

TOWN SIGNATURES:	
CHAIRMAN	DATE
SECRETARY	DATE
TOWN ENGINEER	DATE

SITE INFORMATION:	
SITE NAME:	ALL NORTH HACKETTSTOWN
SITE ADDRESS:	100 BILBY ROAD HACKETTSTOWN, NEW JERSEY 07840
JURISDICTION:	TOWN OF HACKETTSTOWN WARREN COUNTY, NEW JERSEY
ZONING:	HF - HEALTH FACILITIES
PARCEL ID:	BLOCK 45, LOT 2.01
PARCEL SIZE:	3.00 ACRES
SITE COORDINATES:	N 40°51'58.55" (40.8663°) (NAD83) W 74°48'46.08" (-74.8128°) (NAD83)
GROUND ELEVATION:	632.25± (NAVD 88)
STRUCTURE TYPE:	MONOPOLE
STRUCTURE HEIGHT:	155'-0± AGL (TOP OF LIGHTNING ROD)
LANDLORD NAME:	SMDB REALTY LLC
LANDLORD ADDRESS:	100 BILBY ROAD HACKETTSTOWN, NEW JERSEY 07840
APPLICANT:	ALLETOWN SMSA, LIMITED PARTNERSHIP A DELAWARE LIMITED PARTNERSHIP D/B/A VERIZON WIRELESS 2 VALLEY SQUARE / SUITE 300 512 EAST TOWNSHIP LINE ROAD BLUE BELL, PENNSYLVANIA 19422

MUNICIPALITY:	TOWN OF HACKETTSTOWN 215 STIGER STREET HACKETTSTOWN, NEW JERSEY 07840 908-852-3130
POLICE:	HACKETTSTOWN POLICE DEPARTMENT 215 STIGER STREET HACKETTSTOWN, NEW JERSEY 07840 908-852-3300
FIRE:	HACKETTSTOWN FIRE DEPARTMENT 101 MILLER STREET HACKETTSTOWN, NEW JERSEY 07840 908-852-6304

ABBREVIATIONS:			
ATS	AUTOMATIC TRANSFER SWITCH	MAX	MAXIMUM
AWG	AMERICAN WIRE GAUGE	MBB	MASTER GROUND BAR
ATTN	ATTENTION	MIN	MINIMUM
BTS	BASE TRANSMISSION SYSTEM	MTS	MANUAL TRANSFER SWITCH
CONT	CONTINUED	NEC	NATIONAL ELECTRICAL CODE
CU	COPPER	POB	POINT OF BEGINNING
DWG	DRAWING	POC	POINT OF CONNECTION
EMT	ELECTRICAL METALLIC TUBING	POT	POINT OF TERMINATION
GEN	GENERATOR	PPC	POWER PROTECTION CABINET
GRD	GROUND	PVC	POLYVINYL CHLORIDE
IBC	INTERNATIONAL BUILDING CODE	RIGD	RIGID GALVANIZED STEEL
IFC	INTERNATIONAL FIRE CODE	RF	RADIO FREQUENCY
LOD	LIMIT OF DISTURBANCE	TPP	TYPICAL

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING CODES:

BUILDING CODE:	INTERNATIONAL BUILDING CODE 2018 (NEW JERSEY EDITION)
ELECTRICAL CODE:	NATIONAL ELECTRICAL CODE 2017
FIRE SAFETY CODE:	INTERNATIONAL FIRE CODE 2018 (NEW JERSEY EDITION)
USE GROUP:	U (UTILITY)
CONSTRUCTION TYPE:	IIB

**ALLENTOWN SMSA,
LIMITED PARTNERSHIP
A DELAWARE LIMITED PARTNERSHIP d/b/a
VERIZON WIRELESS**

**SITE NAME:
ALL NORTH HACKETTSTOWN**

NEW BUILD

**SITE ADDRESS:
100 BILBY ROAD
HACKETTSTOWN, NEW JERSEY 07840**

STRUCTURAL NOTE:
ADVANTAGE ENGINEERS IS NOT RESPONSIBLE FOR DESIGN OR STRUCTURAL CERTIFICATION OF NEW ANTENNA MOUNTS REQUIRED FOR THE INSTALLATION OF THE PROPOSED EQUIPMENT ASSOCIATED WITH THIS PROJECT.
PLEASE REFER TO THE STRUCTURAL ANALYSIS COMPLETED BY OTHERS FOR ALL STRUCTURAL INFORMATION RELATED TO THE ANTENNA MOUNTS.

811

**Know what's below.
Call before you dig.**

PROTECT YOURSELF. GIVE THREE
WORKING DAYS NOTICE.
THIS DRAWING DOES NOT INCLUDE NECESSARY
COMPONENTS FOR CONSTRUCTION SAFETY. ALL
CONSTRUCTION MUST BE DONE IN COMPLIANCE
WITH THE OCCUPATIONAL SAFETY AND HEALTH
ACT OF 1970 AND ALL RULES AND REGULATIONS
THERE TO APPURTENANT.

NOTE TO GENERAL CONTRACTOR:
NO WORK IS TO BE PERFORMED ON THIS SITE WITHOUT REVIEW OF THE APPROVED
STRUCTURAL ANALYSIS. IF ANY DISCREPANCIES ARE FOUND THE GENERAL
CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING. AT NO TIME WILL ANY
ADDITIONAL ANTENNAS BE INSTALLED WITHOUT WRITTEN CONSENT FROM THE
STRUCTURAL ENGINEER.

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VERIZON WIRELESS
2 VALLEY SQUARE / SUITE 300
512 EAST TOWNSHIP LINE ROAD
BLUE BELL, PENNSYLVANIA 19422



MT. LAUREL, NEW JERSEY 08054
PHONE: (856) 316-4788
www.advantageengineers.com

7	04-29-21	MBM	REVISED PER COMMENTS
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REV No	DATE	DESIGNER	DESCRIPTION

DESIGNER: MBM	AE JOB No: 19E0092.001
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TITLE SHEET

T-1

SITE NAME:
ALL NORTH
HACKETTSTOWN

SITE ADDRESS:
100 BILBY ROAD
HACKETTSTOWN,
NEW JERSEY 07840

JURISDICTION:
TOWN OF HACKETTSTOWN
WARREN COUNTY, NEW JERSEY

1 OF 12
ENGINEER SEAL:

AE CERTIFICATION OF AUTHORIZATION
24GA28073100

1. PROPOSED MONOPOLE AND EQUIPMENT PAD TO BE INSTALLED WITHIN A NEW 1,215.0 S.F. IRREGULAR FENCED COMPOUND / LEASE AREA.
2. PROPOSED LP GENERATOR AND 500 GALLON LP TANK TO BE INSTALLED ON A NEW CONCRETE PAD WITHIN THE COMPOUND.
3. TWELVE (12) PROPOSED ANTENNAS, NINE (9) REMOTE RADIO HEADS AND TWO (2) MAIN DISTRIBUTION BOXES ARE TO BE INSTALLED ON A NEW LOW PROFILE PLATFORM ON THE NEW MONOPOLE.
4. TWO (2) NEW HYBRID CABLES TO BE INSTALLED ALONG THE INSIDE OF THE PROPOSED MONOPOLE AND ALONG A NEW ICE BRIDGE.
5. NEW ELECTRICAL SERVICE TO BE INSTALLED TO COMMUNICATIONS COMPOUND.
6. NEW FIBER SERVICE TO BE INSTALLED TO COMMUNICATIONS COMPOUND.

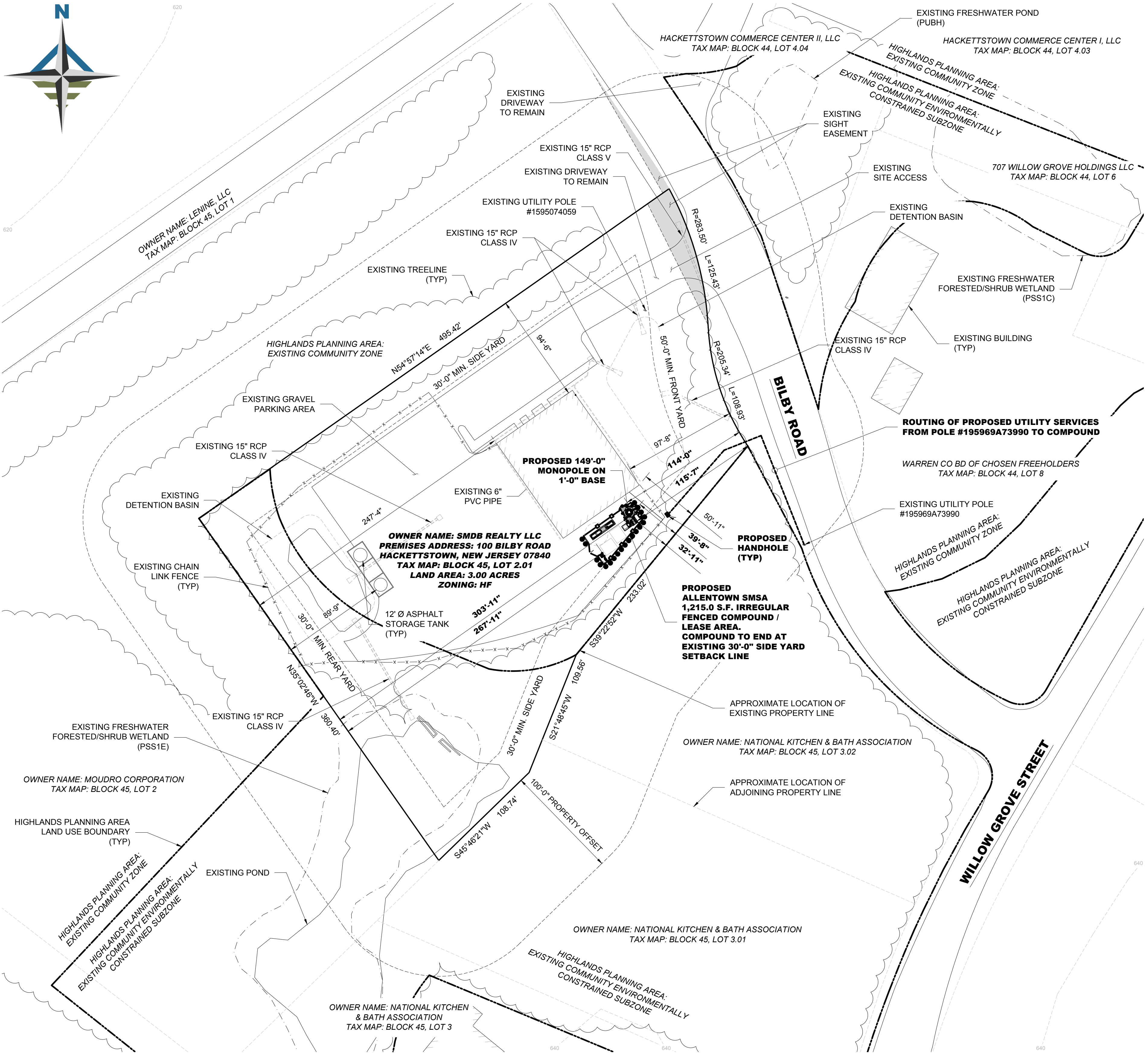
I, _____, HEREBY CERTIFY THAT I AM THE OWNER OF THE PROPERTY WHICH IS SUBJECT OF THIS PLAN AND THAT THE LAND USE ACTION PROPOSED BY THIS PLAN IS MADE AT MY DIRECTION AND THAT I AUTHORIZE THIS PLAN TO BE RECORDED IN ACCORDANCE WITH THE REGULATIONS OF THE TOWN OF HACKETTSTOWN LAND DEVELOPMENT ORDINANCE.

SIGNATURE _____ DATE _____

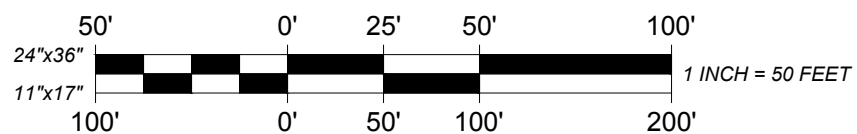
THESE DRAWINGS ARE FORMATTED TO BE FULL SIZE AT 24"x36". CONTRACTOR SHALL VERIFY ALL PLANS & EXISTING DIMENSIONS & CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

ANDREW M. MILLER, PE
NEW JERSEY PROFESSIONAL ENGINEER
LICENSE # GE50514

THIS DRAWING IS PROPERTY OF ADVANTAGE ENGINEERS, LLC. IT IS FOR THE EXCLUSIVE USE OF THIS PROJECT. ANY RE-USE OF THIS DRAWING WITHOUT THE EXPRESSED WRITTEN CONSENT OF ADVANTAGE ENGINEERS, LLC IS PROHIBITED.



1 SITE PLAN
Z-1
SCALE = 1" = 50'-0"



GENERAL NOTES:

1. THIS PLAN WAS PREPARED USING AN APPROVED PLAN ENTITLED "AS BUILT SURVEY" BY FERRIERO ENGINEERING, INC., DATED 07-17-2003.
2. THE PROPOSED FACILITY WILL CAUSE ONLY A "DE MINIMIS" INCREASE IN STORMWATER RUNOFF. THEREFORE, NO DRAINAGE STRUCTURES ARE PROPOSED.
3. NO NOISE, SMOKE, DUST, OR ODOR WILL RESULT FROM THIS FACILITY.
4. THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION (THERE IS NO HANDICAP ACCESS REQUIRED).
5. THE FACILITY IS UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SANITARY SERVICE.
6. ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
7. THE PROPOSED DEVELOPMENT DOES NOT INCLUDE STREET SIGNS OF ANY TYPE.
8. THE PROPOSED DEVELOPMENT DOES NOT INCLUDE OUTDOOR STORAGE OR ANY SOLID WASTE RECEPTACLES.
9. ACCORDING TO THE F.I.R.M. COMMUNITY PANEL # 34041C0252E, DATED 09-29-2011, THE PROPOSED SITE IS NOT IN A FLOODPLAIN.

200' PROPERTY OWNERS LIST

BLOCK	LOT	CLA	PROPERTY OWNER	PROPERTY LOCATION
44	4.03	4B	HACKETTSTOWN COMMERCE CENTER I LLC 460A MAIN AVENUE WALLINGTON, NEW JERSEY 07057	101 BILBY ROAD
44	4.04	4B	HACKETTSTOWN COMMERCE CENTER II LLC 460A MAIN AVENUE WALLINGTON, NEW JERSEY 07057	103 BILBY ROAD
44	6	2	707 WILLOW GROVE HOLDINGS LLC 1003 MCBRIDE AVENUE WOODLAND PARK, NEW JERSEY 07424	707 WILLOW GROVE STREET
44	8	15C	WARREN CO BD OF CHOSEN FREEHOLDERS 165 COUNTY ROUTE 519 SOUTH BELVIDERE, NEW JERSEY 07823	WILLOW GROVE & BILBY ROAD
45	1	4A	LENINE CORPORATION 515 S LIVINGSTON AVENUE LIVINGSTON, NEW JERSEY 07039	108 BILBY ROAD
45	2	1	MOUDRO CORPORATION 268 MAIN STREET HACKETTSTOWN, NEW JERSEY 07840	104 BILBY ROAD
45	2.01	4B	SMD8 REALTY LLC 100 BILBY ROAD HACKETTSTOWN, NEW JERSEY 07840	100 BILBY ROAD
45	3	4B	NATIONAL KITCHEN & BATH ASSOCIATION 687 WILLOW GROVE STREET HACKETTSTOWN, NEW JERSEY 07840	687 WILLOW GROVE STREET
45	3.01	1	NATIONAL KITCHEN & BATH ASSOCIATION 687 WILLOW GROVE STREET HACKETTSTOWN, NEW JERSEY 07840	689 WILLOW GROVE STREET
45	3.02	1	NATIONAL KITCHEN & BATH ASSOCIATION 687 WILLOW GROVE STREET HACKETTSTOWN, NEW JERSEY 07840	691 WILLOW GROVE STREET

BULK REQUIREMENTS:

ZONING DISTRICT: HF - HEALTH FACILITIES			
DESCRIPTION	REQUIRED	EXISTING	PROPOSED
MAX. BUILDING HEIGHT:	40'-0"	<40 FT	NO CHANGE
MIN. LOT AREA:	45,000 S.F.	130,680 S.F.	NO CHANGE
MIN. LOT FRONTAGE:	150'-0"	232'-0"	NO CHANGE
MIN. LOT WIDTH:	150'-0"	244'-3"	NO CHANGE
MIN. LOT DEPTH:	200'-0"	425'-2"	NO CHANGE
MIN. SIDE YARD (EACH):	30'-0"	50'-11"	NO CHANGE
MIN. FRONT YARD:	50'-0"	97'-8"	NO CHANGE
MIN. REAR YARD:	30'-0"	89'-9"	NO CHANGE
MAX. FLOOR AREA RATIO:	0.30	0.06	NO CHANGE
MAX. LOT COVERAGE:	70%	41.70%	NO CHANGE

LAND DEVELOPMENT ORDINANCE SECTION 601.K - PERSONAL WIRELESS TELECOMMUNICATIONS AND EQUIPMENT FACILITIES			
DESCRIPTION	REQUIRED	EXISTING	PROPOSED
MAX. EQUIPMENT HEIGHT:	12'-0"	N/A	10'-7"
MIN. SIDE YARD (EACH):	30'-0"	N/A	32'-11"
MIN. FRONT YARD:	50'-0"	N/A	114'-0"
MIN. REAR YARD:	30'-0"	N/A	267'-11"
MAX TOWER HEIGHT:	150'-0"	N/A	150'-0"
EQUIPMENT SCREENING:	(THREE CARRIER) 8'-10" EVERGREEN OR 8' SOLID FENCE	N/A	(THREE CARRIER) 8'-0" EVERGREEN & 8' SOLID FENCE

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AE JOB No: 19E0092.001

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SITE PLAN

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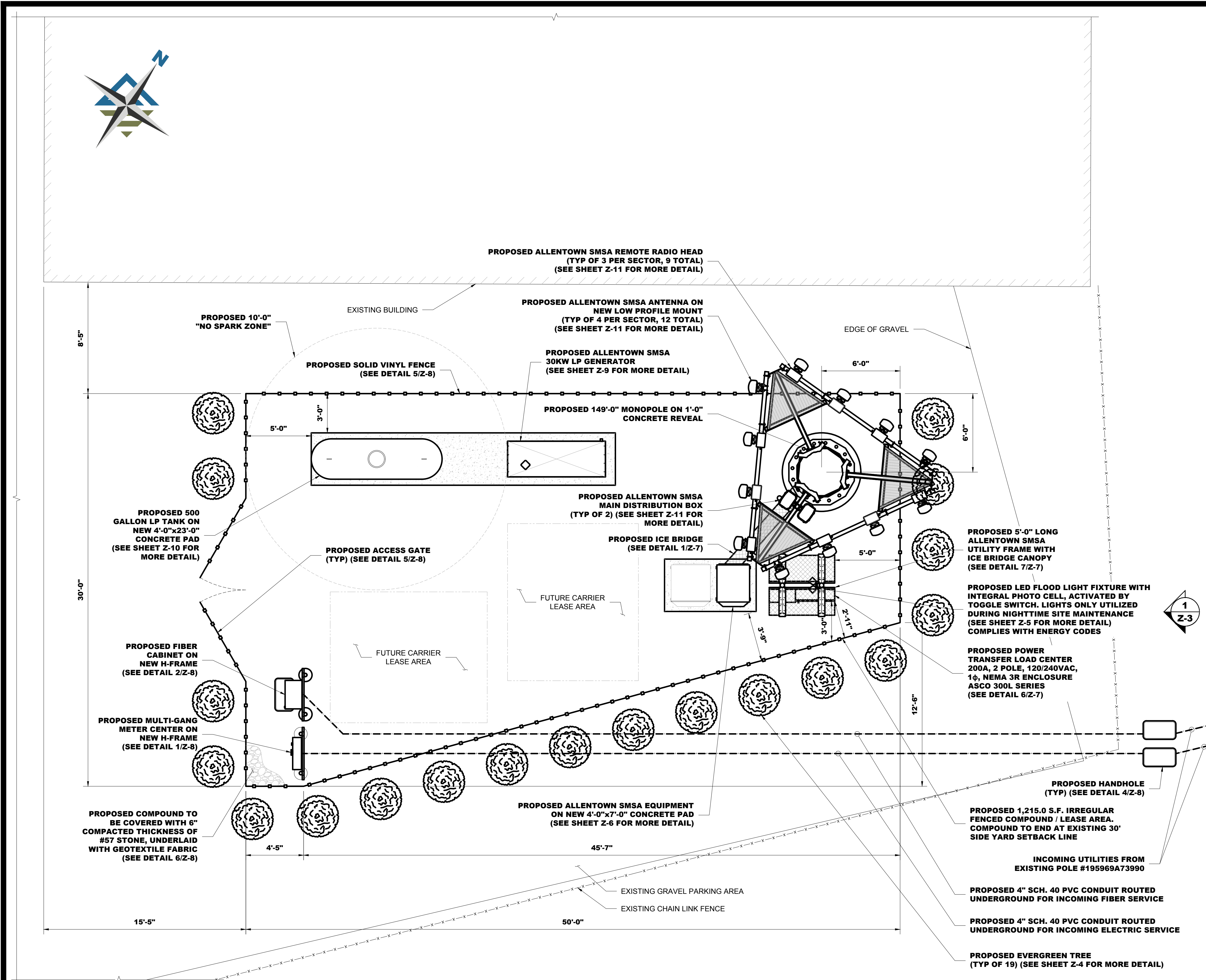
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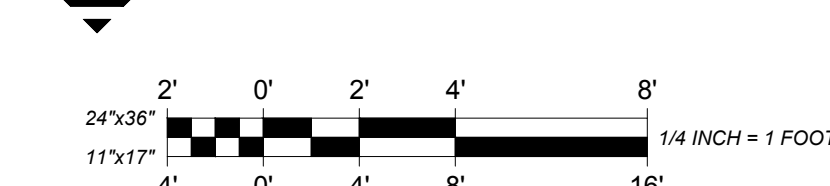
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COMPOUND PLAN



