

RECEIVED

McBRAYER, MCGINNIS, LESLIE & KIRKLAND, ^{PLLC}
ATTORNEYS-AT-LAW

AUG 07 2008

PUBLIC SERVICE
COMMISSION

W. BRENT RICE
brice@mmlk.com

201 E. Main Street, Suite 1000
Lexington, Kentucky 40507
(859) 231-8780
FAX (859) 231-6518

August 7, 2008

Ms. Stephanie L. Stumbo, Executive Director
Public Service Commission
211 Sower Blvd.
Frankfort, KY 40602-0615

VIA HAND DELIVERY

**RE: Application of Powertel/Memphis, Inc. d/b/a T-Mobile, for
Issuance of a Certificate of Public Convenience and Necessity to
Construct an Additional Facility at 494 Capps Road, Campbellville,
Taylor County, Kentucky ("Application") PSC Case No. 2008-00315
(The 9LV1149/North Green River Facility)**

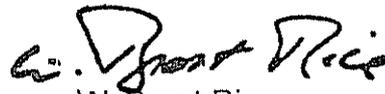
Dear Ms. Stumbo:

Please be advised that the undersigned represents Powertel/Memphis, Inc. in regard to the above-referenced Application which I am filing on its behalf today with the Commission.

Enclosed please find one original and three copies of the Application along with two sets of project description drawings, both of which are signed and sealed by a licensed professional engineer in Kentucky.

Any comments or questions in regard to the application should be forwarded to the undersigned. Thank you for your assistance in this matter.

Sincerely,



W. Brent Rice
Counsel for Powertel/Memphis, Inc.

WBR/dkw
Enclosures

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

ORIGINAL
RECEIVED

In the Matter of:

APPLICATION OF POWERTEL/MEMPHIS, INC.)
d/b/a T-MOBILE FOR ISSUANCE OF A)
CERTIFICATE OF PUBLIC CONVENIENCE AND)
NECESSITY TO CONSTRUCT AN ADDITIONAL)
CELL FACILITY AT 494 CAPPS RD.,)
CAMPBELLSVILLE, TAYLOR COUNTY,)
KENTUCKY)

AUG 07 2008

PUBLIC SERVICE
COMMISSION

CASE NO. 2008-00315

(THE NORTH GREEN RIVER/9LV1149 FACILITY)

APPLICATION

Powertel/Memphis, Inc., a Delaware corporation d/b/a T-Mobile ("Applicant") applies for a Certificate of Public Convenience and Necessity to construct and operate an additional cell facility to serve the customers of its cellular radio telecommunications network in the Commonwealth of Kentucky. In support of this Application, Applicant, respectfully states that:

1. Its complete name, address and telephone number are: Powertel/Memphis, Inc., d/b/a T-Mobile, Four Concourse Parkway, Suite 300, Atlanta, Georgia 30328, having a local address of 11509 Commonwealth Drive, Louisville, Kentucky 40299. The local telephone number is (502)297-6202..

2. The Applicant is a Delaware general partnership. A copy of its Articles of Incorporation; Certificate of Amendment changing its name from Intercell Memphis MTA, Inc. to Powertel/Memphis, Inc.; and its applicable Federal Communications License for this market area is attached as **Exhibit A**.

3. The Applicant proposes to construct an additional cellular facility in Taylor County, Kentucky (the "Cell Facility"). The Cell Facility will be comprised of a 260' self-supporting tower and attached lightning rods extending to 275', and an equipment

shelter. The equipment shelter will contain the transmitters and receivers required to connect the cell facility with cellular telephone users, which will link the Cell Facility with Applicant's other cells. The Cell Facility will be fenced with a secured access gate. Two sets of project drawings are being submitted with this Application. A detailed description of the manner in which the Cell Facility will be constructed is included in the drawings and on the Survey (scale: 1" = 200'). A copy of the Survey is attached as **Exhibit B**. The Survey is signed and sealed by Timothy L. Hardy, a professional registered surveyor in Kentucky and it depicts the proposed location of the tower and all easements and existing structures on the property on which the tower will be located. A vertical tower profile and its foundation, each signed and sealed by a professional engineer registered in Kentucky are attached as **Exhibit C**. The tower design plans include a description of the standard according to which the tower was designed.

4. A geotechnical investigation report performed by Terracon Consulting Engineers of Nashville Tennessee, dated July 14, 2008 is attached as **Exhibit D**. The geotechnical investigation report is signed and sealed by Timothy G. LaGrow, P.E., a professional engineer registered in Kentucky. The geotechnical investigation report includes boring logs, foundation design recommendations, and a finding as the proximity of the proposed site to flood hazard areas.

5. As noted on the Survey attached as a part of **Exhibit B**, the surveyor has determined that the site is not within any FIA flood hazard area.

6. The possibility of a strong ground shaking has been considered in the design of this guyed tower. Formulas are given in codes for earthquake loading. The formulas are for lateral loads, and they take into account the seismic zone, ground motion and structure. The two most important components of the structure are its weight

and shape. Applying all of the factors to the formula, the resultant earthquake load is less than the design wind load. Seismic loading has been considered in the design of this tower, although it is regarded as secondary to the wind loading.

Even if the tower would fall as result of an earthquake, it should not damage any occupied buildings. In the event of failure of the tower mast, all of the debris will most likely lie within a circle whose center is the tower base and whose radius is no more than 60% of the tower height.

7. Similarly, the possibility of a strong wind has been considered in the design of this tower. It has been designed and engineered by professional engineers using computer assistance and the same accepted codes and standards as are typically used for high-rise building construction. This tower has been designed in accordance with the Electronic Industries Association ("ETA") Standard RS-222E, which has been accepted and approved by ANSI and is a nationally recognized tower design standard. The ANSI/EIA standard utilizes a "stepped" wind loading in tower design. This means that a standardized wind speed (the "basic wind speed") is applied to the tower structure at the 33-foot level and then is "increased" with increments of tower height. In this case, the design wind speed is 90 mph. Using the appropriate wind speed for each antenna level, the thrust of the antenna and its corresponding waveguide load are applied to the tower structure for maximum member loads.

8. Personnel directly responsible for the design and construction of the proposed tower are qualified and experienced. The soil testing and part of the foundation design was performed by Terracon Consulting Engineers under the supervision of Timothy G. LaGrow, a registered professional engineer in the Commonwealth of Kentucky. His specialty is geotechnical engineering which includes

sub-surface exploration and foundation design. He has served as project and principal engineer on various projects similar to the applicant's. These projects include construction, tower crane foundations, and nexrad doppler radar towers, other mobile telephone towers and elevated water towers. Foundation types for these towers have included drilled piers, auger-cast piles, driven piles and spread footings. Design of the tower and foundation was performed by FWT Design of Ft. Worth, Texas. The Applicant uses qualified installation crews and site inspectors for construction of its towers. The tower and foundation drawings are signed and sealed by Ta-Wen Lee, a professional engineer registered in Kentucky.

9. The public convenience and necessity require the construction of this additional Cell Facility. The additional Cell Facility is essential to improve service to Applicant's current customers in that transmission and reception "weak spots" within the area to be covered by the Cell Facility will be substantially reduced. The Cell Facility will also increase the system's capacity to meet the increasing demands for cellular service in Kentucky.

The process that was used in selecting the site for the proposed Cell Facility by the applicant's radio frequency engineers was consistent with the process used for selecting generally all other existing cell facilities within the licensed area. The engineers used computer programs to locate cell sites that will enable the cell facilities to serve the Federal Communications Commission certificated territory without extending beyond its approved boundary and to meet other mandates of the Commission. The engineers select the optimum site in terms of elevation and location to provide the best quality service to customers in the service area. A map of the area in which the tower is proposed to be located, that is drawn to scale and that clearly depicts

the necessary search area within which a site should be located as determined by the Applicant's Radio Frequency Engineers is attached as **Exhibit E**.

It is imperative that the proposed Cell Facility be constructed to allow Applicant to meet its licensing requirements as mandated by the Federal Communications Commission and to further meet the increasing demands for cellular service in the licensed area.

10. The Cell Facility will serve an area totally within Applicant's current service area in the licensed area.

11. Since the proposed Cell Facility will serve only the licensed area, no further approvals by the Federal Communications Commission ("FCC") are required. See 47 C.F.R. §24.11(b), "[b]lanket licenses are granted for each market and frequency block. Applications for individual sites are not required and will not be accepted."

12. The Federal Aviation Administration ("FAA") determined on July 2, 2007 that the proposed construction would not exceed FAA obstruction standards and would not be a hazard to air navigation. The determination from the FAA is attached as **Exhibit F**. The Kentucky Airport Zoning Commission ("KAZC") determined on June 23, 2007 that Applicant's application for a permit to construct the proposed facility was approved. A copy of the KAZC determination is attached as **Exhibit G**.

13. The proposed location of the tower is not within a jurisdiction that has adopted planning and zoning regulations in accordance with KRS Chapter 100. The Applicant has notified the Taylor County Judge Executive, by certified mail, return receipt requested, of the proposed construction. The Applicant included in the notice the Commission docket number under which the application will be processed and informed said person of his right to request intervention. A copy of the notice is attached as

Exhibit H.

14. The Cell Facility will be located at 494 Capps Road, Campbellsville, Taylor County, Kentucky. Appropriate notices 2' X 4' with the word "TOWER" in letters at least four inches high, have been posted in a visible location on the proposed site and on the nearest public road and shall remain posted for at least two (2) weeks after the Application is filed. The location of the proposed facility has been published in a newspaper of general circulation in Taylor County, Kentucky. The Cell Facility's coordinates are: Latitude: 37° 18' 11.89"; Longitude: 85° 17' 03.01".

15. Clear directions to the proposed site from the county seat are:

From Blankenbaker drive, take I-64 east to Gene Snyder and turn south to exit 23 (Highway 155) and go to Taylorsville. Take Highway 55 south from Taylorsville through Lebanon to Campbellsville. Turn left on Highway 70 East and go approximately 1.2 miles, then turn right onto Highway 372 (Smith Ridge Road) to the Green River Marina. Go approximately 3 miles and turn left onto Capps Road. Follow this approximately 1 mile. Site is on the left just past the sharp curve.

The telephone number for the person preparing the directions is (502) 297-6232 and the individual's name is Bob Crammer. The Survey identifies every structure within 500' of the proposed tower, and all easements and existing structures within 200' of the access drive, including the intersection with the Public Street System, drawn to a scale no less than one (1) inch equals 200'.

16. Applicant has notified every person who is contiguous or within 500' of the proposed tower by certified mail, return receipt requested, of the proposed construction. Applicant included in said notice the Commission docket number under which the Application will be processed and informed each person of his or her right to request intervention. A list of the property owners and copies of the certified letters sent to the referenced property owners are attached as **Exhibit I**. Copies of the return receipts will

be filed with the Commission when received.

