONFIRM ALL PANELBOARDS, TELCO, ETC WITH CM PRIOR TO CONSTRUCTION.
  2. CONFIRM GENERATOR WIRING & CONTROLS PRIOR TO CONSTRUCTION.

**ELECTRICAL RISER DIAGRAM W/ DC GENERATOR**  
SCALE: N.T.S.

**GENERAL ELECTRICAL NOTES**

1. SUBMITTAL OF BID INDICATES CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED UNDER THIS CONTRACT.
2. CONTRACTOR SHALL PERFORM ALL VERIFICATION OBSERVATION TESTS, AND EXAMINATION WORK PRIOR TO THE ORDERING OF THE ELECTRICAL EQUIPMENT AND THE ACTUAL CONSTRUCTION. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE ARCHITECT LISTING ALL MALFUNCTIONS, FAULTY EQUIPMENT AND DISCREPANCIES.
3. HEIGHTS SHALL BE VERIFIED WITH OWNER PRIOR TO INSTALLATION.
4. THESE PLANS ARE DIAGRAMMATIC ONLY, FOLLOW AS CLOSELY AS POSSIBLE.
5. EACH CONDUCTOR OF EVERY SYSTEM SHALL BE PERMANENTLY TAGGED IN EACH PANELBOARD, PULLBOX, J-BOX, SWITCH BOX, ETC., IN COMPLIANCE WITH OCCUPATIONAL SAFETY AND HEALTH ACT (O.S.H.A.)
6. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION, CONSTRUCTION TOOLS, TRANSPORTATION, ETC., FOR A COMPLETE AND PROPERLY OPERATIVE SYSTEM ENERGIZED THROUGHOUT AND AS INDICATED ON DRAWINGS, AS SPECIFIED HEREIN AND/OR AS OTHERWISE REQUIRED.
7. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN PERFECT CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT. MATERIALS SHALL BE LISTED AND APPROVED BY UNDERWRITER'S LABORATORY AND SHALL BEAR THE INSPECTION LABEL "J" WHERE SUBJECT TO SUCH APPROVAL. MATERIALS SHALL MEET WITH APPROVAL OF THE DIVISION OF INDUSTRIAL SAFETY AND ALL GOVERNING BODIES HAVING JURISDICTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA AND NBFU.
8. CONTRACTOR SHALL CARRY OUT HIS WORK IN ACCORDANCE WITH ALL GOVERNING STATE, COUNTY AND LOCAL CODES AND O.S.H.A.
9. CONTRACTOR SHALL SECURE ALL NECESSARY BUILDING PERMITS AND PAY ALL REQUIRED FEES
10. COMPLETE JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF JOB ACCEPTANCE BY OWNER. ANY WORK, MATERIAL OR EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE CONTRACTOR.
11. ALL CONDUIT ONLY (C.O.) SHALL HAVE A PULL WIRE OR ROPE.
12. PROVIDE PROJECT MANAGER WITH ONE SET OF COMPLETE ELECTRICAL "AS INSTALLED" DRAWINGS AT THE COMPLETION OF THE JOB, SHOWING ACTUAL DIMENSIONS, ROUTINGS, AND CIRCUITS.
13. ALL BROCHURES, OPERATING MANUALS, CATALOGS, SHOP DRAWINGS, ETC. SHALL BE TURNED OVER TO OWNER AT JOB COMPLETION.
14. USE T-TAP CONNECTIONS ON ALL MULTI-CIRCUITS WITH COMMON NEUTRAL CONDUCTOR FOR LIGHTING FIXTURE.
15. ALL CONDUCTORS SHALL BE COPPER.
16. ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING RATING NOT LESS THE MAXIMUM SHORT CIRCUIT CURRENT TO WHICH THEY MAY BE SUBJECTED.
17. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED BY NEC.
18. PATCH, REPAIR AND PAINT ANY AREA THAT HAS

19. IN DRILLING HOLES INTO CONCRETE WHETHER FOR FASTENING OR ANCHORING PURPOSES, OR PENETRATIONS THROUGH THE FLOOR FOR CONDUIT RUNS, M PIPE RUNS, ETC., IT MUST BE CLEARLY UNDERSTOOD THAT TENDONS AND/OR REINFORCING STEEL WILL NOT BE DRILLED INTO, CUT OR DAMAGED UNDER ANY CIRCUMSTANCES.
20. LOCATION OF TENDONS AND/OR REINFORCING STEEL ARE NOT DEFINITELY KNOWN AND, THEREFORE, MUST BE SEARCHED FOR BY APPROPRIATE METHODS AND EQUIPMENT VIA X-RAY OR OTHER DEVICES THAT CAN ACCURATELY LOCATE THE REINFORCING AND/OR STEEL TENDONS.
21. PENETRATIONS IN FIRE RATED WALLS SHALL BE INTERNATIONAL BUILDING CODE 2009, NEW JERSEY EDITION.
22. WIRE AND CABLE CONDUCTORS SHALL BE COPPER #12 AWG MINIMUM UNLESS SPECIFICALLY STATED OTHERWISE ON DRAWINGS.
23. VERIFY ALL CONDUIT ROUTING W/OWNER REP. & C.M.
24. ALL MATERIALS SHALL BE U.L. LISTED.
25. 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

- a. ONLY FOR INTERIOR RUNS.
- c. FLEXIBLE METALLIC CONDUIT SHALL HAVE U.L. LISTED LABEL AND MAY BE USED WHERE PERMITTED BY CODE. FITTINGS SHALL BE "JAKE" OR "SQUEEZE" TYPE, SEAL TIGHT FLEXIBLE CONDUIT. ALL CONDUIT IN EXCESS OF SIX FEET IN LENGTH SHALL HAVE FULL SIZE GROUND WIRE.
- d. CONDUIT RUNS MAY BE SURFACE MOUNTED IN CEILINGS OR WALLS UNLESS INDICATED OTHERWISE. CONDUIT INDICATED SHALL RUN PARALLEL OR AT RIGHT ANGLES TO CEILING, FLOOR OR BEAMS. VERIFY EXACT ROUTING OF ALL EXPOSED CONDUIT WITH ARCHITECT PRIOR TO INSTALLING.
26. ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT ENGRAVED PLASTIC LABELS.
27. COORDINATE THE ELECTRICAL SERVICE SHUTDOWN WITH BUILDING OWNER.
28. GROUNDING SYSTEM RESISTANCE SHALL NOT EXCEED 5 OHMS. IF THE RESISTANCE VALUE IS EXCEEDED, NOTIFY THE OWNER FOR FURTHER INSTRUCTION ON METHODS FOR REDUCING THE RESISTANCE VALUE. SUBMIT TEST REPORTS AND FURNISH TO DISPATCH COMMUNICATIONS ONE COMPLETE SET OF PRINTS SHOWING "INSTALLED WORK".
29. UPON COMPLETION OF WORK, CONDUCT CONTINUITY, AND FALL POTENTIAL GROUNDING TESTS FOR APPROVAL. SUBMIT TEST REPORTS TO PROJECT MANAGER. CLEAN PREMISES OF ALL DEBRIS RESULTING FROM WORK AND LEAVE WORK IN A COMPLETE AND UNDAMAGED CONDITION.
30. ALL WALL PENETRATIONS SHALL BE FIRE STOPPED WITH FS-ONE HIGH PERFORMANCE INTUMESCE FIRE STOP BY HILTI OR APPROVED EQUAL. INSTALL PER MANUFACTURERS RECOMMENDATIONS.

**ELECTRICAL AND TELEPHONE GENERAL NOTES:**

1. FOLLOWING COMPLETION OF WORK, PROVIDE OWNER WITH AS-BUILT DRAWINGS SHOWING TELEPHONE AND ELECTRIC LOCATIONS.
2. WORK SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE, NEC 2011.
3. COORDINATE WITH UTILITY AND LOCAL ELECTRICAL INSPECTOR FOR FINAL POWER CONNECTION.
4. UTILITY WILL SUPPLY METER. COORDINATE WITH UTILITY FOR METER TYPE AND INTERCONNECTION.
5. CONTRACTOR SHALL CONTACT "GARDEN STATE UNDERGROUND PLANT LOCATION SERVICE" AT 1-800-272-1000 AND LOCATE ALL EXISTING UTILITIES WITHIN THE AREA OF WORK PRIOR TO THE START OF ANY EXCAVATION.
6. SEE PAGE E-2 FOR GENERAL GROUNDING NOTES.
7. COORDINATE WITH LOCAL TELEPHONE COMPANY FOR ALL ROUTING AND DESIGN.
8. CONTRACTOR TO VERIFY CONTROL WIRING SIZE WITH GENERATOR MANUFACTURER PRIOR TO CONSTRUCTION.
9. CONTRACTOR TO CONFIRM SET UP LOCATIONS OF WIRING CONDUITS PRIOR TO CONSTRUCTION.



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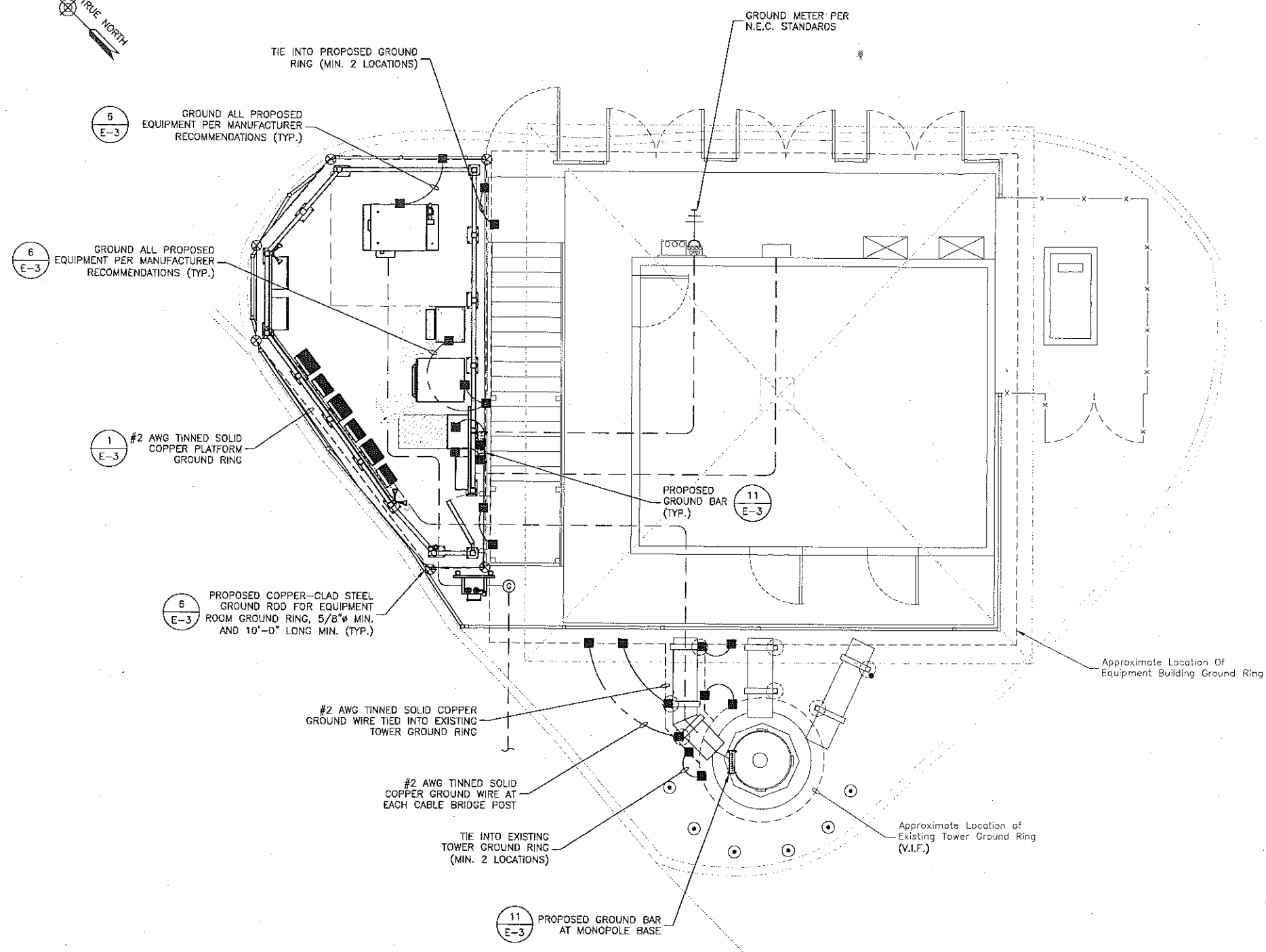
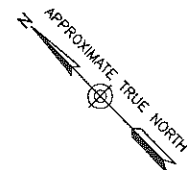
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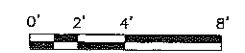
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ELECTRICAL RISER DIAGRAM & ELECTRICAL NOTES