GENERAL NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, LAWS AND REGULATIONS OF ALL MUNICIPALITIES, UTILITY COMPANIES OR OTHER PUBLIC AUTHORITIES.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS THAT MAY BE REQUIRED BY ANY FEDERAL, STATE, COUNTY OR MUNICIPAL AUTHORITIES.
3. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER, IN WRITING, OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF BIDS OR PERFORMANCE OF WORK. MINOR OMISSIONS OR ERRORS IN THE BID DOCUMENTS SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR THE OVERALL INTENT OF THESE DRAWINGS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SITE IMPROVEMENTS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED AS A RESULT OF CONSTRUCTION OF THIS FACILITY.
5. THE SCOPE OF WORK FOR THIS PROJECT SHALL INCLUDE PROVIDING ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO COMPLETE THIS PROJECT. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
6. THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING A BID TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
7. THIS PLAN WAS PREPARED USING AN APPROVED PLAN ENTITLED "AS BUILT SURVEY" BY FERRIERO ENGINEERING, INC., DATED 07-17-2003.
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9. NO NOISE, SMOKE, DUST OR ODOR WILL RESULT FROM THIS FACILITY.
10. THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION (THERE IS NO HANDICAP ACCESS REQUIRED).
11. THE FACILITY IS UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SANITARY SERVICE.
12. POWER TO THE FACILITY WILL BE MONITORED BY A SEPARATE METER.
13. CONTRACTOR SHALL VERIFY ANTENNA ELEVATION AND AZIMUTH WITH RF ENGINEER PRIOR TO INSTALLATION.
14. TOWER, MOUNTS AND ANTENNAS ARE DESIGNED TO MEET ANSI/TIA-222-H AS PER IBC 2018 NEW JERSEY EDITION REQUIREMENTS.
15. ALL STRUCTURAL ELEMENTS SHALL BE HOT DIPPED GALVANIZED STEEL.
16. CONTRACTOR SHALL MAKE A UTILITY "ONE CALL" TO LOCATE ALL UTILITIES PRIOR TO EXCAVATING.
17. IF ANY PIPING EXISTS BENEATH THE SITE AREA, CONTRACTOR MUST LOCATE IT AND CONTACT OWNER'S REPRESENTATIVE.
18. CONSTRUCTION TO COMMENCE UPON COMPLETION OF A PASSING STRUCTURAL ANALYSIS. STRUCTURAL ANALYSIS TO BE PERFORMED BY OTHERS.

**ALLENTOWN SMSA,
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PARTNERSHIP d/b/a
VERIZON WIRELESS**

2 VALLEY SQUARE / SUITE 300
512 EAST TOWNSHIP LINE ROAD
BLUE BELL, PENNSYLVANIA 19422



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AE DESIGN INFO:

DESIGNER: MBM	AE JOB No: 19E0092.001
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DRAWING TITLE:

COMPOUND PLAN

DRAWING SHEET:

Z-2

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HACKETTSTOWN,
NEW JERSEY 07840

JURISDICTION:
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SHEET NUMBER:

3 OF 12

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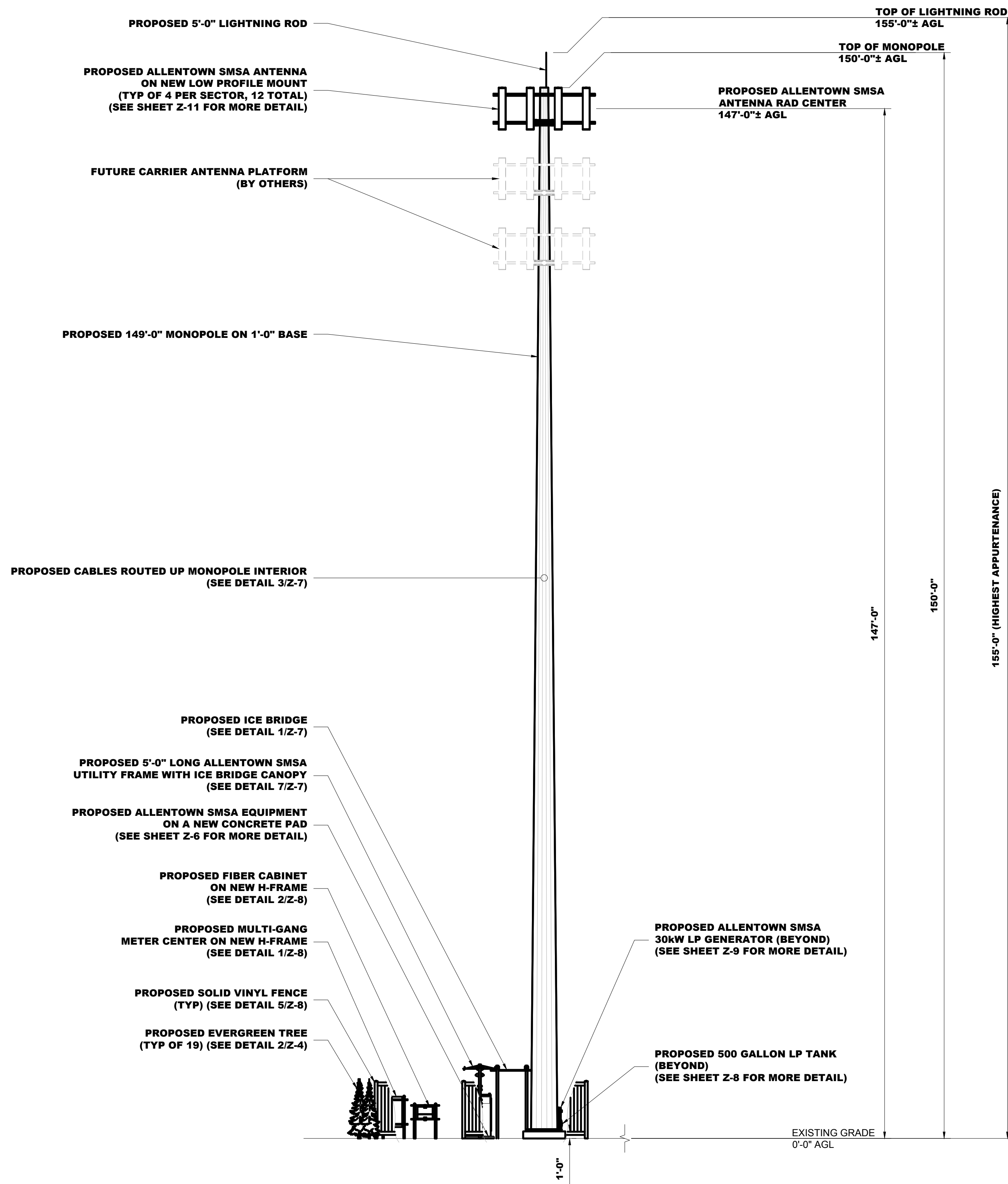
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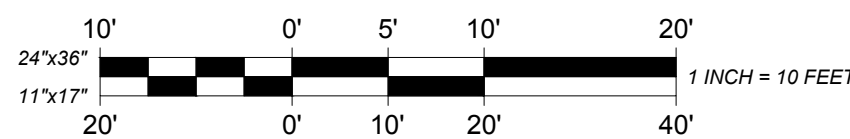
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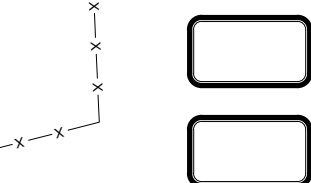
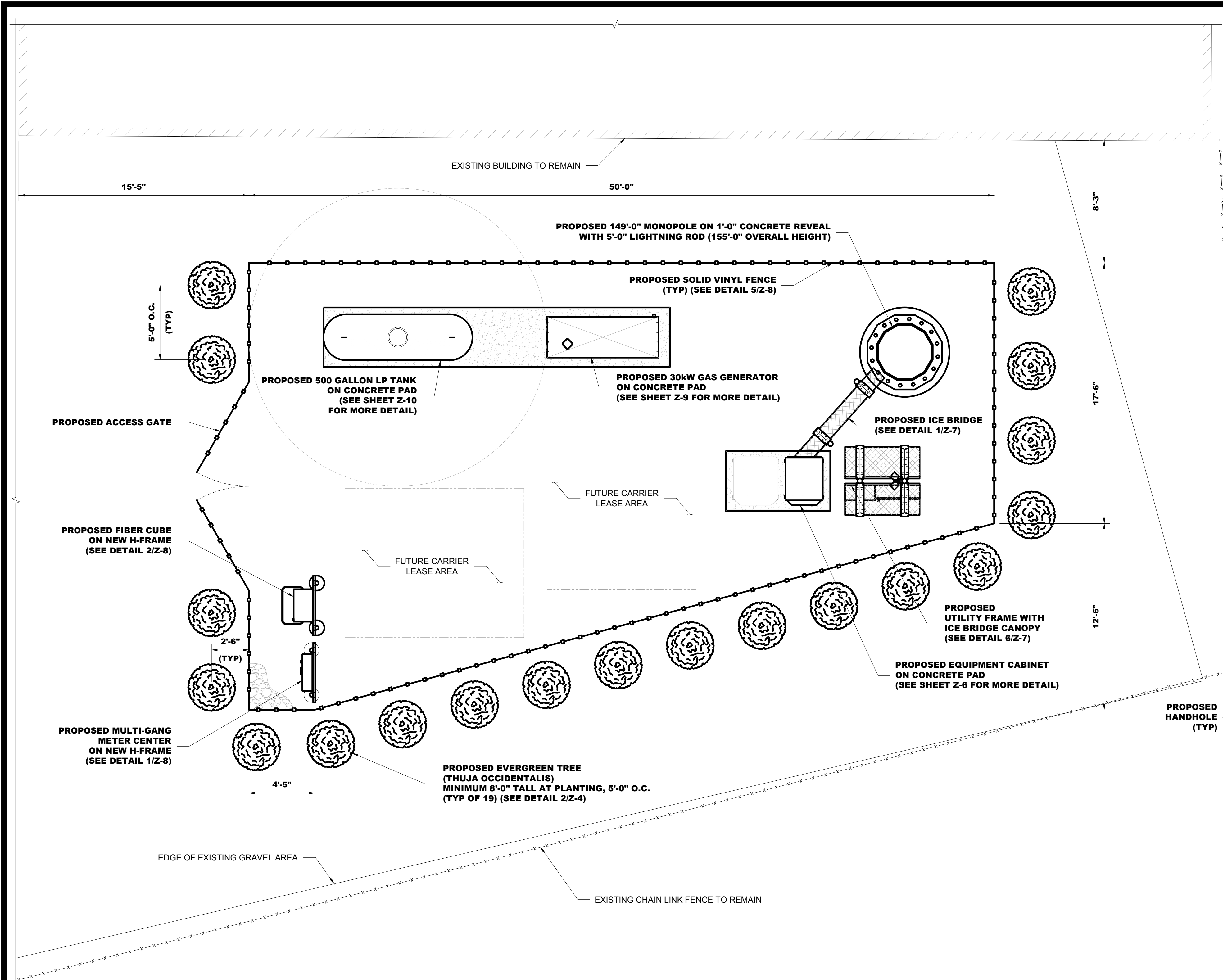
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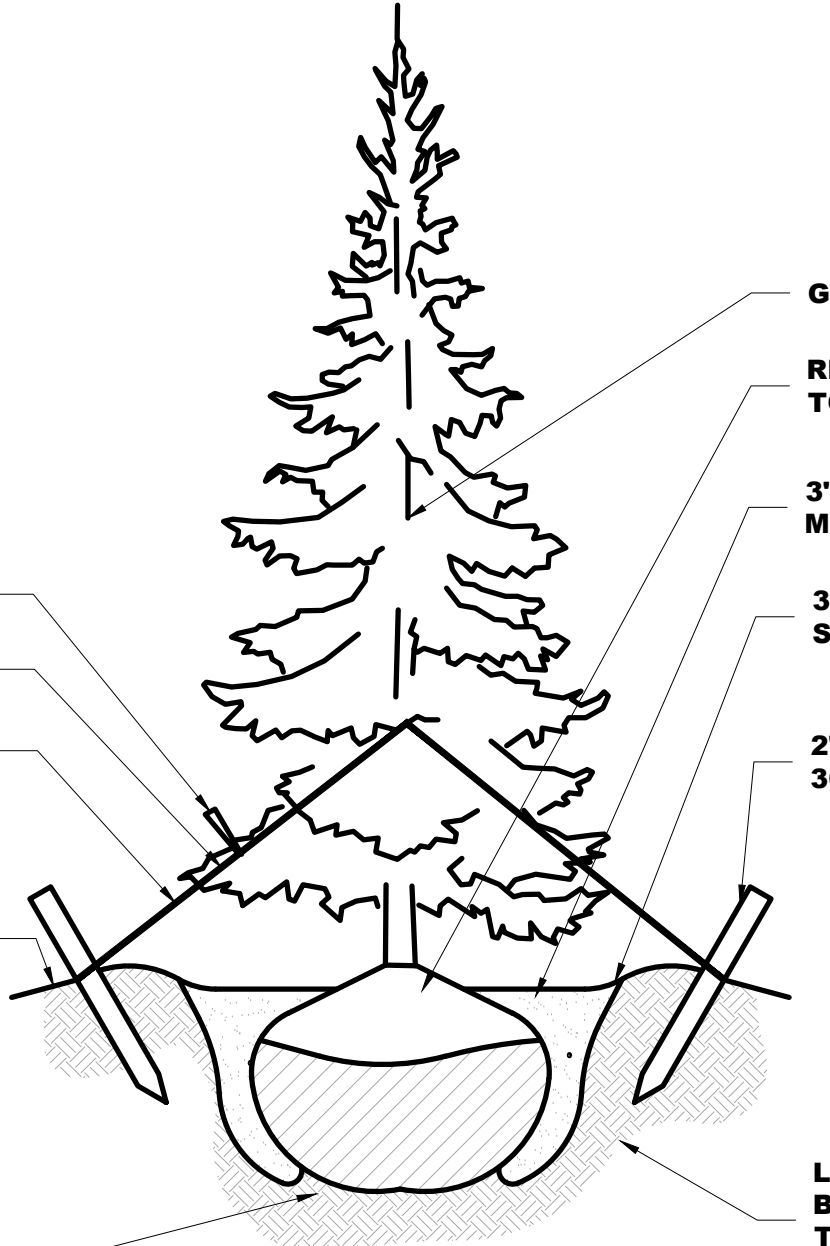
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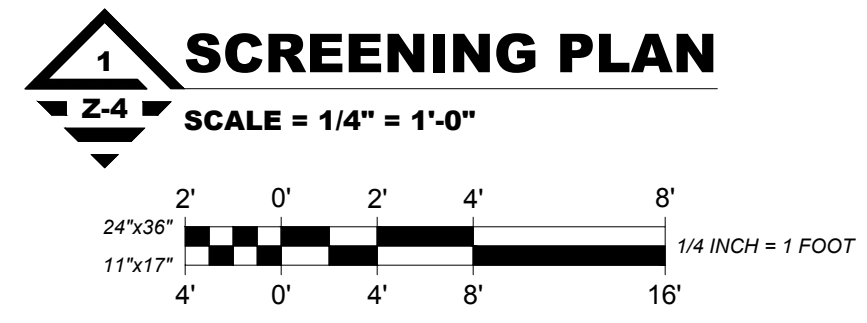
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- PROPOSED HANDHOLE (TYP)
- SURVEYOR'S TAPE
- TURN BUCKLE
- DOUBLE STRAND, 12-GAUGE GALVANIZED WIRE, TWISTED
- TAMP OR WATER TOPSOIL AT 6" INTERVALS; WATER THOROUGHLY WHEN HOLE IS 2/3 FULL
- 6" MIN. BETWEEN BALL AND BOTTOM OF EXCAVATION



- GARDEN HOSE 1/2" DIA. MIN.
- REMOVE BURLAP FROM TOP 1/3 OF ROOT BALL
- 3" SHREDDED HARDWOOD MULCH
- 3" EARTH BERM TO FORM SAUCER
- 2"x2" HARDWOOD STAKES 36" MIN. LENGTH
- LOOSEN SUBSOIL AT BOTTOM OF EXCAVATION TO 6" MIN. DEPTH, TAMP



2 EVERGREEN PLANTING DETAIL N.T.S.

PLANT LIST						
SYMBOL	BOTANICAL NAME	COMMON NAME	QUANTITY	CALIPER	HEIGHT	REMARKS
	THUJA OCCIDENTALIS	EMERALD GREEN ARBORVITAE	19	N/A	8'-0"	8'-0" MIN. HEIGHT AT PLANTING, FULL HEALTHY STRAIGHT TRUNK.

