COUNTY OF BECKER

Planning and Zoning

915 Lake Ave, Detroit Lakes, MN 56501
Phone: 218-846-7314 ~ Fax: 218-846-7266

PLANNING COMMISSION
NOTICE OF PUBLIC HEARING
HEARING DATE AND LOCATION
March 25th, 2026 @ 6:00 P.M.
****3RD FLOOR JURY ASSEMBLY ROOM – BECKER COUNTY COURTHOUSE****

APPLICANT: Vertical Bridge on behalf of Justin Aschnewitz
39600 St Hwy 87
Frazee, MN 56544

Project Location: 40789 & 40545 St Hwy 87
Frazee, MN 56544

APPLICATION AND DESCRIPTION OF PROJECT:

Request a Conditional Use Permit for a two hundred and sixty (260) foot guyed tower with a nine (9) foot lightening rod.

LEGAL LAND DESCRIPTIONS: Tax ID Numbers: **29.0149.000 & 29.0149.001** Section 24 Township 138 Range 039; 24-138-039 SE1/4 LESS HWY & LESS W 500' OF N 1375.50' OF SE1/4 AKA 15 AC & 24-138-039 WEST 500' OF NORTH 1375.50' OF SE1/4 AKA TRACT A; Silver Leaf Township

REFER TO BECKER COUNTY ZONING ORDINANCE

Replies/Comments:
Public testimony regarding this application will only be received by email, in writing, or in-person at the hearing. Interested parties are invited to submit to the Becker County Department of Planning and Zoning written facts, arguments, or objectives by 12:00 P.M. the date of the Hearing. These statements should bear upon the suitability of the location and the adequacy of the Project and should suggest any appropriate changes believed to be desirable.

Replies may be addressed to:
PLANNING AND ZONING DEPARTMENT
915 Lake Avenue
Detroit Lakes, MN 56501

EMAIL: nicole.bradbury@co.becker.mn.us

To view all application information on this project please visit:
http://www.co.becker.mn.us/government/meetings/planning_zoning/planning_commission/

If you have questions about the Project, feel free to call 218-846-7314.

Jurisdiction: This Project comes under the Regulatory Jurisdiction of the Becker County Zoning Laws.

Regulatory Authority: This Application will be reviewed according to the provisions of the Becker County Zoning Ordinance. The decision whether to issue a Permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity. That decision will reflect the concern for both protection and utilization of important resources. All factors which may be relevant to the proposal will be considered including the cumulative effects: Land Use, Shoreline Protection, Water Supply and Conservation, Safety, Economics, in General, the Needs and Welfare of the People.

Conditional Use Application Review — Permit # CUP2026-155

Property and Owner Review

Owner: Justin Aschnewitz	Parcel Number(s): **290149000 290149001**
Mailing Address: 39600 St Hwy 87 Frazee, MN 56544	Site Address: 40789 & 40545 St Hwy 87 Frazee, MN 56544
	Township-S/T/R: **SILVER LEAF-24/138/039**
	Shoreland? **No** Name:

Legal Descr: **24-138-039 SE1/4 LESS HWY & LESS W 500' OF N 1375.50' OF SE1/4 AKA 15 AC**

Conditional Use Details Review

Description of Conditional Use Request: **The applicant is requesting a Conditional Use Permit to construct and operate a wireless communications tower on a rural parcel in Becker County. The facility is needed to improve wireless coverage, network reliability, and emergency communication capabilities in the surrounding area. The tower will occupy a small leased compound and will be designed to meet all applicable zoning, safety, and setback requirements. This request supports the continued development of modern telecommunications infrastructure while maintaining compatibility with existing land uses in the area.**

1. Describe how the conditional use permit, if granted, will not harm the use and enjoyment of other properties in the immediate vicinity for the purposes already permitted, nor substantially diminish or impair property values within the immediate vicinity.

The proposed communications tower will not negatively affect the use, enjoyment, or value of surrounding properties. The structure is located on a rural parcel with low residential density, and the tower site has been positioned to maximize distance from nearby homes and active land uses. All required setbacks, fall-zone clearances, and safety standards will be fully met or exceeded, ensuring that the tower does not interfere with existing agricultural, residential, or recreational activities in the area.

The tower produces no noise, odor, traffic, or emissions that would impact neighboring properties. Its operational footprint is minimal, with only occasional maintenance visits and no ongoing activity that would alter the character of the surrounding land. Modern monopole and self-supporting tower designs also reduce visual impact compared to older lattice structures, and the facility will include neutral-colored finishes to blend with the natural environment.

Independent studies and industry data consistently show that properly sited wireless towers do not diminish property values when located in rural areas with adequate setbacks. In many cases, improved wireless coverage is viewed as a community benefit that enhances safety, economic activity, and connectivity. Given the tower's rural location, compliance with all zoning standards, and minimal operational impacts, the proposed use will not impair property values or the enjoyment of nearby properties.

2. Describe how establishing the conditional use will not impede the normal, orderly development and improvement of surrounding vacant property for uses predominant in the area.

The proposed communications tower will not impede the normal or orderly development of surrounding vacant properties. The tower site is located on a rural parcel where agricultural, forestry, and low-density residential uses are predominant. These land uses are not sensitive to the minimal footprint or operational characteristics of a wireless communications facility. The tower occupies only a small leased area, and the remainder of the parcel remains available for its existing and future permitted uses.

3. Describe how adequate utilities, access roads, drainage and other necessary facilities have been or are being provided.

Adequate utilities, access, and site infrastructure are available to fully support the proposed communications tower. The facility requires only minimal electrical service, which will be provided through an existing nearby utility connection without the need for new public infrastructure. No water, sewer, or other municipal utilities are required for tower operation.

Access to the site is provided by an existing driveway or private access road that can accommodate occasional maintenance vehicles without generating additional traffic or requiring improvements to public roads. The tower compound will include a gravel surface and appropriate grading to ensure proper drainage.

Stormwater will be managed on-site through natural infiltration, and no runoff will be directed toward adjacent properties or public rights-of-way.
Because the tower is a low-impact, low-demand utility structure, it does not require additional public services or infrastructure upgrades.

4. Describe how adequate measures have been or will be taken to provide sufficient off-street parking and loading space to serve the proposed use.
N/A

5. Describe how adequate measures have been or will be taken to prevent or control offensive odor, fumes, dust, noise and vibration, so none of these will constitute a nuisance, and to control lighted signs and other lights so that no disturbance to neighboring properties will result.
The proposed communications tower is a passive utility structure and does not generate odor, fumes, dust, or vibration during normal operation. The facility contains no combustion sources, processing equipment, or mechanical systems that would emit pollutants or create nuisance conditions. Construction activities will be temporary and limited in duration, and standard best management practices—such as dust suppression, erosion control, and proper equipment maintenance—will be used to minimize short-term impacts.
Operational noise is negligible. The tower does not include fans, generators, or other continuously running equipment. Any backup power system, if installed, will be fully enclosed and used only during rare emergency outages or periodic testing, consistent with county noise standards. These activities will not create noise levels that would disturb neighboring properties.
Lighting will comply with FAA requirements, if applicable, and will be limited to the minimum intensity and number of fixtures necessary for aviation safety.

Additional shoreland questions below (if applicable)

6a. Describe how adequate measures have been or will be taken to assure that soil erosion or other possible pollution of public waters will be prevented, both during and after construction.

6b. What measures have been taken to assure that the visibility of structures and other facilities as viewed from public waters will be limited.

6c. What measures have been taken to assure that the site is adequate for water supply and on-site sewage treatment.

6d. Describe how the types, uses and number of watercrafts that the project will generate can be safely accomodated.

Business Plan Review

Name of Business:

Business Owners:

Business Type: If 'Other', explain:

Type of Merchandise:

Type of Service:

Hours and Days of Operation:

Number of Employees:

Off-Street Parking Plan:

Size of structure to be used for Business:
New or Existing:

Signage Plan:

Exterior Lighting Plan:

Known Environmental Hazards:

Additional Business Plan Information:

PROJECT DESCRIPTION:

CONSTRUCTION OF TELECOMMUNICATIONS AND PUBLIC UTILITY FACILITY, CONSISTING OF A CELL TOWER, SPACE FOR CARRIER EQUIPMENT, AND A UTILITY BACKBOARD WITHIN A FENCED COMPOUND. NO WATER OR SEWER IS REQUIRED. THIS WILL BE AN UNMANNED FACILITY.

CODE COMPLIANCE:

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:

1. INTERNATIONAL BUILDING CODE
2. NATIONAL ELECTRIC CODE
3. NFPA101 LIFE SAFETY CODE
4. IFC
5. AMERICAN CONCRETE INSTITUTE
6. AMERICAN INSTITUTE OF STEEL CONSTRUCTION
7. MANUAL OF STEEL CONSTRUCTION, 13TH EDITION
8. ANSI/TIA/EIA-222
9. TIA 607
10. INSTITUTE FOR ELECTRICAL & ELECTRONICS ENGINEER 81
11. IEEE C2 NATIONAL ELECTRIC SAFETY CODE, LATEST EDITION
12. TELECORDIA GR-1275
13. ANSI/T 311
14. UNIFORM MECHANICAL CODE
15. UNIFORM PLUMBING CODE
16. LOCAL BUILDING CODE
17. CITY/COUNTY ORDINANCES
18. STATE BUILDING CODE

verticalbridge

THE TOWERS LLC

US-MN-5477

SPRUCE

ST HWY 87

FRAZEE, MN 56544

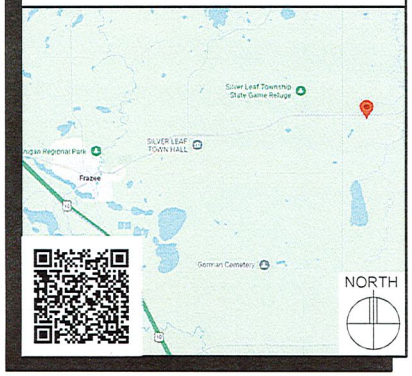
260' GUYED TOWER

verizon

10801 BUSH LAKE ROAD
BLOOMINGTON, MN 55438
CONSTRUCTION DEPT. (952) 946-4700

SITE NAME: MN05 SPRUCE
MDG: 5000366246
FUZE PROJECT ID: 25431337

VICINITY MAP



PROJECT INFORMATION

VERTICAL BRIDGE SITE NUMBER:	US-MN-5477
VERTICAL BRIDGE SITE NAME:	SPRUCE
VERIZON SITE NAME:	MN05 SPRUCE
VERIZON MDG:	5000366246
VERIZON FUZE PROJECT ID:	25431337
SITE ADDRESS:	ST HWY 87 FRAZEE, MN 56544
COUNTY:	BECKER
LATITUDE (DECIMAL):	N 46.751178°
LONGITUDE (DECIMAL):	W 95.550513°
LATITUDE (DMS):	N 46° 45' 04.24"
LONGITUDE (DMS):	W 95° 33' 01.85"
GROUND ELEVATION:	1451.1' AMSL
STRUCTURE TYPE:	GUYED TOWER
STRUCTURE HEIGHT:	260' AGL
OVERALL HEIGHT:	269' AGL
RFDS FORM DATED:	11-10-2025

SHEET INDEX

	SHEET	SHEET DESCRIPTION
VERTICAL BRIDGE	T-1:T-2	PROJECT TITLE SHEET & GENERAL NOTES
	-	SURVEY
	A-1	OVERALL SITE PLAN AND TOWER ELEVATION
	A-2	ENLARGED SITE PLAN
	A-3.1:A-3.2	SITE PREP & GRADING NOTES AND DETAILS
	A-4:A-5	FENCE DETAILS
	A-6	SIGN DETAILS
	A-7	MISC. DETAILS
	A-8	SITE PHOTOS
	G-1:G-4	GROUNDING NOTES, PLAN AND DETAILS
	U-1:U-2	SITE UTILITY PLANS, DETAILS AND NOTES
VERIZON	VZW A-1	VERIZON SITE PLAN
	VZW A-2	RFDS INFO, MOUNTING DETAIL AND ONE-LINE DIAGRAM
	VZW A-3	CABINET AND BASE EQUIPMENT DETAILS
	VZW A-4	CABLE ICE BRIDGE, GPS AND MISC. DETAILS
	VZW A-5	GENERATOR DETAILS
	VZW G-1	VERIZON GROUNDING PLAN
	VZW G-2	VERIZON GROUNDING DETAILS AND NOTES
	VZW U-1	VERIZON UTILITY PLAN, DETAILS AND NOTES
	VZW U-2	CONDUIT ROUTING PLAN AND ONE-LINE ELECTRIC DIAGRAM

ISSUE SUMMARY

REV	DESCRIPTION	SHEET/DETAIL
A	ISSUED FOR REVIEW	ALL
B	ISSUED FOR REVIEW	ALL

CONTACTS

PROPERTY OWNER:	JUSTIN ASCHNEWITS 39600 ST HWY 87, FRAZEE MN 56544 (218) 849-6970
LESSOR / LICENSOR:	THE TOWERS, LLC 22 WEST ATLANTIC AVENUE, SUITE 310 DELRAY BEACH, FL 33444 (404) 862-4089
LESSEE:	VERIZON WIRELESS 10801 BUSH LAKE ROAD BLOOMINGTON, MN 55438 CONSTRUCTION DEPT. (952) 946-4700
POWER UTILITY COMPANY CONTACT:	LAKE REGION ELECTRIC COOPERATIVE 1401 SOUTH BROADWAY P.O. BOX 643 PELICAN RAPIDS, MN 56572 (800) 552-7658
TELCO UTILITY COMPANY CONTACT:	ARVIG 340 US-10 DETROIT LAKES, MN 56501 (877) 290-0560
DESIGNER:	DESIGN 1 OF EDEN PRARIE 9973 VALLEY VIEW ROAD EDEN PRAIRIE, MN 55344 (952) 903-9299
STRUCTURAL ENGINEER (TOWER):	T.B.D.
SITE ACQUISITION:	BUELL CONSULTING, INC. 720 MAIN ST, SUITE 200 ST. PAUL, MN 55118

DRAWING APPROVALS

JOB TITLE	NAME	DATE
VERTICAL BRIDGE		
RF ENGINEER		
CONSTRUCTION ENGINEER		
TRANSPORT ENGINEER		
EQUIPMENT ENGINEER		
REAL ESTATE SPECIALIST		

CALL 811 FOR UNDERGROUND UTILITIES PRIOR TO DIGGING EMERGENCY: CALL 911

PREPARED FOR:

verticalbridge

THE TOWERS, LLC

22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

NOT FOR CONSTRUCTION

DESIGN 1

9973 VALLEY VIEW RD.
EDEN PRAIRIE, MN 55344
(952) 903-9299
WWW.DESIGN1EP.COM

PROJECT
US-MN-5477
FUZE ID: 25431337

US-MN-5477
SPRUCE

ST HWY 87
FRAZEE, MN 56544

SHEET CONTENTS:

DRAWN BY:	M.T.
CHECKED BY:	S.D.
REV. A	02-23-2026
REV. B	02-26-2026

T-1

VERTICAL BRIDGE CONSTRUCTION SCOPE OF WORK:

1.00 PERMITTING
A. CONTRACTOR IS RESPONSIBLE FOR ELECTRICAL PERMITS AND ALL REQUIRED INSPECTIONS.

2.00 SITE CLEARING
A. CONTRACTOR SHALL CLEAR ACCESS EASEMENT AND LEASE AREA OF ALL TREES AND STUMPS. REMOVE AND DISPOSE OF ALL DEBRIS. CONTRACTOR SHALL NOT DISTURB AREA OUTSIDE OF LIMITS OF DISTURBANCE.

B. IF REQUIRED PER UTILITY COORDINATION CONTRACTOR SHALL CLEAR UTILITY EASEMENTS OF ALL TREES AND STUMPS. REMOVE AND DISPOSE OF ALL DEBRIS.

C. CONTRACTOR SHALL INSTALL SILT FENCE PRIOR TO THE START OF CONSTRUCTION.

D. ALL DEBRIS OR MATERIALS TO BE LEFT ON SITE WILL BE CLEARED WITH THE LAND OWNER ON A SIGNED DOCUMENT.

3.00 ACCESS ROAD
A. CONTRACTOR SHALL COMPLETE GRAVEL ACCESS DRIVE TO TOWER COMPOUND PER CONSTRUCTION DRAWINGS OR AT A MINIMUM OF VERTICAL BRIDGE STANDARDS.

B. 18" CULVERT PIPE IS VERTICAL BRIDGE MINIMUM STANDARD UNLESS DOT ENFORCED SIZE IS REQUESTED. SEE CONSTRUCTION DRAWINGS GRADING PLAN FOR SITE CULVERT LOCATION(S) AND SIZES.

4.00 COMPOUND FENCE
A. CONTRACTOR SHALL INSTALL STYMIE LOCK SYSTEM AND VERTICAL BRIDGE LOCK ON COMPOUND GATE. VERTICAL BRIDGE LOCK COMBO (0951)

B. CONTRACTOR SHALL INSTALL MUSHROOM AND GATE STOPS.

C. CONTRACTOR SHALL INSTALL 50'X50'X6' CHAINLINK FENCE WITH (3) RUNS OF BARBED WIRE ON TOP FOR MONOPOLE AND GUYED TOWERS UNLESS NOTED OTHERWISE. (75'X75'X6' FENCED COMPOUND FOR SST TOWER SITES UNLESS NOTED OTHERWISE)

5.00 TOWER AND FOUNDATION
A. CONTRACTOR SHALL COORDINATE DELIVERY OF ANCHOR BOLTS, TEMPLATE AND TOWER STEEL WITH TOWER VENDOR.

B. CONTRACTOR SHALL UTILIZE SUPPLIED FOUNDATION DESIGN FOR TOWER. REBAR AND CONCRETE INSTALLATION SHALL BE INSPECTED AND TESTED BY A 3RD PARTY COMPANY AND SUBMIT TEST AND INSPECTION REPORTS TO VERTICAL BRIDGE. (SPOILS FROM FOUNDATION SHALL BE REMOVED FROM SITE)

C. 3 DAY / 7 DAY / 28 DAY BREAK TEST REQUIRED. BREAK TEST MUST BE SUBMITTED FOR REVIEW PRIOR TO TOWER STACK.

D. CONTRACTOR SHALL INSTALL TOWER, ALL ASSOCIATED STEP BOLTS, SAFETY CLIMB EQUIPMENT, LIGHTNING ROD, WAVEGUIDE LADDER AND ALL MISCELLANEOUS TOWER PARTS.

E. CONTRACTOR SHALL CONFORM TO SUPPLIED FAA HEIGHT VERIFICATION.

6.00 TOWER LIGHTING
A. TOWER LIGHTING EQUIPMENT SHALL BE INSTALLED BY LIGHTING MANUFACTURE.

B. CONTRACTOR SHALL SUPPLY AND INSTALL 100A SUB-PANEL WITH (3) 20 AMP BREAKERS FOR TOWER LIGHTING IF REQUIRED.

C. CONTRACTOR SHALL SUPPLY AND INSTALL (1) GFI OUTLET AT SUB-PANEL LOCATION FOR TOWER LIGHTING IF REQUIRED.

D. CONTRACTOR SHALL SUPPLY AND INSTALL (1) 2" CONDUIT FROM SUB-PANEL LOCATION TO TOWER LEG WITH WEATHER-HEAD IF REQUIRED.

7.00 UTILITY H-FRAME CONSTRUCTION
A. CONTRACTOR SHALL SUPPLY AND INSTALL A 4-GANG 800 AMP METER PANEL ON A NEW 8' H-FRAME.

B. H-FRAME TO BE CONSTRUCTED TO HOLD 4-GANG METER BASE ON FRONT WITH METERS FACING OUT OF COMPOUND.

C. H-FRAME TO BE CONSTRUCTED TO HOLD TOWER LIGHTING SUB-PANEL AND LIGHTING CONTROLLER ON FRONT ALONGSIDE METER BASE.

D. CONTRACTOR SHALL SUPPLY GFCI ALL WEATHER RECEPTACLES ON H-FRAME.

E. CONTRACTOR SHALL SUPPLY AND INSTALL 500-WATT METAL MALIDE FLOOD LIGHT 120 VOLT WITH TIMER SWITCH.

8.00 POWER SERVICE
A. CONTRACTOR SHALL USE PROVIDED UTILITY REPORT AND CONSTRUCTION DRAWINGS TO BID POWER FROM POWER DEMARC.

B. CONTRACTOR SHALL BE IN CONSTANT COMMUNICATION WITH POWER COMPANY UNTIL POWER IS ACQUIRED AT MULTI-METER FRAME.

C. CONTRACTOR SHALL NOTIFY UTILITY PROVIDER OF START OF CONSTRUCTION.

D. CONTRACTOR SHALL CONDUCT A SECOND POWER WALK WITH UTILITY PROVIDER AT START OF CONSTRUCTION.

E. IF CHANGES TO THE SCOPE OF WORK ARE MADE BY THE UTILITY PROVIDER AFTER CONSTRUCTION START, CONTRACTOR SHALL NOTIFY VERTICAL BRIDGE CM/PM IMMEDIATELY.

9.00 VERIZON TELCO/FIBER SERVICE INSTALL BY VERTICAL BRIDGE
A. CONTRACTOR SHALL SUPPLY AND INSTALL A SEPARATE HAND-HOLE AT THE ROW, AT THE COMPOUND AND EVERY 300' (OR AT ANY BEND) WITH 2" CONDUIT FOR THE LIT FIBER PER THE CONSTRUCTION DRAWINGS. MARK HAND-HOLES LIT FIBER

B. CONTRACTOR SHALL SUPPLY AND INSTALL A SEPARATE HAND-HOLE AT THE ROW, AT THE COMPOUND AND EVERY 300' (OR AT ANY BEND) WITH 2" CONDUIT FOR THE DARK FIBER PER THE CONSTRUCTION DRAWINGS. MARK HAND-HOLES DARK FIBER FIBER

C. FIBER TO FOLLOW ACCESS ROAD TO ROW ALWAYS!

D. CONTRACTOR TO PROVIDE AND INSTALL CARLON EXPANSION JOINT CONNECTIONS AT CABINETS/SHELTER LOCATION PER MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

E. CONTRACTOR SHALL PROVIDE 2" SDR-11 HDPE CONDUIT FOR FIBER CONDUIT AS NOTED ON DRAWINGS WHEN DIRECTIONAL BORING IS UTILIZED.

10.00 VERIZON CIVILS
A. CONTRACTOR SHALL PROVIDE LUMP SUM FEE FOR ALL VERIZON LINE ITEMS UNDER TENANT CIVILS ON BID DOCUMENT. THIS INCLUDES SET AND CONNECTIONS OF VERIZON'S EQUIPMENT/GENERATOR PADS, FUEL TANKS, EQUIPMENT/GENERATOR ELECTRICAL, TELCO/FIBER CONDUITS, EQUIPMENT GROUNDING AND ICE BRIDGE.

11.00 VERIZON ANTENNA MOUNT(S)
A. CONTRACTOR SHALL PROVIDE SEPARATE LINE ITEM FOR ANTENNA MOUNT INSTALLATION UNDER TENANT MOUNT. CONTRACTOR SHALL ORDER THE ANTENNA MOUNT AND CONFIRM THE ITEM DESCRIPTION THROUGH VERIZON.

B. CONTRACTOR WILL BE REQUIRED TO ORDER ANTENNA MOUNT ASAP TO AVOID ANY DELAYS TO STACK THE TOWER.

VERIZON CONSTRUCTION SCOPE OF WORK:
1.00 VERIZON ANTENNA AND LINES
A. CONTRACTOR SHALL PROVIDE A LUMP SUM FEE IN "TENANT L&A" FOR THE INSTALL OF VERIZON L&A INCLUDING ANY REQUIRED TESTING AND MATERIALS AS DIRECTED BY VERIZON PERSONNEL FOR A TYPICAL MARKET COLLOCATION.

2.00 CIVILS
A. CONTRACTOR SHALL PROVIDE A LUMP SUM FEE IN "TENANT CIVILS" FOR ALL VERIZON CIVIL WORK INCLUDING EQUIPMENT/GENERATOR/PROPANE PADS AND EQUIPMENT SUPPORTS (I.E. PLINTHS ETC.), CARRIER GROUNDING, ELECTRICAL CONDUITS & CONDUCTORS AND H-FRAME, EQUIPMENT SET AS WELL AS ANY OTHER SERVICES AND/OR MATERIALS AS DIRECTED BY VERIZON FOR A TYPICAL MARKET COLLOCATION.

3.00 MOUNTS
A. CONTRACTOR SHALL PROVIDE A LUMP SUM FEE IN "TENANT MOUNT" FOR PROVIDING THE MOUNT ONLY (PRICE OF MOUNT INSTALLATION TO BE INCLUDED IN "TENANT L&A").

4.00 STARTUP COMMISSIONING
A. CONTRACTOR SHALL PROVIDE LUMP SUM FEE UNDER BID CLARIFICATION/EXCEPTIONS SECTION FOR COMMISSIONING AND START-UPS (AS REQUIRED BY "STANDARD VERIZON INSTALL). VERIZON IS RESPONSIBLE FOR PAYMENT OF THESE SERVICES.

5.00 VERIZON POWER SERVICE
A. CONTRACTOR/VERIZON CM RESPONSIBLE FOR SETTING UP VERIZON'S POWER ACCOUNT OR TRANSFER OF INITIAL SERVICE ACCOUNT FROM VERTICAL BRIDGE TO VERIZON.
1. CONTRACTOR RESPONSIBLE FOR REPORTING POWER UPDATES.
2. CONTRACTOR RESPONSIBLE FOR TRACKING AND CONFIRMING METER SET.
3. PHOTO CONFORMATION REQUIRED.

B. VERIZON POWER SERVICE SHALL BE 200 AMPS

C. TYPICAL VERIZON ELECTRICAL POWER SERVICE INSTALL. SEE CONSTRUCTION DRAWINGS FOR POWER ROUTING.

6.00 THE DESIGNER/E.O.R. MAKES NO WARRANTY, EXPRESSED OR IMPLIED, ON THE STRUCTURAL ADEQUACY FOR PROPRIETARY BRACKETS, CLIPS, PARTS, FROM A MANUFACTURER.

CONTRACTOR NOTES

VERTICAL BRIDGE TIMELINE EXPECTATIONS

- ONCE NTP HAS BEEN ISSUED, CONTRACTOR HAS (3) BUSINESS DAYS TO PROVIDE A SCHEDULE TO VERTICAL BRIDGE CONSTRUCTION MANAGER AND PROJECT MANAGER.
- CONSTRUCTION STARTS WITHIN 7 DAYS OF NTP RECEIPT.
- DAILY SAFETY REPORTS ARE REQUIRED.
- DAILY SITE UPDATES WITH PHOTOS ARE REQUIRED.
- TOWER STACKED (OTHER) WITHIN 28 DAYS OF NTP RECEIPT.
- CLOSEOUT APPROVAL WITHIN 60 DAYS OF NTP RECEIPT.

VERTICAL BRIDGE CM NOTES

PREPARED FOR:
verticalbridge
THE TOWERS, LLC
22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

NOT FOR CONSTRUCTION

DESIGN1
9973 VALLEY VIEW RD.
EDEN PRAIRIE, MN 55344
(952) 903-9299
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SPRUCE

ST HWY 87
FRAZEE, MN 56544

SHEET CONTENTS:
GENERAL NOTES

DRAWN BY:	M.T.
CHECKED BY:	S.D.
REV. A	02-23-2026
REV. B	02-26-2026

T-2

SITE SURVEY
FOR: THE TOWERS, LLC

LEASE AREA DESCRIPTION:

That part of the Southeast Quarter of Section 24, Township 138 North, Range 39 West of the Fifth Principal Meridian, Becker County, Minnesota, described as follows:

Commencing at the northeast corner of said Southeast Quarter; thence South 89 degrees 22 minutes 32 seconds West along the north line of said Southeast Quarter, a distance of 1978.75 feet; thence South 00 degrees 37 minutes 28 seconds East, a distance of 282.83 feet to the Point of Beginning of the lease area to be described; thence North 90 degrees 00 minutes 00 seconds West, a distance of 82.91 to a point hereinafter referred to as Point "A"; thence continue North 90 degrees 00 minutes 00 seconds West, a distance of 17.09 feet; thence South 00 degrees 00 minutes 00 seconds West, a distance of 100.00 feet; thence South 90 degrees 00 minutes 00 seconds East, a distance of 25.18 feet to a point hereinafter referred to as Point "B"; thence continue South 90 degrees 00 minutes 00 seconds East, a distance of 74.82 feet; thence North 00 degrees 00 minutes 00 seconds East, a distance of 43.00 feet to a point hereinafter referred to as Point "C"; thence continue North 00 degrees 00 minutes 00 seconds East, a distance of 57.00 feet to the Point of Beginning.

Said lease area contains 10,000 Sq. Ft. ± or 0.23 Acres ±.

TOGETHER WITH

A 14.00 foot wide strip across said Southeast Quarter of Section 24, the centerline of said strip is described as follows:

Commencing at the previously described Point "A"; thence North 30 degrees 00 minutes 00 seconds West, a distance of 109.42 feet to the Point of Beginning of the centerline to be described; thence continue North 30 degrees 00 minutes 00 seconds West, a distance of 49.00 feet and said centerline there terminating.

Said lease area contains 686 Sq. Ft. ±.

TOGETHER WITH

A 14.00 foot wide strip across said Southeast Quarter of Section 24, the centerline of said strip is described as follows:

Commencing at the previously described Point "B"; thence South 30 degrees 00 minutes 00 seconds West, a distance of 125.59 feet to the Point of Beginning of the centerline to be described; thence continue South 30 degrees 00 minutes 00 seconds West, a distance of 49.00 feet and said centerline there terminating.

Said lease area contains 686 Sq. Ft. ±.

TOGETHER WITH

A 14.00 foot wide strip across said Southeast Quarter of Section 24, the centerline of said strip is described as follows:

Commencing at the previously described Point "C"; thence South 90 degrees 00 minutes 00 seconds East, a distance of 125.24 feet to the Point of Beginning of the centerline to be described; thence continue South 90 degrees 00 minutes 00 seconds East, a distance of 49.00 feet and said centerline there terminating.

Said lease area contains 686 Sq. Ft. ±.

ACCESS AND UTILITY EASEMENT DESCRIPTION: (PARENT PARCEL PID 290149000)

A 30.00 foot wide easement for ingress, egress and utility purposes over, under and across the Southeast Quarter of Section 24, Township 138 North, Range 39 West of the Fifth Principal Meridian, Becker County, Minnesota, the centerline of said easement is described as follows:

Commencing at the northeast corner of said Southeast Quarter; thence South 89 degrees 22 minutes 32 seconds West along the north line of said Southeast Quarter, a distance of 1978.75 feet; thence South 00 degrees 37 minutes 28 seconds East, a distance of 282.83 feet; thence North 90 degrees 00 minutes 00 seconds West, a distance of 50.00 feet to the Point of Beginning of the centerline to be described; thence North 30 degrees 00 minutes 00 seconds West, a distance of 197.71 feet to the south line of the North 110.00 feet of said Southeast Quarter and said centerline there terminating.

The sidelines of said easement shall be shortened or lengthened to terminate at said south line of the North 110.00 feet and at lines North 90 degrees 00 minutes 00 seconds West and South 90 degrees 00 minutes 00 seconds East from the Point of Beginning.

TOGETHER WITH

An easement for ingress, egress and utility purposes over, under and across that part of the North 110.00 feet of the East 65.00 feet of the West 565.00 feet of said Southeast Quarter, lying south of the south right of way line of Minnesota Trunk Highway Number 87.

Said access and utility easements contain 8,548 Sq. Ft. ± or 0.20 Acres ±.

ACCESS AND UTILITY EASEMENT DESCRIPTION: (ACCESS PARCEL PID 290149001)

An easement for ingress, egress and utility purposes over, under and across that part of the North 110.00 feet of the West 500.00 feet of the Southeast Quarter of Section 24, Township 138 North, Range 39 West of the Fifth Principal Meridian, Becker County, Minnesota, lying south of the south right of way line of Minnesota Trunk Highway Number 87.

Said access and utility easement contains 20,547 Sq. Ft. ± or 0.47 Acres ±.

GUY WIRE EASEMENT DESCRIPTION:

A 14.00 foot wide easement for guy wire purposes over and across the Southeast Quarter of Section 24, Township 138 North, Range 39 West of the Fifth Principal Meridian, Becker County, Minnesota, the centerline of said easement is described as follows:

Commencing at the northeast corner of said Southeast Quarter; thence South 89 degrees 22 minutes 32 seconds West along the north line of said Southeast Quarter, a distance of 1978.75 feet; thence South 00 degrees 37 minutes 28 seconds East, a distance of 282.83 feet; thence North 90 degrees 00 minutes 00 seconds West, a distance of 82.91 to a point hereinafter referred to as Point "A"; thence continue North 90 degrees 00 minutes 00 seconds West, a distance of 17.09 feet; thence South 00 degrees 00 minutes 00 seconds West, a distance of 100.00 feet; thence South 90 degrees 00 minutes 00 seconds East, a distance of 25.18 feet to a point hereinafter referred to as Point "B"; thence continue South 90 degrees 00 minutes 00 seconds East, a distance of 74.82 feet; thence North 00 degrees 00 minutes 00 seconds East, a distance of 43.00 feet to the Point of Beginning of the centerline to be described; thence South 90 degrees 00 minutes 00 seconds East, a distance of 125.24 feet and said centerline there terminating.

TOGETHER WITH

A 14.00 foot wide easement for guy wire purposes over and across said Southeast Quarter of Section 24, the centerline of said easement is described as follows:

Beginning at the previously described Point "A"; thence North 30 degrees 00 minutes 00 seconds West, a distance of 109.42 feet and said centerline there terminating.

The sidelines of said easement shall be shortened or lengthened to terminate at lines bearing North 90 degrees 00 minutes 00 seconds West and South 90 degrees 00 minutes 00 seconds East from the Point of Beginning.

TOGETHER WITH

A 14.00 foot wide easement for guy wire purposes over and across said Southeast Quarter of Section 24, the centerline of said easement is described as follows:

Beginning at the previously described Point "B"; thence South 30 degrees 00 minutes 00 seconds West, a distance of 125.59 feet and said centerline there terminating.

The sidelines of said easement shall be shortened or lengthened to terminate at lines bearing South 90 degrees 00 minutes 00 seconds East and North 90 degrees 00 minutes 00 seconds West from the Point of Beginning.

Said guy wire easements contain 4,863 Sq. Ft. ± or 0.11 Acres ±.

PARENT PARCEL DESCRIPTION: (per Tower Title, LLC, Commitment No. VTB-220402-C, Revision No. 1, dated October 27, 2025)

Tract I

The Southeast Quarter (SE 1/4) of Section 24, Township 138, Range 93, Becker County, Minnesota, Except the West 500 Feet of the North 1375 feet thereof.

Parcel ID: 290149000

This being the same property conveyed to Justin J. Aschnewitz and Sheila R. Aschnewitz as joint tenants from Eli T. Gingerich and Mary E. Gingerich, married to each other in a deed dated July 29, 2022 and recorded August 9, 2022 as Instrument No. 691679 in Becker County, MN.

Tract II

The West 500.00 feet of the North 1375.50 feet of the Southeast Quarter in Section 24, Township 138 North, Range 39 West of the Fifth Principle Meridian in Becker County, Minnesota;

Less Trunk Highway No. 87.

Parcel ID: 290149001

This being the same property conveyed to Justin J. Aschnewitz and Sheila R. Aschnewitz as joint tenants from Felty D. Miller and Polly M. Miller, husband and wife in a deed dated November 29, 2010 and recorded December 3, 2010 as Instrument No. 584358 in Becker County, MN.

SCHEDULE "B" EXCEPTIONS: (per Tower Title, LLC, Commitment No. VTB-220402-C, Revision No. 1, dated October 27, 2025)

1-9.) Not a plottable survey matter.

10.) Right of Way Easement between Fred H. Tate, Jr. & Sharon N. Tate, husband & wife; and Lake Region Co-op. Electrical Association, a Minnesota cooperative association, dated November 5, 2003 and recorded November 10, 2003 in (instrument) 504725, in Becker County, Minnesota.

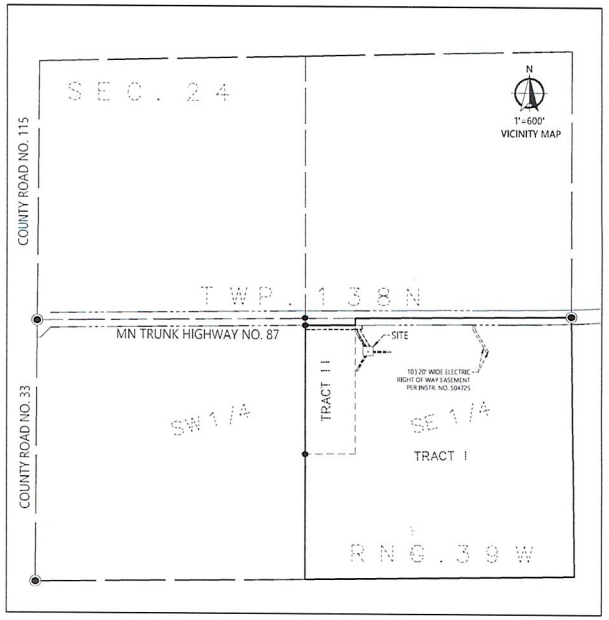
The document describes a 20' wide electric easement to serve the building site. The easement does not affect the surveyed area and is shown in the vicinity map.

11.) Any and all matters disclosed on the map entitled "Certificate of Survey" dated October 29, 2010 and recorded October 29, 2010 in Becker County, Minnesota.

The Certificate of Survey is of Tract II of the parent parcel. Tract II is PID 290149001.

12.) Permit For Use dated August 16, 2016 and recorded August 22, 2016 in (instrument) 635678, in Becker County, Minnesota.

The Use Permit is for sawmilling of logs, building of pallets and processing and sale of firewood on the parent parcel. Not a plottable survey matter.



BRYAN T. BALCOME PROFESSIONAL LAND SURVEYOR #42594 STATE OF MINNESOTA

SHEET 1 OF 2 SHEETS

DESIGN 1

vertical bridge

WIDSETH
ARCHITECTS ▪ ENGINEERS ▪ SCIENTISTS ▪ SURVEYORS

PROPERTY OWNER:
JUSTIN J. ASCHNEWITZ
SHEILA R. ASCHNEWITZ

PARCEL NOS:
290149000 & 290149001

ZONED:
AGRICULTURAL

DEED REFERENCED:
INSTRUMENT NOS. 584358 & 691679

VERTICAL BRIDGE SITE NAME:
SPRUCE

VERTICAL BRIDGE SITE NUMBER:
US-MN-5477

SITE ADDRESS:
40789 ST. HWY 87, FRAZEE,
BECKER COUNTY, MINNESOTA 56544

I HEREBY CERTIFY TO: VERTICAL BRIDGE REIT, LLC, A DELEWARE LIMITED LIABILITY COMPANY, ITS SUBSIDIARIES, AND THEIR RESPECTIVE SUCCESSORS AND/OR ASSIGNS; ITS LENDERS, AND ADMINISTRATIVE AGENTS AND EACH OF THEIR RESPECTIVE SUCCESSORS AND/OR ASSIGNS, AND TOWER TITLE, LLC.

I FURTHER CERTIFY THAT THIS SURVEY, PLAN, OR REPORT WAS REVIEWED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MINNESOTA.

Bryan T Balcome

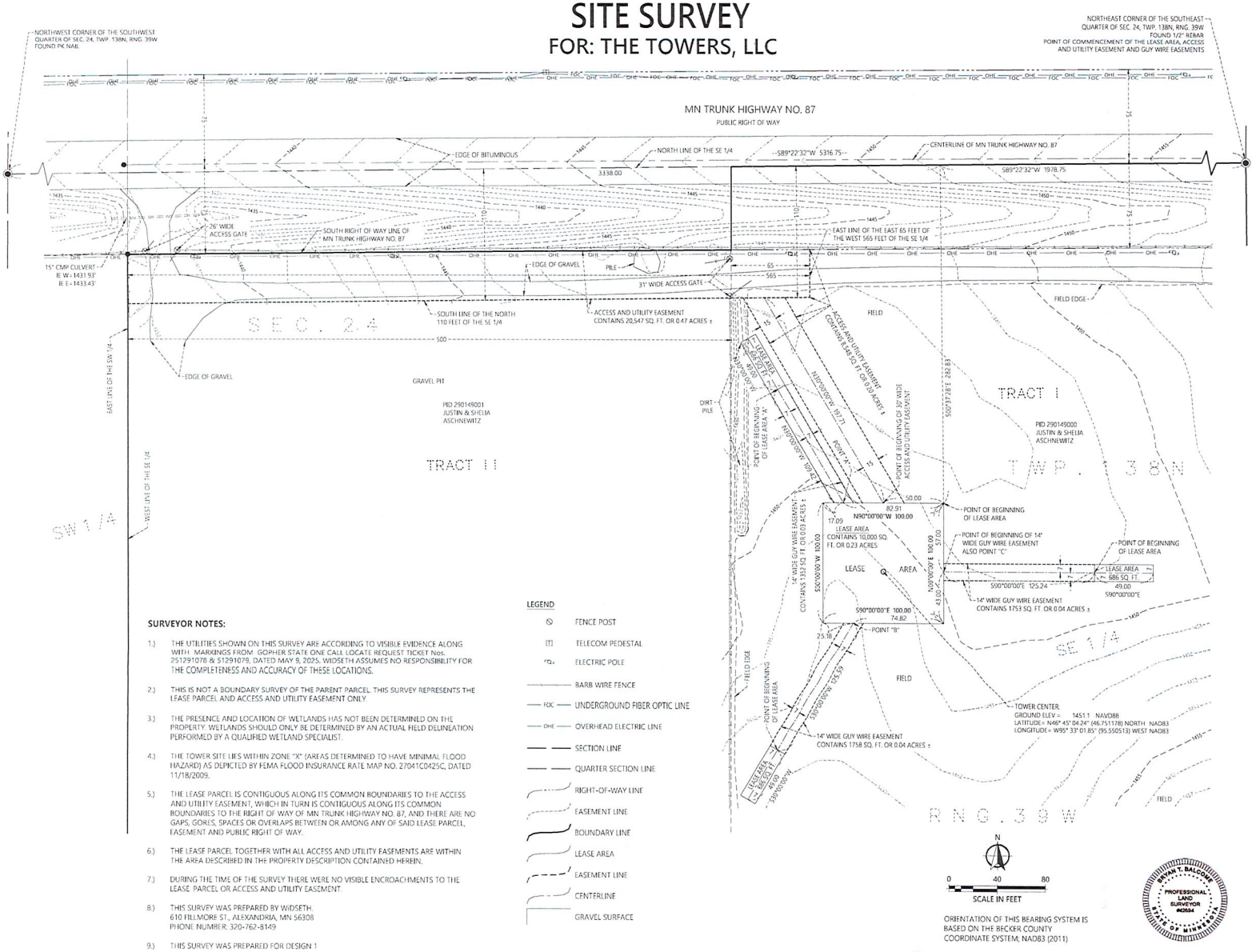
BRYAN T BALCOME LIC. NO.: 42594 DATE: 1/20/26

FULL SCALE ON 22"X34"
HALF SCALE ON 11"X17"
2025-12045

No.	DATE	REVISION	BY	CHK	APP'D

FIELD WORK: 12/9/25 CHECKED BY: BTB DRAWN BY: NTG

SITE SURVEY
FOR: THE TOWERS, LLC



SURVEYOR NOTES:

1.) THE UTILITIES SHOWN ON THIS SURVEY ARE ACCORDING TO VISIBLE EVIDENCE ALONG WITH MARKINGS FROM GOPHER STATE ONE CALL LOCATE REQUEST TICKET Nos. 251291078 & 51291079, DATED MAY 8, 2025. WIDSETH ASSUMES NO RESPONSIBILITY FOR THE COMPLETENESS AND ACCURACY OF THESE LOCATIONS.

2.) THIS IS NOT A BOUNDARY SURVEY OF THE PARENT PARCEL. THIS SURVEY REPRESENTS THE LEASE PARCEL AND ACCESS AND UTILITY EASEMENT ONLY.

3.) THE PRESENCE AND LOCATION OF WETLANDS HAS NOT BEEN DETERMINED ON THE PROPERTY. WETLANDS SHOULD ONLY BE DETERMINED BY AN ACTUAL FIELD DELINEATION PERFORMED BY A QUALIFIED WETLAND SPECIALIST.

4.) THE TOWER SITE LIES WITHIN ZONE "X" (AREAS DETERMINED TO HAVE MINIMAL FLOOD HAZARD) AS DEPICTED BY FEMA FLOOD INSURANCE RATE MAP NO. 27041C0425C, DATED 11/18/2009.

5.) THE LEASE PARCEL IS CONTIGUOUS ALONG ITS COMMON BOUNDARIES TO THE ACCESS AND UTILITY EASEMENT, WHICH IN TURN IS CONTIGUOUS ALONG ITS COMMON BOUNDARIES TO THE RIGHT OF WAY OF MN TRUNK HIGHWAY NO. 87, AND THERE ARE NO GAPS, GORES, SPACES OR OVERLAPS BETWEEN OR AMONG ANY OF SAID LEASE PARCEL, EASEMENT AND PUBLIC RIGHT OF WAY.

6.) THE LEASE PARCEL TOGETHER WITH ALL ACCESS AND UTILITY EASEMENTS ARE WITHIN THE AREA DESCRIBED IN THE PROPERTY DESCRIPTION CONTAINED HEREIN.

7.) DURING THE TIME OF THE SURVEY THERE WERE NO VISIBLE ENCROACHMENTS TO THE LEASE PARCEL OR ACCESS AND UTILITY EASEMENT.