SHEET NUMBER



**GROUNDING PLAN** 1  
 SCALE: 1/8"=1' FOR 11"x17"  
 1/4"=1' FOR 22"x34"



**GROUNDING GENERAL NOTES**

- ALL DOWN CONDUCTORS AND THE GROUND RING CONDUCTOR SHALL BE #2 AWG, SOLID, BARE, TINNED COPPER, UNLESS OTHERWISE NOTED. ALL CONNECTIONS TO GROUND RING SHALL BE EXOTHERMICALLY WELDED. CONDUCTOR SHALL BE AT A MINIMUM DEPTH BELOW GRADE OF 18 INCHES OR TO LEDGE. MINIMUM BEND RADIUS SHALL BE 8 INCHES. CONDUCTOR SHALL BE AT LEAST 24 INCHES FROM ANY FOUNDATION, UNLESS OTHERWISE NOTED.
- GROUND RODS SHALL BE 5/8" DIAMETER COPPER CLAD, HARGER, T&B, ERICO, OR EQUIVALENT. TOP OF ROD SHALL BE A MINIMUM OF 18" BELOW GRADE. IF LEDGE IS ENCOUNTERED, INSTALL GROUND ROD AT AN ANGLE. ELECTRICAL METER GROUND ROD EXCEPTED.
- WHERE MECHANICAL CONNECTIONS ARE SPECIFIED, BOLTED, COMPRESSION-TYPE, CLAMPS OR SPLIT-BOLT TYPE CONNECTORS SHALL BE USED.
- GRIND OFF GALVANIZING IN AFFECTED AREA. EXOTHERMICALLY WELD #2 CONDUCTOR AT 6" ABOVE GRADE OR FOUNDATION, WHICHEVER IS HIGHER. COLD-GALV AFTER. EXOTHERMICALLY WELD OTHER END TO GROUND RING.
- INSTALL GROUNDING KITS AT ANTENNA CENTERLINE, AND TOWER EXIT POINTS. GROUND COAX LINES. EXOTHERMICALLY WELD #2 DOWN CONDUCTOR TO PLATES. RUN DOWN TOWER, AND TIE INTO GROUNDING SYSTEM.
- ALL GROUNDING WORK SHALL COMPLY WITH AT&T CONSTRUCTION CONTRACT STANDARDS. FOLLOWING COMPLETION OF WORK, GROUND SYSTEM MUST BE TESTED AND SHALL HAVE A RESISTANCE OF 5 OHMS OR LESS SUBMIT AN INDEPENDENT "FALL POTENTIAL" TESTING REPORT.
- ALL GROUNDING CONDUCTORS ON EXTERIOR WALL OF SHELTER SHALL BE INSTALLED IN 3/4" SCH 40 PVC CONDUIT TO 12" BELOW GRADE. ATTACH PVC WITH GALVANIZED "C" CLAMPS.
- CONTRACTOR SHALL HAND-DIG IN AREAS AROUND EXISTING UTILITIES.
- NOTIFY CONSTRUCTION ENGINEER IF THERE ARE ANY DIFFICULTIES INSTALLING GROUNDING SYSTEM DUE TO SITE SOIL CONDITIONS.
- GROUNDING RING IS SHOWN AS SCHEMATIC ONLY. IT IS DESIGNED WITHOUT BENEFIT OF RESISTIVITY TESTING AND DOES NOT NECESSARILY REPRESENT A GROUNDING SYSTEM TO MEET ANY SPECIFIC GROUND RESISTANCE.
- PRIOR TO POURING CONCRETE, ALL REBAR LOCATED NEAR THE BOTTOM OF THE FOUNDATION SHALL BE BONDED TOGETHER TO FORM A SINGLE GROUNDING ELECTRODE. BY STEEL TIES OF OTHER EFFECTIVE MEANS APPROVED BY NEC 2011 AND STRUCTURAL ENGINEER, AND BONDED TO THE GROUND RING AS DETAILED IN THESE PLANS. (INSPECTION MAY BE REQUIRED PRIOR TO POURING CONCRETE AND MUST BE COORDINATED BY CONTRACTOR.)
- IN ACCORDANCE WITH NEC 2011 REQUIREMENTS, ALL GROUNDING ELECTRODES PRESENT ON SITE SHALL BE BONDED TOGETHER (REFERENCE 2011 NEC ARTICLE 250.50).
- CAULK AND SEAL ALL NON-FACTORY SHELTER PENETRATIONS.

**NOTES:**

- GROUND UTILITY METER PER N.E.C.
- CONTRACTOR TO VERIFY WITH C.M. FOR FINAL GROUND METHOD.

**GROUNDING LEGEND**

	GROUND BAR
	GROUND COPPER WIRE, SIZE AS NOTED
	MECHANICAL GROUND CONNECTION
	5/8"x10' COPPER CLAD STEEL GROUND ROD
	EXOTHERMIC (CADWELD) CONNECTION



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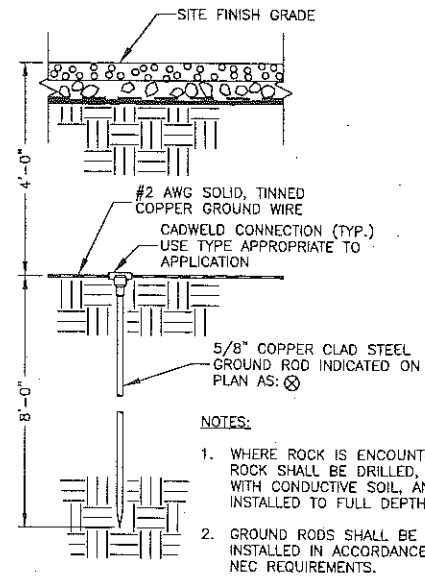
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 SEA BRIGHT, NJ 07760  
 MONMOUTH COUNTY

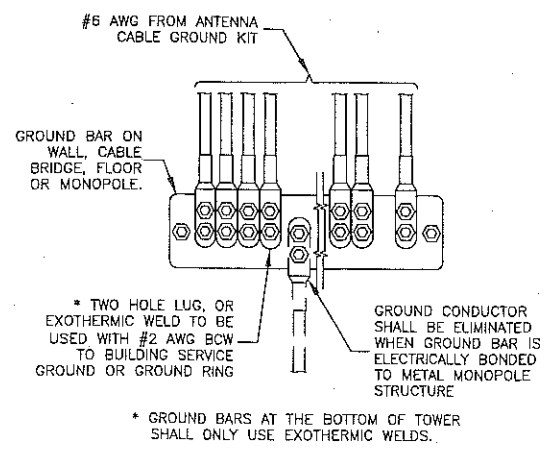
SHEET TITLE

GROUNDING PLAN & GROUNDING NOTES

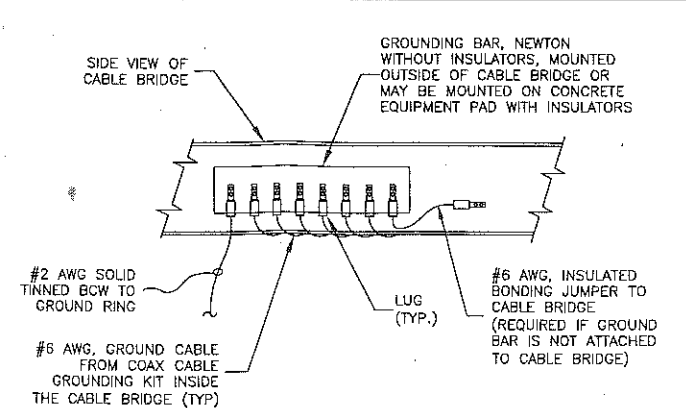
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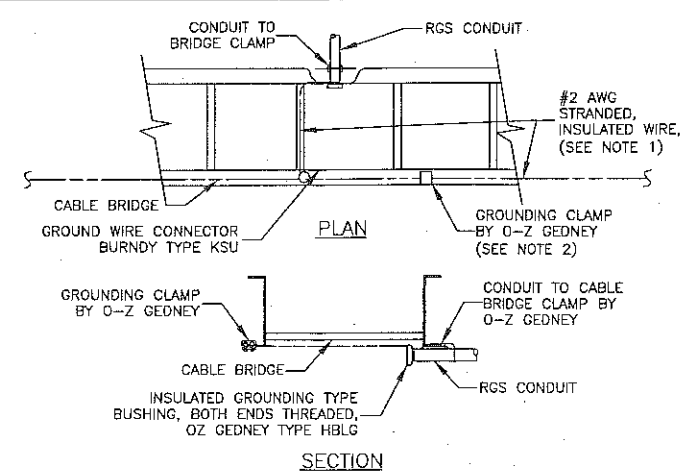
**GROUND ROD AND RING DETAIL**  
SCALE: N.T.S. 1



