

WI05 CEDAR FALLS NEW BUILD

PROJECT INFORMATION

SITE NAME: WI05 CEDAR FALLS
SITE ADDRESS: 730TH AVE
MENOMONIE, WI 54751
COUNTY: DUNN
LATITUDE: N 44° 56' 37.61" (NAD83)
LONGITUDE: W 91° 52' 02.76" (NAD83)
DRAWING BASED ON
SITE DATA FORM DATED: 09-21-17
BUILDING TYPE: IIB
SITE AREA: 75' X 75' = 5625 S.F.

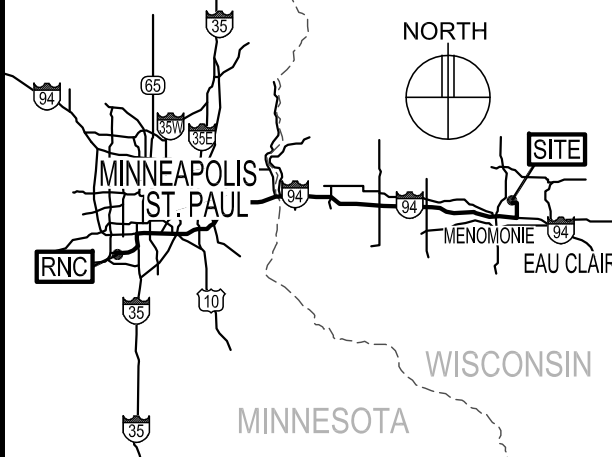
ISSUE SUMMARY

REV	DESCRIPTION	SHEET OR DETAIL
A	ISSUED FOR REVIEW 09-23-17	ALL
B	ISSUED FOR OWNER SIGNOFF 10-26-17	ALL
C	ISSUED FOR SITE MOVEMENT 10-31-17	ALL
D	ISSUED FOR CARRIER ADDITION 02-12-18	ALL

SHEET INDEX

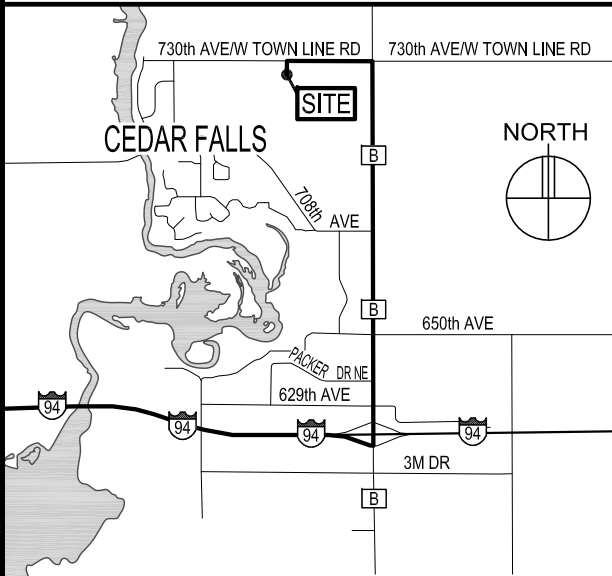
SHEET	SHEET DESCRIPTION
T-1	PROJECT INFORMATION, TOWER ELEVATION, & SHEET INDEX
A-1	SITE PLAN, DETAIL INDEX, & SITE PHOTO
A-2	ENLARGED SITE PLAN
A-3	ANTENNA AND EQUIPMENT KEYS, DETAILS, & SITE PHOTO
A-4	OUTLINE SPECIFICATIONS
G-1	GROUNDING NOTES
G-2	GROUNDING PLAN & GROUNDING DETAIL INDEX
U-1	SITE UTILITY PLANS, H-FRAME DETAIL, & NOTES
-	SURVEY

AREA MAP



DIRECTIONS FROM BLOOMINGTON RNC:
HEAD NORTH ON BUSH LAKE RD, TURN RIGHT ONTO W 108TH ST/W OLD SHAKOPEE RD AND CONTINUE ON W OLD SHAKOPEE RD FOR 4.3 MILES. CONTINUE STRAIGHT ONTO W 98TH ST/W OLD SHAKOPEE RD AND TURN LEFT TO MERGE ONTO I-35W N. AFTER 2.1 MILES, TAKE EXIT 9A TO MERGE ONTO I-494 E/MN-5 E FOR 3.9 MILES. KEEP LEFT TO CONTINUE ON I-494 E FOR 16.0 MILES AND THEN MERGE ONTO I-94 E FOR 55.0 MILES. TAKE EXIT 45 AND TURN LEFT ONTO COUNTY RD B. AFTER 2.8 MILES, TURN LEFT ONTO 730TH AVE/W TOWN LINE RD AND GO 0.6 MILES.

VICINITY MAP



DEPARTMENTAL APPROVALS

JOB TITLE	NAME	DATE
RF ENGINEER	JUSTIN GARTNER	09-26-17
OPERATIONS MANAGER	MICHAEL STUDTMANN	09-26-17
CONSTRUCTION ENGINEER	ALEX HOLZINGER	09-27-17

LESSOR / LICENSOR APPROVAL

SIGNATURE	PRINTED NAME	DATE
		06-06-16

LESSOR / LICENSOR: PLEASE CHECK THE APPROPRIATE BOX BELOW
☐ NO CHANGES. ☐ CHANGES NEEDED. SEE COMMENTS.

CONTACTS

LESSOR / LICENSOR: PAUL HARRISON
E5510 680TH AVE
MENOMONIE, WI 54751
(715) 235-6113

LESSEE: VERIZON WIRELESS
10801 BUSH LAKE ROAD
BLOOMINGTON, MN 55438
RON REITER (612) 720-0052

POWER UTILITY
COMPANY CONTACT: XCEL ENERGY
1414 WEST HAMILTON AVE
EAU CLAIRE, WI 54701
MIKE JOHNSON (715) 232-7415

TELCO UTILITY
COMPANY CONTACT: T.B.D.

ARCHITECT: DESIGN 1 ARCHITECTS LLC
9973 VALLEY VIEW ROAD
EDEN PRAIRIE, MN 55344
(952) 903-9299

SURVEYOR: WIDSETH SMITH NOLTING
610 FILLMORE STREET - PO BOX 1028
ALEXANDRIA, MN 56308-1028
320-762-8149

STRUCTURAL
ENGINEER: N/A

GEOTECHNICAL
ENGINEER: T.B.D.

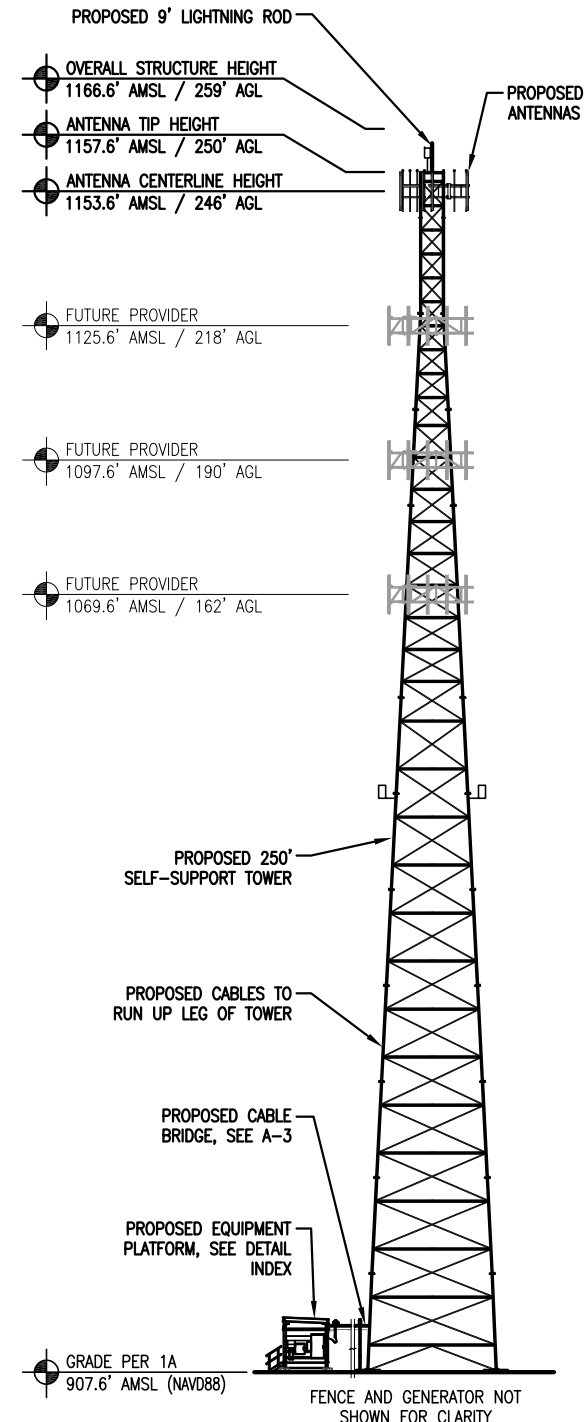
TOWER ELEVATION

NOTE:

1.) TOWER TO BE ERECTED AND INSTALLED IN ACCORDANCE WITH TOWER MANUFACTURER'S DRAWINGS NOT INCLUDED WITH THIS PACKAGE. DISCREPANCIES BETWEEN TOWER DRAWINGS AND ARCHITECTURAL DRAWINGS TO BE REPORTED TO VERIZON WIRELESS AND THE ARCHITECT IMMEDIATELY.

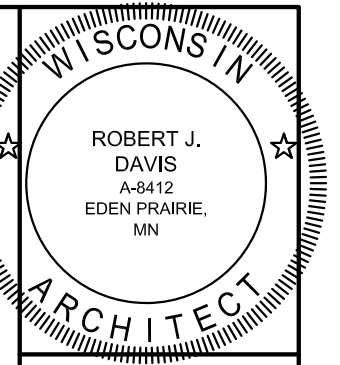
2.) TOWER FOUNDATION, PLATFORM FOUNDATION, GENERATOR FOUNDATION, AND THE ACCESS DRIVE TO BE EXCAVATED AND CONSTRUCTED IN ACCORDANCE WITH RECOMMENDATIONS AND SPECIFICATIONS OF THE GEOTECHNICAL REPORT WHICH IS NOT INCLUDED IN THIS PACKAGE. DISCREPANCIES BETWEEN THE REPORT AND THE OTHER DOCUMENTS TO BE IMMEDIATELY REPORTED TO VERIZON WIRELESS AND THE ARCHITECT.

3.) CONTRACTOR TO ENSURE TIP OF ANTENNAS DO NOT EXCEED TOWER HEIGHT.