8.) THIS SURVEY WAS PREPARED BY WIDSETH
610 FILLMORE ST., ALEXANDRIA, MN 56308
PHONE NUMBER: 320-762-8149

9.) THIS SURVEY WAS PREPARED FOR DESIGN 1

LEGEND

- FENCE POST
- TELECOM PEDESTAL
- ELECTRIC POLE
- BARB WIRE FENCE
- FOC — UNDERGROUND FIBER OPTIC LINE
- OHE — OVERHEAD ELECTRIC LINE
- SECTION LINE
- QUARTER SECTION LINE
- RIGHT-OF-WAY LINE
- EASEMENT LINE
- BOUNDARY LINE
- LEASE AREA
- EASEMENT LINE
- CENTERLINE
- GRAVEL SURFACE

N

0 40 80
SCALE IN FEET

ORIENTATION OF THIS BEARING SYSTEM IS BASED ON THE BECKER COUNTY COORDINATE SYSTEM; NAD83 (2011)

- DENOTES FOUND SECTION CORNER MONUMENT
- DENOTES FOUND IRON MONUMENT

BRYAN T. BALCOME PROFESSIONAL LAND SURVEYOR #42594 STATE OF MINNESOTA

SHEET 2 OF 2 SHEETS

DESIGN 1

vertical bridge

WIDSETH
ARCHITECTS ▪ ENGINEERS ▪ SCIENTISTS ▪ SURVEYORS

PROPERTY OWNER:
JUSTIN J. ASCHNEWITZ
SHEILA R. ASCHNEWITZ

PARCEL NOS:
290149000 & 290149001

ZONED:
AGRICULTURAL

DEED REFERENCED:
INSTRUMENT NOS. 584358 & 691679

VERTICAL BRIDGE SITE NAME:
SPRUCE

VERTICAL BRIDGE SITE NUMBER:
US-MN-5477

SITE ADDRESS:
40789 ST. HWY 87, FRAZEE,
BECKER COUNTY, MINNESOTA 56544

I HEREBY CERTIFY TO: VERTICAL BRIDGE REIT, LLC, A DELEWARE LIMITED LIABILITY COMPANY, ITS SUBSIDIARIES, AND THEIR RESPECTIVE SUCCESSORS AND/OR ASSIGNS; ITS LENDERS, AND ADMINISTRATIVE AGENTS AND EACH OF THEIR RESPECTIVE SUCCESSORS AND/OR ASSIGNS, AND TOWER TITLE, LLC.

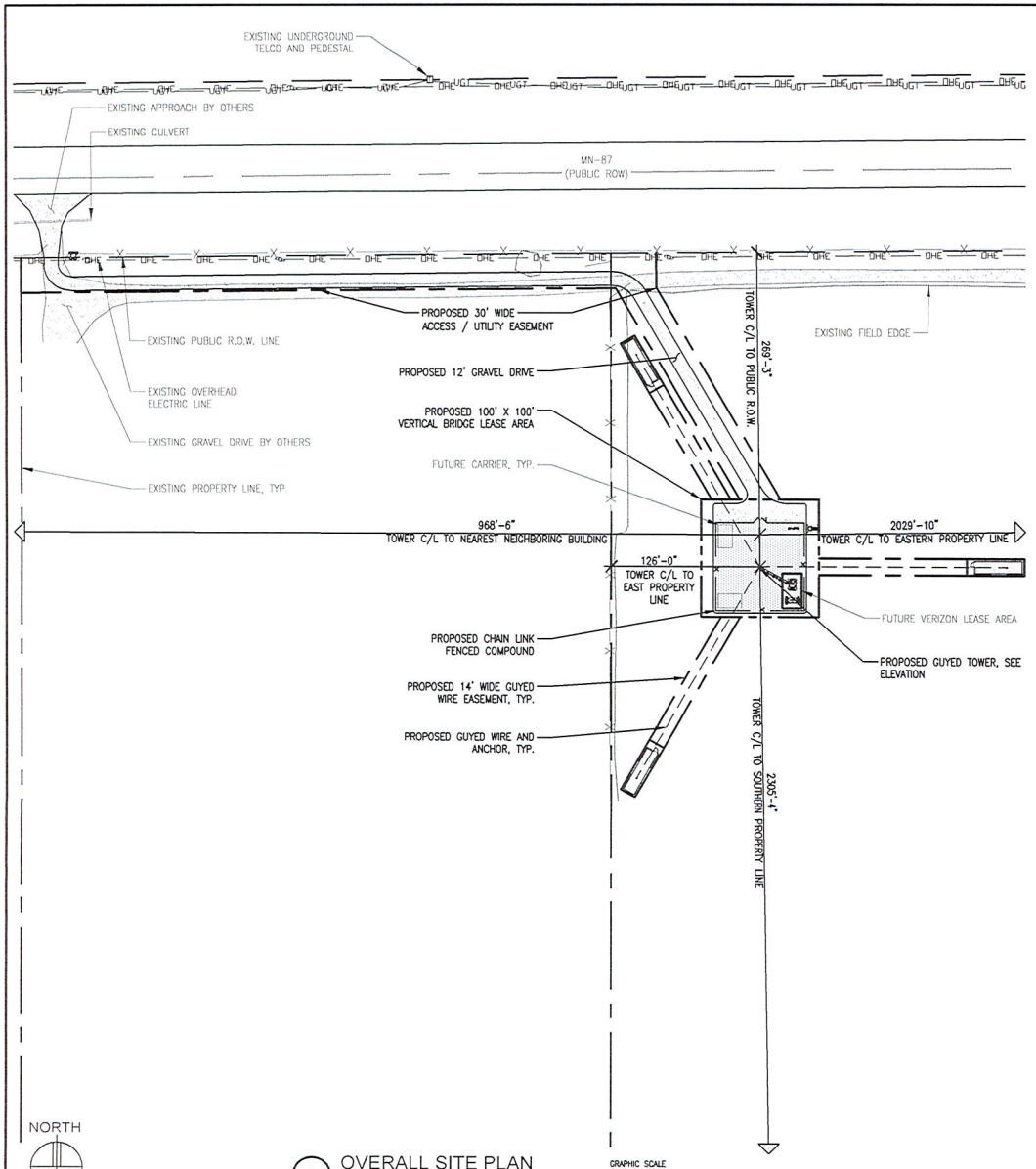
I FURTHER CERTIFY THAT THIS SURVEY, PLAN, OR REPORT WAS REVIEWED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MINNESOTA.

Bryan T Balcome
BRYAN T BALCOME LIC. NO.: 42594 DATE: 1/20/26

FULL SCALE ON 22"X34" HALF SCALE ON 11"X17"
2025-12045

No.	DATE	REVISION	BY	CHK	APPD

FIELD WORK: 12/9/25 CHECKED BY: BTB DRAWN BY: NTG



1 OVERALL SITE PLAN
SCALE: 1" = 100'-0"

GRAPHIC SCALE
0 50' 100'

NOTES:

1. THESE DRAWINGS DO NOT CONSTITUTE A WARRANTY, EXPRESSED OR IMPLIED, OF THE ACCURACY OF THE STRUCTURAL ANALYSES AND THE PERFORMANCE OF THE COMPLETED CONSTRUCTION AS SHOWN ON THESE DOCUMENTS AND THE STRUCTURAL ANALYSES.

2. NO STRUCTURAL ANALYSIS FOR THE TOWER OR FOUNDATION HAVE BEEN PERFORMED AS PART OF THESE DRAWINGS. THE STRUCTURAL ANALYSIS FOR THE TOWER AND FOUNDATION ARE BY THE TOWER SUPPLIER AND SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF THE PROJECT.

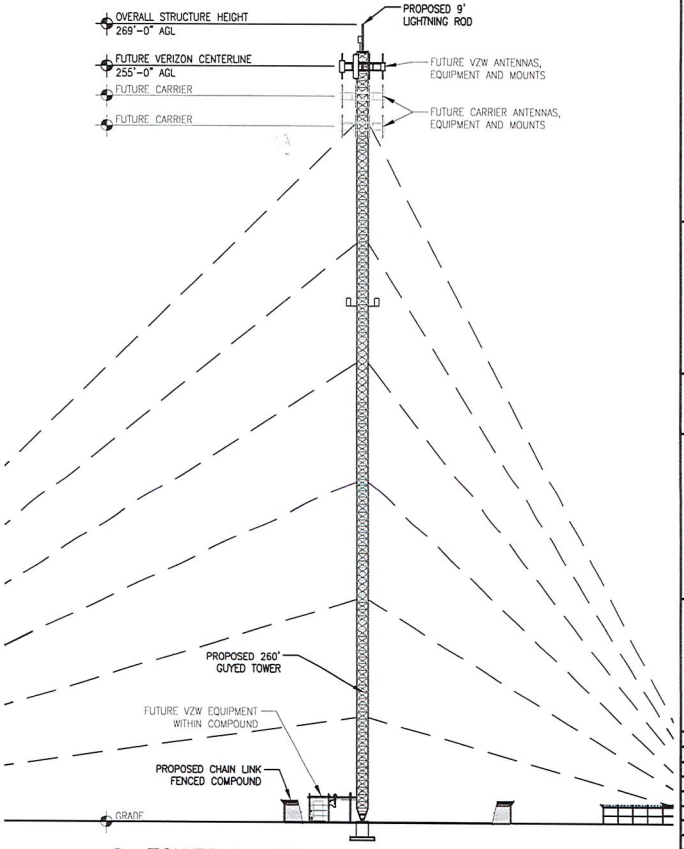
3. PLEASE COORDINATE ANY STRUCTURAL CONCERNS/MATTERS OR ANY LOADING MODIFICATIONS TO THE CONSULTANT WHO AUTHORED THE ANALYSIS AND NOTIFY DESIGN 1 IMMEDIATELY OF THE ISSUE.

4. TOWER 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 THE DESIGNER.

5. TOWER TO BE ERECTED AND INSTALLED IN ACCORDANCE WITH TOWER MANUFACTURER'S DRAWINGS NOT INCLUDED WITH THIS PACKAGE. DISCREPANCIES BETWEEN TOWER DRAWINGS AND DESIGNER DRAWINGS TO BE REPORTED THE DESIGNER IMMEDIATELY.

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

7. ELEVATION IS SHOWN FOR GENERAL DIAGRAMMATIC PURPOSES ONLY. DO NOT SCALE.



2 TOWER ELEVATION
SCALE: 1" = 40'-0"

GRAPHIC SCALE
0 20' 40'

PREPARED FOR:

verticalbridge

THE TOWERS, LLC
22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

NOT FOR CONSTRUCTION

DESIGN 1
9973 VALLEY VIEW RD.
EDEN PRAIRIE, MN 55344
(952) 903-9299
WWW.DESIGN1EP.COM

PROJECT
US-MN-5477
FUZE ID: 25431337

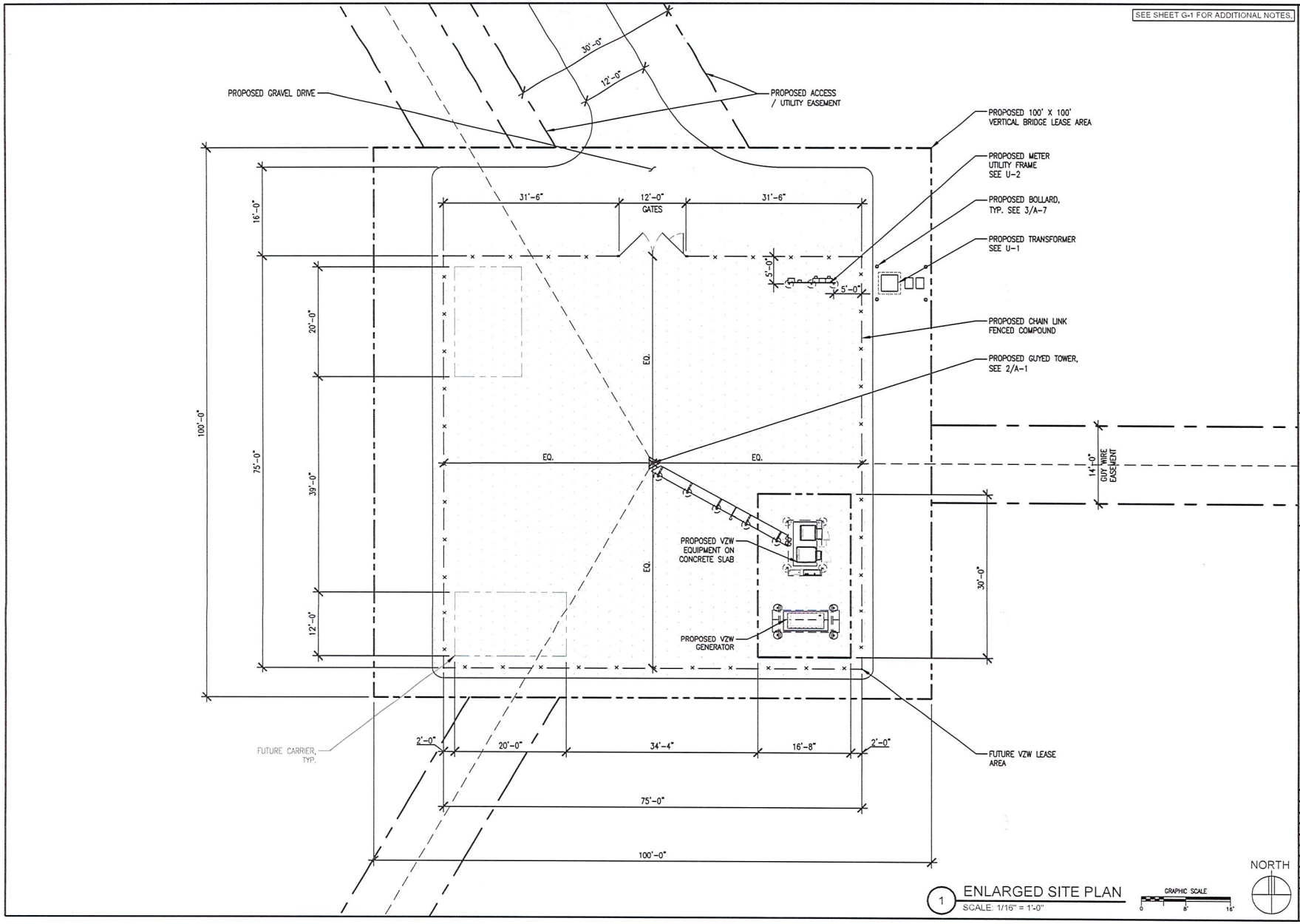
US-MN-5477
SPRUCE

ST HWY 87
FRAZEE, MN 56544

SHEET CONTENTS:
OVERALL SITE PLAN
TOWER ELEVATION

DRAWN BY:	M.T.
CHECKED BY:	S.D.
REV. A	02-23-2026
REV. B	02-26-2026

A-1



1 ENLARGED SITE PLAN
SCALE: 1/16" = 1'-0"

PREPARED FOR:
vertical bridge
THE TOWERS, LLC
22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

NOT FOR CONSTRUCTION

DESIGN 1
9973 VALLEY VIEW RD.
EDEN PRAIRIE, MN 55344
(952) 903-9299
WWW.DESIGN1EP.COM

PROJECT
US-MN-5477
FUZE ID: 25431337

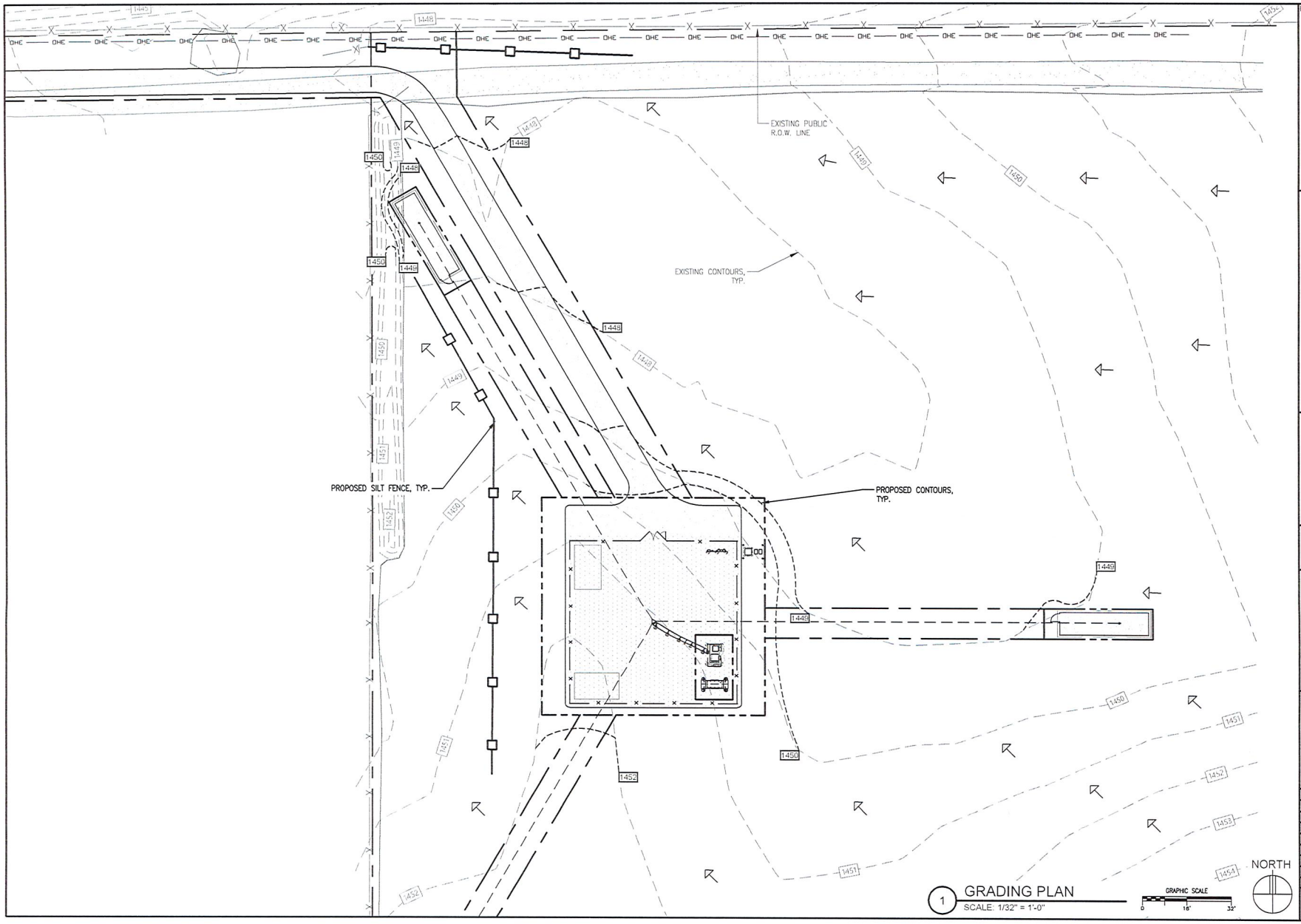
US-MN-5477
SPRUCE

ST HWY 87
FRAZEE, MN 56544

SHEET CONTENTS:
ENLARGED SITE PLAN

DRAWN BY:	M.T.
CHECKED BY:	S.D.
REV. A	02-23-2026
REV. B	02-26-2026

A-2



1 GRADING PLAN
SCALE: 1/32" = 1'-0"

GRAPHIC SCALE
0 16' 32'

NORTH

PREPARED FOR:

vertical bridge

THE TOWERS, LLC
22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

NOT FOR CONSTRUCTION

DESIGN 1
9973 VALLEY VIEW RD.
EDEN PRAIRIE, MN 55344
(952) 900-9299
WWW.DESIGN1EP.COM

PROJECT
US-MN-5477
FUZE ID: 25431337

US-MN-5477
SPRUCE

ST HWY 87
FRAZEE, MN 56544

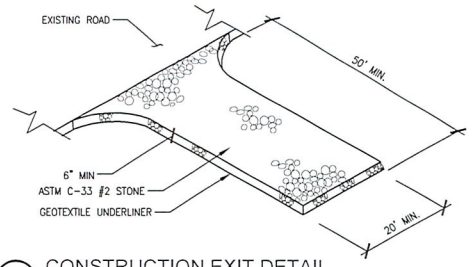
SHEET CONTENTS:
GRADING PLAN

DRAWN BY:	M.T.
CHECKED BY:	S.D.
REV. A	02-23-2026
REV. B	02-26-2026

A-3.1

GRADING & EXCAVATING NOTES:

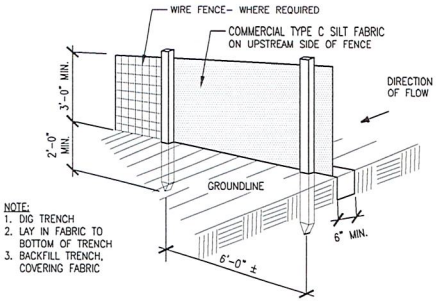
1. ALL EXCAVATIONS ON WHICH CONCRETE IS TO BE PLACED SHALL BE SUBSTANTIALLY HORIZONTAL ON UNDISTURBED AND UNFROZEN SOIL AND BE FREE FROM LOOSE MATERIAL AND EXCESS GROUNDWATER. DEWATERING FOR EXCESS GROUNDWATER SHALL BE PROVIDED IF REQUIRED.
2. CONCRETE FOUNDATIONS SHALL NOT BE PLACED ON ORGANIC MATERIAL. IF SOUND SOIL IS NOT REACHED AT THE DESIGNATED EXCAVATION DEPTH, THE UNSATISFACTORY SOIL SHALL BE EXCAVATED TO ITS FULL DEPTH AND EITHER BE REPLACED WITH MECHANICALLY COMPACTED GRANULAR MATERIAL OR THE EXCAVATION BE FILLED WITH CONCRETE OF THE SAME QUALITY SPECIFIED FOR THE FOUNDATION.
3. ANY EXCAVATION OVER THE REQUIRED DEPTH SHALL BE FILLED WITH EITHER MECHANICALLY COMPACTED GRANULAR MATERIAL OR CONCRETE OF THE SAME QUALITY SPECIFIED FOR THE FOUNDATION. CRUSHED STONE MAY BE USED TO STABILIZE THE BOTTOM OF THE EXCAVATION. STONE, IF USED, SHALL NOT BE USED AS COMPILING CONCRETE THICKNESS.
4. AFTER COMPLETION OF THE FOUNDATION AND OTHER CONSTRUCTION BELOW GRADE, AND BEFORE BACKFILLING, ALL EXCAVATIONS SHALL BE CLEAN OF UNSUITABLE MATERIAL SUCH AS VEGETATION, TRASH, DEBRIS, AND SO FORTH.
5. –USE APPROVED MATERIALS CONSISTING OF EARTH, LOAM, SANDY CLAY, SAND –BE FREE FROM CLODS OR STONES OVER 2–1/2" MAXIMUM DIMENSIONS –BE PLACED IN 6" LAYERS AND COMPACTED TO 95% STANDARD PROCTOR EXCEPT IN GRASSED/LANDSCAPED AREAS, WHERE 90% STANDARD PROCTOR
6. REMOVE ALL VEGETATION, TOPSOIL, DEBRIS, WET AND UNSATISFACTORY SOIL MATERIALS, OBSTRUCTIONS, AND DELETERIOUS MATERIALS FROM GROUND SURFACE PRIOR TO PLACING FILLS. PLOW, STRIP, OR BREAK UP SLOPED SURFACES STEEPER THAN THAN 1 VERTICAL TO 4 HORIZONTAL SO FILL MATERIAL WILL BOND WITH EXISTING SURFACE. WHEN SUBGRADE OR EXISTING GROUND SURFACE TO RECEIVE FILL HAS A DENSITY LESS THAN THAT REQUIRED FOR FILL, BREAK UP GROUND SURFACE TO DEPTH REQUIRED, PULVERIZE, MOISTURE–CONDITION OR AERATE SOIL AND RECOMPACT TO REQUIRED DENSITY.
7. PROTECT EXISTING GRAVEL SURFACING AND SUBGRADE IN AREAS WHERE EQUIPMENT LOADS WILL OPERATE. USE PLANKING OR OTHER SUITABLE MATERIALS DESIGNED TO SPREAD EQUIPMENT LOADS. REPAIR DAMAGE TO EXISTING GRAVEL SURFACING OR SUBGRADE WHERE SUCH DAMAGE IS DUE TO THE CONTRACTOR'S OPERATIONS. DAMAGED GRAVEL SURFACING SHALL BE RESTORED TO MATCH THE ADJACENT UNDAMAGED GRAVEL SURFACING AND SHALL BE OF THE SAME THICKNESS.
8. REPLACE EXISTING GRAVEL SURFACING ON AREAS FROM WHICH GRAVEL SURFACING IS REMOVED DURING CONSTRUCTION OPERATIONS. GRAVEL SURFACING SHALL BE REPLACED TO MATCH EXISTING ADJACENT GRAVEL SURFACING AND SHALL BE OF THE SAME THICKNESS. SURFACES OF GRAVEL SURFACING SHALL BE FREE FROM CORRUGATIONS AND WAVES. EXISTING GRAVEL SURFACING MAY BE EXCAVATED SEPARATELY AND REUSED IF INJURIOUS AMOUNTS OF EARTH, ORGANIC MATTER, OR OTHER DELETERIOUS MATERIALS ARE REMOVED PRIOR TO REUSE. FURNISH ALL ADDITIONAL GRAVEL RESURFACING MATERIAL AS REQUIRED. BEFORE GRAVEL SURFACING IS REPLACED, SUBGRADE SHALL BE GRADED TO CONFORM TO REQUIRED SUBGRADE ELEVATIONS, AND LOOSE OR DISTURBED MATERIALS SHALL BE THOROUGHLY COMPACTED. DEPRESSIONS IN THE SUBGRADE SHALL BE FILLED AND COMPACTED WITH APPROVED SELECTED MATERIAL. GRAVEL SURFACING MATERIAL MAY BE USED FOR FILLING DEPRESSIONS IN THE SUBGRADE, SUBJECT TO ENGINEER'S APPROVAL.
9. DAMAGE TO EXISTING STRUCTURES AND UTILITIES RESULTING FROM CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED/REPLACED TO OWNER'S SATISFACTION AT CONTRACTOR'S EXPENSE.
10. CONTRACTOR SHALL COORDINATE THE CONSTRUCTION SCHEDULE WITH PROPERTY OWNER SO AS TO AVOID INTERRUPTIONS TO PROPERTY OWNER'S OPERATIONS.
11. ENSURE POSITIVE DRAINAGE DURING AND AFTER COMPLETION OF CONSTRUCTION.
12. ALL CUT AND FILL SLOPES SHALL BE MAXIMUM 2 HORIZONTAL TO 1 VERTICAL.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR MONITORING SITE VEHICLE TRAFFIC AS TO NOT ALLOW VEHICLES LEAVING THE SITE TO TRACK MUD ONTO PUBLIC STREETS. THE CONTRACTOR IS RESPONSIBLE FOR CLEANING PUBLIC STREETS DUE TO MUDDY VEHICLES LEAVING THE SITE.



1 CONSTRUCTION EXIT DETAIL

GENERAL EROSION & SEDIMENT CONTROL NOTES:

1. THE SOIL EROSION AND SEDIMENT CONTROL MEASURES AND DETAILS AS SHOWN HEREIN AND STIPULATED WITHIN STATE STANDARDS SHALL BE FOLLOWED AND INSTALLED IN A MANNER SO AS TO MINIMIZE SEDIMENT LEAVING THE SITE.
2. PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITY, THE LIMITS OF LAND DISTURBANCE SHALL BE CLEARLY AND ACCURATELY DEMARCATED WITH STAKES, RIBBONS, OR OTHER APPROPRIATE MEANS.
3. EROSION CONTROL DEVICES SHALL BE INSTALLED BEFORE GROUND DISTURBANCE OCCURS. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM SHOWN ON THE APPROVED PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE FINAL PROPOSED DRAINAGE PATTERNS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
4. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM THAT SHOWN ON THE PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE FINAL PROPOSED DRAINAGE PATTERNS. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
5. CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL MEASURES UNTIL PERMANENT VEGETATION HAS BEEN ESTABLISHED. CONTRACTOR SHALL CLEAN OUT ALL SEDIMENT PONDS WHEN REQUIRED BY THE ENGINEER OR THE LOCAL JURISDICTION INSPECTOR. CONTRACTOR SHALL INSPECT EROSION CONTROL MEASURES AT THE END OF EACH WORKING DAY TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.
6. THE CONTRACTOR SHALL REMOVE ACCUMULATED SILT WHEN THE SILT IS WITHIN 12" OF THE TOP OF THE SILT FENCE.
7. FAILURE TO INSTALL, OPERATE OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB SITE UNTIL SUCH MEASURES ARE CORRECTED.
8. SILT BARRIERS TO BE PLACED AT DOWNSTREAM TOE OF ALL CUT AND FILL SLOPES.
9. ALL CUT AND FILL SLOPES MUST BE SURFACED ROUGHENED AND VEGETATED WITHIN SEVEN (7) DAYS OF THEIR CONSTRUCTION.
10. CONTRACTOR SHALL REMOVE ALL EROSION & SEDIMENT CONTROL MEASURES AFTER COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER.
11. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND–DISTURBING ACTIVITIES.



2 SILT FENCE DETIAL

SEEDING GUIDELINES:

FINAL STABILIZATION OF ALL DISTURBED AREAS, UNLESS OTHERWISE NOTED, SHALL BE LOAMED AND SEEDED. LOAM SHALL BE PLACED AT A MINIMUM COMPACTED DEPTH OF 4". RECOMMENDED SEEDING DATES FOR PERMANENT VEGETATION SHALL BE BETWEEN JUNE 15 THROUGH AUGUST 1 AND SEPTEMBER 15 THROUGH OCTOBER 15. TEMPORARY VEGETATIVE MEASURES SHALL CONSIST OF AN ANNUAL OR PERENNIAL RYE GRASS WITH RECOMMENDED SEEDING DATES BEING FROM JUNE 1 THROUGH AUGUST 15 AND SEPTEMBER 30 THROUGH NOVEMBER 30.

EVALUATE PROPOSED COVER MATERIAL:

BEFORE SPREADING COVER MATERIAL OVER THE DESIGNATED AREA, OBTAIN A REPRESENTATIVE SOIL SAMPLE AND SUBMIT TO A REPUTABLE SOIL TESTING LABORATORY FOR CHEMICAL AND PHYSICAL ANALYSIS. THE PRELIMINARY TEST IS NECESSARY TO DETERMINE THE REQUIRED INORGANIC AND/OR ORGANIC AMENDMENTS THAT ARE NEEDED TO ASSIST IN ESTABLISHING THE SEED MIXTURE IN AN ENVIRONMENTALLY AND ECONOMICALLY SOUND MANNER. THE RESULTS WILL GIVE THE COVER MATERIAL CHARACTERISTICS SUCH AS pH AND FERTILIZATION NEEDS. THESE RESULTS SHALL BE KEPT ON–SITE B THE CONTRACTOR AND AVAILABLE FOR REVIEW BY THE COUNTY.

SEED BED PREPARATION:

PROPOSED COVER MATERIAL SHOULD BE SPREAD EVENLY OVER THE SITE AREA IN A MINIMUM 4" LIFT VIA BULLDOZER/BUCKET LOADER. USING THE INFORMATION FROM THE SOIL ANALYSIS, CAREFULLY CALCULATE THE QUANTITIES OF LIMESTONE AND PRE–PLANT FERTILIZER NEEDED PRIOR TO APPLYING. PRE–PLANT AMENDMENTS CAN BE APPLIED WITH A BROADCAST AND/OR DROP SEEDER AND INCORPORATED WITH AN OFFSET DISK, YORK RAKE, AND/OR HAND RAKE. AFTER INCORPORATION THE PRE–PLANT SOIL AMENDMENTS, THE SEED BED SHOULD BE SMOOTH AND FIRM PRIOR TO SEEDING. THE FOLLOWING SEED MIXTURES SHALL BE USED AS NOTED:

SEED MIXTURE:

SPECIES/VARIETY	LBS/ACRE
CREEPING RED FESCUE	20
KENTUCKY BLUEGRASS	20
PERENNIAL RYEGRASS	5

SEED TIME AND METHOD:

THE PREFERRED TIME FOR SEEDING THE COOL SEASON MIXTURE IS LATE SUMMER. SOIL AND AIR TEMPERATURES ARE IDEAL FOR SEED GERMINATION AND SEEDING GROWTH. WEED COMPETITION IS REDUCED BECAUSE SEEDS OF MANY WEED SPECIES GERMINATE EARLIER IN THE GROWING SEASON. ADDITIONALLY, HERBICIDE USE IS GREATLY REDUCED. HOWEVER, SEEDING MAY BE DONE AT ANY OF THE ABOVE NOTED TIMES.

MULCHING:

NEWLY SEEDED AREAS SHOULD BE MULCHED TO INSURE ADEQUATE MOISTURE FOR SUCCESSFUL TURF ESTABLISHMENT AND TO PROTECT AGAINST SURFACE MOVEMENT OF SEDIMENT–BOUND AGROCHEMICALS AND SOIL EROSION. IF MULCHING PROCEDURES ARE NOT SPECIFIED ON PLANS, APPLY GOOD QUALITY STRAW OR HAY AT A RATE OF 2 BALES/1000 SQ. FT. OTHER COMMERCIALLY AVAILABLE MULCHES CAN BE USED.

CONSTRUCTION NOTES FOR FABRICATED SILT FENCE:

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER–LAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
5. ALL SILT FENCE MATERIALS MUST BE LISTED ON THE CURRENT STATES. D.O.T. QUALIFIED PRODUCTS LIST.

POSTS: STEEL EITHER T OR U

FENCE: WOVEN WIRE, 14 GA. 6" MAX. MESH OPENING.

FILTER CLOTH: FILTER X, MIRAFI 100X' STABLINKA T140N OR APPROVED EQUAL.

PREFABRICATED UNIT: GEOFAB, ENVIROFENCE OR APPROVED EQUAL

PREPARED FOR:
verticalbridge
THE TOWERS, LLC
22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

NOT FOR CONSTRUCTION

DESIGN 1
9973 VALLEY VIEW RD.
EDEN PRAIRIE, MN 55344
(952) 903-9299
WWW.DESIGN1EP.COM

PROJECT
US-MN-5477
FUZE ID: 25431337

US-MN-5477
SPRUCE

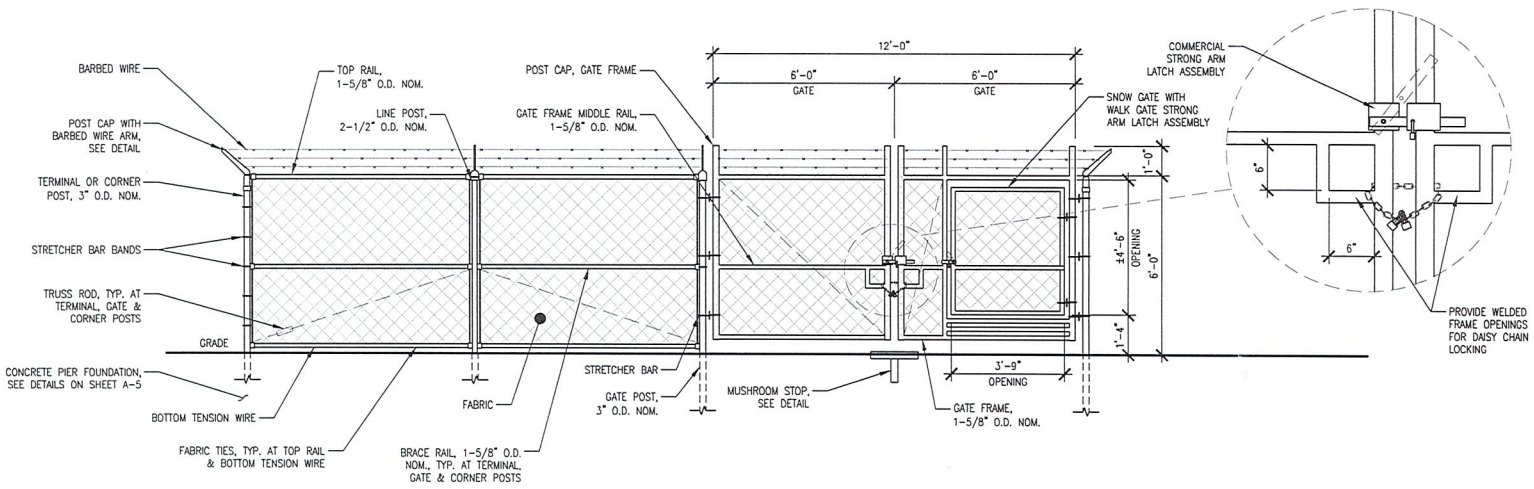
ST HWY 87
FRAZEE, MN 56544

SHEET CONTENTS:
DRAINAGE, GRADING & EROSION CONTROL NOTES & DETAILS

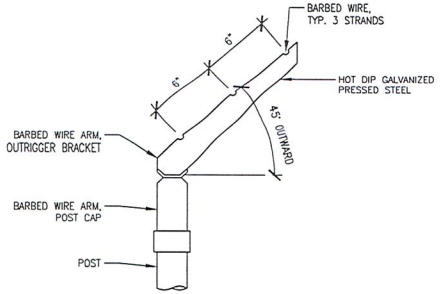
DRAWN BY:	M.T.
CHECKED BY:	S.D.
REV. A	02-23-2026
REV. B	02-26-2026

A-3.2

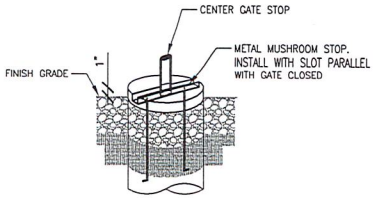
NOTE:
CONTRACTOR TO INSTALL NUTS ON ALL BOLTS TOWARDS THE INTERIOR OF THE COMPOUND



1 FENCE DETAIL
SCALE: 1/4" = 1'-0"



2 BARBED WIRE ARM DETAIL



3 MUSHROOM STOP DETAIL

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SHEET CONTENTS:
FENCE DETAILS

DRAWN BY:	M.T.
CHECKED BY:	S.D.
REV. A	02-23-2026
REV. B	02-26-2026

A-4

NOTES:

1. ZINC COATING – THE WEIGHT OF THE COATING SHALL NOT BE LESS THAN 1.2 OUNCES PER SQUARE FOOT OF ACTUAL SURFACE COVERED. ALL FERROUS METALS USED AS PART OF THE FENCE INSTALLATION SHALL BE HOT DIP GALVANIZED OR STAINLESS STEEL. ALL SCREWS, BOLTS, LOCK WASHERS, NUTS, ETC. SHALL BE HOT DIP GALVANIZED OR MADE OF STAINLESS STEEL.

2. FABRIC – STANDARD INDUSTRIAL GRADE, 9 GAUGE WITH 2 INCH MESH (KNUCKLE & TWIST SELVAGE) ZINC COATED CHAIN LINK WITH A BREAKING STRENGTH OF NOT LESS THAN 1290 POUNDS SHALL BE USED. THE FABRIC SHALL BE ZINC COATED BY THE HOT DIP PROCESS AFTER FABRICATION.

3. METAL POSTS – METAL POSTS (LINE, CORNER, TERMINAL, GATE POSTS, MIDDLE RAILS, BRACES AND TOP RAIL) SHALL BE HOT DIP GALVANIZED SCHEDULE 40 TUBULAR STEEL WITH A NOMINAL OUTSIDE DIAMETER AS INDICATED IN THE DRAWINGS.

4. POST CAPS – LINE, CORNER, TERMINAL AND GATE POST CAPS TO INCLUDE A BARBED WIRE OUTRIGGER BRACKET AND SHALL BE ATTACHED TO THE POST WITH TAMPER RESISTANT SCREWS, BRADS, OR BOLTS. GATE FRAME POST CAPS TO BE PRESSED STEEL DOME TYPE.

5. TOP RAIL – A MINIMUM OF ONE COUPLING IN EACH STRAIGHT RUN OF TOP RAIL, SHALL HAVE A HEAVY SPRING INSERTED WITHIN THE COUPLING TO TAKE UP EXPANSION AND CONTRACTION OF THE TOP RAIL. THE TOP RAIL SHALL BE FASTENED TO TERMINAL POSTS WITH PRESSED STEEL CONNECTIONS.

6. GATE FRAME MIDDLE RAIL – THE MIDDLE RAIL SHALL BE OF THE SAME MATERIAL AS THE TOP RAIL AND INSTALLED WITH HOT DIP GALVANIZED FITTINGS ATTACHED TO THE POSTS.

7. BRACE RAIL – BRACE RAIL MATERIAL SHALL BE OF THE MATERIAL AS THE TOP RAIL AND LOCATED 1/2 OF THE DISTANCE UP FROM THE BOTTOM OF THE FABRIC. BRACE RAILS SHALL BE SECURELY FASTENED TO POSTS BY SUITABLE PRESSED STEEL CONNECTIONS.

8. TRUSS RODS – SHALL BE 3/8" ROUND GALVANIZED STEEL RODS WITH GALVANIZED TURNBUCKLES.

9. BOTTOM TENSION WIRE – THE TENSION WIRE SHALL BE OF 7 GAUGE HOT DIP GALVANIZED SPRING TENSION WIRE WITH A BREAKING STRENGTH OF NOT LESS THAN 1900 POUNDS. THIS WIRE SHALL BE KEPT TAUT WITH GALVANIZED TURNBUCKLES AND ATTACHED TO POSTS WITH GALVANIZED HARDWARE OR CABLE CLAMPS.

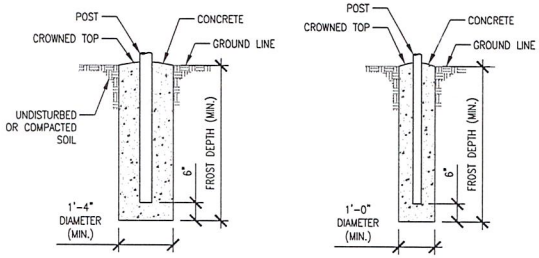
10. FABRIC TIES – THE FABRIC TIES SHALL BE ALUMINUM WIRE. NOT LESS THAN 9 GAUGE.

11. STRETCHER BARS – THE STRETCHER BARS SHALL BE FLAT GALVANIZED STEEL BARS NOT LESS THAN 5/16" X 3/4" AND NOT LESS THAN 2" SHORTER THAN THE FABRIC. STRETCHER BAR BANDS SHALL BE FLAT GALVANIZED STEEL BARS NOT LESS THAN 5/16" X 1 1/2" WITH 5/16" DIAMETER GALVANIZED CARRIAGE BOLT.

12. BARBED WIRE – BARBED WIRE OF GALVANIZED STEEL (OR ALUMINUM) CONSISTING OF 12.5 GAUGE WIRE WITH 4-POINT BARBS SPACED 5 INCHES APART.

13. GATE FRAMES SHALL BE CONSTRUCTED OF HEAVY DUTY GALVANIZED STEEL PIPE. THE GATES SHALL BE ASSEMBLED USING CORNER FITTINGS OF HEAVY PRESSED STEEL OR MALLEABLE CASTINGS OR MAY BE WELDED IF THE ENTIRE GATE FRAME IS HOT DIP GALVANIZED AFTER THE WELDING. ALL GATES SHALL BE EQUIPPED WITH HEAVY DUTY GALVANIZED STEEL TYPE HINGES WITH LARGE BEARING SURFACES OF ADEQUATE STRENGTH TO SUPPORT THE GATE. THE HINGES SHALL NOT TWIST OR TURN UNDER THE ACTION OF THE GATE. GATES WILL PROVIDE A FULL RANGE OF MOTION AND BE EASILY OPENED AND CLOSED BY ONE PERSON. DOUBLE GATE LATCH SHALL BE DAC INDUSTRIES COMMERCIAL STRONG ARM LATCH #4000. SNOW GATE LATCH SHALL BE DAC INDUSTRIES WALK GATE STRONG ARM LATCH #4300. LATCHES SHALL BE EQUIPPED TO RECEIVE A PADLOCK.

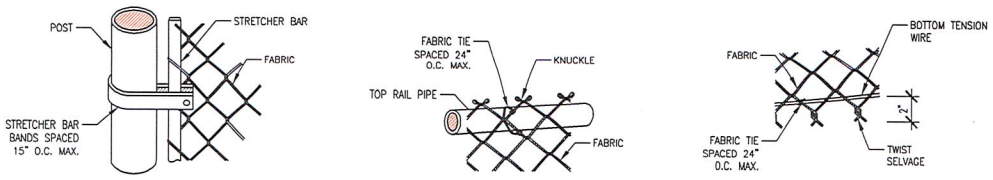
14. PROVIDE R.F. WARNING SIGNAGE ON ALL GATES.



FOOTING FOR TERMINAL, GATE & CORNER POST

FOOTING FOR LINE POST

1 POST FOOTINGS



METHOD OF FASTENING STRETCHER BAR TO POST

METHOD OF TYING FABRIC TO PIPE

METHOD OF TYING FABRIC TO TENSION WIRE

2 FABRIC/BAR CONNECTIONS

PREPARED FOR:

verticalbridge

THE TOWERS, LLC

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DELRAY BEACH, FL 33444

NOT FOR CONSTRUCTION

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PROJECT
US-MN-5477
FUZE ID: 25431337

US-MN-5477
SPRUCE

ST HWY 87
FRAZEE, MN 56544

SHEET CONTENTS:
FENCE NOTES
FENCE DETAILS

DRAWN BY:	M.T.
CHECKED BY:	S.D.
REV. A	02-23-2026
REV. B	02-26-2026

A-5

verticalbridge

SITE NAME: [FULL SITE NAME]
SITE ID: [SITE ID NUMBER]
FCC TOWER ID: [ASR NUMBER]

Owned by: VERTICAL BRIDGE
Telephone: 877-589-6411
www.verticalbridge.com
sales@verticalbridge.com
operations@verticalbridge.com

NO TRESPASSING

A

OWNER CONTACT SIGN
18" HIGH X 24" WIDE
WHITE BACKGROUND, BLACK LETTERING
MOUNTING LOCATION: LEFT GATE
QUANTITY: 1

INFORMATION

Federal Communications Commission
Tower Registration Number

1 2 3 4 5 6 7

Posted in accordance with Federal Communications Commission rules on antenna tower registration 47 CFR 17.4(g).