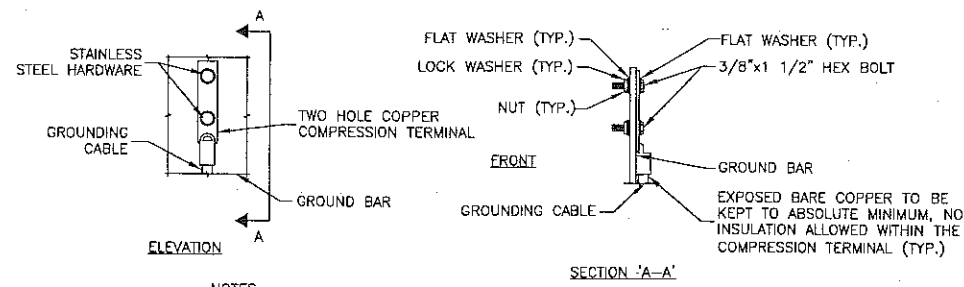
**INSTALLATION OF GROUND WIRE TO GROUND BAR**  
SCALE: N.T.S. 2



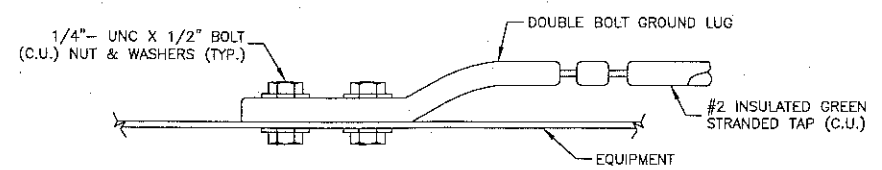
**GROUND BAR MOUNTED ON CABLE BRIDGE TOWER**  
SCALE: N.T.S. 3



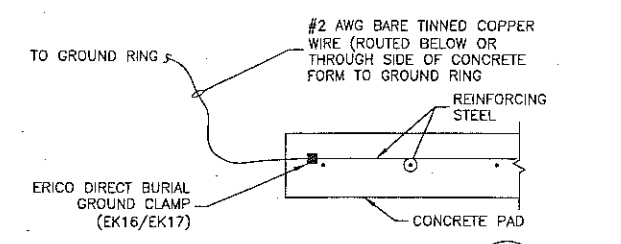
**CABLE BRIDGE GROUNDING AND RGS CONDUIT RUN DETAIL**  
SCALE: N.T.S. 4



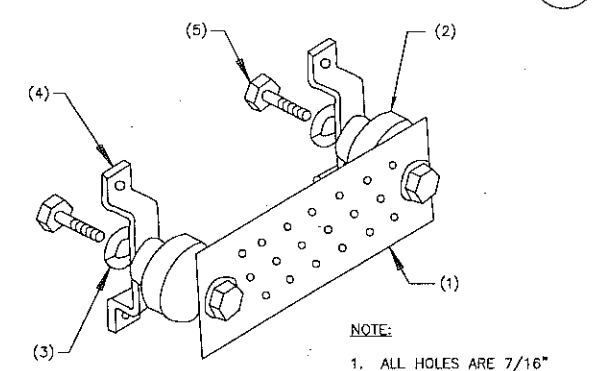
**TYPICAL GROUND BAR MECHANICAL CONNECTION DETAIL**  
SCALE: N.T.S. 5



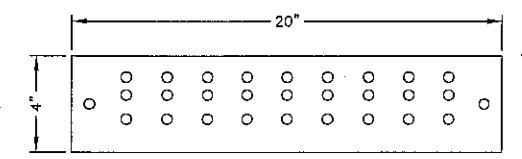
**CONNECTION TO EQUIPMENT DETAIL**  
SCALE: N.T.S. 6



**REBAR GROUNDING DETAIL**  
SCALE: N.T.S. 7



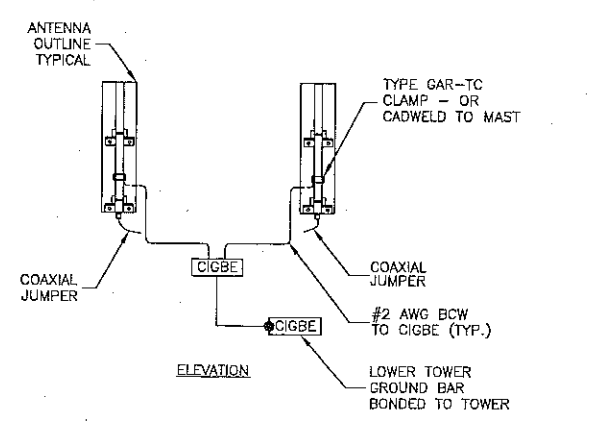
**LEGEND:**  
1. COPPER GROUND BAR, 1/4"x4"x20", GBIT 14420 J 2-7. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION.  
2. STANDOFF INSULATORS, HARGER LIGHTNING PROTECTION, INC. CAT. No. 5263-A8.  
3. 1/2" LOCKWASHERS, HARGER CO. CAT. No. LWBS.  
4. WALL MOUNTING STAINLESS STEEL, MOUNTING BRACKET,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



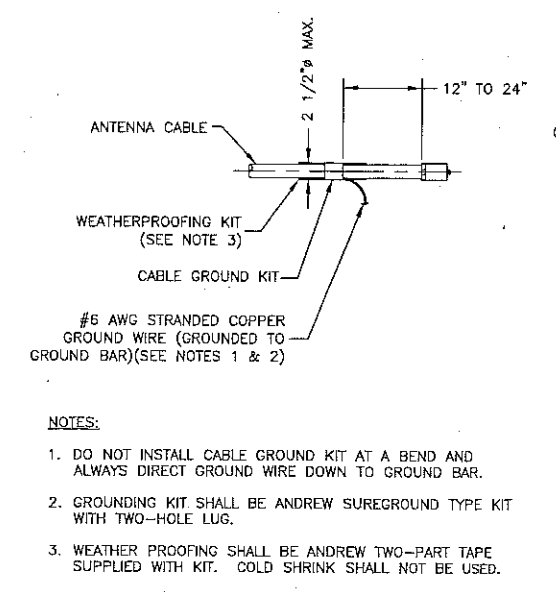
THE GROUND BAR IS 1/4" THICK, 4" WIDE, 20" LONG. IT HAS A HOLE PATTERN "J" WITH A NO. 2 AWG SOLID TINNED TAIL.  
GBIT 14420 J 2-7  
STYLE SIZE HOLE TAIL PATTERN

STYLE: GBIT - GROUND BAR WITH WALL MOUNTING BRACKETS, INSULATORS AND A 25' EXOTHERMICALLY WELDED TAIL.  
SIZE: THICKNESS, WIDTH, LENGTH IN INCHES.  
HOLE PATTERN: HOLE PATTERN CENTERS MATCH NEMA DOUBLE LUG CONFIGURATION. SEE ISOMETRIC.  
TAIL: SPECIFY AMERICAN WIRE GAUGE (AWG) SIZE AND STRANDING REQUIRED. 25' LENGTH IS STANDARD UNLESS OTHERWISE REQUESTED.

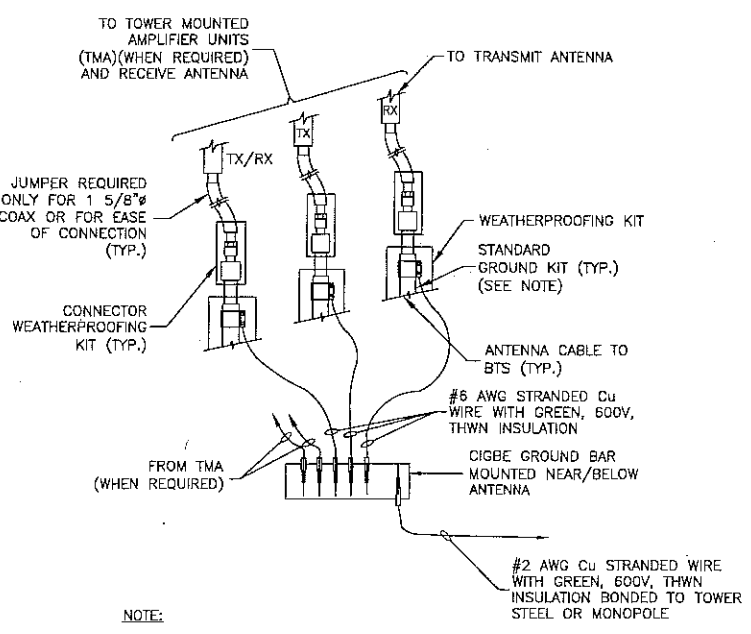
**GROUND BAR DETAIL**  
SCALE: N.T.S. 11



**ANTENNA MOUNT GROUNDING DETAIL**  
SCALE: N.T.S. 8



**CONNECTION OF CABLE GROUND KIT TO ANTENNA CABLE DETAIL**  
SCALE: N.T.S. 9



**CONNECTION OF GROUND WIRE TO GROUNDING BAR DETAIL**  
SCALE: N.T.S. 10

**SEA BRIGHT BOROUGH HALL W-5867**

**CONSTRUCTION DRAWINGS**

0	01/05/21	ISSUED FOR REVIEW
0	12/04/20	ISSUED FOR REVIEW
C	12/30/19	ISSUED FOR REVIEW
B	10/30/19	ISSUED FOR REVIEW
A	10/22/19	ISSUED FOR REVIEW

**Dewberry**  
Dewberry Engineers Inc.  
600 PARSIPPANY ROAD  
SUITE 301  
PARSIPPANY, NJ 07054  
PHONE: 973.739.9400  
FAX: 973.739.9710  
COA 24GA28047600

DAVID E. REVETTE, P.E.  
NJ LICENSE NO. 24GE05408600  
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER TO ALTER THIS DOCUMENT.