WEST ELEVATION

SCALE: 1" = 40'



I hereby certify that the portion of this technical submission described below was prepared by me or under my direct supervision and responsible charge. I am a duly registered Architect under the laws of the State of WISCONSIN, ROBERT J. DAVIS, Reg. No. A-8412

Signed: *Robert J. Davis*
Date: 02-12-18



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10801 BUSH LAKE ROAD
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PROJECT
20161365991
LOC. CODE: 412347

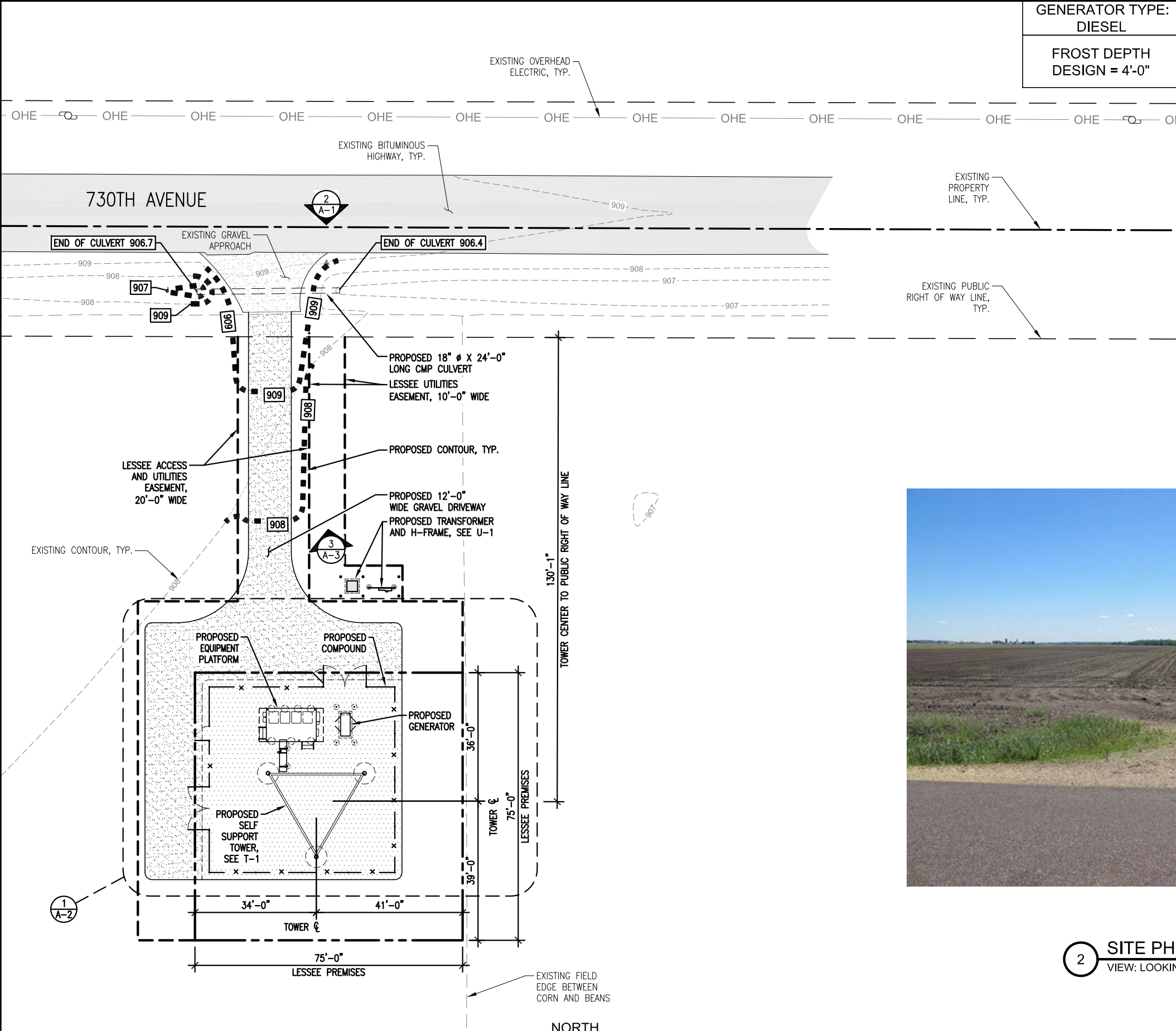
WI05
CEDAR FALLS

730TH AVE
MENOMONIE, WI 54751

SHEET CONTENTS:
CONTACTS
ISSUE SUMMARY
SHEET INDEX
DEPARTMENTAL APPROVALS
LESSOR APPROVAL
PROJECT INFORMATION
AREA & VICINITY MAPS
GENERAL NOTES

DRAWN BY: DJS
DATE: 07-25-17
CHECKED BY: BMS
REV. A 09-23-17
REV. B 10-26-17
REV. C 10-31-17
REV. D 02-12-18

T-1



GENERATOR TYPE:
DIESEL

FROST DEPTH
DESIGN = 4'-0"

DETAIL INDEX	
DETAIL	DETAIL DESCRIPTION
PLATFORM	VZW9.4X14-GLSP-4: 9'-4"x14'-0" PLATFORM W/ FULL CANOPY
GEN 1.4	20REOZK: DIESEL GENERATOR W/ ICE SHIELD
1.1	BOLLARD DETAIL
2.1	FENCE SECTION (DETAIL 2)
3.1	CABLE BRIDGE SECTION
4.4	CABLE BRIDGE ELEVATION
5.1	GRAVEL ROAD W/ BASE (DETAIL 1)
6.1	SNOW/MAN GATE (DETAIL 1)
7.1	GPS MOUNTING DETAIL (DETAIL 1)
8.1	TELCO ENTRY DETAIL
9.1	CMPH DETAIL
10.5/10.6	ONE-LINE RISER DIAGRAM
13.1	I.L.C./DIST. BOX ICE SHIELD

WISCONSIN

ARCHITECT

ROBERT J. DAVIS

A-8412

EDEN PRAIRIE, MN

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Signed:

02-12-18

Date:

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WI05

CEDAR FALLS

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MENOMONIE, WI 54751

SHEET CONTENTS:

SITE PLAN

DETAIL INDEX

SITE PHOTO

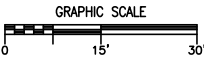
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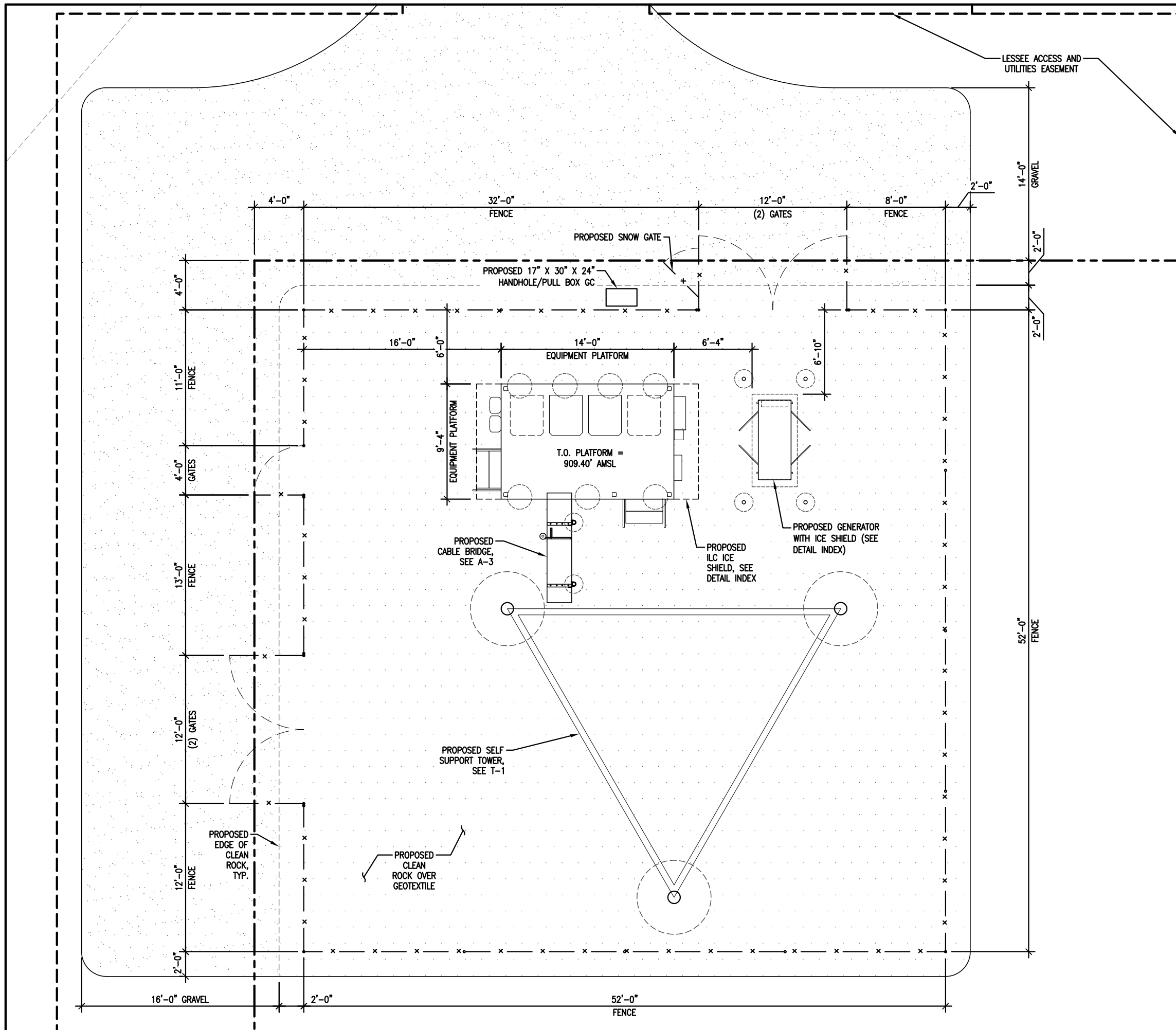
A-1



2 SITE PHOTO - ACCESS
VIEW: LOOKING NORTH

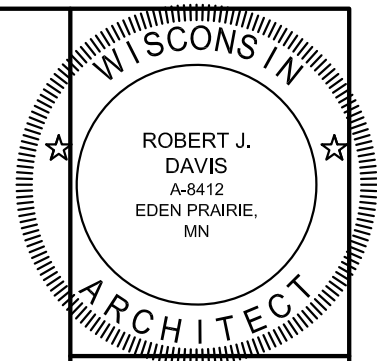
1 SITE PLAN
SCALE: 1" = 30'





NOTE:
CONTRACTOR TO COORDINATE PUBLIC AND PRIVATE UTILITY LOCATES PRIOR TO CONSTRUCTION START. NOTIFY THE ARCHITECT AND THE VZW CONSTRUCTION ENGINEER IMMEDIATELY OF ANY UTILITY LINE ISSUES.

NOTE:
EQUIPMENT PLATFORM PROVIDED ASSEMBLED WITH GUARD RAILS, ILC (INTEGRATED LOAD CENTER), CANOPY AND LIGHT FIXTURE. CONTRACTOR TO PROVIDE ADEQUATE LIFTING EQUIPMENT FOR PICKING AND SETTING ON FOUNDATION.



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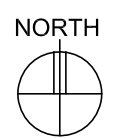
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CEDAR FALLS

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SHEET CONTENTS:
ENLARGED SITE PLAN