17. The site for the proposed Facility is located outside the incorporated limits of the City of Campbellsville and is zoned agricultural. The area is rural in nature with vacant land and few residences. The proposed facility will improve coverage in the Green River area of Taylor County and will provide 911 emergency coverage in order to meet the continuing demands of location services.

18. Applicant has considered the likely effects of the installation on nearby land uses and values and has concluded that there is no more suitable location reasonably available from which adequate service can be provided. Applicant attempted to collocate on existing towers or structures, however, there are no such existing towers or structures in the vicinity of the proposed site.

19. The site for the Cell Facility is to be leased from James Lloyd Capps of Campbellsville, Kentucky. A copy of the Site Lease with Option Agreement is attached as **Exhibit J**.

20. The names of all public utilities, corporations, or persons with whom the proposed new construction is likely to compete is Sprint PCS, AT&T Wireless and Verizon Wireless.

21. Applicant plans to finance the construction of the Cell Facility through the use of working capital. If sufficient funds are not available from this source, the company will obtain funds through short-term loans payable within two years.

22. Any customer complaints may be reported by dialing 611 on the customer's cellular phone.

WHEREFORE, Applicant requests that the Commission, pursuant to KRS

278.020, grant a Certificate of Public Convenience and Necessity to Applicant for construction and operation of the proposed Cell Facility and providing for such other relief as is necessary and appropriate.

Respectfully submitted,



W. Brent Rice
McBRAYER, McGINNIS, LESLIE &
KIRKLAND, PLLC
201 East Main Street, Suite 1000
Lexington, KY 40507
Phone: 859/231-8780
COUNSEL FOR POWERTEL/MEMPHIS, INC.
d/b/a T-MOBILE

P:\DonnaW\My Documents\WBR\powertel memphis\north green river\psc application doc

LIST OF EXHIBITS

- | | |
|-----------|--|
| Exhibit A | Applicant Adoption Notices |
| Exhibit B | Site Plan and Survey |
| Exhibit C | Tower and Foundation Profile |
| Exhibit D | Report of Geotechnical Exploration |
| Exhibit E | Search Area Map |
| Exhibit F | FAA Determination |
| Exhibit G | KAZC Determination |
| Exhibit H | Correspondence to County Judge Executive |
| Exhibit I | Notice to Adjoining Property Owners |
| Exhibit J | Site Lease Agreement |

Federal Communications Commission
Wireless Telecommunications Bureau

Radio Station Authorization (Reference Copy Only)

This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.

Licensee: Powertel Memphis Licenses, Inc

ATTN Dan Menser
Powertel Memphis Licenses, Inc
12920 SE 38th Street
Bellevue, WA 98006

FCC Registration Number (FRN): 0001832807	
Call Sign: KNLH399	File Number:
Radio Service: CW - PCS Broadband	

Grant Date 04/28/1997	Effective Date 01/09/2006	Expiration Date 04/28/2007	Print Date 01/20/2006
--------------------------	------------------------------	-------------------------------	--------------------------

Market Number: BTA252	Channel Block: E	Sub-Market Designator: 0
Market Name: Lexington, KY		

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date
04/28/2002			

Special Conditions or Waivers/Conditions

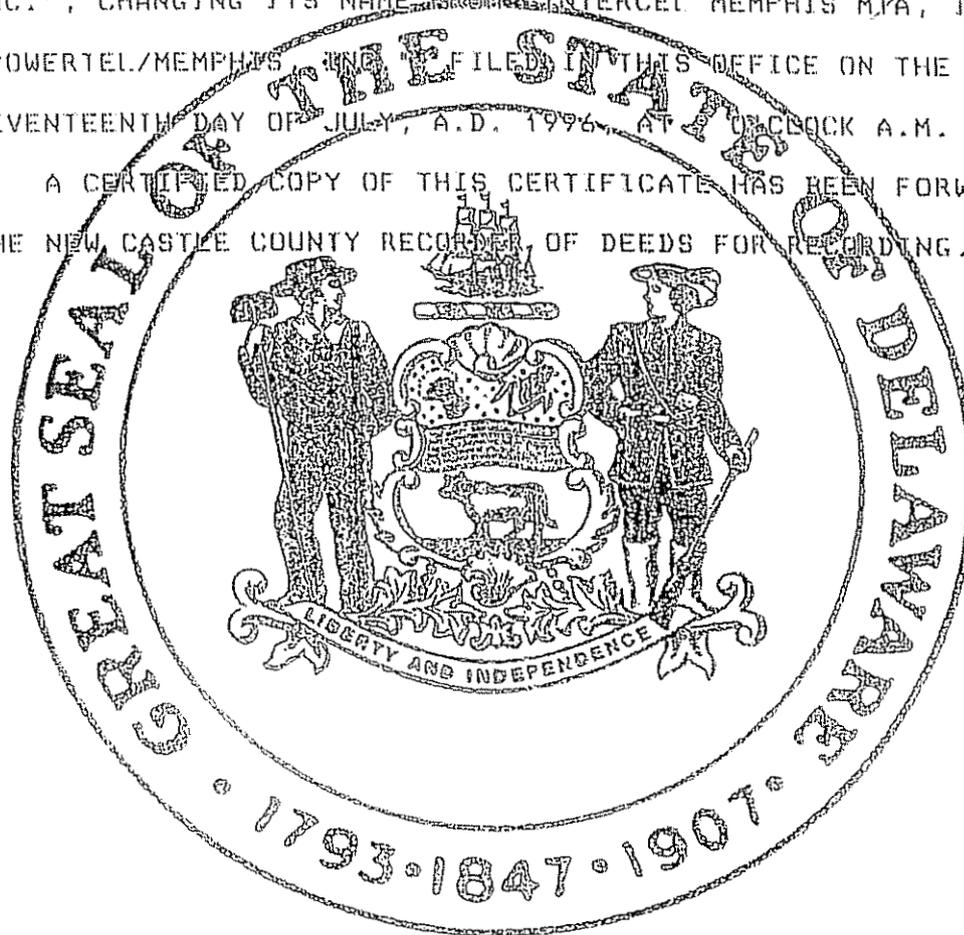
Conditions
Pursuant to Section 309(h) of the Communications Act of 1934, as amended, 47 U.S.C. Section 309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. Section 310(d). This license is subject in terms to the right of use or control conferred by Section 706 of the Communications Act of 1934, as amended. See 47 U.S.C. Section 706.

A graphical representation of the geographic area authorized to this call sign may be generated by selecting 'License Search' at the following web address: <http://www.fcc.gov/wtb/uls/>.

State of Delaware
Office of the Secretary of State

I, EDWARD J. FREEL, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF AMENDMENT OF "INTERCEL MEMPHIS MTA, INC.", CHANGING ITS NAME FROM "INTERCEL MEMPHIS MTA, INC." TO "POWERTEL/MEMPHIS, INC." FILED IN THIS OFFICE ON THE SEVENTEENTH DAY OF JULY, A.D. 1996, AT 10 O'CLOCK A.M.

A CERTIFIED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS FOR RECORDING.



Edward J. Freel

Edward J. Freel, Secretary of State



2447268 8100

960207691

AUTHENTICATION:

DATE:

8030247

07-17-96

CERTIFICATE OF AMENDMENT
OF
CERTIFICATE OF INCORPORATION
OF
INTERCEL MEMPHIS MTA, INC.

InterCel Memphis MTA, Inc. (the "Corporation"), a corporation organized and existing under the General Corporation Law of the State of Delaware, does hereby certify as follows:

FIRST: That in accordance with the requirements of Section 242 of the General Corporation Law of the State of Delaware, the Board of Directors of the Corporation, acting by written consent signed by all of the directors of the Corporation pursuant to Section 141(f) of the General Corporation Law of the State of Delaware, duly adopted resolutions: (1) proposing and declaring advisable the changing of the Corporation's name to "Powertel/Memphis, Inc.," (2) proposing and declaring advisable the amendment of the Certificate of Incorporation of the Corporation to reflect such change and (3) recommending that such name change and amendment be submitted to the sole stockholder of the Corporation for consideration, action and approval.

SECOND: That the amendment to the Certificate of Incorporation of the Corporation is as follows:

ARTICLE FIRST of the Certificate of Incorporation of the Corporation is hereby amended to read in its entirety as follows:

"FIRST. The name of the corporation is
Powertel/Memphis, Inc (the "Corporation")."

THIRD: That thereafter, pursuant to resolution of the Board of Directors, the sole stockholder of the Corporation, acting by written consent in accordance with Sections 228 and 229 of the General Corporation law of the State of Delaware, duly approved such name change and the aforesaid amendment to the Certificate of Incorporation of the Corporation to reflect such name change

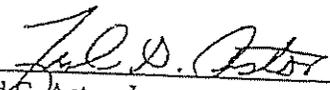
FOURTH: That the aforesaid amendment to the Certificate of Incorporation of the Corporation was duly adopted in accordance with the provisions of Sections 141(f), 228, 229 and 242 of the General Corporation Law of the State of Delaware.

FIFTH: That upon this Certificate of Amendment of Certificate of Incorporation becoming effective, the name of the Corporation shall be changed to "Powertel/Memphis, Inc."

IN WITNESS WHEREOF, InterCel Memphis MTA, Inc. has caused this Certificate of Amendment of Certificate of Incorporation to be signed by Allen E. Smith, its President, and attested by Fred G. Astor, Jr., its Secretary, on July 9, 1996.

By: 
Allen E. Smith
President

Attest:


Fred G. Astor, Jr.
Secretary



P16

Powertel/Kentucky, Inc. merges into
Powertel/Memphis, Inc.

Delaware

PAGE 1

The First State

I, HARRIET SMITH WINDSOR, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF MERGER, WHICH MERGES:

"POWERTEL/KENTUCKY, INC.", A DELAWARE CORPORATION,
WITH AND INTO "POWERTEL/MEMPHIS, INC." UNDER THE NAME OF
"POWERTEL/MEMPHIS, INC.", A CORPORATION ORGANIZED AND EXISTING
UNDER THE LAWS OF THE STATE OF DELAWARE, AS RECEIVED AND FILED
IN THIS OFFICE THE TWENTY-FIRST DAY OF DECEMBER, A.D. 2005, AT
11:30 O'CLOCK A.M.

AND I DO HEREBY FURTHER CERTIFY THAT THE EFFECTIVE DATE OF
THE AFORESAID CERTIFICATE OF MERGER IS THE FIRST DAY OF JANUARY,
A.D. 2006, AT 12:30 O'CLOCK A.M.

A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE
NEW CASTLE COUNTY RECORDER OF DEEDS.

