



CELLCO PARTNERSHIP d/b/a VERIZON WIRELESS

SITE NAME:
PHI - SATURN COW - FOX FUEL
NEW BUILD
2450 OLD WELSH ROAD
WILLOW GROVE, PENNSYLVANIA 19090

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 ENGINEER IN WRITING. AT NO TIME WILL ANY ADDITIONAL ANTENNAS BE INSTALLED WITHOUT WRITTEN CONSENT FROM TOWER ENGINEER.

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.

**CELLCO PARTNERSHIP d/b/a
VERIZON WIRELESS**

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



SCHEDULE OF REVISIONS	
REV. NO.	DESCRIPTION OF CHANGES
4	
3	
2	
1	
0	
A	10-29-15 ISSUED FOR ZONING
A	10-28-16 ISSUED FOR 90% REVIEW (ZD)

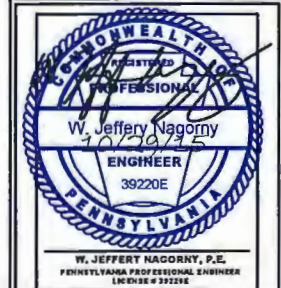
DRAWN BY: TRP
CHECKED BY: JMC
SCALE: NOTED
JOB NO: M132838.00

DRAWING TITLE:
TITLE SHEET

DRAWING SHEET:
T-1

SHEET NUMBER:
1 OF 6

SITE INFORMATION:
SITE NAME:
PHI-SATURN COW - FOX FUEL
SITE ADDRESS:
2450 OLD WELSH ROAD
WILLOW GROVE, PENNSYLVANIA 19090
JURISDICTION:
ABINGTON TOWNSHIP



SITE INFORMATION	
SITE NAME:	PHI - SATURN COW - FOX FUEL
SITE ADDRESS:	2450 OLD WELSH ROAD WILLOW GROVE, PENNSYLVANIA 19090
JURISDICTION:	ABINGTON TOWNSHIP MONTGOMERY COUNTY, PENNSYLVANIA
ZONING:	R4-RESIDENTIAL HIGH DENSITY
APN #	30-00-49012-00-8
PARCEL ID:	30121025
PARCEL SIZE / COMPOUND SIZE:	41,155 S.F. (0.9448 ACRES) / 2500 S.F.
SITE COORDINATES:	N 40° 08' 15.63" (NAD 83) W 75° 07' 25.11" (NAD 83)
GROUND ELEVATION:	318.1' ± (NAVD 88)
STRUCTURE TYPE:	BALLAST MOUNTED MONOPOLE
STRUCTURE HEIGHT:	100'-0" ± AGL (TOP OF MONOPOLE)
ANTENNA RAD CENTER:	95'-0" ± AGL
GROUND LANDLORD NAME:	MALCOM H. FOX
GROUND LANDLORD ADDRESS:	2450 OLD WELSH ROAD WILLOW GROVE, PENNSYLVANIA 19090
APPLICANT:	CELLCO PARTNERSHIP DBA VERIZON WIRELESS 2 VALLEY SQUARE / SUITE 300 512 EAST TOWNSHIP LINE ROAD BLUE BELL, PENNSYLVANIA 19422
APPLICANT CONTACT:	JENNIFER COYLE (610) 420-0775

CODE ANALYSIS	
BUILDING CODE:	IBC 2009 (P.U.C.C)
ELECTRICAL CODE:	NEC 2008
FIRE CODE:	IFC 2009
USE GROUP:	U (UTILITY)
CONSTRUCTION TYPE:	II

PROJECT DESCRIPTION	
1.	TEMPORARY COW TO BE LOCATED IN NEW COMPOUND/LEASE AREA
2.	NEW ANTENNAS TO BE INSTALLED ON TEMPORARY BALLAST MOUNTED MONOPOLE