DRAWN BY:	FG
REVIEWED BY:	BSH
CHECKED BY:	DER
PROJECT NUMBER:	50110598
JOB NUMBER:	50110611
SITE ADDRESS:	

1167 OCEAN AVE  
SEA BRIGHT, NJ 07760  
MONMOUTH COUNTY

SHEET TITLE: **GROUNDING DETAILS**  
SHEET NUMBER: \_\_\_\_\_

## GENERAL PLUMBING NOTES

- ALL UNDERGROUND PIPE SLEEVES SHALL BE COORDINATED WITH SITE ENGINEER FOR SIZE, LOCATION AND ELEVATION.
- UNNECESSARY NOISE SHALL BE AVOIDED AT ALL TIMES AND NECESSARY NOISE SHALL BE REDUCED TO A MINIMUM.
- WHERE THE WORK MAKES TEMPORARY SHUT DOWNS OF SERVICE UNAVOIDABLE, THEY SHALL BE MADE AT NIGHT OR AT TIMES AS THIS WILL CAUSE THE LEAST INTERFERENCE WITH THE ESTABLISHED OPERATING ROUTINE OF THE BUILDING.
- CONTRACTOR SHALL CHECK AND VERIFY THE EXACT LOCATION OF ALL PIPE PENETRATIONS AND PIPE ELEVATIONS.
- ALL INDICATED WORK SHALL BE PERFORMED BY THE PLUMBING CONTRACTOR UNLESS OTHERWISE NOTED.
- IT IS THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO REVIEW THESE PLANS AND SPECIFICATIONS, AS WELL AS THE RELATED HVAC, FIRE PROTECTION, ELECTRICAL, STRUCTURAL, ARCHITECTURAL, INTERIOR DECOR AND SITE ENGINEERING DRAWINGS TO BECOME FAMILIAR WITH THE FULL PROJECT SCOPE. IN ADDITION, THIS CONTRACTOR MUST COORDINATE WITH AN OWNER REPRESENTATIVE TO FULLY UNDERSTAND ALL REQUIREMENTS WHICH MAY NOT BE SPECIFIED HEREIN AND WHICH THE OWNER MAY CONSIDER PART OF THIS CONTRACT. DURING THE COURSE OF CONSTRUCTION COORDINATION AND ACTUAL CONSTRUCTION, IT IS THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO WORK CLOSELY WITH ALL ACCOMPANYING CONTRACTORS AND TRADESMEN IN ORDER TO ENSURE A SMOOTH RUNNING AND CAREFULLY COORDINATED INSTALLATION.
- ANY DISCREPANCIES OR INADEQUACIES WITHIN THESE BID DOCUMENTS OR BETWEEN THESE BID DOCUMENTS AND THE RELATED HVAC, FIRE PROTECTION, ELECTRICAL, STRUCTURAL, ARCHITECTURAL, INTERIOR DECOR AND SITE ENGINEERING DRAWINGS, OR BETWEEN THESE BID DOCUMENTS AND FIELD CONDITIONS MUST BE BROUGHT TO THE ATTENTION OF THE OWNER, ARCHITECT AND ENGINEER PRIOR TO BID SUBMISSION.
- THE PLUMBING CONTRACTOR MUST VISIT THE SITE AND NOTE ALL EXISTING CONDITIONS AS WELL AS CONDITIONS TO BE MET PRIOR TO BID SUBMISSION. LACK OF A THOROUGH UNDERSTANDING OF THE PROJECT SCOPE AND CONDITIONS SHALL NOT CONSTITUTE AN EXCUSE FOR ERRORS OR OMISSIONS, NOR FOR A REQUEST FOR EXTRA COMPENSATION.
- ALL REQUIRED OFFSETS, RISES AND DROPS DUE TO POSSIBLE OBSTRUCTIONS OF PIPE RUNS ARE NOT NECESSARILY SHOWN. PLUMBING CONTRACTOR SHALL INCLUDE A CONTINGENCY IN HIS BID TO OFFSET ANY COST REQUIRED FOR ADDITIONAL FITTINGS AND LABOR THAT MAY BE REQUIRED.
- ALL UTILITY TIES WILL BE MADE ON PREMIUM TIME, COORDINATE ALL SHUT-DOWNS WITH OWNER.
- MAKE SUBMITTALS OF SHOP DRAWINGS AS SPECIFIED.
- WORK IS NOT SHOWN IN FINITE DETAIL BUT IS INTENDED TO INCLUDE ITEMS NECESSARY FOR COMPLETION AND PROPER OPERATION.
- NO DEAD ENDS SHALL BE LEFT ON ANY PIPING UPON COMPLETION OF WORK.
- ALL SYSTEMS SHALL BE LEFT IN PERFECT WORKING ORDER UPON COMPLETION OF ALL NEW WORK.
- SUPPLY TWO COPIES OF A WARRANTY COUNTERSIGNED AND GUARANTEED BY CONTRACTOR, STATING THAT IMPERFECT SYSTEM OPERATION AND ALL DEFECTS IN LABOR AND MATERIALS OF PLUMBING WORK WILL BE REPAIRED WITHOUT COST TO OWNER FOR A PERIOD OF ONE YEAR FROM DATE OF SUBSTANTIAL COMPLETION, AND STATING THAT ALL PLUMBING EQUIPMENT HAS BEEN FULLY SERVICED AND LEFT IN PROPER OPERATING CONDITION.
- GUARANTEE THAT SERVICING WILL BE PROVIDED WITHOUT COST DURING GUARANTEE PERIOD.
- LOCATION OF ALL FULL-OPEN VALVES AND SHUTOFF VALVES SHALL BE INSTALLED PER THE NATIONAL STANDARD PLUMBING CODE, 2009, WHETHER SPECIFICALLY SHOWN ON DRAWINGS OR NOT.
- ITEMS NEEDING SAWCUTTING AND PATCHING SHALL BE COORDINATED BETWEEN TRADES. ONLY MAJOR PIECES ARE SHOWN ON DRAWINGS AND DO NOT INDICATE ALL LOCATIONS. PLUMBER SHALL BE RESPONSIBLE FOR CONCEALING ALL NEW WORK, UNLESS NOTED OTHERWISE.
- ALL STEEL HANGERS, SUPPORTS, INSULATION SHIELDS, CLAMPS, STEEL ANGLES, BEAM HOOKS, THREADED RODS, CONCRETE INSERTS, NUTS, ROD COUPLINGS, CHANNELS, ETC... SHALL BE ELECTRO-GALVANIZED OR HOT-DIP GALVANIZED.

## PLUMBING SYSTEM CONTROL WIRING NOTES

- THE PLUMBING CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS AND SERVICES FOR LINE VOLTAGE AND LOW VOLTAGE CONTROL WIRING, INCLUDING ALL CONDUITS, WIRING, HARDWARE'S, SOFTWARE'S, RELAYS, CONTROL MODULES AND ALL ACCESSORIES AND SERVICES NECESSARY AND AS REQUIRED FOR A COMPLETE FUNCTIONAL INSTALLATION OF THE EMERGENCY GENERATOR INCLUDING GAS SHUTOFF SOLENOID VALVES CONTROL, AS PER DRAWINGS AND SPECIFICATIONS.
- THE PLUMBING CONTRACTOR SHALL RETAIN AND PAY FOR A LICENSED ELECTRICAL CONTRACTOR TO INSTALL THE COMPLETE PLUMBING CONTROL WIRING SYSTEMS.

## NATURAL GAS NOTES

- INSTALL VALVES IN ALL SERVICE CONNECTIONS IN ALL BRANCH LINES.
- CHANGES IN PIPE SIZES SHALL BE MADE WITH REDUCING OR INCREASING FITTINGS.
- USE SEALANT ON METAL GAS PIPING THREADS WHICH ARE CHEMICALLY RESISTANT TO NATURAL GAS. USE SEALANT SPARINGLY, AND APPLY TO ONLY MALE THREADS OF METAL JOINTS.
- REMOVE CUTTING AND THREADING BURRS BEFORE ASSEMBLING PIPING.
- DO NOT INSTALL DEFECTIVE PIPING AND FITTINGS. DO NOT USE PIPE WITH THREADS WHICH ARE CHIPPED, STRIPPED AND DAMAGED.
- PLUG EACH OUTLET INCLUDING VALVES WITH THREADS, PLUG OR CAP IMMEDIATELY AFTER INSTALLATION AND RETAIN UNTIL CONTINUING PIPING OR EQUIPMENT CONNECTION ARE COMPLETED.
- INSTALL DRIP LEGS IN GAS PIPING WHERE REQUIRED BY CODE.
- THE ENTIRE INSTALLATION SHALL BE GUARANTEED AND SERVICED FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE INSTALLATION BY THE OWNER.
- THE CONTRACTOR SHALL DURING THE PERIOD OF THE GUARANTEE REPLACE OR REPAIR AT THEIR OWN EXPENSE ANY PIECE OF EQUIPMENT AND/OR MATERIAL WHICH IS FOUND TO BE DEFECTED. THE REPLACEMENT OR RE-PAIRMENT SHALL BE DONE AS SOON AS NOTIFIED.
- ALL NEW EQUIPMENT SHALL BE HOOKED UP BY THIS CONTRACTOR. CONTRACTOR SHALL FURNISH AND INSTALL ALL REQUIRED VALVES, FITTINGS, ETC. NECESSARY FOR THE COMPLETE HOOK UP, AND TO PROVIDE PROPER OPERATION OF EACH PIECE OF EQUIPMENT.

## FUEL GAS PRODUCTS NOTES

- BOLTS, ANCHOR BOLTS AND NUTS - ALL NECESSARY BOLTS, ANCHOR BOLTS, NUTS, WASHERS, PLATES AND BOLT SLEEVES SHALL BE PROVIDED IN ACCORDANCE HERewith. ANCHOR BOLTS SHALL HAVE SUITABLE WASHERS, LOCK WASHERS AND HEXAGONAL NUTS. BOLTS, ANCHOR BOLTS, NUTS AND WASHERS SPECIFIED TO BE GALVANIZED, SHALL BE ZINC COATED AFTER BEING THREADED BY THE HOT-DIP PROCESS.
- PIPE HANGERS & SUPPORTS - PIPE HANGERS AND SUPPORTS, HANGER RODS, PROTECTION SADDLES AND INSERTS SHALL BE TYPE NUMBERS BASED ON MANUFACTURER'S STANDARDIZATION SOCIETY SP-89, UNLESS OTHERWISE INDICATED. PIPE COVERING PROTECTION SADDLES: TYPES 39 OR 40. PIPE HANGERS: TYPES 1, 41, AND 43, OR FEE AND MASON #212 SPLIT RING HANGERS WITH SUPPORTING RODS. SPRING HANGERS: TYPES 49, 51, OR 53. ANCHORS: GRINNELL FIG. 197 OR FEE & MASON FIG. 159. PIPE GUIDES: GRINNELL FIG. 256, C & P FIG. 1007, OR ELCEN FIG. 411.
- ALL PIPING SYSTEMS SHALL BE SEISMIC ALLY BRACED IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE INTERNATIONAL BUILDING CODE-NJ, 2009 AND NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) CURRENT EDITION. REFER TO DETAILS FOR SEISMIC PIPE BRACING.
- FUEL GAS PIPE INSIDE BUILDING: SIZES 3" AND SMALLER SHALL BE SCHEDULE 40 CARBON STEEL PIPE WITH MALLEABLE IRON SCREWED FITTINGS.
- FUEL GAS PIPE OUTSIDE OF BUILDING SHALL BE PLASTIC HOPE UNDERGROUND PIPE AND FITTINGS WITH WELDED JOINTS. ALL HANGER MATERIALS OUTSIDE OF BUILDING TO BE HOT DIPPED GALVANIZED. ALL NUTS, WASHERS & BOLTS TO BE STAINLESS STEEL.
- FUEL GAS SHUT-OFF VALVES 2-1/2" AND SMALLER: APOLLO 77.100 FULL PORT BRONZE BODY WITH TEE HANDLE. 2-1/2" AND LARGER: NORDSTORM 143, SERCK AUDCO LSW-133-GG, OR WALWORTH 175 PSI WORKING PRESSURE IRON BODY LUBRICATED PLUG VALVE WITH FLANGED ENDS.