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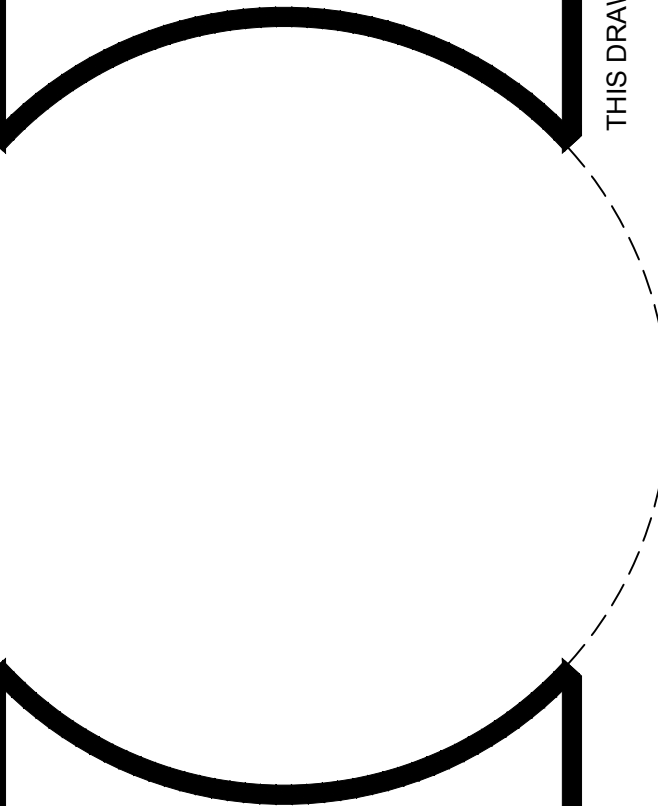
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SCREENING PLAN

DRAWING SHEET:
Z-4

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245A28073100

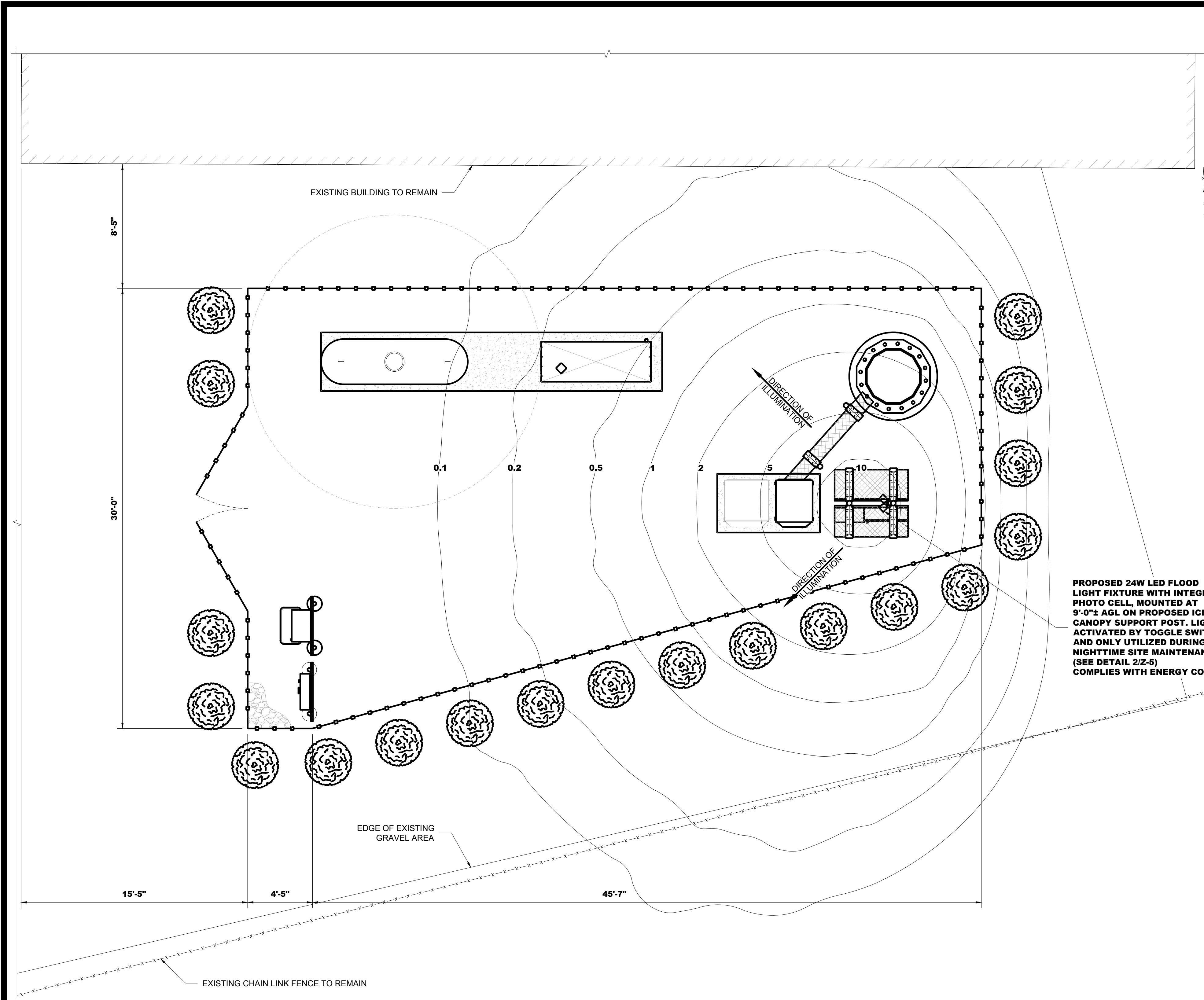


ANDREW M. MILLER, PE
NEW JERSEY PROFESSIONAL ENGINEER
LICENSE # GE50514

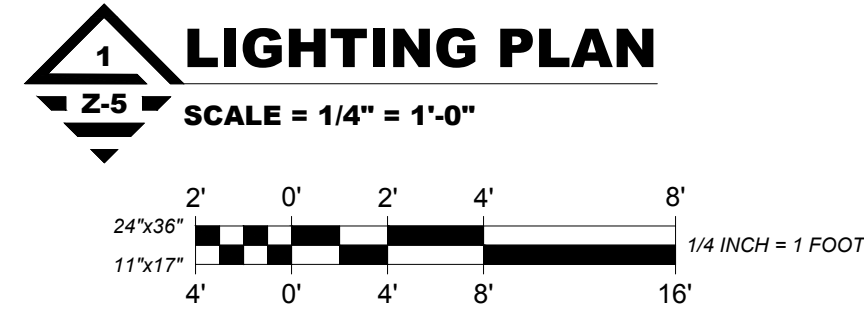


PROTECT YOURSELF. GIVE THREE WORKING DAYS NOTICE.
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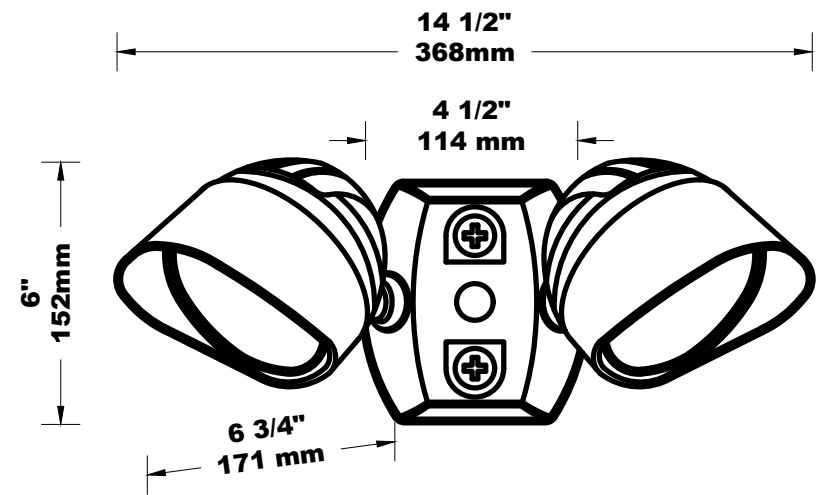
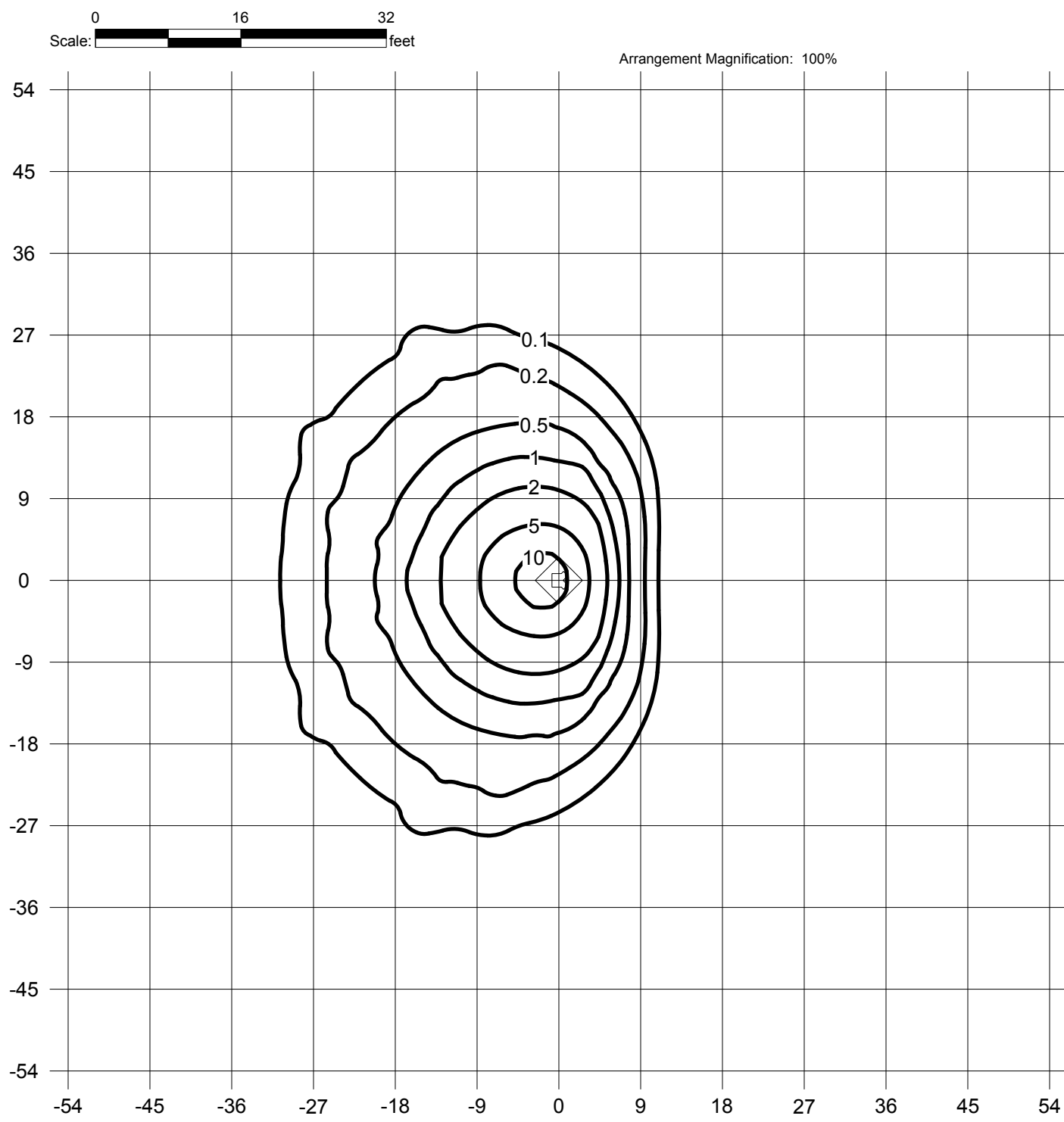
NOTE: ILLUMINATION IS MEASURED IN FOOTCANDLES



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Luminaire
IES Filename : rab01898-c.ies
Description : BULLET 12
CAST FINNED METAL HEAT SINK MOLDED
TEXTURED PLASTIC
TWENTY-FOUR WHITE LIGHT EMITTING
Light Loss Factor : 1.00
Number of Lamps : 24
Lamps Lumens : ~1 lms
Luminaire Watts : 12 W



LAMP SPECIFICATIONS		
DESCRIPTION	APPROXIMATE INITIAL LUMENS	WATTS
RAB LIGHTING # BULLET2X1212AA	1,664	24

NOTE: FIXTURE TO BE PROVIDED WITHOUT MOTION SENSOR.



ALLENTOWN SMSA,
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A DELAWARE LIMITED
PARTNERSHIP d/b/a
VERIZON WIRELESS
2 VALLEY SQUARE / SUITE 300
512 EAST TOWNSHIP LINE ROAD
BLUE BELL, PENNSYLVANIA 19422

520 FELLOWSHIP ROAD, SUITE A-108
MT. LAUREL, NEW JERSEY 08054
PHONE: (856) 316-4788
www.advantageengineers.com

PLAN REVISIONS:			
7	04-29-21	MBM	REVISED PER COMMENTS
6	04-22-21	MBM	REVISED LAYOUT
5	01-27-21	MBM	REVISED ZONING
4	12-03-20	MBM	ISSUED FOR ZONING
3	10-29-20	MBM	ISSUED FOR ZONING
REV No	DATE	DESIGNER	DESCRIPTION

AE DESIGN INFO:
DESIGNER: MBM
AE JOB No: 19E0092.001

DRAWING TITLE:
LIGHTING PLAN

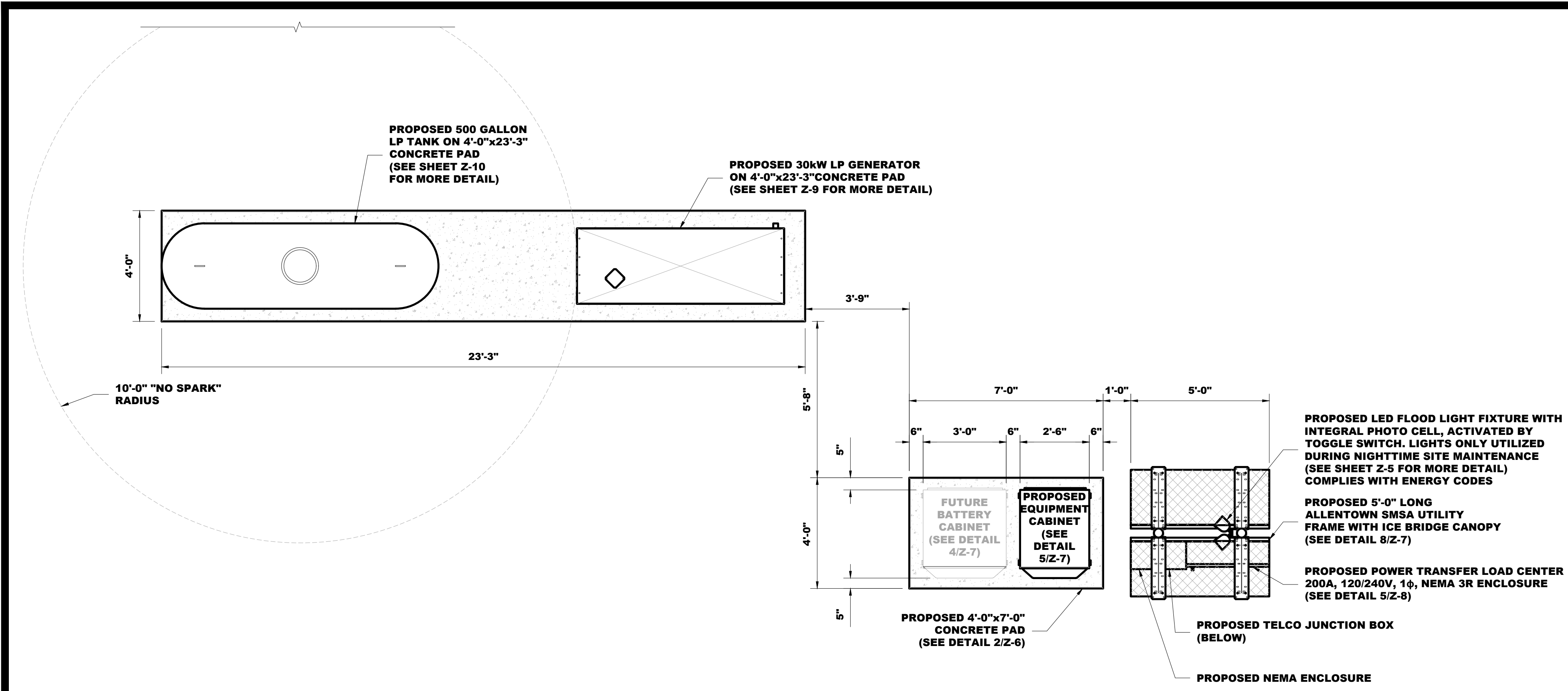
DRAWING SHEET:
Z-5

SITE INFORMATION:
SITE NAME:
ALL NORTH
HACKETTSTOWN
SITE ADDRESS:
100 BILBY ROAD
HACKETTSTOWN,
NEW JERSEY 07840

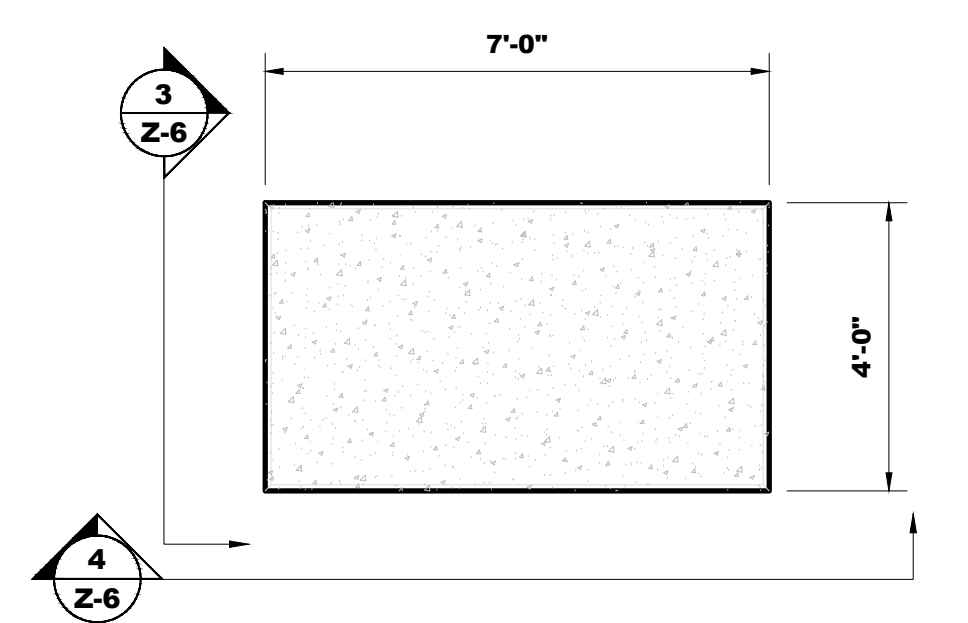
JURISDICTION:
TOWN OF HACKETTSTOWN
WARREN COUNTY, NEW JERSEY
SHEET NUMBER:
6 OF 12
ENGINEER SEAL:
AE CERTIFICATION OF AUTHORIZATION
24GA28073100

ANDREW M. MILLER, PE
NEW JERSEY PROFESSIONAL ENGINEER
LICENSE # GE50514

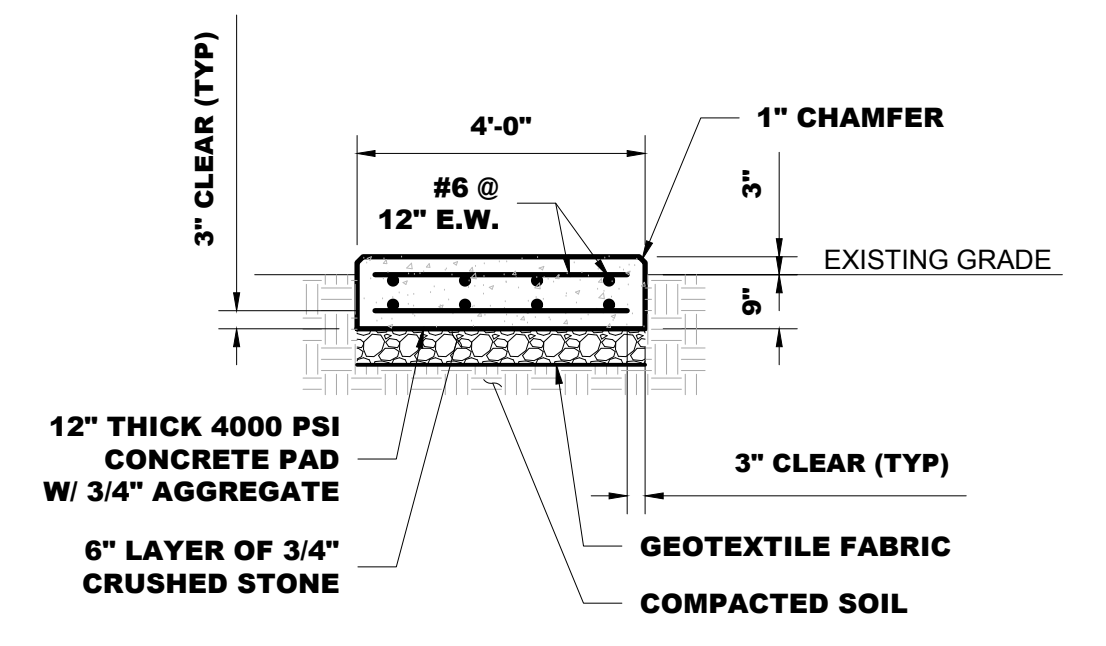
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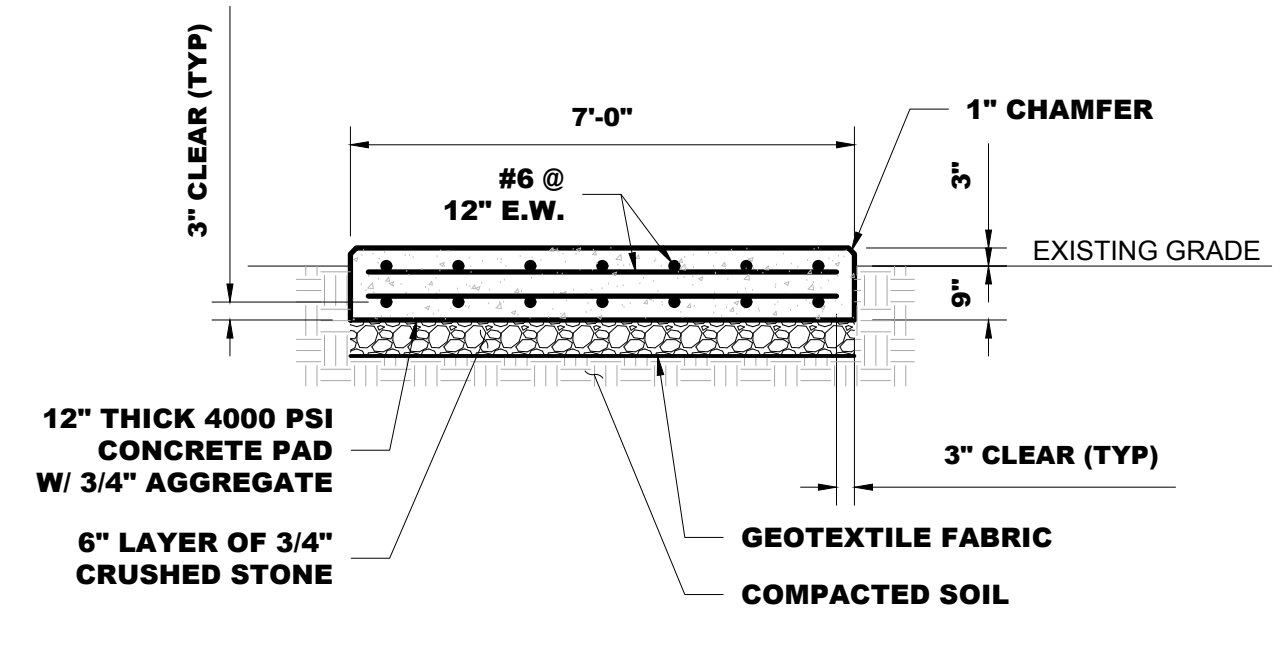
1
EQUIPMENT LAYOUT PLAN
Z-6 N.T.S.