2447268 8100M

051046113



Harriet Smith Windsor

Harriet Smith Windsor, Secretary of State
AUTHENTICATION: 4400474

DATE: 12-23-05

State of Delaware
Secretary of State
Division of Corporations
Delivered 11:30 AM 12/21/2005
FILED 11:30 AM 12/21/2005
SRV 051046113 - 2447268 FILE

STATE OF DELAWARE
CERTIFICATE OF MERGER OF
DOMESTIC CORPORATIONS

Pursuant to Title 8, Section 251(c) of the Delaware General Corporation Law, the undersigned corporation executed the following Certificate of Merger:

FIRST: The name of the surviving corporation is Powertel/Memphis, Inc.
_____ and the name of the corporation being
merged into this surviving corporation is Powertel/Kentucky, Inc.

SECOND: The Agreement of Merger has been approved, adopted, certified, executed and acknowledged by each of the constituent corporations,

THIRD: The name of the surviving corporation is Powertel/Memphis, Inc
_____ a Delaware corporation

FOURTH: The Certificate of Incorporation of the surviving corporation shall be its Certificate of Incorporation

FIFTH: The merger is to become effective on January 1, 2006 at 12:30 a.m.

SIXTH: The Agreement of Merger is on file at _____
12920 SE 38th Street, Bellevue, WA 98006, the place of business
of the surviving corporation

SEVENTH: A copy of the Agreement of Merger will be furnished by the surviving corporation on request without cost to any stockholder of the constituent corporations

IN WITNESS WHEREOF, said surviving corporation has caused this certificate to be signed by an authorized officer, the 15th day of December, A.D.,
2005

By: /s/ David A. Miller
Authorized Officer

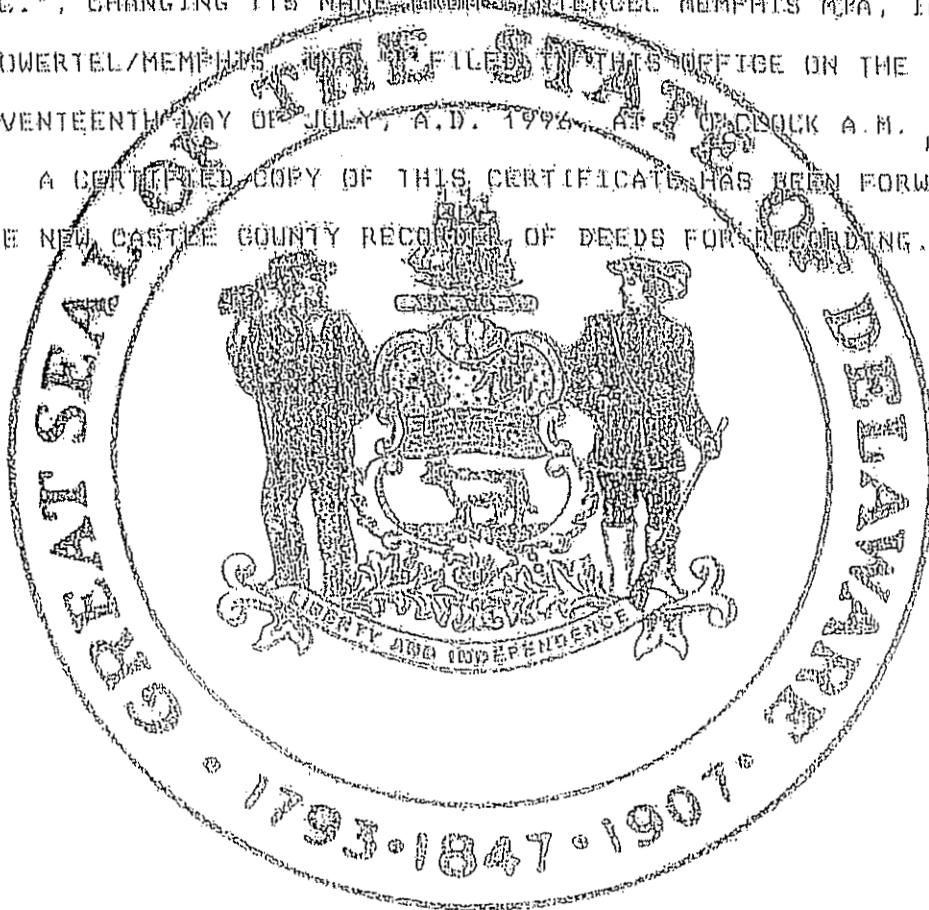
Name: David A. Miller
Print or Type

Title: Senior Vice President

State of Delaware
Office of the Secretary of State

I, EDWARD J. FREEL, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF AMENDMENT OF "INTERCEL MEMPHIS MIA, INC.", CHANGING ITS NAME FROM "INTERCEL MEMPHIS MIA, INC." TO "POWERTEL/MEMPHIS MIA, INC." FILED IN THIS OFFICE ON THE SEVENTEENTH DAY OF JULY, A.D. 1996 AT 7:00 O'CLOCK A.M.

A CERTIFIED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDS OF DEEDS FOR RECORDING.



Edward J. Freel, Secretary of State



2447268 8100

960207691

AUTHENTICATION:

8030247

DATE:

07-17-96

CERTIFICATE OF AMENDMENT
OF
CERTIFICATE OF INCORPORATION
OF
INTERCEL MEMPHIS MTA, INC.

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FIRST: That in accordance with the requirements of Section 242 of the General Corporation Law of the State of Delaware, the Board of Directors of the Corporation, acting by written consent signed by all of the directors of the Corporation pursuant to Section 141(f) of the General Corporation Law of the State of Delaware, duly adopted resolutions: (1) proposing and declaring advisable the changing of the Corporation's name to "Powertel/Memphis, Inc.;" (2) proposing and declaring advisable the amendment of the Certificate of Incorporation of the Corporation to reflect such change and (3) recommending that such name change and amendment be submitted to the sole stockholder of the Corporation for consideration, action and approval

SECOND: That the amendment to the Certificate of Incorporation of the Corporation is as follows:

ARTICLE FIRST of the Certificate of Incorporation of the Corporation is hereby amended to read in its entirety as follows:

"FIRST The name of the corporation is
Powertel/Memphis, Inc. (the "Corporation")"

THIRD: That thereafter, pursuant to resolution of the Board of Directors, the sole stockholder of the Corporation, acting by written consent in accordance with Sections 228 and 229 of the General Corporation Law of the State of Delaware, duly approved such name change and the aforesaid amendment to the Certificate of Incorporation of the Corporation to reflect such name change

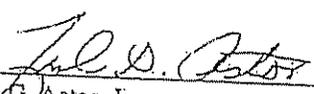
FOURTH: That the aforesaid amendment to the Certificate of Incorporation of the Corporation was duly adopted in accordance with the provisions of Sections 141(f), 228, 229 and 242 of the General Corporation Law of the State of Delaware.

FIFTH: That upon this Certificate of Amendment of Certificate of Incorporation becoming effective, the name of the Corporation shall be changed to "Powertel/Memphis, Inc."

IN WITNESS WHEREOF, InterCel Memphis MTA, Inc. has caused this Certificate of Amendment of Certificate of Incorporation to be signed by Allen E. Smith, its President, and attested by Fred G. Astor, Jr., its Secretary, on July 9, 1996

By: 
Allen E. Smith
President

Attest:


Fred G. Astor, Jr.
Secretary





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- [Statement of Change of Reg. Agent/Office \(PDF\)](#)
- [Statement of Change of Principal Office \(PDF\)](#)

Printable Version of this page

Organization Number 0412295
Name POWERTEL/MEMPHIS, INC
Profit or Non-Profit P - Profit
Company Type FCO - Foreign Corporation
Status A - Active
Standing G - Good
State DE
File Date 2/23/1996
Authority Date 2/23/1996
Last Annual Report 2/16/2005
Principal Office 12920 S. E. 38TH STREET
 BELLEVUE, WA 98006
Registered Agent CSC-LAWYERS INCORPORATING
 SERVICE CO.
 421 W MAIN ST.
 FRANKFORT, KY 40601

Current Officers

President Robert P. Dotson
Vice President David A Milelr

Vice President [Cregg B. Baumbaugh](#)
 Secretary [David A Miller](#)
 Director [Susan Swenson](#)
 Director [David A. Miller](#)
 Director [Brian Kirkpatrick](#)
 Officer [Lee A Tostevin](#)

Assumed Names	Status
T-MOBILE KENTUCKY	Active
T-MOBILE MEMPHIS	Active

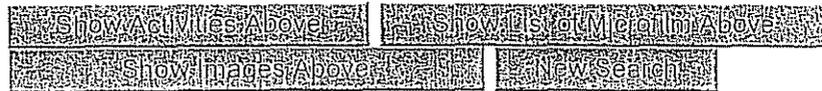
Previous Names

Certificates Available

[Certificate of Authorization](#)

[Certificate of Registered Agent \(Domestic and Foreign\)](#)

Click on a certificate title to purchase it. Certificates are \$10.00, payable by credit card or prepaid account. They are stored and returned as PDF documents. You must have Adobe PDF Reader to print the document.



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SHEET 1

-  - VICINITY AND 500' STRUCTURAL MAP
-  - ABUTTING PROPERTY OWNERS
-  - U.S.G.S. QUAD MAP

SHEET 2

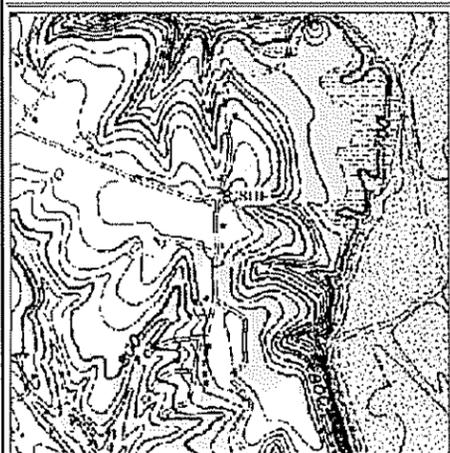
-  - PROPOSED LEASE AREA
-  - LEGAL DESCRIPTIONS
-  - FLOOD ZONE DATA



GRID NORTH
TRUE NORTH
00° 16' 56"