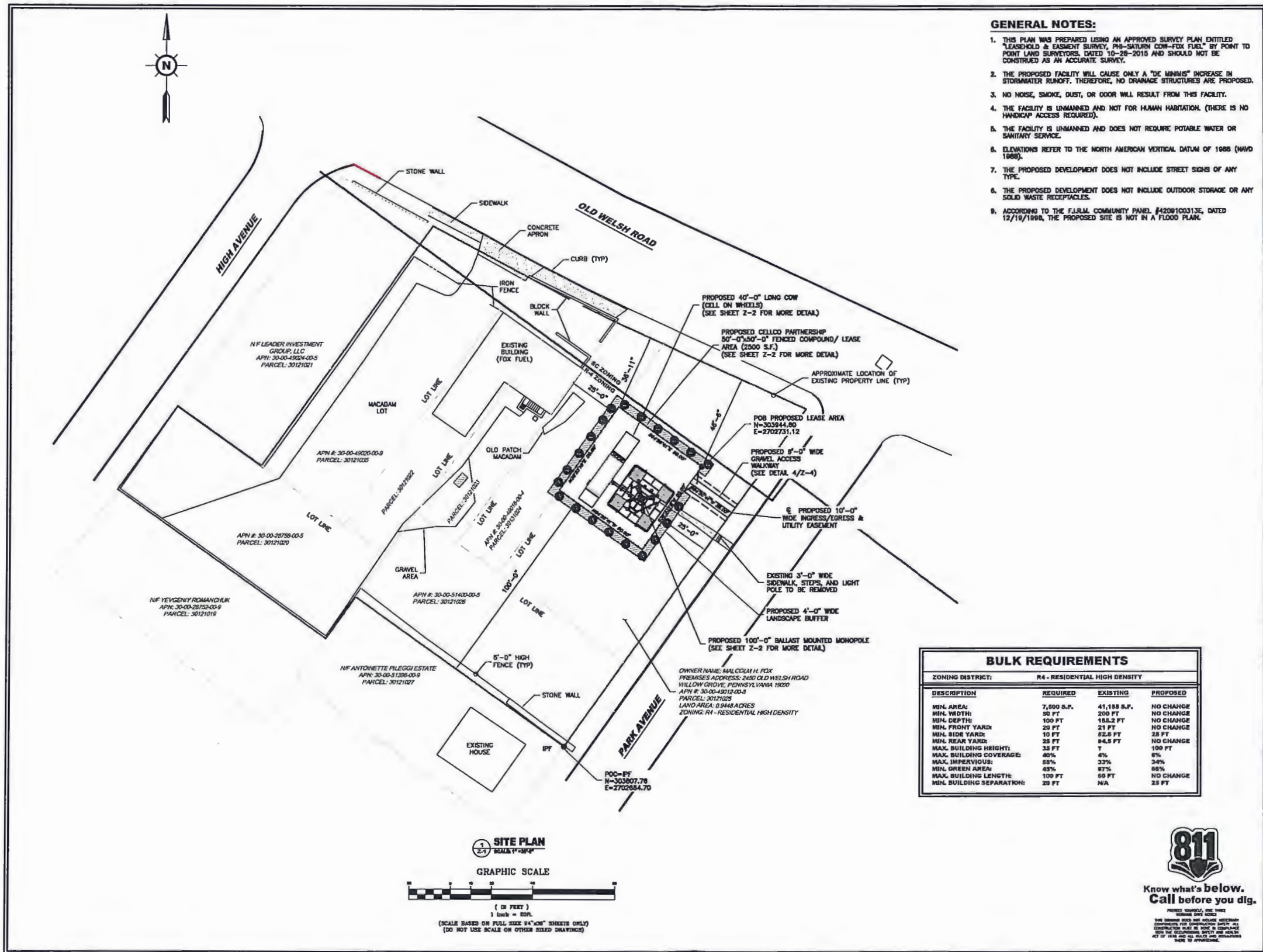


AREA MAP
WILLOW GROVE, PENNSYLVANIA
SCALE: 1" = 2000'-0"

DIRECTIONS:
FROM VERIZON OFFICE AT 512 EAST TOWNSHIP LANE, BLUE BELL, PA.
TURN RIGHT ONTO SR 300/STATE ROUTE 300/EAST TOWNSHIP LINE ROAD (0.3 MI). USE THE LEFT 2 LANES TO TURN SLIGHTLY LEFT ONTO HERRISTOWN ROAD/ SR 300/STATE ROUTE 300 (1.6 MI). TURN LEFT ONTO BUTLER PIKE (0.4 MI). TURN RIGHT ONTO PA-73 EAST (1.8 MI). SLIGHT LEFT ONTO CAMP HILL ROAD (1.8 MI). TURN RIGHT ONTO DRESHERTOWN ROAD (1.8 MI). TURN LEFT ONTO LIMEKILN PIKE (0.3 MI). TURN RIGHT ONTO SUSQUEHANNA ROAD (0.9 MI). TURN LEFT ONTO FITZWATERTOWN ROAD (1.3 MI). TURN RIGHT ONTO OLD WELSH ROAD, THE DESTINATION WILL BE ON THE RIGHT, (0.7 MI)

SHEET INDEX	
DRAWING SHEET	DRAWING TITLE
T-1	TITLE SHEET
Z-1	SITE PLAN
Z-2	COMPOUND PLAN
Z-3	ELEVATION
Z-4	CONSTRUCTION DETAILS
Z-5	ANTENNA PLAN & DETAILS

PROJECT CONTACT INFO	
VERIZON WIRELESS ENGINEER:	MARK LYNCH
VERIZON WIRELESS RF ENGINEER:	RICHARD MAXWELL
VERIZON WIRELESS OPERATIONS MANAGER:	BRAD WUNDERLY
VERIZON WIRELESS REAL ESTATE CONTACT:	JENNIFER COYLE
VERIZON WIRELESS AE CONTACT:	JOHN THIBODOUX
POWER CONTACT:	PECO ENERGY COMPANY 1-800-841-4141
TELCO CONTACT:	VERIZON



GENERAL NOTES:

1. THIS PLAN WAS PREPARED USING AN APPROVED SURVEY PLAN ENTITLED "LEASEHOLD & EASEMENT SURVEY, PHI-SATURN COW-FOX FUEL" BY POINT TO POINT LAND SURVEYORS, DATED 10-28-2015 AND SHOULD NOT BE CONSIDERED AS AN ACCURATE SURVEY.
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 1988).
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 RECEIPTABLES.
9. ACCORDING TO THE FORMAL COMMUNITY PANEL #4208100313E, DATED 12/19/1998, THE PROPOSED SITE IS NOT IN A FLOOD PLAIN.