B

FCC REGISTRATION SIGN
8" HIGH X 12" WIDE
WHITE/GREEN BACKGROUND, WHITE/BLACK LETTERING
MOUNTING LOCATION: RIGHT GATE & BASE OF TOWER
QUANTITY: 2

DANGER

NO TRESPASSING

C

NO TRESPASSING
10" HIGH X 14" WIDE
WHITE/BLACK/RED BACKGROUND, BLACK/WHITE LETTERING
MOUNTING LOCATION: ADJACENT TO LEFT GATE & CENTERED ON OTHER THREE FENCED SIDES (QTY. 4)

⚠ NOTICE ⚠
GUIDELINES FOR WORKING IN RADIOFREQUENCY ENVIRONMENTS

- ⚠ All personnel should have electromagnetic energy (EME) awareness training.
- ⚠ All personnel entering this site must be authorized.
- ⚠ Obey all posted signs.
- ⚠ Assume all antennas are active.
- ⚠ Before working on antennas, notify owners and disable appropriate transmitters.
- ⚠ Maintain minimum 3 feet clearance from all antennas.
- ⚠ Do not stop in front of antennas.
- ⚠ Use personal RF monitors while working near antennas.
- ⚠ Never operate transmitters without shields during normal operation.
- ⚠ Do not operate base station antennas in equipment room.

D

RF GUIDELINES SIGN
8" HIGH X 12" WIDE
YELLOW BACKGROUND, BLACK LETTERING
MOUNTING LOCATION: RIGHT GATE & BASE OF TOWER
QUANTITY: 2

NOTICE

Radio frequency fields beyond this point may exceed the FCC general public exposure limit.

Obey all posted signs and site guidelines for working in radio frequency environments.

In accordance with Federal Communications Commission rules on radio frequency emissions 47 CFR 1.1307(b)

E

NOTICE RF SIGN (BLUE)
12" HIGH X 8" WIDE
WHITE/BLUE BACKGROUND, WHITE/BLACK LETTERING
MOUNTING LOCATION: ADJACENT TO LEFT GATE
QUANTITY: 1

⚠ CAUTION

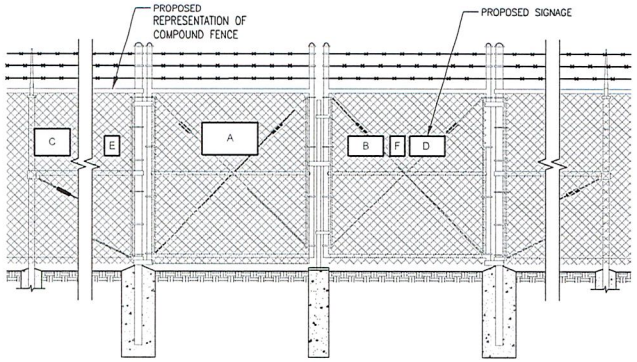
On this tower:
Radio frequency fields near some antennas may exceed FCC rules for human exposure.
Personnel climbing this tower should be trained for working in radio frequency environments and use a personal RF monitor if working near active antennas.

In accordance with Federal Communications Commission rules on radio frequency emissions 47 CFR 1.1307(b)

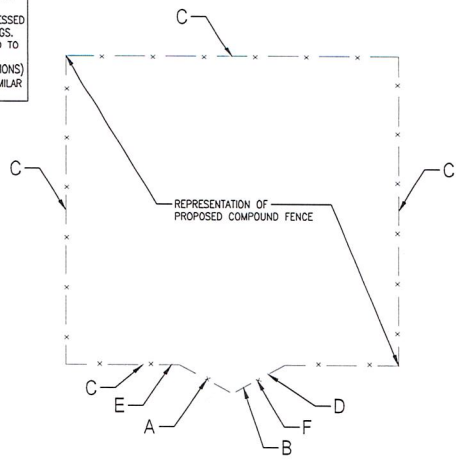
F

NOTICE RF SIGN (YELLOW)
12" HIGH X 8" WIDE
WHITE/YELLOW BACKGROUND, BLACK LETTERING
MOUNTING LOCATION: RIGHT GATE QUANTITY: 1

NOTES:
1. SIGNAGE, PLAN, & ELEVATION IS SHOWN FOR INFORMATION PURPOSES ONLY. CONTRACTOR TO VERIFY EXACT PLACEMENT WITH TOWER OWNER
2. SIGNS SHALL BE FABRICATED FROM CORROSION RESISTANT PRESSED METAL AND PAINTED WITH LONG LASTING UV RESISTANT COATINGS.
3. SIGNS (EXCEPT WHERE NOTED OTHERWISE) SHALL BE MOUNTED TO THE TOWER, GATE, & FENCE USING A MINIMUM OF 9 GAUGE ALUMINUM WIRE, HOG RINGS (AS UTILIZED IN FENCE INSTALLATIONS) OR BRACKETS WHERE NECESSARY. BRACKETS SHALL BE OF SIMILAR METAL AS THE STRUCTURE TO AVOID GALVANIC CORROSION.



1 SITE SIGNAGE



PREPARED FOR:
verticalbridge
THE TOWERS, LLC
22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

NOT FOR CONSTRUCTION

DESIGN 1
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EDEN PRAIRIE, MN 55344
(952) 903-9299
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PROJECT
US-MN-5477
FUZE ID: 25431337

US-MN-5477
SPRUCE

ST HWY 87
FRAZEE, MN 56544

SHEET CONTENTS:
SITE SIGNAGE DETAILS

DRAWN BY:	M.T.
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REV. A	02-23-2026
REV. B	02-26-2026

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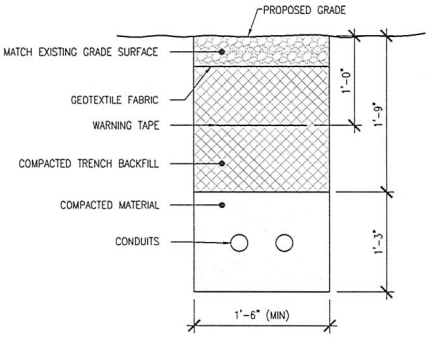
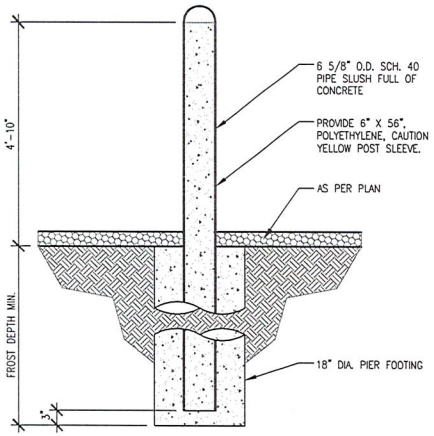
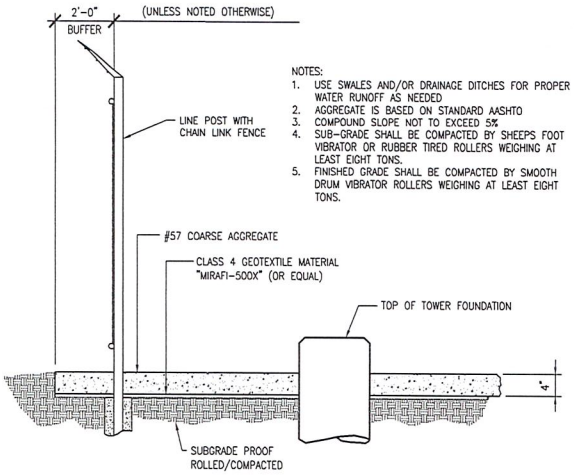


4 UTILITY TRENCH DETAIL

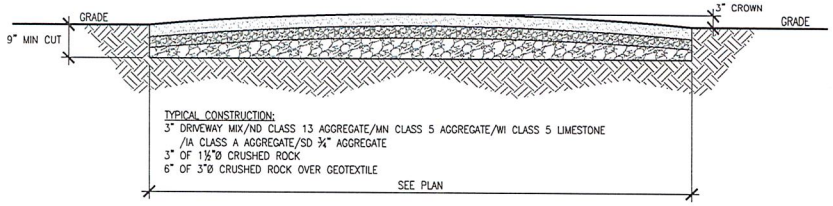


3 BOLLARD DETAIL
SCALE: 1/2" = 1'-0"



2 COMPOUND SURFACING DETAIL

NOTES:
1. PREPARE SUB-GRADE AND CONSTRUCT IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.
2. ANY VARIANCE FROM THIS ROADWAY DESIGN MUST BE SUBMITTED AND APPROVED PRIOR TO BID.
3. CONTRACTOR TO COMPACT EACH LAYER OF ROCK IN ACCORDANCE WITH ASTM & LOCAL STANDARDS.



1 GRAVEL DRIVE SECTION
SCALE: 3/8" = 1'-0"

GRAPHIC SCALE
0
1'-4"
2'-8"

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SHEET CONTENTS:
GRAVEL DRIVE SECTION
SURFACING DETAIL
BOLLARD DETAIL
UTILITY TRENCH DETAIL

DRAWN BY:	M.T.
CHECKED BY:	S.D.
REV. A	02-23-2026
REV. B	02-26-2026

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1 SITE PHOTO

2 SITE PHOTO

3 SITE PHOTO

4 SITE PHOTO

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vertical bridge

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SHEET CONTENTS:
PHOTOS

DRAWN BY:	M.T.
CHECKED BY:	S.D.
REV. A	02-23-2026
REV. B	02-26-2026

A-8

GENERAL GROUNDING NOTES:

An external buried ground ring (Lead 1) shall be established around the equipment cabinets 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 cabinets, 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 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 cabinets 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 adjacent to the ILC (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 EQUIPMENT CABINETS, 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
④	EL	ELECTRICAL SERVICE GROUND
⑥	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

GENERAL CONTRACTOR NOTES:

1. CONTRACTOR TO COORDINATE PUBLIC & PRIVATE UTILITY LOCATES PRIOR TO CONSTRUCTION START. NOTIFY THE DESIGNER AND CARRIER CONSTRUCTION ENGINEER IMMEDIATELY OF ANY UTILITY LINE ISSUES.

2. GENERAL CONTRACTOR IS RESPONSIBLE FOR CONFIRMING THAT THE INSTALLATION OF ALL GROUNDING MEETS THE CARRIERS GROUNDING STANDARDS AS APPLICABLE.

3. CONTRACTOR SHALL ENSURE THAT EACH WHIP IS ROUTED TO LEAD 1 BY THE SHORTEST PATH, AND BENDS SHALL NOTE BE LESS THAN 12" RADIUS.

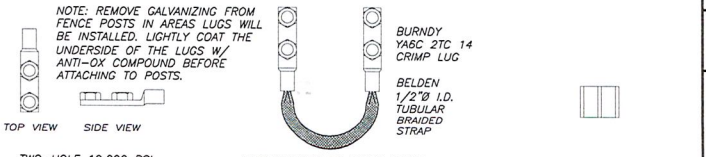
4. PRIMARY ELECTRICAL - DEPTH AND SPECIFICATION BY POWER UTILITY COMPANY.

5. SECONDARY ELECTRICAL - INSTALL CONDUIT 32" BELOW GRADE WITH TWO (2) DETECTABLE RIBBONS.

6. FIBER OPTIC - INSTALL CONDUIT 36" BELOW GRADE WITH PULL STRING, TRACEABLE WIRE AND TWO (2) DETECTABLE RIBBON.

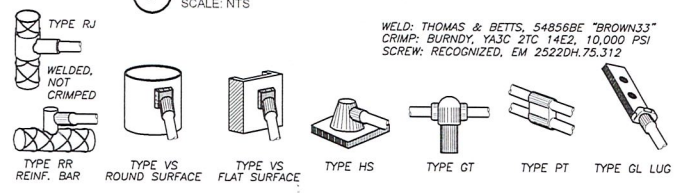
LEAD IDENTIFICATION & DESCRIPTION:

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	LGHTNG 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	NSTD33-11
30	BRANCH AC PNL TO OUTLETS	NSTD33-11
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	NSTD33-14.5
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/BDFB	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 XMTTR	#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



2 COMPRESSION CONNECTOR DETAILS

SCALE: NTS



1 EXOTHERMIC WELD DETAILS

SCALE: NTS

PREPARED FOR:

verticalbridge

THE TOWERS, LLC

22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

NOT FOR CONSTRUCTION

DESIGN 1

9973 VALLEY VIEW RD.
EDEN PRAIRIE, MN 55344
(952) 903-9299
WWW.DESIGN1EP.COM

PROJECT
US-MN-5477
FUZE ID: 25431337

US-MN-5477
SPRUCE

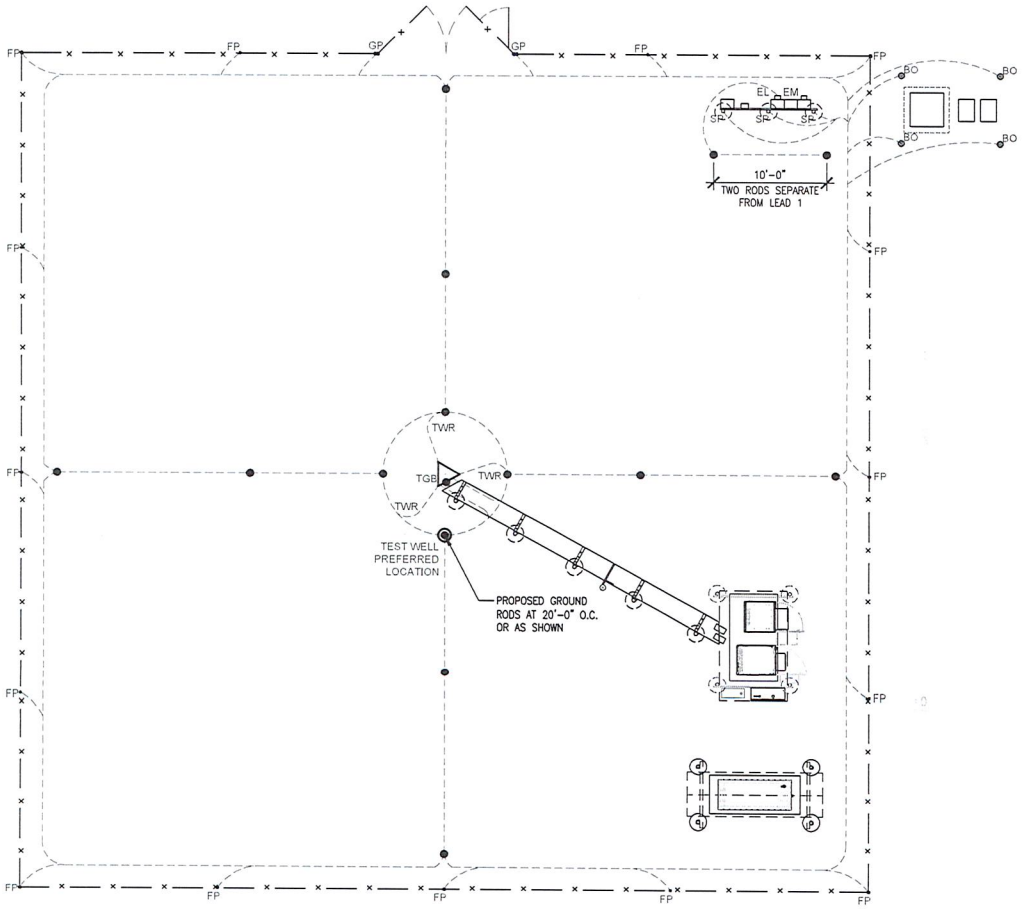
ST HWY 87
FRAZEE, MN 56544

SHEET CONTENTS:
GROUNDING NOTES

DRAWN BY:	M.T.
CHECKED BY:	S.D.
REV. A	02-23-2026
REV. B	02-26-2026

G-1

NOTES:
1. SEE SHEET VZW G-1 FOR VERIZON GROUNDING PLAN.
2. SEE SHEET G-1 FOR ADDITIONAL NOTES.
3. GROUND RING SYSTEM PERFORMANCE TEST ALLOWANCE IS FIVE (5) OHMS MAXIMUM.



1 GROUNDING PLAN
SCALE: NTS

NORTH

PREPARED FOR:
verticalbridge
THE TOWERS, LLC
22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

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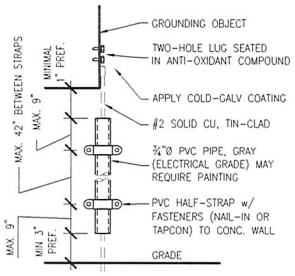
SPRUCE

ST HWY 87
FRAZEE, MN 56544

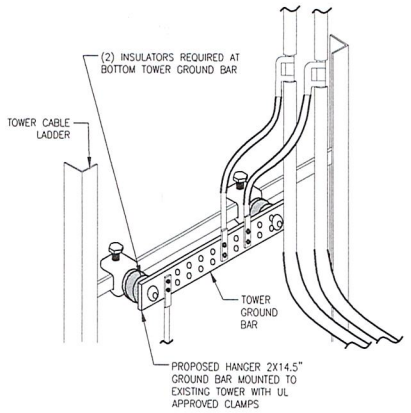
SHEET CONTENTS:
GROUNDING PLAN

DRAWN BY:	M.T.
CHECKED BY:	S.D.
REV. A	02-23-2026
REV. B	02-26-2026

G-2

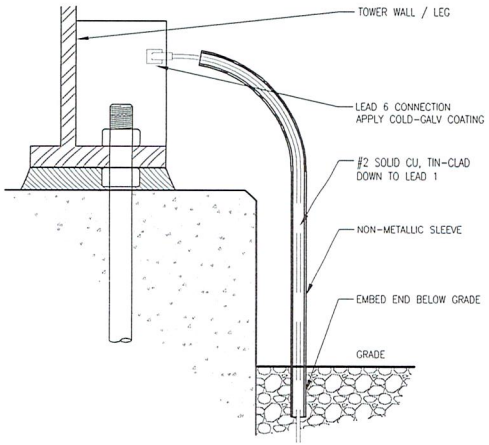


1 CONDUIT DETAIL
SCALE: NONE

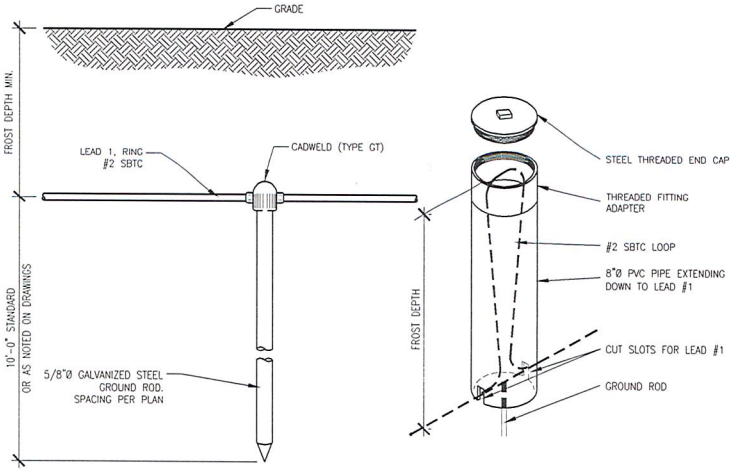


5 TOWER GROUND BAR DETAIL
SCALE: NONE

NOTE: IF NO FLANGES ARE PROVIDED, USE BASE PLATE. OR CONTACT TOWER MANUFACTURER.



2 REBAR GROUNDING DETAIL
SCALE: NONE



4 GROUND RING & ROD DETAIL
SCALE: NONE

PREPARED FOR:

verticalbridge

THE TOWERS, LLC
22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

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PROJECT
US-MN-5477
FUZE ID: 25431337

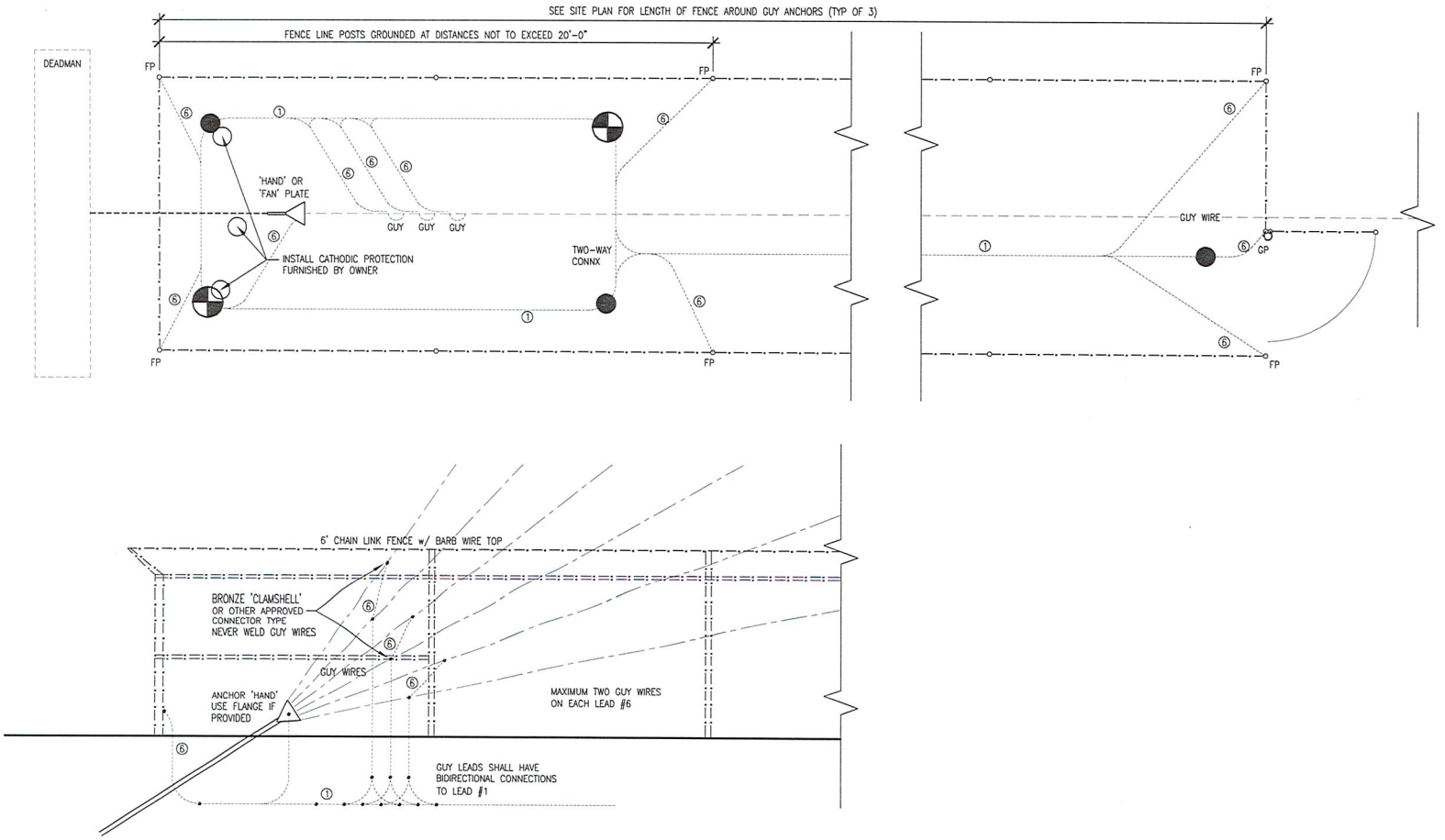
US-MN-5477
SPRUCE

ST HWY 87
FRAZEE, MN 56544

SHEET CONTENTS:
GROUNDING DETAILS

DRAWN BY:	M.T.
CHECKED BY:	S.D.
REV. A	02-23-2026
REV. B	02-26-2026

G-3



1 GUY WIRE & COMPOUND GROUNDING DETAIL
SCALE: 1/4" = 1'-0"

PREPARED FOR:

vertical bridge

THE TOWERS, LLC

22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

NOT FOR CONSTRUCTION

DESIGN 1

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US-MN-5477
FUZE ID: 25431337

US-MN-5477
SPRUCE

ST HWY 87
FRAZEE, MN 56544

SHEET CONTENTS:
GROUNDING DETAILS

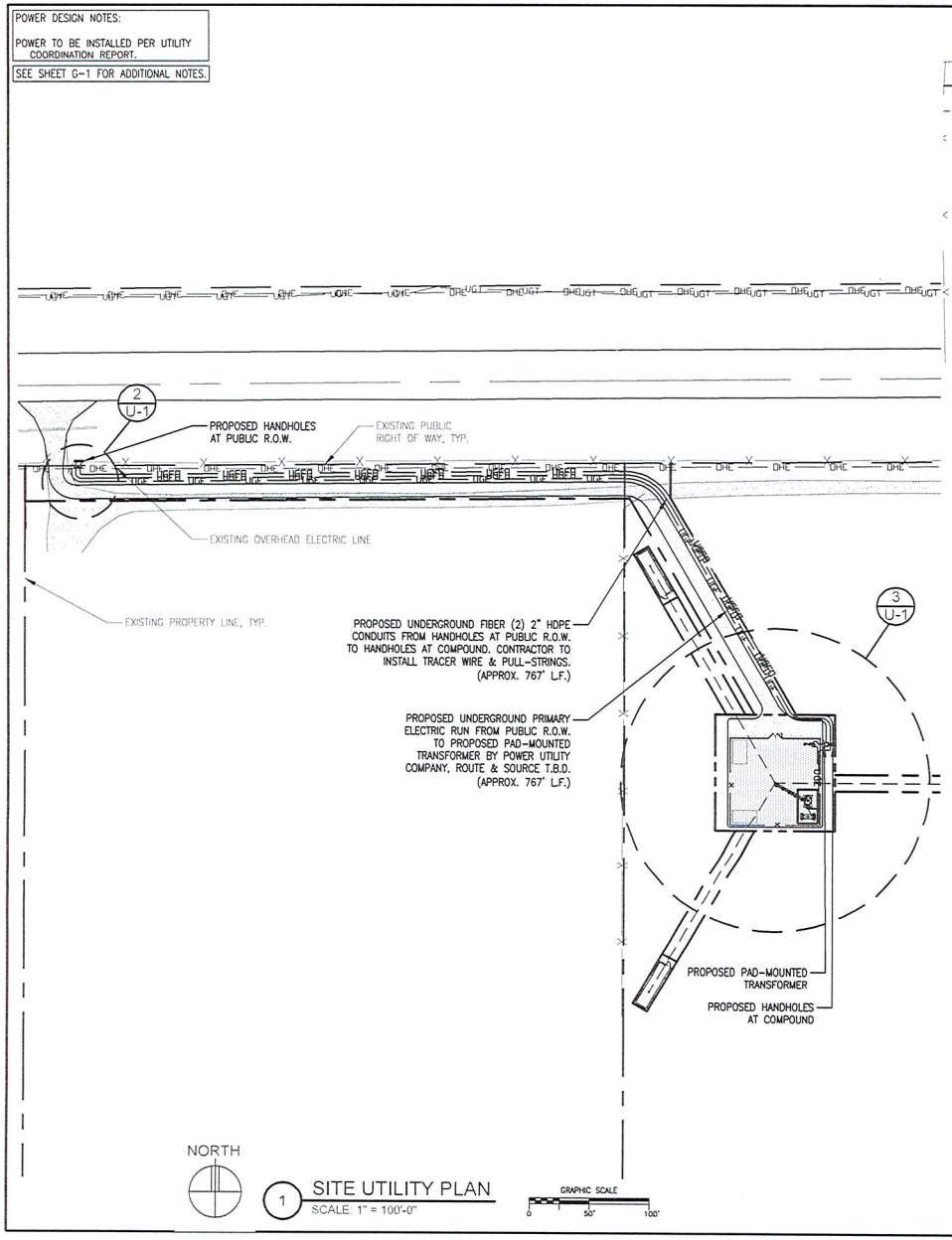
DRAWN BY:	M.T.
CHECKED BY:	S.D.
REV. A	02-23-2026
REV. B	02-26-2026

G-4

POWER DESIGN NOTES:

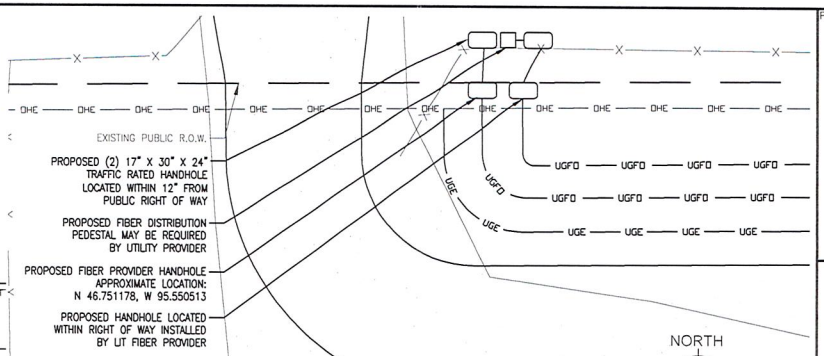
POWER TO BE INSTALLED PER UTILITY COORDINATION REPORT.

SEE SHEET G-1 FOR ADDITIONAL NOTES.



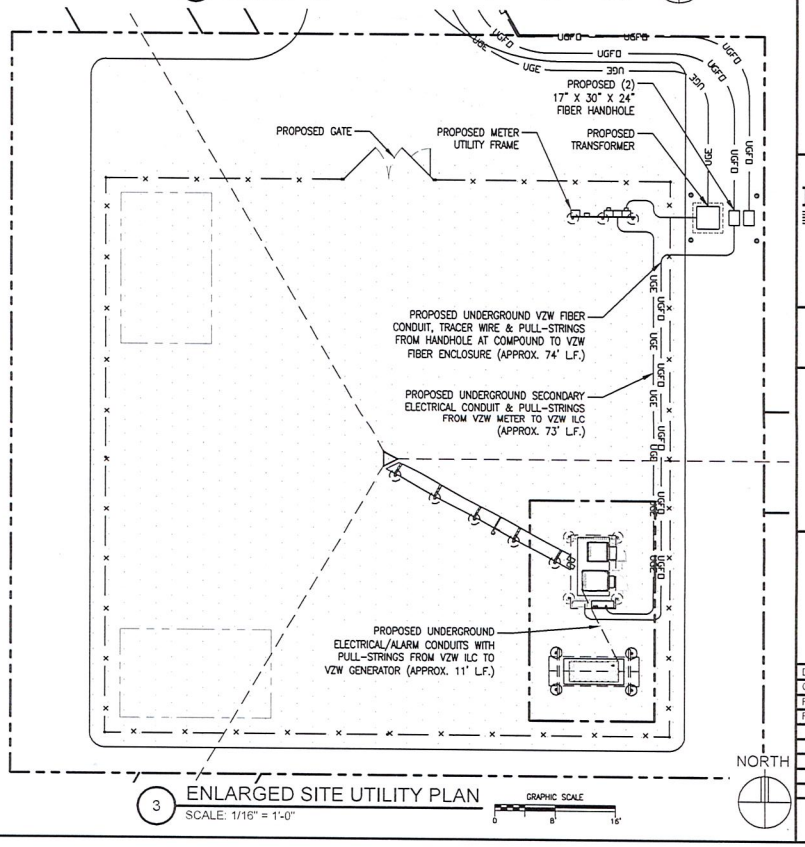
1 SITE UTILITY PLAN
SCALE: 1" = 100'-0"

GRAPHIC SCALE 0 50' 100'



2 PULLBOX LOCATION PLAN
SCALE: 3/32" = 1'-0"

GRAPHIC SCALE 0 5'-4" 10'-8"



3 ENLARGED SITE UTILITY PLAN
SCALE: 1/16" = 1'-0"

GRAPHIC SCALE 0 8' 16'

PREPARED FOR:

vertical bridge

THE TOWERS, LLC

22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

NOT FOR CONSTRUCTION

DESIGN 1

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EDEN PRAIRIE, MN 55344
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PROJECT
US-MN-5477
FUZE ID: 25431337

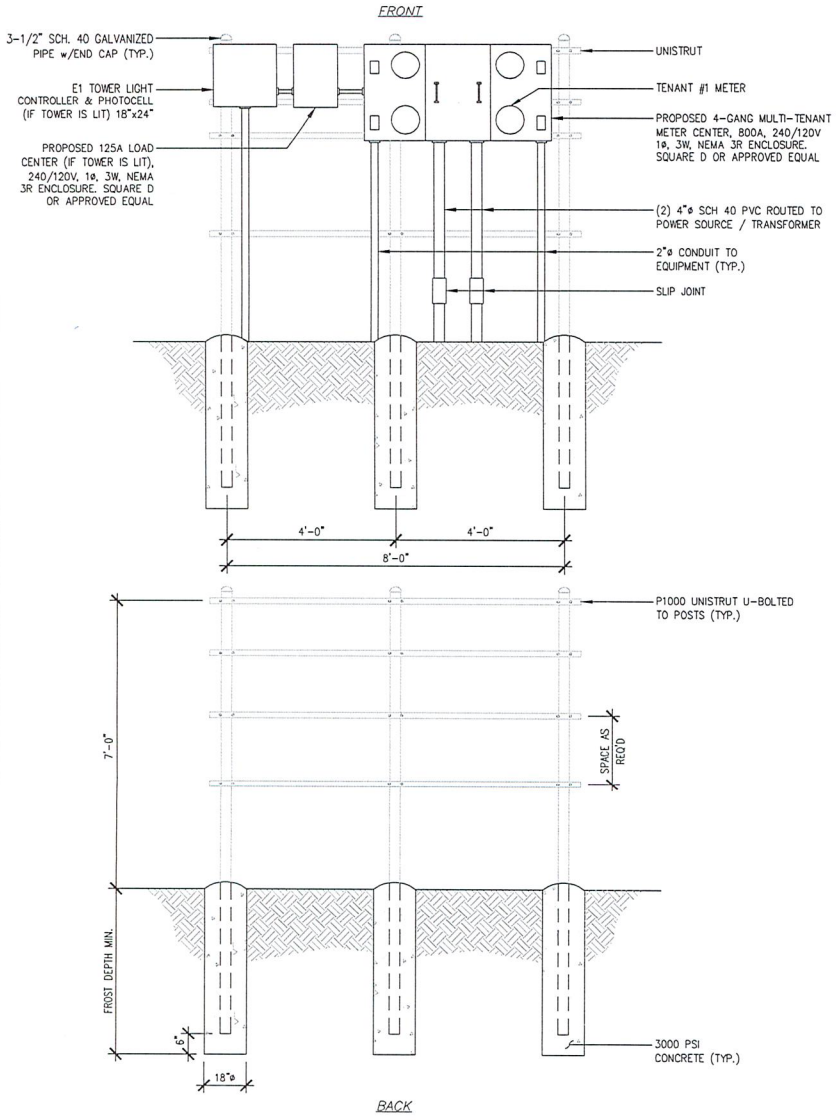
US-MN-5477
SPRUCE

ST HWY 87
FRAZEE, MN 56544

SHEET CONTENTS:
SITE UTILITY PLAN
ENLARGED SITE UTILITY PLAN
PULLBOX LOCATION PLAN

DRAWN BY:	M.T.
CHECKED BY:	S.D.
REV. A	02-23-2026
REV. B	02-26-2026

U-1



1 METER UTILITY FRAME DETAIL
SCALE: NONE

ELECTRIC SERVICE NOTES:

ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 (LATEST REVISION). THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES AND REQUIREMENTS IN FORCE. ANY INSTALLATION WHICH WOULD VOID THE U.L. LISTING (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE SHALL NOT BE PERMITTED.

COORDINATE ELECTRIC SERVICE WITH LOCAL POWER UTILITY COMPANY. COORDINATE WITH UTILITY FOR METER TYPE AND CONNECTION.

ALL CONDUIT SHALL BE SEALED WATERTIGHT UNTIL FINAL TERMINATIONS ARE MADE.

PROVIDE PULL CORD IN ALL CONDUITS. SECURE AT EACH END.

ADJUST DEPTH OF CONDUITS TO PASS ABOVE GROUNDING SYSTEM.

PROVIDE 18 INCH (MIN.) RADIUS ELBOWS FOR ALL BENDS.

PROVIDE PHENOLIC ENGRAVED NAMEPLATES AT THE SERVICE DISCONNECT LABELED: "SERVICE DISCONNECT" & "NOTE ENGINE GENERATOR NEUTRAL IS ALSO BONDED TO GROUND AT THE SERVICE DISCONNECT." PROVIDE ADDITIONAL NAMEPLATES NOTING TYPE AND LOCATION OF STANDBY POWER SOURCE.

PREPARED FOR:
verticalbridge
THE TOWERS, LLC
22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

NOT FOR CONSTRUCTION

DESIGN1
9973 VALLEY VIEW RD.
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PROJECT
US-MN-5477
FUZE ID: 25431337

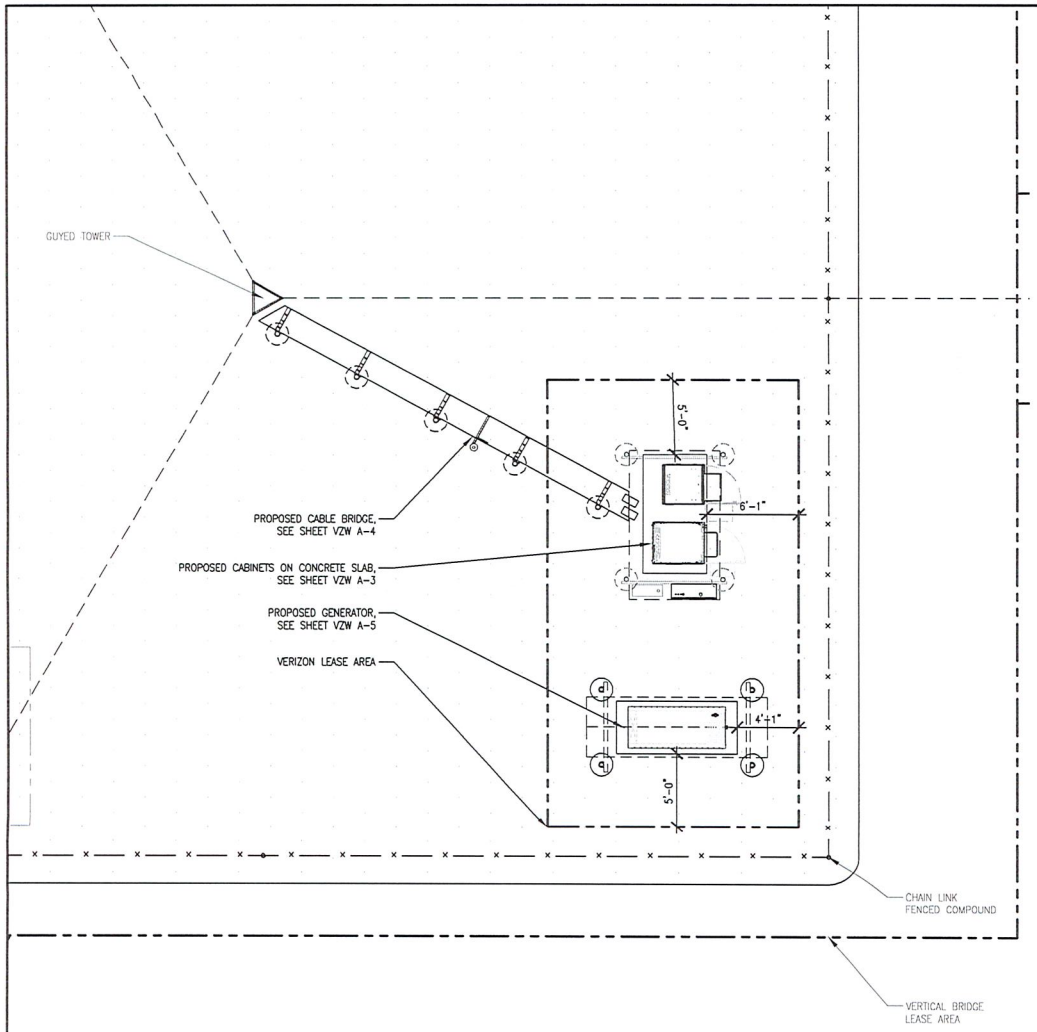
US-MN-5477
SPRUCE

ST HWY 87
FRAZEE, MN 56544

SHEET CONTENTS:
METER UTILITY FRAME DETAIL

DRAWN BY:	M.T.
CHECKED BY:	S.D.
REV. A	02-23-2026
REV. B	02-26-2026

U-2



NORTH

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

GRAPHIC SCALE 0 4' 8'

NOTES:

1. THESE DRAWINGS DO NOT CONSTITUTE A WARRANTY, EXPRESSED OR IMPLIED, OF THE ACCURACY OF THE STRUCTURAL ANALYSES AND THE PERFORMANCE OF THE COMPLETED CONSTRUCTION AS SHOWN ON THESE DOCUMENTS AND THE STRUCTURAL ANALYSES.

2. NO STRUCTURAL ANALYSIS FOR THE MOUNT HAS BEEN PERFORMED AS PART OF THESE DRAWINGS.

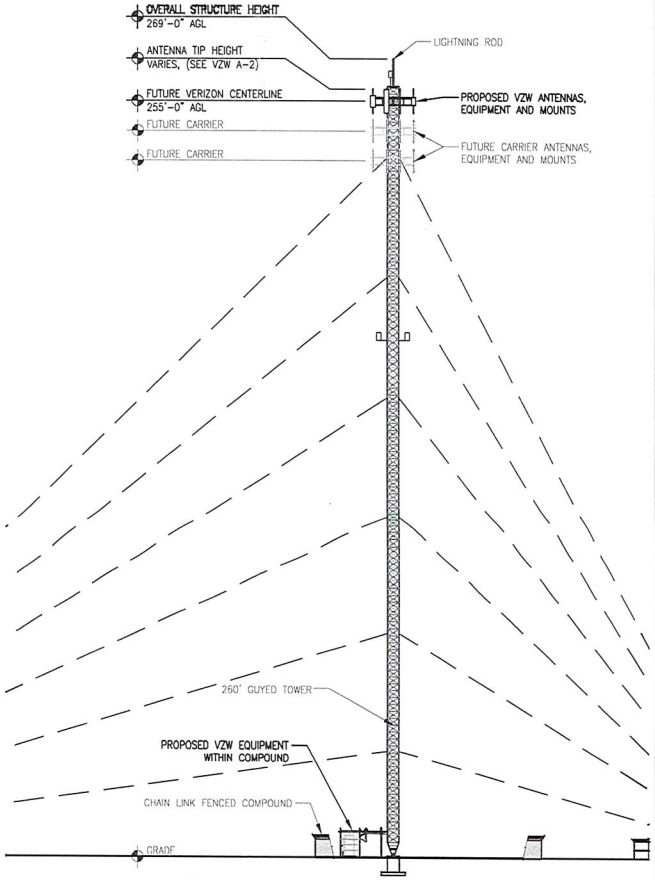
3. PLEASE COORDINATE ANY STRUCTURAL CONCERNS/MATTERS OR ANY LOADING MODIFICATIONS TO THE CONSULTANT WHO AUTHORED THE ANALYSIS AND NOTIFY DESIGN 1 IMMEDIATELY OF THE ISSUE.

4. EQUIPMENT SLAB AND GENERATOR FOUNDATION 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 DESIGNER.

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

6. ELEVATION IS SHOWN FOR GENERAL DIAGRAMMATIC PURPOSES ONLY. DO NOT SCALE.

7. THE STRUCTURAL ANALYSIS FOR THE MOUNTS (BY OTHERS) SHALL BE PER THE VERIZON NETWORK STANDARD NSTD-445. ALL LOADING AND DESIGN SHALL BE PER THE TIA-222-H STANDARD.