## INSTALLATION OF FUEL GAS PIPING SYSTEM NOTES

- ALL PIPING AND EQUIPMENT IS SHOWN DIAGRAMMATIC. EXACT LOCATIONS TO BE DETERMINED IN FIELD. INSTALL PIPING STRAIGHT, PLUMB AND AS DIRECT AS POSSIBLE. LOCATE GROUPS OF PIPES PARALLEL TO EACH OTHER; SPACE INDIVIDUAL PIPES IN ORDER TO PERMIT APPLICATION OF FULL INSULATION AND TO PERMIT ACCESS FOR SERVICING VALVES.
- ALL PIPING SHALL BE REAMED TO BE FREE OF BURRS. KEEP PIPING FREE FROM SCALE AND DIRT; PROTECT OPEN PIPE ENDS WHENEVER WORK IS SUSPENDED DURING CONSTRUCTION TO PREVENT FOREIGN MATERIAL ENTERING AND LODGING; USE TEMPORARY PLUG, PLASTIC, OR OTHER APPROVED MATERIAL FOR PROTECTION.
- PIPING SHALL BE ACCURATELY CUT TO MEASUREMENTS ESTABLISHED IN THE FIELD AND INSTALLED IN PLACE WITHOUT COLD SPRING OR FORCING INTO ALIGNMENT. FLAME CUTTING OF BEVEL FOR WELDED JOINTS IS NOT ALLOWED. JOINTS SHALL BE FREE OF BURRS AND ALL WELD SPLATTER AND BEADS REMOVED FROM JOINTS. JOINTS SHALL EXHIBIT FULL PENETRATION OF ROOT PASS AND FINAL PASS SHALL BE FREE OF UNDER CUTTING.
- INSTALLATION AND TESTING SHALL COMPLY WITH NFPA 54 AND THE REQUIREMENTS OF THE APPROVING AUTHORITIES AND THIS SECTION. INSTALL PIPING PITCHED NOT LESS THAN 1/4" IN 15' SLOPE UPWARD TO RISERS AND DOWN TO METER AND EQUIPMENT. INSTALL BRANCH TEES OF THE SIDE OR TOP OF MAINS AND PROVIDE 6" MINIMUM SIZE DRIP LEGS AT LOW POINTS.
- PROVIDE SHUT-OFF VALVE FLEXIBLE CONNECTOR AND UNION OR FLANGE AT EACH EQUIPMENT CONNECTION. LOCATE VALVE WITHIN 6' OF EQUIPMENT SERVED WITH UNION DOWNSTREAM OF VALVE. PROVIDE CONTROL VALVES AND SHUT-OFF VALVES IN ACCESSIBLE LOCATIONS. DRIP LEG TRAPS SHALL BE READILY ACCESSIBLE. IDENTIFY EACH VALVE WITH UNIQUE TAG NUMBER. VALVES INSTALLED GREATER THAN 7'-0" AFF/AFR SHALL BE CHAIN OPERATED.
- INSTALL SYSTEM COMPONENTS AS REQUIRED FOR PROPER TESTING AS SPECIFIED IN THIS SECTION. PROVIDE AUXILIARY ISOLATION AND PURGE VALVES AS REQUIRED FOR CONSTRUCTION PHASING AND SYSTEM TESTING. REMOVE VALVE HANDLES FROM ALL AUXILIARY CONSTRUCTION PHASING AND TESTING VALVES AS DIRECTED BY THE OWNER.
- CONNECTIONS TO EXISTING GAS SYSTEM:  
ISOLATE THE EXISTING SECTION OF PIPING BY CLOSING THE CLOSEST UPSTREAM SHUT-OFF VALVE. TEST THE VALVE BY REDUCING THE DOWNSTREAM PRESSURE TO ATMOSPHERIC PRESSURE AND CLOSING ALL OUTLETS. MONITOR THE SYSTEM PRESSURE FOR AT LEAST 2 HOURS TO DETECT ANY INCREASE IN PRESSURE BY LEAKAGE THROUGH THE VALVE.  
BEFORE TESTING THE ZONE VALVE, VERIFY THAT OUTLETS ARE NOT LEAKING BY PRESSURIZING THE SECTION OF PIPING BETWEEN THE ZONE VALVE BOX AND THE OUTLETS AND CLOSING THE ZONE VALVE BOX. THE SYSTEM SHOULD MAINTAIN THE SAME SYSTEM PRESSURE WITHOUT A PRESSURE DROP FOR AT LEAST 5 MINUTES.  
WHILE WELDING THE NEW CONNECTION, PURGE THE PIPING WITH NITROGEN BACK THROUGH THE NEW CONNECTION FROM THE CLOSEST GAS OUTLET DOWNSTREAM OF THE NEW POINT OF CONNECTION.  
PRESSURIZE THE SYSTEM WITH NITROGEN TO 45 PSIG AFTER WELDING IS COMPLETED. BLOW THE EXISTING PIPING CLEAR FROM THE CLOSEST DOWNSTREAM GAS OUTLET OUT THE NEW CONNECTION INTO A CLEAN WHITE CLOTH UNTIL THERE ARE NO SIGNS OF DISCOLORATION OR PARTICULATES.  
REPRESSURIZE THE SYSTEM WITH NATURAL GAS AND PURGE ALL OUTLETS IN THE SYSTEM STARTING WITH THE OUTLET CLOSEST TO THE SOURCE OF SUPPLY. REPEATEDLY PURGE THE EXISTING SYSTEM THROUGH THE EXISTING OUTLETS INTO A CLEAN WHITE CLOTH AT NORMAL SYSTEM WORKING PRESSURE TO VERIFY THAT NO PARTICULATES REMAIN IN THE SYSTEM.  
DO NOT MAKE THE NEW CONNECTION TO THE NEW ROUGHED-IN PIPING SYSTEM UNTIL AFTER THE 200 PSI PARTICULATE BLOW-DOWN HAS BEEN PERFORMED.  
TEST THE NEW CONNECTION JOINT WITH SOAPY WATER AT NORMAL SYSTEM WORKING PRESSURE.
- IDENTIFICATION OF PIPE DURING CONSTRUCTION: PROVIDE A 6" LONG COLOR-CODED SPRAY PAINT INDICATION ON THE BOTTOM OF PIPE SECTIONS DURING INSTALLATION. IDENTIFY EACH SECTION OF PIPE IMMEDIATELY AFTER INSTALLATION. DO NOT PAINT PIPE JOINTS.
- FINAL IDENTIFICATION OF PIPING AND EQUIPMENT: FLOW ARROWS SHALL POINT FROM THE SOURCE TO THE OUTLETS. INSTALL MARKERS ON PAINTED PIPING ONLY AFTER PAINTING IS COMPLETE AND HAS BEEN ACCEPTED BY THE OWNER. INSTALL MARKER ADJACENT TO ACCESS PANELS IF PIPING IS CONCEALED. STENCIL EQUIPMENT SUCH AS THE EMERGENCY GENERATOR WITH THE NAME OF THE EQUIPMENT AND EQUIPMENT NUMBER. STENCILS SHALL BE AT LEAST 6" HIGH AND SHALL BE A CONTRASTING COLOR WITH THE EQUIPMENT FINISH.

## FUEL GAS PIPING GENERAL NOTES

- REFERENCE STANDARDS - ALL MATERIALS, EQUIPMENT WORK AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE INTERNATIONAL FUEL GAS CODES 2015, AND THE APPLICABLE REQUIREMENTS OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA), AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI), AMERICAN SOCIETY OF TESTING MATERIALS (ASTM), AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME), NATIONAL ELECTRIC MANUFACTURERS' ASSOCIATION (NEMA), AMERICAN WELDING SOCIETY (AWS), AND CAST IRON PIPE INSTITUTE (CISPI), AND ANY PERTINENT FEDERAL, STATE LOCAL CODES, LAWS AND ORDINANCES, WHICH REQUIREMENTS HAVE PRECEDENCE OVER THE SPECIFICATIONS IN THE EVENT OF ANY CONFLICT. ANY CONFLICT BETWEEN THE REQUIREMENTS OF THE ABOVE ITEMS OR WITH THESE SPECIFICATIONS SHALL BE REFERRED TO THE ENGINEER.
- PERMITS, FEES, AND NOTICES - SECURE AND PAY FOR THE BUILDING PERMITS AND FOR ALL OTHER PERMITS OR GOVERNMENTAL FEES, LICENSES, INSPECTIONS, AND NOTICES NECESSARY FOR THE EXECUTION AND COMPLETION OF THE WORK, WHICH ARE CUSTOMARILY SECURED AFTER EXECUTION OF THE CONTRACT, WHICH ARE LEGALLY REQUIRED AT THE TIME THE BIDS ARE RECEIVED. GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY BEARING ON THE PERFORMANCE OF THE WORK, GIVE SUFFICIENT NOTICE OF ITS READINESS FOR INSPECTION.
- PROJECT RECORD DOCUMENTS - MAINTAIN A SET OF DRAWINGS AT THE SITE ON WHICH SHALL BE ACCURATELY SHOWN THE ACTUAL INSTALLATION OF ALL WORK INDICATING THEREON ANY VARIATIONS FROM THE CONTRACT DRAWINGS, INCLUDING CHANGES IN SIZES, LOCATION AND DIMENSIONS. PROVIDE A COMPLETE SET OF AS-BUILT DRAWINGS TO OWNER AND ENGINEER UPON COMPLETION OF PROJECT.
- OPERATING AND MAINTENANCE INSTRUCTIONS - PROVIDE A COMPETENT ENGINEER OR TECHNICIAN TO INSTRUCT THE OPERATING PERSONNEL IN THE OPERATION AND MAINTENANCE OF EQUIPMENT AND SYSTEMS. A COPY OF THE OPERATING AND MAINTENANCE MANUAL SHALL BE PROVIDED AT THIS TIME. PROVIDE A MINIMUM OF 40 HOURS TRAINING ON MECHANICAL SYSTEMS, OR AS SPECIFIED IN EACH MECHANICAL SECTION OF THESE SPECIFICATIONS.
- CLEANING - KEEP THE WORK AREAS, INCLUDING ANY FABRICATION, AND STORAGE AREAS, FREE FROM ACCUMULATION OF WASTE MATERIALS OR RUBBISH CAUSED BY THIS OPERATION. AT THE COMPLETION OF THE WORK REMOVE ALL CONSTRUCTION DEBRIS, TEMPORARY FACILITIES AND EQUIPMENT FROM THE WORK AREA, AS WELL AS ALL TOOLS, CONSTRUCTION EQUIPMENT, MACHINERY, AND SURPLUS MATERIALS. IF THE CONTRACTOR FAILS TO CLEAN UP AT THE COMPLETION OF THE WORK, THE OWNER MAY DO SO AND THE COST THEREOF SHALL BE CHARGED TO THE CONTRACTOR.
- CUTTING AND PATCHING - PERFORM ALL CUTTING, FITTING OR PATCHING REQUIRED TO COMPLETE THE WORK OR MAKE ITS SEVERAL PARTS FIT TOGETHER PROPERLY.
- ELECTRICAL WORK - MOTORS, COMBINATION MAGNETIC MOTOR STARTERS, SWITCHES AND CONTROLS SHALL BE FURNISHED FOR ALL ELECTRICALLY DRIVEN EQUIPMENT SPECIFIED HEREIN AND SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF THE ELECTRICAL SPECIFICATIONS. ELECTRICAL POWER WIRING SHALL BE FURNISHED AND INSTALLED AS INDICATED ON THE ELECTRICAL DRAWINGS.
- PRIOR TO BEGINNING WORK, CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION AND PROPER RELATIONSHIP OF HIS WORK TO THE PROPERTY AND OTHER TRADES. ALL CONFLICTS SHALL BE RESOLVED BY THE GENERAL CONTRACTOR AND APPROVED BY THE ENGINEER. ALL WORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED. OFFSETS FOR PIPING TO ACCOMMODATE OBSTRUCTIONS AND TRANSITIONS AROUND OBSTRUCTION SHALL BE PROVIDED WITH NO ADDITIONAL COST TO .