**CELLCO PARTNERSHIP d/b/a
VERIZON WIRELESS**

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

advantage engineers
431 INDEPENDENCE AVENUE, SUITE C
MECHANICSBURG, PENNSYLVANIA 17055
PHONE: (717) 458-0800
FAX: (717) 458-0801

SCHEDULE OF REVISIONS

NO.	DATE	DESCRIPTION OF CHANGES
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		
33		
34		
35		
36		
37		
38		
39		
40		
41		
42		
43		
44		
45		
46		
47		
48		
49		
50		
51		
52		
53		
54		
55		
56		
57		
58		
59		
60		
61		
62		
63		
64		
65		
66		
67		
68		
69		
70		
71		
72		
73		
74		
75		
76		
77		
78		
79		
80		
81		
82		
83		
84		
85		
86		
87		
88		
89		
90		
91		
92		
93		
94		
95		
96		
97		
98		
99		
100		

DRAWN BY: TRP
CHECKED BY: JMC
SCALE: NOTED
JOB NO: M132838.00

DRAWING TITLE:
SITE PLAN

DRAWING SHEET:
Z-1

SHEET NUMBER:
2 OF 6

SITE INFORMATION:
**SITE NAME:
PHI-SATURN COW -
FOX FUEL**
**SITE ADDRESS:
2450 OLD WELSH ROAD
WILLOW GROVE,
PENNSYLVANIA 19090**
**JURISDICTION:
ABINGTON TOWNSHIP**

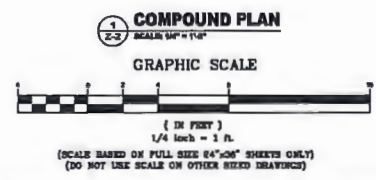
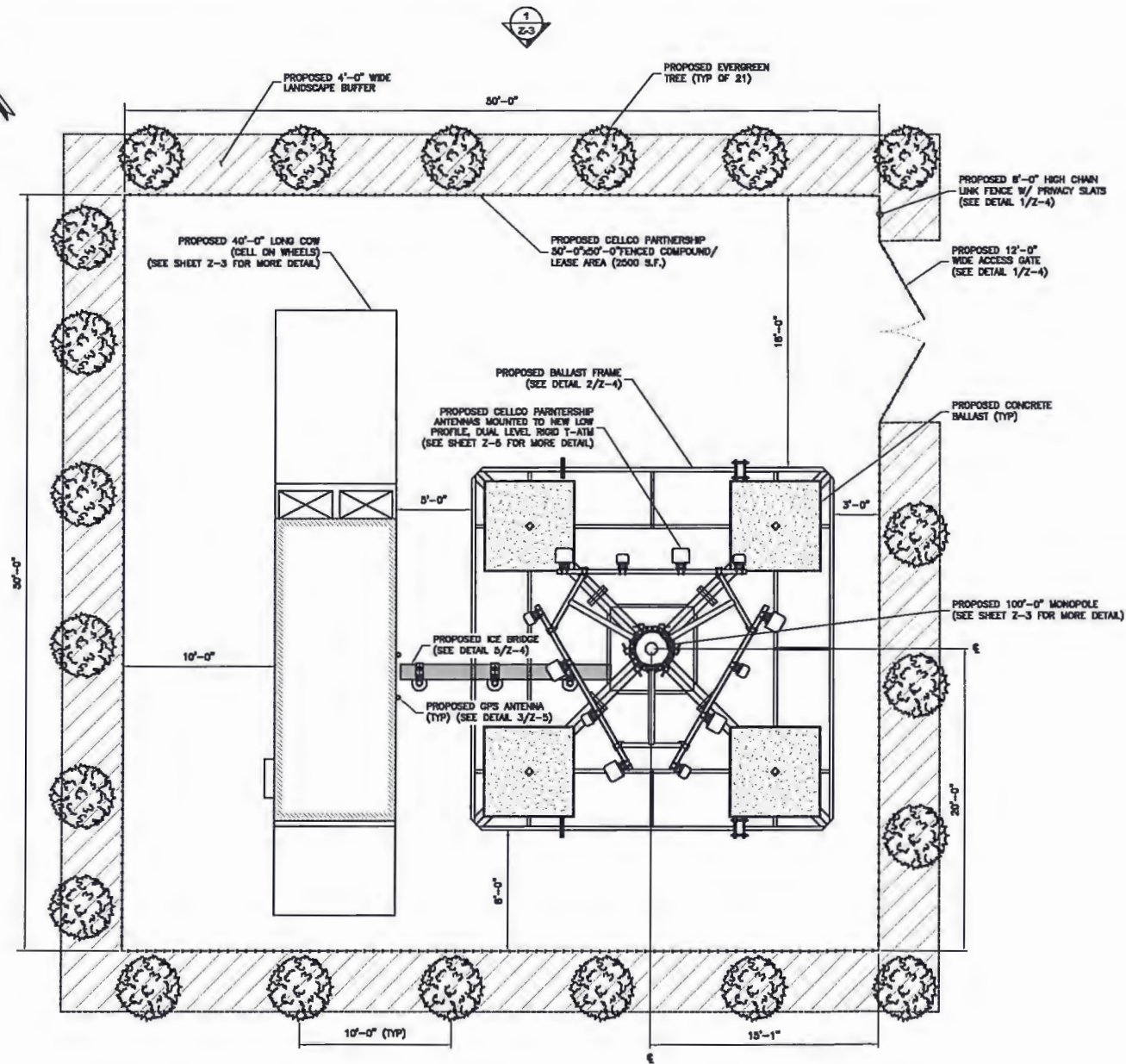
BULK REQUIREMENTS