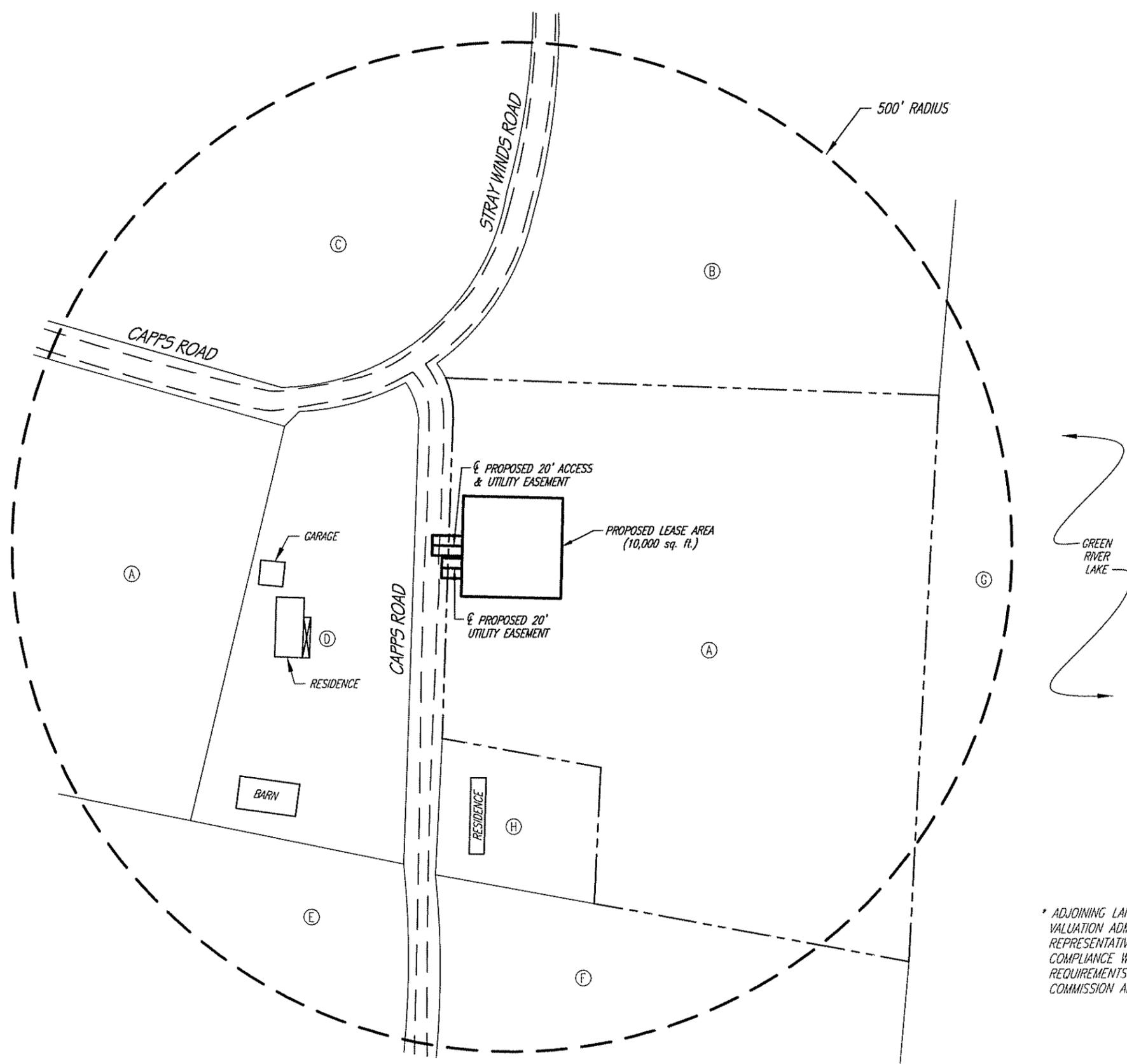
GRID NORTH BY G.P.S. OBSERVATION, ±10 SECONDS

NORTH IS BASED ON THE KENTUCKY STATE PLANE COORDINATE SYSTEM, SOUTHERN ZONE AND WAS DETERMINED BY COMPUTATION FROM G.P.S. OBSERVATION ON JUNE 18, 2008



QUAD MAP
SCALE: 1"=2000'

U.S.G.S. 7 1/2 MINUTE QUAD MAP OF CAMPBELLVILLE, KY



MAP NO. 53, LOT 79
JAMES LLOYD CAPPS
494 CAPPS ROAD
CAMPBELLVILLE, KY 42718
DEED BOOK 85, PAGE 565
NO ZONING

MAP NO. 53, LOT 080
EUGENE H. SHIVELY
803 LEBANON AVE.
CAMPBELLVILLE, KY 42718
DEED BOOK 111, PAGE 293
NO ZONING

MAP NO. 53, LOT 079-02
ERIC K. & BROOKE M. SEROWLES
135 RUSTIC HAVEN DRIVE
CAMPBELLVILLE, KY 42718
DEED BOOK 261, PAGE 404
NO ZONING

MAP NO. 53, LOT 091-06
ROGER L. & ANITA R. CARLQUIST
807 STRAY WINDS
CAMPBELLVILLE, KY 42718
DEED BOOK 235, PAGE 086
NO ZONING

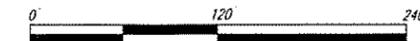
MAP NO. 53, LOT 091-08
MARK WRIGHT
2570 WEST SALOMA ROAD
CAMPBELLVILLE, KY 42718
DEED BOOK 228, PAGE 790
NO ZONING

MAP NO. 53, LOT 091-03
CHARLES KEITH MCHOLAN
837 N. POPELICK ROAD
LOUISVILLE, KY 40243
DEED BOOK 236, PAGE 309
NO ZONING

MAP NO. 53, LOT 65
GREEN RIVER RESERVOIR
CAMPBELLVILLE, KY 42718
NO DEED OF RECORD FOUND
NO ZONING

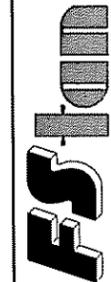
MAP NO. 53, LOT 78
WANDA J. FRENCH
918 STRAY WINDS ROAD
CAMPBELLVILLE, KY 42718
DEED BOOK 231, PAGE 552
NO ZONING

* ADJOINING LAND OWNERS LISTED ARE BASED ON PROPERTY VALUATION ADMINISTRATION ("PVA") RECORDS ISSUED BY A REPRESENTATIVE FROM TAYLOR COUNTY, TO BE IN COMPLIANCE WITH ALL STATUTORY AND REGULATORY REQUIREMENTS BEFORE THE KENTUCKY PUBLIC SERVICE COMMISSION AND FOR TELECOMMUNICATION USE ONLY.



(IN FEET)
SCALE: 1" = 120'

T-Mobile



F.S. Land Company
T. Alan Neal Company
Land Surveyors and Consulting Engineers
Louisville, KY 40217
Phone: (502) 636-5865 (502) 636-5111
Fax: (502) 636-5263

"SITE SURVEY"

SITE NUMBER:	9LV1149
SITE NAME:	GREEN RIVER NORTH
SITE ADDRESS:	494 CAPPS ROAD CAMPBELLVILLE, KY 42718
PROPOSED T-MOBILE LEASE AREA:	AREA = 10,000 sq. ft.
PROPERTY OWNER:	DONALD & CAROLYN GAINS 494 CAPPS ROAD CAMPBELLVILLE, KY 42718
TAX MAP NUMBER:	53
PARCEL NUMBER:	79
SOURCE OF TITLE:	DEED BOOK 85, PAGE 565
DWG BY:	CDT
CHKD BY:	FSII
DATE:	06.20.08
FSIAN PROJECT NO.:	08-5306

REVISIONS:

RELOCATE LEASE AREA -	06.25.08
UTILITY EASEMENT -	07.07.08
SOURCE OF TITLE -	07.14.08

C1

SHEET 1

- S1 1 - VICINITY AND 500' STRUCTURAL MAP
- S1 2 - ABUTTING PROPERTY OWNERS
- S1 3 - U.S.G.S. QUAD MAP

SHEET 2

- S2 1 - PROPOSED LEASE AREA
- S2 2 - LEGAL DESCRIPTIONS
- S2 3 - FLOOD ZONE DATA

COORDINATE POINT LOCATION

NAD 1983
 LATITUDE: 37° 18' 11.89"
 LONGITUDE: 85° 17' 03.01"
 NAVD 1988
 ELEVATION: 883' AMSL
 KENTUCKY STATE PLANE COORDINATE SOUTH ZONE
 (BLUE MARBLE GEOGRAPHIC CALCULATOR VERSION 3.0)
 NORTHING: 1993927.463
 EASTING: 1775915.431

PROJECT POWER POLE

UTILITY COMPANY: UNKNOWN
 IDENTIFICATION #: N/A

PROJECT BENCHMARK

NORTH: 1993976.188
 EAST: 1775966.686
 ELEVATION: 878.482
 LOCATION: BEING AN IPC SET AT THE NORTHEAST CORNER OF THE PROPOSED LEASE AREA

SYMBOL LEGEND

- WOOD POWER POLE
- LIGHT POLE
- GUY POLE
- TELEPHONE PEDESTAL
- GUY ANCHOR
- SANITARY SEWER MANHOLE
- DRAIN SEWER MANHOLE
- MANHOLE
- WATER VALVE
- WATER METER
- FIRE HYDRANT
- ELECTRIC BOX
- F.P. FENCE POST
- SET #5 REBAR (UNLESS OTHERWISE NOTED)
- EXISTING #5 REBAR (UNLESS OTHERWISE NOTED)

ABBREVIATIONS

- EP EDGE OF PAVEMENT
- ROW RIGHT OF WAY
- CL CENTERLINE
- RCP REINFORCED CONCRETE PIPE
- CONC CONCRETE
- CMP CORRUGATED METAL PIPE
- R SUBJECT PROPERTY LINE
- TC TOP OF CURB
- BC BOTTOM OF CURB
- POB POINT OF BEGINNING
- IPC IRON PIN CAPPED

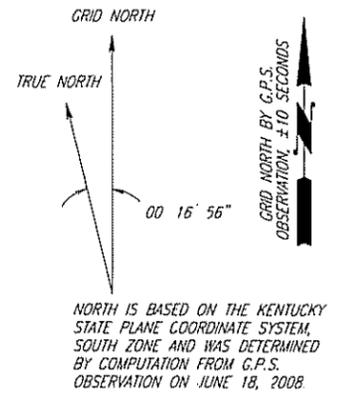
LINE LEGEND

- OVERHEAD ELECTRIC
- UNDERGROUND GAS LINE
- UNDERGROUND WATER LINE
- OVERHEAD ELECTRIC & TELEPHONE LINE
- OVERHEAD TELEPHONE LINE
- DRAINAGE/STORM SEWER LINE
- EXISTING FENCE
- PROPOSED FENCE
- SUBJECT PROPERTY BOUNDARY
- RIGHT OF WAY CENTERLINE

NOTE: SYMBOLS, ABBREVIATIONS, OR LINESYLES DO NOT NECESSARILY APPEAR ON DRAWING(S). USE ONLY AS APPLICABLE

UNDERGROUND UTILITIES
 CALL 2 WORKING DAYS
BEFORE YOU DIG
 INDIANA 1-800-382-5544
 KENTUCKY 1-800-752-6007
 UTILITIES PROTECTION SERVICE
 NON-MEMBERS MUST CALL DIRECTLY

The utility information shown on this plot, prepared by FSTAN was obtained from existing records and/or by field locations. It is the contractor's responsibility to verify their existence and location, and to contact the appropriate utility company for field locations.