DRAWN BY:	DJS
DATE:	07-25-17
CHECKED BY:	BMS
REV. A	09-23-17
REV. B	10-26-17
REV. C	10-31-17
REV. D	02-12-18

1 ENLARGED SITE PLAN
SCALE: 1/8" = 1'-0"



A-2

ANTENNA KEY													EQUIPMENT KEY			
	AZIMUTH	POSITION	FUNCTION	QTY	MANUFACTURER	MODEL	MOD TYPE	ANTENNA LENGTH	ANTENNA TIP	ANTENNA CENTER	ELEC DOWNTILT	MECH DOWNTILT	QTY	MANUFACTURER	MODEL	RRU PORT
"X" SECTOR	60°	1.1	TX/RX1	1	COMMSCOPE	NHH-65C-R2B	AWS +45	96"	250'	246'	3'	0'	1	ERICSSON	8843	1
	-	1.2	TX/RX2	-	-	2ND PORT	AWS -45	-	-	-	-	-	-	-	-	2
	-	1.3	TX/RX1	-	-	3RD PORT	700 +45	-	-	-	3'	0'	1	ERICSSON	4449	1
	-	1.4	TX/RX2	-	-	4TH PORT	700 -45	-	-	-	-	-	-	-	-	2
	-	1.5	TX/RX3	-	-	5TH PORT	AWS +45	-	-	-	3'	0'	-	ERICSSON	8843	3
	-	1.6	TX/RX4	-	-	6TH PORT	AWS -45	-	-	-	-	-	-	-	-	4
	60°	3.1	TX/RX1	1	COMMSCOPE	NHH-65C-R2B	PCS +45	96"	250'	246'	3'	0'	-	ERICSSON	8843	5
	-	3.2	TX/RX2	-	-	2ND PORT	PCS -45	-	-	-	-	-	-	-	-	6
	-	3.3	TX/RX3	-	-	3RD PORT	700 +45	-	-	-	3'	0'	-	ERICSSON	4449	3
	-	3.4	TX/RX4	-	-	4TH PORT	700 -45	-	-	-	-	-	-	-	-	4
	-	3.5	TX/RX3	-	-	5TH PORT	PCS +45	-	-	-	3'	0'	-	ERICSSON	8843	7
	-	3.6	TX/RX4	-	-	6TH PORT	PCS -45	-	-	-	-	-	-	-	-	8
"Y" SECTOR	180°	1.1	TX/RX1	1	COMMSCOPE	NHH-65C-R2B	AWS +45	96"	250'	246'	3'	0'	1	ERICSSON	8843	1
	-	1.2	TX/RX2	-	-	2ND PORT	AWS -45	-	-	-	-	-	-	-	-	2
	-	1.3	TX/RX1	-	-	3RD PORT	700 +45	-	-	-	3'	0'	1	ERICSSON	4449	1
	-	1.4	TX/RX2	-	-	4TH PORT	700 -45	-	-	-	-	-	-	-	-	2
	-	1.5	TX/RX3	-	-	5TH PORT	AWS +45	-	-	-	3'	0'	-	ERICSSON	8843	3
	-	1.6	TX/RX4	-	-	6TH PORT	AWS -45	-	-	-	-	-	-	-	-	4
	180°	3.1	TX/RX1	1	COMMSCOPE	NHH-65C-R2B	PCS +45	96"	250'	246'	3'	0'	-	ERICSSON	8843	5
	-	3.2	TX/RX2	-	-	2ND PORT	PCS -45	-	-	-	-	-	-	-	-	6
	-	3.3	TX/RX3	-	-	3RD PORT	700 +45	-	-	-	3'	0'	-	ERICSSON	4449	3
	-	3.4	TX/RX4	-	-	4TH PORT	700 -45	-	-	-	-	-	-	-	-	4
	-	3.5	TX/RX3	-	-	5TH PORT	PCS +45	-	-	-	3'	0'	-	ERICSSON	8843	7
	-	3.6	TX/RX4	-	-	6TH PORT	PCS -45	-	-	-	-	-	-	-	-	8
"Z" SECTOR	300°	1.1	TX/RX1	1	COMMSCOPE	NHH-65C-R2B	AWS +45	96"	250'	246'	3'	0'	1	ERICSSON	8843	1
	-	1.2	TX/RX2	-	-	2ND PORT	AWS -45	-	-	-	-	-	-	-	-	2
	-	1.3	TX/RX1	-	-	3RD PORT	700 +45	-	-	-	3'	0'	1	ERICSSON	4449	1
	-	1.4	TX/RX2	-	-	4TH PORT	700 -45	-	-	-	-	-	-	-	-	2
	-	1.5	TX/RX3	-	-	5TH PORT	AWS +45	-	-	-	3'	0'	-	ERICSSON	8843	3
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	-	3.6	TX/RX4	-	-	6TH PORT	PCS -45	-	-	-	-	-	-	-	-	8

ADDITIONAL:
(2) DISTRIBUTION BOXES, MODEL RVZDC-6627-PF-48: (1) AT PLATFORM & (1) ON TOWER.
(2) COMMSCOPE HYBRID CABLE, MODEL HFT1206-24SV2-270 (DIST BOX AT PLATFORM TO DIST BOX ON TOWER)
(6) RET JUMPERS (RRU TO ANTENNA 1, AND FROM ANTENNA 1 TO ANTENNA 2, PER SECTOR)
(12) COMMSCOPE HYBRID JUMPER, MODEL HFT412-4S29-15 (DIST. BOX TO RRU)
(36) ANDREW JUMPER, MODEL LDF4-50, 10' X 1/2 DIA. (RRU TO ANTENNA)

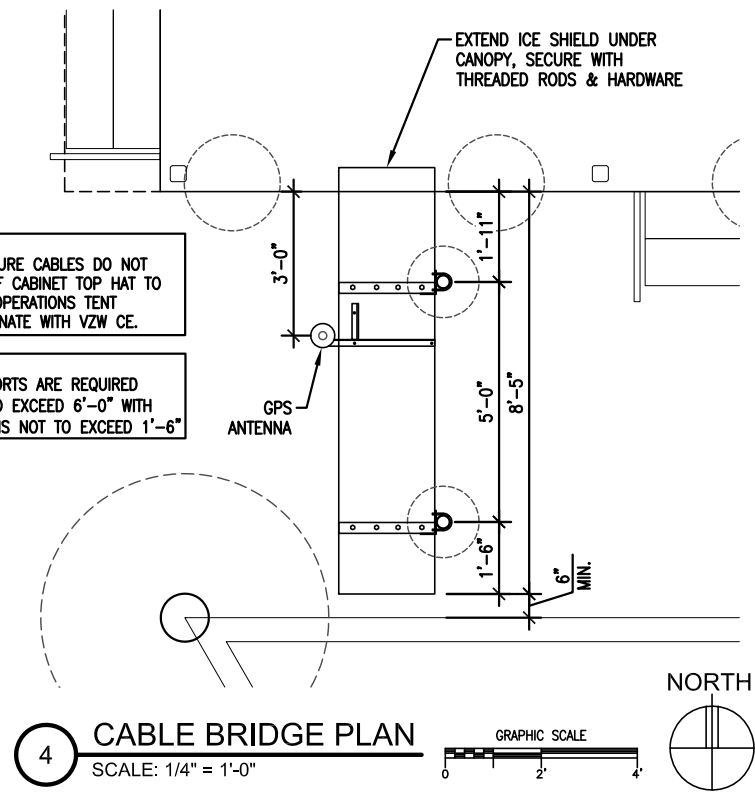
SHELTER = 6'
CABLE BRIDGE = 9'
RAD CENTER = 246'
EXTRA = 9'
TOTAL = 270'

EQUIPMENT KEY

1 ANTENNA KEY

NOTE:
CONTRACTOR TO ENSURE CABLES DO NOT ENTER THE FRONT OF CABINET TOP HAT TO ACCOMMODATE VZW OPERATIONS TENT DEPLOYMENT, COORDINATE WITH VZW CE.

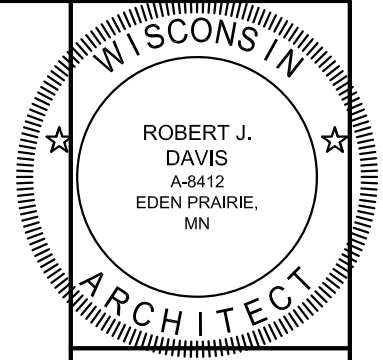
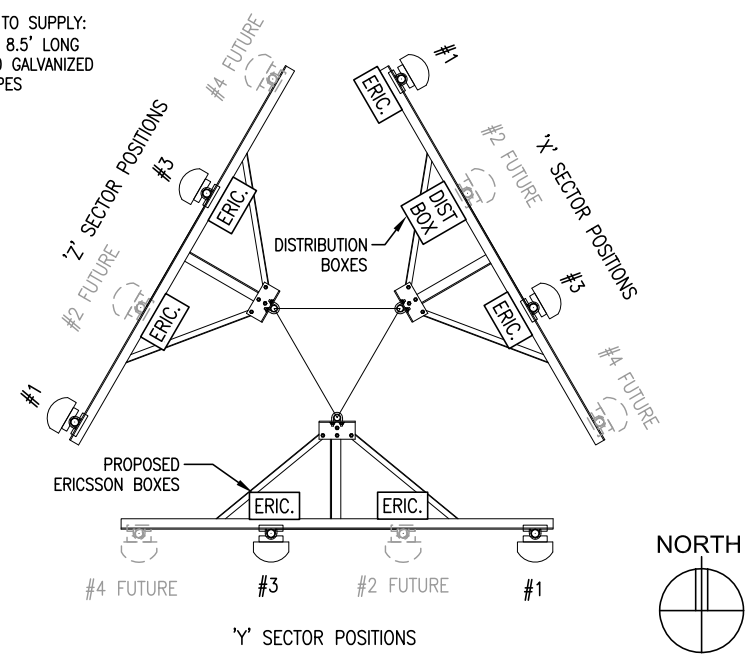
NOTE:
CABLE BRIDGE SUPPORTS ARE REQUIRED AT INTERVALS NOT TO EXCEED 6'-0" WITH OVERHANG EXTENSIONS NOT TO EXCEED 1'-6"



3 SITE PHOTO - ACCESS

VIEW: LOOKING NORTH

NOTE:
T-FRAME MAKE AND MODEL T.B.D.
CONTRACTOR TO SUPPLY:
(12) 2.5"Ø x 8.5' LONG SCHEDULE 40 GALVANIZED MOUNTING PIPES



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SHEET CONTENTS:
ANTENNA KEY
EQUIPMENT/CABLE KEY
CABLE BRIDGE PLAN
ANTENNA MOUNTING DETAIL
SITE PHOTO

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REV. A 09-23-17
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REV. D 02-12-18

GENERAL CONDITIONS

00 0001 PERMITS
Construction Permit shall be acquired by, or in the name of, Verizon Wireless, to be hereinafter referred to as the OWNER. Other permits shall be acquired by the Contractor.

00 0002 SURVEY FEES
Survey shall be furnished by the Architect. Layout Staking shall be coordinated with the Surveyor per "Request For Quote", (RFQ).

01 0010 INSURANCE & BONDS
Contractor is to furnish Insurance certificates for themselves and subcontractors. Contractor will provide any required Bonding. Contractor agrees to warranty the project for (1) one year after completion.

01 0400 SUPERVISION & COORDINATION
Contractor shall provide supervision throughout the Project, coordinating the work of the Subcontractors, and delivery & installation of Owner–furnished items. Contractor's responsibilities include arranging & conducting of Underground Utilities Locates. Contractor shall comply with municipal, county, state and/or federal codes, including OSHA.

01 0600 TESTING
Contractor is responsible for providing Agencies with sufficient notice to arrange for Test Samples (i.e.: Concrete Cylinders), and for Special Inspections.

01 2000 MEETINGS
Contractor shall make themselves aware of, and attend, meetings with the Owner and/or Architect. Contractor is to attend a Pre–Construction Meeting of all parties involved, prior to the start of construction.

01 5100 TEMPORARY UTILITIES
Contractor shall maintain the job site in a clean and orderly fashion, providing temporary sanitary facilities, waste disposal, and security (fence area or trailer module).

01 5300 EQUIPMENT RENTAL
Contractor shall furnish equipment necessary to expedite work.

01 5900 FIELD OFFICES & SHEDS
Contractor shall provide security (fence area or trailer module) for tools and materials that remain overnight on site.

01 7000 CLEAN UP & CLOSE OUT
Contractor shall clean up the Site to the satisfaction of Owner. Contractor shall complete the items listed on the Owner's Punch List, and shall sign and return the List to the Owner. Contractor shall maintain a set of drawings during the job, on which changes shall be noted in red ink. A full set of redlined drawings (As–Builtts) are to be given to the Architect at Job completion and submit "construction work complete memo" to Construction Engineer.

01 8000 TRUCKS & MILEAGE
Contractor shall provide transportation for their own personnel.

01 8300 TRAVEL TIME & PER DIEM
Contractor shall provide room and board for their own personnel, and reasonable time for traveling to & from job site.

01 9200 TAXES
Contractor shall pay sales and/or use tax on materials and taxable services.

SITework

02 1000 SITE PREPARATION
Contractor is to mobilize within 7 calendar days of the Owner issuing a 'START' document. Contractor will immediately report to Architect if any environmental considerations arise. Site shall be scraped to a depth of 3" minimum to remove vegetative matter, and scrapings shall be stockpiled on site. Excess material to be disposed of in accordance with RFQ.

02 1100 ROAD IMPROVEMENT & CONSTRUCTION
Contractor shall furnish materials for, and install, a twelve foot (12') wide gravel roadway from the road access to the work area, for truck and crane access to site. Base course shall be 6" deep, 3"+ crushed rock, topped with 3" deep, 1½" crushed rock, topped with 3" deep WI Class 5 Limestone or Driveway Mix. Contractor shall furnish & install culverts as necessary to prevent ponding or washing–out from normal surface runoff. Contractor shall obtain city, county, state and/or federal approvals for road approach and culvert work within or adjacent to right–of ways. Road shall be graded smooth, and edges dressed, at job completion.

02 2000 EARTHWORK & EXCAVATION
Excavation material shall be used for surface grading as necessary; excess to be stockpiled on site. Excess material to be disposed of in accordance with RFQ. For dewatering excavated areas, contractor shall utilize sock or sediment filter for filtering of water discharge.