DESCRIPTION	R4 - RESIDENTIAL HIGH DENSITY		
	REQUIRED	EXISTING	PROPOSED
MIN. AREA:	7,500 S.F.	41,188 S.F.	NO CHANGE
MIN. WIDTH:	30 FT	200 FT	NO CHANGE
MIN. DEPTH:	100 FT	185.2 FT	NO CHANGE
MIN. FRONT YARD:	20 FT	21 FT	NO CHANGE
MIN. SIDE YARD:	10 FT	82.8 FT	28 FT
MIN. REAR YARD:	25 FT	94.5 FT	NO CHANGE
MAX. BUILDING HEIGHT:	35 FT	7	100 FT
MAX. BUILDING COVERAGE:	40%	4%	8%
MAX. IMPERVIOUS:	85%	33%	34%
MIN. GREEN AREA:	45%	87%	88%
MAX. BUILDING LENGTH:	100 FT	60 FT	NO CHANGE
MIN. BUILDING SEPARATION:	20 FT	NA	25 FT

811
Know what's below.
Call before you dig.

PROVIDED BY: 811 CENTER
FOR THE COMMONWEALTH OF PENNSYLVANIA
THIS SERVICE IS NOT A GUARANTEE OF THE ACCURACY OF THE INFORMATION PROVIDED. THE USER SHALL BE RESPONSIBLE FOR VERIFYING THE INFORMATION PROVIDED TO THEM BY THE 811 CENTER.

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
W. Jeffery Nagorny
10/29/15
ENGINEER
39220E
W. JEFFERY NAGORNY, P.E.
PENNSYLVANIA PROFESSIONAL ENGINEER
LICENSE # 39220E



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 FROM 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 SURVEY PLAN ENTITLED "PHI-SATURN COW-FOX FUEL" BY POINT TO POINT LAND SURVEYORS, DATED 10-28-2010 AND SHOULD NOT BE CONSIDERED AS AN ACCURATE SURVEY.
8. THE PROPOSED FACILITY WILL CAUSE ONLY A "DE MINIMIS" INCREASE IN STORMWATER RUNOFF. THEREFORE, NO DRAINAGE STRUCTURES ARE PROPOSED.
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 ENGINEERING PRIOR TO INSTALLATION.
14. MOUNTS AND ANTENNAS ARE DESIGNED TO MEET ANS/TIA-222-G-2 AS PER IBC 2006 (PLCC) 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 OWNERS REPRESENTATIVE.
18. CONSTRUCTION TO COMMENCE UPON COMPLETION OF A PASSING STRUCTURAL ANALYSIS. STRUCTURAL ANALYSIS TO BE PERFORMED BY OTHERS.

**CELCO PARTNERSHIP d/b/a
VERIZON WIRELESS**

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

advantage engineers

435 INDEPENDENCE AVENUE, SUITE C
MECHANICSBURG, PENNSYLVANIA 17055
PHONE: (717) 458-0800
FAX: (717) 458-0801

SCHEDULE OF REVISIONS

REV. NO.	DATE	DESCRIPTION OF CHANGES
1		
2		
3		
4		
5		
6		
7		
8	10-29-15	ISSUED FOR ZONING
9	10-28-15	ISSUED FOR 90% REVIEW (ZP)