2
CONCRETE PAD PLAN
Z-6 N.T.S.



3
CONCRETE PAD SECTION
Z-6 N.T.S.



4
CONCRETE PAD SECTION
Z-6 N.T.S.



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STRUCTURAL NOTES:

- DESIGN INFORMATION AND GENERAL REQUIREMENTS
 - CODES
 - DESIGN CONFORMS TO INTERNATIONAL BUILDING CODE (IBC) 2018 NEW JERSEY EDITION.
 - AMERICAN CONCRETE INSTITUTE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE," ACI 318-14.
 - EARTHWORK
 - FOUNDATIONS
 - FOUNDATIONS HAVE BEEN DESIGNED TO BEAR ON UNDISTURBED RESIDUAL SOILS, CAPABLE OF SAFELY SUPPORTING A NET ALLOWABLE BEARING PRESSURE OF 2000 PSF. IF FOUNDATION CONDITIONS PROVE UNACCEPTABLE AT ELEVATIONS SHOWN, EXCAVATION SHALL BE CARRIED DEEPER AND SHALL BE BACKFILLED WITH LEAN CONCRETE TO PLAN FOOTING BOTTOM, OR REDESIGN OF FOUNDATIONS WILL BE REQUIRED AT THE DIRECTION OF THE ENGINEER.
 - DESIGN, FURNISH AND INSTALL ALL TEMPORARY SHEETING, SHORING AND DRAINAGE NECESSARY TO MAINTAIN THE EXCAVATION AND PROTECT SURROUNDING STRUCTURES AND UTILITIES.
 - THOROUGHLY COMPACT ALL BOTTOM OF FOOTINGS PRIOR TO PLACING ANY CONCRETE.
 - CONCRETE
 - FORMWORK
 - CONCRETE CONSTRUCTION SHALL CONFORM TO "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS," (ACI 301-16).
 - FORMWORK SHALL CONFORM TO ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS."
 - REINFORCEMENT
 - REINFORCING STEEL ASTM A615, GRADE 60. WELDED WIRE ASTM A185 (FLAT SHEET), LAPS 40 BAR DIAMETERS UNLESS NOTED. BARS SHALL BE SECURELY HELD IN ACCURATE POSITION BY SUITABLE ACCESSORIES, TIE BARS, SUPPORT BARS, ETC. HOOK LENGTHS SHALL BE 12 BAR DIAMETERS.
 - CONCRETE COVER FOR REINFORCING BARS SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED:

FOOTINGS & SLABS CAST AGAINST GROUND	3"
AT BARS GREATER THAN #5	2"
AT BARS #5 OR LESS	1 1/2"
CONCRETE NOT TO BE EXPOSED TO GROUND OR WEATHER	
BEAMS, GIRDERS & COLUMNS	1 1/2"
SLABS & WALLS	3/4"
 - CAST-IN-PLACE-CONCRETE
 - MINIMUM 28 DAY CYLINDER STRENGTH AND MAXIMUM SLUMP, PRIOR TO ADDITION OF SUPER PLASTICIZERS, AS FOLLOWS:

	F _c (PSI)	SLUMP
CLASS I FOOTINGS	3000	3"
CLASS III INTERIOR ELEVATED SLABS & WALLS	4000	4"
CLASS V OTHER WORK	4000	4"
 - CLASS VI LEAN CONCRETE FOR OVER-EXCAVATION OF FOUNDATIONS 2000 | N/A | - MIX DESIGN TO BE IN ACCORDANCE WITH ACI 318, CHAPTER 5. NO CALCIUM CHLORIDE OR ADMIXTURE CONTAINING CHLORIDES SHALL BE USED IN ANY CONCRETE.
 - COARSE AGGREGATE FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C33 SIZE #57. COARSE AGGREGATE FOR LIGHT WEIGHT CONCRETE SHALL CONFORM TO ASTM C330 GRADED 3/4" TO 1/4".
 - COLD WEATHER PLACEMENT SHALL COMPLY WITH ACI 306.1
 - HOT WEATHER PLACEMENT SHALL COMPLY WITH ACI 305 R.
 - CHAMFER ALL EXPOSED EDGES 3/4".
 - THE MAXIMUM TEMPERATURE OF ALL CONCRETE AT DELIVERY TO THE SITE SHALL BE 85°F. TOTAL DELIVERY TIME SHALL BE LESS THAN 75 MIN.
 - STRUCTURAL STEEL
 - MATERIALS
 - STRUCTURAL STEEL ASTM A992 || MISC & PLATE | ASTM A36, U.N.O. |
| HSS | ASTM A500, GRADE B, F_y=46 ksi |
| PIPES | ASTM A53, GRADE B |
 - BOLTS ASTM A325 U.N.O. | - WELDING ELECTRODES AWS A5.1 (E70XX) | - STEEL CONSTRUCTION SHALL CONFORM TO "SPECIFICATION FOR STRUCTURAL STEEL FOR BUILDINGS".
 - WELDING SHALL CONFORM TO AWS D1.1 "STRUCTURAL WELDING CODE".
 - THE FABRICATOR SHALL FURNISH CHECKED SHOP AND ERECTION DRAWINGS TO THE ENGINEER, AND OBTAIN APPROVAL PRIOR TO FABRICATING ANY STRUCTURAL STEEL. SHOP DRAWINGS SHALL CONFORM TO AISC "DETAILING FOR STEEL CONSTRUCTION".
 - CONNECTIONS
 - SHOP CONNECTIONS MAY BE BOLTED OR WELDED.
 - FIELD CONNECTIONS BOLTED WITH A325-N BOLTS, (INSTALLED SNUG TIGHT) UNLESS OTHERWISE SPECIFIED OR IF WELDED CONNECTIONS ARE NOTED ON DRAWINGS.
 - FIELD CONNECTIONS SHALL BE MADE WITH HIGH TENSILE BOLTS AND HARDENED WASHERS EXCEPT AS INDICATED ON THE DESIGN DRAWINGS.
 - CONNECTIONS NOT SHOWN ON DRAWINGS SHALL BE DESIGNED BY THE STEEL FABRICATOR. CONNECTIONS SHALL BE DESIGNED IN ACCORDANCE WITH AISC "SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS" AND AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES".
 - DO NOT FIELD CUT OR ALTER STRUCTURAL MEMBERS WITHOUT PRIOR WRITTEN APPROVAL OF ENGINEER.
 - FINISHES
 - STRUCTURAL STEEL SHALL BE HOT DIP GALVANIZED AFTER FABRICATION PER ASTM A123.
 - ALL STEEL SHALL BE CLEANED OF RUST, LOOSE MILL SCALE AND OTHER FOREIGN MATERIALS AND BE HOT DIPPED GALVANIZED OR STAINLESS STEEL IF OTHERWISE INDICATED ON PLAN.
 - FIELD FABRICATIONS SHALL BE TREATED WITH ZRC COLD GALVANIZING COMPOUND OR EQUAL PRIOR TO ASSEMBLY.
 - BOLTS AND NUTS SHALL BE HOT DIP GALVANIZED PER ASTM A153.

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3	10-29-20	MBM	ISSUED FOR ZONING

AE DESIGN INFO:

DESIGNER: MBM

AE JOB No: 19E0092.001

DRAWING TITLE:

EQUIPMENT PAD
DETAILS & NOTES

DRAWING SHEET:

Z-6

SITE INFORMATION:

SITE NAME:
ALL NORTH
HACKETTSTOWN

SITE ADDRESS:
100 BILBY ROAD
HACKETTSTOWN,
NEW JERSEY 07840

JURISDICTION:
TOWN OF HACKETTSTOWN
WARREN COUNTY, NEW JERSEY

SHEET NUMBER:

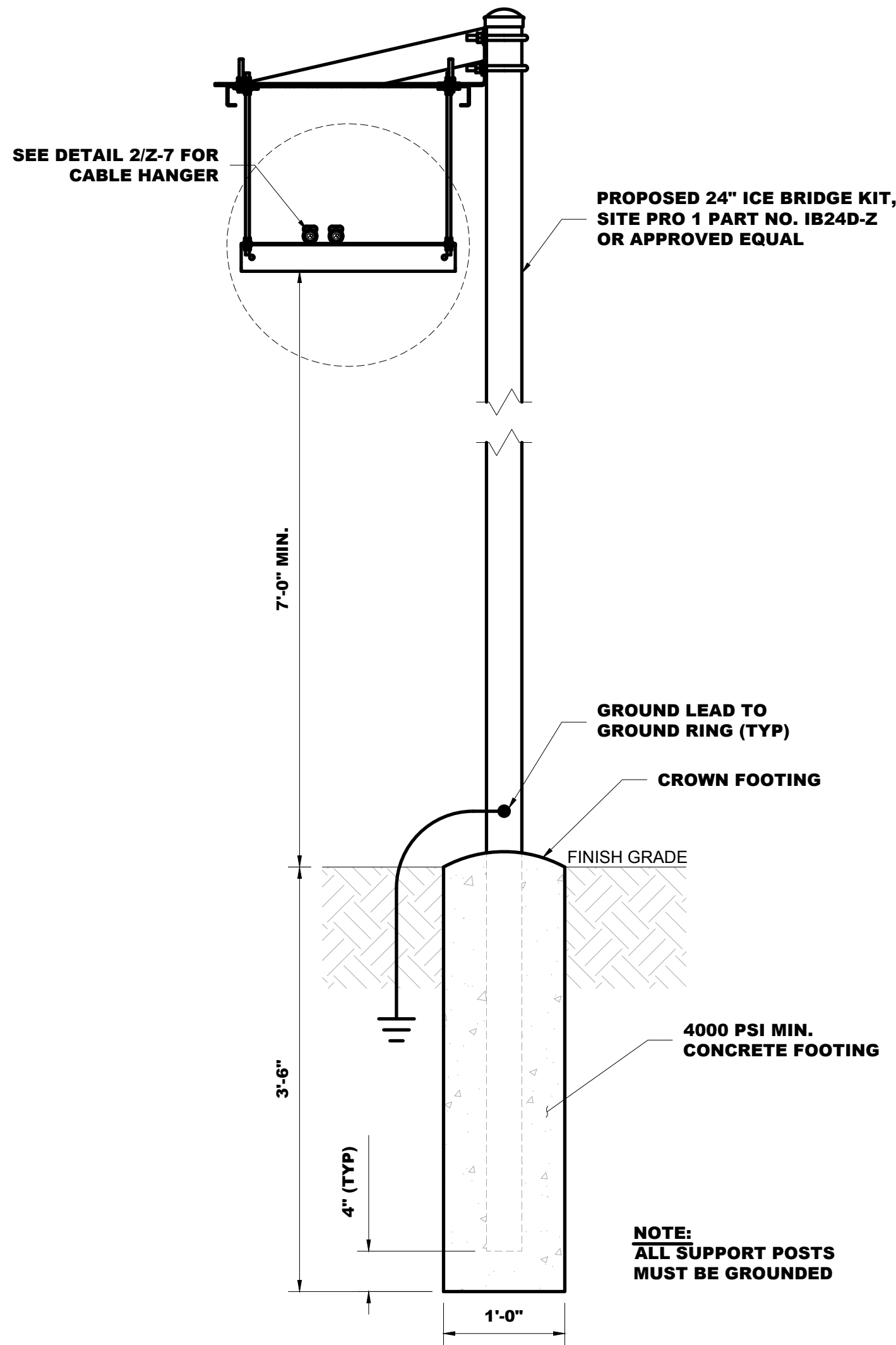
7 OF 12

ENGINEER SEAL:

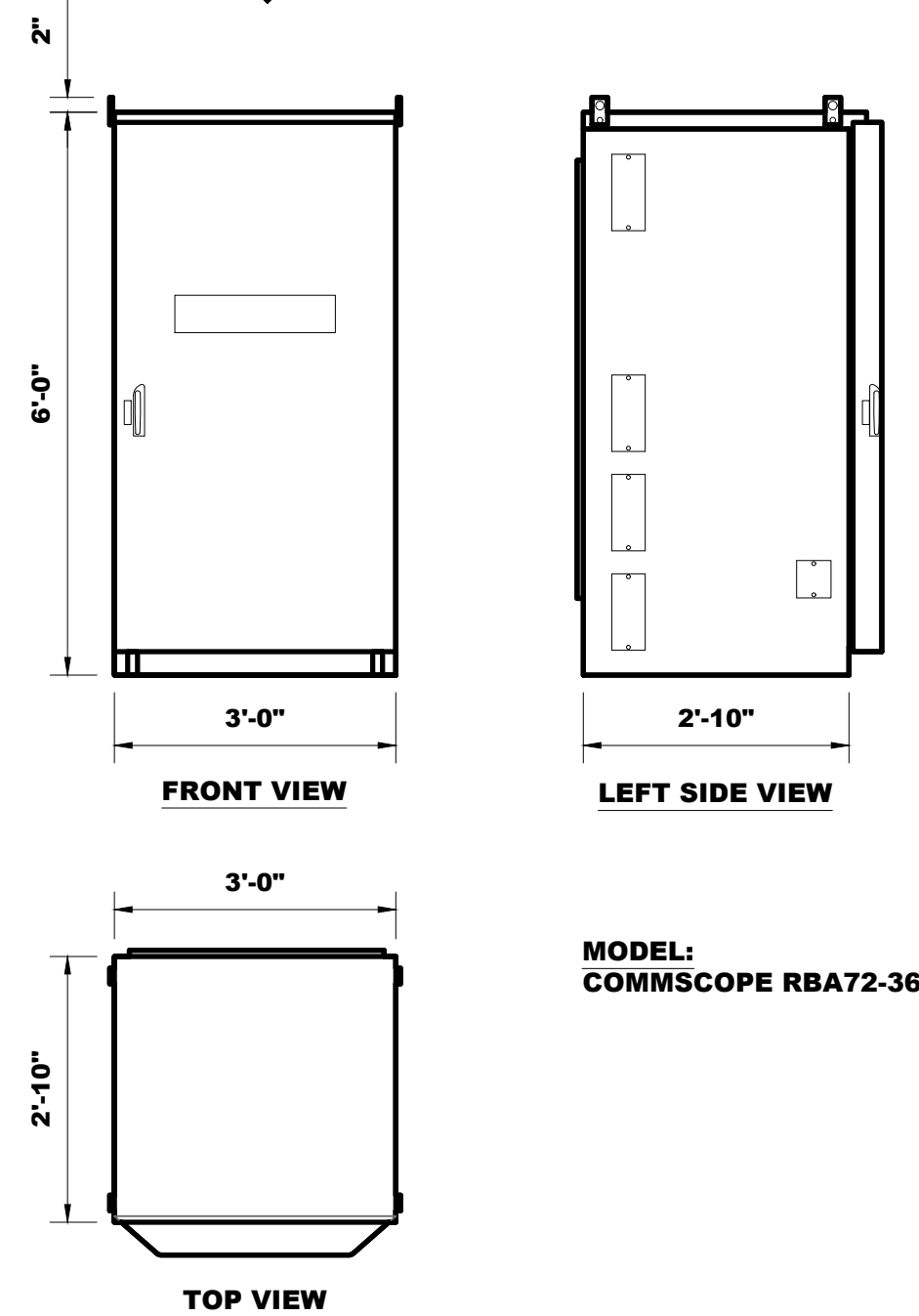
AE CERTIFICATION OF AUTHORIZATION
245A28073100