02 5000 PAVING & SURFACING
Gravel paving shall be as described in 02 1100.

02 7800 POWER TO SITE
Contractor shall coordinate the electrical service to the building with the Utility Provider. Conduits shall include pull strings. Underground conduits shall be 2–1/2" Schedule 40 PVC. (schedule 80 PVC under roads and drives) Cable to be 3/0 THWN CU. Trenches shall be backfilled in a timely fashion, using a compactor, and including two (2) detectable ribbons; one each at 3" and 15" above conduit. Service shall be 200 amp, single phase, 120/240 volt. Service type shall be "General Time–Of–Day" if available, and meter base shall be approved by utility provider.

02 7900 TELCO TO SITE
Contractor shall provide 2" schedule 40 PVC conduit, (schedule 80 PVC under roads and drives) with 'large sweep' elbows or 2" SDR–11 HDPE conduit for directional boring, & pull string for TELCO service as noted on plans. Cable to be fiber optic lines, source and provider T.B.D. Trenches shall be as in 02 7800.

02 8000 SITE IMPROVEMENTS
Areas bounded by fence and adjacent to Equipment Platform shall receive polyethylene geotextile, 200 mesh woven, topped with 3" deep 3/4" to 1 1/2" clean rock (no fines), raked smooth.

02 8001 FENCING
All fence materials and fittings shall be galvanized steel. Fence shall be 6'–0" high x 9 ga. X 2" chain link fabric, w/ 7 ga. bottom tension wire. Corner and Gate posts shall be 2 7/8" O.D. sch 40 steel pipe, driven 60" below grade. Line posts shall be 2 3/8" O.D. sch 40 steel pipe. Top Rails shall be 1 5/8" O.D. steel pipe. Gate frames shall be 1 5/8" O.D. welded pipe. Fence top shall be three (3) strands barbed wire to 7'–0" above grade, canted outward. Bracing shall be 3/8" truss rods and 1 5/8" O.D. pipe mid–rails at corners. Gate latch shall be commercial grade, "Cargo" or equal. Fabric shall extend to within 1" of finish grade. Fence enclosures shall be completed within 7 days of tower erecting and Contractor shall provide for temporary security fence at base of Tower.

02 8500 IRRIGATION SYSTEMS
N/A

02 9000 LANDSCAPING
N/A

CONCRETE

03 1000 CONCRETE FORMWORK
Concrete forms shall be dimension lumber, modular, or steel.

03 6000 GROUT
Contractor shall grout baseplates according to Tower Manufacturer drawings.

03 8000 TOWER FOUNDATION
Contractor shall arrange for delivery of anchors, and shall furnish and install materials per Tower Manufacturer Plans. Tower foundation concrete and reinforcing to be per tower manufacturer's specification, or 6% ±1% air entrained, 4,000 PSI @ 28 days, with Grade 60 (ASTM 615) reinforcing steel, whichever is greater. Contractor shall comply with the Owner's Standard CONSTRUCTION SPECIFICATIONS MINIMUM CONCRETE STANDARDS.

03 8001 CATHODIC PROTECTION
N/A

03 9000 EQUIPMENT PLATFORM/GENERATOR FOUNDATION
Contractor shall furnish & install materials for Equipment Platform/Generator foundation. Concrete shall be 6% ±1% air entrained, and 4,000 psi at 28 days. All reinforcing steel is to be Grade 60 (ASTM 615). Anchor bolts are furnished by Contractor. Contractor shall comply with the Owner's Standard CONSTRUCTION SPECIFICATIONS MINIMUM CONCRETE STANDARDS.

MASONRY
N/A

METALS

05 0000 METALS
Contractor will furnish and install structural and fabricated steel items not specifically furnished by Owner, and install Owner–furnished items. Structural steel shall be fabricated and erected per AISC specifications. Welding shall conform to AWS standards. Field welding shall be as shown on Shop Drawings, performed by AWS Certified Welders, and inspected as prescribed by the Structural Engineer. Steel shall be ASTM A992 OR A36, and 3/4" field bolts shall be A325. Temporary erecting bolts, clip hangers, and bracing shall be furnished by Contractor. Fabrications shall be shop welded if possible, and galvanized before delivery to site. Structural steel, and miscellaneous iron and steel, shall be hot dipped galvanized per ASTM A123 thickness grade 55. Fabricated iron and steel hardware shall be hot dipped galvanized per ASTM A153. Repair of damaged or uncoated galvanized surfaces shall be per ASTM A780.

WOOD & PLASTICS
N/A

THERMAL & MOISTURE
N/A

DOORS AND HARDWARE
N/A

FINISHES
N/A

SPECIAL CONSTRUCTION

13 1260 CABLE BRIDGE, CANOPY, & ICE SHIELDS
Contractor shall furnish & install materials for the Cable Bridge as indicated on the drawings and Verizon Wireless Standard Details. Platform canopies are supplied by Equipment Platform Manufacturer. Contractor shall install canopy components shipped loose with the Equipment Platform. Contractor shall furnish & install materials for the Ice Shields as indicated on the Drawings & Verizon Wireless Standard Details.

13 1400 ANTENNA INSTALL
Contractor shall install Owner's antennas and feed lines during erecting. Contractor shall test and certify feed lines per current VZW standards.

13 3423 TRANSPORT AND SET EQUIPMENT PLATFORM/GENERATOR
Contractor shall provide crane(s) and/or truck for transporting, setting and erecting Equipment Platform/Generator per RFQ. Contractor shall install items shipped loose with the Equipment Platform/Generator including, but not limited to, the following: anchoring plates; stair assemblies; exterior lighting; canopies; guardrails; and buss bar.

13 3613 TRANSPORT AND ERECT TOWER
Contractor shall schedule delivery of Owner–furnished Tower, and provide cranes for unloading and erecting. Contractor shall ensure the existence of a 3/8" cable safety climb (DBI/Sala or equal) on the Tower.

MECHANICAL

15 4000 PLUMBING
N/A

15 5000 HVAC
N/A

ELECTRIC

16 5000 LIGHTING AND ELECTRICAL
Contractor shall provide labor and materials as necessary to complete the work shown on Drawings including items shipped loose with the Equipment Platform/Generator assembly. Contractor shall provide labor and materials as necessary to complete the installation of any tower lighting system described in the RFQ.

16 6000 GROUNDING
Contractor shall make themselves familiar with and follow the current GROUNDING STANDARDS of VERIZON WIRELESS. Contractor shall perform work as shown on Grounding Plans. Any site–specific grounding issues not covered by the GROUNDING STANDARD are to be addressed by the Contractor to the Owner.

OWNER–FURNISHED EQUIPMENT & FEES
EQUIPMENT PLATFORM
GENERATOR
SELF–SUPPORT TOWER
T–FRAMES
TOWER LIGHTING
CABINETS
COAX AND/OR CABLES
ANTENNAS & DOWNTILT BRACKETS
GPS & GPS MOUNTING
BUILDING PERMIT FEES
MATERIALS TESTING FEES
SPECIAL INSPECTIONS FEES

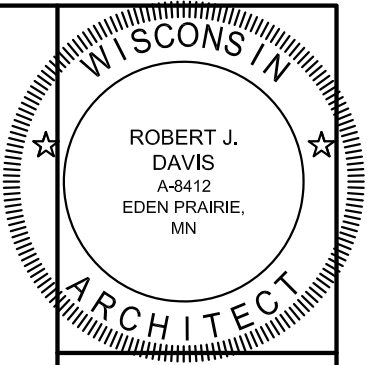
CONTRACTOR–FURNISHED EQUIPMENT
POWER TO SITE
TELCO TO SITE
CABLE BRIDGE AND ICE SHIELDS
GROUNDING MATERIALS
FENCING AND CATTLE GATES
CONNECTORS, BOOTS, & RELATED HARDWARE

SCOPE OF WORK:

CONTRACTOR SHALL PROVIDE MATERIALS, LABOR, TOOLS, TRANSPORTATION, SUPERVISION, ETC. TO FULLY EXECUTE WORK. WORK REQUIREMENTS ARE DETAILED ON THE DRAWINGS AND SPECIFICATIONS AND SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING ITEMS:

SITE PREPARATION
SITE WORK & ROAD CONSTRUCTION
EQUIPMENT PLATFORM, GENERATOR & TOWER FOUNDATIONS
SET EQUIPMENT PLATFORM & GENERATOR AND ERECT TOWER
ROUTING OF GROUND, POWER, FIBER & ALARM
SITE GROUNDING
ELECTRICAL & TELEPHONE SERVICES
INSTALL ANTENNAS & CABLES
CABLE BRIDGE AND ICE SHIELDS
GRAVEL SURFACING & FENCING
TOWER LIGHTING

Contractor to compare drawings against Owner's "Request for Quote", (RFQ). If discrepancies arise, Contractor shall verify with Owner that the RFQ supersedes the drawings.



I hereby certify that the portion of this technical submission described below was prepared by me or under my direct supervision and responsible charge. I am a duly registered Architect under the laws of the State of WISCONSIN. ROBERT J. DAVIS, Reg. No. A-8412

Signed: *Robert J. Davis*
Date: 02-12-18

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PROJECT
20161365991
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WI05
CEDAR FALLS

730TH AVE
MENOMONIE, WI 54751

SHEET CONTENTS:
OUTLINE SPECIFICATIONS

DRAWN BY:	DJS
DATE:	07-25-17
CHECKED BY:	BMS
REV. A	09-23-17
REV. B	10-26-17
REV. C	10-31-17
REV. D	02-12-18

GENERAL GROUNDING NOTES:

An external buried ground ring (Lead 1) shall be established around the equipment shelter and tower foundations. Lead 1 shall be kept 24" from foundations; if foundations are less than 48" apart, keep Lead 1 centered between them. If the tower base is over 20'-0" from the equipment shelter, a separate Lead 1 shall be established around each foundation, and the two Lead 1s shall be bonded with two parallel leads at least 6 feet apart horizontally. Connections between the two Lead 1s shall be bi-directional.

All subgrade connections shall be by exothermic weld, brazed weld, or gas-tight UL467-listed compression fittings pre-filled with anti-oxidant compound. Subgrade connections shall not be 'cold galvanize' coated.

Lead 1 shall be #2 solid bare tin-clad (SBTC) copper wire buried at local frost depth. Lead 1 bends shall be minimum 24" radius. 'Whip' lead bends may be of 12" radius.

Ground rods shall be galvanized steel, 5/8"Ø, spaced twenty feet apart, or as shown. Rods shall be kept min. 24 inches from foundations. Ground rods are required to be installed at their full specified length. Depth shall be as shown in Detail 11.1 in the Verizon Wireless Standard Detail Booklet.

SPECIAL CONSIDERATIONS FOR GROUND RODS:

When ground rods are not specified to be backfilled w/ Bentonite Slurry: If boulders, bedrock, or other obstructions prevent driving of ground rods, the Contractor will need to have drilling equipment bore a hole for ground rod placement. Hole to be backfilled w/ Bentonite Slurry.

When specified with slurried Bentonite encasement, drilling equipment will be need to be used to be bore a hole for ground rod placement. Slurry shall be made from pelletized material ("Grounding Gravel"); powdered Bentonite is not allowed. If boulders, bedrock, or other obstructions are found, Contractor shall drill to the specified depth and provide Bentonite encasements.

Above-grade connections shall be by lugs w/ two-hole tongues unless noted otherwise, joined to solid leads by welding (*T&B 54856BE "BROWN"*), self-threading (*RECOGNIZED, EM 2522DH.75.312*), or 10,000psi crimping (*BURNDY YA3C 2TC 14E2*). Surfaces that are galvanized or coated shall have coating(s) removed prior to bolting. Bolts shall be stainless steel with flat washers on each side of the connection and a lock washer beneath the fastening nut. Star-tooth washers shall be used between lug & dissimilar metal (copper-to-steel, etc) but are not required between tin-clad CU lugs & tin-clad CU bus bars. Lug tongues shall be coated with anti-oxidant compound, and excess compound wiped clean after bolting. The connection shall then be coated with cold-galvanizing compound, or with color-matching paint.

Ground bars exposed to weather shall be tin-clad copper, and shall be clean of any oxidation prior to lug bolting.