DRAWN BY: TRF
CHECKED BY: JMC
SCALE: NOTED
JOB NO: M132838.00

DRAWING TITLE:
COMPOUND PLAN

DRAWING SHEET:
Z-2

SHEET NUMBER:
3 OF 6

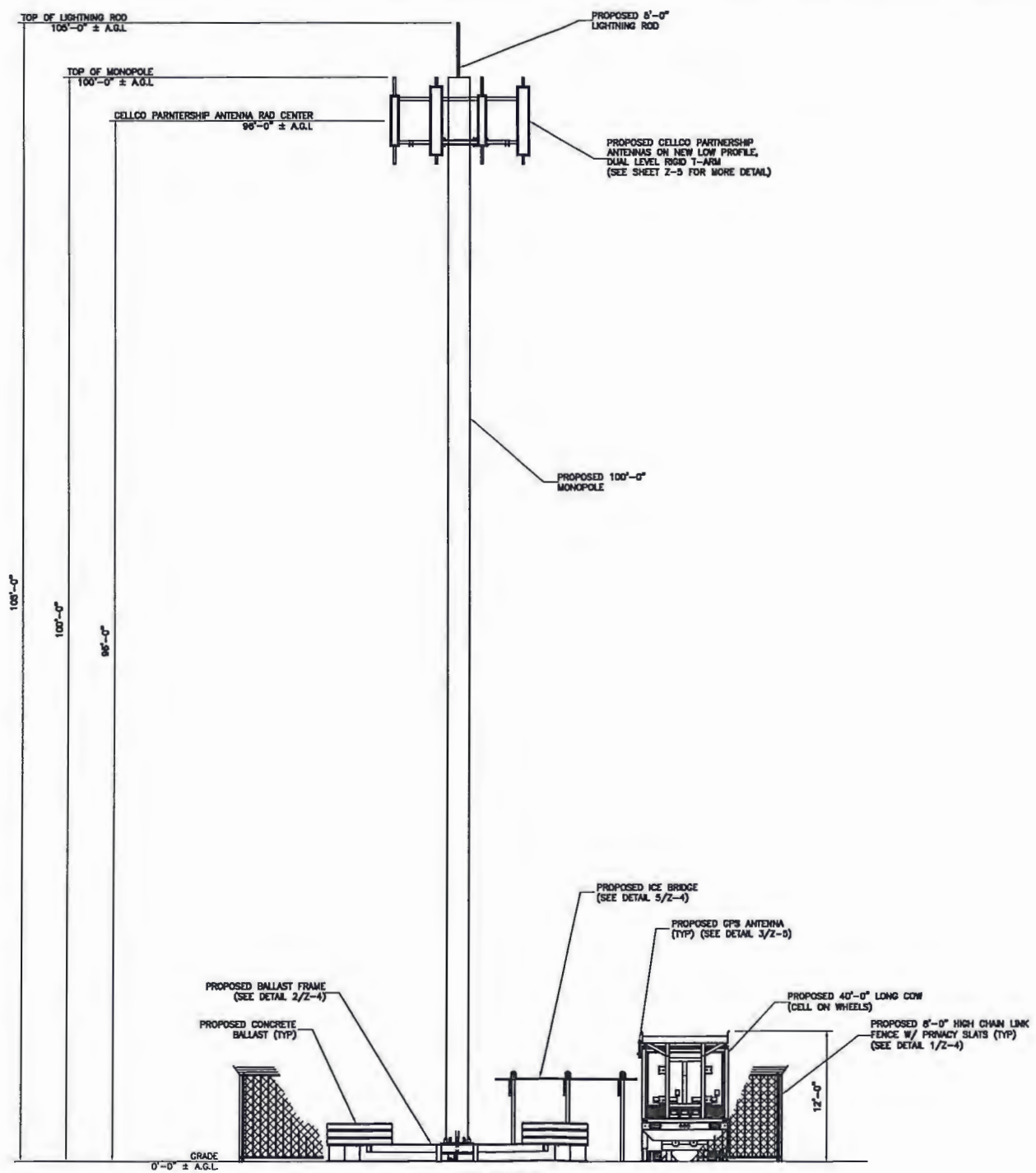
SITE INFORMATION:
SITE NAME:
PHI-SATURN COW - FOX FUEL
SITE ADDRESS:
**2450 OLD WELSH ROAD
WILLOW GROVE,
PENNSYLVANIA 19090**
JURISDICTION:
ABINGTON TOWNSHIP

811

Know what's below.
Call before you dig.

PROJECT FUNDING: SEE SHEET
DRAWING DATE: 10/29/15
THIS DRAWING DOES NOT INCLUDE NECESSARY
CONNECTIONS OR AS-BUILT DETAILS. ALL
CONNECTIONS AND AS-BUILT DETAILS SHALL BE
OBTAINED FROM THE UTILITY OFFICE AND CHECKED
ACT OF 1910 AND ALL RULES AND REGULATIONS
THERE TO APPLICABLE.

W. Jeffrey Nagorny
10/29/15
ENGINEER
39220E
PENNSYLVANIA PROFESSIONAL ENGINEER
LICENSE # 39220E



ELEVATION
 SCALE: 3/8" = 1'-0"
GRAPHIC SCALE
 (IN FEET)
 3/16 inch = 1 ft.
 (SCALE BASED ON FULL SIZE 8 1/2" x 11" SHEETS ONLY)
 (DO NOT USE SCALE ON OTHER SIZED DRAWINGS)

**CELLCO PARTNERSHIP d/b/a
 VERIZON WIRELESS**

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

advantage engineers
 435 INDEPENDENCE AVENUE, SUITE C
 MECHANICSBURG, PENNSYLVANIA 17055
 PHONE: (717) 458-0800
 FAX: (717) 458-0801

SCHEDULE OF REVISIONS

REV. NO.	DATE	DESCRIPTION OF CHANGES
1		
2		
3		
4		
5		
6		
7		
8	10-29-15	ISSUED FOR ZONING
9	10-28-15	ISSUED FOR 80% REVIEW (ZDP)