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LICENSE # GE05014

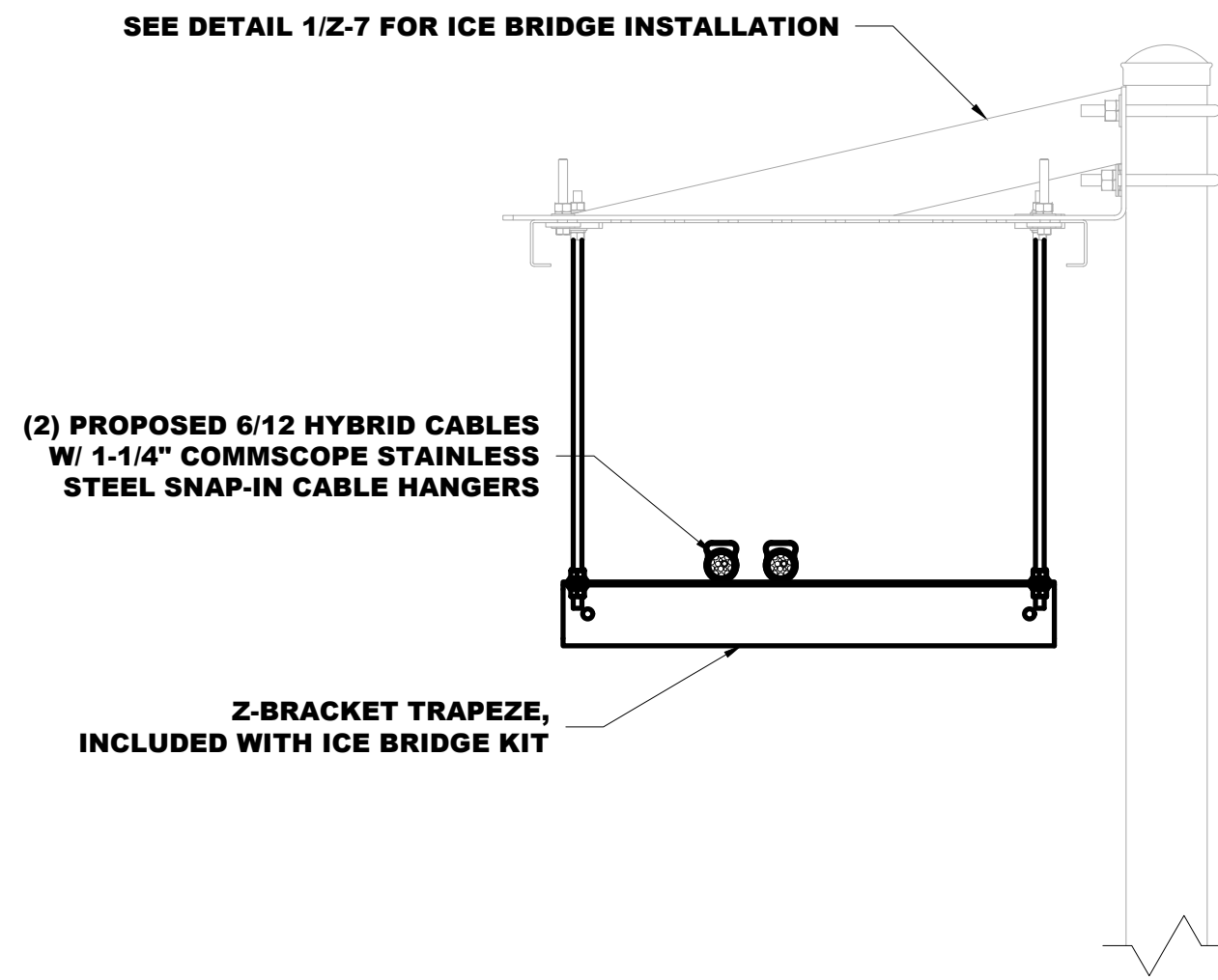
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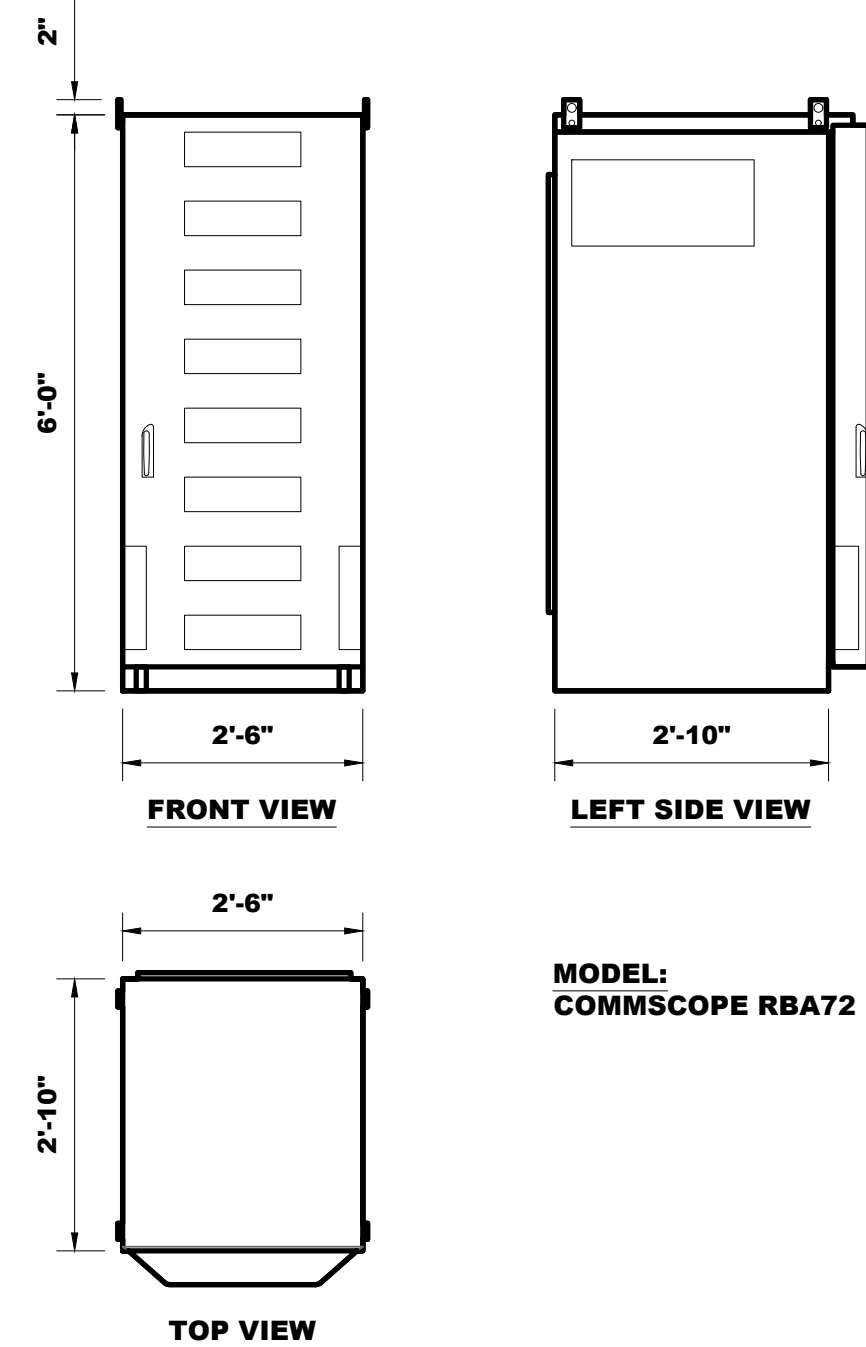
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Z-7 N.T.S.



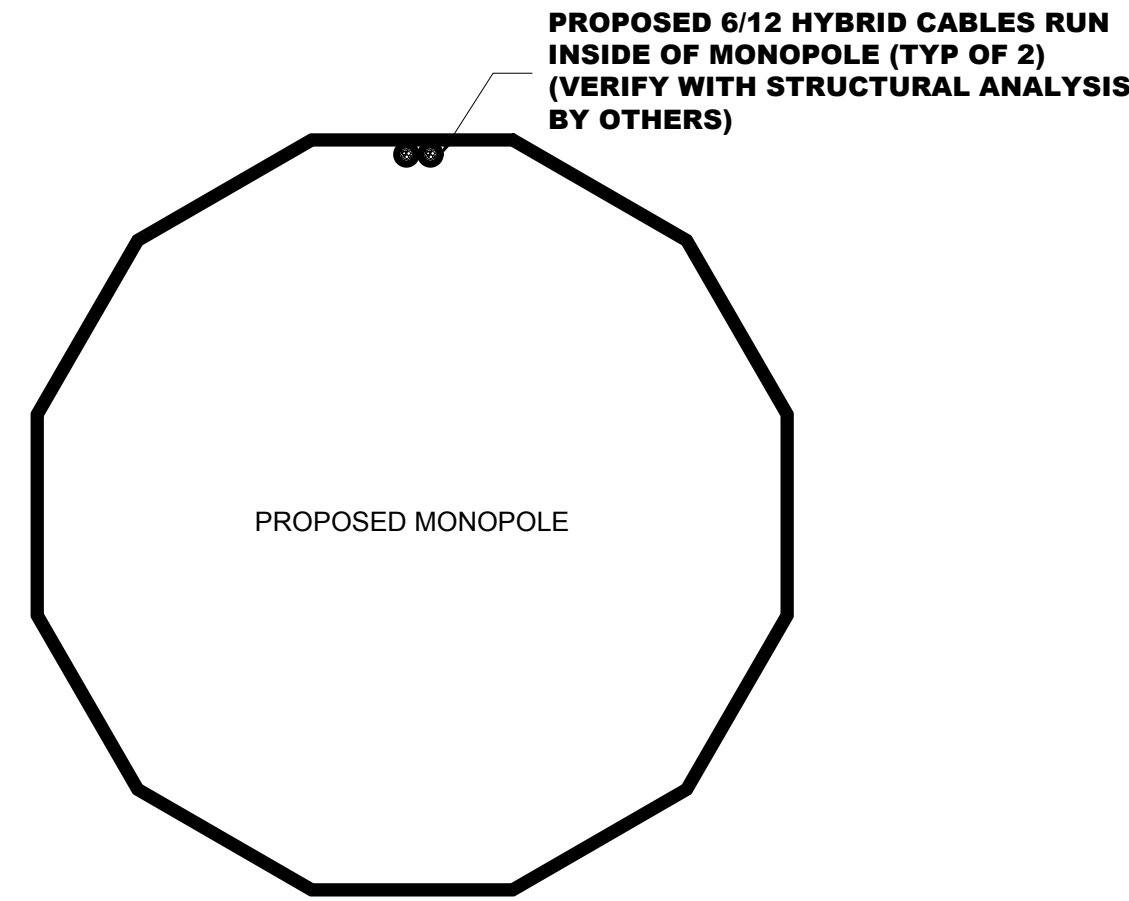
4 BATTERY CABINET DETAIL
Z-7 N.T.S.



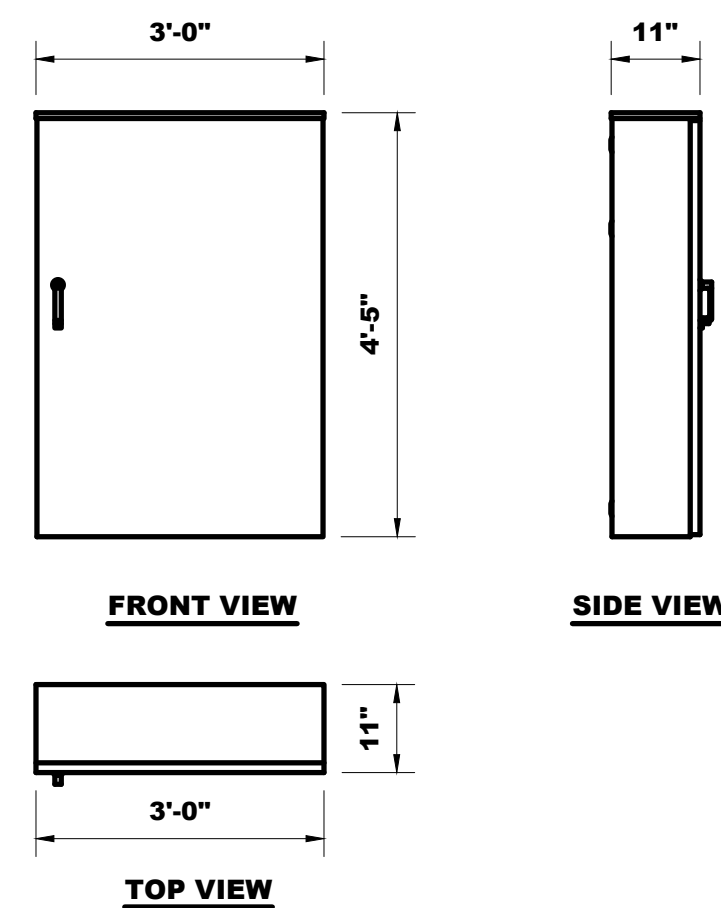
2 CABLE SUPPORT SECTION
Z-7 N.T.S.



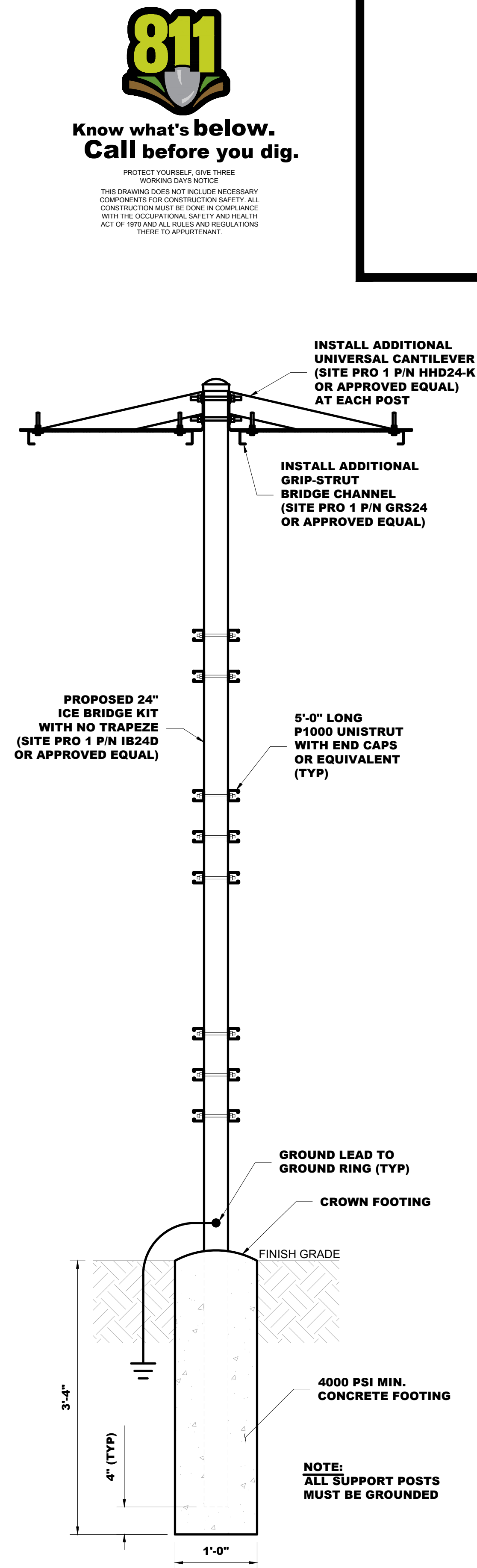
5 EQUIPMENT CABINET DETAIL
Z-7 N.T.S.



3 CABLE ROUTING SECTION
Z-7 N.T.S.



6 POWER TRANSFER LOAD CENTER (PTLC) DETAIL
Z-7 N.T.S.



7 EQUIPMENT ICE BRIDGE SECTION
Z-7 N.T.S.



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VERIZON WIRELESS
2 VALLEY SQUARE / SUITE 300
512 EAST TOWNSHIP LINE ROAD
BLUE BELL, PENNSYLVANIA 19422



REVISIONS:			
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5	01-27-21	MBM	REVISED ZONING
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3	10-29-20	MBM	ISSUED FOR ZONING

AE DESIGN INFO:
DESIGNER: MBM
AE JOB No: 19E0092.001

DRAWING TITLE:

CONSTRUCTION
DETAILS

DRAWING SHEET:

Z-7

SITE INFORMATION:

SITE NAME:
ALL NORTH
HACKETTSTOWN

SITE ADDRESS:
100 BILBY ROAD
HACKETTSTOWN,
NEW JERSEY 07840

JURISDICTION:
TOWN OF HACKETTSTOWN
WARREN COUNTY, NEW JERSEY

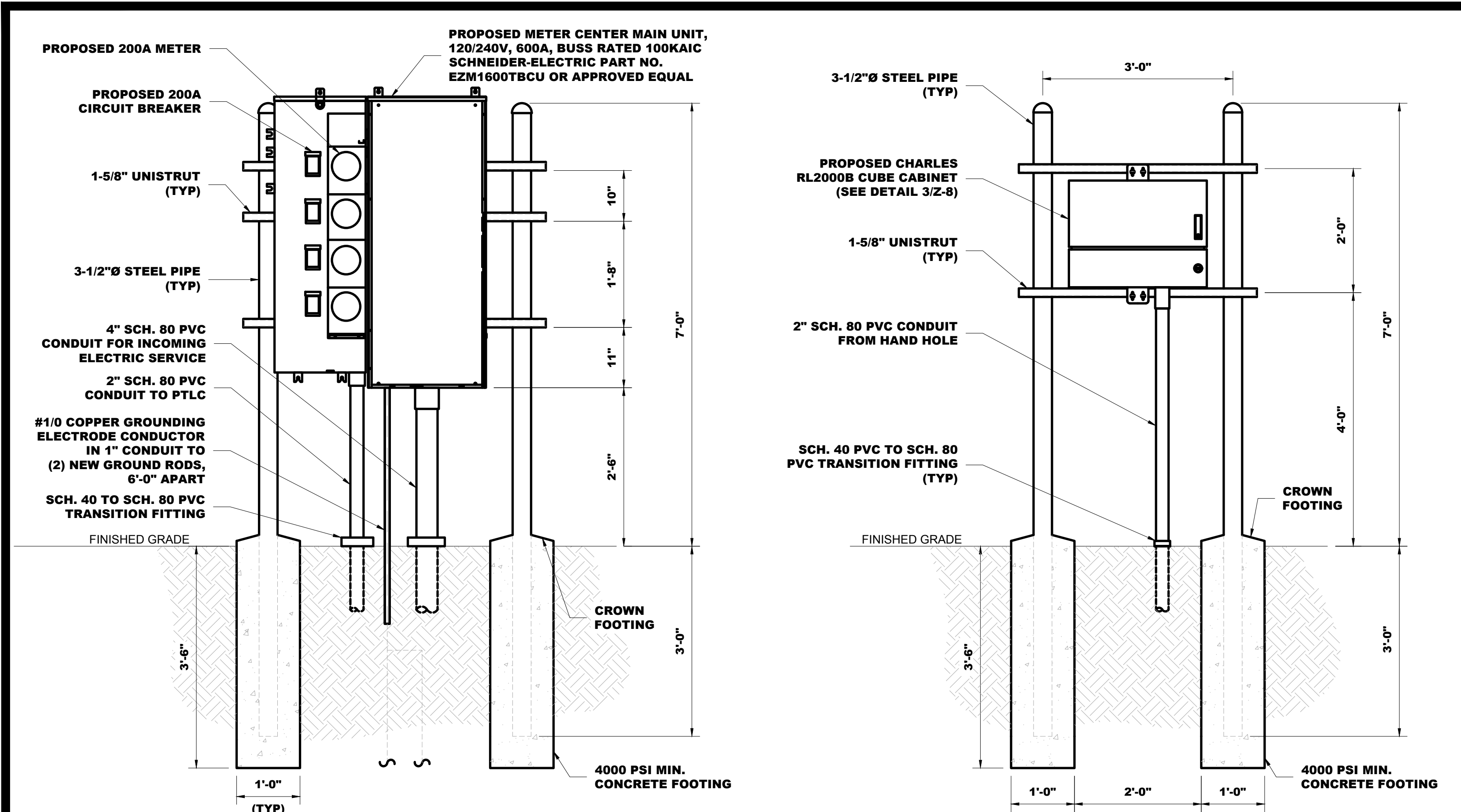
SHEET NUMBER:

8 OF 12

ENGINEER SEAL:
AE CERTIFICATION OF AUTHORIZATION
24GA28073100

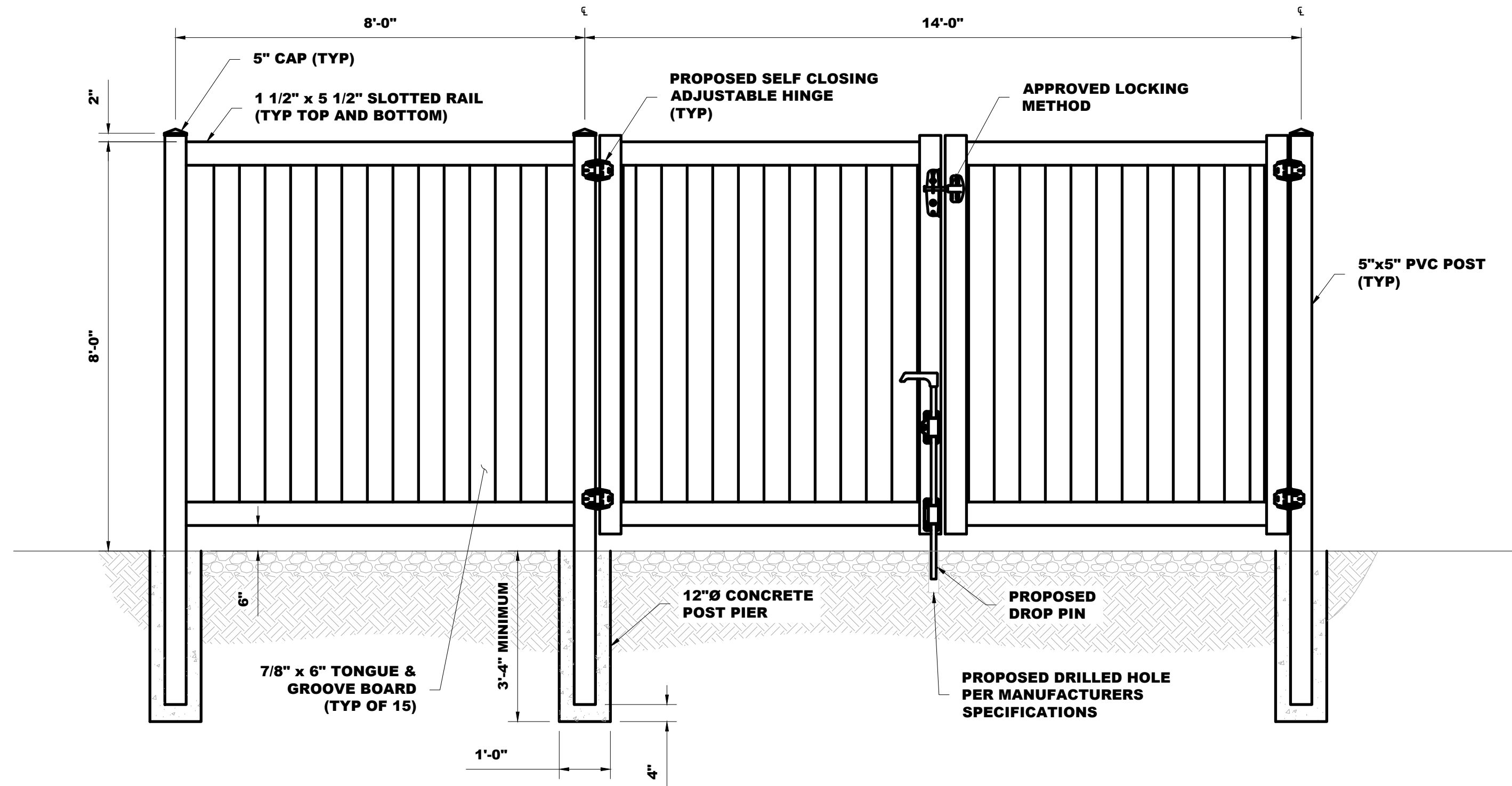
ANDREW M. MILLER, PE
NEW JERSEY PROFESSIONAL ENGINEER
LICENSE # GE50514

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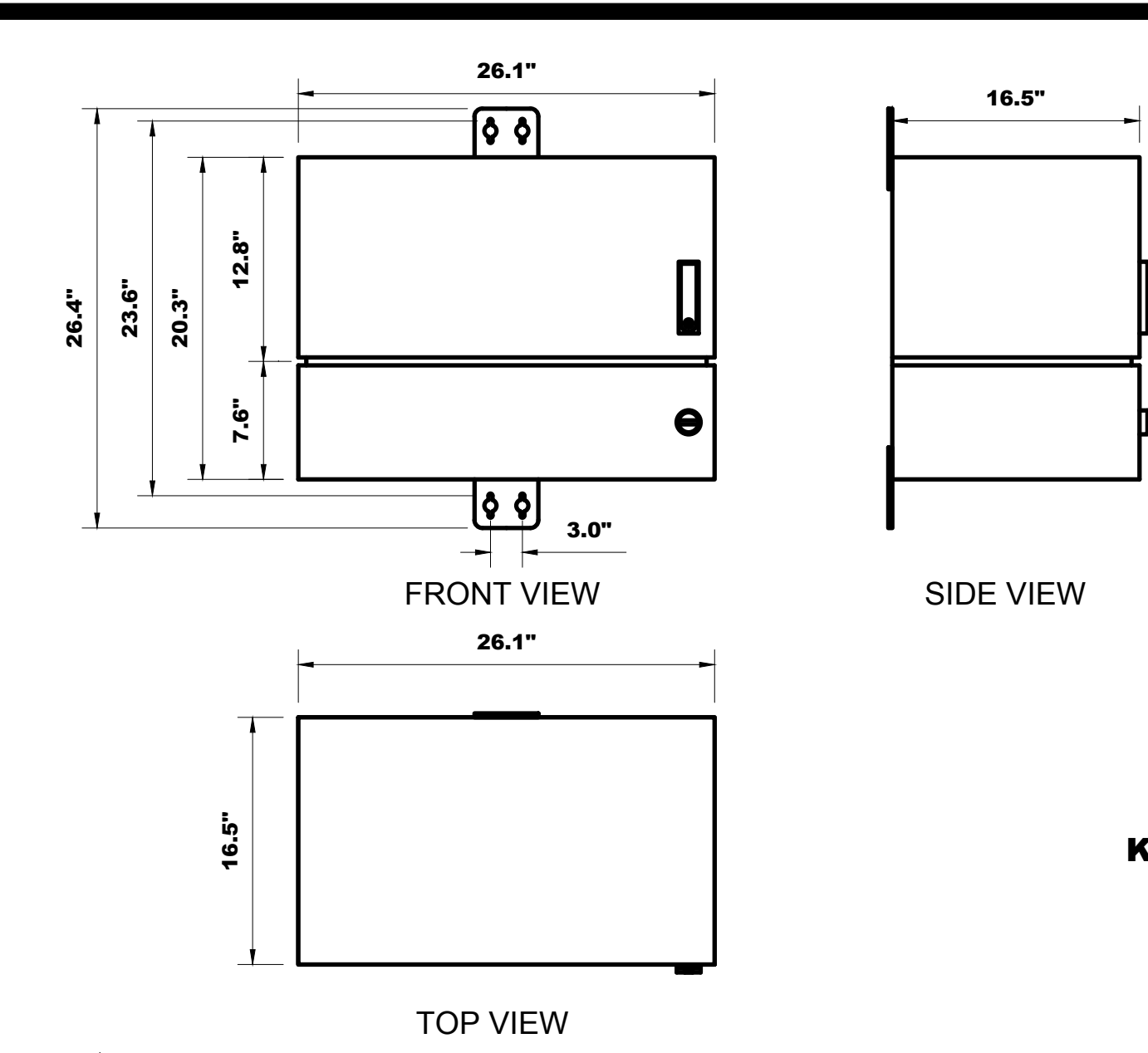


1 METER CENTER ON H-FRAME DETAIL
Z-8 N.T.S.

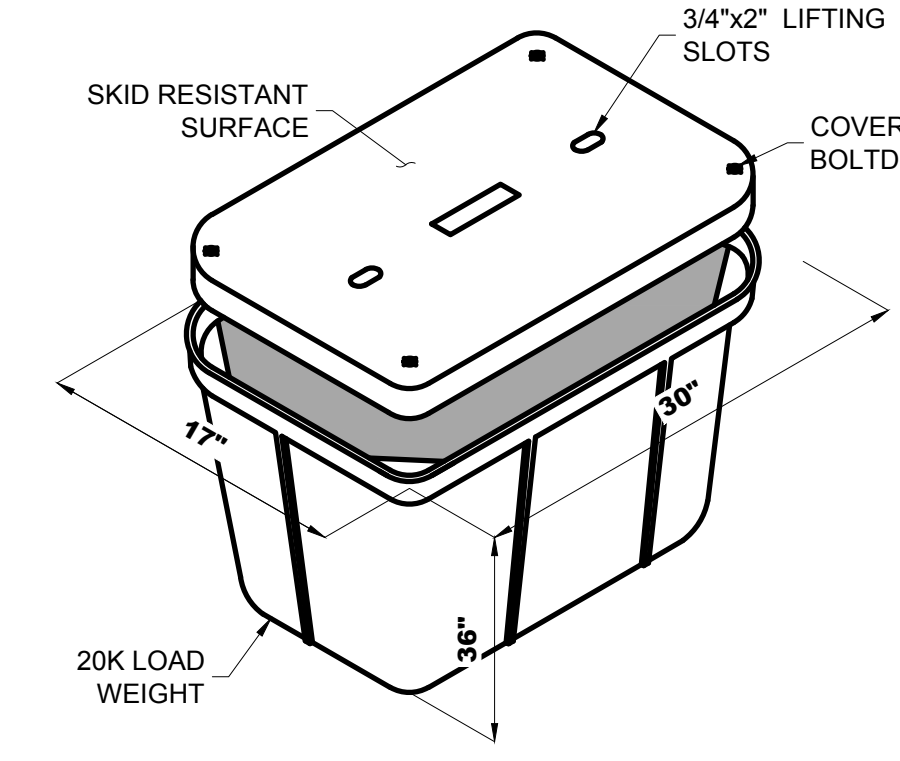
2 FIBER CUBE ON H-FRAME DETAIL
Z-8 N.T.S.



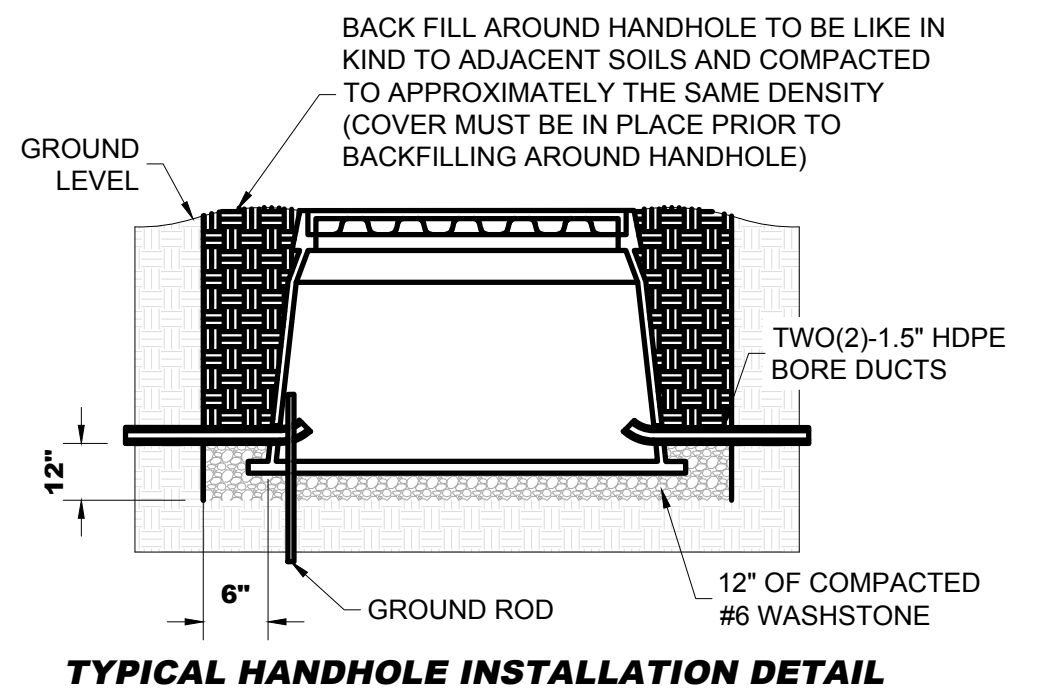
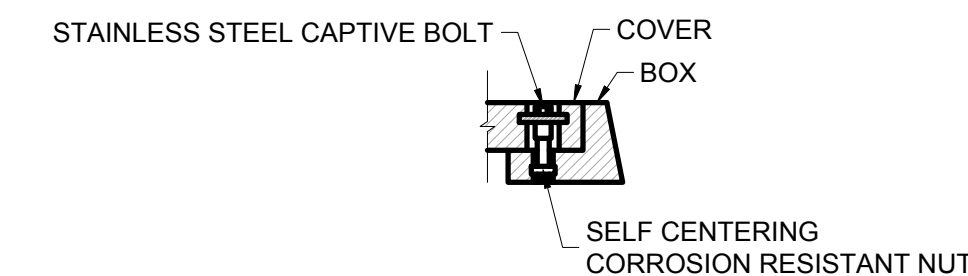
5 VINYL FENCE & GATE DETAIL
Z-8 N.T.S.



3 CHARLES RL2000 CUBE CABINET
Z-8 N.T.S.

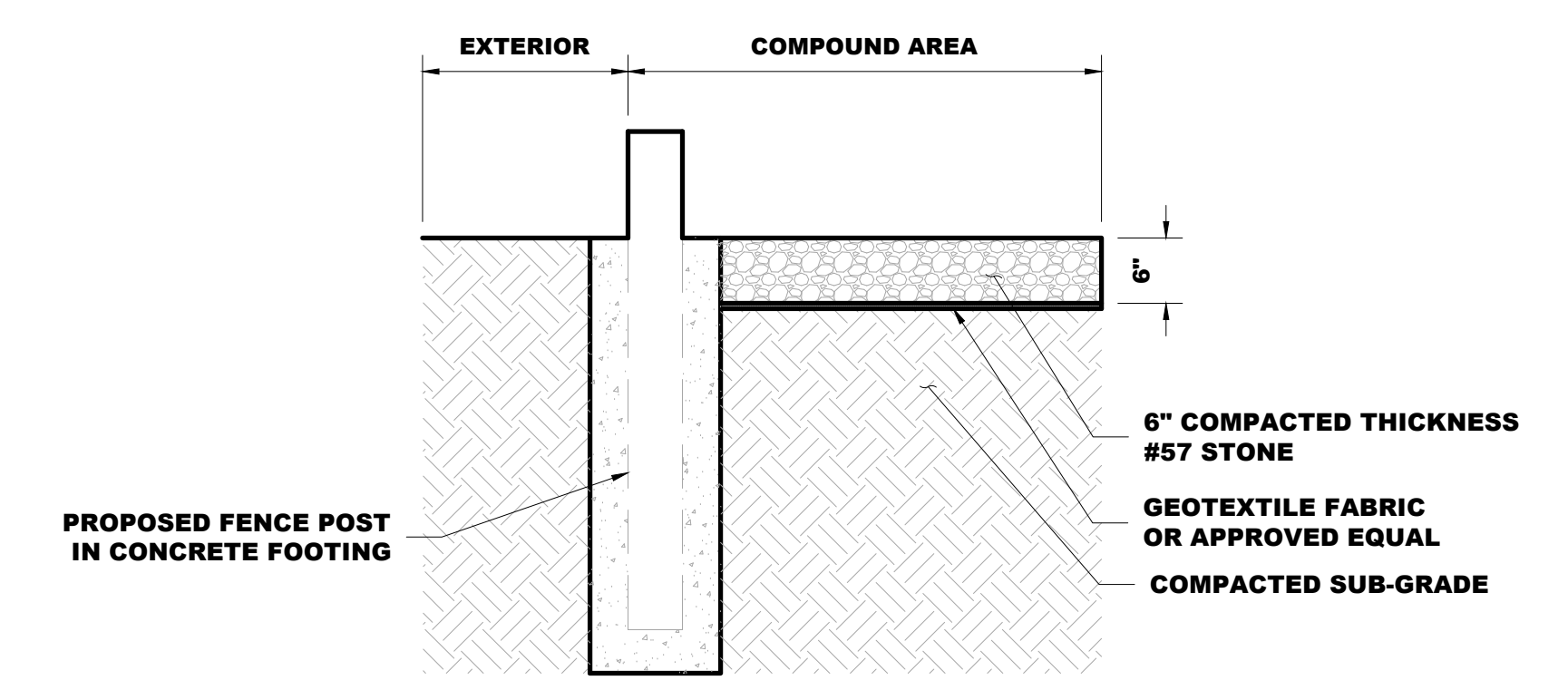


ISOMETRIC DETAIL



- NOTES:**
- HANDHOLE WILL BE PLACED ON A 12" LAYER OF #6 WASHSTONE (3/4" TO 1" STONE) EXTENDING 6" FROM ALL SIDES.
 - CABLE TO BE COILED IN BOTTOM OF HANDHOLE.
 - HANDHOLE TO BE PLACED WITH TOP LEVEL TO GRADE.
 - NO DIRT OR TRASH INSIDE HANDHOLE.
 - ALL POLYMER CONCRETE HANDHOLES TO BE EQUIPPED WITH SECURITY LIDS WITH LOCKING BOLTS.
 - DUCT PLUGS MUST BE USED.
 - FIBER TAG EVERY HANDHOLE.
 - GROUND RODS AT SPLICE LOCATIONS.

4 HANDHOLE DETAIL
Z-8 N.T.S.



6 COMPOUND GRAVEL DETAIL
Z-8 N.T.S.



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REV No	DATE	DESIGNER	DESCRIPTION	

AE DESIGN INFO:
DESIGNER: MBM
AE JOB No: 19E0092.001

DRAWING TITLE:
CONSTRUCTION DETAILS (CONTINUED)

DRAWING SHEET:

Z-8

SITE INFORMATION:
SITE NAME: ALL NORTH HACKETTSTOWN
SITE ADDRESS: 100 BILBY ROAD HACKETTSTOWN, NEW JERSEY 07840

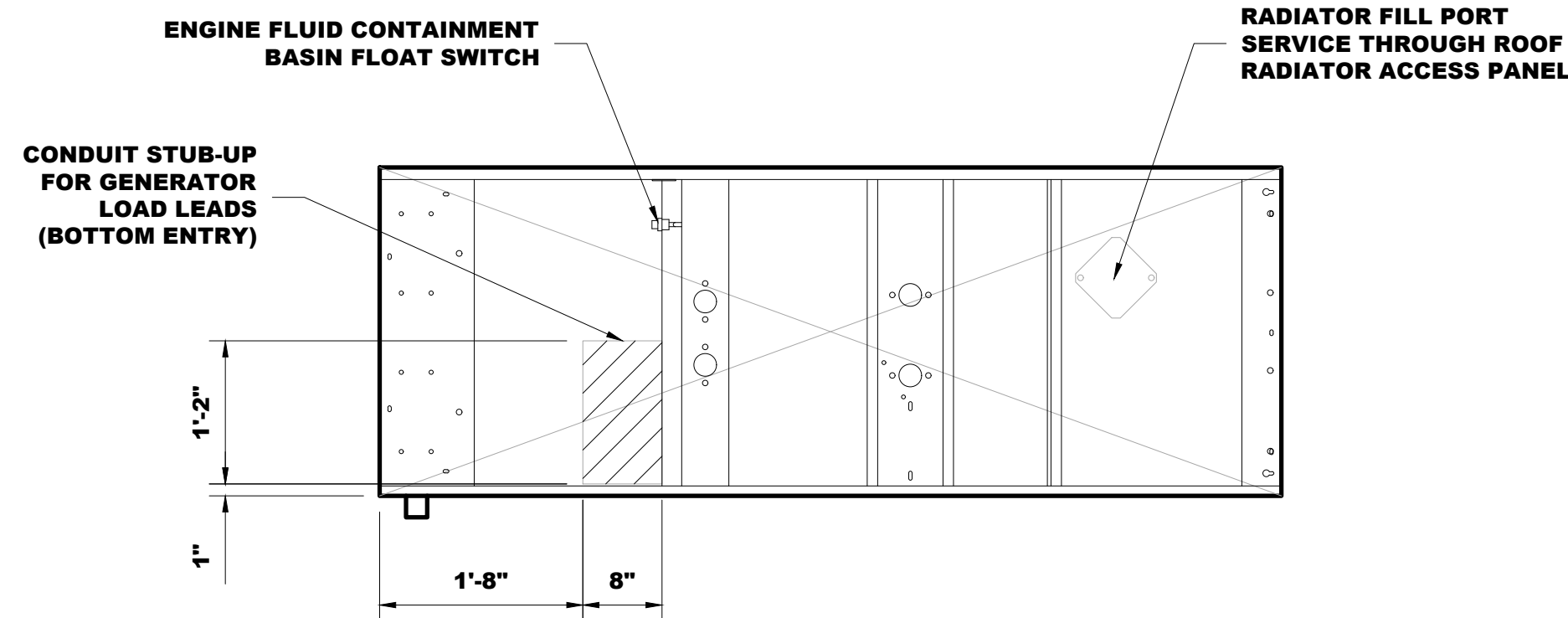
JURISDICTION: TOWN OF HACKETTSTOWN WARREN COUNTY, NEW JERSEY

SHEET NUMBER:
9 OF 12

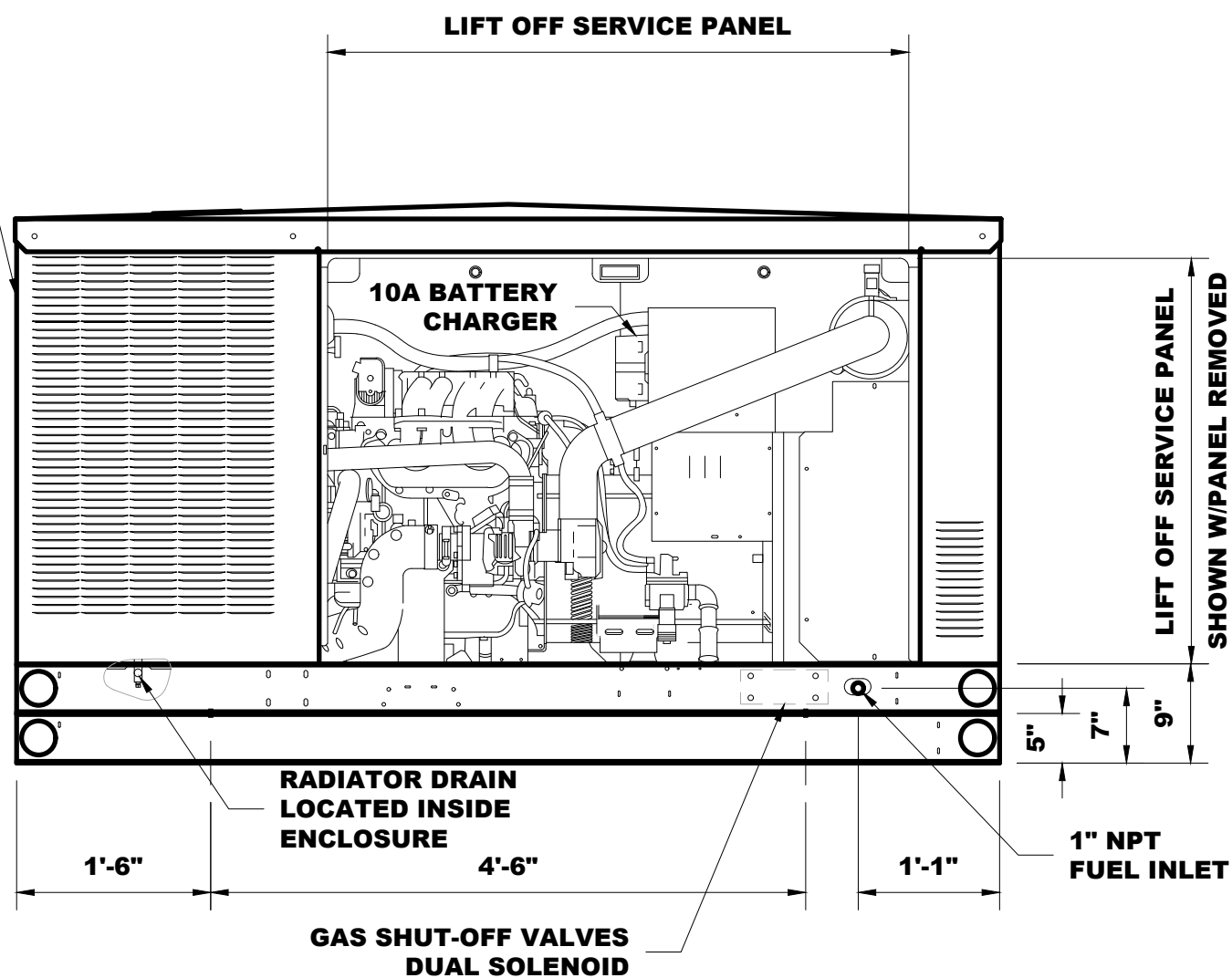
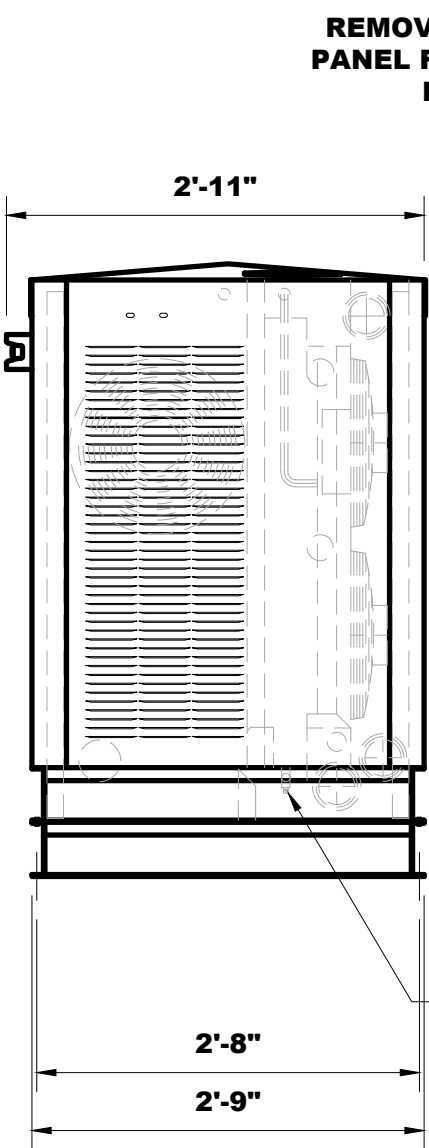
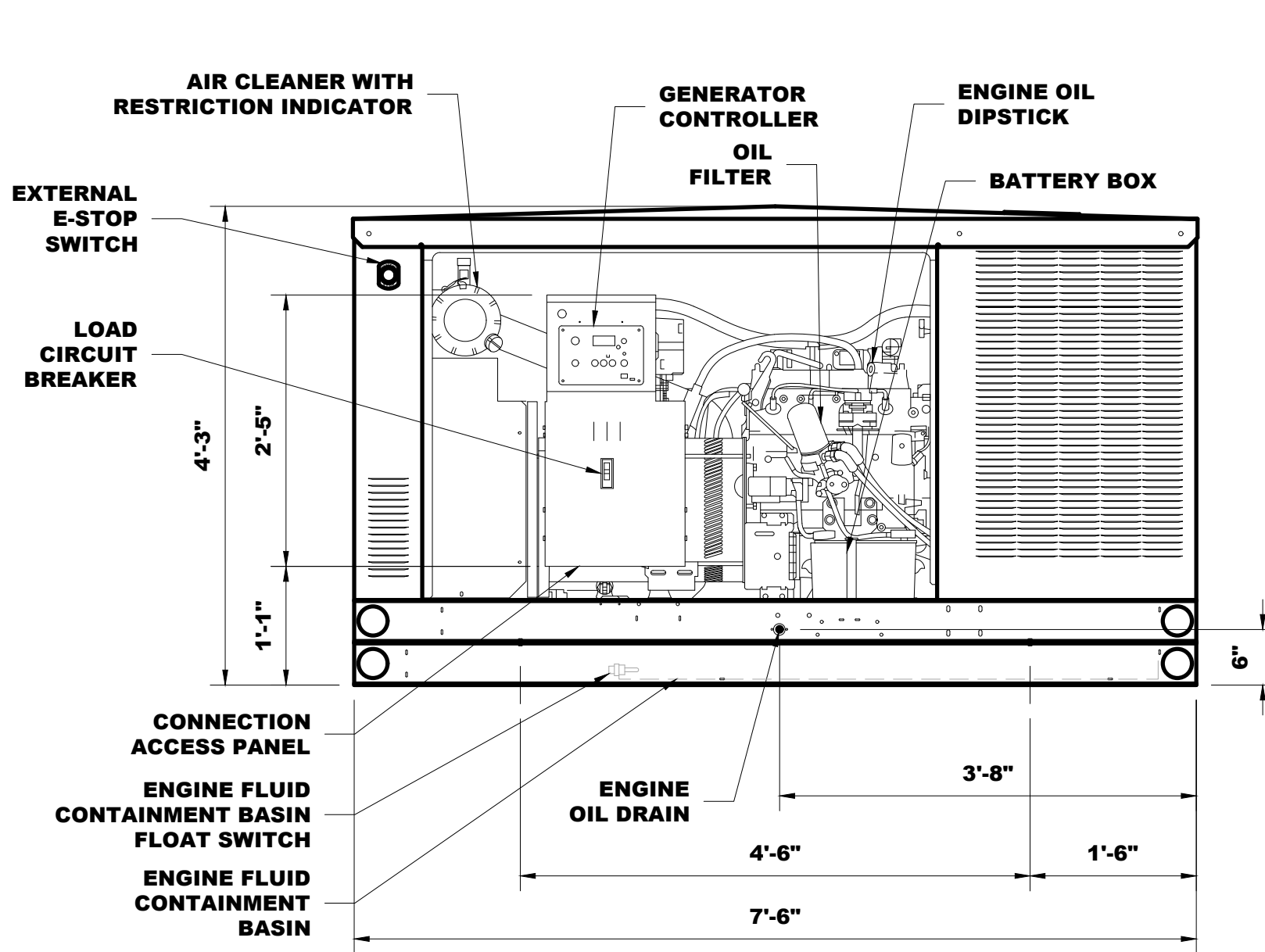
ENGINEER SEAL:
AE CERTIFICATION OF AUTHORIZATION # 24GA28073100

ANDREW M. MILLER, PE
NEW JERSEY PROFESSIONAL ENGINEER
LICENSE # GE50514

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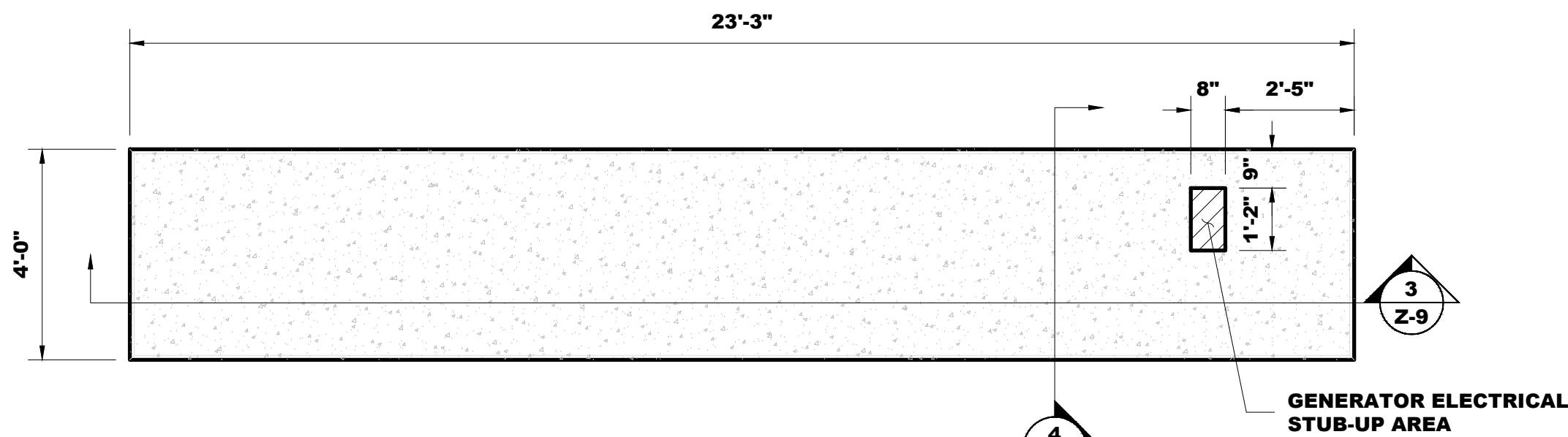
NOTES:
1. APPROXIMATE WEIGHT (WET): 1,600LB
2. ENCLOSURE: ALUMINUM WITH ENCLOSED SILENCER
3. SOUND LEVEL: 67.7 dB(A) at 7m
4. FUEL INLET CONNECTION: 1 NPTF
5. VERIZON PART NUMBERS: 30CCL



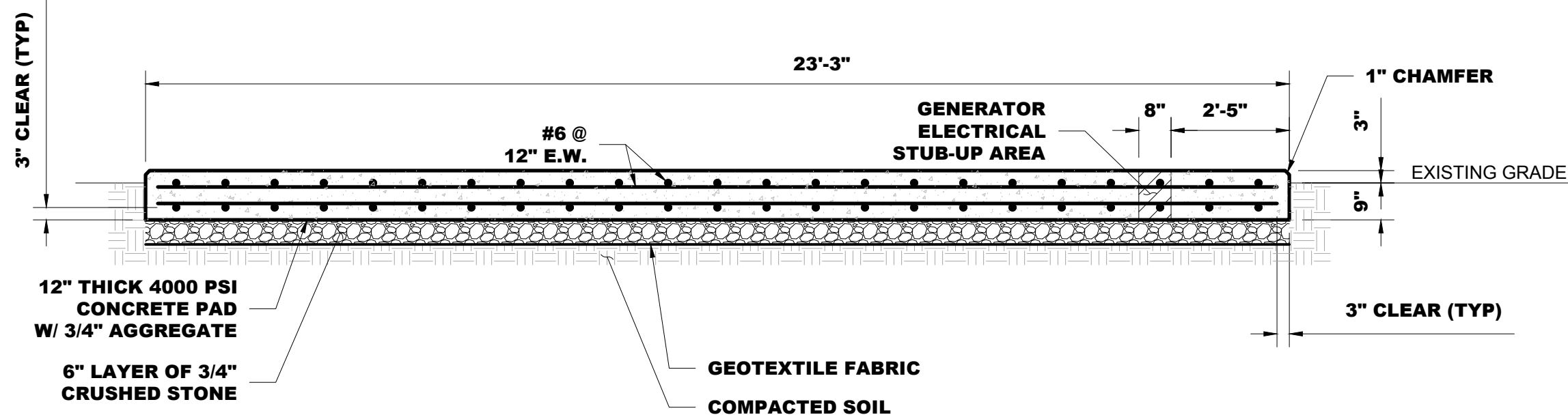
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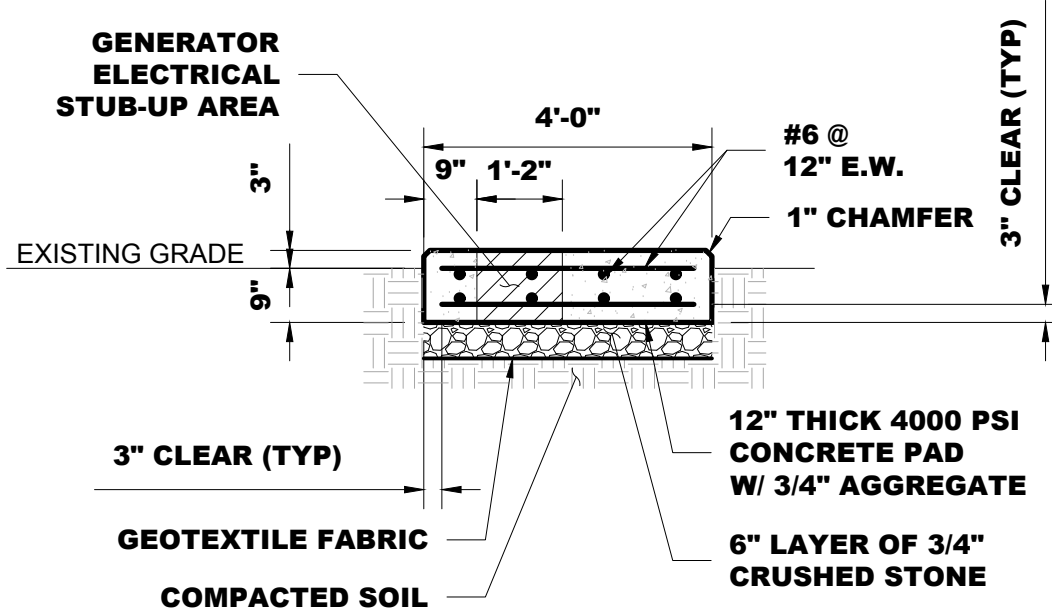
1 KOHLER 30CCL 30kW LP GENERATOR Z-9 N.T.S.



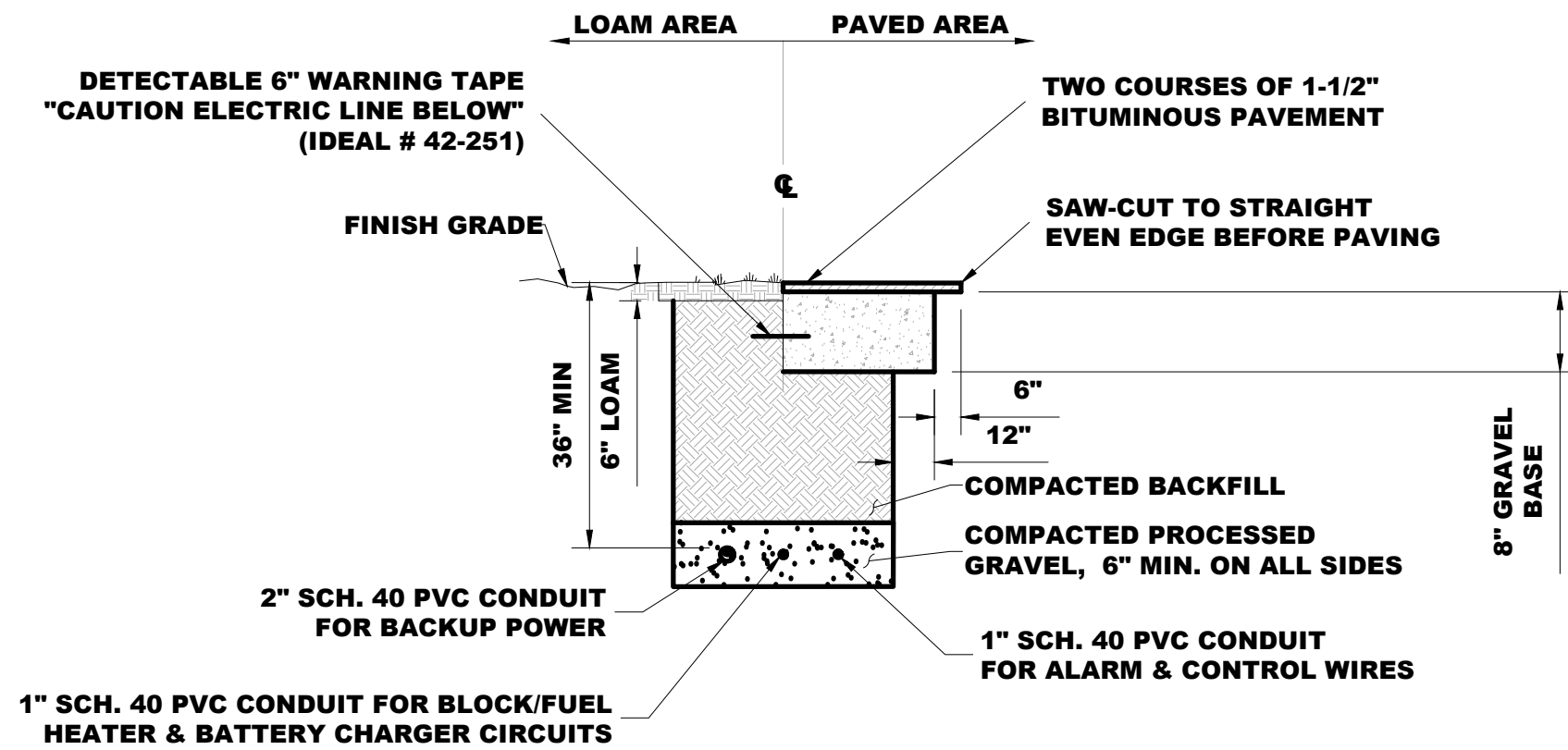
2 GENERATOR PAD PLAN Z-9 N.T.S.



3 GENERATOR PAD SECTION Z-9 N.T.S.



4 GENERATOR PAD SECTION Z-9 N.T.S.



NOTE:
EXCAVATE EXISTING SUBGRADE AS REQUIRED TO INSTALL CONDUITS IN ACCORDANCE WITH ALL APPLICABLE LOCAL AND NEC CODES. SEE UTILITY AND SITE PLANS. PROVIDE APPROVED 2'-0"x3'-0" PULL BOXES AS REQUIRED FOR EVERY 250'-0" OF CONDUIT RUN. COORDINATE INSTALLATION W/ ALL UTILITY COMPANIES FOR INTERFACING AT TERMINATION POINTS. PROVIDE FULL LENGTH PULL ROPES (TYP).