2 TOWER ELEVATION
SCALE: 1" = 40'-0"

GRAPHIC SCALE 0 20' 40'

PREPARED FOR:

verticalbridge

THE TOWERS, LLC
22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

NOT FOR CONSTRUCTION

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PROJECT
US-MN-5477
FUZE ID: 25431337

US-MN-5477
SPRUCE

ST HWY 87
FRAZEE, MN 56544

SHEET CONTENTS:
VERIZON SITE PLAN
TOWER ELEVATION

DRAWN BY:	M.T.
CHECKED BY:	S.D.
REV. A	02-23-2026
REV. B	02-26-2026

VZW A-1

ANTENNA KEY

	AZIMUTH	POSITION	FUNCTION	QTY	MANUFACTURER	MODEL	MOD TYPE	ANTENNA LENGTH	ANTENNA TIP	ANTENNA CENTER	ELEC DOWNTILT	MECH DOWNTILT	STATUS
"X" SECTOR	0°	1.0	--	1	ERICSSON	AIR 3283	AWS3	48.0"	257.0'	255.0'	2°	0°	PROPOSED
	--	--	--	--	--	--	--	--	--	--	--	--	--
	0°	2.1	TX/RX0	1	JMA	MX08FHG865-BHG	700 LTE	96.0"	259.0'	255.0'	2°	0°	PROPOSED
	--	2.2	TX/RX1	--	--	2ND PORT	700 LTE	--	--	--	--	--	--
	--	2.3	TX/RX0	--	--	3RD PORT	850 LTE	--	--	--	--	--	--
	--	2.4	TX/RX1	--	--	4TH PORT	850 LTE	--	--	--	--	--	--
	--	2.5	--	--	--	5TH PORT	--	--	--	--	--	--	FUTURE
	--	2.6	--	--	--	6TH PORT	--	--	--	--	--	--	FUTURE
	--	2.7	--	--	--	7TH PORT	--	--	--	--	--	--	FUTURE
	--	2.8	--	--	--	8TH PORT	--	--	--	--	--	--	FUTURE
	0°	3.0	--	--	--	--	--	--	--	--	--	--	FUTURE
	0°	4.0	--	1	ERICSSON	AIR 6419	C-BAND	28.3"	256.2'	255.0'	3°	0°	PROPOSED
	--	--	--	--	--	--	--	--	--	--	--	--	--
"Y" SECTOR	110°	1.0	--	1	ERICSSON	AIR 3283	AWS3	48.0"	257.0'	255.0'	2°	0°	PROPOSED
	--	--	--	--	--	--	--	--	--	--	--	--	--
	110°	2.1	TX/RX0	1	JMA	MX08FHG865-BHG	700 LTE	96.0"	259.0'	255.0'	2°	0°	PROPOSED
	--	2.2	TX/RX1	--	--	2ND PORT	700 LTE	--	--	--	--	--	--
	--	2.3	TX/RX0	--	--	3RD PORT	850 LTE	--	--	--	--	--	--
	--	2.4	TX/RX1	--	--	4TH PORT	850 LTE	--	--	--	--	--	--
	--	2.5	--	--	--	5TH PORT	--	--	--	--	--	--	FUTURE
	--	2.6	--	--	--	6TH PORT	--	--	--	--	--	--	FUTURE
	--	2.7	--	--	--	7TH PORT	--	--	--	--	--	--	FUTURE
	--	2.8	--	--	--	8TH PORT	--	--	--	--	--	--	FUTURE
	110°	3.0	--	--	--	--	--	--	--	--	--	--	FUTURE
	110°	4.0	--	1	ERICSSON	AIR 6419	C-BAND	28.3"	256.2'	255.0'	3°	0°	PROPOSED
	--	--	--	--	--	--	--	--	--	--	--	--	--
"Z" SECTOR	250°	1.0	--	1	ERICSSON	AIR 3283	AWS3	48.0"	257.0'	255.0'	2°	0°	PROPOSED
	--	--	--	--	--	--	--	--	--	--	--	--	--
	250°	2.1	TX/RX0	1	JMA	MX08FHG865-BHG	700 LTE	96.0"	259.0'	255.0'	2°	0°	PROPOSED
	--	2.2	TX/RX1	--	--	2ND PORT	700 LTE	--	--	--	--	--	--
	--	2.3	TX/RX0	--	--	3RD PORT	850 LTE	--	--	--	--	--	--
	--	2.4	TX/RX1	--	--	4TH PORT	850 LTE	--	--	--	--	--	--
	--	2.5	--	--	--	5TH PORT	--	--	--	--	--	--	FUTURE
	--	2.6	--	--	--	6TH PORT	--	--	--	--	--	--	FUTURE
	--	2.7	--	--	--	7TH PORT	--	--	--	--	--	--	FUTURE
	--	2.8	--	--	--	8TH PORT	--	--	--	--	--	--	FUTURE
	250°	3.0	--	--	--	--	--	--	--	--	--	--	FUTURE
	250°	4.0	--	1	ERICSSON	AIR 6419	C-BAND	28.3"	256.2'	255.0'	3°	0°	PROPOSED
	--	--	--	--	--	--	--	--	--	--	--	--	--

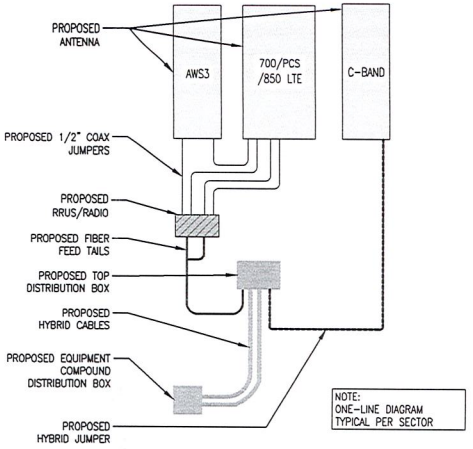
PROPOSED ADDITIONAL:
(1) RAYCAP DISTRIBUTION BOX, MODEL #RVZDC-6627-PF-48, (ON SECTOR MOUNT)
(1) RAYCAP DISTRIBUTION BOX, MODEL #RVZDC-6627-PF-48, (INSIDE EQUIPMENT CABINET)
(2) HUBER + SUHNER HYBRID CABLE, MODEL #85205124, (300' - CABINET TO SECTOR MOUNT)
(1) POWERSHIFT EQUIPMENT, DC-DC UP-CONVERTER UNIT
(5) POWERSHIFT EQUIPMENT, DC-DC UP-CONVERTER MODULES

HYBRID CABLE LENGTH		
CABLE BRIDGE	=	28'
RAD CENTER	=	255'
EXTRA	=	10'
TOTAL	=	293'

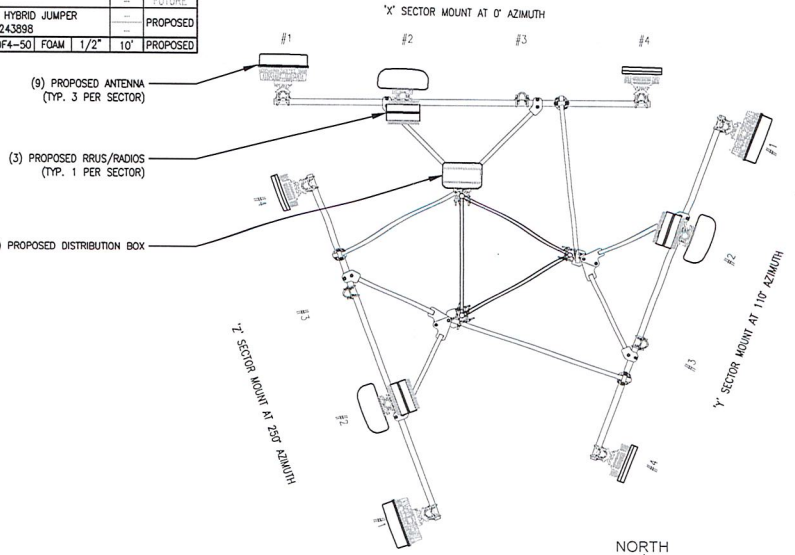
EQUIPMENT KEY

QTY	MANUFACTURER	MODEL	FIBER FEED TAIL	RRU PORT	STATUS
1	HUBER + SUHNER HYBRID JUMPER MPN #85243898			--	PROPOSED
				--	
1	ERICSSON	4490	HUBER + SUHNER HYBRID JUMPER MPN #85243898 - DIST. BOX TO RRU	1	PROPOSED
				2	
				3	
				4	
4	TERMINATOR 1-2W 50Ω			--	FUTURE
				--	
				--	
				--	
--	--			--	FUTURE
1	HUBER + SUHNER HYBRID JUMPER MPN #85243898			--	PROPOSED
				--	
1	HUBER + SUHNER HYBRID JUMPER MPN #85243898			--	PROPOSED
1	ERICSSON	4490	HUBER + SUHNER HYBRID JUMPER MPN #85243898 - DIST. BOX TO RRU	1	PROPOSED
				2	
				3	
				4	
4	TERMINATOR 1-2W 50Ω			--	FUTURE
				--	
				--	
				--	
--	--			--	FUTURE
1	HUBER + SUHNER HYBRID JUMPER MPN #85243898			--	PROPOSED
				--	
1	HUBER + SUHNER HYBRID JUMPER MPN #85243898			--	PROPOSED
1	ERICSSON	4490	HUBER + SUHNER HYBRID JUMPER MPN #85243898 - DIST. BOX TO RRU	1	PROPOSED
				2	
				3	
				4	
4	TERMINATOR 1-2W 50Ω			--	FUTURE
				--	
				--	
				--	
--	--			--	FUTURE
1	HUBER + SUHNER HYBRID JUMPER MPN #85243898			--	PROPOSED
				--	
12	JUMPER	ANDREW	LDF4-50 FOAM 1/2"	10'	PROPOSED

1 RFDS INFORMATION



2 RFDS PLUMBING DIAGRAM



3 ANTENNA MOUNTING DETAIL

SCALE: 1/4" = 1'-0"

GRAPHIC SCALE 0 2' 4'

NORTH

PREPARED FOR:

vertical bridge

THE TOWERS, LLC

22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

NOT FOR CONSTRUCTION

DESIGN 1

9973 VALLEY VIEW RD.
EDEN PRAIRIE, MN 55344
(952) 903-9299
WWW.DESIGN1EP.COM

PROJECT
US-MN-5477
FUZE ID: 25431337

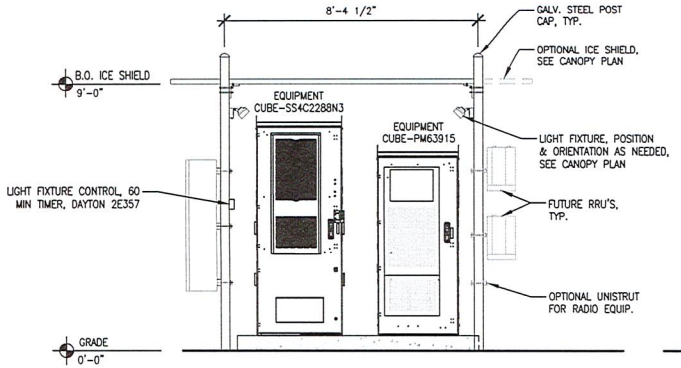
US-MN-5477
SPRUCE

ST HWY 87
FRAZEE, MN 56544

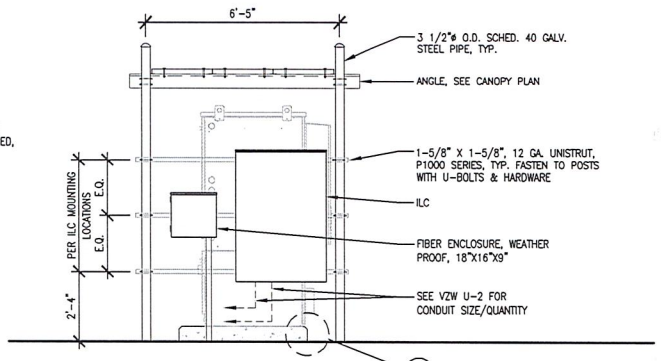
SHEET CONTENTS:
RFDS INFORMATION
RFDS PLUMBING DIAGRAM
ANTENNA MOUNTING DETAIL

DRAWN BY:	M.T.
CHECKED BY:	S.D.
REV. A	02-23-2026
REV. B	02-26-2026

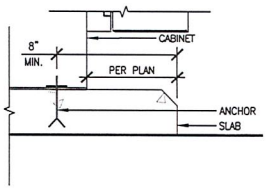
VZW A-2



5 FRONT ELEVATION
SCALE: 1/4" = 1'-0"



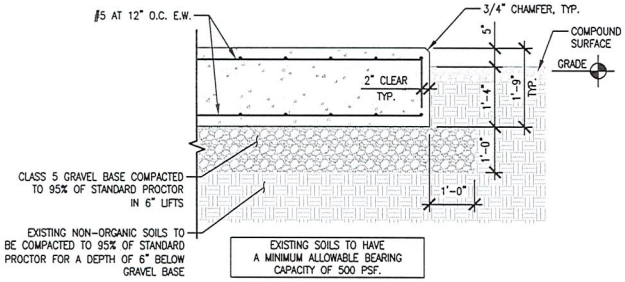
6 SIDE ELEVATION
SCALE: 1/4" = 1'-0"



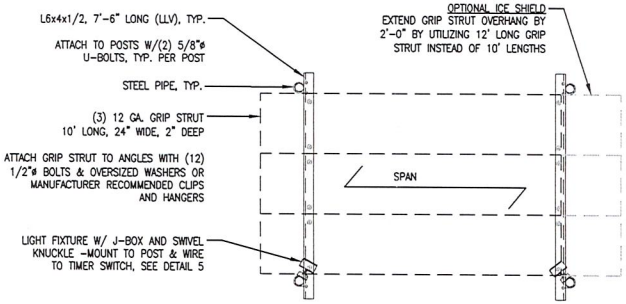
TYPICAL CAB. FRAME ANCHOR BOLT:
HILTI KWIK BOLT TZ (GALV.) EXP. ANCHOR-5/8"ø X 3-9/16" NOM. EMBED. MIN.

ANCHOR PER MANUFACTURER SPECIFIED LOCATIONS

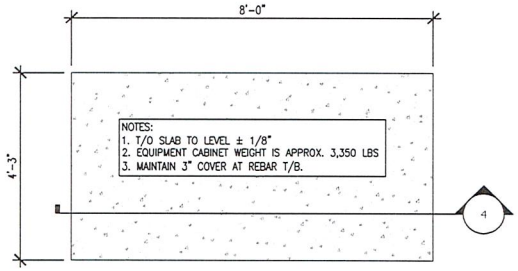
7 DETAIL
SCALE: 1-1/2" = 1'-0"



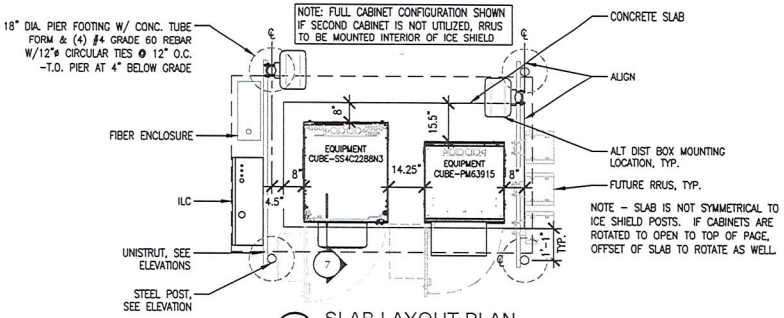
4 SLAB SECTION
SCALE: 3/8" = 1'-0"



2 CANOPY PLAN
SCALE: 1/4" = 1'-0"



3 SLAB PLAN
SCALE: 3/8" = 1'-0"



NOTE - SLAB IS NOT SYMMETRICAL TO ICE SHIELD POSTS. IF CABINETS ARE ROTATED TO OPEN TO TOP OF PAGE, OFFSET OF SLAB TO ROTATE AS WELL.

1 SLAB LAYOUT PLAN
SCALE: 1/4" = 1'-0"

PREPARED FOR:

verticalbridge

THE TOWERS, LLC
22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

NOT FOR CONSTRUCTION

DESIGN 1
9973 VALLEY VIEW RD.
EDEN PRAIRIE, MN 55344
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PROJECT
US-MN-5477
FUZE ID: 25431337

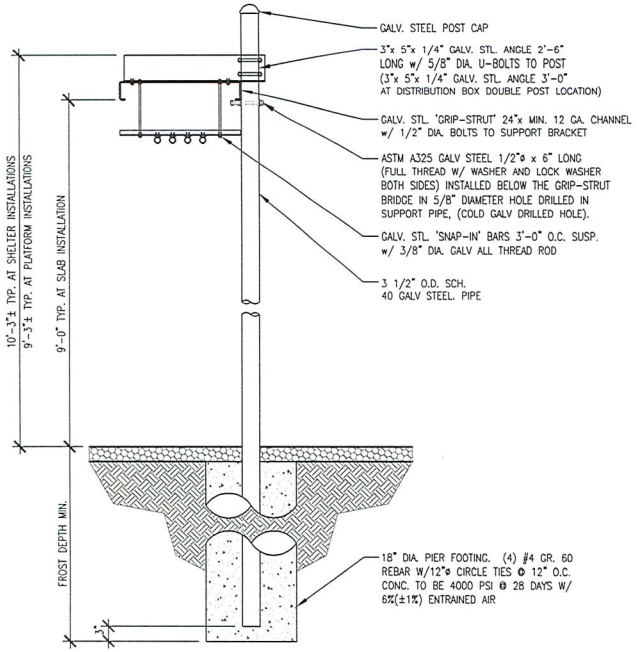
US-MN-5477
SPRUCE

ST HWY 87
FRAZEE, MN 56544

SHEET CONTENTS:
FOUNDATION PLAN & DETAILS
LAYOUT PLAN
ELEVATIONS

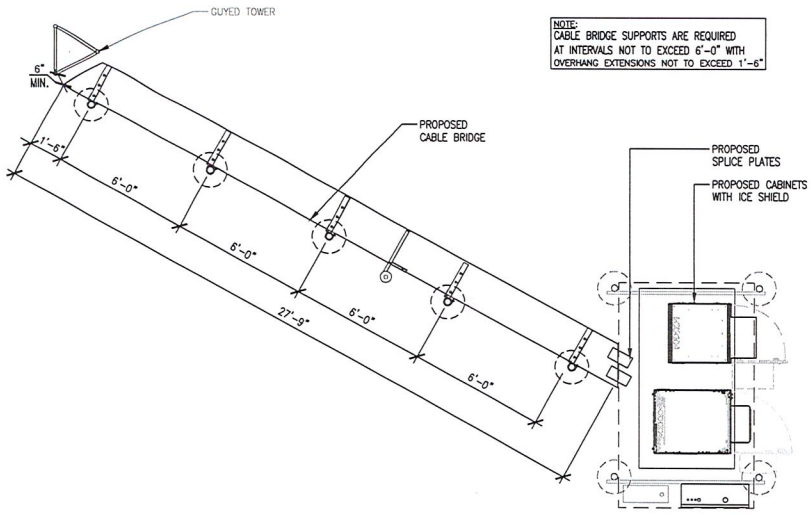
DRAWN BY:	M.T.
CHECKED BY:	S.D.
REV. A	02-23-2026
REV. B	02-26-2026

VZW A-3



1 CABLE BRIDGE SECTION
SCALE: 1/2" = 1'-0"

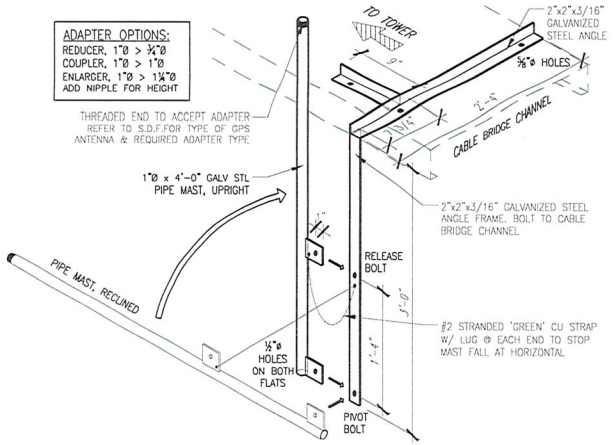
GRAPHIC SCALE
0 1' 2'



2 CABLE BRIDGE PLAN
SCALE: 3/16" = 1'-0"

GRAPHIC SCALE
0 2'-8" 5'-4"

NORTH



3 GPS ANTENNA MOUNTING
SCALE: N.T.S

PREPARED FOR:

verticalbridge

THE TOWERS, LLC
22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

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PROJECT
US-MN-5477
FUZE ID: 25431337

US-MN-5477
SPRUCE

ST HWY 87
FRAZEE, MN 56544

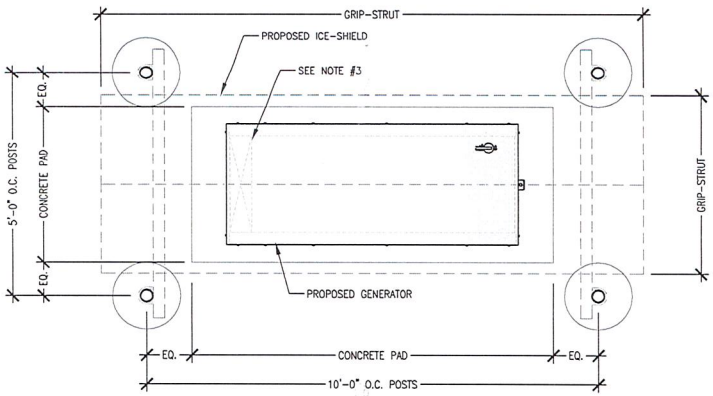
SHEET CONTENTS:
CABLE BRIDGE DETAILS
CABLE LADDER DETAIL
GPS DETAILS

DRAWN BY:	M.T.
CHECKED BY:	S.D.
REV. A	02-23-2026
REV. B	02-26-2026

VZW A-4

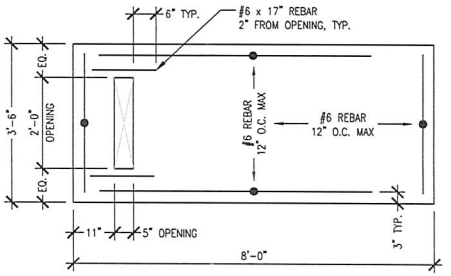
NOTES:

1) PROPOSED GENERATOR TO BE AS FOLLOWS:
   - 30 kW EXTERIOR GENERATOR ASSEMBLY
     - KOHLER MODEL #30REOZK & DRAWING #AVD-8855
   - STANDARD FUEL TANK, 203 GALLON TANK, DIESEL:
     - KOHLER PART #GM97093-MA2
   - DIMENSIONS (LxWxH) 77.5" X 32.5" X 84.0"
   - DRY WEIGHT (APPROX.) 2,114 LBS
   - WET WEIGHT (APPROX.) 3,535 LBS
2) ORIENTATION OF GENERATOR PER COMPOUND PLAN.
3) OPENING IN PAD TO BE ALIGNED WITH CONDUIT STUB-UPS (ELECTRICAL/ALARM) AND GENERATOR ASSEMBLY TO BE CENTERED ON PAD.
4) ANCHOR GENERATOR ASSEMBLY TO PAD USING EPOXY ANCHOR BOLTS OR EXPANSION ANCHORS, UTILIZE ALL MOUNTING HOLES IN BOTTOM OF GENERATOR ASSEMBLY.
5) CONTRACTOR TO INSTALL E-STOP (SUPPLIED WITH GENERATOR) ON THE GENERATOR ENCLOSURE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS/REQUIREMENTS AND THE N.E.C. CONNECT TO GENERATOR CONTROL PANEL AS REQUIRED TO SHUT DOWN ENGINE UPON ACTIVATION.
6) SEAL ANY GAPS BETWEEN GENERATOR ASSEMBLY AND PAD WITH EXTERIOR POLYURETHANE SEALANT, AND FILL OPENINGS IN PAD WITH CONCRETE UPON INSTALLATION OF CONDUITS.
7) IT HAS BEEN ASSUMED THAT THE EXISTING NATIVE SOILS AT THE SITE MINIMALLY CONFORM TO IBC CODE – TABLE 1806.2, CLASS OF MATERIALS #5: CLAY, SANDY CLAY, CLAYEY SILT, SILT AND SANDY SILT (CL, ML, MH, AND CH) WITH AN ALLOWABLE VERTICAL BEARING PRESSURE OF 1500 PSF (MINIMUM).
8) IF POOR SOILS OR UNCONTROLLED FILL OR WORSE ARE FOUND, IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INFORM DESIGN 1 OF THE SITE CONDITIONS FOR FURTHER REVIEW.
9) THE PAD IS NOT FROST-PROTECTED AND IS SUBJECT TO FREEZE/THAW MOVEMENT. IT SHALL BE THE RESPONSIBILITY OF OTHERS TO PROVIDE FLEXIBLE CONNECTIONS AND/OR OTHER MEANS TO PREVENT ANY DAMAGE TO THE GENERATOR AND ITS COMPONENTS FROM THE MOVEMENT.
10) CONCRETE AND REBAR SHALL CONFORM TO THE FOLLOWING CHARACTERISTICS:
    - MINIMUM CONCRETE f'c = 4,500 PSI, AIR-ENTRAINED.
    - REBAR Fy = 60 KSI.
11) TOP SURFACE OF PAD TO BE WITHIN A FLATNESS OF 1/8".



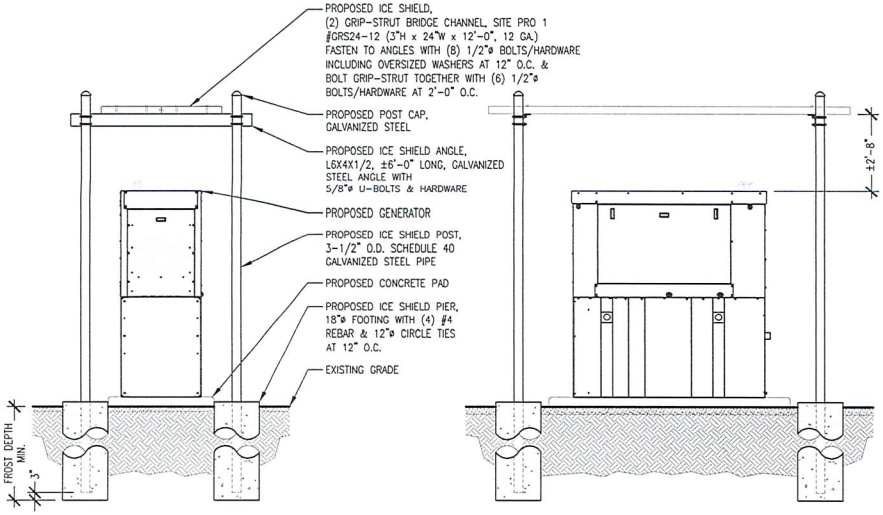
2 GENERATOR ASSEMBLY PLAN
SCALE: 3/8" = 1'-0"

GRAPHIC SCALE 0 1'-4" 2'-8"



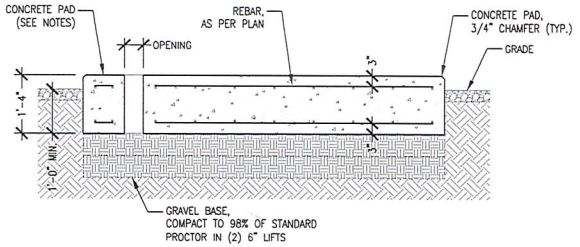
3 CONCRETE PAD PLAN
SCALE: 3/8" = 1'-0"

GRAPHIC SCALE 0 1'-4" 2'-8"



1 GENERATOR ASSEMBLY ELEVATIONS
SCALE: 1/4" = 1'-0"

GRAPHIC SCALE 0 2' 4'



4 CONCRETE PAD SECTION
SCALE: 3/8" = 1'-0"

GRAPHIC SCALE 0 1'-4" 2'-8"

PREPARED FOR:

verticalbridge

THE TOWERS, LLC
22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

NOT FOR CONSTRUCTION

DESIGN 1

9973 VALLEY VIEW RD.
EDEN PRAIRIE, MN 55344
(952) 903-9299
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PROJECT
US-MN-5477
FUZE ID: 25431337

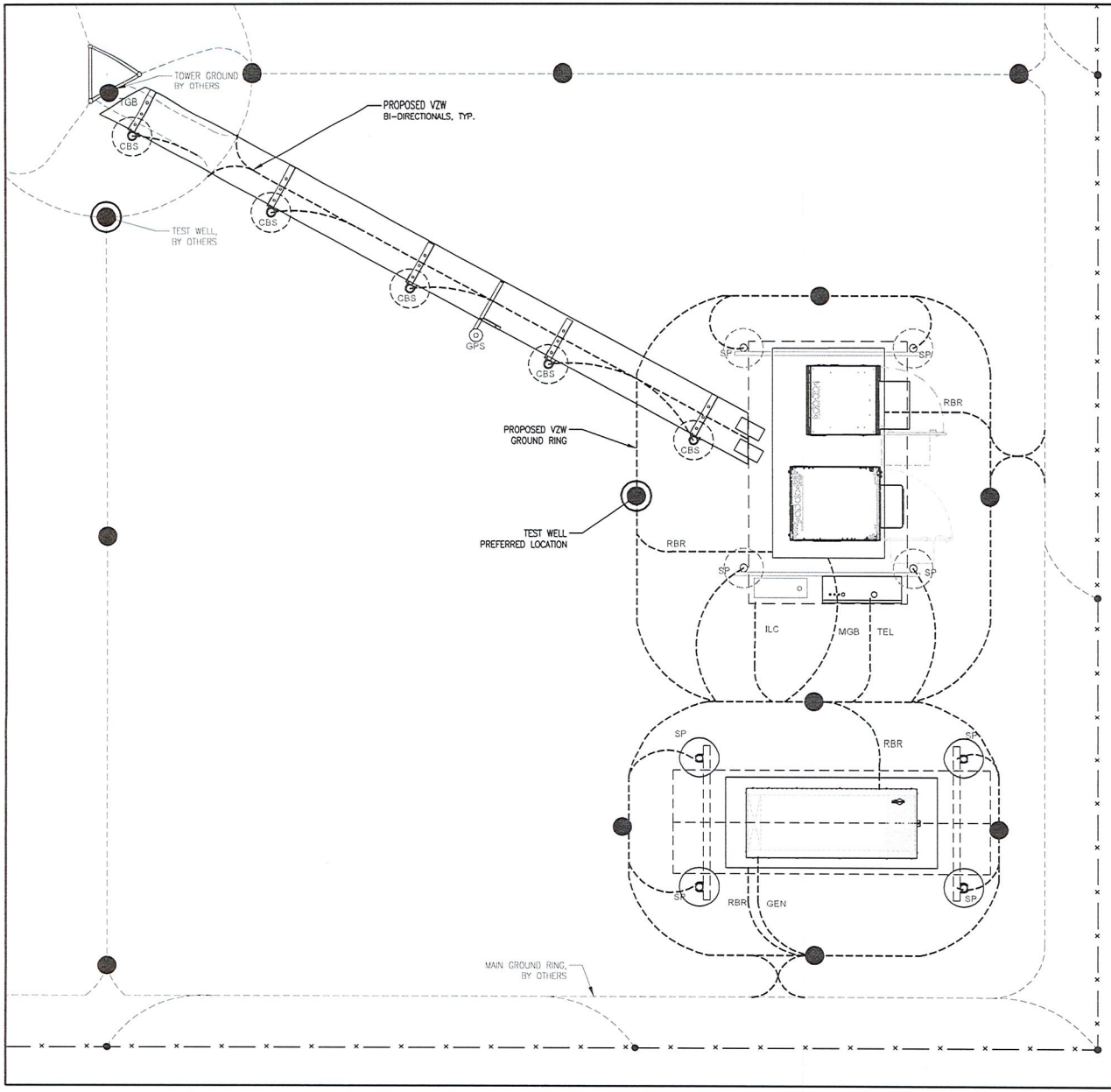
US-MN-5477
SPRUCE

ST HWY 87
FRAZEE, MN 56544

SHEET CONTENTS:
GENERATOR DETAILS,
STANDARD TANK

DRAWN BY:	M.T.
CHECKED BY:	S.D.
REV. A	02-23-2026
REV. B	02-26-2026

VZW A-5



NOTES:
1. GENERAL CONTRACTOR IS RESPONSIBLE FOR CONFIRMING THAT THE INSTALLATION OF ALL GROUNDING MEETS THE VERIZON NETWORK STANDARD NUMBERS "NSTD46" DOCUMENTS TITLES "CELL SITE AND MICROWAVE RADIO STATION PROTECTION – ENGINEERING CONSIDERATIONS".
2. PROPOSED EQUIPMENT & EQUIPMENT CABINETS TO BE GROUNDED PER MANUFACTURER'S SPECS AND ATTACHED TO MAIN BUSS BAR.
3. SEE SHEET G-1 FOR ADDITIONAL NOTES.

1 GROUNDING PLAN
SCALE: NTS

NORTH

PREPARED FOR:

verticalbridge

THE TOWERS, LLC
22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

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PROJECT
US-MN-5477
FUZE ID: 25431337

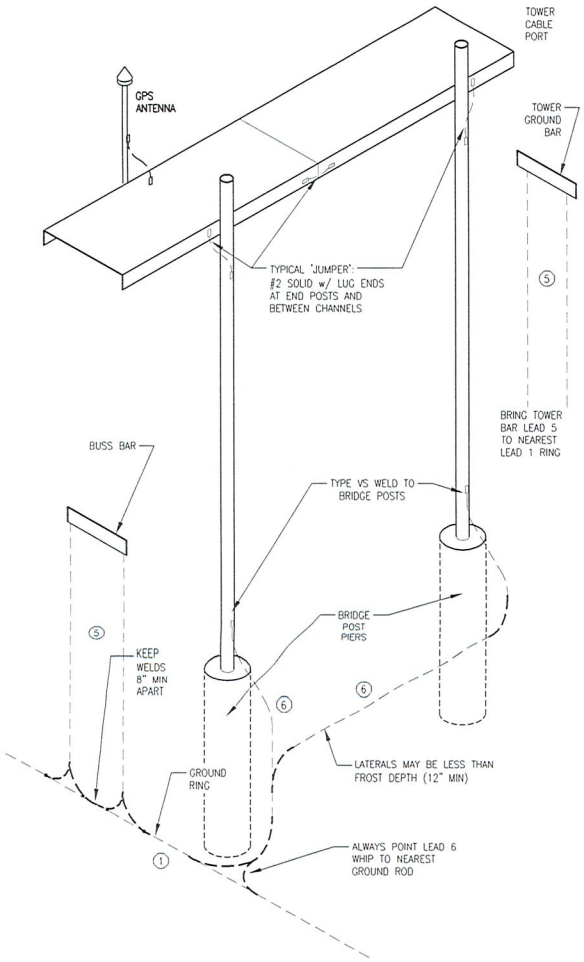
US-MN-5477
SPRUCE

ST HWY 87
FRAZEE, MN 56544

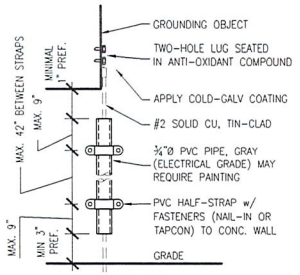
SHEET CONTENTS:
GROUNDING PLAN

DRAWN BY:	M.T.
CHECKED BY:	S.D.
REV. A	02-23-2026
REV. B	02-26-2026

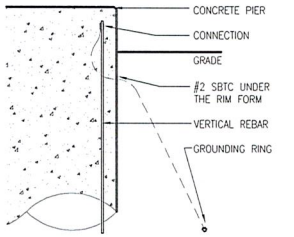
VZW G-1



1 TYPICAL CABLE BRIDGE GROUNDING DETAIL
SCALE: NONE

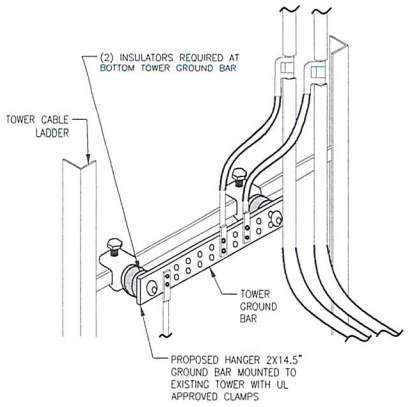


4 CONDUIT DETAIL
SCALE: NONE

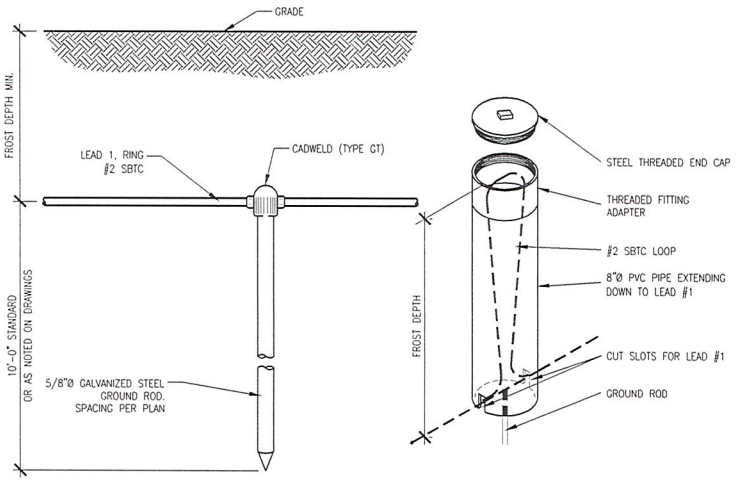


PIER FOUNDATION

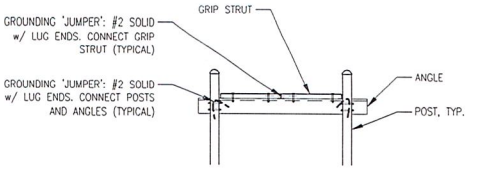
3 REBAR GROUNDING DETAIL
SCALE: NONE



2 TOWER GROUND BAR DETAIL
SCALE: NONE



5 GROUND RING & ROD DETAIL
SCALE: NONE



6 TYPICAL ICE SHIELD GROUNDING DETAILS
SCALE: NONE

PREPARED FOR:
verticalbridge
THE TOWERS, LLC
22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

NOT FOR CONSTRUCTION

DESIGN1
8973 VALLEY VIEW RD.
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PROJECT
US-MN-5477
FUZE ID: 25431337

US-MN-5477
SPRUCE

ST HWY 87
FRAZEE, MN 56544

SHEET CONTENTS:
GROUNDING DETAILS

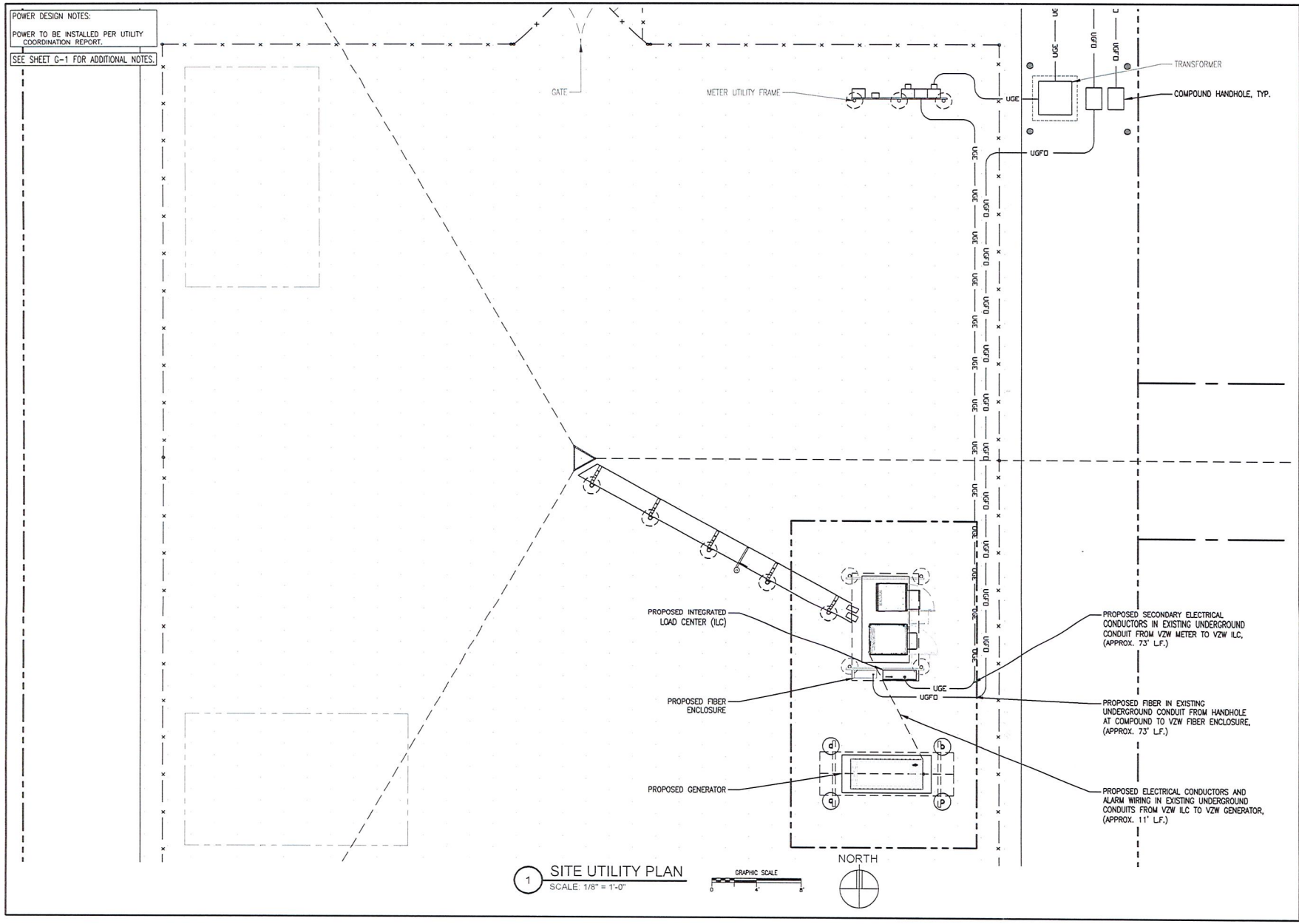
DRAWN BY:	M.T.
CHECKED BY:	S.D.
REV. A	02-23-2026
REV. B	02-26-2026

VZW G-2

POWER DESIGN NOTES:

POWER TO BE INSTALLED PER UTILITY COORDINATION REPORT.

SEE SHEET G-1 FOR ADDITIONAL NOTES.



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

PREPARED FOR:

verticalbridge

THE TOWERS, LLC
22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

NOT FOR CONSTRUCTION

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9973 VALLEY VIEW RD.
EDEN PRAIRIE, MN 55344
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PROJECT
US-MN-5477
FUZE ID: 25431337

US-MN-5477
SPRUCE

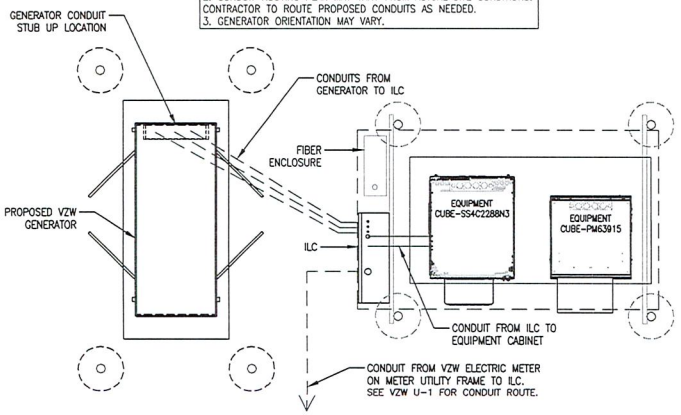
ST HWY 87
FRAZEE, MN 56544

SHEET CONTENTS:
VZW UTILITY PLAN

DRAWN BY:	M.T.
CHECKED BY:	S.D.
REV. A	02-23-2026
REV. B	02-26-2026

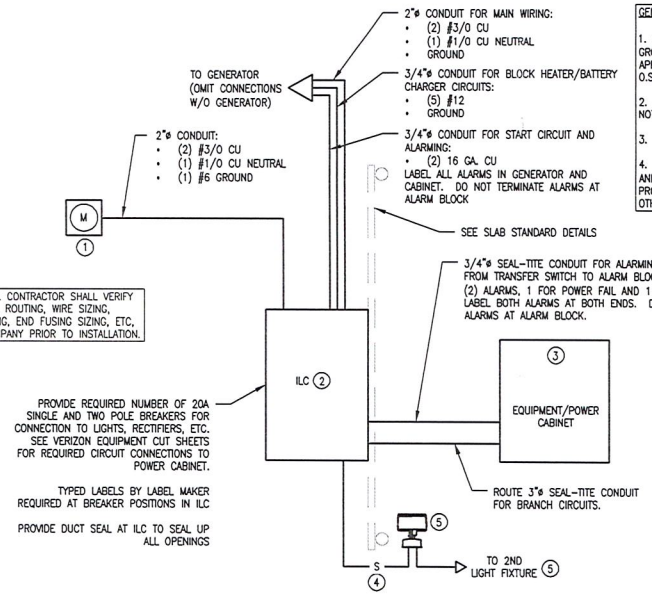
VZW U-1

NOTES:
1. SEE ONE-LINE ELECTRIC DIAGRAM FOR WIRE SIZES/QUANTITIES.
2. CONDUIT ROUTING PLAN MAY VARY FROM ACTUAL SITE CONDITIONS. CONTRACTOR TO ROUTE PROPOSED CONDUITS AS NEEDED.
3. GENERATOR ORIENTATION MAY VARY.



1 CONDUIT ROUTING PLAN
SCALE: 1/4" = 1'-0"

NOTE: ELECTRICAL CONTRACTOR SHALL VERIFY FINAL ELECTRICAL ROUTING, WIRE SIZING, CONDUCTOR SIZING, END FUSING SIZING, ETC, WITH UTILITY COMPANY PRIOR TO INSTALLATION.



GENERAL NOTES

1. CONTRACTOR SHALL PERFORM WORK (ELECTRICAL, GROUNDING, & BONDING) IN ACCORDANCE WITH ALL APPLICABLE GOVERNING STATE & LOCAL CODES AND O.S.H.A. REGULATIONS.
2. ALL CONDUCTORS SHALL BE TYPE THHN UNLESS NOTED OTHERWISE.
3. LABEL METER & DISCONNECT PER NEC.
4. EQUIPMENT AND MATERIALS SHOWN IN DIAGRAM AND LISTED IN KEY (OR APPROVED EQUAL) TO BE PROVIDED BY CONTRACTOR UNLESS NOTED OTHERWISE.