DRAWN BY: TRP
 CHECKED BY: JMC
 SCALE: NOTED
 JOB NO: M132838,00

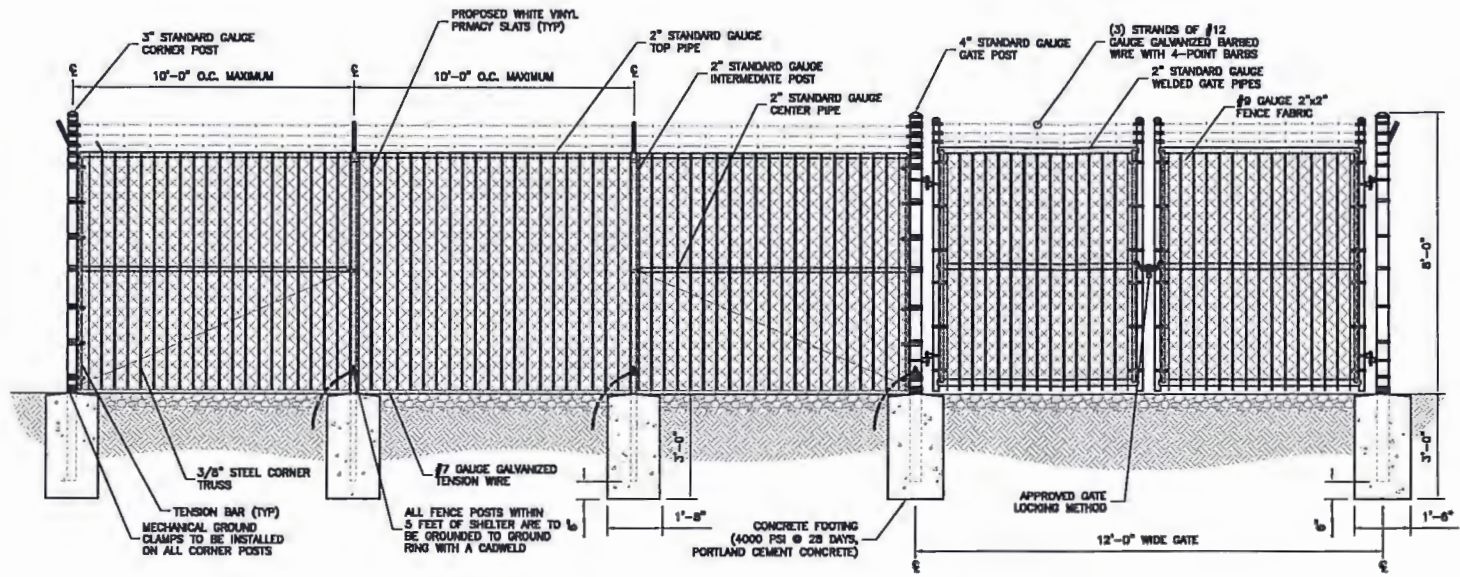
DRAWING TITLE:
ELEVATION

DRAWING SHEET:
Z-3

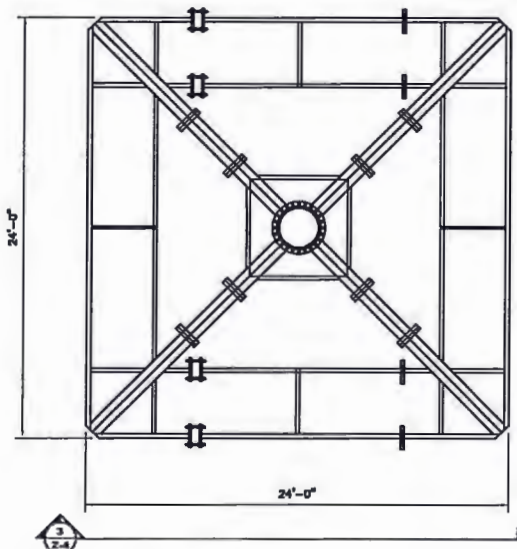
SHEET NUMBER:
4 OF 6

SITE INFORMATION:
 SITE NAME:
**PHI-SATURN COW -
 FOX FUEL**
 SITE ADDRESS:
**2450 OLD WELSH ROAD
 WILLOW GROVE,
 PENNSYLVANIA 19090**
 JURISDICTION:
ABINGTON TOWNSHIP

W. Jeffrey Nagorny
 10/29/15
 ENGINEER
 39220E
 W. JEFFREY NAGORNY, P.E.
 PENNSYLVANIA PROFESSIONAL ENGINEER
 LICENSE # 39220E