New Cingular Wireless PCS, LLC  
One AT&T Way  
Bedminster, NJ 07921

**SEA BRIGHT  
BOROUGH HALL  
W-5867**

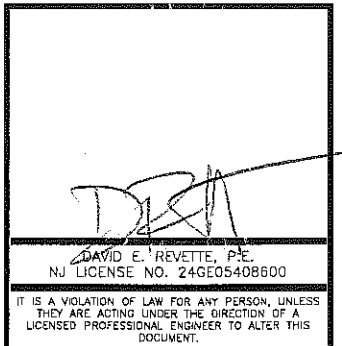
## CONSTRUCTION DRAWINGS

REV	DATE	DESCRIPTION
D	01/05/21	ISSUED FOR REVIEW
D	12/04/20	ISSUED FOR REVIEW
C	12/30/19	ISSUED FOR REVIEW
B	10/30/19	ISSUED FOR REVIEW
A	10/22/19	ISSUED FOR REVIEW



Dewberry Engineers Inc.

800 PARSIPPANY ROAD  
SUITE 301  
PARSIPPANY, NJ 07054  
PHONE: 973.739.9400  
FAX: 973.739.9710  
COA 24GA28047600



DRAWN BY: FG

REVIEWED BY: BSH

CHECKED BY: DER

PROJECT NUMBER: 50110598

JOB NUMBER: 50110611

SITE ADDRESS:

1167 OCEAN AVE  
SEA BRIGHT, NJ 07760  
MONMOUTH COUNTY

SHEET TITLE

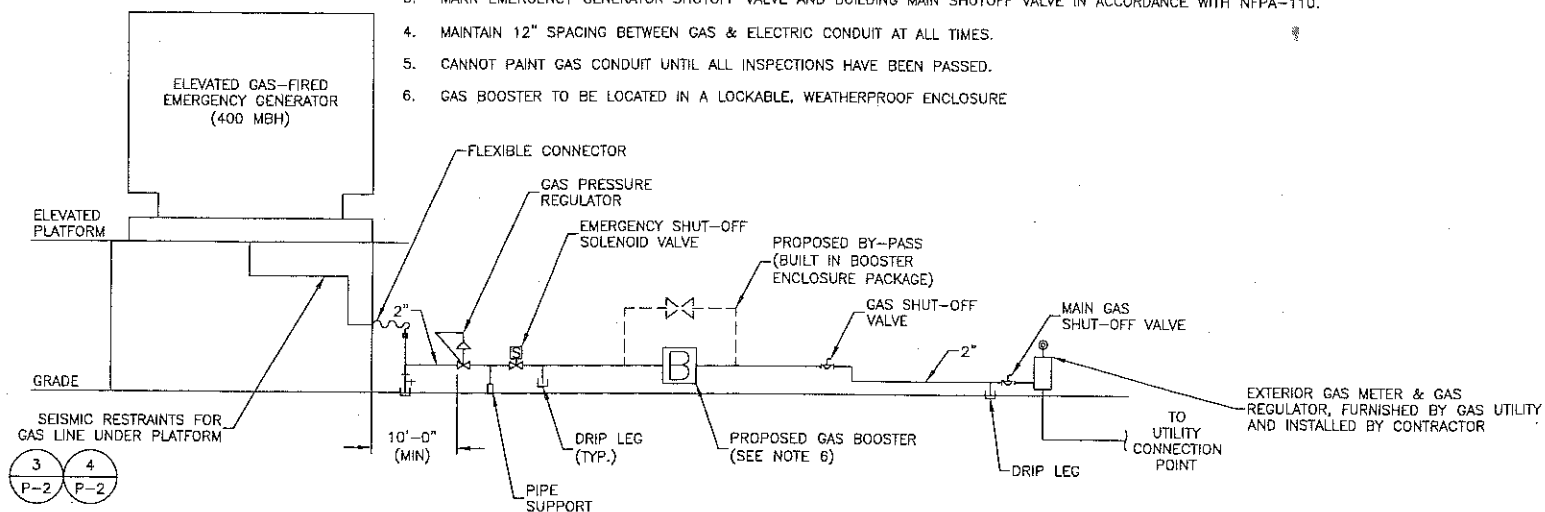
GENERAL  
PLUMBING NOTES

SHEET NUMBER

P-1

**NOTES:**

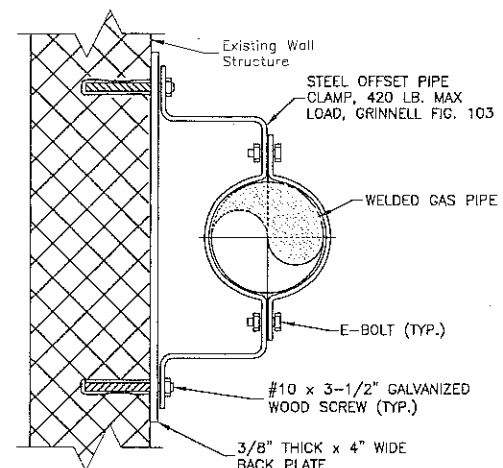
1. THIS IS A SCHEMATIC REPRESENTATION. A GAS CONSULT MUST BE PERFORMED PRIOR TO START OF WORK FOR FINAL SIZING OF NATURAL GAS PIPE.
2. PROVIDE A COMPLETE GAS TRAIN SYSTEM WITH PIPING, REGULATORS, PRV, FILING, TESTING IN COMPLIANCE WITH NFPA, UTILITY Co. AND ALL AGENCIES, HAVING JURISDICTION.
3. MARK EMERGENCY GENERATOR SHUTOFF VALVE AND BUILDING MAIN SHUTOFF VALVE IN ACCORDANCE WITH NFPA-110.
4. MAINTAIN 12" SPACING BETWEEN GAS & ELECTRIC CONDUIT AT ALL TIMES.
5. CANNOT PAINT GAS CONDUIT UNTIL ALL INSPECTIONS HAVE BEEN PASSED.
6. GAS BOOSTER TO BE LOCATED IN A LOCKABLE, WEATHERPROOF ENCLOSURE



**GAS RISER DIAGRAM**

SCALE: N.T.S.

1



**PIPE SUPPORT DETAIL**

SCALE: N.T.S.

2

3  
P-2

4  
P-2



New Cingular Wireless PCS, LLC  
One AT&T Way  
Bedminster, NJ 07921



**SEA BRIGHT  
BOROUGH HALL  
W-5867**

**CONSTRUCTION DRAWINGS**

0	01/05/21	ISSUED FOR REVIEW
D	12/04/20	ISSUED FOR REVIEW
C	12/30/19	ISSUED FOR REVIEW
B	10/30/19	ISSUED FOR REVIEW
A	10/22/19	ISSUED FOR REVIEW



Dewberry Engineers Inc.  
600 PARSIPPANY ROAD  
SUITE 301  
PARSIPPANY, NJ 07054  
PHONE: 973.739.9400  
FAX: 973.739.9710  
COA 24GA28047800

*[Signature]*  
C. DAVID E. REVETTE, P.E.  
NJ LICENSE NO. 24GE05408600  
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PROJECT NUMBER: 50110598

JOB NUMBER: 50110511

SITE ADDRESS:

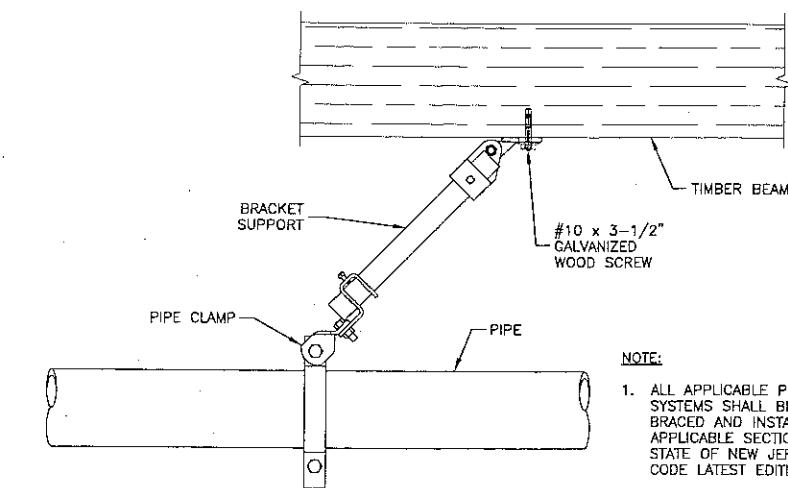
1167 OCEAN AVE  
SEA BRIGHT, NJ 07760  
MONMOUTH COUNTY

SHEET TITLE

GAS RISER DIAGRAM &  
PLUMBING DETAILS

SHEET NUMBER

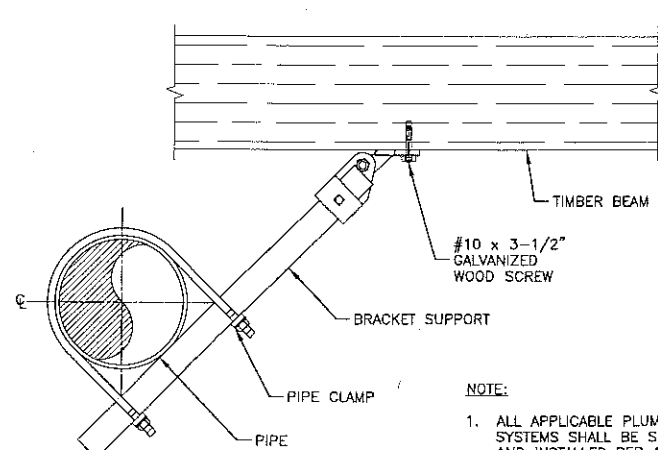
P-2



**LONGITUDINAL BRACE SEISMIC  
PIPE BRACING DETAIL**

SCALE: N.T.S.