ELECTRICAL EQUIPMENT LIST & KEY

KEY NOTE	ALT.	MANUFACTURER PART NUMBER	MANUFACTURER	DESCRIPTION
1	–	–	–	UTILITY CO. APPROVED 200A METER WITH MCB/DISCONNECT
2	GEN.	AA300G-1PH-42-3R	ASCO POWER TECHNOLOGIES	D300L SERIES, SINGLE PHASE, 200A POWER TRANSFER LOAD CENTER (PROVIDED BY VERIZON)
	W/O GEN.	AA300G-1PH-3RGC		D300L SERIES, SINGLE PHASE, 200A POWER TRANSFER LOAD CENTER W/CAM-LOK (PROVIDED BY VERIZON)
3	–	–	–	PUNCH DOWN ALARM TERMINAL BLOCK (LOCATED WITHIN EQUIPMENT)
4	–	E357	DAYTON	LIGHT FIXTURE CONTROL & WEATHERPROOF CASING
5	–	OLFL PE 14 BZ	LITHONIA	OUTDOOR INTEGRATED LED FLOOD LIGHT FIXTURE – MOUNT PER STANDARD DETAILS

2 ONE-LINE ELECTRIC DIAGRAM
SCALE: NONE

PREPARED FOR:
verticalbridge
THE TOWERS, LLC
22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

NOT FOR CONSTRUCTION

DESIGN 1
9973 VALLEY VIEW RD.
EDEN PRAIRIE, MN 55344
(952) 903-0299
WWW.DESIGN1EP.COM

PROJECT
US-MN-5477
FUZE ID: 25431337

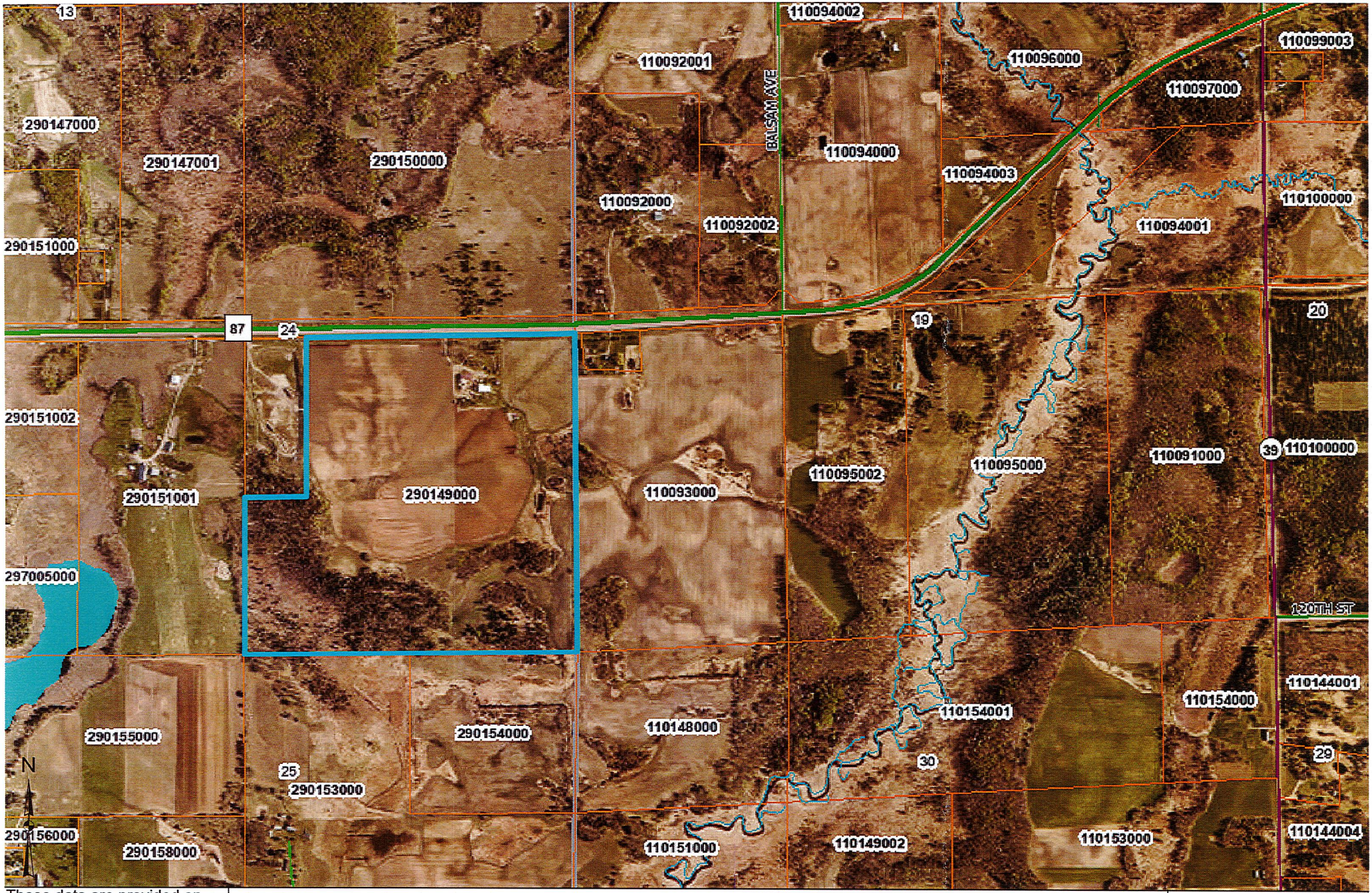
US-MN-5477
SPRUCE

ST HWY 87
FRAZEE, MN 56544

SHEET CONTENTS:
CONDUIT ROUTING PLAN
ONE-LINE ELECTRIC DIAGRAM

DRAWN BY:	M.T.
CHECKED BY:	S.D.
REV. A	02-23-2026
REV. B	02-26-2026

VZW U-2



These data are provided on an "AS-IS" basis, without warranty of any type, expressed or implied, including but not limited to any warranty as to their performance, merchantability, or fitness for any particular purpose.

Becker County

1:18,056

Date: 2/25/2026

This map is not a substitute for accurate field surveys or for locating actual property lines and any adjacent features.

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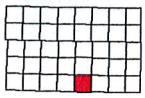

Silver Leaf

Township 138N - Range 39W

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SEE PAGE 35

SEE PAGE 17

SEE PAGE 21

Subject

OTTER TAIL COUNTY

COUNTY OF BECKER

Planning and Zoning

915 Lake Ave, Detroit Lakes, MN 56501
Phone: 218-846-7314 ~ Fax: 218-846-7266

PLANNING COMMISSION
NOTICE OF PUBLIC HEARING
HEARING DATE AND LOCATION
March 25th, 2026 @ 6:00 P.M.
****3RD FLOOR JURY ASSEMBLY ROOM – BECKER COUNTY COURTHOUSE****

APPLICANT: Vertical Bridge on behalf of Steven F & Leah M Lymburner
27658 Co Rd 156
Osage, MN 56570

Project Location: 45520 Co Hwy 44
Ponsford, MN 56575

APPLICATION AND DESCRIPTION OF PROJECT:

Request a Conditional Use Permit for a one hundred and ninety (190) foot self-support tower with a nine (9) foot lightening rod.

LEGAL LAND DESCRIPTION: Tax ID Number: **05.0013.000** Section 03 Township 140 Range 037; N1/2 W1/2 NW1/4 AKA NW1/4 NW1/4; Carsonville Township

REFER TO BECKER COUNTY ZONING ORDINANCE

Replies/Comments:
Public testimony regarding this application will only be received by email, in writing, or in-person at the hearing. Interested parties are invited to submit to the Becker County Department of Planning and Zoning written facts, arguments, or objectives by 12:00 P.M. the date of the Hearing. These statements should bear upon the suitability of the location and the adequacy of the Project and should suggest any appropriate changes believed to be desirable.

Replies may be addressed to:
PLANNING AND ZONING DEPARTMENT
915 Lake Avenue
Detroit Lakes, MN 56501

EMAIL: nicole.bradbury@co.becker.mn.us

To view all application information on this project please visit:
http://www.co.becker.mn.us/government/meetings/planning_zoning/planning_commission/

If you have questions about the Project, feel free to call 218-846-7314.

Jurisdiction: This Project comes under the Regulatory Jurisdiction of the Becker County Zoning Laws.

Regulatory Authority: This Application will be reviewed according to the provisions of the Becker County Zoning Ordinance. The decision whether to issue a Permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity. That decision will reflect the concern for both protection and utilization of important resources. All factors which may be relevant to the proposal will be considered including the cumulative effects: Land Use, Shoreline Protection, Water Supply and Conservation, Safety, Economics, in General, the Needs and Welfare of the People.

Conditional Use Application Review — Permit # CUP2026-156

Property and Owner Review

Owner: Steven F & Leah M Lymburner	Parcel Number(s): **050013000**
Mailing Address: 27658 Co Rd 156 Osage, MN 56570	Site Address: 45520 Co Hwy 44 Ponsford, MN 56575
	Township-S/T/R: **CARSONVILLE-03/140/037**
	Shoreland? **No** Name:

Legal Descr: **N1/2 W1/2 NW1/4 AKA NW1/4 NW1/4**

Conditional Use Details Review

Description of Conditional Use Request: **Construction of a telecommunications and public utility facility, consisting of a cell tower, space for carrier equipment, and a utility backboard within a fenced compound. No water or sewer is required. This will be an unmanned facility.**

1. Describe how the conditional use permit, if granted, will not harm the use and enjoyment of other properties in the immediate vicinity for the purposes already permitted, nor substantially diminish or impair property values within the immediate vicinity.

The proposed communications tower will not negatively affect the use, enjoyment, or value of surrounding properties. The structure is located on a rural parcel with low residential density, and the tower site has been positioned to maximize distance from nearby homes and active land uses. All required setbacks, fall-zone clearances, and safety standards will be fully met or exceeded, ensuring that the tower does not interfere with existing agricultural, residential, or recreational activities in the area.

The tower produces no noise, odor, traffic, or emissions that would impact neighboring properties. Its operational footprint is minimal, with only occasional maintenance visits and no ongoing activity that would alter the character of the surrounding land. Modern monopole and self-supporting tower designs also reduce visual impact compared to older lattice structures, and the facility will include neutral-colored finishes to blend with the natural environment

2. Describe how establishing the conditional use will not impede the normal, orderly development and improvement of surrounding vacant property for uses predominant in the area.

The proposed communications tower will not impede the normal or orderly development of surrounding vacant properties. The tower site is located on a rural parcel where agricultural, forestry, and low-density residential uses are predominant. These land uses are not sensitive to the minimal footprint or operational characteristics of a wireless communications facility. The tower occupies only a small leased area, and the remainder of the parcel remains available for its existing and future permitted uses.

The facility does not generate traffic, noise, odor, or other impacts that would restrict or discourage development on nearby properties. Because the tower is a passive, low-activity use, it does not place additional demands on local infrastructure or public services that could affect future growth in the area. All required setbacks and fall-zone clearances will be met or exceeded, ensuring that the tower does not limit how adjacent landowners may develop their property under the zoning district's permitted uses.

Wireless infrastructure is recognized as a necessary public utility that supports economic development, public safety, and modern communication needs.

3. Describe how adequate utilities, access roads, drainage and other necessary facilities have been or are being provided.

Adequate utilities, access, and site infrastructure are available to fully support the proposed communications tower. The facility requires only minimal electrical service, which will be provided through an existing nearby utility connection without the need for new public infrastructure. No water, sewer, or other municipal utilities are required for tower operation.

Access to the site is provided by an existing driveway or private access road that can accommodate occasional maintenance vehicles without generating additional traffic or requiring improvements to public roads. The tower compound will include a gravel surface and appropriate grading to ensure proper drainage. Stormwater will be managed on-site through natural infiltration, and no runoff will be directed toward

adjacent properties or public rights-of-way.
Because the tower is a low-impact, low-demand utility structure, it does not require additional public services or infrastructure upgrades.

4. Describe how adequate measures have been or will be taken to provide sufficient off-street parking and loading space to serve the proposed use.
N/A

5. Describe how adequate measures have been or will be taken to prevent or control offensive odor, fumes, dust, noise and vibration, so none of these will constitute a nuisance, and to control lighted signs and other lights so that no disturbance to neighboring properties will result.
The proposed communications tower is a passive utility structure and does not generate odor, fumes, dust, or vibration during normal operation. The facility contains no combustion sources, processing equipment, or mechanical systems that would emit pollutants or create nuisance conditions. Construction activities will be temporary and limited in duration, and standard best management practices—such as dust suppression, erosion control, and proper equipment maintenance—will be used to minimize short-term impacts.
Operational noise is negligible. The tower does not include fans, generators, or other continuously running equipment. Any backup power system, if installed, will be fully enclosed and used only during rare emergency outages or periodic testing, consistent with county noise standards. These activities will not create noise levels that would disturb neighboring properties.
Lighting will comply with FAA requirements, if applicable, and will be limited to the minimum intensity and number of fixtures necessary for aviation safety.

Additional shoreland questions below (if applicable)

6a. Describe how adequate measures have been or will be taken to assure that soil erosion or other possible pollution of public waters will be prevented, both during and after construction.

6b. What measures have been taken to assure that the visibility of structures and other facilities as viewed from public waters will be limited.

6c. What measures have been taken to assure that the site is adequate for water supply and on-site sewage treatment.

6d. Describe how the types, uses and number of watercrafts that the project will generate can be safely accomodated.

Business Plan Review

Name of Business:

Business Owners:

Business Type: If 'Other', explain:

Type of Merchandise:

Type of Service:

Hours and Days of Operation:

Number of Employees:

Off-Street Parking Plan:

Size of structure to be used for Business:
New or Existing:

Signage Plan:

Exterior Lighting Plan:

Known Environmental Hazards:

Additional Business Plan Information:

PROJECT DESCRIPTION:

CONSTRUCTION OF TELECOMMUNICATIONS AND PUBLIC UTILITY FACILITY, CONSISTING OF A CELL TOWER, SPACE FOR CARRIER EQUIPMENT, AND A UTILITY BACKBOARD WITHIN A FENCED COMPOUND. NO WATER OR SEWER IS REQUIRED. THIS WILL BE AN UNMANNED FACILITY.

CODE COMPLIANCE:

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:

1. INTERNATIONAL BUILDING CODE
2. NATIONAL ELECTRIC CODE
3. NFPA101 LIFE SAFETY CODE
4. IFC
5. AMERICAN CONCRETE INSTITUTE
6. AMERICAN INSTITUTE OF STEEL CONSTRUCTION
7. MANUAL OF STEEL CONSTRUCTION, 13TH EDITION
8. ANSI/TIA/EIA-222
9. TIA 607
10. INSTITUTE FOR ELECTRICAL & ELECTRONICS ENGINEER 81
11. IEEE C2 NATIONAL ELECTRIC SAFETY CODE, LATEST EDITION
12. TELECORDIA GR-1275
13. ANSI/T 311
14. UNIFORM MECHANICAL CODE
15. UNIFORM PLUMBING CODE
16. LOCAL BUILDING CODE
17. CITY/COUNTY ORDINANCES
18. STATE BUILDING CODE

verticalbridge

THE TOWERS LLC

US-MN-5481

PONSFORD

45520 COUNTY HWY 44
PONSFORD, MN 56475
190' SELF SUPPORT TOWER

verizon

10801 BUSH LAKE ROAD
BLOOMINGTON, MN 55438
CONSTRUCTION DEPT. (952) 946-4700

SITE NAME: MN05 PONSFORD
MDG: 20171617671
FUZE PROJECT ID: 17096918

VICINITY MAP

PROJECT INFORMATION

VERTICAL BRIDGE SITE NUMBER:	US-MN-5481
VERTICAL BRIDGE SITE NAME:	PONSFORD
VERIZON SITE NAME:	MN05 PONSFORD
VERIZON MDG:	20171617671
VERIZON FUZE PROJECT ID:	17096918
SITE ADDRESS:	45520 COUNTY HWY 44 PONSFORD, MN 56475
COUNTY:	BECKER
LATITUDE (DECIMAL):	N 46.976766°
LONGITUDE (DECIMAL):	W 95.351216°
LATITUDE (DMS):	N 46° 58' 36.36"
LONGITUDE (DMS):	W 95° 21' 04.38"
GROUND ELEVATION:	1537.8' AMSL
STRUCTURE TYPE:	SELF SUPPORT TOWER
STRUCTURE HEIGHT:	190' AGL
OVERALL HEIGHT:	199' AGL
RFDS FORM DATED:	09-24-25

SHEET INDEX

	SHEET	SHEET DESCRIPTION
VERTICAL BRIDGE	T-1:T-2	PROJECT TITLE SHEET & GENERAL NOTES
	-	SURVEY
	A-1	OVERALL SITE PLAN AND TOWER ELEVATION
	A-2	ENLARGED SITE PLAN
	A-3	SITE PREP & GRADING NOTES AND DETAILS
	A-4:A-5	FENCE DETAILS
	A-6	SIGN DETAILS
	A-7	MISC. DETAILS
	A-8	SITE PHOTOS
	G-1:G-3	GROUNDING NOTES, PLAN AND DETAILS
	U-1:U-2	SITE UTILITY PLANS, DETAILS AND NOTES
VERIZON	VZW A-1	VERIZON SITE PLAN
	VZW A-2	RFDS INFO, MOUNTING DETAIL AND ONE-LINE DIAGRAM
	VZW A-3	CABINET AND BASE EQUIPMENT DETAILS
	VZW A-4	CABLE ICE BRIDGE, GPS AND MISC. DETAILS
	VZW A-5	GENERATOR DETAILS
	VZW G-1	VERIZON GROUNDING PLAN
	VZW G-2	VERIZON GROUNDING DETAILS AND NOTES
	VZW U-1	VERIZON UTILITY PLAN, DETAILS AND NOTES
	VZW U-2	CONDUIT ROUTING PLAN AND ONE-LINE ELECTRIC DIAGRAM

ISSUE SUMMARY

REV	DESCRIPTION	SHEET/DETAIL
1	ISSUED FOR REVIEW	ALL
2	ISSUED FOR REVIEW	ALL

CONTACTS

PROPERTY OWNER:	STEVEN F & LEAH M LYMBURNER 27658 COUNTY ROAD 156 OSAGE, MN 56570 (218) 252-2107
LESSOR / LICENSOR:	THE TOWERS, LLC 22 WEST ATLANTIC AVENUE, SUITE 310 DELRAY BEACH, FL 33444 (404) 862-4089
LESSEE:	VERIZON WIRELESS 10801 BUSH LAKE ROAD BLOOMINGTON, MN 55438 CONSTRUCTION DEPT. (952) 946-4700
POWER UTILITY COMPANY CONTACT:	ITASCA MANTRAP COOP ELEC (218) 732-3377
TELCO UTILITY COMPANY CONTACT:	E. OTTERTAIL TELE CO (218) 547-1234
DESIGNER:	DESIGN 1 OF EDEN PRARIE 9973 VALLEY VIEW ROAD EDEN PRAIRIE, MN 55344 (952) 903-9299
STRUCTURAL ENGINEER (TOWER):	T.B.D.
SITE ACQUISITION:	BUELL CONSULTING, INC. 720 MAIN ST, SUITE 200 ST. PAUL, MN 55118

DRAWING APPROVALS

JOB TITLE	NAME	DATE
VERTICAL BRIDGE		
RF ENGINEER		
CONSTRUCTION ENGINEER		
TRANSPORT ENGINEER		
EQUIPMENT ENGINEER		
REAL ESTATE SPECIALIST		

CALL 811 FOR UNDERGROUND UTILITIES PRIOR TO DIGGING EMERGENCY: CALL 911

PREPARED FOR:

verticalbridge
THE TOWERS, LLC
22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

NOT FOR CONSTRUCTION

DESIGN 1
9973 VALLEY VIEW RD.
EDEN PRAIRIE, MN 55344
(952) 903-9299
WWW.DESIGN1EP.COM

PROJECT
US-MN-5481
FUZE ID: 17096918

US-MN-5481
PONSFORD

45520 COUNTY HWY 44
PONSFORD, MN 56475

SHEET CONTENTS:
PROJECT DESCRIPTIONS
CODE COMPLIANCE
VICINITY MAP
PROJECT INFORMATION
SHEET INDEX
ISSUE SUMMARY
DRAWING APPROVALS
CONTACTS

DRAWN BY:	TLS
CHECKED BY:	SJD
REV. 1	09-02-25
REV. 2	02-03-26

T-1

VERTICAL BRIDGE CONSTRUCTION SCOPE OF WORK:

1.00 PERMITTING
A. CONTRACTOR IS RESPONSIBLE FOR ELECTRICAL PERMITS AND ALL REQUIRED INSPECTIONS.

2.00 SITE CLEARING
A. CONTRACTOR SHALL CLEAR ACCESS EASEMENT AND LEASE AREA OF ALL TREES AND STUMPS. REMOVE AND DISPOSE OF ALL DEBRIS. CONTRACTOR SHALL NOT DISTURB AREA OUTSIDE OF LIMITS OF DISTURBANCE.

B. IF REQUIRED PER UTILITY COORDINATION CONTRACTOR SHALL CLEAR UTILITY EASEMENTS OF ALL TREES AND STUMPS. REMOVE AND DISPOSE OF ALL DEBRIS.

C. CONTRACTOR SHALL INSTALL SILT FENCE PRIOR TO THE START OF CONSTRUCTION.

D. ALL DEBRIS OR MATERIALS TO BE LEFT ON SITE WILL BE CLEARED WITH THE LAND OWNER ON A SIGNED DOCUMENT.

3.00 ACCESS ROAD
A. CONTRACTOR SHALL COMPLETE GRAVEL ACCESS DRIVE TO TOWER COMPOUND PER CONSTRUCTION DRAWINGS OR AT A MINIMUM OF VERTICAL BRIDGE STANDARDS.

B. 18" CULVERT PIPE IS VERTICAL BRIDGE MINIMUM STANDARD UNLESS DOT ENFORCED SIZE IS REQUESTED. SEE CONSTRUCTION DRAWINGS GRADING PLAN FOR SITE CULVERT LOCATION(S) AND SIZES.

4.00 COMPOUND FENCE
A. CONTRACTOR SHALL INSTALL STYMIE LOCK SYSTEM AND VERTICAL BRIDGE LOCK ON COMPOUND GATE. VERTICAL BRIDGE LOCK COMBO (0951)

B. CONTRACTOR SHALL INSTALL MUSHROOM AND GATE STOPS.

C. CONTRACTOR SHALL INSTALL 50'X50'X6' CHAINLINK FENCE WITH (3) RUNS OF BARBED WIRE ON TOP FOR MONOPOLE AND GUYED TOWERS UNLESS NOTED OTHERWISE. (75'X75'X6' FENCED COMPOUND FOR SST TOWER SITES UNLESS NOTED OTHERWISE)

5.00 TOWER AND FOUNDATION
A. CONTRACTOR SHALL COORDINATE DELIVERY OF ANCHOR BOLTS, TEMPLATE AND TOWER STEEL WITH TOWER VENDOR.

B. CONTRACTOR SHALL UTILIZE SUPPLIED FOUNDATION DESIGN FOR TOWER. REBAR AND CONCRETE INSTALLATION SHALL BE INSPECTED AND TESTED BY A 3RD PARTY COMPANY AND SUBMIT TEST AND INSPECTION REPORTS TO VERTICAL BRIDGE. (SPOILS FROM FOUNDATION SHALL BE REMOVED FROM SITE)

C. 3 DAY / 7 DAY / 28 DAY BREAK TEST REQUIRED. BREAK TEST MUST BE SUBMITTED FOR REVIEW PRIOR TO TOWER STACK.

D. CONTRACTOR SHALL INSTALL TOWER, ALL ASSOCIATED STEP BOLTS, SAFETY CLIMB EQUIPMENT, LIGHTNING ROD, WAVEGUIDE LADDER AND ALL MISCELLANEOUS TOWER PARTS.

E. CONTRACTOR SHALL CONFORM TO SUPPLIED FAA HEIGHT VERIFICATION.

6.00 TOWER LIGHTING
A. TOWER LIGHTING EQUIPMENT SHALL BE INSTALLED BY LIGHTING MANUFACTURE.

B. CONTRACTOR SHALL SUPPLY AND INSTALL 100A SUB-PANEL WITH (3) 20 AMP BREAKERS FOR TOWER LIGHTING IF REQUIRED.

C. CONTRACTOR SHALL SUPPLY AND INSTALL (1) GFI OUTLET AT SUB-PANEL LOCATION FOR TOWER LIGHTING IF REQUIRED.

D. CONTRACTOR SHALL SUPPLY AND INSTALL (1) 2" CONDUIT FROM SUB-PANEL LOCATION TO TOWER LEG WITH WEATHER-HEAD IF REQUIRED.

7.00 UTILITY H-FRAME CONSTRUCTION
A. CONTRACTOR SHALL SUPPLY AND INSTALL A 4-GANG 800 AMP METER PANEL ON A NEW 8' H-FRAME.

B. H-FRAME TO BE CONSTRUCTED TO HOLD 4-GANG METER BASE ON FRONT WITH METERS FACING OUT OF COMPOUND.

C. H-FRAME TO BE CONSTRUCTED TO HOLD TOWER LIGHTING SUB-PANEL AND LIGHTING CONTROLLER ON FRONT ALONGSIDE METER BASE.

D. CONTRACTOR SHALL SUPPLY GFCI ALL WEATHER RECEPTACLES ON H-FRAME.

E. CONTRACTOR SHALL SUPPLY AND INSTALL 500-WATT METAL MALIDE FLOOD LIGHT 120 VOLT WITH TIMER SWITCH.

8.00 POWER SERVICE
A. CONTRACTOR SHALL USE PROVIDED UTILITY REPORT AND CONSTRUCTION DRAWINGS TO BID POWER FROM POWER DEMARC.

B. CONTRACTOR SHALL BE IN CONSTANT COMMUNICATION WITH POWER COMPANY UNTIL POWER IS ACQUIRED AT MULTI-METER FRAME.

C. CONTRACTOR SHALL NOTIFY UTILITY PROVIDER OF START OF CONSTRUCTION.

D. CONTRACTOR SHALL CONDUCT A SECOND POWER WALK WITH UTILITY PROVIDER AT START OF CONSTRUCTION.

E. IF CHANGES TO THE SCOPE OF WORK ARE MADE BY THE UTILITY PROVIDER AFTER CONSTRUCTION START, CONTRACTOR SHALL NOTIFY VERTICAL BRIDGE CM/PM IMMEDIATELY.

9.00 VERIZON TELCO/FIBER SERVICE INSTALL BY VERTICAL BRIDGE
A. CONTRACTOR SHALL SUPPLY AND INSTALL A SEPARATE HAND-HOLE AT THE ROW, AT THE COMPOUND AND EVERY 300' (OR AT ANY BEND) WITH 2" CONDUIT FOR THE LIT FIBER PER THE CONSTRUCTION DRAWINGS. MARK HAND-HOLES LIT FIBER

B. CONTRACTOR SHALL SUPPLY AND INSTALL A SEPARATE HAND-HOLE AT THE ROW, AT THE COMPOUND AND EVERY 300' (OR AT ANY BEND) WITH 2" CONDUIT FOR THE DARK FIBER PER THE CONSTRUCTION DRAWINGS. MARK HAND-HOLES DARK FIBER FIBER

C. FIBER TO FOLLOW ACCESS ROAD TO ROW ALWAYS!

D. CONTRACTOR TO PROVIDE AND INSTALL CARLON EXPANSION JOINT CONNECTIONS AT CABINETS/SHELTER LOCATION PER MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

E. CONTRACTOR SHALL PROVIDE 2" SDR-11 HDPE CONDUIT FOR FIBER CONDUIT AS NOTED ON DRAWINGS WHEN DIRECTIONAL BORING IS UTILIZED.

10.00 VERIZON CIVILS
A. CONTRACTOR SHALL PROVIDE LUMP SUM FEE FOR ALL VERIZON LINE ITEMS UNDER TENANT CIVILS ON BID DOCUMENT. THIS INCLUDES SET AND CONNECTIONS OF VERIZON'S EQUIPMENT/GENERATOR PADS, FUEL TANKS, EQUIPMENT/GENERATOR ELECTRICAL, TELCO/FIBER CONDUITS, EQUIPMENT GROUNDING AND ICE BRIDGE.

11.00 VERIZON ANTENNA MOUNT(S)
A. CONTRACTOR SHALL PROVIDE SEPARATE LINE ITEM FOR ANTENNA MOUNT INSTALLATION UNDER TENANT MOUNT. CONTRACTOR SHALL ORDER THE ANTENNA MOUNT AND CONFIRM THE ITEM DESCRIPTION THROUGH VERIZON.

B. CONTRACTOR WILL BE REQUIRED TO ORDER ANTENNA MOUNT ASAP TO AVOID ANY DELAYS TO STACK THE TOWER.

VERIZON CONSTRUCTION SCOPE OF WORK:
1.00 VERIZON ANTENNA AND LINES
A. CONTRACTOR SHALL PROVIDE A LUMP SUM FEE IN "TENANT L&A" FOR THE INSTALL OF VERIZON L&A INCLUDING ANY REQUIRED TESTING AND MATERIALS AS DIRECTED BY VERIZON PERSONNEL FOR A TYPICAL MARKET COLLOCATION.

2.00 CIVILS
A. CONTRACTOR SHALL PROVIDE A LUMP SUM FEE IN "TENANT CIVILS" FOR ALL VERIZON CIVIL WORK INCLUDING EQUIPMENT/GENERATOR/PROPANE PADS AND EQUIPMENT SUPPORTS (I.E. PLINTHS ETC.), CARRIER GROUNDING, ELECTRICAL CONDUITS & CONDUCTORS AND H-FRAME, EQUIPMENT SET AS WELL AS ANY OTHER SERVICES AND/OR MATERIALS AS DIRECTED BY VERIZON FOR A TYPICAL MARKET COLLOCATION.

3.00 MOUNTS
A. CONTRACTOR SHALL PROVIDE A LUMP SUM FEE IN "TENANT MOUNT" FOR PROVIDING THE MOUNT ONLY (PRICE OF MOUNT INSTALLATION TO BE INCLUDED IN "TENANT L&A").

4.00 STARTUP COMMISSIONING
A. CONTRACTOR SHALL PROVIDE LUMP SUM FEE UNDER BID CLARIFICATION/EXCEPTIONS SECTION FOR COMMISSIONING AND START-UPS (AS REQUIRED BY "STANDARD VERIZON INSTALL). VERIZON IS RESPONSIBLE FOR PAYMENT OF THESE SERVICES.

5.00 VERIZON POWER SERVICE
A. CONTRACTOR/VERIZON CM RESPONSIBLE FOR SETTING UP VERIZON'S POWER ACCOUNT OR TRANSFER OF INITIAL SERVICE ACCOUNT FROM VERTICAL BRIDGE TO VERIZON.
1. CONTRACTOR RESPONSIBLE FOR REPORTING POWER UPDATES.
2. CONTRACTOR RESPONSIBLE FOR TRACKING AND CONFIRMING METER SET.
3. PHOTO CONFORMATION REQUIRED.

B. VERIZON POWER SERVICE SHALL BE 200 AMPS

C. TYPICAL VERIZON ELECTRICAL POWER SERVICE INSTALL. SEE CONSTRUCTION DRAWINGS FOR POWER ROUTING.

6.00 THE DESIGNER/E.O.R. MAKES NO WARRANTY, EXPRESSED OR IMPLIED, ON THE STRUCTURAL ADEQUACY FOR PROPRIETARY BRACKETS, CLIPS, PARTS, FROM A MANUFACTURER.

CONTRACTOR NOTES

VERTICAL BRIDGE TIMELINE EXPECTATIONS

- ONCE NTP HAS BEEN ISSUED, CONTRACTOR HAS (3) BUSINESS DAYS TO PROVIDE A SCHEDULE TO VERTICAL BRIDGE CONSTRUCTION MANAGER AND PROJECT MANAGER.
- CONSTRUCTION STARTS WITHIN 7 DAYS OF NTP RECEIPT.
- DAILY SAFETY REPORTS ARE REQUIRED.
- DAILY SITE UPDATES WITH PHOTOS ARE REQUIRED.
- TOWER STACKED (OTHER) WITHIN 28 DAYS OF NTP RECEIPT.
- CLOSEOUT APPROVAL WITHIN 60 DAYS OF NTP RECEIPT.

VERTICAL BRIDGE CM NOTES

PREPARED FOR:
verticalbridge
THE TOWERS, LLC
22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

NOT FOR CONSTRUCTION

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REV. 1	09-02-25
REV. 2	02-03-26

T-2

SITE SURVEY
FOR: THE TOWERS, LLC

PARENT PARCEL DESCRIPTION: (per Tower Title, LLC, Commitment No. VTB-214166-C, dated August 4, 2025)

Leasehold interest in the below property

The North Half of the West Half of the Northwest Quarter (N1/2 W1/2 NW1/4), Section Three (3), Township One Hundred Forty (140), Range Thirty-seven (37), Carsonville Township, Becker County, consisting of approximately 38.86 acres.

Parcel ID: 050013000

This being the same property conveyed to Steven F. Lymburner and Leah M. Lymburner, as joint tenants from Carl R. Lymburner and Edith P. Lymburner, husband and wife in a deed dated October 7, 2004 and recorded October 11, 2004 as Instrument No. 516506 in Becker County, MN.

SCHEDULE "B" EXCEPTIONS: (per Tower Title, LLC, Commitment No. VTB-214166-C, dated August 4, 2025)

1-9.) Not survey related.

10.) Terms and conditions of an unrecorded agreement, as evidenced by a(n) This Agreement between Raymond W. Abbott and Virginia L. Abbott, husband and wife and Carl R. Lymburner and Edith P. Lymburner, husband and wife, dated April 29, 1982 and recorded May 3, 1982 in (book) 118 (page) 455 (instrument) 316191, in Becker County, Minnesota.

The Agreement is a Contract for Deed affecting the parent parcel and other lands. The parent parcel has since been conveyed to the current owners. Not a plottable survey matter.

11.) Easement between Steven F. Lymburner and Leah M. Lymburner, husband and wife; and Great River Energy, a Minnesota cooperative corporation, its successors and assigns, dated May 1, 2013 and recorded May 13, 2013 in (instrument) 607496, in Becker County, Minnesota.

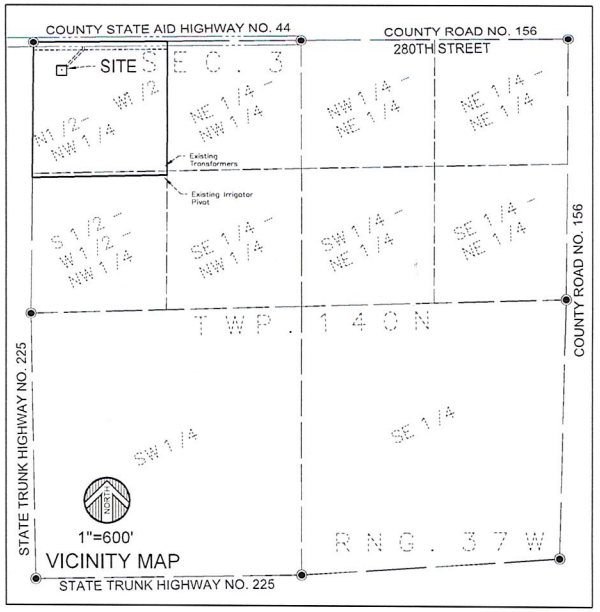
This document describes an 82' wide easement for electric transmission line purposes. This easement does affect the 20' wide access and utility easement. Said easement is as shown on the survey.

12.) Terms and conditions of an unrecorded lease, as evidenced by a(n) Memorandum of Land Lease Agreement between Steven F. Lymburner and Leah M. Lymburner, married to each other and Verizon Wireless (VAW) LLC d/b/a Verizon Wireless, dated November 12, 2018 and recorded November 19, 2018 in (instrument) 655239, in Becker County, Minnesota.

The Memorandum is for a lease within the parent parcel. A specific description is not provided. The lease area is not shown on the survey.

13.) Permit for Use dated November 13, 2019 and recorded November 14, 2019 in (instrument) 663633, in Becker County, Minnesota.

The Permit is for the installation of a telecommunications tower with related ground equipment within the parent parcel. Not a plottable survey matter.



LEASE AREA DESCRIPTION:

That part of the North Half of the West Half of the Northwest Quarter of Section 3, Township 140 North, Range 37 West of the Fifth Principal Meridian, Becker County, Minnesota, described as follows:

Commencing at the northwest corner of said North Half of the West Half of the Northwest Quarter; thence North 89 degrees 29 minutes 32 seconds East along the North line of said North Half of the West Half of the Northwest Quarter, a distance of 227.41 feet; thence South 0 degrees 30 minutes 28 seconds East, a distance of 220.50 feet to the Point of Beginning of the lease area to be described; thence South 90 degrees 00 minutes 00 seconds East, a distance of 100.00 feet; thence South 0 degrees 00 minutes 00 seconds West, a distance of 100.00 feet; thence North 90 degrees 00 minutes 00 seconds West, a distance of 100.00 feet; thence North 0 degrees 00 minutes 00 seconds East, a distance of 100.00 feet to the Point of Beginning.

Said lease area contains 10,000 Sq. Ft. ± or 0.23 Acres ±.

ACCESS AND UTILITY EASEMENT DESCRIPTION:

A 20.00 foot wide easement for ingress, egress and utility purposes over, under and across the North Half of the West Half of the Northwest Quarter of Section 3, Township 140 North, Range 37 West of the Fifth Principal Meridian, Becker County, Minnesota, the centerline of said easement is described as follows:

Commencing at the northwest corner of said North Half of the West Half of the Northwest Quarter; thence North 89 degrees 29 minutes 32 seconds East along the North line of said North Half of the West Half of the Northwest Quarter, a distance of 227.41 feet; thence South 0 degrees 30 minutes 28 seconds East, a distance of 220.50 feet; thence South 90 degrees 00 minutes 00 seconds East, a distance of 100.00 feet to the Point of Beginning of the centerline to be described; thence North 48 degrees 49 minutes 29 seconds East, a distance of 222.58 feet; thence North 0 degrees 00 minutes 00 seconds East, a distance of 26.19 feet to the south right of way line of County State Aid Highway Number 44 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 County State Aid Highway Number 44 and at lines bearing North 90 degrees 00 minutes 00 seconds West and South 0 degrees 00 minutes 00 seconds West from the Point of Beginning.

Said access and utility easement contains 5,077 Sq. Ft. ± or 0.12 Acres ±.

SHAWN M. KUPCHO LAND SURVEYOR #49021 STATE OF MINNESOTA

DESIGN 1

vertical bridge

WIDSETH
ARCHITECTS ▪ ENGINEERS ▪ SCIENTISTS ▪ SURVEYORS

PROPERTY OWNER:

STEVEN F. LYMBURNER
LEAH M. LYMBURNER

PARCEL NO:

050013000

ZONED:

AGRICULTURE

DEED REFERENCED:

INSTRUMENT NO. 516506

VERTICAL BRIDGE SITE NAME:
PONSFORD

VERTICAL BRIDGE SITE NUMBER:
US-MN-5481

SITE ADDRESS:
45520 CO HWY 44, Ponsford, Becker County, MN 56575

I HEREBY CERTIFY TO: Vertical Bridge REIT, LLC, a Delaware limited liability company, its subsidiaries, and their respective successors and/or assigns; its lenders, and administrative agents and each of their respective successors and/or assigns, and TOWER TITLE, LLC.

I further certify that this survey, plan, or report was prepared by me or under my direct supervision and that I am a duly Licensed Land Surveyor under the laws of the State of Minnesota.

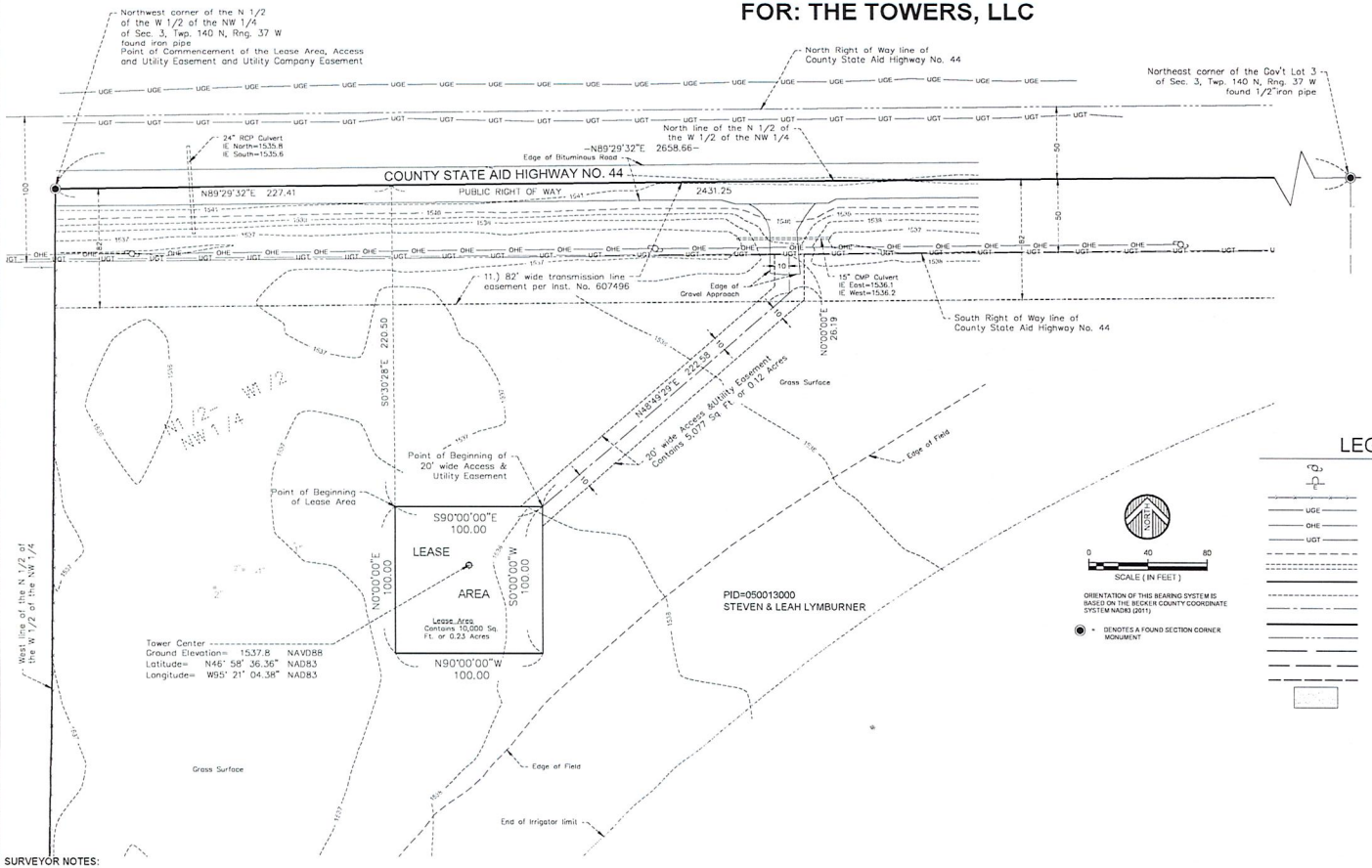
SIGNATURE: Shawn M Kupcho
SHAWN M. KUPCHO, L.S.
DATE: 6/15/18 LICENSE # 49021

FULL SCALE ON 22"x34"
HALF SCALE ON 11"x17"
2025-11476

No.	Date	REVISIONS	By	CHK	APP'D
1	2/2/26	UPDATED TITLE COMMITMENT, SHEET LAYOUT, CERTIFICATION	BAM	JB	SMK

FIELD WORK: 12/7/17 CHECKED BY: SMK DRAWN BY: JPB/JMB

SITE SURVEY
FOR: THE TOWERS, LLC



LEGEND

- ELEC POLE
- ELEC METER
- FENCE BARB WIRE
- UGE — UNDERGROUND ELECTRIC
- OHE — OVERHEAD ELECTRIC
- UGT — UNDERGROUND TELE
- FIELD EDGE
- CULVERT
- LEASE AREA
- EASEMENT LINE
- CENTERLINE
- BOUNDARY LINE
- RIGHT OF WAY LINE
- SECTION LINE
- QUARTER LINE
- SIXTEENTH LINE
- GRAVEL SURFACE

SURVEYOR NOTES:

1.) Utilities are per observed evidence, provided maps and from markings per GOPHER STATE ONE CALL, Locate Request Ticket Nos. 173341621 & 173341622, dated November 30, 2017 and 180850296 & 180850297, dated March 26, 2018.

2.) This is not a boundary survey of the parent parcel. This survey represents the Lease Parcel and Access and Utility Easement only.

3.) The presence and location of wetlands has not been determined on the property. Wetlands should only be determined by an actual field delineation performed by a qualified wetland specialist.

4.) The tower site is located within an unmapped area by FEMA. There are no available maps determining the flood zone hazard as of 2/2/26.

5.) The Lease Area is contiguous along its common boundaries to the Access and Utility Easement, which in turn is contiguous along its common boundaries to the right of way of County State Aid Highway 44, and there are no gaps, gores, spaces or overlaps between or among any of said Lease Parcel, Easement and Public Right of Way.

6.) The Lease Area together with all Access and Utility Easements are within the area described in the Property Description contained herein.

7.) During the time of the survey there were no visible encroachments to the Lease Area or Access and Utility Easement.

8.) This survey was prepared by Widseth, 610 Fillmore St., Alexandria, MN 56308 Phone Number: 320-762-8149

9.) This survey was prepared for Design 1.

SHEET 2 OF 2 SHEETS

DESIGN 1

vertical bridge

WIDSETH
ARCHITECTS ▪ ENGINEERS ▪ SCIENTISTS ▪ SURVEYORS

PROPERTY OWNER:

STEVEN F. LYMBURNER
LEAH M. LYMBURNER

PARCEL NO:

050013000

ZONED:

AGRICULTURE

DEED REFERENCED:

INSTRUMENT NO. 516506

VERTICAL BRIDGE SITE NAME:
PONSFORD

VERTICAL BRIDGE SITE NUMBER:
US-MN-5481

SITE ADDRESS:
45520 CO HWY 44, Ponsford, Becker County, MN 56575

I HEREBY CERTIFY TO: Vertical Bridge REIT, LLC, a Delaware limited liability company, its subsidiaries, and their respective successors and/or assigns; its lenders, and administrative agents and each of their respective successors and/or assigns, and TOWER TITLE, LLC.