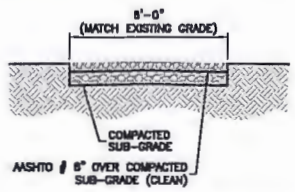
1 FENCE & GATE DETAIL
NTS



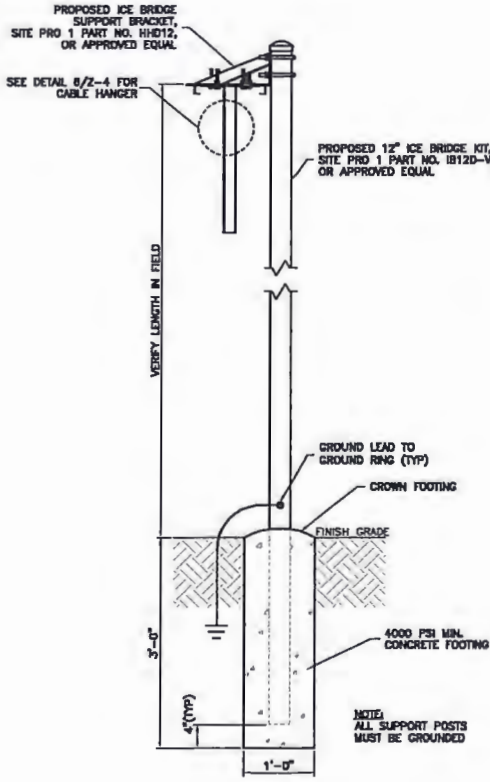
2 BALLAST FRAME
NTS



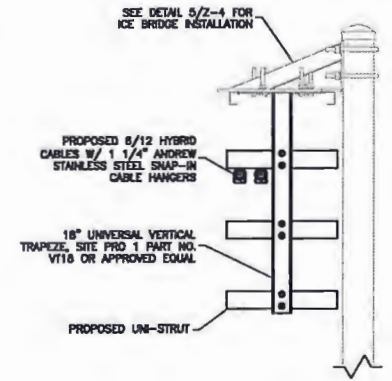
3 BALLAST FRAME ELEVATION
NTS



4 GRAVEL WALKWAY DETAIL
NTS



5 ICE BRIDGE SECTION
NTS



6 CABLE SUPPORT SECTION
NTS



811
Know what's below.
Call before you dig.
PROTECT YOURSELF, THE BEST
WAY TO SAVE MONEY.
THE DRAWING AREA AND AROUND IT. ALL
CONTRACTORS FOR CONSTRUCTION SHOULD CALL
BEFORE THEY START TO DIG. CALL 811 TO
GET THE LOCATION, DEPTH AND DIALOGUE
ACT OF STATE AND ALL RULES AND REGULATIONS
HAVE TO BE OBSERVED.

**CELLCO PARTNERSHIP d/b/a
VERIZON WIRELESS**

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



advantage engineers

438 INDEPENDENCE AVENUE, SUITE C
MECHANICSBURG, PENNSYLVANIA 17055
PHONE: (717) 458-0200
FAX: (717) 458-0801

SCHEDULE OF REVISIONS

REV. NO.	DATE	DESCRIPTION OF CHANGES
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		
33		
34		
35		
36		
37		
38		
39		
40		
41		
42		
43		
44		
45		
46		
47		
48		
49		
50		
51		
52		
53		
54		
55		
56		
57		
58		
59		
60		
61		
62		
63		
64		
65		
66		
67		
68		
69		
70		
71		
72		
73		
74		
75		
76		
77		
78		
79		
80		
81		
82		
83		
84		
85		
86		
87		
88		
89		
90		
91		
92		
93		
94		
95		
96		
97		
98		
99		
100		

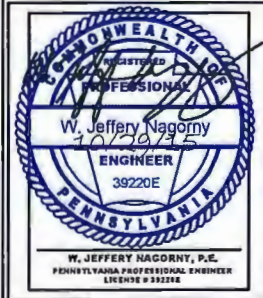
DRAWN BY: TRF
CHECKED BY: JMC
SCALE: NOTED
JOB NO: M132839.00

DRAWING TITLE:
**CONSTRUCTION
DETAILS**

DRAWING SHEET:
Z-4

SHEET NUMBER:
5 OF 6

SITE INFORMATION:
**SITE NAME:
PHI-SATURN COW -
FOX FUEL**
**SITE ADDRESS:
2450 OLD WELSH ROAD
WILLOW GROVE,
PENNSYLVANIA 19090**
**JURISDICTION:
ABINGTON TOWNSHIP**



CELLCO PARTNERSHIP d/b/a
VERIZON WIRELESS

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



advantage engineers

435 INDEPENDENCE AVENUE, SUITE C
MECHANICSBURG, PENNSYLVANIA 17055
PHONE: (717) 438-0800
FAX: (717) 438-0801

SCHEDULE OF REVISIONS

REV. NO.	DATE	DESCRIPTION OF CHANGES
1		
2		
3		
4		
5		
6		
7		
8	10-29-15	ISSUED FOR ZONING
9	10-28-15	ISSUED FOR 90% REVIEW (ZD)

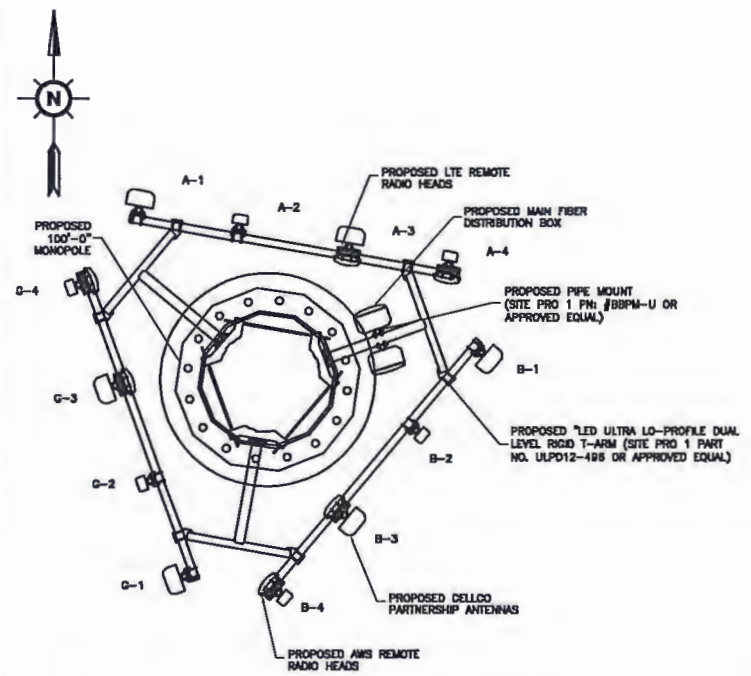
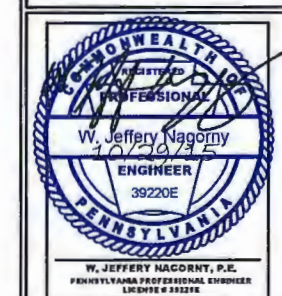
DRAWN BY: TRF
CHECKED BY: JMC
SCALE: NOTED
JOB NO: M132838,00