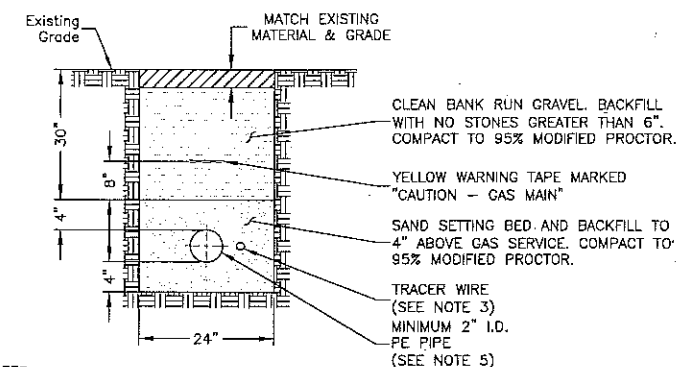
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**LATERAL (TRANSVERSE)  
BRACE DETAIL**

SCALE: N.T.S.

4



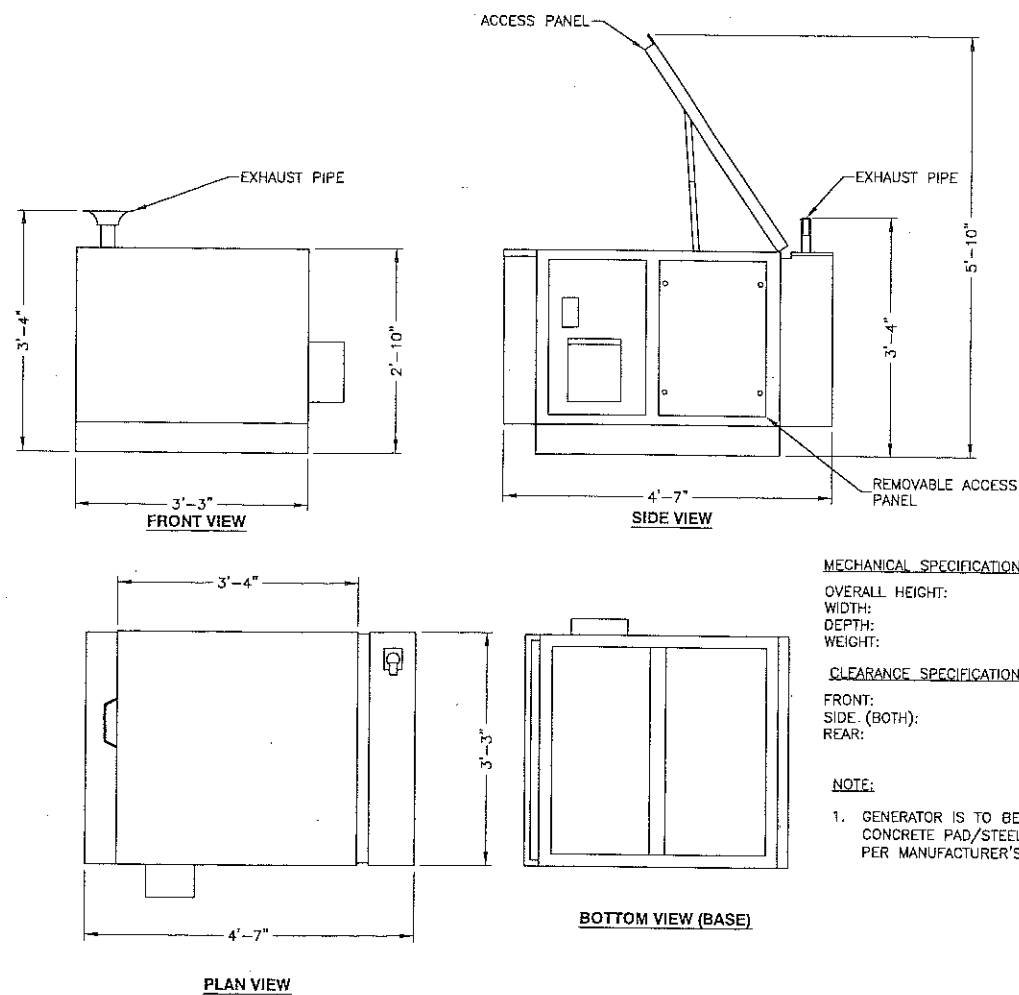
**NOTES:**

1. ALL EXCAVATION SHALL BE HAND EXCAVATION ONLY.
2. PE PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH UTILITY COMPANY REQUIREMENTS.
3. A YELLOW INSULATED COPPER TRACER WIRE SHALL BE INSTALLED ADJACENT TO UNDERGROUND NONMETALLIC PIPING. ACCESS SHALL BE PROVIDED TO THE TRACER WIRE OR THE TRACER WIRE SHALL TERMINATE ABOVE GROUND AT EACH END OF THE NONMETALLIC PIPING. THE TRACER WIRE SIZE SHALL NOT BE LESS THAN 18 AWG AND THE INSULATION TYPE SHALL BE SUITABLE FOR DIRECT BURIAL COMPLIANT TO IFGC SECTION 404.15.3.
4. SPLICE BETWEEN STEEL GAS PIPE & PE PIPE TO BE THREADED.
5. THIS IS A SCHEMATIC TRENCH DETAIL. A GAS CONSULT MUST BE PERFORMED PRIOR TO START OF WORK FOR FINAL SIZING OF NATURAL GAS PIPE.

**GAS TRENCH DETAIL**

SCALE: N.T.S.

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**MECHANICAL SPECIFICATIONS**

OVERALL HEIGHT: 55 IN  
 WIDTH: 39 IN  
 DEPTH: 40 IN  
 WEIGHT: 698.9 LBS

**CLEARANCE SPECIFICATIONS**

FRONT: 36.0 IN  
 SIDE (BOTH): 36.0 IN  
 REAR: 36.0 IN

**NOTE:**

1. GENERATOR IS TO BE MOUNTED TO CONCRETE PAD/STEEL PLATFORM AS PER MANUFACTURER'S SPECIFICATIONS.

**SPECIFICATIONS PN 8220-100-G-20-03**

**Engine**

Engine Model	Ford TSG 415
Cylinders	4 in-line
Displacement (L)	1.5
Bore (in./mm)	3.11/79
Stroke (in./mm)	3.01/76.4
Intake Air System	Naturally Aspirated
Engine HP	47
Emissions	U.S. EPA Tier 4
Emissions Compliance	EPA Certified
Variable RPM	2300 to 2800

**Engine lubrication system**

Oil Filter Type	Full flow spin-on canister
Oil Capacity (L)	3.78
Oil Pressure Switch	Yes
Oil Pressure Transducer	Optional

**Fuel consumption NG [Calculated Values]**

Output (kW)	Flow Rate (in BTU/hr)
10	211,000
15	340,000
20	400,000 (nominal)

**Fuel Consumption LPG [Calculated Values]**

Output (kW)	gal/hr	L/hr
4	0.97	3.67
5	1.1	4.16
6	1.26	4.77
8	1.69	6.4
9	1.945	7.35
10	2.2	8.33
12	2.52	9.54
15	3.55	13.44
20	5.1	19.3

**Engine cooling system**

Type	Pressurized Aluminum Radiator
Water Pump	Belt-driven, Pre-lubed, self-sealing
Fan Type	Electric Fans
Airflow CFM	1300
Fan Mode	Pusher
Temperature Sensor	Yes

**Environmental**

Operating Temperature (°C/°F)	-40 to 72 / -40 to 162
Operating Humidity %	100
Cold Start Aids	Spark Plugs

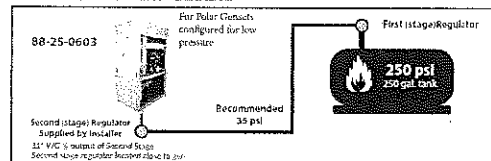
**Power adjustment for conditions**

Temperature Deration	2% derate for every 5.6 °C (10 °F) above 25 °C (77 °F)
Altitude Deration	4% derate for every 300 m (1000 ft) above 91 m (300 ft)

**Fuel system**

Type	LPG or Natural Gas
Fuel Pump Type	Fuel Solenoid Customer
Fuel Tank/Line/2nd stage Regulator	Supplied by customer
Max fuel flow rate (BTU/hr)	400,000 (nominal)

0.14 psi	0.39 psi	0.5 psi
4 in H2O	11 in H2O	13.9 in H2O
10 mbar	27.4 mbar	34.5 mbar



**20kW NATURAL GAS GENERATOR DETAIL**

SCALE: N.T.S.

1

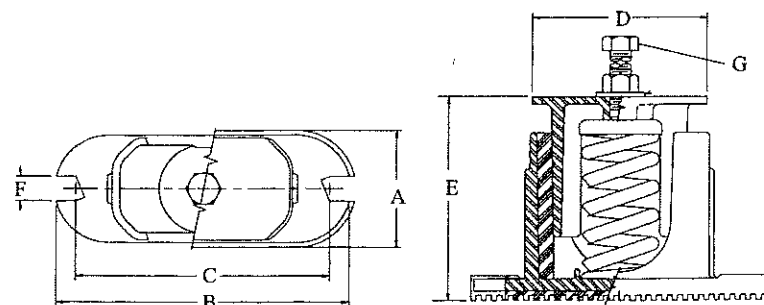
**Korfund "CE" vibration isolators**

Part number	Quantity included per Part number	Max load per isolator (lbs)	Dimensions (in)							Spring constant lbs/in	Static deflection (in)
			A	B	C	D	E	F	G		
0402-0690-11	4	600	3	7-1/2	6-1/2	4-1/2	5-1/4	5/8	1/2	513	1.17
0402-0690-12	4	750	3	7-1/2	6-1/2	4-1/2	5-1/4	5/8	1/2	707	1.06
0402-0690-13	4	900	3	7-1/2	6-1/2	4-1/2	5-1/4	5/8	1/2	881	1.02
0402-0690-14	4	1100	3	7-1/2	6-1/2	4-1/2	5-1/4	5/8	1/2	1327	0.83
0402-0690-15	4	1300	3	7-1/2	6-1/2	4-1/2	5-1/4	5/8	1/2	1758	0.74
0402-0691-02	2	2200	3	10-1/4	9-1/4	7-1/2	5-5/8	5/8	5/8	2654	0.83
0402-0691-04	2	2600	3	10-1/4	9-1/4	7-1/2	5-5/8	5/8	5/8	3516	0.74

Note: "CE" isolators cannot be used with sub-base fuel tanks (159-1486-xx, 159-1512-xx, or 179-4921-xx).

**NOTES:**

- CONTRACTOR TO INSTALL (4) VIBRATION ISOLATORS PER MANUFACTURER RECOMMENDATIONS.
- VIBRATION ISOLATOR TO BE ANCHORED TO PROPOSED STEEL PLATFORM FRAMING WITH (2) 3/4" ASTM A325 STRUCTURAL BOLTS.
- CONFIRM VIBRATION ISOLATOR WITH GENERATOR MANUFACTURER PRIOR TO INSTALLATION.



**EXTERNAL VIBRATION ISOLATORS**

SCALE: N.T.S.