5 GENERATOR CONDUIT TRENCH DETAIL Z-9 N.T.S.

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BLUE BELL, PENNSYLVANIA 19422



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REV No	DATE	DESIGNER	DESCRIPTION
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6	04-22-21	MBM	REVISED LAYOUT
5	01-27-21	MBM	REVISED ZONING
4	12-03-20	MBM	ISSUED FOR ZONING
3	10-29-20	MBM	ISSUED FOR ZONING

AE DESIGN INFO:
DESIGNER: MBM
AE JOB No: 19E0092.001

DRAWING TITLE:

GENERATOR
DETAILS

DRAWING SHEET:

Z-9

SITE INFORMATION:

SITE NAME:
ALL NORTH
HACKETTSTOWN
SITE ADDRESS:
100 BILBY ROAD
HACKETTSTOWN,
NEW JERSEY 07840

JURISDICTION:
TOWN OF HACKETTSTOWN
WARREN COUNTY, NEW JERSEY

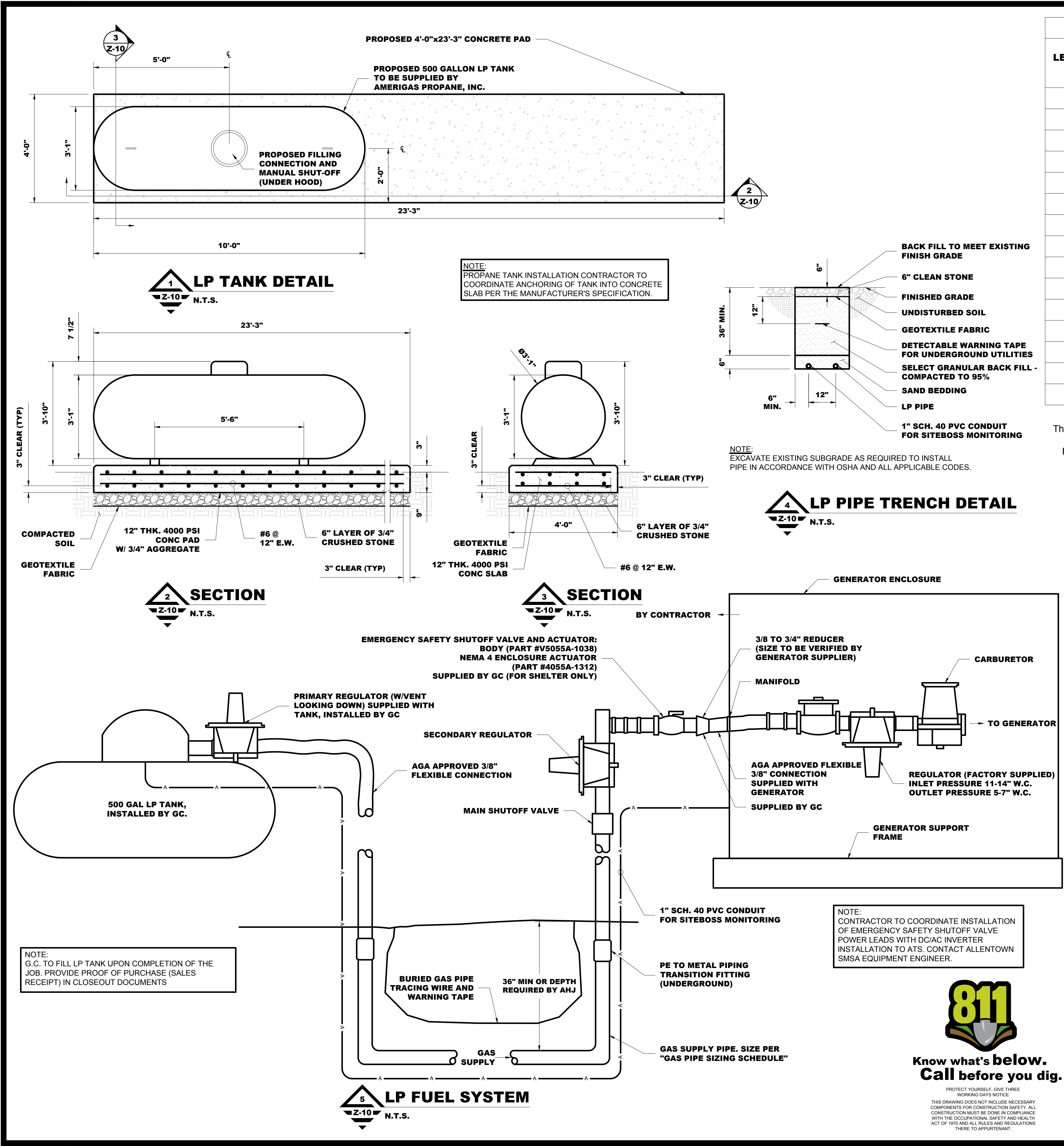
SHEET NUMBER:

10 OF 12

ENGINEER SEAL:
AE CERTIFICATION OF AUTHORIZATION
24GA28073100

ANDREW M. MILLER, PE
NEW JERSEY PROFESSIONAL ENGINEER
LICENSE # GE50514

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LIQUID PROPANE GAS PIPE SIZING CHART									
LENGTH OF PIPE	SIZE OF PIPE								
	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"
10'-0"	275	567	1071	2205	3307	6221	10140	17990	35710
20'-0"	189	393	732	1496	2299	4331	7046	12510	25520
30'-0"	152	315	590	1212	1858	3465	5695	10110	20620
40'-0"	129	267	504	1039	1559	2992	4778	8481	17300
50'-0"	114	237	448	913	1417	2646	4343	7708	15730
60'-0"	103	217	409	834	1275	2394	3908	6936	14150
80'-0"	89	185	346	724	1086	2047	3329	5908	12050
100'-0"	78	162	307	630	976	1811	2991	5309	10830
125'-0"	69	146	275	567	866	1606	2654	4711	9613
150'-0"	63	132	252	511	787	1496	2412	4281	8736
200'-0"	54	112	209	439	665	1282	2083	3618	7382
250'-0"	48	100	185	390	590	1138	1808	3210	6549
300'-0"	43	90	168	353	534	1030	1637	2905	5927
350'-0"	40	83	155	325	491	947	1505	2671	5450
400'-0"	37	77	144	303	458	887	1404	2492	5084

Liquid Propane Gas flow is given in thousands of BTU/hr. - One cubic foot of LP Gas = 2516 BTU
This chart refers to low pressure LP, after regulation. Standard nominal pressure at the burner for Liquid Propane Gas is 11" of water column.
Pipe length must include additional length for all fittings. Add approximately 5 feet of pipe per fitting.

GENERAL NOTES:

- MAINTAIN MINIMUM 1'-0" VERTICAL AND 1'-0" HORIZONTAL SEPARATION OF GAS LINE FROM OTHER UTILITIES.
- CONNECTION POINT MAY VARY WITH GENERATOR MANUFACTURER.
- MAINTAIN 3 FOOT SERVICE CLEARANCE ON ALL SIDES OF GENERATOR.
- G.C. SHALL ANCHOR GENERATOR BASE TO SLAB OR PLATFORM WITH HOLES PROVIDED.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL EQUIPMENT PRIOR TO INSTALLATION.
- CONTRACTOR SHALL COORDINATE INSTALLATION WITH GAS COMPANY & OTHER DISCIPLINES.
- CONTRACTOR SHALL ADHERE TO APPLICABLE STATE & LOCAL CODES.
- CONTRACTOR SHALL COORDINATE LOCATION OF GAS PIPE WITH OTHER UTILITIES.
- FLEXIBLE CONNECTION TO BE SAME SIZE AS PIPING TIE-IN THAT IS PROVIDED BY THE GENERATOR SUPPLIER.
- CONTRACTOR SHALL PROVIDE PIPING TO BE INSTALLED PER GENERATOR MANUFACTURER'S REQUIREMENTS.

SPECIFICATIONS:

- PIPE (ABOVE GROUND): STEEL PIPE: ASTM A53, TYPE E OR S, ELECTRIC-RESISTANCE WELDED OR SEAMLESS, GRADE A OR B, SCHEDULE 40 BLACK STEEL, PAINTED YELLOW.
- PIPE FITTINGS (ABOVE GROUND):
 - GRAY-IRON THREAD FITTINGS: ASME B16.4, CLASS 125, STANDARD PATTERN.
 - UNIONS: ASME B16.39, CLASS 150, BLACK MALLEABLE IRON, FEMALE PATTERN, BRASS TO IRON SEAT, GROUND JOINT.
 - TRANSITION FITTINGS: TYPE, MATERIAL, AND END CONNECTIONS TO MATCH PIPING BEING JOINED.
 - PROVIDE DI-ELECTRIC UNIONS WHERE REQUIRED BETWEEN DIFFERENT METALLIC PIPE MATERIALS.
- PIPE (UNDERGROUND): POLYETHYLENE (PE) PIPE: ASTM D 2513, SDR 11 OR IN ACCORDANCE WITH LOCAL CODES AND REGULATIONS.
- PE FITTINGS (UNDERGROUND): ASTM D 2883, SOCKET TYPE OR ASTM D 3261, BUTT TYPE WITH DIMENSIONS MATCHING ASTM D 2513, SDR AA, PE PIPE.
- TRANSITION FITTINGS: MANUFACTURED PIPE FITTING FOR CONNECTION TO PE PIPE AND WITH ONE ASTM A53/A53M, SCHEDULED 40, BLACK STEEL PIPE END FOR THREADED CONNECTION TO BLACK STEEL PIPE.
- SERVICE-LINE RISER: MANUFACTURED PIPE FITTING WITH PE PIPE INLET FOR CONNECTION TO UNDERGROUND PE PIPE: PE PIPE RISER SECTION WITH PROTECTIVE-COATED, ANODES, STEEL CASING AND THREADED OUTLET FOR THREADED CONNECTION TO ABOVE GROUND STEEL PIPING.

GENERATOR INSTALLATION RESPONSIBILITIES:

- GENERAL CONTRACTOR:
- INSTALL ATS
 - SECURE (BOLT IN HOLES PROVIDED) GENERATOR USING RUBBER ISOLATORS UNDER GENERATOR SUPPORT FRAME AND PROPANE TANK TO THE SLAB OR PLATFORM.
 - INSTALL "SHIP LOOSE" ITEMS TO LP TANK TO INCLUDE THE COVER AND LOW FUEL SWITCH.
 - INSURE REGULATOR DRAINS ARE "FACE DOWN" (REGULATORS ARE TO BE OUTSIDE OF GENERATOR AND LP TANK COVER).
 - RUN STUB UPS FOR LP TO GENERATOR.
- GENERATOR MANUFACTURER CERTIFIED ELECTRICIAN:
- COMPLETE FUEL CONNECTIONS.
 - TERMINATE ALARMS AND CONTROL CIRCUITS TO THE GENERATOR.
 - INSTALL FUEL REGULATORS.
 - FINAL INSPECTION AND STARTUP.
 - NOTIFY OPERATIONS (CELL TECH) TWO DAYS PRIOR TO START-UP SCHEDULE. PLAN ON CELL TECH ARRIVAL EARLY AFTERNOON IF START-UP PROBLEMS INCUR, NOTIFY CELL TECH OF DELAY BEFORE NOON.
 - RUN LOAD TEST (ADDITIONAL COST TO ALLENTOWN SMSA) AS REQUIRED, MOSTLY IN CORE.
 - E-MAIL COPY OF START-UP CHECK OFF LIST TO ALLENTOWN SMSA.

ALLENTOWN SMSA,
LIMITED PARTNERSHIP
A DELAWARE LIMITED
PARTNERSHIP d/b/a
VERIZON WIRELESS
2 VALLEY SQUARE / SUITE 300
512 EAST TOWNSHIP LINE ROAD
BLUE BELL, PENNSYLVANIA 19422



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AE DESIGN INFO:
DESIGNER: MBM
AE JOB No: 19E0092.001

DRAWING TITLE:

LP TANK DETAILS

DRAWING SHEET:

Z-10

SITE INFORMATION:

SITE NAME:
ALL NORTH
HACKETTSTOWN

SITE ADDRESS:
100 BILBY ROAD
HACKETTSTOWN,
NEW JERSEY 07840

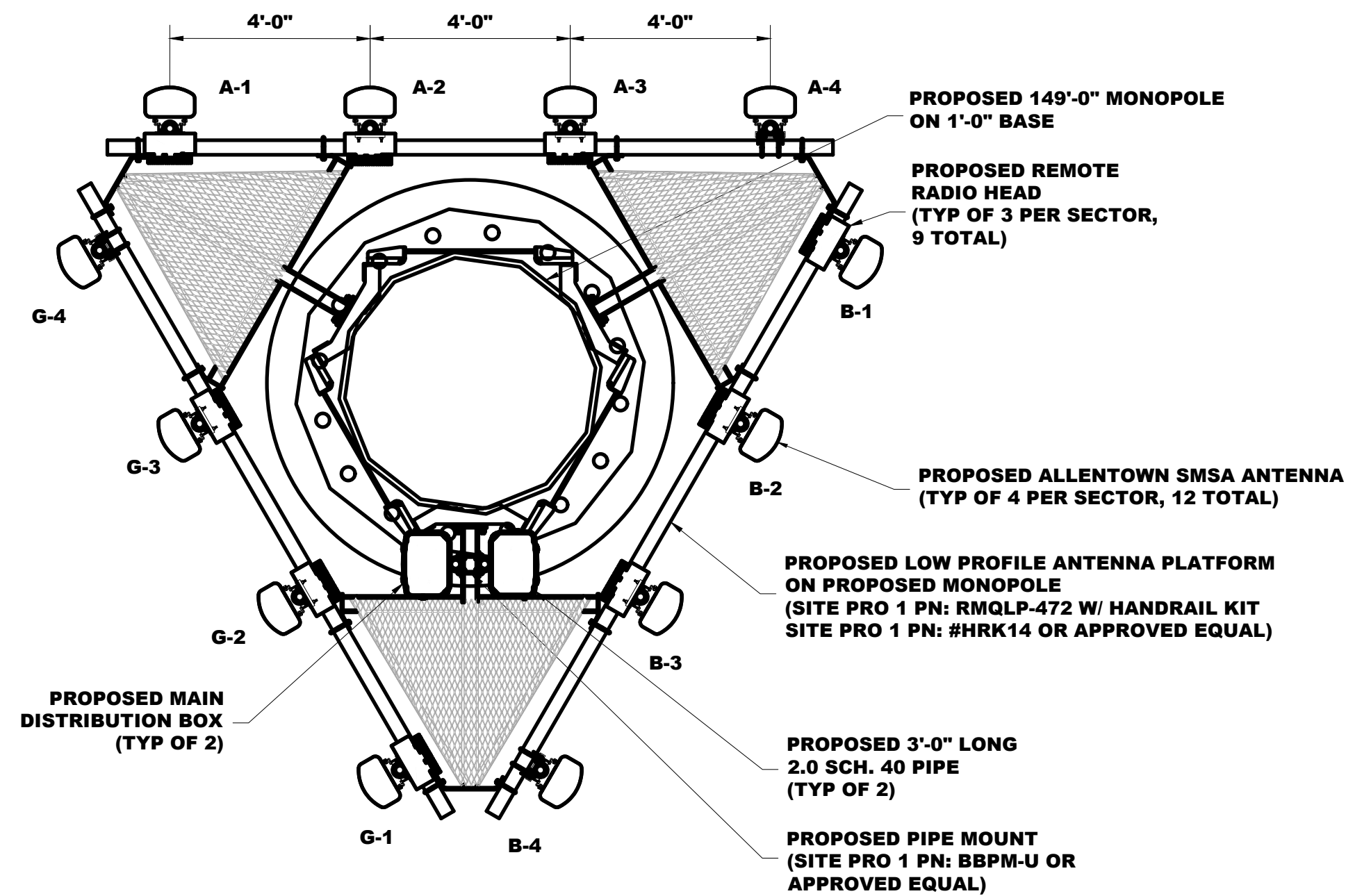
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SHEET NUMBER:
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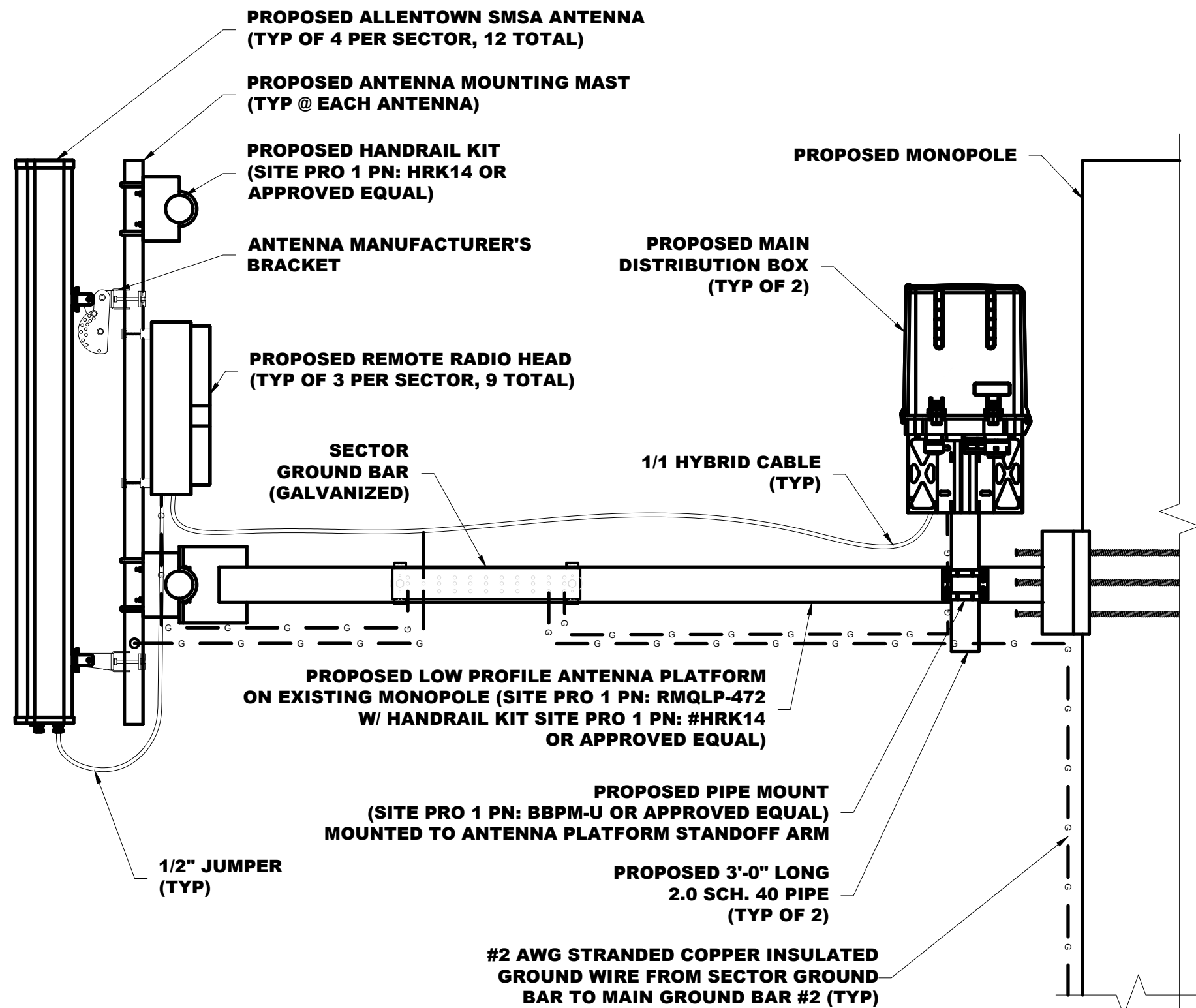
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NOTES:

1. TYPES AND SIZES OF THE ANTENNA CABLE ARE BASED ON ESTIMATED LENGTHS. PRIOR TO ORDERING CABLE, CONTRACTOR TO VERIFY ACTUAL LENGTH BASED ON CONSTRUCTION LAYOUT AND NOTIFY PROJECT MANAGER IF ACTUAL LENGTHS EXCEED ESTIMATED LENGTHS.
2. CONTRACTOR SHALL VERIFY THE DOWNTILT OF EACH ANTENNA WITH A DIGITAL LEVEL.
3. CONTRACTOR TO CONFIRM CABLE COLOR CODING PRIOR TO CONSTRUCTION.
4. COLOR BANDING SHALL BE 2" WIDE ON THE MAIN LINE (5 WRAP MIN.). SPACING TO BE 1" BETWEEN COLORS. COLOR BAND ON JUMPERS 1" WIDE WITH 1" SPACE. START COLOR BANDS 2" BEYOND WEATHERPROOFING. START SECTOR COLOR NEXT TO END CONNECTOR.

1 PROPOSED ANTENNA PLAN
Z-11 N.T.S.



NOTES:

1. ALL ANTENNAS TO BE FURNISHED WITH DOWNTILT BRACKETS. CONTRACTOR TO COORDINATE REQUIRED MECHANICAL DOWNTILT FOR EACH ANTENNA WITH RF ENGINEER.
2. ANTENNA CENTERLINE HEIGHT IS IN REFERENCE TO ELEVATION 0'-0" AGL.
3. CHECK WITH RF ENGINEER FOR LATEST ANTENNA TYPE & AZIMUTH.
4. CONTRACTOR SHALL VERIFY ANTENNA TYPE AND AZIMUTH WITH CONSTRUCTION.

2 ANTENNA MOUNTING DETAIL (SIDE VIEW)
Z-11 N.T.S.

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& DETAILS

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NEW JERSEY 07840

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