LEGAL DESCRIPTIONS:

This is a description for T-Mobile, of an area to be leased from the property of James Lloyd Capps, which is further described as follows

PROPOSED LEASE AREA

Beginning of an IP with a plastic cap (no stamp number) found at the Northeast corner of the property conveyed to Roger L. & Anita R. Carquist in Deed Book 235, Page 086 in the Office of the Clerk of Taylor County, Kentucky, said IP being S 82°37'13" E - 138.90' from a Disc stamped "CAPPS 1963" found at the Northwest corner of said property, and being also N 02°04'55" E - 461.30' from an IP found at the Southeast corner of said property; thence S 25°43'48" E - 100.15' to a set #5 rebar with a cap stamped "STIAN #3282" on the property conveyed to James Lloyd Capps in Deed Book 85, Page 565 in said Clerk's Office, and the TRUE POINT OF BEGINNING of the Proposed Lease Area, thence S 88°33'00" E - 100.00' to a set #5 rebar with a cap stamped "STIAN #3282"; thence S 01°27'00" W - 100.00' to a set #5 rebar with a cap stamped "STIAN #3282"; thence N 88°33'00" W - 100.00' to a set #5 rebar with a cap stamped "STIAN #3282" being N 05°32'04" E - 277.42' from an IP found at the Southwest corner of the property conveyed to Wanda French in Deed Book 231, page 552 in said Clerk's Office, said found IP being N 79°33'58" W - 159.86' from a 2" IP found at the Southeast corner of said French property; thence N 01°27'00" E - 100.00' to the true point of beginning, containing 10,000 square feet as per survey by Frank L. Sellinger, II, PLS No. 3282 with FS/Tan Land Surveyors & Consulting Engineers, dated June 20, 2008, revised June 25, 2008.

CENTERLINE OF PROPOSED 20' ACCESS & UTILITY EASEMENT

Beginning of an IP with a plastic cap (no stamp number) found at the Northeast corner of the property conveyed to Roger L. & Anita R. Carquist in Deed Book 235, Page 086 in the Office of the Clerk of Taylor County, Kentucky, said IP being S 82°37'13" E - 138.90' from a Disc stamped "CAPPS 1963" found at the Northwest corner of said property, and being also N 02°04'55" E - 461.30' from an IP found at the Southeast corner of said property; thence S 25°43'48" E - 100.15' to a set #5 rebar with a cap stamped "STIAN #3282" on the property conveyed to James Lloyd Capps in Deed Book 85, Page 565 in said Clerk's Office, thence S 01°27'00" W - 50.00' to a set #5 rebar with a cap stamped "STIAN #3282" and the TRUE POINT OF BEGINNING of the Centerline of the Proposed 20' Access & Utility Easement, thence N 88°33'00" W - 29.84' to a "MAG" nail set in the centerline of Capps Road and the end of the easement as per survey by Frank L. Sellinger, II, PLS No. 3282 with FS/Tan Land Surveyors & Consulting Engineers, dated June 20, 2008, revised June 25, 2008.

CENTERLINE OF PROPOSED 20' UTILITY EASEMENT

Beginning of an IP with a plastic cap (no stamp number) found at the Northeast corner of the property conveyed to Roger L. & Anita R. Carquist in Deed Book 235, Page 086 in the Office of the Clerk of Taylor County, Kentucky, said IP being S 82°37'13" E - 138.90' from a Disc stamped "CAPPS 1963" found at the Northwest corner of said property, and being also N 02°04'55" E - 461.30' from an IP found at the Southeast corner of said property; thence S 25°43'48" E - 100.15' to a set #5 rebar with a cap stamped "STIAN #3282" on the property conveyed to James Lloyd Capps in Deed Book 85, Page 565 in said Clerk's Office, thence S 01°27'00" W - 72.22' to a set #5 rebar with a cap stamped "STIAN #3282" and the TRUE POINT OF BEGINNING of the Centerline of the Proposed 20' Utility Easement, thence N 88°33'00" W - 20.00' to a set #5 rebar with a cap stamped "STIAN #3282" and the end of the easement as per survey by Frank L. Sellinger, II, PLS No. 3282 with FS/Tan Land Surveyors & Consulting Engineers, dated June 20, 2008, revised June 25, 2008.

STATE AND COUNTY ROAD RIGHT-OF-WAY

- 1) ANY RAD. STREET, HIGHWAY OR PARCEL OF GROUND DEDICATED AND LAID OFF AS A PUBLIC WAY AND USED WITHOUT RESTRICTIONS BY THE GENERAL PUBLIC FOR FIVE CONSECUTIVE YEARS. SHALL CONCLUSIVELY BE PRESUMED TO BE A PUBLIC ROAD
- 2) IN THE ABSENCE OF ANY RECORD, THE WIDTH OF A PUBLIC ROAD RIGHT-OF-WAY SHALL BE PRESUMED TO EXTEND TO AND INCLUDE THAT AREA LYING OUTSIDE THE SHOULDERS AND DITCH LINES AND WITHIN ANY LANDMARKS SUCH AS FENCES, FENCE POSTS, CORNER STONES OR OTHER SIMILAR MONUMENTS INDICATING THE BOUNDARY LINE.
- 3) IN THE ABSENCE OF BOTH RECORD OR LANDMARK, THE RIGHT-OF-WAY OF A PUBLIC ROAD SHALL BE DEEMED TO EXTEND TO AND INCLUDE THE SHOULDERS AND DITCH LINES ADJACENT TO SAID ROAD. AND TO THE TOP OF CUTS OR TOE OF FILLS WHERE SUCH EXIST (KRS 170.025)

SURVEYORS NOTES

SOURCE OF BEARING IS A G.P.S. OBSERVATION ON JUNE 18, 2008.
 SITE SHOWN SUBJECT TO RIGHT OF WAYS AND EASEMENTS SHOWN HEREON OR NOT.
 NO SEARCH OF PUBLIC RECORDS HAS BEEN PERFORMED BY THIS FIRM TO DETERMINE ANY DEFECTS AND/OR ANGIQUITIES IN THE TITLE OF THE PARENT TRACT.
 THIS DRAWING DOES NOT REPRESENT A BOUNDARY SURVEY.
 EXISTING CONTOURS ARE AT ONE FOOT INTERVALS.

LAND SURVEYOR'S CERTIFICATE

Type "A" Survey - Unadjusted linear traverse closure: 1 in 32,100.
 TO ALL PARTIES INTERESTED IN TITLE TO PREMISES SURVEYED I hereby certify that this plot and survey were made under my supervision, and that the angular and linear measurements, as witnessed by monuments shown hereon, are true and correct to the best of my knowledge and belief.
 This survey and plat meets or exceeds the minimum standards of the governing authorities.
 This property is subject to any recorded easements or right of ways not shown hereon

STATE OF KENTUCKY

FRANK L. SELLINGER #3282

LICENSED PROFESSIONAL LAND SURVEYOR

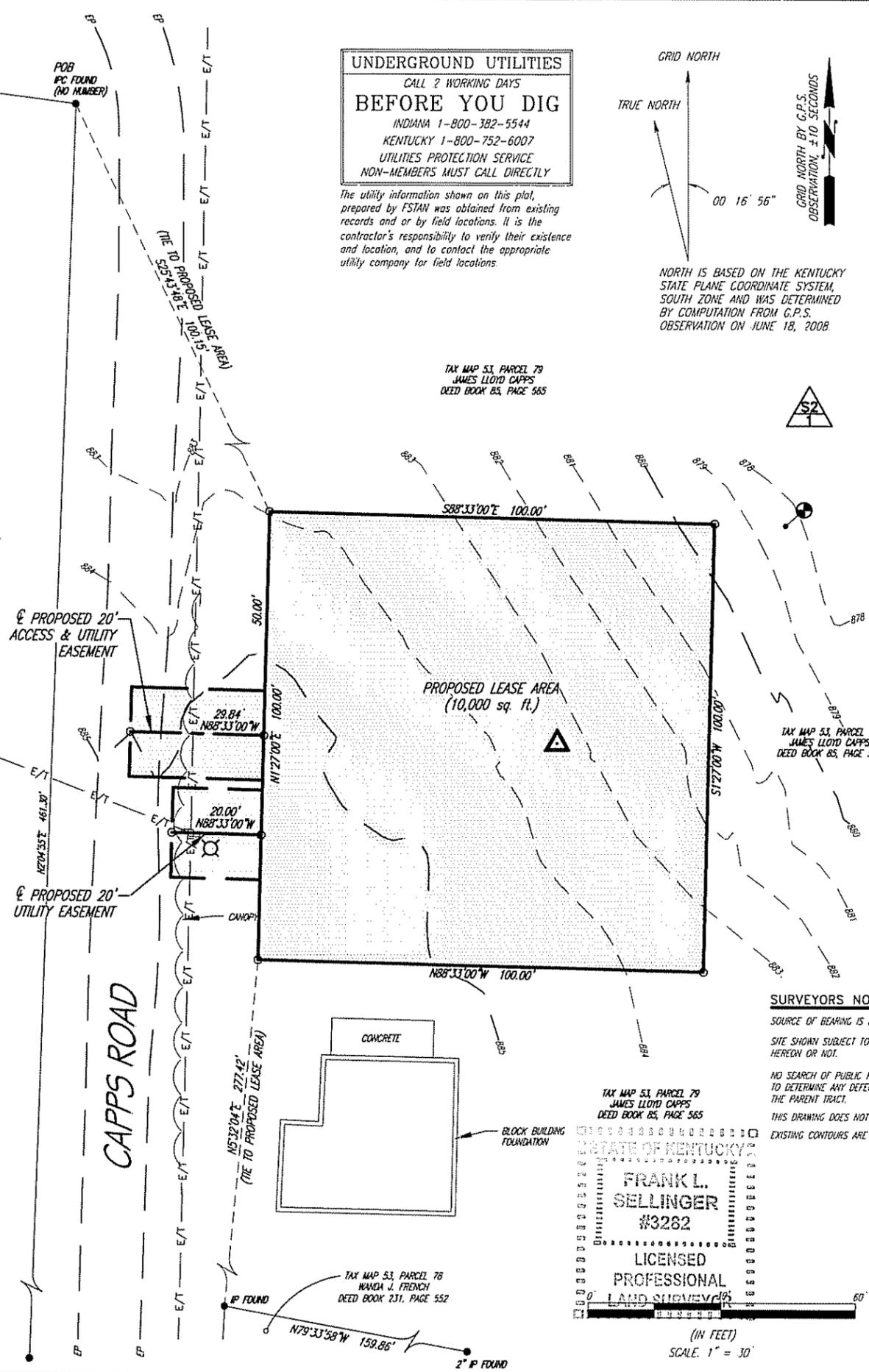
(IN FEET)
 SCALE: 1" = 30'

REFERENCED AS "EXHIBIT C"

OWNER APPROVAL _____ DATE _____

T-MOBILE APPROVAL _____ DATE _____

I HAVE REVIEWED THE FLOOD INSURANCE RATE MAPS (FIRM) MAP NO. 2102120100B DATED 02.06.91 AND THE PROPOSED LEASE AREA DOES NOT APPEAR TO BE IN A FLOOD PRONE AREA. THE PROPOSED LEASE AREA IS LOCATED IN ZONE X.