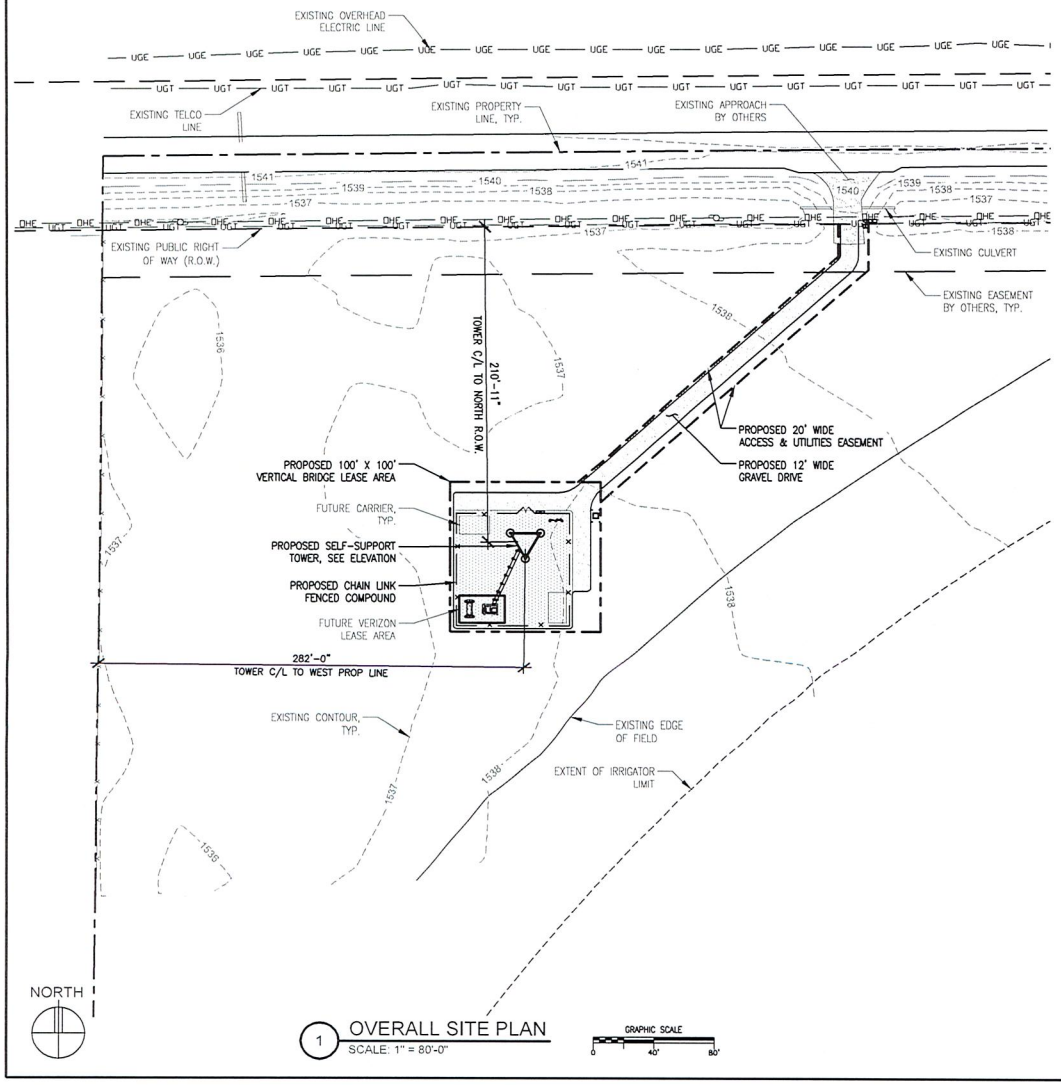
I further certify that this survey, plan, or report was prepared by me or under my direct supervision and that I am a duly Licensed Land Surveyor under the laws of the State of Minnesota.

SIGNATURE: Shawn M Kupcho
SHAWN M. KUPCHO, L.S.
DATE: 6/15/18 LICENSE # 49021

FULL SCALE ON 22"X34"
HALF SCALE ON 11"X17"
2025-11476

No.	Date	REVISIONS	By	CHK	APP'D
1	2/2/26	UPDATED TITLE COMMITMENT, SHEET LAYOUT, CERTIFICATION	BAM	JB	SMK

FIELD WORK: 12/7/17 | CHECKED BY: SMK | DRAWN BY: JPB/JMB



1 OVERALL SITE PLAN
SCALE: 1" = 80'-0"

GRAPHIC SCALE
0 40' 80'

NOTES:

1. THESE DRAWINGS DO NOT CONSTITUTE A WARRANTY, EXPRESSED OR IMPLIED, OF THE ACCURACY OF THE STRUCTURAL ANALYSES AND THE PERFORMANCE OF THE COMPLETED CONSTRUCTION AS SHOWN ON THESE DOCUMENTS AND THE STRUCTURAL ANALYSES.

2. NO STRUCTURAL ANALYSIS FOR THE TOWER OR FOUNDATION HAVE BEEN PERFORMED AS PART OF THESE DRAWINGS. THE STRUCTURAL ANALYSIS FOR THE TOWER AND FOUNDATION ARE BY THE TOWER SUPPLIER AND SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF THE PROJECT.

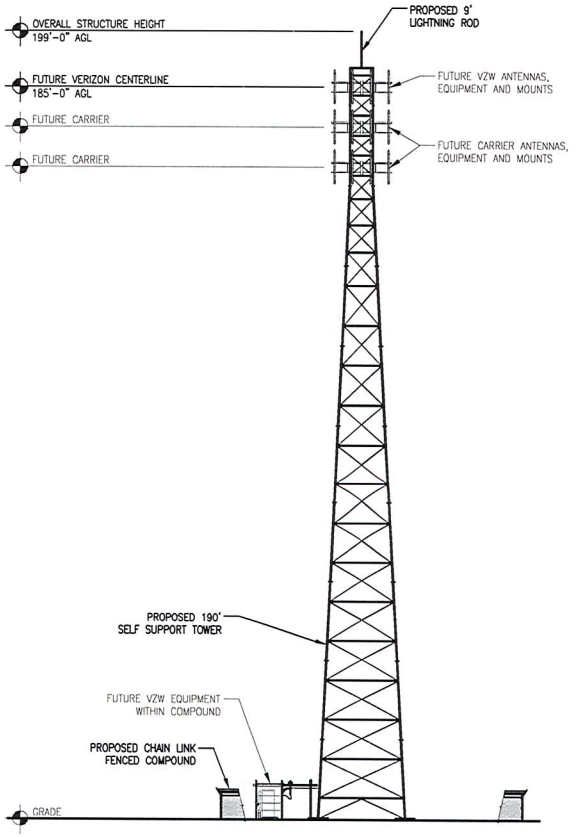
3. PLEASE COORDINATE ANY STRUCTURAL CONCERNS/MATTERS OR ANY LOADING MODIFICATIONS TO THE CONSULTANT WHO AUTHORED THE ANALYSIS AND NOTIFY DESIGN 1 IMMEDIATELY OF THE ISSUE.

4. TOWER 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 THE DESIGNER.

5. TOWER TO BE ERECTED AND INSTALLED IN ACCORDANCE WITH TOWER MANUFACTURER'S DRAWINGS NOT INCLUDED WITH THIS PACKAGE. DISCREPANCIES BETWEEN TOWER DRAWINGS AND DESIGNER DRAWINGS TO BE REPORTED THE DESIGNER IMMEDIATELY.

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

7. ELEVATION IS SHOWN FOR GENERAL DIAGRAMMATIC PURPOSES ONLY. DO NOT SCALE.



2 TOWER ELEVATION
SCALE: 1" = 30'-0"

GRAPHIC SCALE
0 15' 30'

PREPARED FOR:

verticalbridge

THE TOWERS, LLC
22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

NOT FOR CONSTRUCTION

DESIGN 1
9973 VALLEY VIEW RD.
EDEN PRAIRIE, MN 55344
(952) 903-9299
WWW.DESIGN1EP.COM

PROJECT
US-MN-5481
FUZE ID: 17096918

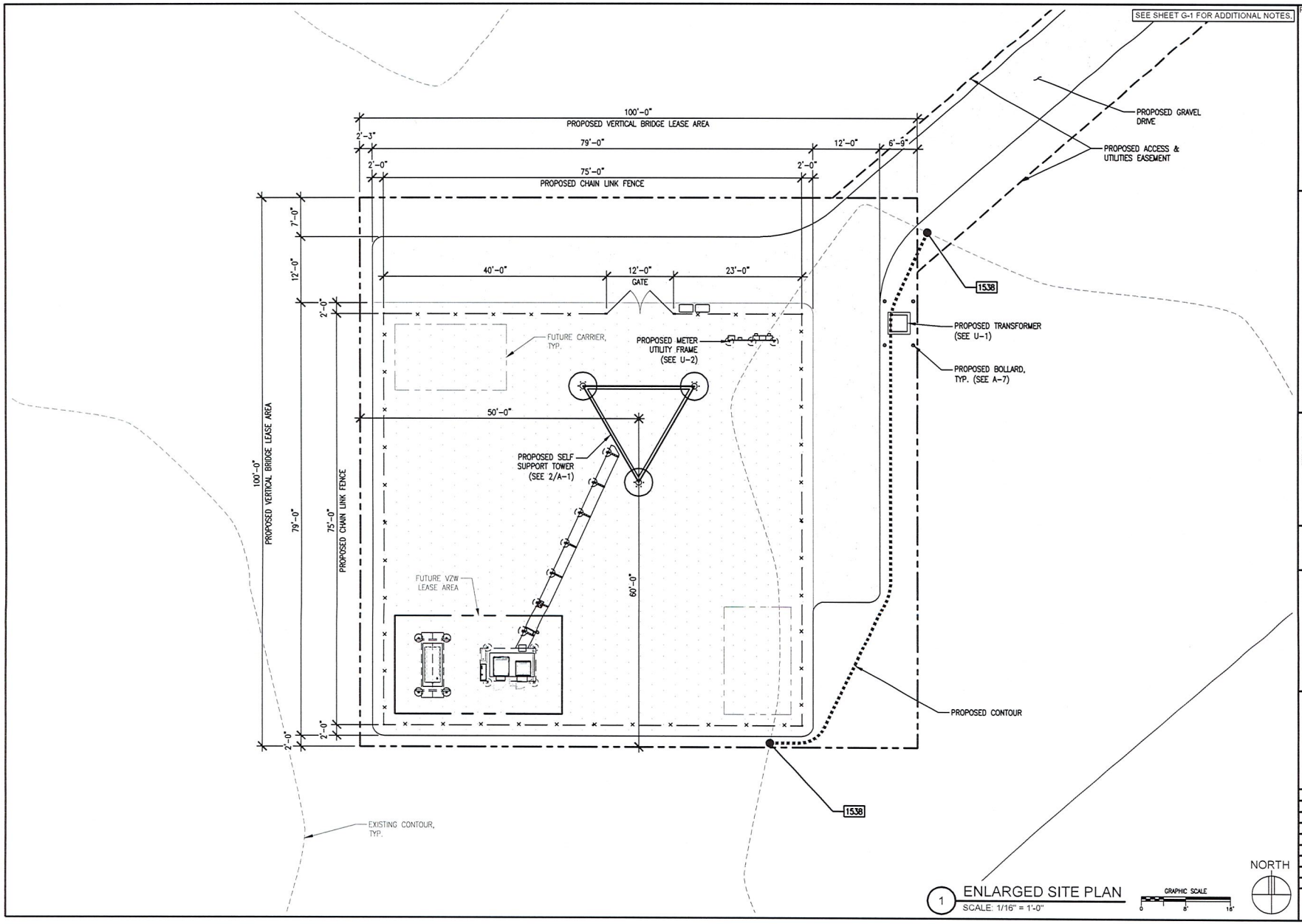
US-MN-5481
PONSFORD

45520 COUNTY HWY 44
PONSFORD, MN 56475

SHEET CONTENTS:
OVERALL SITE PLAN
TOWER ELEVATION

DRAWN BY:	TLS
CHECKED BY:	SJD
REV. 1	09-02-25
REV. 2	02-03-26

A-1



1 ENLARGED SITE PLAN
SCALE: 1/16" = 1'-0"

PREPARED FOR:

verticalbridge

THE TOWERS, LLC

22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

NOT FOR CONSTRUCTION

DESIGN1

9973 VALLEY VIEW RD.
EDEN PRAIRIE, MN 55344
(952) 903-9299
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PROJECT
US-MN-5481
FUZE ID: 17096918

US-MN-5481
PONSFORD

45520 COUNTY HWY 44
PONSFORD, MN 56475

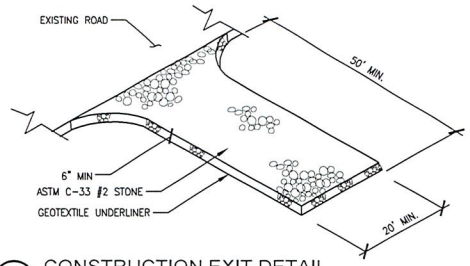
SHEET CONTENTS:
ENLARGED SITE PLAN

DRAWN BY:	TLS
CHECKED BY:	SJD
REV. 1	09-02-25
REV. 2	02-03-26

A-2

GRADING & EXCAVATING NOTES:

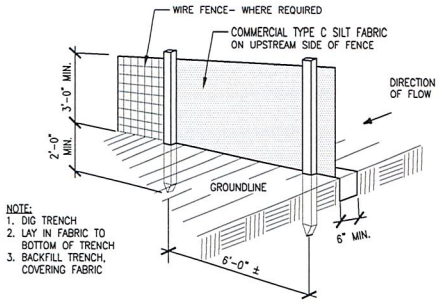
1. ALL EXCAVATIONS ON WHICH CONCRETE IS TO BE PLACED SHALL BE SUBSTANTIALLY HORIZONTAL ON UNDISTURBED AND UNFROZEN SOIL AND BE FREE FROM LOOSE MATERIAL AND EXCESS GROUNDWATER. DEWATERING FOR EXCESS GROUNDWATER SHALL BE PROVIDED IF REQUIRED.
2. CONCRETE FOUNDATIONS SHALL NOT BE PLACED ON ORGANIC MATERIAL. IF SOUND SOIL IS NOT REACHED AT THE DESIGNATED EXCAVATION DEPTH, THE UNSATISFACTORY SOIL SHALL BE EXCAVATED TO ITS FULL DEPTH AND EITHER BE REPLACED WITH MECHANICALLY COMPACTED GRANULAR MATERIAL OR THE EXCAVATION BE FILLED WITH CONCRETE OF THE SAME QUALITY SPECIFIED FOR THE FOUNDATION.
3. ANY EXCAVATION OVER THE REQUIRED DEPTH SHALL BE FILLED WITH EITHER MECHANICALLY COMPACTED GRANULAR MATERIAL OR CONCRETE OF THE SAME QUALITY SPECIFIED FOR THE FOUNDATION. CRUSHED STONE MAY BE USED TO STABILIZE THE BOTTOM OF THE EXCAVATION. STONE, IF USED, SHALL NOT BE USED AS COMPILING CONCRETE THICKNESS.
4. AFTER COMPLETION OF THE FOUNDATION AND OTHER CONSTRUCTION BELOW GRADE, AND BEFORE BACKFILLING, ALL EXCAVATIONS SHALL BE CLEAN OF UNSUITABLE MATERIAL SUCH AS VEGETATION, TRASH, DEBRIS, AND SO FORTH.
5. –USE APPROVED MATERIALS CONSISTING OF EARTH, LOAM, SANDY CLAY, SAND –BE FREE FROM CLODS OR STONES OVER 2–1/2" MAXIMUM DIMENSIONS –BE PLACED IN 6" LAYERS AND COMPACTED TO 95% STANDARD PROCTOR EXCEPT IN GRASSED/LANDSCAPED AREAS, WHERE 90% STANDARD PROCTOR
6. REMOVE ALL VEGETATION, TOPSOIL, DEBRIS, WET AND UNSATISFACTORY SOIL MATERIALS, OBSTRUCTIONS, AND DELETERIOUS MATERIALS FROM GROUND SURFACE PRIOR TO PLACING FILLS. PLOW, STRIP, OR BREAK UP SLOPED SURFACES STEEPER THAN THAN 1 VERTICAL TO 4 HORIZONTAL SO FILL MATERIAL WILL BOND WITH EXISTING SURFACE. WHEN SUBGRADE OR EXISTING GROUND SURFACE TO RECEIVE FILL HAS A DENSITY LESS THAN THAT REQUIRED FOR FILL, BREAK UP GROUND SURFACE TO DEPTH REQUIRED, PULVERIZE, MOISTURE–CONDITION OR AERATE SOIL AND RECOMPACT TO REQUIRED DENSITY.
7. PROTECT EXISTING GRAVEL SURFACING AND SUBGRADE IN AREAS WHERE EQUIPMENT LOADS WILL OPERATE. USE PLANKING OR OTHER SUITABLE MATERIALS DESIGNED TO SPREAD EQUIPMENT LOADS. REPAIR DAMAGE TO EXISTING GRAVEL SURFACING OR SUBGRADE WHERE SUCH DAMAGE IS DUE TO THE CONTRACTOR'S OPERATIONS. DAMAGED GRAVEL SURFACING SHALL BE RESTORED TO MATCH THE ADJACENT UNDAMAGED GRAVEL SURFACING AND SHALL BE OF THE SAME THICKNESS.
8. REPLACE EXISTING GRAVEL SURFACING ON AREAS FROM WHICH GRAVEL SURFACING IS REMOVED DURING CONSTRUCTION OPERATIONS. GRAVEL SURFACING SHALL BE REPLACED TO MATCH EXISTING ADJACENT GRAVEL SURFACING AND SHALL BE OF THE SAME THICKNESS. SURFACES OF GRAVEL SURFACING SHALL BE FREE FROM CORRUGATIONS AND WAVES. EXISTING GRAVEL SURFACING MAY BE EXCAVATED SEPARATELY AND REUSED IF INJURIOUS AMOUNTS OF EARTH, ORGANIC MATTER, OR OTHER DELETERIOUS MATERIALS ARE REMOVED PRIOR TO REUSE. FURNISH ALL ADDITIONAL GRAVEL RESURFACING MATERIAL AS REQUIRED. BEFORE GRAVEL SURFACING IS REPLACED, SUBGRADE SHALL BE GRADED TO CONFORM TO REQUIRED SUBGRADE ELEVATIONS, AND LOOSE OR DISTURBED MATERIALS SHALL BE THOROUGHLY COMPACTED. DEPRESSIONS IN THE SUBGRADE SHALL BE FILLED AND COMPACTED WITH APPROVED SELECTED MATERIAL. GRAVEL SURFACING MATERIAL MAY BE USED FOR FILLING DEPRESSIONS IN THE SUBGRADE, SUBJECT TO ENGINEER'S APPROVAL.
9. DAMAGE TO EXISTING STRUCTURES AND UTILITIES RESULTING FROM CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED/REPLACED TO OWNER'S SATISFACTION AT CONTRACTOR'S EXPENSE.
10. CONTRACTOR SHALL COORDINATE THE CONSTRUCTION SCHEDULE WITH PROPERTY OWNER SO AS TO AVOID INTERRUPTIONS TO PROPERTY OWNER'S OPERATIONS.
11. ENSURE POSITIVE DRAINAGE DURING AND AFTER COMPLETION OF CONSTRUCTION.
12. ALL CUT AND FILL SLOPES SHALL BE MAXIMUM 2 HORIZONTAL TO 1 VERTICAL.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR MONITORING SITE VEHICLE TRAFFIC AS TO NOT ALLOW VEHICLES LEAVING THE SITE TO TRACK MUD ONTO PUBLIC STREETS. THE CONTRACTOR IS RESPONSIBLE FOR CLEANING PUBLIC STREETS DUE TO MUDDY VEHICLES LEAVING THE SITE.



1 CONSTRUCTION EXIT DETAIL

GENERAL EROSION & SEDIMENT CONTROL NOTES:

1. THE SOIL EROSION AND SEDIMENT CONTROL MEASURES AND DETAILS AS SHOWN HEREIN AND STIPULATED WITHIN STATE STANDARDS SHALL BE FOLLOWED AND INSTALLED IN A MANNER SO AS TO MINIMIZE SEDIMENT LEAVING THE SITE.
2. PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITY, THE LIMITS OF LAND DISTURBANCE SHALL BE CLEARLY AND ACCURATELY DEMARCATED WITH STAKES, RIBBONS, OR OTHER APPROPRIATE MEANS.
3. EROSION CONTROL DEVICES SHALL BE INSTALLED BEFORE GROUND DISTURBANCE OCCURS. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM SHOWN ON THE APPROVED PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE FINAL PROPOSED DRAINAGE PATTERNS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
4. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM THAT SHOWN ON THE PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE FINAL PROPOSED DRAINAGE PATTERNS. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
5. CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL MEASURES UNTIL PERMANENT VEGETATION HAS BEEN ESTABLISHED. CONTRACTOR SHALL CLEAN OUT ALL SEDIMENT PONDS WHEN REQUIRED BY THE ENGINEER OR THE LOCAL JURISDICTION INSPECTOR. CONTRACTOR SHALL INSPECT EROSION CONTROL MEASURES AT THE END OF EACH WORKING DAY TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.
6. THE CONTRACTOR SHALL REMOVE ACCUMULATED SILT WHEN THE SILT IS WITHIN 12" OF THE TOP OF THE SILT FENCE.
7. FAILURE TO INSTALL, OPERATE OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB SITE UNTIL SUCH MEASURES ARE CORRECTED.
8. SILT BARRIERS TO BE PLACED AT DOWNSTREAM TOE OF ALL CUT AND FILL SLOPES.
9. ALL CUT AND FILL SLOPES MUST BE SURFACED ROUGHENED AND VEGETATED WITHIN SEVEN (7) DAYS OF THEIR CONSTRUCTION.
10. CONTRACTOR SHALL REMOVE ALL EROSION & SEDIMENT CONTROL MEASURES AFTER COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER.
11. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND–DISTURBING ACTIVITIES.



2 SILT FENCE DETIAL

SEEDING GUIDELINES:

FINAL STABILIZATION OF ALL DISTURBED AREAS, UNLESS OTHERWISE NOTED, SHALL BE LOAMED AND SEEDED. LOAM SHALL BE PLACED AT A MINIMUM COMPACTED DEPTH OF 4". RECOMMENDED SEEDING DATES FOR PERMANENT VEGETATION SHALL BE BETWEEN JUNE 15 THROUGH AUGUST 1 AND SEPTEMBER 15 THROUGH OCTOBER 15. TEMPORARY VEGETATIVE MEASURES SHALL CONSIST OF AN ANNUAL OR PERENNIAL RYE GRASS WITH RECOMMENDED SEEDING DATES BEING FROM JUNE 1 THROUGH AUGUST 15 AND SEPTEMBER 30 THROUGH NOVEMBER 30.

EVALUATE PROPOSED COVER MATERIAL:

BEFORE SPREADING COVER MATERIAL OVER THE DESIGNATED AREA, OBTAIN A REPRESENTATIVE SOIL SAMPLE AND SUBMIT TO A REPUTABLE SOIL TESTING LABORATORY FOR CHEMICAL AND PHYSICAL ANALYSIS. THE PRELIMINARY TEST IS NECESSARY TO DETERMINE THE REQUIRED INORGANIC AND/OR ORGANIC AMENDMENTS THAT ARE NEEDED TO ASSIST IN ESTABLISHING THE SEED MIXTURE IN AN ENVIRONMENTALLY AND ECONOMICALLY SOUND MANNER. THE RESULTS WILL GIVE THE COVER MATERIAL CHARACTERISTICS SUCH AS pH AND FERTILIZATION NEEDS. THESE RESULTS SHALL BE KEPT ON–SITE B THE CONTRACTOR AND AVAILABLE FOR REVIEW BY THE COUNTY.

SEED BED PREPARATION:

PROPOSED COVER MATERIAL SHOULD BE SPREAD EVENLY OVER THE SITE AREA IN A MINIMUM 4" LIFT VIA BULLDOZER/BUCKET LOADER. USING THE INFORMATION FROM THE SOIL ANALYSIS, CAREFULLY CALCULATE THE QUANTITIES OF LIMESTONE AND PRE–PLANT FERTILIZER NEEDED PRIOR TO APPLYING. PRE–PLANT AMENDMENTS CAN BE APPLIED WITH A BROADCAST AND/OR DROP SEEDER AND INCORPORATED WITH AN OFFSET DISK, YORK RAKE, AND/OR HAND RAKE. AFTER INCORPORATION THE PRE–PLANT SOIL AMENDMENTS, THE SEED BED SHOULD BE SMOOTH AND FIRM PRIOR TO SEEDING. THE FOLLOWING SEED MIXTURES SHALL BE USED AS NOTED:

SEED MIXTURE:

SPECIES/VARIETY	LBS/ACRE
CREEPING RED FESCUE	20
KENTUCKY BLUEGRASS	20
PERENNIAL RYEGRASS	5

SEED TIME AND METHOD:

THE PREFERRED TIME FOR SEEDING THE COOL SEASON MIXTURE IS LATE SUMMER. SOIL AND AIR TEMPERATURES ARE IDEAL FOR SEED GERMINATION AND SEEDING GROWTH. WEED COMPETITION IS REDUCED BECAUSE SEEDS OF MANY WEED SPECIES GERMINATE EARLIER IN THE GROWING SEASON. ADDITIONALLY, HERBICIDE USE IS GREATLY REDUCED. HOWEVER, SEEDING MAY BE DONE AT ANY OF THE ABOVE NOTED TIMES.

MULCHING:

NEWLY SEEDED AREAS SHOULD BE MULCHED TO INSURE ADEQUATE MOISTURE FOR SUCCESSFUL TURF ESTABLISHMENT AND TO PROTECT AGAINST SURFACE MOVEMENT OF SEDIMENT–BOUND AGROCHEMICALS AND SOIL EROSION. IF MULCHING PROCEDURES ARE NOT SPECIFIED ON PLANS, APPLY GOOD QUALITY STRAW OR HAY AT A RATE OF 2 BALES/1000 SQ. FT. OTHER COMMERCIALLY AVAILABLE MULCHES CAN BE USED.

CONSTRUCTION NOTES FOR FABRICATED SILT FENCE:

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER–LAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
5. ALL SILT FENCE MATERIALS MUST BE LISTED ON THE CURRENT STATES. D.O.T. QUALIFIED PRODUCTS LIST.

POSTS: STEEL EITHER T OR U

FENCE: WOVEN WIRE, 14 GA. 6" MAX. MESH OPENING.

FILTER CLOTH: FILTER X, MIRAFI 100X' STABLINKA T140N OR APPROVED EQUAL.

PREFABRICATED UNIT: GEOFAB, ENVIROFENCE OR APPROVED EQUAL

PREPARED FOR:

verticalbridge

THE TOWERS, LLC

22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

NOT FOR CONSTRUCTION

DESIGN 1

9973 VALLEY VIEW RD.
EDEN PRAIRIE, MN 55344
(952) 903-9299
WWW.DESIGN1EP.COM

PROJECT
US-MN-5481
FUZE ID: 17096918

US-MN-5481
PONSFORD

45520 COUNTY HWY 44
PONSFORD, MN 56475

SHEET CONTENTS:
DRAINAGE, GRADING & EROSION CONTROL NOTES & DETAILS

DRAWN BY:	TLS
CHECKED BY:	SJD
REV. 1	09-02-25
REV. 2	02-03-26

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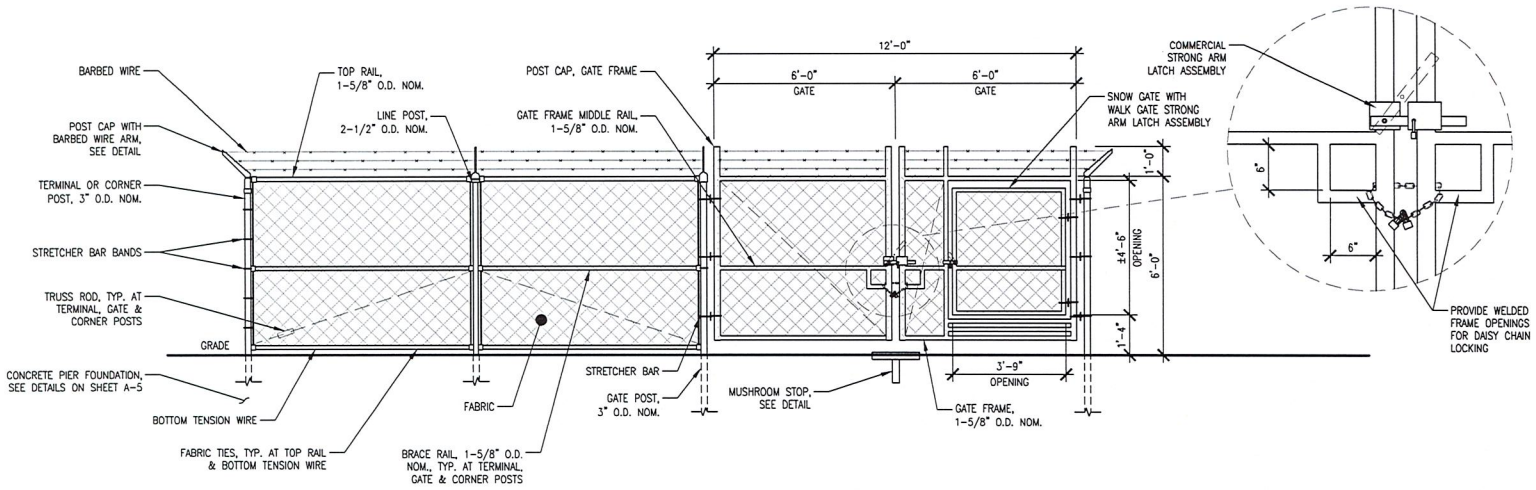
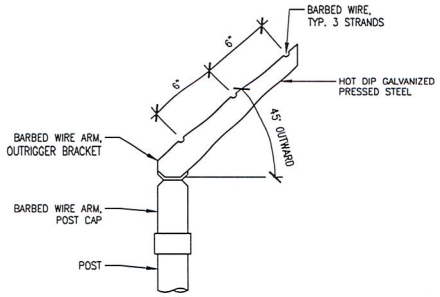
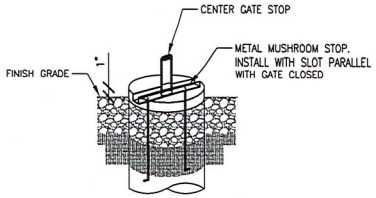
NOTE:
CONTRACTOR TO INSTALL NUTS ON ALL BOLTS TOWARDS THE INTERIOR OF THE COMPOUND



1 FENCE DETAIL
SCALE: 1/4" = 1'-0"



2 BARBED WIRE ARM DETAIL



3 MUSHROOM STOP DETAIL

PREPARED FOR:
verticalbridge
THE TOWERS, LLC
22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

NOT FOR CONSTRUCTION

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SHEET CONTENTS:
FENCE DETAILS

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REV. 1	09-02-25
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NOTES:

1. ZINC COATING – THE WEIGHT OF THE COATING SHALL NOT BE LESS THAN 1.2 OUNCES PER SQUARE FOOT OF ACTUAL SURFACE COVERED. ALL FERROUS METALS USED AS PART OF THE FENCE INSTALLATION SHALL BE HOT DIP GALVANIZED OR STAINLESS STEEL. ALL SCREWS, BOLTS, LOCK WASHERS, NUTS, ETC. SHALL BE HOT DIP GALVANIZED OR MADE OF STAINLESS STEEL.

2. FABRIC – STANDARD INDUSTRIAL GRADE, 9 GAUGE WITH 2 INCH MESH (KNUCKLE & TWIST SELVAGE) ZINC COATED CHAIN LINK WITH A BREAKING STRENGTH OF NOT LESS THAN 1290 POUNDS SHALL BE USED. THE FABRIC SHALL BE ZINC COATED BY THE HOT DIP PROCESS AFTER FABRICATION.

3. METAL POSTS – METAL POSTS (LINE, CORNER, TERMINAL, GATE POSTS, MIDDLE RAILS, BRACES AND TOP RAIL) SHALL BE HOT DIP GALVANIZED SCHEDULE 40 TUBULAR STEEL WITH A NOMINAL OUTSIDE DIAMETER AS INDICATED IN THE DRAWINGS.

4. POST CAPS – LINE, CORNER, TERMINAL AND GATE POST CAPS TO INCLUDE A BARBED WIRE OUTRIGGER BRACKET AND SHALL BE ATTACHED TO THE POST WITH TAMPER RESISTANT SCREWS, BRADS, OR BOLTS. GATE FRAME POST CAPS TO BE PRESSED STEEL DOME TYPE.

5. TOP RAIL – A MINIMUM OF ONE COUPLING IN EACH STRAIGHT RUN OF TOP RAIL, SHALL HAVE A HEAVY SPRING INSERTED WITHIN THE COUPLING TO TAKE UP EXPANSION AND CONTRACTION OF THE TOP RAIL. THE TOP RAIL SHALL BE FASTENED TO TERMINAL POSTS WITH PRESSED STEEL CONNECTIONS.

6. GATE FRAME MIDDLE RAIL – THE MIDDLE RAIL SHALL BE OF THE SAME MATERIAL AS THE TOP RAIL AND INSTALLED WITH HOT DIP GALVANIZED FITTINGS ATTACHED TO THE POSTS.

7. BRACE RAIL – BRACE RAIL MATERIAL SHALL BE OF THE MATERIAL AS THE TOP RAIL AND LOCATED 1/2 OF THE DISTANCE UP FROM THE BOTTOM OF THE FABRIC. BRACE RAILS SHALL BE SECURELY FASTENED TO POSTS BY SUITABLE PRESSED STEEL CONNECTIONS.

8. TRUSS RODS – SHALL BE 3/8" ROUND GALVANIZED STEEL RODS WITH GALVANIZED TURNBUCKLES.

9. BOTTOM TENSION WIRE – THE TENSION WIRE SHALL BE OF 7 GAUGE HOT DIP GALVANIZED SPRING TENSION WIRE WITH A BREAKING STRENGTH OF NOT LESS THAN 1900 POUNDS. THIS WIRE SHALL BE KEPT TAUT WITH GALVANIZED TURNBUCKLES AND ATTACHED TO POSTS WITH GALVANIZED HARDWARE OR CABLE CLAMPS.

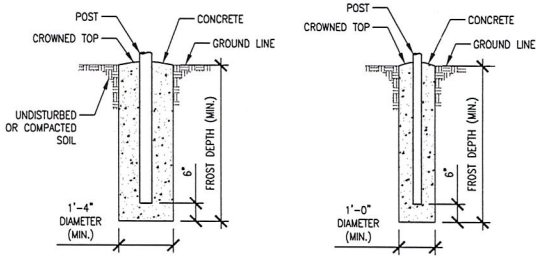
10. FABRIC TIES – THE FABRIC TIES SHALL BE ALUMINUM WIRE. NOT LESS THAN 9 GAUGE.

11. STRETCHER BARS – THE STRETCHER BARS SHALL BE FLAT GALVANIZED STEEL BARS NOT LESS THAN 5/16" X 3/4" AND NOT LESS THAN 2" SHORTER THAN THE FABRIC. STRETCHER BAR BANDS SHALL BE FLAT GALVANIZED STEEL BARS NOT LESS THAN 5/16" X 1 1/2" WITH 5/16" DIAMETER GALVANIZED CARRIAGE BOLT.

12. BARBED WIRE – BARBED WIRE OF GALVANIZED STEEL (OR ALUMINUM) CONSISTING OF 12.5 GAUGE WIRE WITH 4-POINT BARBS SPACED 5 INCHES APART.

13. GATE FRAMES SHALL BE CONSTRUCTED OF HEAVY DUTY GALVANIZED STEEL PIPE. THE GATES SHALL BE ASSEMBLED USING CORNER FITTINGS OF HEAVY PRESSED STEEL OR MALLEABLE CASTINGS OR MAY BE WELDED IF THE ENTIRE GATE FRAME IS HOT DIP GALVANIZED AFTER THE WELDING. ALL GATES SHALL BE EQUIPPED WITH HEAVY DUTY GALVANIZED STEEL TYPE HINGES WITH LARGE BEARING SURFACES OF ADEQUATE STRENGTH TO SUPPORT THE GATE. THE HINGES SHALL NOT TWIST OR TURN UNDER THE ACTION OF THE GATE. GATES WILL PROVIDE A FULL RANGE OF MOTION AND BE EASILY OPENED AND CLOSED BY ONE PERSON. DOUBLE GATE LATCH SHALL BE DAC INDUSTRIES COMMERCIAL STRONG ARM LATCH #4000. SNOW GATE LATCH SHALL BE DAC INDUSTRIES WALK GATE STRONG ARM LATCH #4300. LATCHES SHALL BE EQUIPPED TO RECEIVE A PADLOCK.

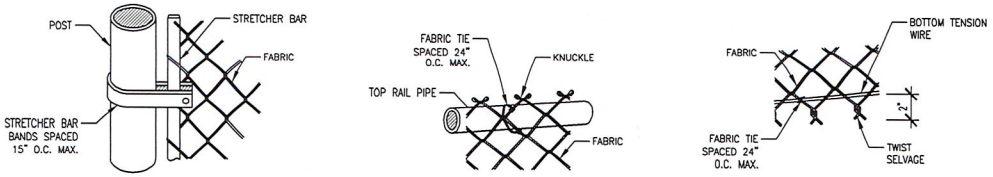
14. PROVIDE R.F. WARNING SIGNAGE ON ALL GATES.



FOOTING FOR TERMINAL, GATE & CORNER POST

FOOTING FOR LINE POST

1 POST FOOTINGS



METHOD OF FASTENING STRETCHER BAR TO POST

METHOD OF TYING FABRIC TO PIPE

METHOD OF TYING FABRIC TO TENSION WIRE

2 FABRIC/BAR CONNECTIONS

PREPARED FOR:

verticalbridge

THE TOWERS, LLC

22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

NOT FOR CONSTRUCTION

DESIGN1

9973 VALLEY VIEW RD.
EDEN PRAIRIE, MN 55344
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PROJECT
US-MN-5481
FUZE ID: 17096918

US-MN-5481
PONSFORD

45520 COUNTY HWY 44
PONSFORD, MN 56475

SHEET CONTENTS:
FENCE NOTES
FENCE DETAILS

DRAWN BY:	TLS
CHECKED BY:	SJD
REV. 1	09-02-25
REV. 2	02-03-26

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verticalbridge
SITE NAME: [FULL SITE NAME]
SITE ID: [SITE ID NUMBER]
FCC TOWER ID: [ASR NUMBER]
Owned by: VERTICAL BRIDGE
Telephone: 877-589-6411
www.verticalbridge.com
sales@verticalbridge.com
operations@verticalbridge.com
NO TRESPASSING

A | OWNER CONTACT SIGN
18" HIGH X 24" WIDE
WHITE BACKGROUND, BLACK LETTERING
MOUNTING LOCATION: LEFT GATE
QUANTITY: 1

INFORMATION
Federal Communications Commission
Tower Registration Number
1 2 3 4 5 6 7
Posted in accordance with Federal Communications Commission rules on antenna tower registration
47 CFR 17.4(g).

B | FCC REGISTRATION SIGN
8" HIGH X 12" WIDE
WHITE/GREEN BACKGROUND, WHITE/BLACK LETTERING
MOUNTING LOCATION: RIGHT GATE & BASE OF TOWER
QUANTITY: 2

DANGER
NO
TRESPASSING

C | NO TRESPASSING
10" HIGH X 14" WIDE
WHITE/BLACK/RED BACKGROUND, BLACK/WHITE LETTERING
MOUNTING LOCATION: ADJACENT TO LEFT GATE & CENTERED ON OTHER THREE FENCED SIDES (QTY. 4)

NOTICE
GUIDELINES FOR WORKING IN RADIOFREQUENCY ENVIRONMENTS
- All personnel should have electromagnetic energy (EME) awareness training.
- All personnel entering this site must be authorized.
- Obey all posted signs.
- Assume all antennas are active.
- Before working on antennas, notify owners and disable appropriate transmitters.
- Maintain minimum 3 feet clearance from all antennas.
- Do not stop in front of antennas.
- Use personal RF monitors while working near antennas.
- Never operate transmitters without shields during normal operation.
- Do not operate base station antennas in equipment room.

D | RF GUIDELINES SIGN
8" HIGH X 12" WIDE
YELLOW BACKGROUND, BLACK LETTERING
MOUNTING LOCATION: RIGHT GATE & BASE OF TOWER
QUANTITY: 2

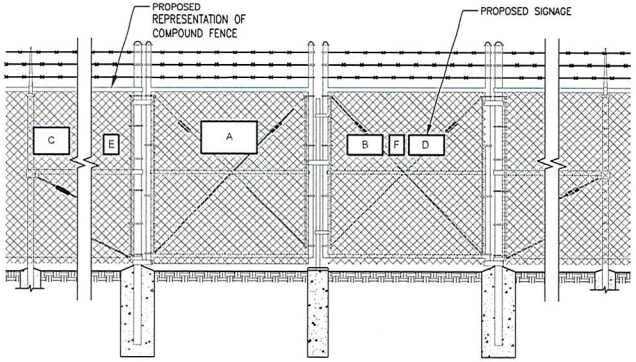
NOTICE
Radio frequency fields beyond this point may exceed the FCC general public exposure limit.
Obey all posted signs and site guidelines for working in radio frequency environments.
In accordance with Federal Communications Commission rules on radio frequency emissions 47 CFR 1.1307(b)

E | NOTICE RF SIGN (BLUE)
12" HIGH X 8" WIDE
WHITE/BLUE BACKGROUND, WHITE/BLACK LETTERING
MOUNTING LOCATION: ADJACENT TO LEFT GATE
QUANTITY: 1

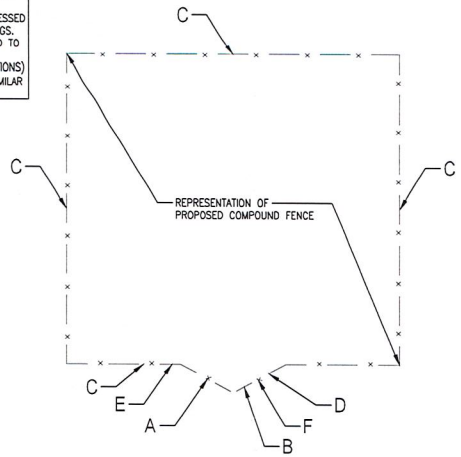
CAUTION
On this tower:
Radio frequency fields near some antennas may exceed FCC rules for human exposure.
Personnel climbing this tower should be trained for working in radio frequency environments and use a personal RF monitor if working near active antennas.
In accordance with Federal Communications Commission rules on radio frequency emissions 47 CFR 1.1307(b)

F | NOTICE RF SIGN (YELLOW)
12" HIGH X 8" WIDE
WHITE/YELLOW BACKGROUND, BLACK LETTERING
MOUNTING LOCATION: RIGHT GATE QUANTITY: 1

NOTES:
1. SIGNAGE, PLAN, & ELEVATION IS SHOWN FOR INFORMATION PURPOSES ONLY. CONTRACTOR TO VERIFY EXACT PLACEMENT WITH TOWER OWNER
2. SIGNS SHALL BE FABRICATED FROM CORROSION RESISTANT PRESSED METAL AND PAINTED WITH LONG LASTING UV RESISTANT COATINGS.
3. SIGNS (EXCEPT WHERE NOTED OTHERWISE) SHALL BE MOUNTED TO THE TOWER, GATE, & FENCE USING A MINIMUM OF 9 GAUGE ALUMINUM WIRE, HOG RINGS (AS UTILIZED IN FENCE INSTALLATIONS) OR BRACKETS WHERE NECESSARY. BRACKETS SHALL BE OF SIMILAR METAL AS THE STRUCTURE TO AVOID GALVANIC CORROSION.