Galvanized items shall have zinc removed within 1" of weld area, and below lug surface contact area. After welding or bolting, the joint shall be coated with cold galvanizing compound.

Ground Bar leads

Ground bars are isolated electrically from tower bottoms and equipment shelters by their standoff mounts. Leads from each ground bar to the ground ring shall be a pair of #2 SBTC, each connected to Lead 1 bi-directionally with #2 SBTC 'jumpers'. Pairs of #2 SBTC may be required between ground bars. Leads shall be routed to ground bars as follows:

- * The Main Ground Bar (MGB), typically mounted inside on the equipment shelter 'back' wall; or mounted to the equipment platform steel beam (location varies).
- * The Port Ground Bars (PGB), mounted inside and outside on the equipment shelter walls beneath the transmission line port. Note: Transmission line grounds also attach to the PGBs.
- * The Tower Ground Bar (TGB) mounted at the base of the tower. Note: Transmission line grounds also attach to the TGBs.

NOTE: Contractor shall confirm that TGBs exist at 75-foot vertical intervals on any guyed or self-support tower, and that transmission lines are grounded to each TGB. Only the bottom-most TGB is isolated from the tower steel frame; upper TGBs may use the tower steel frame as common ground, requiring no copper leads between TGBs.

#2 SBTC Whip leads

"Whip" leads shall connect the buried external ground ring to the following items:

Monopole Towers:
* Three whips to flanges on the monopole base, at least 90° apart. If none are provided, attach to the baseplate or consult tower manufacturer.

Self-Support Towers:
* Two whips to flange(s) on each tower leg base. If none are provided, attach to the baseplate or consult tower manufacturer.

Guyed Towers:
* Two whips to flange(s) on the tower base. If none are provided, attach to the baseplate or consult tower manufacturer.
* Establish a Lead 1 within the fence enclosure of each guy anchor, at least 40 foot perimeter and having 4 ground rods.
* #2 SBTC leads shall extend up, and be clamped (bronze clamshell or equal), to any two guy wires. NEVER weld leads to the guy wires. The lead to the guy anchor 'hand' plate may be welded.

Fences:
Metallic fence within 25 feet of tower Lead 1, or within 6 feet of shelter lead 1, shall have whip leads as follows:
* Each corner post.
* Each pair of gate posts.
* Any line post over 20'-0" from a grounded post.
* Each gate leaf to its respective gatepost using braided strap (3/4", tin-clad copper w/ lug ends).
* Fences around guy anchors shall be grounded in similar fashion.

Fuel tanks:
NEVER WELD to any fuel enclosure. NEVER penetrate the fuel containment. Metal tanks shall have one whip lead attached. Use an approved clamp or two-hole lug on an available flange.

- Equipment Shelter/Platform and Other General Requirements (including but not limited to):
- Extend new Lead 21B up to shelter halo, remaking two-way connections as needed. Generator-equipped shelters have 6 such connections. Connections within the shelter shall be by compression; NEVER weld inside the shelter.
 - Each vertical support pipe of the exterior cable bridge. Bridge end shall be kept at least 6" from the tower structure. The cable bridge shall be jumpered to the vertical support pipes with #2 SBTC at each vertical support pipe.
 - Opposite corners of the steel equipment platform.
 - Opposite corners of the roof shield over the equipment shelter.
 - Each HVAC unit shield, if separate (may be 'jumpered' to main roof shield).
 - Each HVAC package unit.
 - Commercial electric meter box.
 - Generator receptacle, if present.
 - Steel building skid, if shelter is metal frame.
 - Each air intake or exhaust fan vent louver.
 - Each generator vent hood or louver.
 - Generator exhaust stack, external.
 - Opposite corners of generator support frame, if separate from shelter.
 - Generator fuel tank, if separate from generator unit.
 - Host building rain gutter, downspouts, and roof flashings within 25 feet.
 - Telco MPOP (Main Point of Presence), if external to equipment shelter.
 - Within cable vaults, one each to the ladder and to the manhole rim.

Note: The door frame is connected to the interior ground halo, and need no separate connection to the external ground ring.

Inspection & Testing

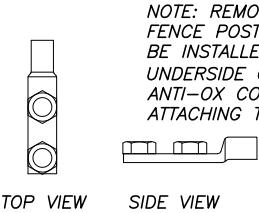
Test lead #1 and ground rods after installation but before backfilling or connecting to any other grounding, using the 3-point fall of potential method. Contractor to notify Verizon Wireless senior construction engineer at least 48 hours prior to testing. Document installation and test results with photographs.

SYMBOL AND NOTE LEGEND

- ①--- #2 SBTC AROUND SHELTER/PLATFORM, TOWER, OR GUY ANCHOR
- 5/8" X 10'-0" GALVANIZED STEEL GROUND ROD
- ◎ TEST WELL PREFERRED LOCATION
- #2 SBTC 'WHIP' LEAD
- ⑤--- (2) #2 SBTC FROM MGB, PGB, OR TGB TO LEAD 1
- ⑥ AC HVAC UNIT
- ②1B BC BUILDING CORNER
- ⑥ BO BOLLARD
- ⑥ CBS CABLE BRIDGE SUPPORT POST
- ⑥ CL CAMLOK
- ④ EL ELECTRICAL SERVICE GROUND
- ④ EM COMMERCIAL ELECTRICAL METER
- ⑥ FAN GUY ANCHOR PLATE
- ⑥ FP FENCE POST
- ⑨0 GEN GENERATOR
- ⌒ GP GATE POST, 3/4" BRAID STRAP TO LEAF
- ⑥ GPS GPS UNIT
- ⑥ GUY GUY WIRE, MECH. CLAMP ONLY – NO WELDS
- ⑥ HL HOOD OR LOUVER
- ⑥ HB OUTSIDE OF HOFFMAN BOX
- ⑥ ILC INTEGRATED LOAD CENTER
- ⑤ MGB MAIN GROUND BAR
- ⑥ MU GENERATOR MUFFLER
- ⑤ PGB PORT GROUND BAR
- ⑥ RBR FOUNDATION REINFORCING
- ⑥ RS ROOF SHIELD
- ⑥ SB STEEL BEAM
- ⑥ SP STEEL POST
- ⑥ STP STEEL PLATFORM
- ⑥ TEL HOFFMAN BOX
- ⑤ TGB TOWER GROUND BAR
- ⑥ TWR TOWER BASE
- ⑥ VP DIESEL FUEL VENT PIPE

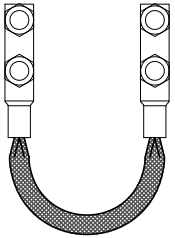
Note:

Contractor to provide #2 solid bare tin-clad (SBTC) copper wire lead from #1 ground ring to air conditioner & ice shield if provided by VZW.



TWO-HOLE 10,000 PSI COMPRESSION FITTING UL 9498 LISTED

NOTE: REMOVE GALVANIZING FROM FENCE POSTS IN AREAS LUGS WILL BE INSTALLED. LIGHTLY COAT THE UNDERSIDE OF THE LUGS W/ ANTI-OX COMPOUND BEFORE ATTACHING TO POSTS.



GATE BONDED TO FENCE POST (2) TWO-HOLE 10,000 PSI COMPRESSION FITTING W/ 3/4" BRAIDED TINNED COPPER JUMPER STRAP

BURNDY YA6C 2TC 14 CRIMP LUG

BELDEN 1/2"Ø I.D. TUBULAR BRAIDED STRAP



HYTAP CONNECTOR 10,000 PSI COMPRESSION FITTING FITTING MUST BE UL467 LISTED ACCEPTABLE FOR DIRECT BURIAL

2 COMPRESSION CONNECTOR DETAILS SCALE: NTS



TYPE RJ REINF. BAR



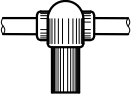
TYPE VS ROUND SURFACE



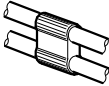
TYPE VS FLAT SURFACE



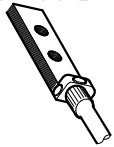
TYPE HS



TYPE GT



TYPE PT



TYPE GL LUG

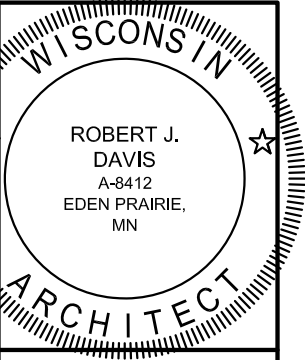
WELD: THOMAS & BETTS, 54856BE "BROWN33" CRIMP: BURNDY, YA3C 2TC 14E2, 10,000 PSI SCREW: RECOGNIZED, EM 2522DH.75.312

1 EXOTHERMIC WELD DETAILS SCALE: NTS

LEAD IDENTIFICATION & DESCRIPTION:

- 1 RING, EXTERNAL BURIED w/ RODS #2 SBTC
- 1A RING, CONCRETE ENCASED #2 SBTC
- 2 DEEP ANODE (TO IMPROVE OHMS) ROD OR PIPE
- 3 RING TO BLDG STL FRAME #2 SBTC
- 4 MAIN AC PANEL NEUTRAL BUS TO (2) GROUND RODS, ISOLATED FROM LEAD #1 NEC 250.66
- 5 RING TO GROUND BAR (2) #2 SBTC
- 6 RING TO EXT MTL OBJECT #2 SBTC
- 7 DEEP ANODE TO MGB NSTD33-9
- 8 AC PANEL TO WATER METER NEC 250.66
- 9 EXT WATER TO INT WATER PIPES NSTD33-9
- 10 INT WATER PIPE TO MGB NSTD33-9
- 11-12 NOT USED
- 13 AC PANEL TO MGB NSTD33-9
- 14 MGB/FGB TO BLDG STL FRAME #2/0 I-STR
- 14C MGB/FGB TO ROOF/WALL MTL PNL #1/0 I-STR
- 15 MGB/FGB TO FGB-HE SAME FLOOR #2/0 I-STR
- 16 NOT USED
- 16A ECPGB TO CABLE ENTRY RACK #1/0 I-STR
- 17 MGB TO CABLE SHIELDING #6 I-STR
- 17A ECPGB TO CABLE SHIELDING #6 I-STR
- 17B MGB/FGB TO F-O SPLICE SHELF #1 I-STR
- 18 LOWEST MGB/FGB TO HIGHEST FGB #2/0 I-STR
- 19 LEAD 18 TO OTHER FGBs, <6' #2/0 I-STR
- 20 MGB/FGB TO BRANCH AC PNL #6 I-STR
- 20A NEAREST GRND TO DISCONNECT PNL NEC 250.66
- 20B GWB TO AC DISTR PNL #6 I-STR
- 21 MGB/FGB TO INT HALO #2 I-STR
- 21A INTERIOR 'GREEN' HALO #2 I-STR
- 21B INT HALO TO EXT RING #2 SBTC
- 21C INT HALO TO EQUIPMENT MTL #6 I-STR
- 22 ROOF TOWER RING TO ROOF GRND NFPA 780
- 23 MGB/FGB TO ECPGB, SAME FLOOR #1 I-STR
- 23A MGB/FGB TO CXR-HF LINR PROT #6 I-STR
- 24 ECPGB TO EACH PROTECTOR ASSEMBLY #6 I-STR
- 24A LOWER PROT ASSY TO UPPER #6 I-STR