FSTAN

F.S. Land Company
 T. Alan Neal Company
 Land Surveyors and Consulting Engineers
 PO Box 17546 2313/2315 Chittenden Drive
 Louisville, KY 40217
 Phone: (502) 635-5866 (502) 636-5111
 Fax: (502) 636-5263

"SITE SURVEY"

SITE NUMBER: BLV1149

SITE NAME: GREEN RIVER NORTH

SITE ADDRESS: 494 CAPPS ROAD, CAMPBELLSVILLE, KY 42714

PROPOSED LEASE AREA: 10,000 sq. ft.

PROPERTY OWNER: JAMES LLOYD CAPPS, 494 CAPPS ROAD, CAMPBELLSVILLE, KY 42714

TAX MAP NUMBER: 53

PARCEL NUMBER: 79

SOURCE OF TITLE: DEED BOOK 85, PAGE 565

DWG BY: DJG

CHRD BY: FSII

DATE: 06.20.08

FSTAN PROJECT NO.: 08-5306

SHEET 2 OF 2

REVISIONS:

RELOCATE LEASE AREA - 06.25.08

UTILITY EASEMENT - 07.07.08

SOURCE OF TITLE - 07.14.08

C2



P.O. BOX 8597 FORT WORTH, TX 76124-0597
 PHONE: (800) 433-1816 FAX: (817) 255-8656

JOB DATA			
Page 1 of 1	Job No	J080716003	
By HD/tw	Design No.	S08-0276-A	
Chk'd By TW	Date	Jul 16 2008	
Structure 260-FT SST	Rev. No.	0	Rev. Date
Ref. No. ...s\08-0200\0276\J080716003\J080716003.out			
Design Standard	ANSI/TIA-222-G-2005 Addendum 1		

GENERAL DESIGN CONDITIONS	
Design Wind Speed: 90.00(mph)	Structure Class: II
Iced Wind Speed: 30.00(mph)	Exposure Category: C
Service Wind Speed: 60.00(mph)	Topographic Category: 1
Ice Thickness: 0.75(in)	-

ANTENNA LIST					
No.	Elev.(FT)	Antenna	Mount Type	AZ (°)	COAX
1	260	(1) Lightning Rod		0	
2	260	(4) TMBX-6517-R2M	AM110-P-12'	0	18)LDF7P-50A
3	260	(4) TMBX-6517-R2M	AM110-P-12'	120	
4	260	(4) TMBX-6517-R2M	AM110-P-12'	240	
5	250	(4) TMBX-6517-R2M	AM110-P-12'	0	12)LDF7P-50A
6	250	(4) TMBX-6517-R2M	AM110-P-12'	120	
7	250	(4) TMBX-6517-R2M	AM110-P-12'	240	
8	240	(4) TMBX-6517-R2M	AM110-P-12'	0	12)LDF7P-50A
9	240	(4) TMBX-6517-R2M	AM110-P-12'	120	
10	240	(4) TMBX-6517-R2M	AM110-P-12'	240	
11	230	(4) TMBX-6517-R2M	AM110-P-12'	0	4)LDF7P-50A
12	230	(4) TMBX-6517-R2M	AM110-P-12'	120	4)LDF7P-50A
13	230	(4) TMBX-6517-R2M	AM110-P-12'	240	4)LDF7P-50A
14	220	(4) TMBX-6517-R2M	AM110-P-12'	0	4)LDF7P-50A
15	220	(4) TMBX-6517-R2M	AM110-P-12'	120	4)LDF7P-50A
16	220	(4) TMBX-6517-R2M	AM110-P-12'	240	4)LDF7P-50A

LINEAR APPURTENANCES	
STEP BOLTS ON ONE LEG	
(1)-Waveguide Ladder: 0'-260' On Tower Face (AZ): 60 deg	
(1)-Waveguide Ladder: 0'-250' On Tower Face (AZ): 180 deg	
(1)-Waveguide Ladder: 0'-240' On Tower Face (AZ): 300 deg	

COAXIAL LINES DISTRIBUTION				
HEIGHT	FACE 1	FACE 2	FACE 3	TOTAL
260'	18D	-	-	18
250'	-	12D	-	12
240'	-	-	12D	12
230'	4D	4D	4D	12
220'	4D	4D	4D	12

(D = DOUBLE STACKED)



07-17-08



(1) 5/8" BOLT EA END
 (EL 10' to 70')

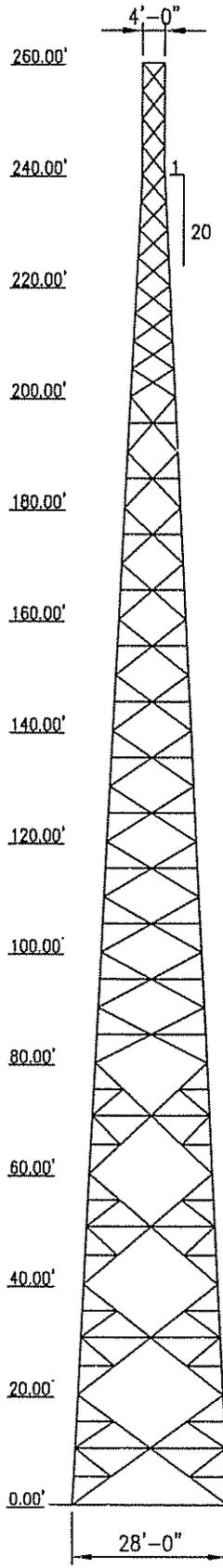
MEMBER TABLE LEGEND	
E	L3X3X1/4
D	L3X3X3/16
F	L3 1/2X3 1/2X1/4
C	L2 1/2X2 1/2X3/16
G	L4X4X1/4
B	L2X2X3/16
Y	L1 3/4X1 3/4X3/16

FACTORED BASE REACTIONS

UPLIFT/LEG:	544.9 KIPS	OT MOMENT:	14477.7 FT-KIPS
COMP /LEG:	630.8 KIPS	MAX. DOWNLOAD:	75.9 KIPS
HORIZ /LEG:	59.3 KIPS	TOTAL SHEAR:	98.8 KIPS
EST WEIGHT:	51.7 KIPS (No SPL or Gussets)		

ASTM													
50 KSI		A36				A325				A36			
LEGS (ø)	4 3/4	4 1/2	4 1/4	4 1/4	4 1/4	4	3 3/4	3 1/2	3 1/2	3 1/4	2 3/4	2 1/2	2
DIAGONALS	EE	EE	EE	EE	EE	F	E	D	D	D	B	B	Y
GIRTS	DD	CC	F	D	F	D	C	C	C	B	N/R	N/R	B
INT BRACING	F	D	D	D	D	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
SUB BRG.	F	D	D	D	D	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
SUB GIRTS	E	E	C	C	C	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
DIAG BOLTS (ø)	2-5/8	2-5/8	2-5/8	2-5/8	2-5/8	2-5/8	2-5/8	2-5/8	2-5/8	2-5/8	2-5/8	2-5/8	2-1/2
RDNT BOLTS (ø)	1-5/8	1-5/8	1-5/8	1-5/8	1-5/8	1-5/8	1-5/8	1-5/8	1-5/8	1-5/8	1-5/8	1-5/8	1-5/8
SPLICE BOLTS (ø)	N/R	6-1 1/2	6-1 3/8	6-1 3/8	6-1 3/8	6-1 1/4	6-1	6-1	6-1	6-1	6-3/4	6-3/4	4-5/8
ANCHOR RODS (ø)	(6) - 2 1/4" x 6'-6" TOTAL ANCHOR ROD LENGTH												

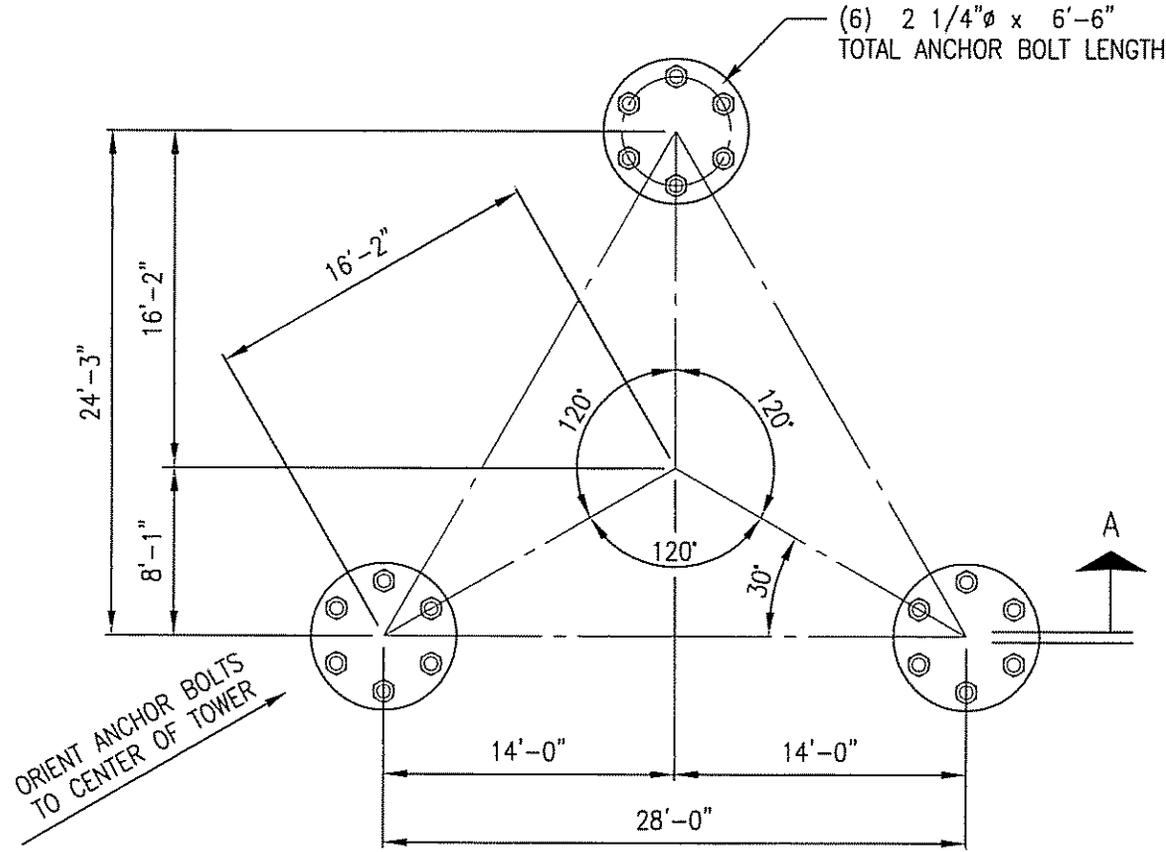
Note: DOUBLE LETTER SIGNIFY BACK TO BACK ANGLES