1 SITE SIGNAGE



PREPARED FOR:
verticalbridge
THE TOWERS, LLC
22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

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DESIGN 1
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EDEN PRAIRIE, MN 55344
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PROJECT
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FUZE ID: 17096918

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PONSFORD

45520 COUNTY HWY 44
PONSFORD, MN 56475

SHEET CONTENTS:
SITE SIGNAGE DETAILS

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REV. 1	09-02-25
REV. 2	02-03-26

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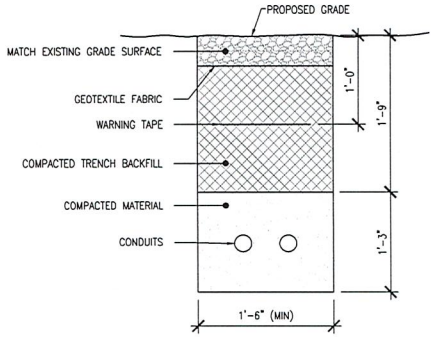
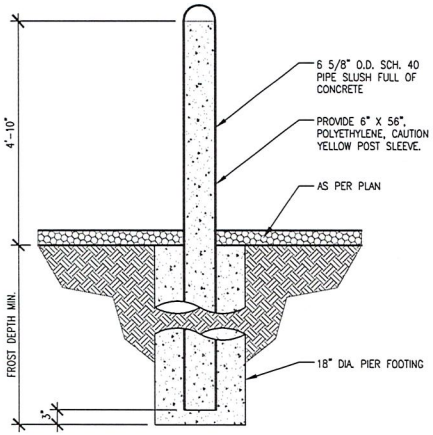
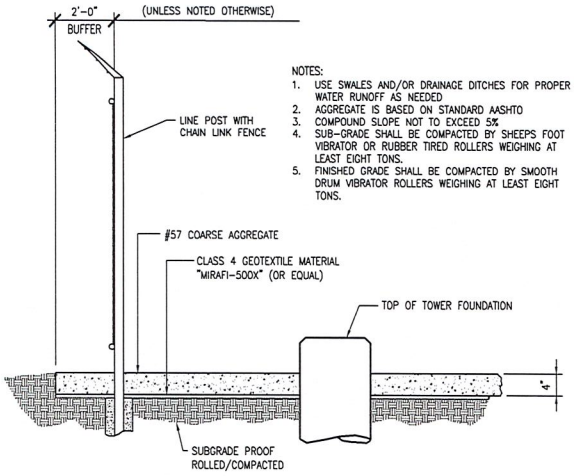


4 UTILITY TRENCH DETAIL



3 BOLLARD DETAIL
SCALE: 1/2" = 1'-0"

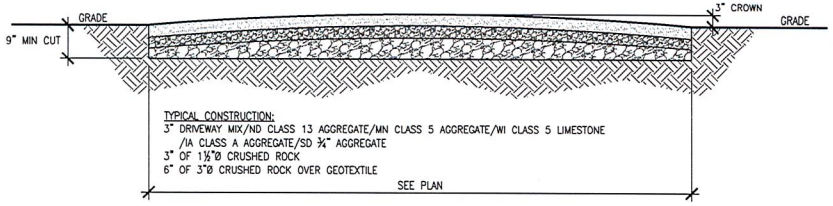
GRAPHIC SCALE
0 1" 2"



NOTES:
1. USE SWALES AND/OR DRAINAGE DITCHES FOR PROPER WATER RUNOFF AS NEEDED
2. AGGREGATE IS BASED ON STANDARD AASHTO
3. COMPOUND SLOPE NOT TO EXCEED 5%
4. SUB-GRADE SHALL BE COMPACTED BY SHEEPS FOOT VIBRATOR OR RUBBER TIRED ROLLERS WEIGHING AT LEAST EIGHT TONS.
5. FINISHED GRADE SHALL BE COMPACTED BY SMOOTH DRUM VIBRATOR ROLLERS WEIGHING AT LEAST EIGHT TONS.

2 COMPOUND SURFACING DETAIL

NOTES:
1. PREPARE SUB-GRADE AND CONSTRUCT IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.
2. ANY VARIANCE FROM THIS ROADWAY DESIGN MUST BE SUBMITTED AND APPROVED PRIOR TO BID.
3. CONTRACTOR TO COMPACT EACH LAYER OF ROCK IN ACCORDANCE WITH ASTM & LOCAL STANDARDS.



1 GRAVEL DRIVE SECTION
SCALE: 3/8" = 1'-0"

GRAPHIC SCALE
0 1'-4" 2'-8"

PREPARED FOR:
vertical bridge
THE TOWERS, LLC
22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

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SHEET CONTENTS:
GRAVEL DRIVE SECTION
SURFACING DETAIL
BOLLARD DETAIL
UTILITY TRENCH DETAIL

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CHECKED BY:	SJD
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REV. 2	02-03-26

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1 SITE PHOTO

2 SITE PHOTO

3 SITE PHOTO

4 SITE PHOTO

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vertical bridge

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SHEET CONTENTS:
PHOTOS

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CHECKED BY:	SJD
REV. 1	09-02-25
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GENERAL GROUNDING NOTES:

An external buried ground ring (Lead 1) shall be established around the equipment cabinets 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 cabinets, 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 cabinets 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 adjacent to the ILC (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

- #2 SBTC AROUND EQUIPMENT CABINETS, TOWER, OR GUY ANCHOR
- 5/8" X 10'-0" GALVANIZED STEEL GROUND ROD
- TEST WELL PREFERRED LOCATION
- #2 SBTC 'WHIP' LEAD
- (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
(4)	EL	ELECTRICAL SERVICE GROUND
(6)	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

GENERAL CONTRACTOR NOTES:

1. CONTRACTOR TO COORDINATE PUBLIC & PRIVATE UTILITY LOCATES PRIOR TO CONSTRUCTION START. NOTIFY THE DESIGNER AND CARRIER CONSTRUCTION ENGINEER IMMEDIATELY OF ANY UTILITY LINE ISSUES.

2. GENERAL CONTRACTOR IS RESPONSIBLE FOR CONFIRMING THAT THE INSTALLATION OF ALL GROUNDING MEETS THE CARRIERS GROUNDING STANDARDS AS APPLICABLE.

3. CONTRACTOR SHALL ENSURE THAT EACH WHIP IS ROUTED TO LEAD 1 BY THE SHORTEST PATH, AND BENDS SHALL NOTE BE LESS THAN 12" RADIUS.

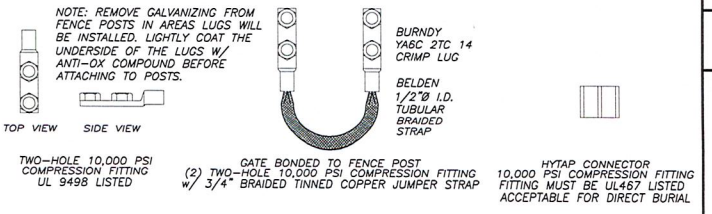
4. PRIMARY ELECTRICAL - DEPTH AND SPECIFICATION BY POWER UTILITY COMPANY.

5. SECONDARY ELECTRICAL - INSTALL CONDUIT 32" BELOW GRADE WITH TWO (2) DETECTABLE RIBBONS.

6. FIBER OPTIC - INSTALL CONDUIT 36" BELOW GRADE WITH PULL STRING, TRACEABLE WIRE AND TWO (2) DETECTABLE RIBBON.

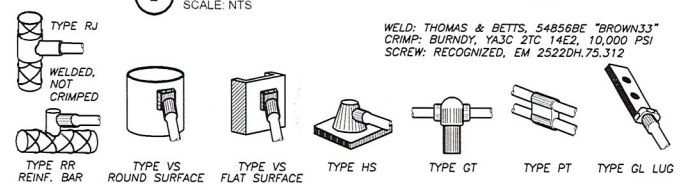
LEAD IDENTIFICATION & DESCRIPTION:

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 RODS, ISOLATED FROM LEAD #1	(2) GROUND 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 1B 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	LGHTNG 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	NSTD33-11
30	BRANCH AC PNL TO OUTLETS	NSTD33-11
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	NSTD33-14.5
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/BDFB	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 XMTTR	#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



2 COMPRESSION CONNECTOR DETAILS

SCALE: NTS



1 EXOTHERMIC WELD DETAILS

SCALE: NTS

PREPARED FOR:

verticalbridge

THE TOWERS, LLC

22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

NOT FOR CONSTRUCTION

DESIGN1

9973 VALLEY VIEW RD.
EDEN PRAIRIE, MN 55344
(952) 903-9299
WWW.DESIGN1EP.COM

PROJECT
US-MN-5481
FUZE ID: 17096918

US-MN-5481
PONSFORD

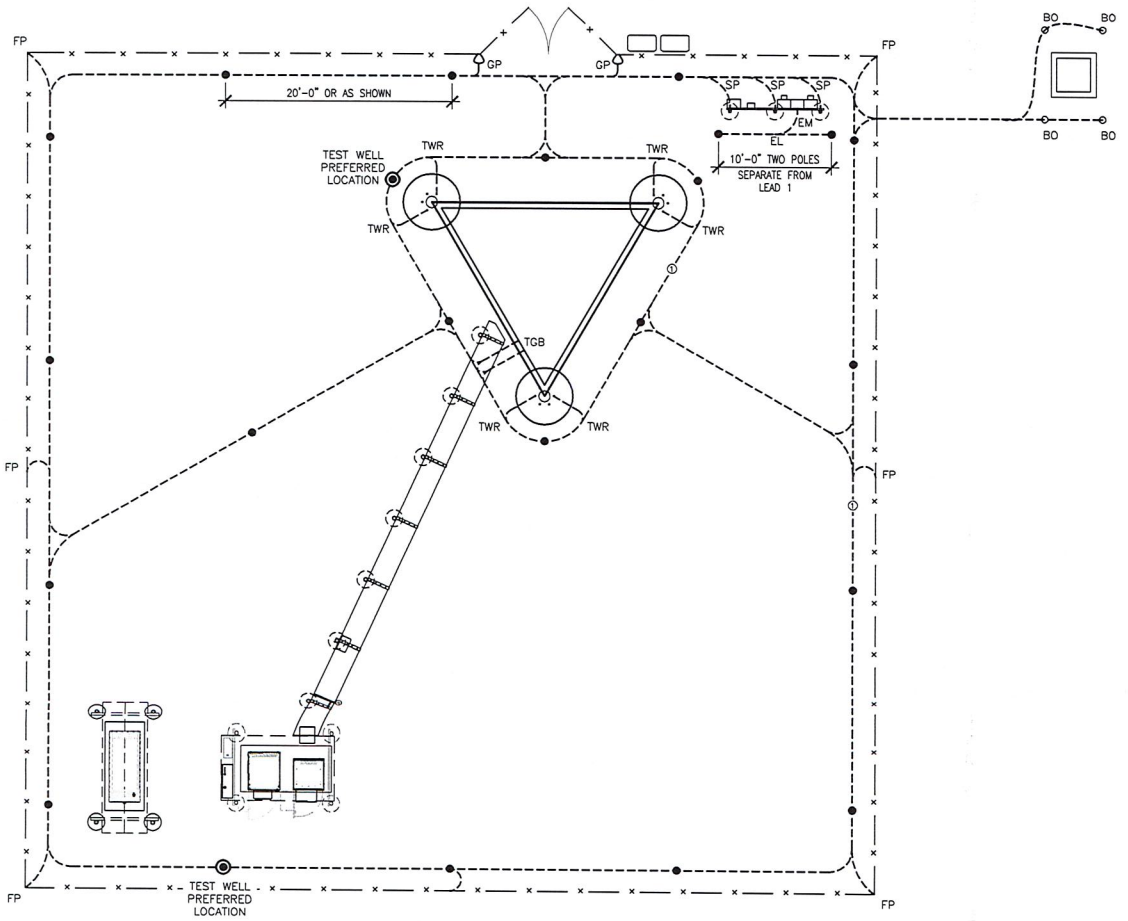
45520 COUNTY HWY 44
PONSFORD, MN 56475

SHEET CONTENTS:
GROUNDING NOTES

DRAWN BY:	TLS
CHECKED BY:	SJD
REV. 1	09-02-25
REV. 2	02-03-26

G-1

NOTES:
1. SEE SHEET VZW G-1 FOR VERIZON GROUNDING PLAN.
2. SEE SHEET G-1 FOR ADDITIONAL NOTES.
3. GROUND RING SYSTEM PERFORMANCE TEST ALLOWANCE IS FIVE (5) OHMS MAXIMUM.



1 GROUNDING PLAN
SCALE: NTS

NORTH

PREPARED FOR:

vertical bridge

THE TOWERS, LLC

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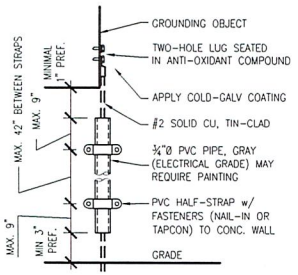
PONSFORD, MN 56475

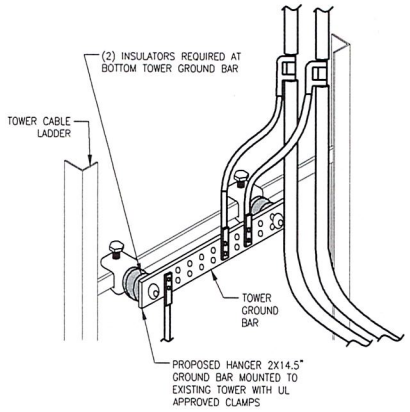
SHEET CONTENTS:
GROUNDING PLAN

DRAWN BY:	TLS
CHECKED BY:	SJD
REV. 1	09-02-25
REV. 2	02-03-26

G-2

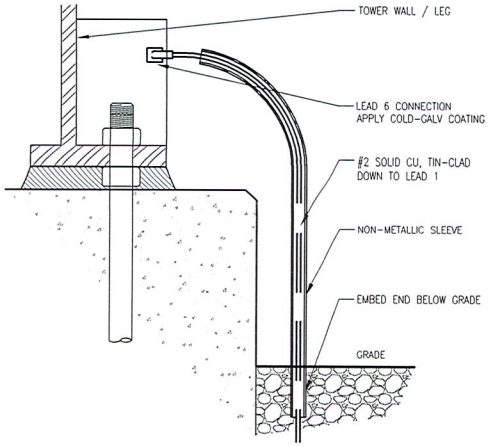


1 CONDUIT DETAIL
SCALE: NONE

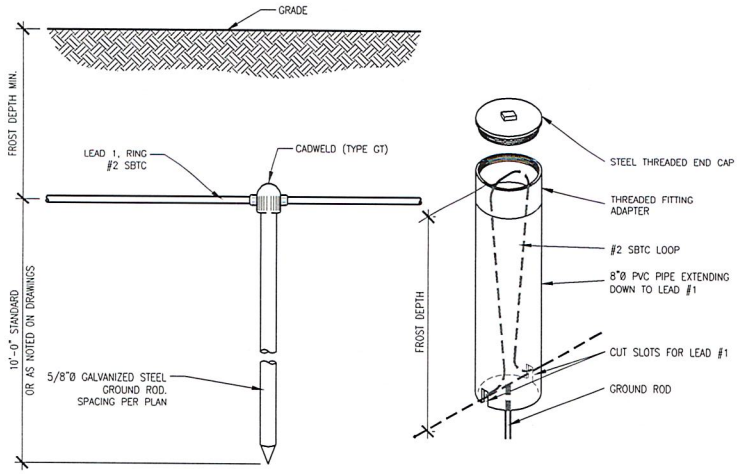


3 TOWER GROUND BAR DETAIL
SCALE: NONE

NOTE: IF NO FLANGES ARE PROVIDED, USE BASE PLATE. OR CONTACT TOWER MANUFACTURER.



2 REBAR GROUNDING DETAIL
SCALE: NONE



4 GROUND RING & ROD DETAIL
SCALE: NONE

PREPARED FOR:
verticalbridge
THE TOWERS, LLC
22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

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PONSFORD, MN 56475

SHEET CONTENTS:
GROUNDING DETAILS

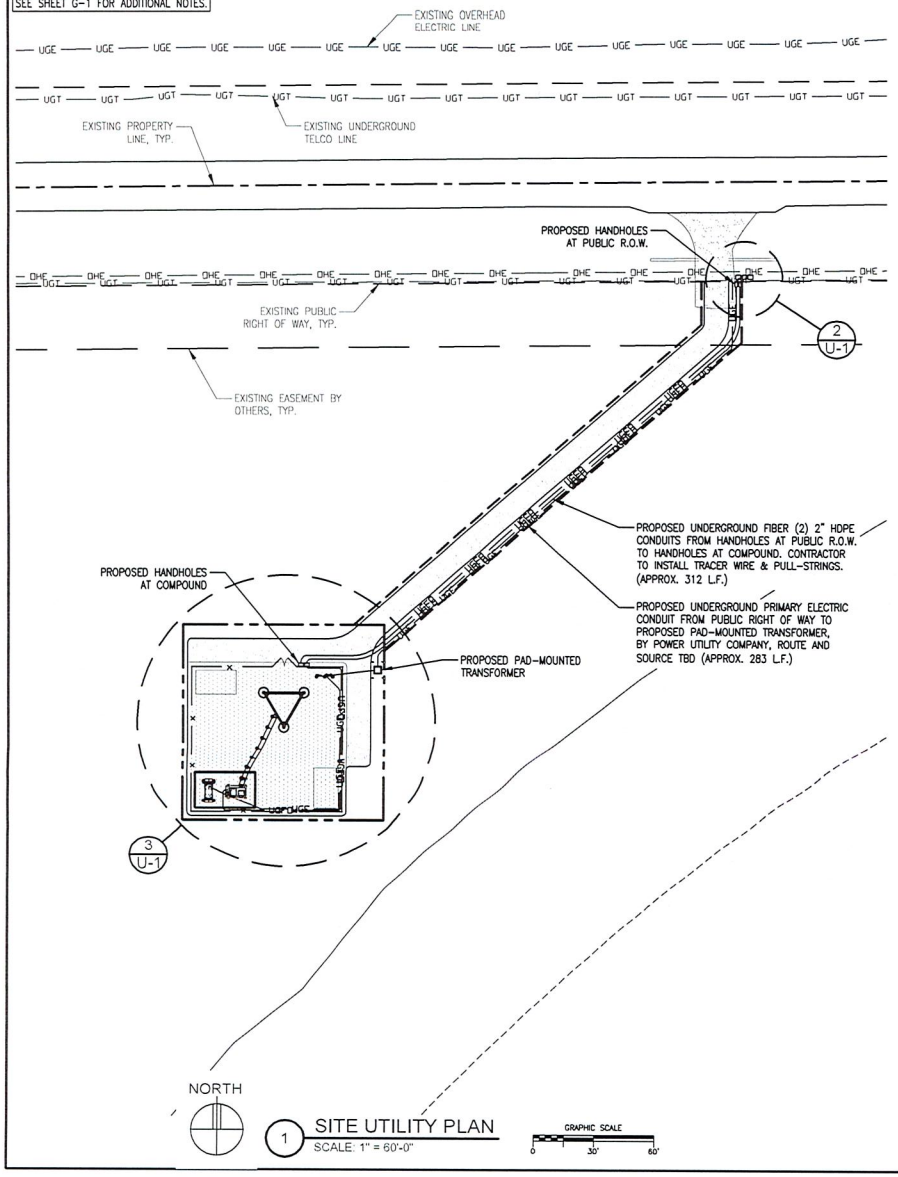
DRAWN BY:	TLS
CHECKED BY:	SJD
REV. 1	09-02-25
REV. 2	02-03-26

G-3

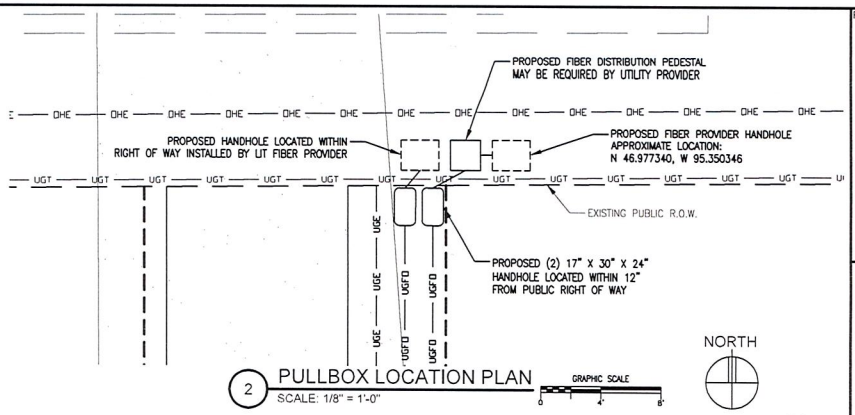
POWER DESIGN NOTES:

POWER TO BE INSTALLED PER UTILITY COORDINATION REPORT.

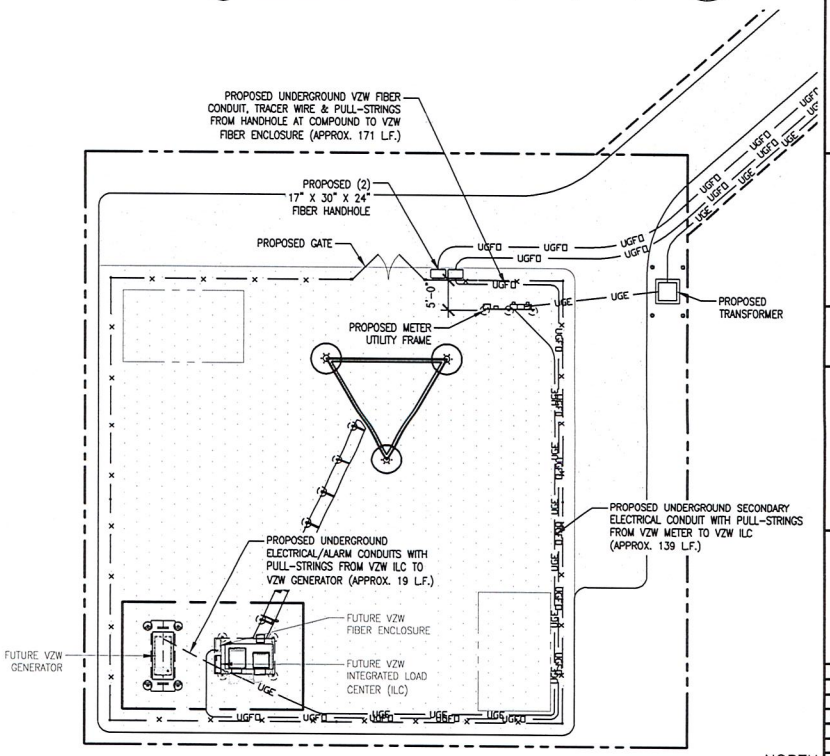
SEE SHEET G-1 FOR ADDITIONAL NOTES.



1 SITE UTILITY PLAN
SCALE: 1" = 60'-0"
GRAPHIC SCALE 0 30' 60'



2 PULLBOX LOCATION PLAN
SCALE: 1/8" = 1'-0"
GRAPHIC SCALE 0 4' 8'



3 ENLARGED SITE UTILITY PLAN
SCALE: 1" = 20'-0"
GRAPHIC SCALE 0 10' 20'

PREPARED FOR:

verticalbridge

THE TOWERS, LLC
22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

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DESIGN1
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PROJECT
US-MN-5481
FUZE ID: 17096918

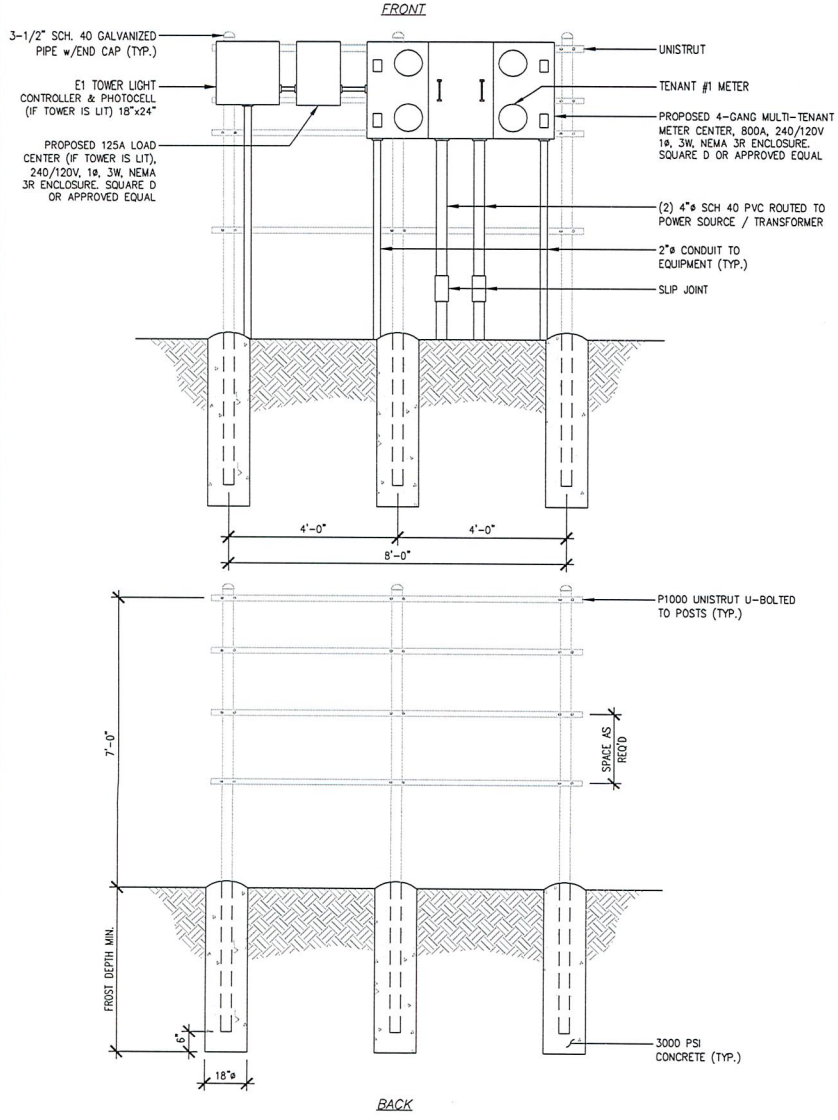
US-MN-5481
PONSFORD

45520 COUNTY HWY 44
PONSFORD, MN 56475

SHEET CONTENTS:
SITE UTILITY PLAN
ENLARGED SITE UTILITY PLAN
PULLBOX LOCATION PLAN

DRAWN BY:	TLS
CHECKED BY:	SJD
REV. 1	08-02-25
REV. 2	02-03-26

U-1



1 METER UTILITY FRAME DETAIL
SCALE: NONE

ELECTRIC SERVICE NOTES:

ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 (LATEST REVISION). THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES AND REQUIREMENTS IN FORCE. ANY INSTALLATION WHICH WOULD VOID THE U.L. LISTING (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE SHALL NOT BE PERMITTED.

COORDINATE ELECTRIC SERVICE WITH LOCAL POWER UTILITY COMPANY. COORDINATE WITH UTILITY FOR METER TYPE AND CONNECTION.

ALL CONDUIT SHALL BE SEALED WATERTIGHT UNTIL FINAL TERMINATIONS ARE MADE.

PROVIDE PULL CORD IN ALL CONDUITS. SECURE AT EACH END.

ADJUST DEPTH OF CONDUITS TO PASS ABOVE GROUNDING SYSTEM.

PROVIDE 18 INCH (MIN.) RADIUS ELBOWS FOR ALL BENDS.

PROVIDE PHENOLIC ENGRAVED NAMEPLATES AT THE SERVICE DISCONNECT LABELED: "SERVICE DISCONNECT" & "NOTE ENGINE GENERATOR NEUTRAL IS ALSO BONDED TO GROUND AT THE SERVICE DISCONNECT." PROVIDE ADDITIONAL NAMEPLATES NOTING TYPE AND LOCATION OF STANDBY POWER SOURCE.

PREPARED FOR:
verticalbridge
THE TOWERS, LLC
22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

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EDEN PRAIRIE, MN 55344
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PROJECT
US-MN-5481
FUZE ID: 17096918

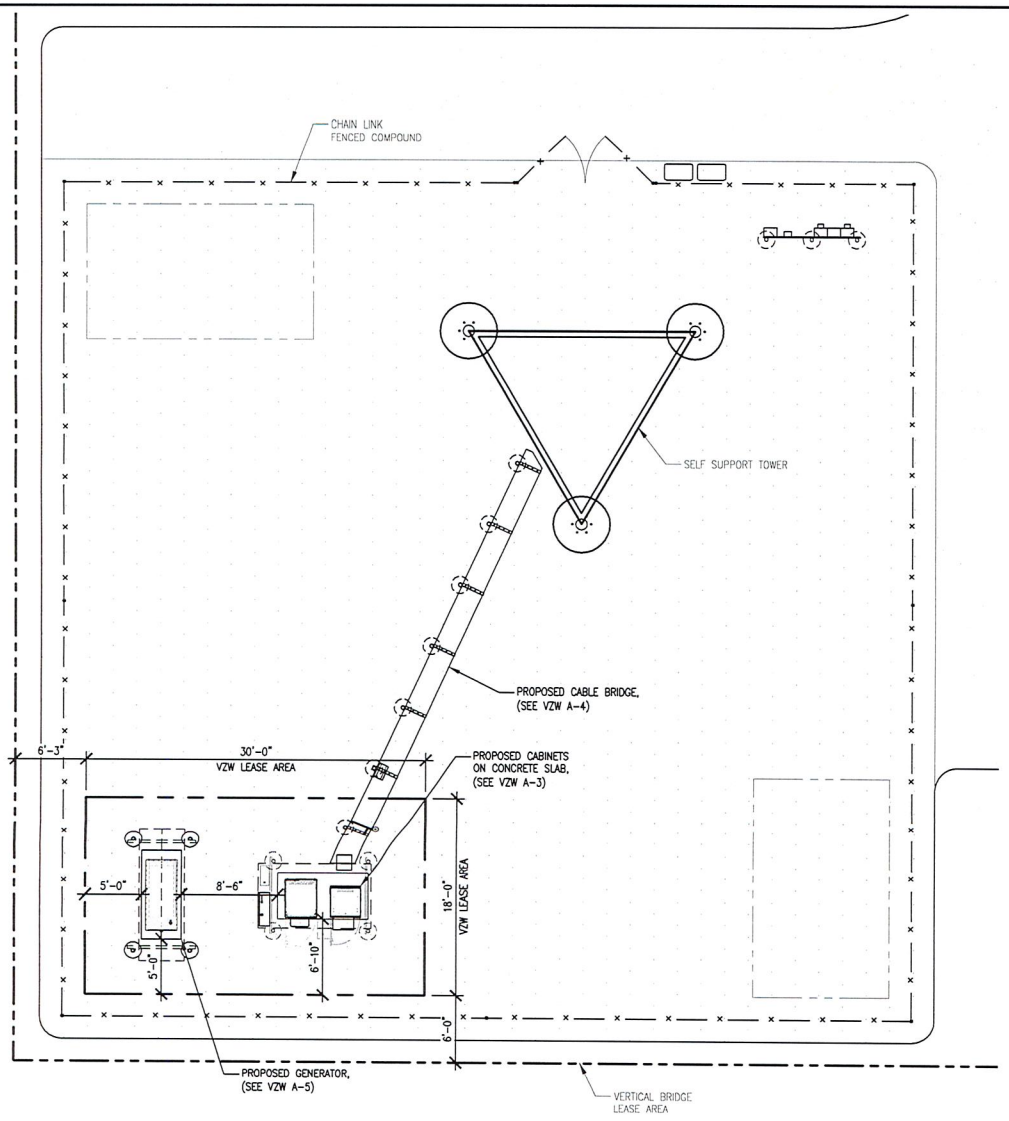
US-MN-5481
PONSFORD

45520 COUNTY HWY 44
PONSFORD, MN 56475

SHEET CONTENTS:
METER UTILITY FRAME DETAIL

DRAWN BY:	TLS
CHECKED BY:	SJD
REV: 1	09-02-25
REV: 2	02-03-26

U-2



NORTH

1 VERIZON SITE PLAN
SCALE: 3/32" = 1'-0"

GRAPHIC SCALE
0 5'-4" 10'-8"

NOTES:

1. THESE DRAWINGS DO NOT CONSTITUTE A WARRANTY, EXPRESSED OR IMPLIED, OF THE ACCURACY OF THE STRUCTURAL ANALYSES AND THE PERFORMANCE OF THE COMPLETED CONSTRUCTION AS SHOWN ON THESE DOCUMENTS AND THE STRUCTURAL ANALYSES.

2. NO STRUCTURAL ANALYSIS FOR THE MOUNT HAS BEEN PERFORMED AS PART OF THESE DRAWINGS.

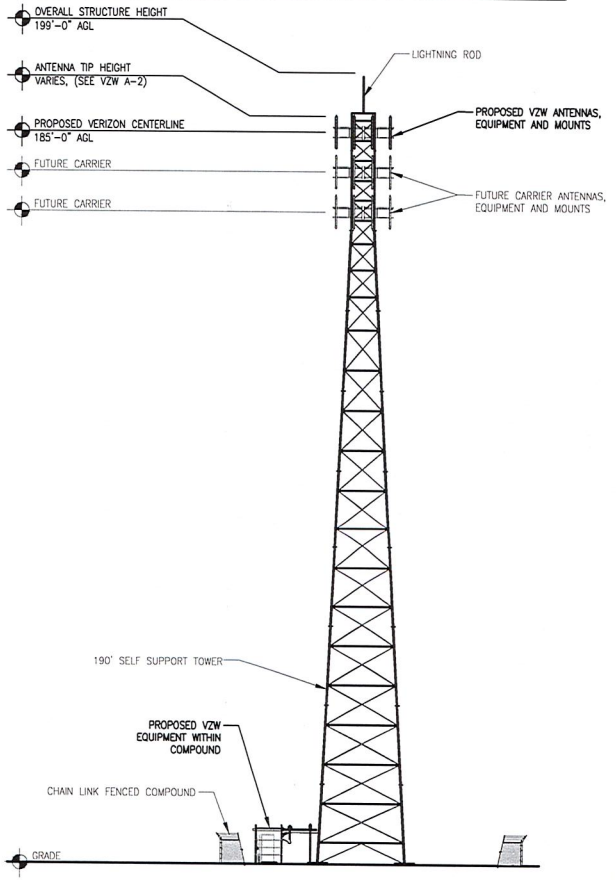
3. PLEASE COORDINATE ANY STRUCTURAL CONCERNS/MATTERS OR ANY LOADING MODIFICATIONS TO THE CONSULTANT WHO AUTHORED THE ANALYSIS AND NOTIFY DESIGN 1 IMMEDIATELY OF THE ISSUE.

4. EQUIPMENT SLAB AND GENERATOR FOUNDATION 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 DESIGNER.

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

6. ELEVATION IS SHOWN FOR GENERAL DIAGRAMMATIC PURPOSES ONLY. DO NOT SCALE.

7. THE STRUCTURAL ANALYSIS FOR THE MOUNTS (BY OTHERS) SHALL BE PER THE VERIZON NETWORK STANDARD NSTD-445. ALL LOADING AND DESIGN SHALL BE PER THE TIA-222-H STANDARD.



2 TOWER ELEVATION
SCALE: 1" = 30'-0"

GRAPHIC SCALE
0 15' 30'

PREPARED FOR:

verticalbridge

THE TOWERS, LLC

22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

NOT FOR CONSTRUCTION

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EDEN PRAIRIE, MN 55344
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PROJECT
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FUZE ID: 17096918

US-MN-5481
PONSFORD

45520 COUNTY HWY 44
PONSFORD, MN 56475

SHEET CONTENTS:
VERIZON SITE PLAN
TOWER ELEVATION

DRAWN BY:	TLS
CHECKED BY:	SJD
REV. 1	09-02-25
REV. 2	02-03-26

VZW A-1

ANTENNA KEY

	AZIMUTH	POSITION	FUNCTION	QTY	MANUFACTURER	MODEL	MOD TYPE	ANTENNA LENGTH	ANTENNA TIP	ANTENNA CENTER	ELEC DOWNTILT	MECH DOWNTILT
"X" SECTOR	0°	1.0	32TX/RX	1	ERICSSON	AIR3283	PCS/AWS	48.0"	187.0'	185.0'	2°	0°
	0°	2.1	TX/RX1	1	JMA WIRELESS	MX08FHG865-BHG	700/850	96.0"	189.0'	185.0'	1°	0°
	–	2.2	TX/RX2	–	–	2ND PORT	700/850	–	–	–	–	–
	–	2.3	TX/RX3	–	–	3RD PORT	700/850	–	–	–	–	–
	–	2.4	TX/RX4	–	–	4TH PORT	700/850	–	–	–	–	–
	–	2.5	–	–	–	5TH PORT	TERMINATED	–	–	–	–	–
	–	2.6	–	–	–	6TH PORT	TERMINATED	–	–	–	–	–
	–	2.7	–	–	–	7TH PORT	TERMINATED	–	–	–	–	–
	–	2.8	–	–	–	8TH PORT	TERMINATED	–	–	–	–	–
	–	3.0	–	–	–	–	–	–	–	–	–	–
	0°	4.0	64TX/RX	1	ERICSSON	AIR6419	C-BAND	28.3"	186.2'	185.0'	3°	0°
"Y" SECTOR	130°	1.0	32TX/RX	1	ERICSSON	AIR3283	PCS/AWS	48.0"	187.0'	185.0'	2°	0°
	130°	2.1	TX/RX1	1	JMA WIRELESS	MX08FHG865-BHG	700/850	96.0"	189.0'	185.0'	1°	0°
	–	2.2	TX/RX2	–	–	2ND PORT	700/850	–	–	–	–	–
	–	2.3	TX/RX3	–	–	3RD PORT	700/850	–	–	–	–	–
	–	2.4	TX/RX4	–	–	4TH PORT	700/850	–	–	–	–	–
	–	2.5	–	–	–	5TH PORT	TERMINATED	–	–	–	–	–
	–	2.6	–	–	–	6TH PORT	TERMINATED	–	–	–	–	–
	–	2.7	–	–	–	7TH PORT	TERMINATED	–	–	–	–	–
	–	2.8	–	–	–	8TH PORT	TERMINATED	–	–	–	–	–
	–	3.0	–	–	–	–	–	–	–	–	–	–
	130°	4.0	64TX/RX	1	ERICSSON	AIR6419	C-BAND	28.3"	186.2'	185.0'	3°	0°
"Z" SECTOR	250°	1.0	32TX/RX	1	ERICSSON	AIR3283	PCS/AWS	48.0"	187.0'	185.0'	2°	0°
	250°	2.1	TX/RX1	1	JMA WIRELESS	MX08FHG865-BHG	700/850	96.0"	189.0'	185.0'	1°	0°
	–	2.2	TX/RX2	–	–	2ND PORT	700/850	–	–	–	–	–
	–	2.3	TX/RX3	–	–	3RD PORT	700/850	–	–	–	–	–
	–	2.4	TX/RX4	–	–	4TH PORT	700/850	–	–	–	–	–
	–	2.5	–	–	–	5TH PORT	TERMINATED	–	–	–	–	–
	–	2.6	–	–	–	6TH PORT	TERMINATED	–	–	–	–	–
	–	2.7	–	–	–	7TH PORT	TERMINATED	–	–	–	–	–
	–	2.8	–	–	–	8TH PORT	TERMINATED	–	–	–	–	–
	–	3.0	–	–	–	–	–	–	–	–	–	–
	250°	4.0	64TX/RX	1	ERICSSON	AIR6419	C-BAND	28.3"	186.2'	185.0'	3°	0°

ADDITIONAL:
(1) DISTRIBUTION BOX, MODEL RVZDC-6627-PF-48 (ON TOWER)
(1) DISTRIBUTION BOX, MODEL RVZDC-6627-PF-48 (ON CABLE BRIDGE)
(2) 6 X 12 HYBRID CABLE, HUBER+SUHNER MODEL 85205118 (DIST BOX TO DIST BOX)
(1) 1 X 4 HYBRID JUMPER, HUBER+SUHNER MODEL 85243897 (DIST. BOX TO Y-SECTOR RRU)
(2) 1 X 4 HYBRID JUMPER, HUBER+SUHNER MODEL 85243898 (DIST. BOX TO X & Z-SECTOR RRUs)
(2) 1 X 4 HYBRID JUMPER, HUBER+SUHNER MODEL 85243897 (DIST. BOX TO Y-SECTOR ANTENNAS)
(4) 1 X 4 HYBRID JUMPER, HUBER+SUHNER MODEL 85243898 (DIST. BOX TO X & Z-SECTOR ANTENNAS)
(12) ANDREW COAX JUMPER, MODEL LDF4-50A, 10' EACH (RRU TO ANTENNA)
(1) DC-DC UP-CONVERTER UNIT (IN CABINET)
(5) DC-DC UP-CONVERTER MODULE (IN CABINET)
(12) 1-2W 50Ω TERMINATOR

CABLE BRIDGE	=	42'
EXTRA	=	13'
RAD CENTER	=	185'
TOTAL	=	420'

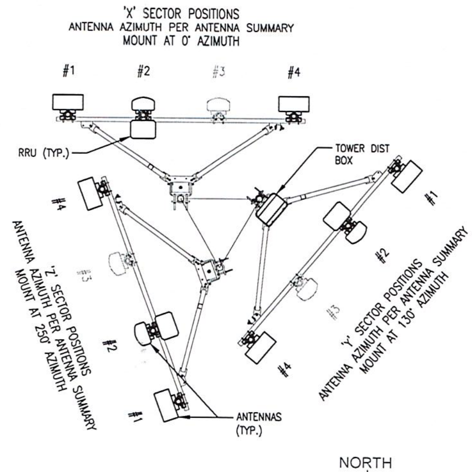
1 ANTENNA KEY

EQUIPMENT KEY

SECTOR	QTY	MANUFACTURER	MODEL	RRU PORT
"X"	–	–	–	–
	1	ERICSSON	4490	1
	–	–	–	2
	–	–	–	3
	–	–	–	4
	–	–	–	–
	–	–	–	–
	–	–	–	–
	–	–	–	–
	–	–	–	–
	–	–	–	–
"Y"	–	–	–	–
	1	ERICSSON	4490	1
	–	–	–	2
	–	–	–	3
	–	–	–	4
	–	–	–	–
	–	–	–	–
	–	–	–	–
	–	–	–	–
	–	–	–	–
	–	–	–	–
"Z"	–	–	–	–
	1	ERICSSON	4490	1
	–	–	–	2
	–	–	–	3
	–	–	–	4
	–	–	–	–
	–	–	–	–
	–	–	–	–
	–	–	–	–
	–	–	–	–
	–	–	–	–

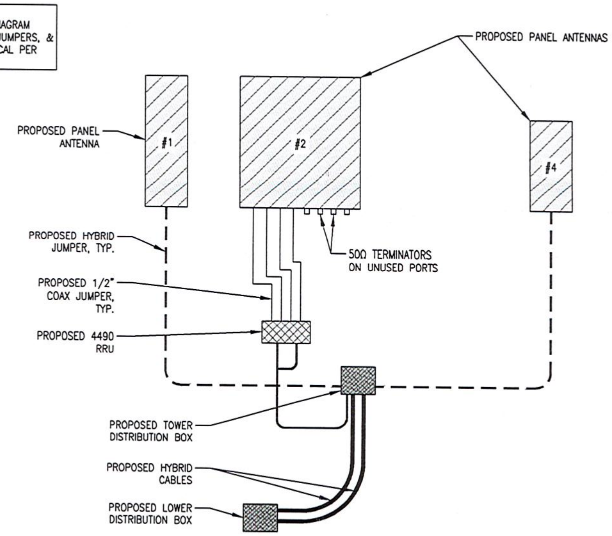
2 EQUIPMENT KEY

NOTES:
1. VERIZON WIRELESS GC TO SUPPLY AND INSTALL THE MOUNTS. THE MOUNTS MUST MEET THE VERIZON WIRELESS MOUNT STANDARD NSTD-445. THE GC SHOULD OBTAIN A MOUNT CLASSIFICATION BY A LICENSED STRUCTURAL ENGINEER IN THE STATE OF THE PROJECT AND SUBMIT THE PE-STAMPED REPORT TO VERIZON PRIOR TO CONSTRUCTION. THE GC SHALL BRING ANY CONCERNS OR DISCREPANCIES TO THE ATTENTION OF THE CONSTRUCTION ENGINEER AND ENGINEER OF RECORD.
2. VZW GC TO ENSURE MOUNT & ANTENNA ARRAY DOES NOT IMPEDE SAFETY CLIMB/CABLES.
3. TIE-BACKS NOT SHOWN FOR CLARITY.



3 ANTENNA MOUNTING DETAIL
SCALE: 3/16" = 1'-0"

NOTE:
ONE-LINE DIAGRAM ANTENNAS, JUMPERS, & RADIOS TYPICAL PER SECTOR



4 RFDS PLUMBING DIAGRAM

PREPARED FOR:
verticalbridge

THE TOWERS, LLC
22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

NOT FOR CONSTRUCTION

DESIGN 1
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EDEN PRAIRIE, MN 55344
(952) 903-9299
WWW.DESIGN1EP.COM

PROJECT
US-MN-5481
FUZE ID: 17096918

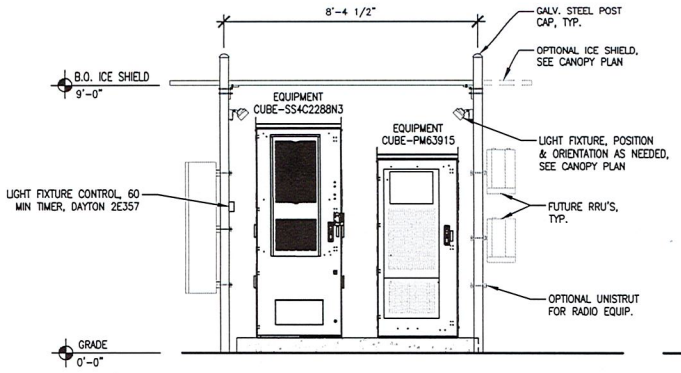
US-MN-5481
PONSFORD

45520 COUNTY HWY 44
PONSFORD, MN 56475

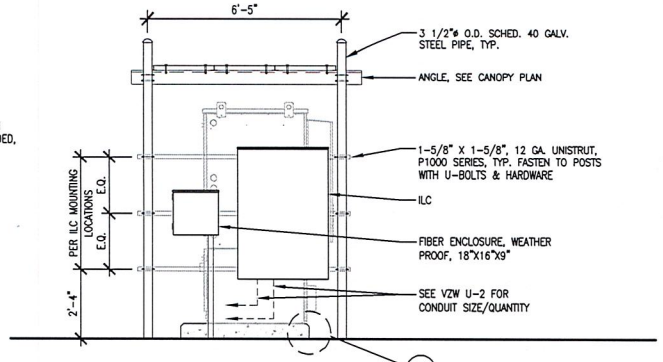
SHEET CONTENTS:
RFDS INFORMATION
RFDS PLUMBING DIAGRAM
ANTENNA MOUNTING DETAIL

DRAWN BY:	TLS
CHECKED BY:	SJD
REV. 1	09-02-25
REV. 2	02-03-26

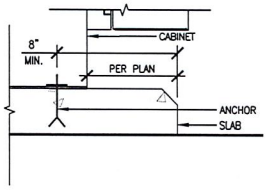
VZW A-2



5 FRONT ELEVATION
SCALE: 1/4" = 1'-0"



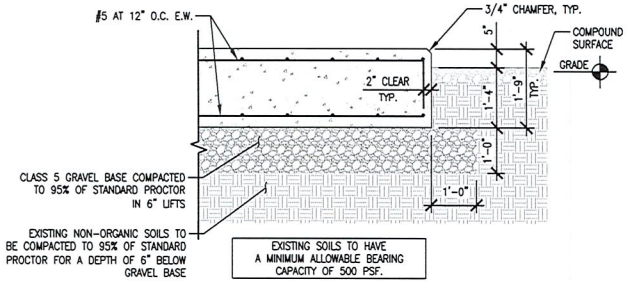
6 SIDE ELEVATION
SCALE: 1/4" = 1'-0"



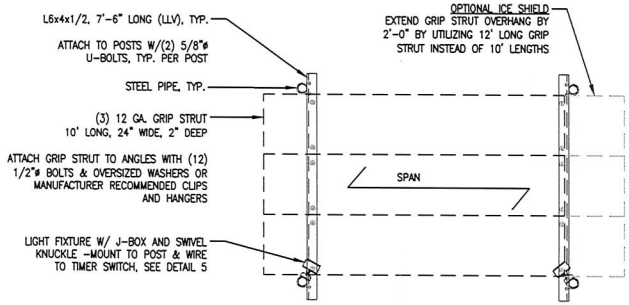
TYPICAL CAB. FRAME ANCHOR BOLT:
HILTI KWIK BOLT TZ (GALV.) EXP. ANCHOR-5/8"ø X 3-9/16" NOM. EMBED, MIN.