- 25 RING TO NEAREST LIGHTNING ROD #2 SBTC
- 26 LGHTING ROD SYS TO NEARBY MTL NFPA 780
- 27 RING TO TOWER RING (2) #2 SBTC
- 28 RING TO SHELTER RING (2) #2 SBTC
- 29 BRANCH AC PNL TO BTTY CHG FRM NSTD33-9
- 30 BRANCH AC PNL TO OUTLETS NSTD33-9
- 31 MGB/FGB TO PWR, BTTY FRAMES #2/0 I-STR
- 32 #31 TO BATTERY CHARGER FRAME #6 I-STR
- 33 #31 TO BATTERY RACK FRAME #6 I-STR
- 34 #31 TO PCU FRAME #6 I-STR
- 35 #31 TO DSU FRAME #6 I-STR
- 36 #31 TO PDU FRAME #6 I-STR
- 37 MGB/FGB TO BTTY RETURN NSTD33-14.3
- 37A MGB/FGB TO RTN TERM CARR SUPP #6 I-STR
- 38 FGB TO PDU GB #750MCM I-STR
- 38A FGB TO PDU GB CARRIER SUPPLY #2/0 I-STR
- 39 DC BUS DUCT TO NEXT SECTION #6 I-STR
- 40 DC BUS DUCT TO MGB/FGB #6 I-STR
- 41A MGB/FGB TO #58 #2/0 I-STR
- 42-44 NOT USED
- 45 MAIN AC PNL TO BRANCH AC PNL NSTD33-11
- 46 BRANCH AC PNL TO DED OUTLET NSTD33-11
- 47 FGB TO INTEG FRM #2 I-STR
- 48 LEAD #31 TO INTEG FRM #6 I-STR
- 49 INTEG FRM TO EQUIP SHELF BY FASTENERS
- 50 PDU BTTY RET TO #51 #2/0 I-STR
- 51 #50 TO TRANS FRM ISO DC PWR #6 I-STR
- 52 TRANS FRM FUSE TO FRM OR BAR #8 I-STR
- 53A MGB/FGB TO PDF/BOFB NSTD33-22
- 54 MGB/FGB TO STATIC DEVICES #6 I-STR
- 55 MGB/FGB TO CABLE AT ENTRY #6 I-STR
- 56 MGB/FGB TO AC PWR RADIO XMTR #6 I-STR
- 57A MGB/FGB TO CBL GRID/RUNWAY #2/0 I-STR
- 58A #41A TO AISLE FRAME #2 I-STR
- 59A #58A TO EACH SGL FRAME GRND #6 I-STR
- 60-89 NOT USED
- 90 GENERATOR FRAME TO EXT RING #2 SBTC



I hereby certify that the portion of this technical submission described below was prepared by me or under my direct supervision and responsible charge. I am a duly registered Architect under the laws of the State of WISCONSIN. ROBERT J. DAVIS, Reg. No. A-8412

Signed: [Signature]
Date: 02-12-18



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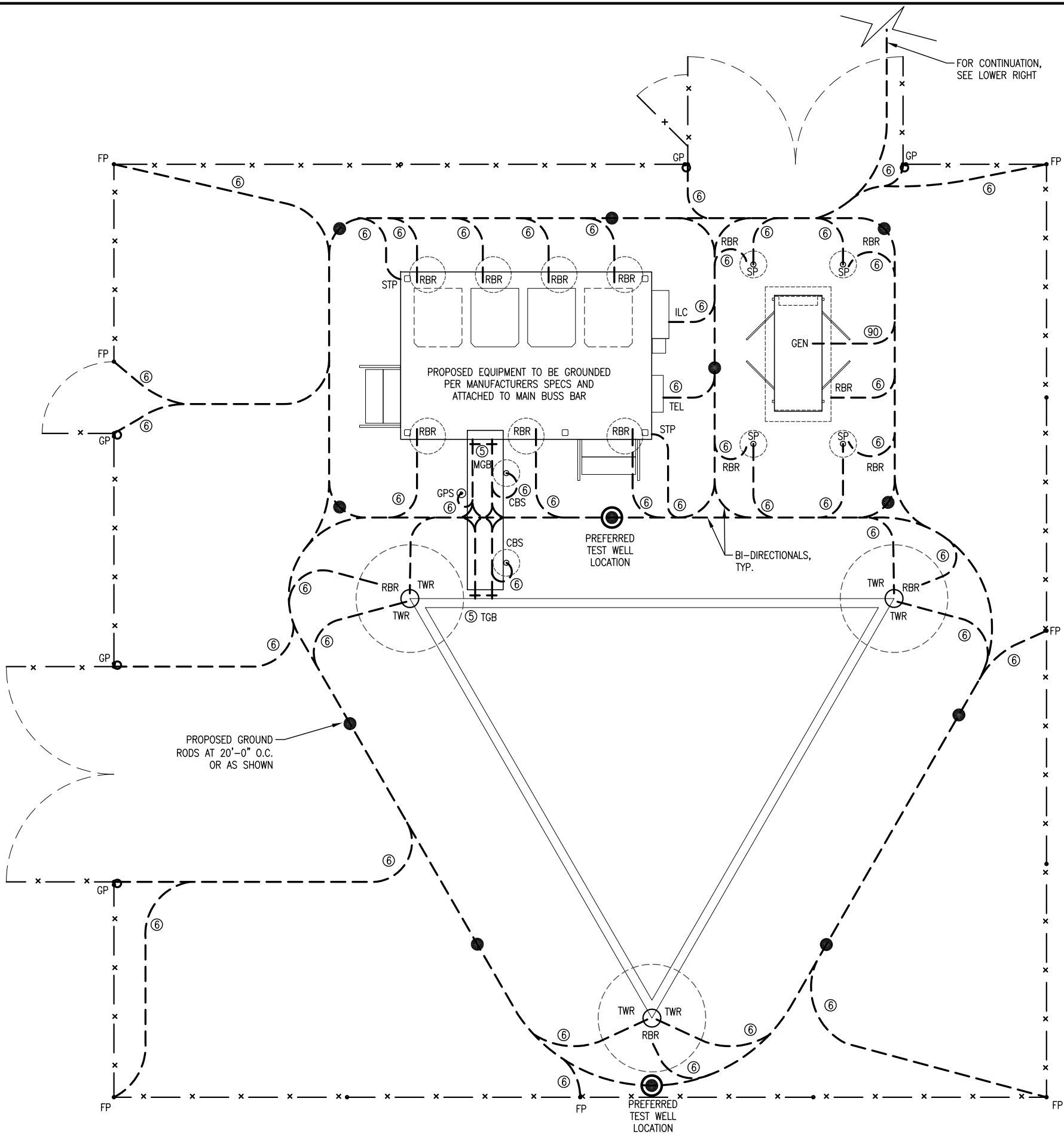
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LOC. CODE: 412347

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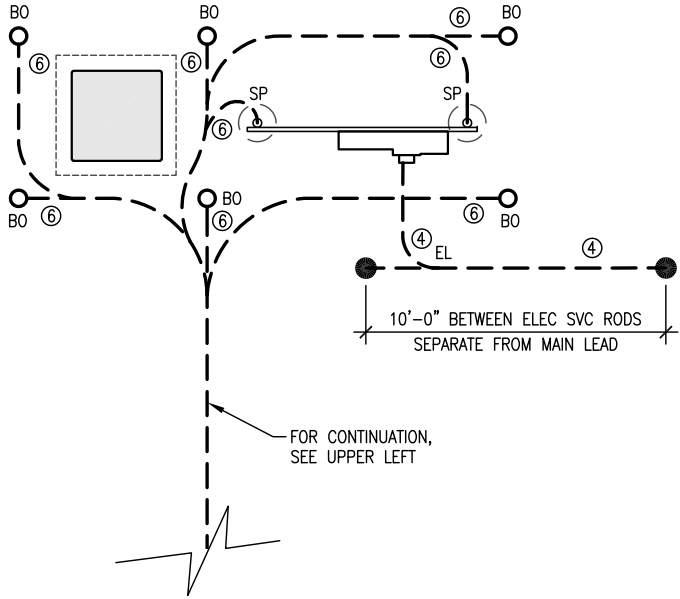
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SHEET CONTENTS:
GROUNDING NOTES

DRAWN BY:	DJS
DATE:	07-25-17
CHECKED BY:	BMS
REV. A	09-23-17
REV. B	10-26-17
REV. C	10-31-17
REV. D	02-12-18



GROUNDING DETAIL INDEX	
DETAIL	DETAIL DESCRIPTION
PLATFORM	9'-4" X 14'-0" PLATFORM W/ CANOPY GROUNDING ELEVATIONS
11.1	TEST WELL DETAIL, GROUND RING & ROD DETAIL
11.3	REBAR GROUNDING DETAIL
11.4	CONDUIT DETAIL
11.5	TYPICAL GROUNDING CABLE BRIDGE DETAIL
11.6	TYPICAL TOWER GROUNDING DETAIL



NOTE:
CONTRACTOR SHALL ENSURE THAT EACH WHIP IS ROUTED TO LEAD 1 BY THE SHORTEST PATH, AND BENDS SHALL NOT BE LESS THAN 12" RADIUS