DRAWING TITLE:
ANTENNA PLAN & DETAILS

DRAWING SHEET:
Z-5

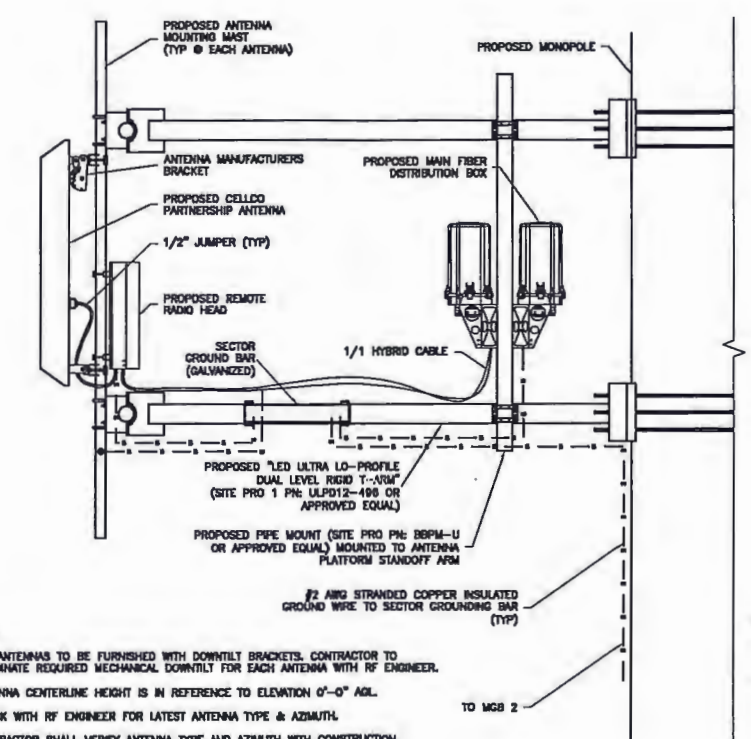
SHEET NUMBER:
6 OF 6

SITE INFORMATION:
SITE NAME:
PHI-SATURN COW - FOX FUEL
SITE ADDRESS:
**2450 OLD WELSH ROAD
WILLOW GROVE,
PENNSYLVANIA 19090**
JURISDICTION:
ABINGTON TOWNSHIP



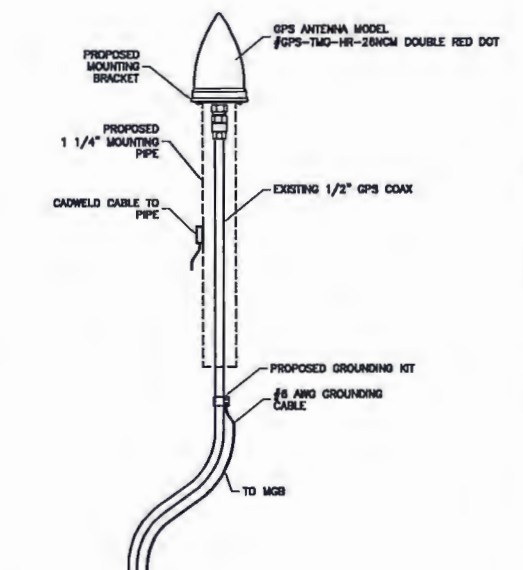
- NOTES:
1. TYPES AND SIZES OF THE ANTENNA CABLE ARE BASED ON ESTIMATED LENGTHS, PRIOR TO ORDERING CABLE. CONTRACTOR TO VERIFY ACTUAL LENGTH BASED ON CONSTRUCTION LAYOUT AND NOTIFY PROJECT MANAGER IF ACTUAL LENGTHS EXCEED ESTIMATED LENGTHS.
 2. CONTRACTOR SHALL VERIFY THE DOWNTILT OF EACH ANTENNA WITH A DIGITAL LEVEL.
 3. CONTRACTOR TO CONFIRM COAX 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
2-5
KTX
PROPOSED ANTENNA PLAN



- 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
2-6
KTX
ANTENNA MOUNTING DETAIL (SIDE VIEW)



- NOTES:
1. THE ELEVATION AND LOCATION OF THE GPS ANTENNA SHALL BE IN ACCORDANCE WITH THE FINAL RF REPORT.
 2. THE GPS ANTENNA MOUNT IS DESIGNED TO FASTEN TO A STANDARD 1 1/4" # 4 SCH 40 GALVANIZED STEEL OR STAINLESS STEEL PIPE. THE PIPE MUST BE THREADED AT THE ANTENNA MOUNT END. THE PIPE SHALL BE CUT TO THE REQUIRED LENGTH (MINIMUM OF 18 INCHES) USING A HAND OR ROTARY PIPE CUTTER TO ASSURE A SMOOTH AND PERPENDICULAR CUT. A HACK SAW SHALL NOT BE USED. THE CUT PIPE SHALL BE DEBURRED AND SMOOTH IN ORDER TO SEAL AGAINST THE NEOPRENE GASKET ATTACHED TO THE ANTENNA MOUNT.

3
2-5
KTR
GPS ANTENNA ELEVATION DETAIL