ANCHOR PER MANUFACTURER SPECIFIED LOCATIONS

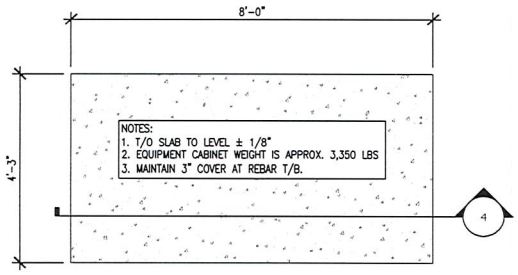
7 DETAIL
SCALE: 1-1/2" = 1'-0"



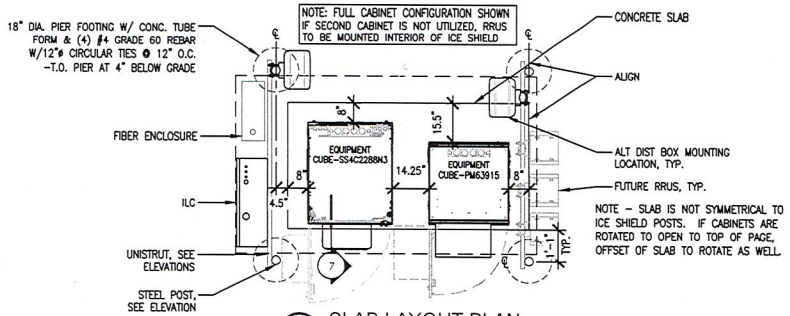
4 SLAB SECTION
SCALE: 3/8" = 1'-0"



2 CANOPY PLAN
SCALE: 1/4" = 1'-0"



3 SLAB PLAN
SCALE: 3/8" = 1'-0"



1 SLAB LAYOUT PLAN
SCALE: 1/4" = 1'-0"

PREPARED FOR:

verticalbridge

THE TOWERS, LLC

22 WEST ATLANTIC AVENUE, SUITE 310
DELRAY BEACH, FL 33444

NOT FOR CONSTRUCTION

DESIGN1

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PROJECT
US-MN-5481
FUZE ID: 17096918

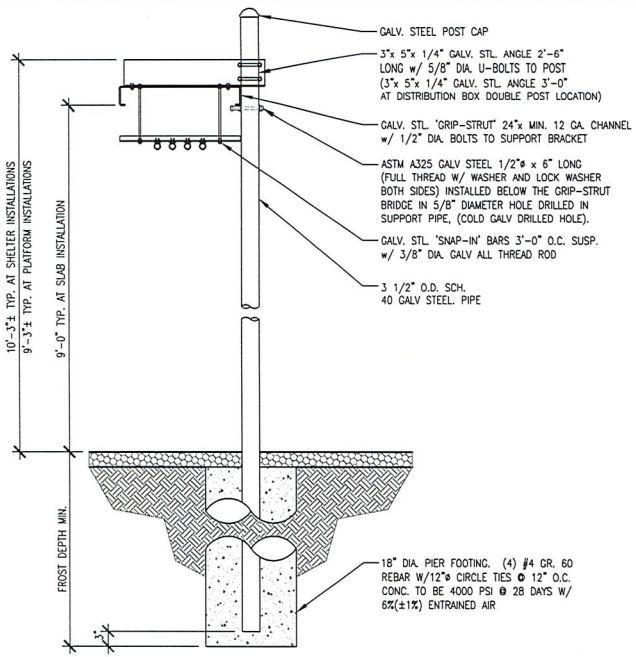
US-MN-5481
PONSFORD

45520 COUNTY HWY 44
PONSFORD, MN 56475

SHEET CONTENTS:
FOUNDATION PLAN & DETAILS
LAYOUT PLAN
ELEVATIONS

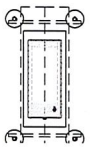
DRAWN BY:	TLS
CHECKED BY:	SJD
REV. 1	09-02-25
REV. 2	02-03-26

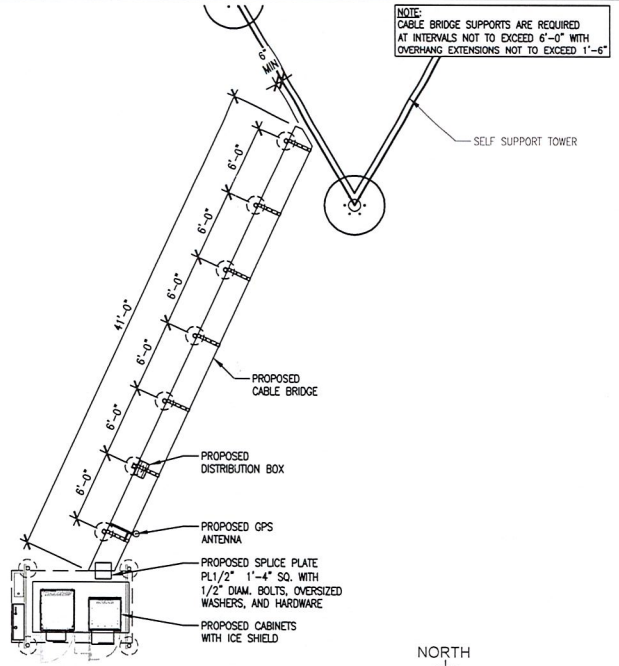
VZW A-3



1 CABLE BRIDGE SECTION
SCALE: 1/2" = 1'-0"

GRAPHIC SCALE
0 1' 2'

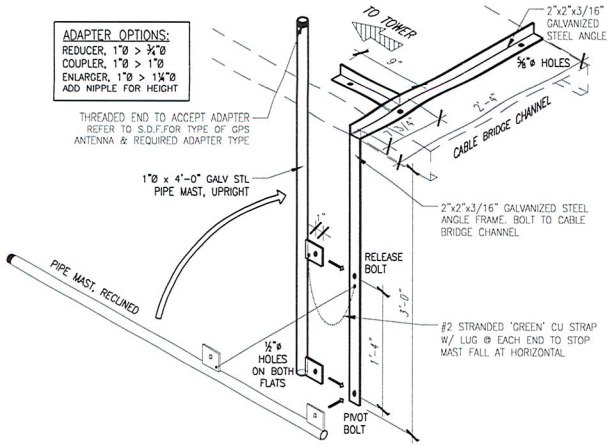




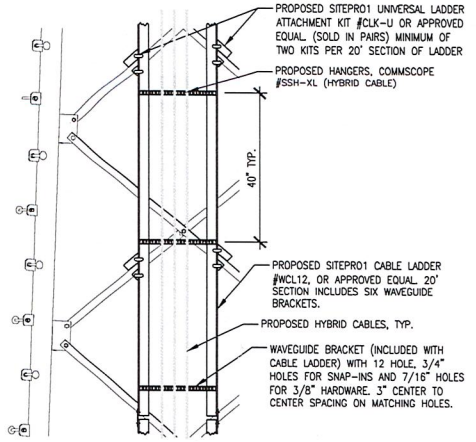
2 CABLE BRIDGE PLAN
SCALE: 1" = 10'-0"

GRAPHIC SCALE
0 5' 10'

NORTH



3 GPS ANTENNA MOUNTING
SCALE: N.T.S



4 CABLE LADDER DETAIL

PREPARED FOR:
verticalbridge
THE TOWERS, LLC
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DELRAY BEACH, FL 33444

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US-MN-5481
FUZE ID: 17096918

US-MN-5481
PONSFORD

45520 COUNTY HWY 44
PONSFORD, MN 56475

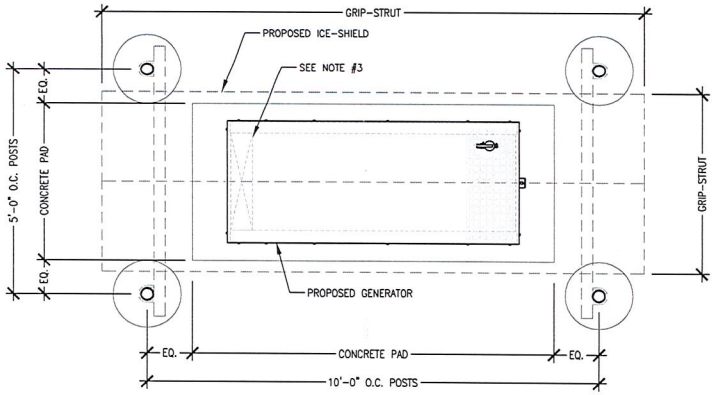
SHEET CONTENTS:
CABLE BRIDGE DETAILS
CABLE LADDER DETAIL
GPS DETAILS

DRAWN BY:	TLS
CHECKED BY:	SJD
REV. 1	09-02-25
REV. 2	02-03-26

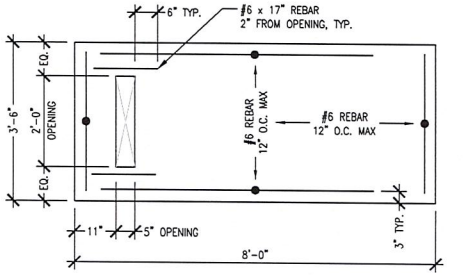
VZW A-4

NOTES:

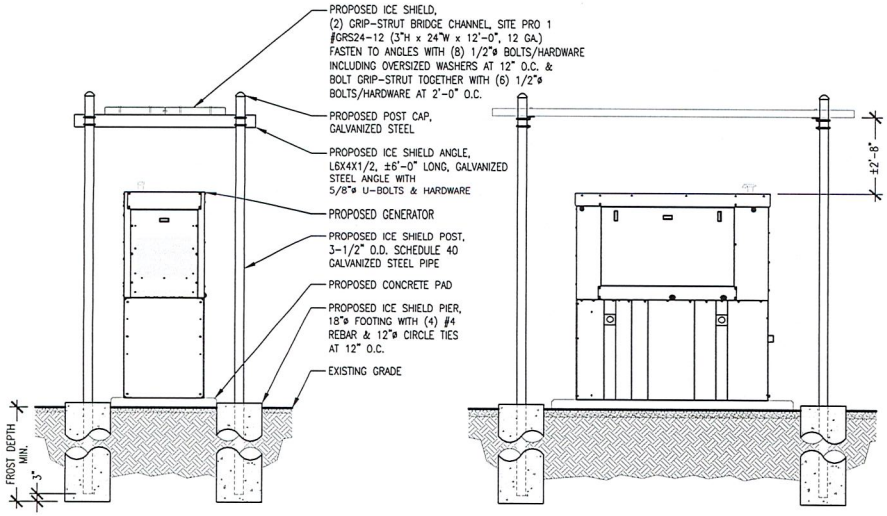
1) PROPOSED GENERATOR TO BE AS FOLLOWS:
   - 30 KW EXTERIOR GENERATOR ASSEMBLY
     - KOHLER MODEL #30REOZK & DRAWING #AVD-8855
   - STANDARD FUEL TANK, 203 GALLON TANK, DIESEL:
     - KOHLER PART #GM97093-MA2
   - DIMENSIONS (LxWxH) 77.5" X 32.5" X 84.0"
   - DRY WEIGHT (APPROX.) 2,114 LBS
   - WET WEIGHT (APPROX.) 3,535 LBS
2) ORIENTATION OF GENERATOR PER COMPOUND PLAN.
3) OPENING IN PAD TO BE ALIGNED WITH CONDUIT STUB-UPS (ELECTRICAL/ALARM) AND GENERATOR ASSEMBLY TO BE CENTERED ON PAD.
4) ANCHOR GENERATOR ASSEMBLY TO PAD USING EPOXY ANCHOR BOLTS OR EXPANSION ANCHORS, UTILIZE ALL MOUNTING HOLES IN BOTTOM OF GENERATOR ASSEMBLY.
5) CONTRACTOR TO INSTALL E-STOP (SUPPLIED WITH GENERATOR) ON THE GENERATOR ENCLOSURE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS/REQUIREMENTS AND THE N.E.C. CONNECT TO GENERATOR CONTROL PANEL AS REQUIRED TO SHUT DOWN ENGINE UPON ACTIVATION.
6) SEAL ANY GAPS BETWEEN GENERATOR ASSEMBLY AND PAD WITH EXTERIOR POLYURETHANE SEALANT, AND FILL OPENINGS IN PAD WITH CONCRETE UPON INSTALLATION OF CONDUITS.
7) IT HAS BEEN ASSUMED THAT THE EXISTING NATIVE SOILS AT THE SITE MINIMALLY CONFORM TO IBC CODE - TABLE 1806.2, CLASS OF MATERIALS #5: CLAY, SANDY CLAY, CLAYEY SILT, SILT AND SANDY SILT (CL, ML, MH, AND CH) WITH AN ALLOWABLE VERTICAL BEARING PRESSURE OF 1500 PSF (MINIMUM).
8) IF POOR SOILS OR UNCONTROLLED FILL OR WORSE ARE FOUND, IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INFORM DESIGN 1 OF THE SITE CONDITIONS FOR FURTHER REVIEW.
9) THE PAD IS NOT FROST-PROTECTED AND IS SUBJECT TO FREEZE/THAW MOVEMENT. IT SHALL BE THE RESPONSIBILITY OF OTHERS TO PROVIDE FLEXIBLE CONNECTIONS AND/OR OTHER MEANS TO PREVENT ANY DAMAGE TO THE GENERATOR AND ITS COMPONENTS FROM THE MOVEMENT.
10) CONCRETE AND REBAR SHALL CONFORM TO THE FOLLOWING CHARACTERISTICS:
    - MINIMUM CONCRETE f'c = 4,500 PSI, AIR-ENTRAINED.
    - REBAR Fy = 60 KSI.
11) TOP SURFACE OF PAD TO BE WITHIN A FLATNESS OF 1/8".



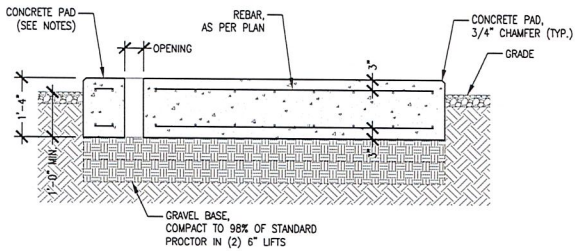
2 GENERATOR ASSEMBLY PLAN
SCALE: 3/8" = 1'-0"
GRAPHIC SCALE 0 1'-4" 2'-8"



3 CONCRETE PAD PLAN
SCALE: 3/8" = 1'-0"
GRAPHIC SCALE 0 1'-4" 2'-8"



1 GENERATOR ASSEMBLY ELEVATIONS
SCALE: 1/4" = 1'-0"
GRAPHIC SCALE 0 2' 4'



4 CONCRETE PAD SECTION
SCALE: 3/8" = 1'-0"
GRAPHIC SCALE 0 1'-4" 2'-8"

PREPARED FOR:

verticalbridge

THE TOWERS, LLC
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DELRAY BEACH, FL 33444

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PROJECT
US-MN-5481
FUZE ID: 17096918

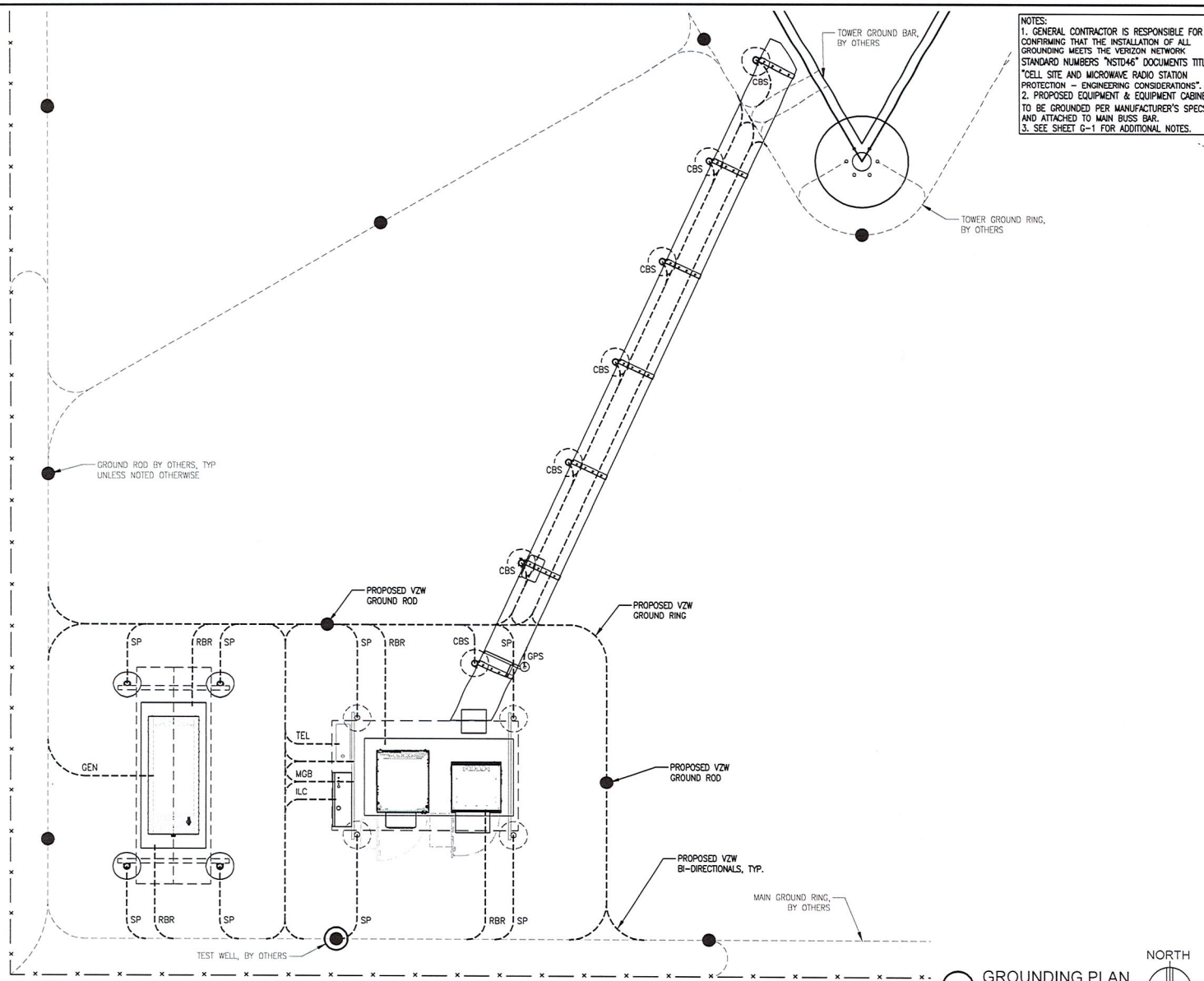
US-MN-5481
PONSFORD

45520 COUNTY HWY 44
PONSFORD, MN 56475

SHEET CONTENTS:
GENERATOR DETAILS,
STANDARD TANK

DRAWN BY:	TLS
CHECKED BY:	SJD
REV. 1	09-02-25
REV. 2	02-03-26

VZW A-5



NOTES:
1. GENERAL CONTRACTOR IS RESPONSIBLE FOR CONFIRMING THAT THE INSTALLATION OF ALL GROUNDING MEETS THE VERIZON NETWORK STANDARD NUMBERS "NSTD46" DOCUMENTS TITLES "CELL SITE AND MICROWAVE RADIO STATION PROTECTION – ENGINEERING CONSIDERATIONS".
2. PROPOSED EQUIPMENT & EQUIPMENT CABINETS TO BE GROUNDED PER MANUFACTURER'S SPECS AND ATTACHED TO MAIN BUSS BAR.
3. SEE SHEET G-1 FOR ADDITIONAL NOTES.

1 GROUNDING PLAN
SCALE: NTS

NORTH

PREPARED FOR:

verticalbridge

THE TOWERS, LLC

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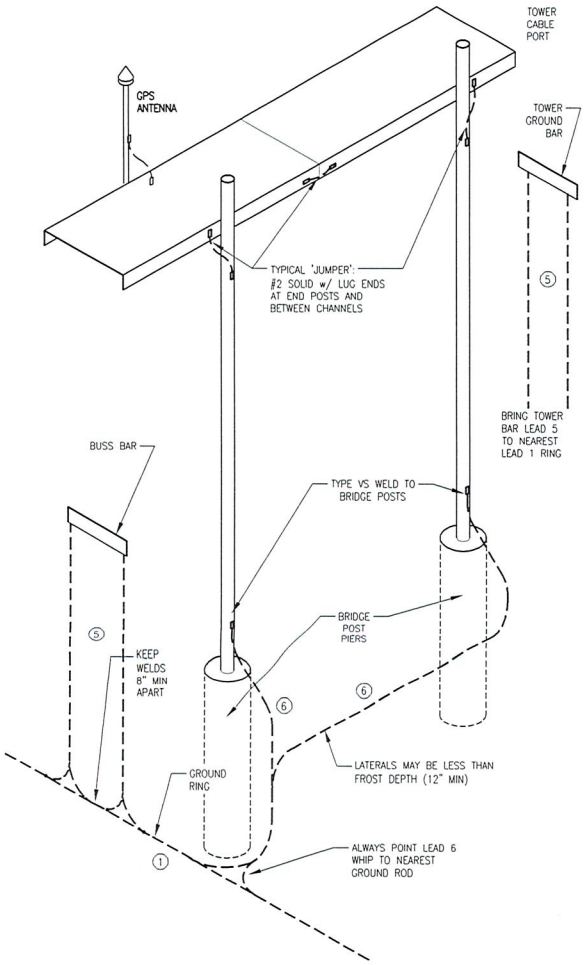
PONSFORD

45520 COUNTY HWY 44
PONSFORD, MN 56475

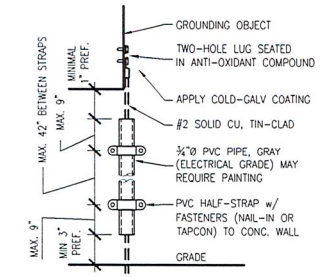
SHEET CONTENTS:
GROUNDING PLAN

DRAWN BY:	TLS
CHECKED BY:	SJD
REV. 1	09-02-25
REV. 2	02-03-26

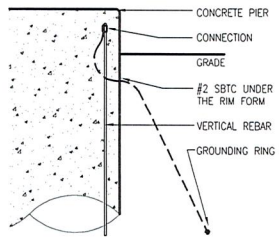
VZW G-1



1 TYPICAL CABLE BRIDGE GROUNDING DETAIL
SCALE: NONE

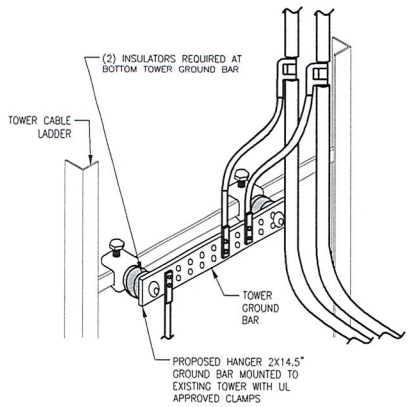


4 CONDUIT DETAIL
SCALE: NONE

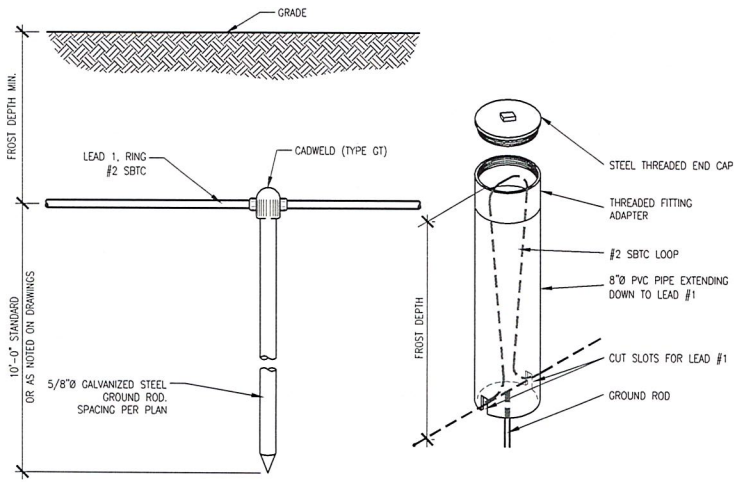


PIER FOUNDATION

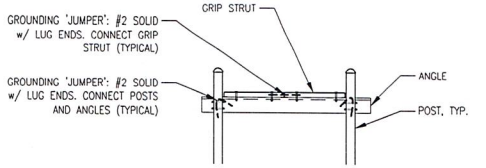
3 REBAR GROUNDING DETAIL
SCALE: NONE



2 TOWER GROUND BAR DETAIL
SCALE: NONE



5 GROUND RING & ROD DETAIL
SCALE: NONE



6 TYPICAL ICE SHIELD GROUNDING DETAILS
SCALE: NONE

PREPARED FOR:

verticalbridge

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FUZE ID: 17096918

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PONSFORD

45520 COUNTY HWY 44
PONSFORD, MN 56475

SHEET CONTENTS:
GROUNDING DETAILS

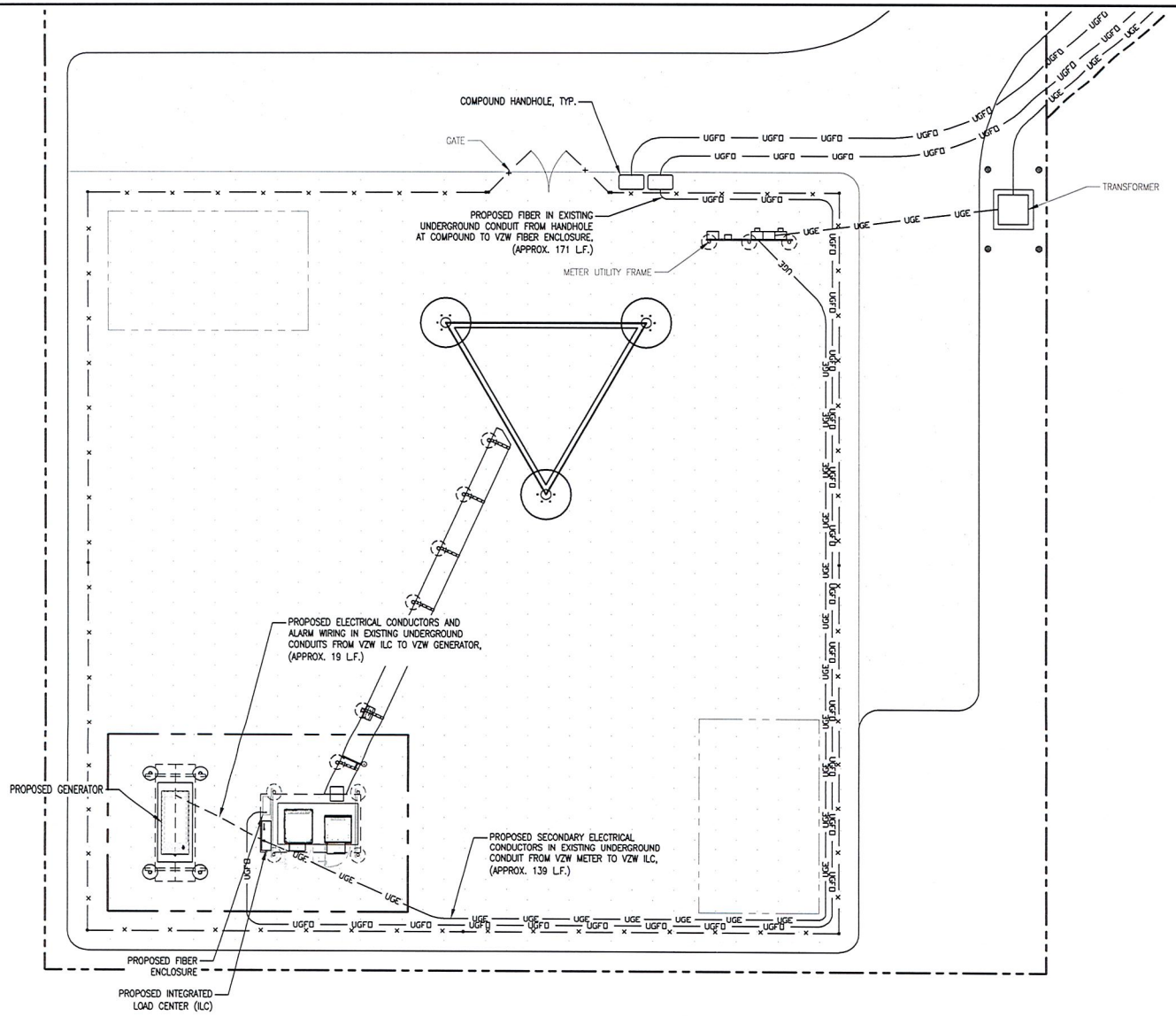
DRAWN BY:	TLS
CHECKED BY:	SJD
REV. 1	09-02-25
REV. 2	02-03-26

VZW G-2

POWER DESIGN NOTES:

POWER TO BE INSTALLED PER UTILITY COORDINATION REPORT.

SEE SHEET G-1 FOR ADDITIONAL NOTES.



1 SITE UTILITY PLAN
SCALE: 3/32" = 1'-0"

GRAPHIC SCALE
0 5'-4" 10'-8"

NORTH

PREPARED FOR:

verticalbridge

THE TOWERS, LLC
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DELRAY BEACH, FL 33444

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FUZE ID: 17096918

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PONSFORD

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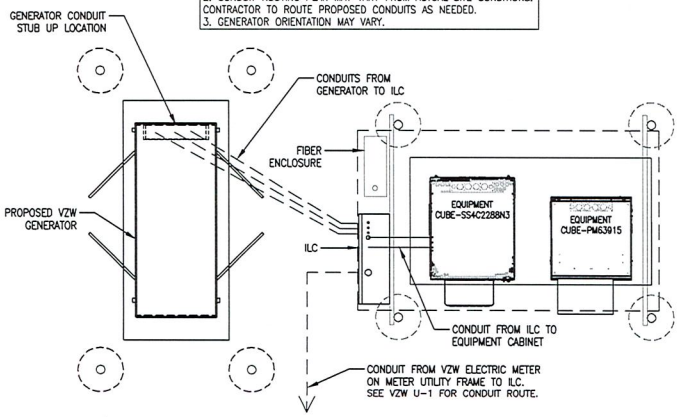
PONSFORD, MN 56475

SHEET CONTENTS:
VZW UTILITY PLAN

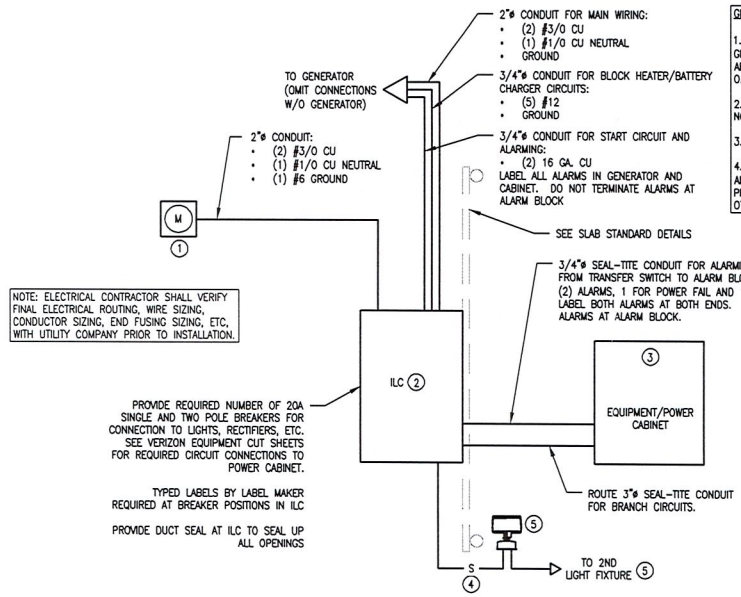
DRAWN BY:	TLS
CHECKED BY:	SJD
REV. 1	09-02-25
REV. 2	02-03-26

VZW U-1

NOTES:
1. SEE ONE-LINE ELECTRIC DIAGRAM FOR WIRE SIZES/QUANTITIES.
2. CONDUIT ROUTING PLAN MAY VARY FROM ACTUAL SITE CONDITIONS. CONTRACTOR TO ROUTE PROPOSED CONDUITS AS NEEDED.
3. GENERATOR ORIENTATION MAY VARY.



1 CONDUIT ROUTING PLAN
SCALE: 1/4" = 1'-0"



GENERAL NOTES

1. CONTRACTOR SHALL PERFORM WORK (ELECTRICAL, GROUNDING, & BONDING) IN ACCORDANCE WITH ALL APPLICABLE GOVERNING STATE & LOCAL CODES AND O.S.H.A. REGULATIONS.
2. ALL CONDUCTORS SHALL BE TYPE THHN UNLESS NOTED OTHERWISE.
3. LABEL METER & DISCONNECT PER NEC.
4. EQUIPMENT AND MATERIALS SHOWN IN DIAGRAM AND LISTED IN KEY (OR APPROVED EQUAL) TO BE PROVIDED BY CONTRACTOR UNLESS NOTED OTHERWISE.

ELECTRICAL EQUIPMENT LIST & KEY

KEY NOTE	ALT.	MANUFACTURER PART NUMBER	MANUFACTURER	DESCRIPTION
(1)	–	–	–	UTILITY CO. APPROVED 200A METER WITH MCB/DISCONNECT
(2)	GEN.	AA300G-1PH-42-3R	ASCO POWER TECHNOLOGIES	D300L SERIES, SINGLE PHASE, 200A POWER TRANSFER LOAD CENTER (PROVIDED BY VERIZON)
	W/O GEN.	AA300G-1PH-3RGC		D300L SERIES, SINGLE PHASE, 200A POWER TRANSFER LOAD CENTER W/CAM-LOK (PROVIDED BY VERIZON)
(3)	–	–	–	PUNCH DOWN ALARM TERMINAL BLOCK (LOCATED WITHIN EQUIPMENT)
(4)	–	E357	DAYTON	LIGHT FIXTURE CONTROL & WEATHERPROOF CASING
(5)	–	OLFL PE 14 BZ	LITHONIA	OUTDOOR INTEGRATED LED FLOOD LIGHT FIXTURE – MOUNT PER STANDARD DETAILS

2 ONE-LINE ELECTRIC DIAGRAM
SCALE: NONE

PREPARED FOR:
verticalbridge
THE TOWERS, LLC
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PONSFORD

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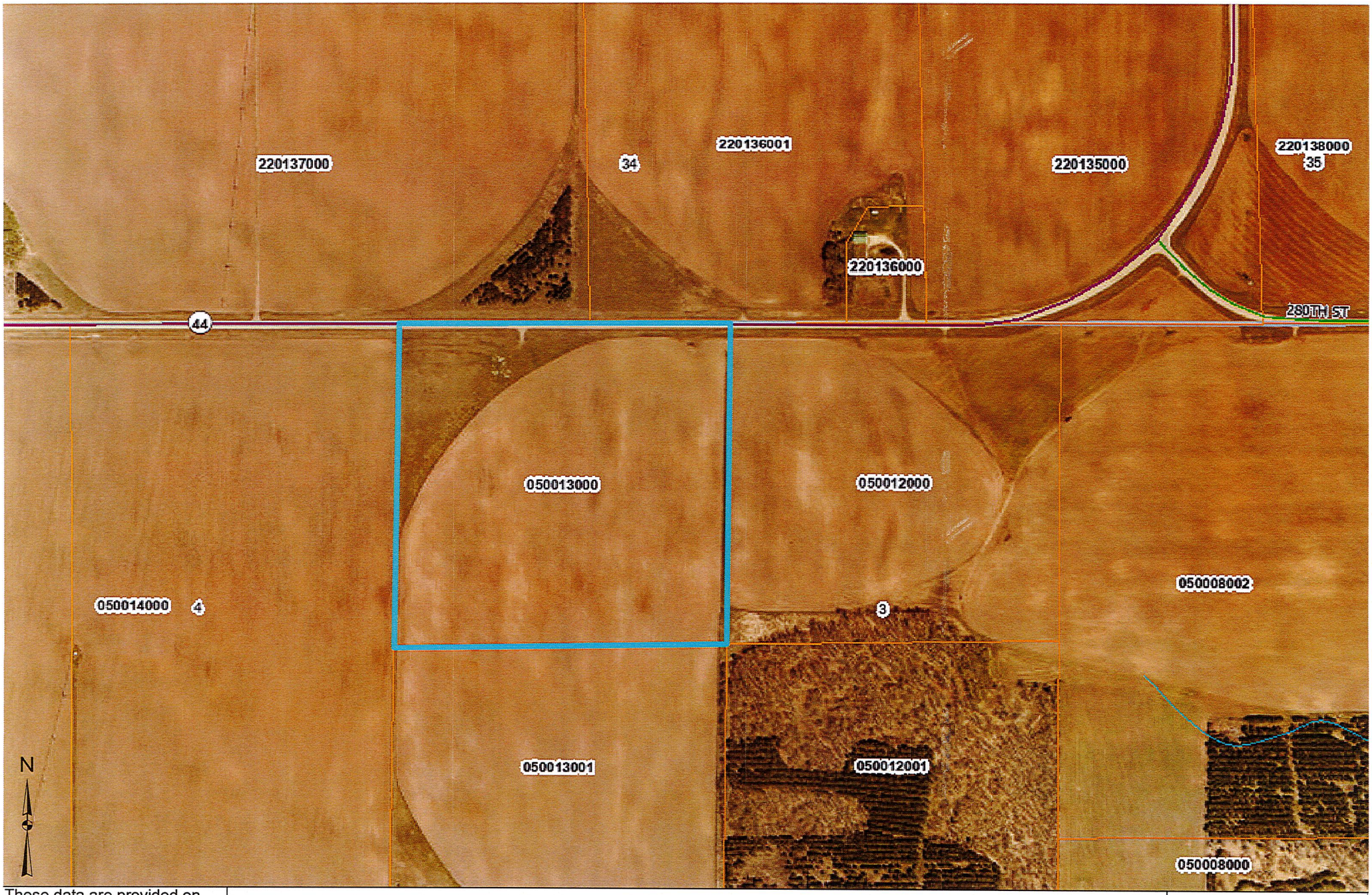
PONSFORD, MN 56475

SHEET CONTENTS:
CONDUIT ROUTING PLAN
ONE-LINE ELECTRIC DIAGRAM

DRAWN BY:	TLS
CHECKED BY:	SJD
REV. 1	09-02-25
REV. 2	02-03-26

VZW U-2



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Becker County

1:9,028

Date: 3/6/2026

This map is not a substitute for accurate field surveys or for locating actual property lines and any adjacent features.

Carsonville

Subject

Township 140N - Range 37W

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SEE PAGE
SEE PAGE 73
SEE PAGE 53
SEE PAGE 57
SEE PAGE 39

POW WOW HWY
COUNTY ROAD 129W
PONSFORD
280TH ST
270TH ST
485TH AVE
520TH AVE
COUNTY ROAD 156
SMOKY HILLS STATE FOREST
SMOKEY HILLS FOREST RD
SMOKEY HILLS TRL
SHELL RIVER TR
OLD MILL RD
GUPLESS RD
HANNAMORE RD
NAVILLUS BLVD
MUD LAKE
LINBOM LAKE
ASH MOUNTAIN DR
BASS BAY DR
W STRAIGHT LAKE AVE
SHELL RIVER

Blouch LLC 195
Profitt LP 82
Profitt LP 81
Michael Swan 29
John & Kathryn French 51
Larry D Tretbar 135
Joseph James Klein 112
Honor The Earth 40
Conrad James Mack Etal 155
Steven & Leah Lymburner 203
William C & Loriann M Lymburner 79
Carl & Edith Lymburner 32
Darrell Hart 20
R D Offutt Co 134
Fred & Janice Seybert 154
Joan Bendson Rev Tr 77
Mark Harris 97
Leslie & Irene Bridger 310
Douglas A & Lisa L Kloss 80
Beyer & Clements 40
Louis Meeks 39
BCTF State Forest 80
Joe Klein Etal 90
Todd Yliniemi 124
Larry & Jean Tretbar 151
R D Offutt Company 150
Ronald & Ruth Ann Pachel 60
Karen & Thomas Patterson 80
Scott Yliniemi 43
Darlene J Spalding Tr 80
Todd Yliniemi 28
Anne M Garrett 160
John & Patricia Corbid 80
Michael L & Nadine Paplow 78
Ashley Tretbar 40
Justin & Christina Wilson 40
David Wayne Harris 60
Louis Meeks 70
Matthew Clayton 40
Meyer Family Trust 40
Edward & Amy Streeper 94
BCTF State Forest 280
BCTF State Forest 560
Swensen Family Cabin Trust 120
Thomas W Mack Trust 400
John & Linda Mack 80
Roger & Barbara Wilson 80
R D Offutt Co 248
Nancy A Carter 160
Todd Yliniemi 80
Paul & Jolynn Nilson 80
Danny & Cheryl Breitbach 80
Susan Fitzpatrick 320
R D Offutt Company 160
R D Offutt Company Etal 160
Delbert & Nora Ba Saarinen Etal 86
BCTF State Forest 600
BCTF State Forest 520
State of MN Dept of Natural Resources State Forest 640
State of MN Dept o Natural Resources State Forest 80
BCTF State Forest 40
State of MN DNR 80
Henry John Mack 40
Wilson Family Trust 40
Becker Cty Tax Forfeited 40
Bruce Wilson Etal 40
Rodney & Patricia Stearns 74
Brian & Michelle Stearns 40
Mark & Jean Heston 40
Jeremy, Richard & Tracy Jo Brue 40
Nancy A Carter 320
R D Offutt Company Etal 117
R D Offutt Company Etal 160
JJB Partnership 152
BCTF State Forest 200
State of MN Dept of Natural Resources State Forest 120
St of MN DNR State Forest 40
Michael A Enfield 80
State of MN Dept of Natural Resources 75
R D Offutt Company 480
BCTF State Forest 480
Becker County Tax Forfeited 40
BCTF State Forest 400
BCTF State Forest 560
BCTF State Forest 520
William & Catherine Eckberg 203
Bruce R Brummitt 49
Myrtle R Wilson 57
Linda F Stearns 151
John B Wagner 80
R D Offutt Co 55
State of MN Dept of Natural Resources 80
Conrad & Cary Mack 40
Michael & Vicki Zager 40
Robert E Klein Jr 120
Benjamin B Kimball 80
Gerald Vincent Hines 25
Ronald Celander 105
Lee Family Trust 120
Bradley N Wasilk 80
Bradley N Wasilk 120
BCTF State Forest 115
BCTF State Forest 40
St of MN DNR State Forest 40
Michael & Tammy Weaver 30
Judith C & Nicolle Y Lafleur 200
BCTF State Forest 80
BCTF State Forest 400
BCTF State Forest 358
Christopher Collins 40
Midwest Hunting Group 160
David C Schaum 40
Ronald & Diane Lechner 77
Prairie Lakes Property LLC 67
Tim & Jennefer Clements 75
Nicolle Lafleur 40
James & Donna Mae Kovala 80
Wade Janson 60
Harvala Northslopes Fm Tr 100
James & Donna Mae Kovala 160
Robert Stang 39
William M Simpson III 29
Edward J Liljedahl 77
Khohil & Ritva Ahmed 190
Jeffrey & Carol Gort 40
Susan J Busker Tr 443
Danny & Josephine Niemi 156
Andrew Kovala 40
Richard Kovala Etal 60
Harvala Northslopes Fm Tr 188
Wesley A Latto 278
Paula Latto 51
Jonathan Turner 80
James Earl Clements 80
BCTF State Forest 200
Corey Kluver 80
Corey L Kluver 160
Bruce E & Irene L Horstman 160
Dean Drewes 116
Matthew W & Melissa R Fabian 145
Kaylee Drewes 20
Heidi A Drewes 40
Bruce & Nola Johnson 53
Jacob Latto 39
Rbt & Vernet Latto Tr 115
David Herzog 40
State of MN Dept of Natural Resources 120
R K R Properties Inc 120
Fischer Family Trust 40
BCTF State Forest 41
Bradley N & Deborah J Winn 160
Bruce & Lorie Huseth 160
Donald Heston 55
Kimball Rev Liv Tr 23
Daly 15