1 GROUNDING PLAN
SCALE: NTS



WISCONSIN ARCHITECT

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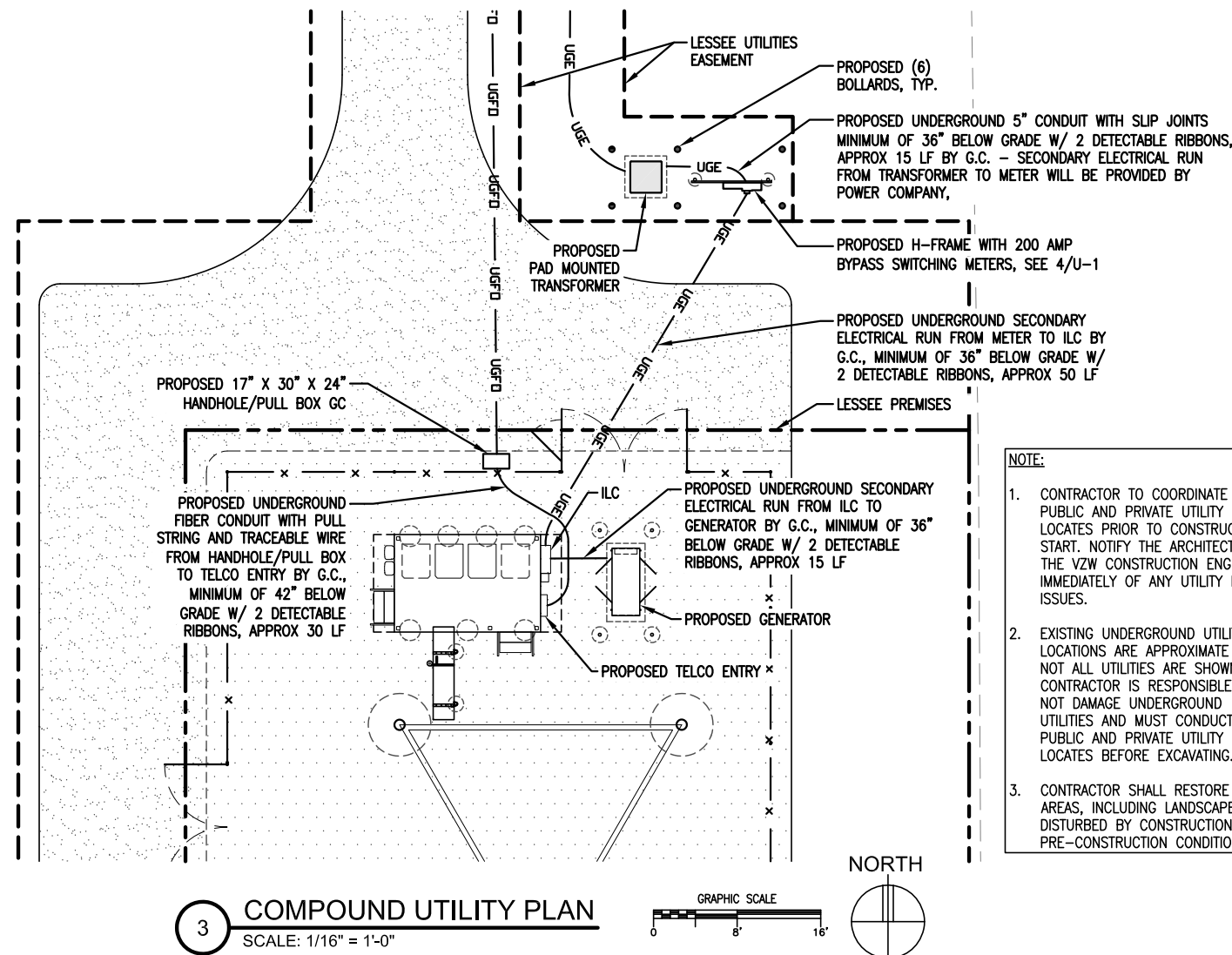
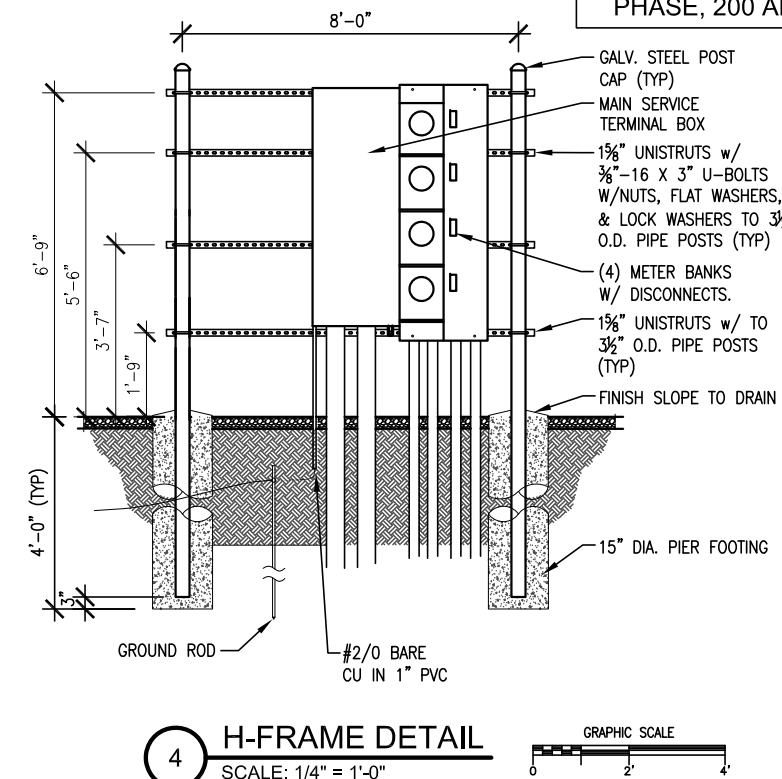
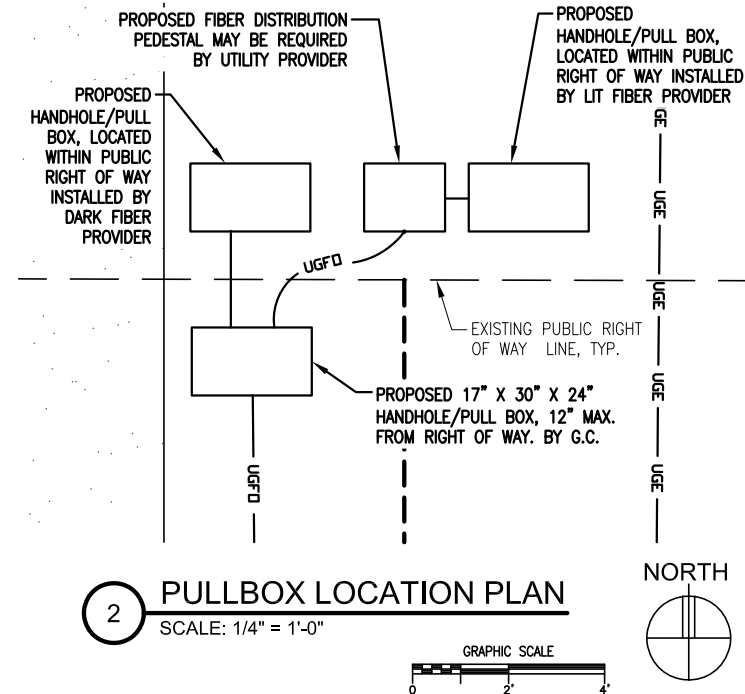
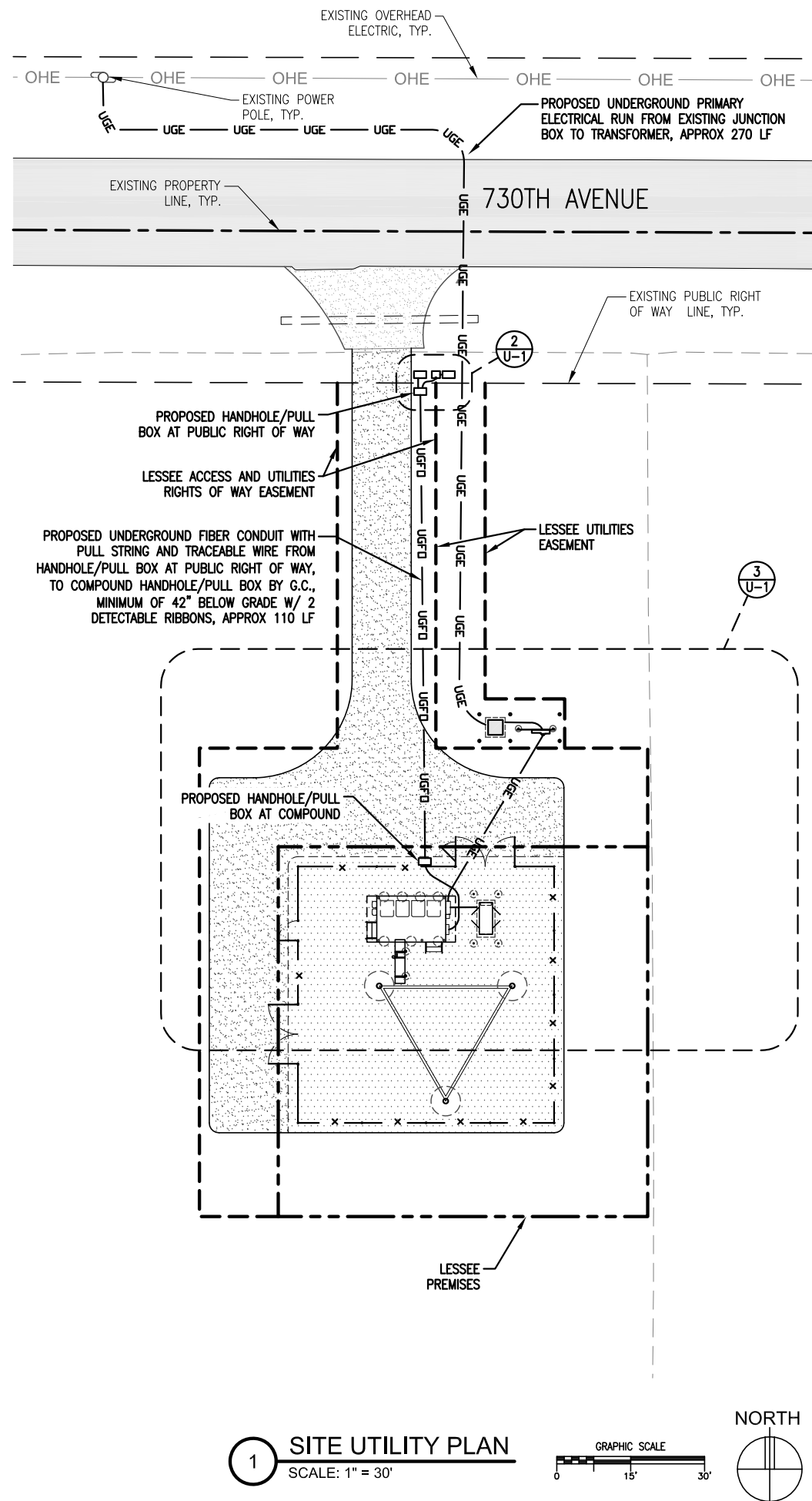
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GROUNDING DETAIL INDEX

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G-2



- NOTE:**
- CONTRACTOR TO COORDINATE PUBLIC AND PRIVATE UTILITY LOCATES PRIOR TO CONSTRUCTION START. NOTIFY THE ARCHITECT AND THE VZW CONSTRUCTION ENGINEER IMMEDIATELY OF ANY UTILITY LINE ISSUES.
 - EXISTING UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE AND NOT ALL UTILITIES ARE SHOWN. CONTRACTOR IS RESPONSIBLE TO NOT DAMAGE UNDERGROUND UTILITIES AND MUST CONDUCT BOTH PUBLIC AND PRIVATE UTILITY LOCATES BEFORE EXCAVATING.
 - CONTRACTOR SHALL RESTORE ALL AREAS, INCLUDING LANDSCAPE, DISTURBED BY CONSTRUCTION TO PRE-CONSTRUCTION CONDITIONS.