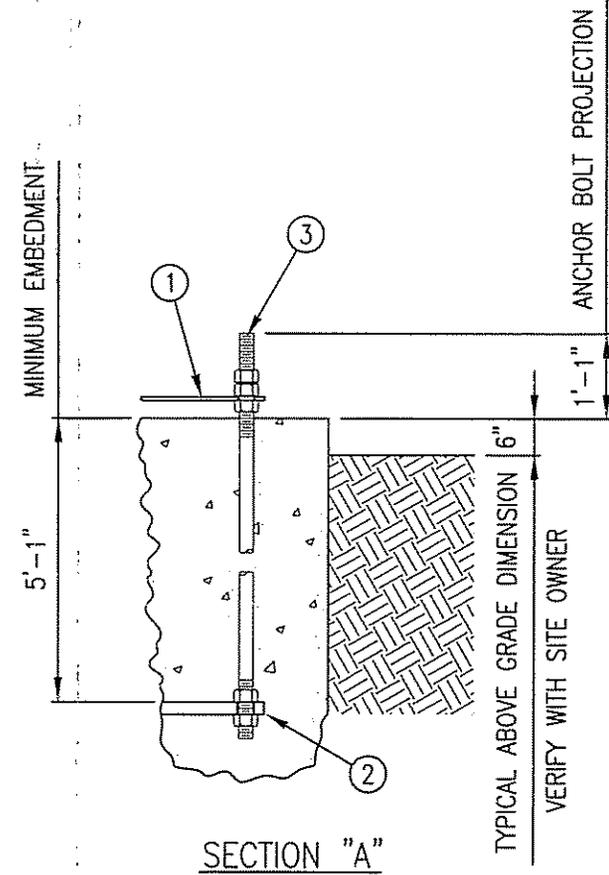
FIELD NOTES:

- 1.) VERIFY TOWER ORIENTATION WITH CUSTOMER.
- 2.) TOP OF FINISHED CONCRETE MUST BE AT THE SAME ELEVATION UNDER ALL TOWER LEGS.
- 3.) SEE FOUNDATION DESIGN FOR SPECIFIC INSTALLATION INFORMATION AND DESIGN CRITERIA.
- 4.) ANCHOR BOLTS TO BE SET WITH FURNISHED ANCHOR BOLT TEMPLATES.
- 5.) ANCHOR BOLT ORIENTATION - SEE BELOW
- 6.) ANCHOR BOLT THREADS ABOVE CONCRETE SHOULD BE PROTECTED DURING FOUNDATION INSTALLATION.
- 7.) REMOVE TOP TEMPLATE PRIOR TO SETTING TOWER BASE SECTION.

BILL OF MATERIAL				
ITEM	MARK NO.	QTY.	DESCRIPTION	WEIGHT/lbs
1	-----	3	TEMPLATE @ TOP	
2	-----	3	ANCHOR PLATE @ BOTTOM	
3	-----	18	2 1/4"Ø A36 ANCHOR ROD x 6'-6"	
4				
5				
6				
7				
8				
9				
10				
TOTAL GALVANIZED WEIGHT/lbs				



PLAN VIEW

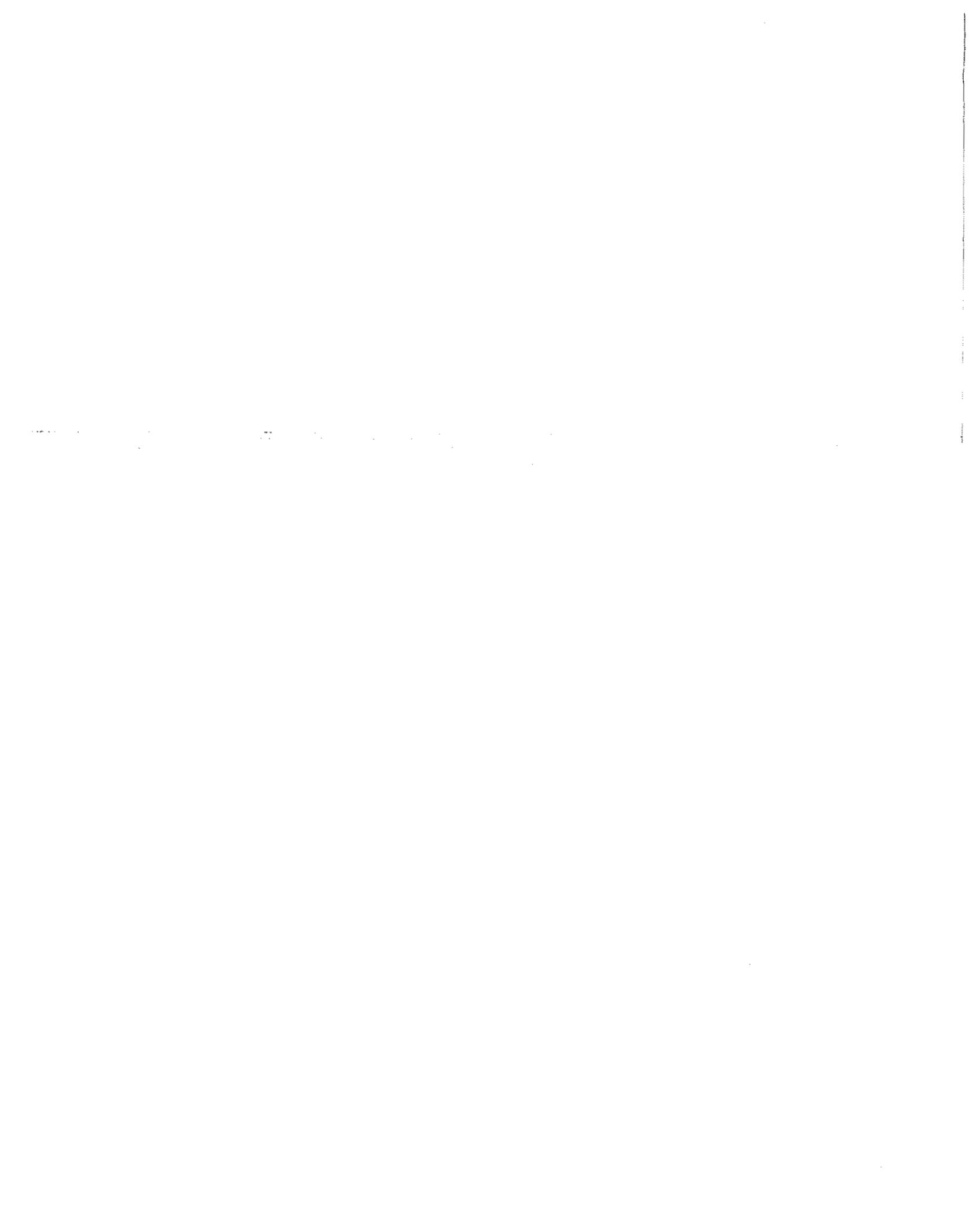


SECTION "A"

! PROPRIETARY AND CONFIDENTIAL !
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 PROPERTY OF FWT, INC. DUPLICATION OR DISSEMINATION OF THIS
 INFORMATION WITHOUT PRIOR WRITTEN CONSENT OF FWT, INC. IS
 PROHIBITED.

FWT, Inc.
 5750 East I-20
 Fort Worth, Texas 76119 U.S.A.
 (817) 255-3060 FAX (817) 255-8656

REV.	DATE	BY	INIT.	DESCRIPTION
DRAWN BY: TLEE		CHECKED BY: -		CAD FILE: C:\CUSTOM\DRAWING6.DWG\TLEE[17JUL08]9:47AM
SPECIFIC INFORMATION				SCALE: NONE
LV1149 GREEN RIVER NORTH- TAYLOR COUNTY- KY				DATE: 17-Jul-08
DRAWING TITLE				SHEET NO.
ANCHOR ROD INSTALLATION				SHEET 1 OF 1
JOB NO.				DRAWING NO.
J080716003				AB0000



File: L:\Designs\08-0200\0276\J080716003\J080716003.out
Contract: S08-0276-A:J080716003
Project: 260-FT:SST:13-SECTIONS
Date and Time: 7/16/2008 6:19:34 PM

Revision: 0
Site: LV1149 Green River North- Taylor
Engineer: HD/tw

Section A: PROJECT DATA

Project Title: 260-FT:SST:13-SECTIONS
Customer Name: T-Mobile (Tennessee)
Site: LV1149 Green River North- Taylor County- KY
Contract No.: S08-0276-A:J080716003
Revision: 0
Engineer: HD/tw
Date: Jul 16 2008
Time: 06:17:51 PM

Design Standard: ANSI/TIA-222-G-2005 Addendum 1

GENERAL DESIGN CONDITIONS

Start wind direction: 0.00 (Deg)
End wind direction: 330.00 (Deg)
Increment wind direction: 30.00 (Deg)
Elevation above ground: 0.00 (ft)
Gust Response Factor Gh: 0.85
Structure class: II
Exposure category: C
Topographic category: 1
Material Density: 490.1 (lbs/ft³)
Young's Modulus: 29000.0 (ksi)
Poisson Ratio: 0.30
Weight Multiplier: 1.03
Minimum Bracing Resistance as per 4.4.1

WIND ONLY CONDITIONS:

Basic Wind Speed (No Ice): 90.00 (mph)
Directionality Factor Kd: 0.85
Importance Factor I: 1.00
Wind Load Factor: 1.60
Dead Load Factor: 1.20
Dead Load Factor for Uplift: 0.90

WIND AND ICE CONDITIONS:

Basic Wind Speed (With Ice): 30.00 (mph)
Directionality Factor Kd: 0.85
Importance Factor I: 1.00
Ice Thickness: 0.75 (in)
Ice Density: 56.19 (lbs/ft³)
Wind Load Factor: 1.00
Dead Load Factor: 1.20
Ice Load Factor: 1.00

WIND ONLY SERVICEABILITY CONDITIONS:

Serviceability Wind Speed: 60.00 (mph)
Directionality Factor Kd: 0.85
Importance Factor I: 1.00
Wind Load Factor: 1.00
Dead Load Factor: 1.00