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 PARSIPPANY, NJ 07054  
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 COA 24GA28047600

DAVID J. REVETTE, P.E.  
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NATURAL GAS  
 GENERATOR DETAILS

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**Dewberry**

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SUITE 301  
PARSIPPANY, NJ 07054  
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SHEET TITLE

NATURAL GAS  
BOOSTER DETAILS

SHEET NUMBER

**FUEL GAS PRODUCTS:**

**1. GAS PRESSURE BOOSTER**

FURNISH AND INSTALL AN ETTER COMPANY, MODEL FL 101-P, HERMETIC TYPE GAS PRESSURE BOOSTER PACKAGE COMPLETE WITH OUTDOOR ENCLOSURE.

**A. CAPACITY AND CONDITIONS OF SERVICE:**

- (1) 800 CFH OF NATURAL GAS; 0.65 SP. GR.
- (2) 4.0" W.C. INLET PRESSURE.
- (3) 12.0" W.C. OUTLET PRESSURE
- (4) 1/4 HP EXPLOSION-PROOF MOTOR; CLASS 1, GROUP D.
- (5) FOR OPERATION WITH 120V/1 PH/60 HZ POWER.
- (6) U.L. LISTED.

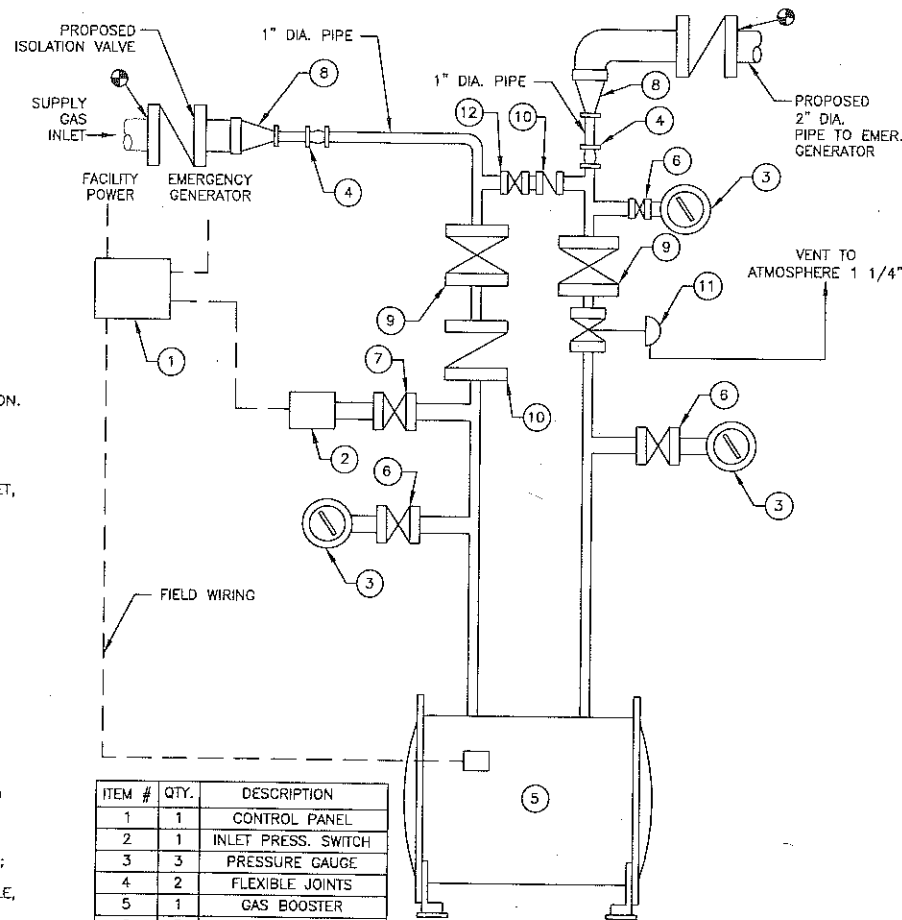
**B. THE SYSTEM SHALL INCLUDE THE FOLLOWING:**

- (1) UL LISTED MAGNETICALLY COUPLED GAS BOOSTER, EG&G ROTRON.
- (2) SUPPLY PRESSURE GAGE WITH PETCOCK.
- (3) INLET SHUT-OFF VALVE, ECLIPSE.
- (4) INLET GAS CHECK VALVE, ECLIPSE.
- (5) INLET FLEX HOSE WITH BRONZE OVERBRAID, MASS APPROVED.
- (6) VENTLESS LOW GAS PRESSURE CUT OFF SWITCH, MANUAL RESET, ANTUNES LGPG.
- (7) BY-PASS SHUT-OFF VALVE, ECLIPSE.
- (8) BY-PASS GAS CHECK VALVE, ECLIPSE.
- (9) OUTLET FLEX HOSE WITH STAINLESS STEEL OVERBRAID.
- (10) OUTLET SHUT-OFF VALVE, ECLIPSE.
- (11) DISCHARGE PRESSURE GAGE WITH PETCOCK.
- (12) VENTLESS RECYCLING HIGH/LOW PRESSURE SWITCH FOR OPERATIONAL DEADBAND.
- (13) LOCK UP DISCHARGE REGULATOR.
- (14) LOCKABLE ENCLOSURE.
- (15) GENERATOR UPS POWER BACK-UP, MINIMUM RUN TIME SEVEN MINUTES AT 100% CHARGE.

**C. PRESSURE BOOSTER SHALL BE FURNISHED WITH A FACTORY-INSTALLED EXPLOSION-PROOF JUNCTION BOX FOR ELECTRICAL POWER CONNECTION.**

**D. PRESSURE BOOSTER SHALL BE FURNISHED WITH AN INTEGRATED CONTROL SYSTEM CONSISTING OF MOTOR STARTER; FUSED DISCONNECT/INTERLOCK SWITCH; BOOSTER MANUAL-OFF-AUTO SWITCH; LOW GAS PRESSURE SWITCH; HIGH GAS PRESSURE SWITCH; ALARM HORN; RELAYS; CONTROL CIRCUIT TRANSFORMER; SIGNAL LIGHTS FOR POWER, BOOSTER ON, LOW GAS PRESSURE, AND HIGH GAS PRESSURE. SYSTEM COMPONENTS, AS APPLICABLE, SHALL BE MOUNTED AND PREWIRED IN A NEMA 12 PANEL WITH NUMBERED TERMINAL STRIPS FOR CONNECTION OF EXTERNAL WIRING.**

**E. PRESSURE BOOSTER SHALL BE ELECTRICALLY INTERLOCKED WITH STANDBY GENERATOR TO OPERATE ON DEMAND ONLY WHEN THE GENERATOR IS OPERATING.**



ITEM #	QTY.	DESCRIPTION
1	1	CONTROL PANEL
2	1	INLET PRESS. SWITCH
3	3	PRESSURE GAUGE
4	2	FLEXIBLE JOINTS
5	1	GAS BOOSTER
6	3	BALL VALVE
7	1	SWITCH SHUTOFF VALVE
8	1	3" TO 1" REDUCER
9	2	ISOLATION VALVE
10	2	CHECK VALVE
11	1	PRESSURE REGULATOR
12	1	BY-PASS VALVE

**NOTES:**

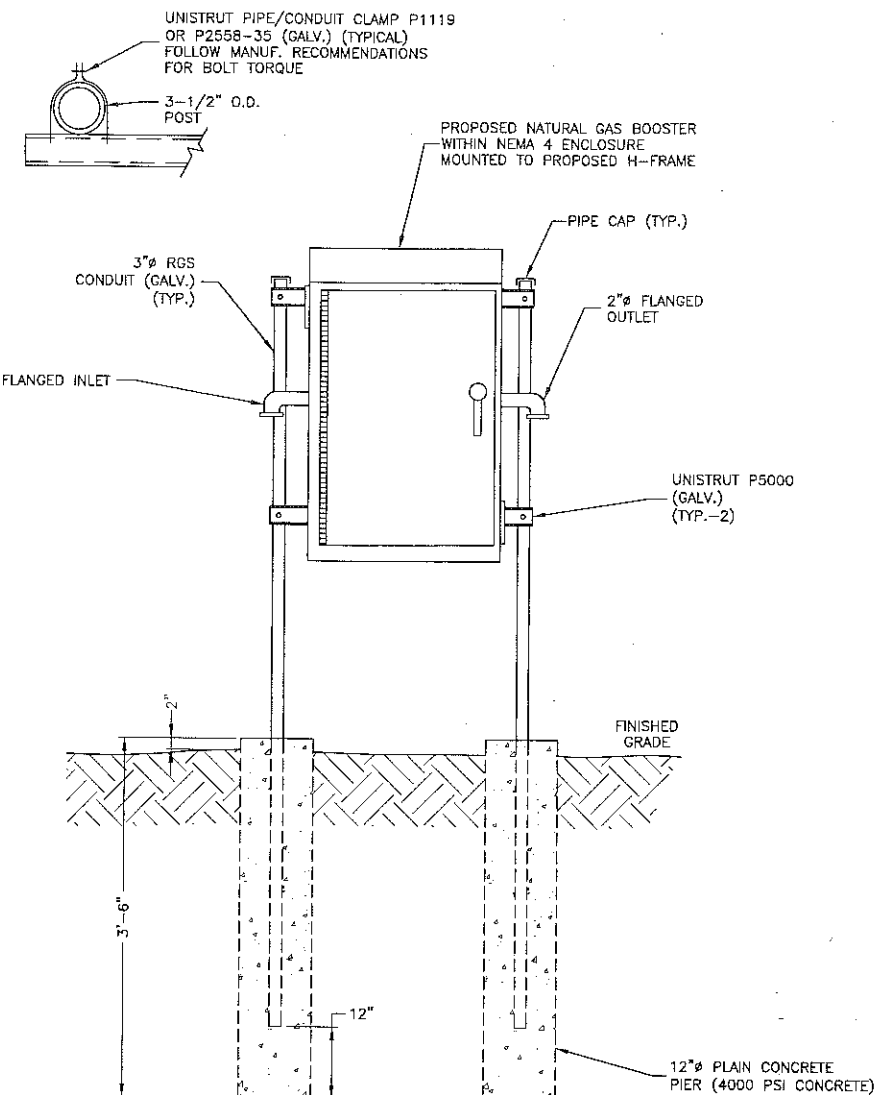
1. ALTHOUGH THE PRESSURE REGULATOR (ITEM 11) IS SHOWN IN A VERTICAL POSITION, IT SHOULD BE INSTALLED IN AN UPRIGHT / HORIZONTAL POSITION FOR PROPER OPERATION.
2. UTILITY CONSULT IS REQUIRED PRIOR TO FINALIZING GAS DESIGN AND REQUIREMENTS.

GAS BOOSTER	
MAKE:	AETECH ENGINEERED SYSTEMS
MODEL:	GENPAC MODEL MD101-ATT

**GAS BOOSTER DETAIL 1**

SCALE: N.T.S.

1



**NOTE:**

1. MOUNT METER BANK AND MAIN LUGS SECTION PER MANUFACTURER'S RECOMMENDATION AND INSTRUCTIONS.

**GAS BOOSTER MOUNTING DETAIL 2**

SCALE: N.T.S.

2