WISCONSIN

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ARCHITECT

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verizon

10801 BUSH LAKE ROAD
BLOOMINGTON, MN 55438
(612) 720-0052

PROJECT
20161365991
LOC. CODE: 412347

**WI05
CEDAR FALLS**

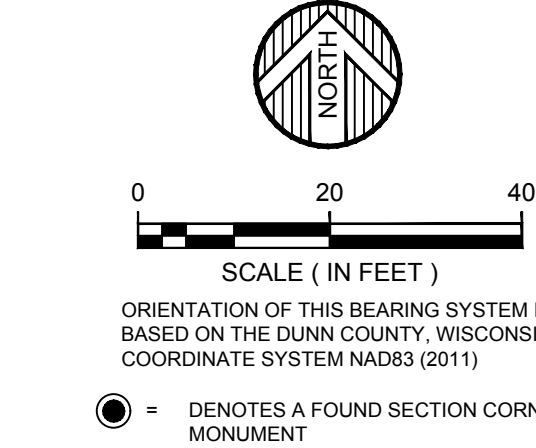
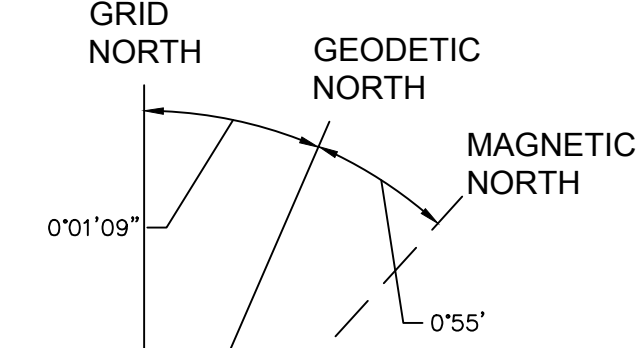
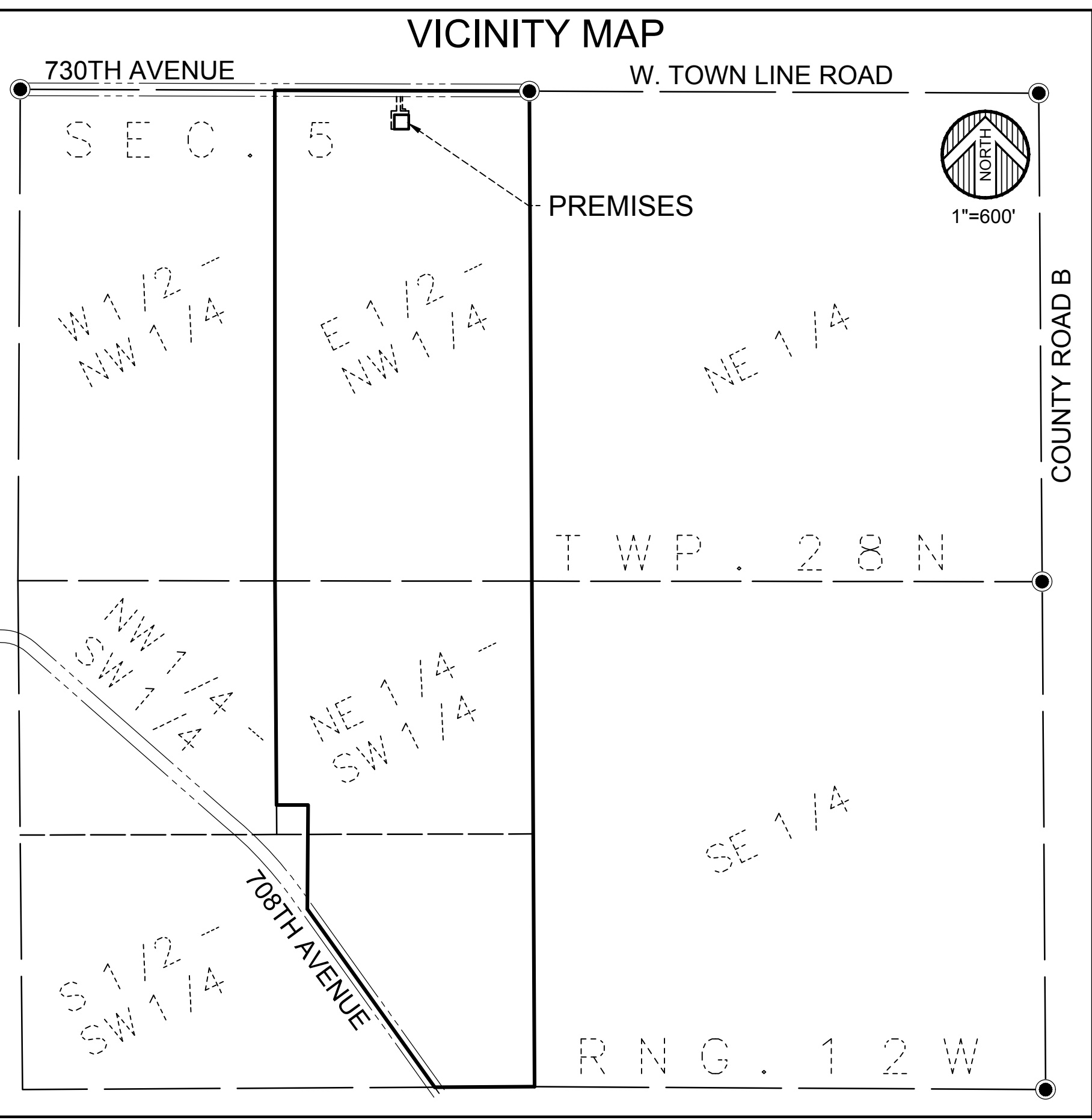
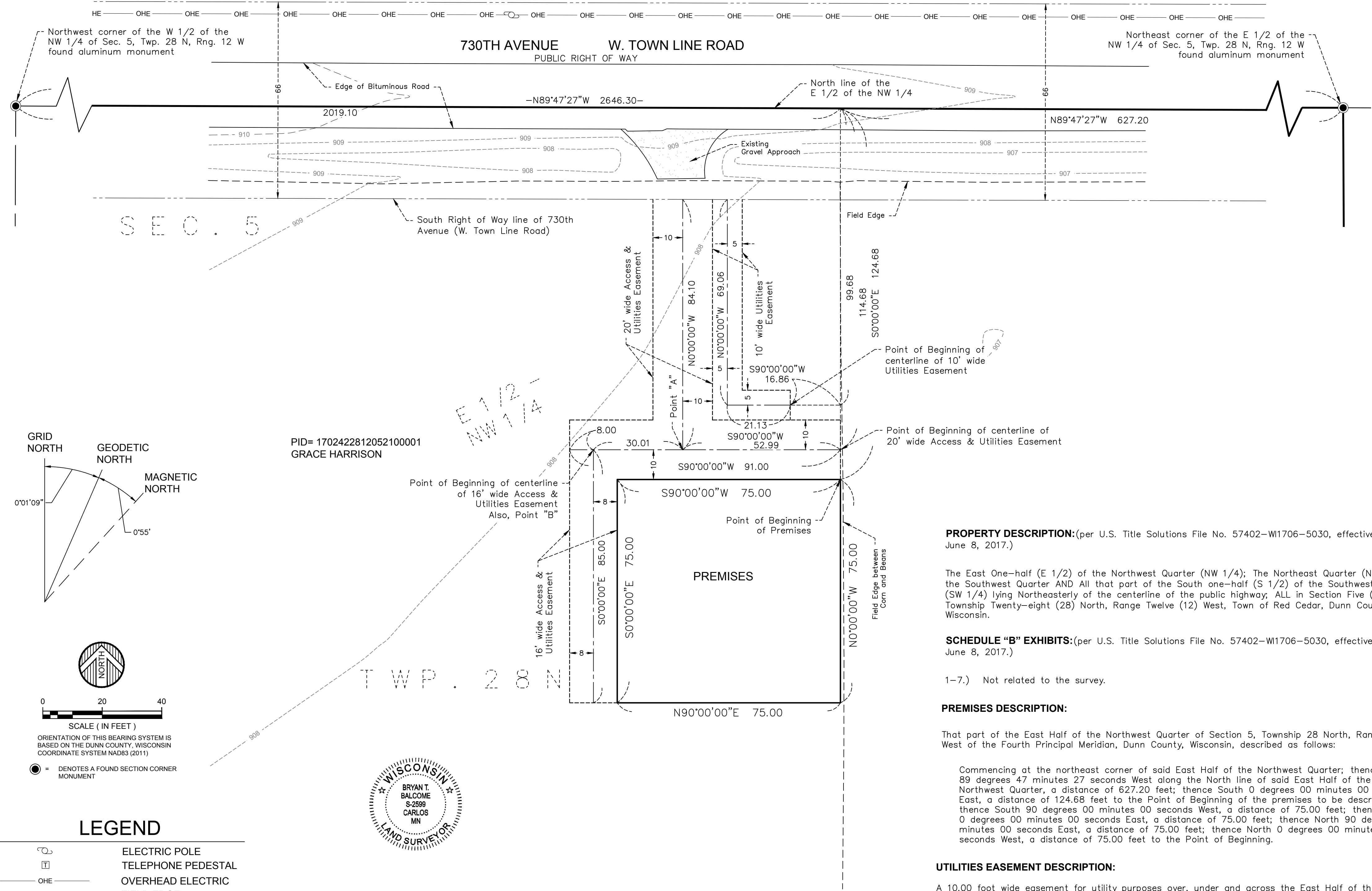
730TH AVE
MENOMONIE, WI 54751

SHEET CONTENTS:
SITE UTILITY PLAN
PULLBOX LOCATION PLAN
COMPOUND UTILITY PLAN
H-FRAME DETAIL

DRAWN BY:	DJS
DATE:	07-25-17
CHECKED BY:	BMS
REV. A	09-23-17
REV. B	10-26-17
REV. C	10-31-17
REV. D	02-12-18

U-1

SITE SURVEY



- LEGEND**
- ELECTRIC POLE
 - TELEPHONE PEDESTAL
 - OVERHEAD ELECTRIC
 - FIELD EDGE
 - BOUNDARY LINE
 - PREMISES
 - EASEMENT LINE
 - CENTERLINE
 - RIGHT OF WAY LINE
 - SECTION LINE
 - QUARTER LINE
 - SIXTEENTH LINE
 - GRAVEL SURFACE


DESIGN 1

SITE NAME:
WI05 CEDAR FALLS
Dunn County, WI

1	11/8/17	MOVED PREMISES REVISED PREMISES DESCRIPTION REVISED ACCESS AND UTILITY EASEMENT DESCRIPTIONS	SMK	BTB	BTB
No.	Date	REVISIONS	By	CHK	APP'D
FIELD WORK:		6/27/17	CHECKED BY: SMK	DRAWN BY:	BAM/JMB

I, BRYAN T. BALCOMBE, LAND SURVEYOR, HEREBY CERTIFY THAT THIS MAP IS A TRUE REPRESENTATION OF THE LANDS SURVEYED AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

SIGNATURE: *Bryan T. Balcombe*
BRYAN T. BALCOMBE, L.S.
DATE: 11/2/17
LICENSE # 2599



WIDSETH SMITH NOLTING
Engineering | Architecture | Surveying | Environmental

FULL SCALE ON 22"x34"
HALF SCALE ON 11"x17"

0494A2326.001

PROPERTY DESCRIPTION:(per U.S. Title Solutions File No. 57402–W1706–5030, effective date June 8, 2017.)

The East One–half (E 1/2) of the Northwest Quarter (NW 1/4); The Northeast Quarter (NE 1/4) of the Southwest Quarter AND All that part of the South one–half (S 1/2) of the Southwest Quarter (SW 1/4) lying Northeasterly of the centerline of the public highway; ALL in Section Five (5), Township Twenty–eight (28) North, Range Twelve (12) West, Town of Red Cedar, Dunn County, Wisconsin.

SCHEDULE "B" EXHIBITS:(per U.S. Title Solutions File No. 57402–W1706–5030, effective date June 8, 2017.)

1–7.) Not related to the survey.

PREMISES DESCRIPTION:

That part of the East Half of the Northwest Quarter of Section 5, Township 28 North, Range 12 West of the Fourth Principal Meridian, Dunn County, Wisconsin, described as follows:

Commencing at the northeast corner of said East Half of the Northwest Quarter; thence North 89 degrees 47 minutes 27 seconds West along the North line of said East Half of the Northwest Quarter, a distance of 627.20 feet; thence South 0 degrees 00 minutes 00 seconds East, a distance of 124.68 feet to the Point of Beginning of the premises to be described; thence South 90 degrees 00 minutes 00 seconds West, a distance of 75.00 feet; thence South 0 degrees 00 minutes 00 seconds East, a distance of 75.00 feet; thence North 0 degrees 00 minutes 00 seconds West, a distance of 75.00 feet to the Point of Beginning.

UTILITIES EASEMENT DESCRIPTION:

A 10.00 foot wide easement for utility purposes over, under and across the East Half of the Northwest Quarter of Section 5, Township 28 North, Range 12 West of the Fourth Principal Meridian, Dunn County, Wisconsin, the centerline of said easement is described as follows:

Commencing at the northeast corner of said East Half of the Northwest Quarter; thence North 89 degrees 47 minutes 27 seconds West along the North line of said East Half of the Northwest Quarter, a distance of 627.20 feet; thence South 0 degrees 00 minutes 00 seconds East, a distance of 99.68 feet; thence South 90 degrees 00 minutes 00 seconds West, a distance of 16.86 feet to the Point of Beginning of the centerline to be described; thence continue South 90 degrees 00 minutes 00 seconds West, a distance of 21.13 feet; thence North 0 degrees 00 minutes 00 seconds West, a distance of 69.06 feet to the south right of way line of 730th Avenue and said centerline there terminating.

The sidelines of said easement shall be shortened or lengthened to terminate at said south right of way line of 730th Avenue.

ACCESS AND UTILITIES EASEMENT DESCRIPTION:

A 20.00 foot wide easement for ingress, egress and utility purposes over, under and across the East Half of the Northwest Quarter of Section 5, Township 28 North, Range 12 West of the Fourth Principal Meridian, Dunn County, Wisconsin, the centerline of said easement is described as follows:

Commencing at the northeast corner of said East Half of the Northwest Quarter; thence North 89 degrees 47 minutes 27 seconds West along the North line of said East Half of the Northwest Quarter, a distance of 627.20 feet; thence South 0 degrees 00 minutes 00 seconds East, a distance of 114.68 feet to the Point of Beginning of the centerline to be described; thence South 90 degrees 00 minutes 00 seconds West, a distance of 52.99 feet to a point hereinafter referred to as Point "A"; thence continue South 90 degrees 00 minutes 00 seconds West, a distance of 30.01 feet to a point hereinafter referred to as Point "B"; thence continue South 90 degrees 00 minutes 00 seconds West, a distance of 8.00 feet and said centerline there terminating.

TOGETHER WITH

A 20.00 foot wide easement for ingress, egress and utility purposes over, under and across said East Half of the Northwest Quarter, the centerline of said easement is described as follows:

Beginning at the previously described Point "A"; thence North 0 degrees 00 minutes 00 seconds West, a distance of 84.10 feet to the south right of way line of 730th Avenue and said centerline there terminating.

The sidelines of said easement shall be shortened or lengthened to terminate at said south right of way line of 730th Avenue.

TOGETHER WITH

A 16.00 foot wide easement for ingress, egress and utility purposes over, under and across said East Half of the Northwest Quarter, the centerline of said easement is described as follows:

Beginning at the previously described Point "B"; thence South 0 degrees 00 minutes 00 seconds East, a distance of 85.00 feet and said centerline there terminating.

SURVEYOR NOTES:

- Utilities are per observed evidence, and markings per DIGGERS HOTLINE, Locate Request Ticket Nos. 20172508914 & 20172509533, dated June 20, 2017.
- The Proposed Premises together with all Access and Utilities Easements are within the area described in the Property Description contained herein.