PATTERN LOADING (IF APPLICABLE) CONDITIONS:

Basic Wind Speed (No Ice): 90.00 (mph)
Directionality Factor Kd: 0.85



TSTower - v 3.7.2 Tower Analysis Program
(c) 1997-2006 TowerSoft www.TSTower.com



Licensed to: FWT Inc.
Fort Worth, TX

File: L:\Designs\08-0200\0276\J080716003\J080716003.out
Contract: S08-0276-A:J080716003
Project: 260-FT:SST:13-SECTIONS
Date and Time: 7/16/2008 6:19:34 PM

Revision: 0
Site: LV1149 Green River North- Taylor
Engineer: HD/tw

Importance Factor I: 1.00
Wind Load Factor: 1.60
Dead Load Factor: 1.20
Dead Load Factor for Uplift: 0.90

Analysis performed using: TowerSoft Finite Element Analysis Program

File: L:\Designs\08-0200\0276\J080716003\J080716003.out

Contract: S08-0276-A:J080716003

Project: 260-FT:SST:13-SECTIONS

Date and Time: 7/16/2008 6:19:34 PM

Revision: 0

Site: LV1149 Green River North- Taylor

Engineer: HD/tw

Section B: STRUCTURE GEOMETRY

TOWER GEOMETRY

Cross-Section	Height (ft)	Tot Height (ft)	# of Section	Bot Width (in)	Top Width (in)
Triangular	260.00	260.00	13	336.00	48.00

SECTION GEOMETRY

Sec #	Sec. Name	Elevation		Widths		Masses				Brcg. Clear (in)		
		Bottom (ft)	Top (ft)	Bottom (in)	Top (in)	Legs (lbs)	Brcg. (lbs)	Sec.Brc (lbs)	Int.Brc (lbs)		Sect. Database (lbs)	
13	4X20A000040420	240.00	260.00	48	48	875.2	363.9	0.0	0.0	1239.1	3643.1	0.787
12	4X25B000040620	220.00	240.00	72	48	1219.7	423.6	0.0	0.0	1643.3	2705.2	0.787
11	4X27B000060820	200.00	220.00	96	72	1440.8	514.9	0.0	0.0	1955.6	3270.9	0.787
10	GX32D000081020	180.00	200.00	120	96	1881.0	617.2	134.8	0.0	2633.0	3673.5	0.787
9	GX35D000101220	160.00	180.00	144	120	2178.4	681.8	208.5	0.0	3068.7	3961.3	0.787
8	GX35E000121420	140.00	160.00	168	144	2196.7	993.4	246.3	0.0	3436.3	4407.3	0.787
7	GX37E000141620	120.00	140.00	192	168	2609.0	1091.8	343.9	0.0	4044.7	4246.4	0.787
6	GX40F000161820	100.00	120.00	216	192	2956.6	1402.5	389.7	0.0	4748.8	5304.2	0.787
5	GX42G000182020	80.00	100.00	240	216	3325.6	1753.2	675.5	0.0	5754.2	5754.3	0.787
4	BX42EED0202220	60.00	80.00	264	240	3318.5	1756.2	905.1	120.1	6099.8	5922.5	0.787
3	BX45EED0222420	40.00	60.00	288	264	3698.8	1845.8	1133.6	131.6	6809.8	7281.9	0.787
2	BX45EEF0242620	20.00	40.00	312	288	3671.8	1938.7	1219.3	221.8	7051.7	6867.2	0.787
1	BX47EEF0262820	0.00	20.00	336	312	4056.4	2034.7	1625.3	239.6	7956.0	8241.3	0.787
Total Mass:						33428.5	15417.5	6882.0	713.1	56441.1	65279.1	

PANEL GEOMETRY

Sec#	Pnl#	Type	SecBrcg	Mid. Continuous	Horiz	Horiz	Height (ft)	Bottom Width (in)	Top Width (in)	Plan Bracing	Hip Bracing	Gusset Plate Area (ft^2)	Gusset Plate Weight (lbs)
13	4	X	(None)	Yes	5.0	48.0	48.0	(None)	(None)	(None)	(None)	0.850	17.35
13	3	X	(None)	None	5.0	48.0	48.0	(None)	(None)	(None)	(None)	0.850	17.35
13	2	X	(None)	None	5.0	48.0	48.0	(None)	(None)	(None)	(None)	0.850	17.35
13	1	X	(None)	None	5.0	48.0	48.0	(None)	(None)	(None)	(None)	0.850	17.35
12	4	X	(None)	None	5.0	54.0	48.0	(None)	(None)	(None)	(None)	0.737	15.02
12	3	X	(None)	None	5.0	60.0	54.0	(None)	(None)	(None)	(None)	0.737	15.02
12	2	X	(None)	None	5.0	66.0	60.0	(None)	(None)	(None)	(None)	0.737	15.02
12	1	X	(None)	None	5.0	72.0	66.0	(None)	(None)	(None)	(None)	0.737	15.02
11	4	X	(None)	None	5.0	78.0	72.0	(None)	(None)	(None)	(None)	0.753	15.34
11	3	X	(None)	None	5.0	84.0	78.0	(None)	(None)	(None)	(None)	0.753	15.34
11	2	X	(None)	None	5.0	90.0	84.0	(None)	(None)	(None)	(None)	0.753	15.34
11	1	X	(None)	None	5.0	96.0	90.0	(None)	(None)	(None)	(None)	0.753	15.34
10	2	X	2-Subdiv.	No	None	10.0	108.0	96.0	(None)	(None)	(None)	1.055	21.54
10	1	X	2-Subdiv.	No	None	10.0	120.0	108.0	(None)	(None)	(None)	1.055	21.54
9	2	X	2-Subdiv.	No	None	10.0	132.0	120.0	(None)	(None)	(None)	1.200	24.50
9	1	X	2-Subdiv.	No	None	10.0	144.0	132.0	(None)	(None)	(None)	1.200	24.50
8	2	X	2-Subdiv.	No	None	10.0	156.0	144.0	(None)	(None)	(None)	1.345	27.46
8	1	X	2-Subdiv.	No	None	10.0	168.0	156.0	(None)	(None)	(None)	1.345	27.46
7	2	X	2-Subdiv.	No	None	10.0	180.0	168.0	(None)	(None)	(None)	1.491	45.65
7	1	X	2-Subdiv.	No	None	10.0	192.0	180.0	(None)	(None)	(None)	1.491	45.65
6	2	X	2-Subdiv.	No	None	10.0	204.0	192.0	(None)	(None)	(None)	1.636	50.07
6	1	X	2-Subdiv.	No	None	10.0	216.0	204.0	(None)	(None)	(None)	1.636	50.07
5	2	X	2-Subdiv.	No	None	10.0	228.0	216.0	(None)	(None)	(None)	1.781	54.51
5	1	X	2-Subdiv.	No	None	10.0	240.0	228.0	(None)	(None)	(None)	1.781	54.51

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4	1	X	4-Subdiv.	Yes	None	20.0	264.0	240.0	2-Subdiv.	(None)	3.488	106.73
3	1	X	4-Subdiv.	Yes	None	20.0	288.0	264.0	2-Subdiv.	(None)	3.681	112.70
2	1	X	4-Subdiv.	Yes	None	20.0	312.0	288.0	2-Subdiv.	(None)	3.396	103.97
1	1	X	4-Subdiv.	Yes	None	20.0	336.0	312.0	2-Subdiv.	(None)	3.418	104.58

MEMBER PROPERTIES

Sec/ Pnl	Type	Description	Steel Grade	Conn. Type	Bolt #-Size	Bolt Grade	End Dist.	Edge Dist.	Gusset Thick.	Bolt Space	Dble Mem.	Member Spacing Bolt Stitch (ft)
					(in)	(in)		(in)	(in)	(in)	(in)	(ft)
13/4	Leg	SR 2	A572 gr.	50Tension	4-0.625	A325X						
13/4	Diag	L1 3/4x1 3/4x3/16	A36	Bolted	2-0.500	A325X	1.125	0.750	0.250	3.000		
13/4	Horiz	L2x2x3/16	A36	Bolted	1-0.625	A325X	1.250	0.875	0.250	1.875		
13/3	Leg	SR 2	A572 gr.	50Tension	4-0.625	A325X						
13/3	Diag	L1 3/4x1 3/4x3/16	A36	Bolted	2-0.500	A325X	1.125	0.750	0.250	3.000		
13/2	Leg	SR 2	A572 gr.	50Tension	4-0.625	A325X						
13/2	Diag	L1 3/4x1 3/4x3/16	A36	Bolted	2-0.500	A325X	1.125	0.750	0.250	3.000		
13/1	Leg	SR 2	A572 gr.	50Tension	4-0.625	A325X						
13/1	Diag	L1 3/4x1 3/4x3/16	A36	Bolted	2-0.500	A325X	1.125	0.750	0.250	3.000		
12/4	Leg	SR 2 1/2	A572 gr.	50Tension	6-0.750	A325X						
12/4	Diag	L2x2x3/16	A36	Bolted	2-0.625	A325X	1.250	0.875	0.250	3.000		
12/3	Leg	SR 2 1/2	A572 gr.	50Tension	6-0.750	A325X						
12/3	Diag	L2x2x3/16	A36	Bolted	2-0.625	A325X	1.250	0.875	0.250	3.000		
12/2	Leg	SR 2 1/2	A572 gr.	50Tension	6-0.750	A325X						
12/2	Diag	L2x2x3/16	A36	Bolted	2-0.625	A325X	1.250	0.875	0.250	3.000		
12/1	Leg	SR 2 1/2	A572 gr.	50Tension	6-0.750	A325X						
12/1	Diag	L2x2x3/16	A36	Bolted	2-0.625	A325X	1.250	0.875	0.250	3.000		
11/4	Leg	SR 2 3/4	A572 gr.	50Tension	6-0.750	A325X						
11/4	Diag	L2x2x3/16	A36	Bolted	2-0.625	A325X	1.250	0.875	0.250	3.000		
11/3	Leg	SR 2 3/4	A572 gr.	50Tension	6-0.750	A325X						
11/3	Diag	L2x2x3/16	A36	Bolted	2-0.625	A325X	1.250	0.875	0.250	3.000		
11/2	Leg	SR 2 3/4	A572 gr.	50Tension	6-0.750	A325X						
11/2	Diag	L2x2x3/16	A36	Bolted	2-0.625	A325X	1.250	0.875	0.250	3.000		
11/1	Leg	SR 2 3/4	A572 gr.	50Tension	6-0.750	A325X						
11/1	Diag	L2x2x3/16	A36	Bolted	2-0.625	A325X	1.250	0.875	0.250	3.000		
10/2	Leg	SR 3 1/4	A572 gr.	50Tension	6-1.000	A325X						
10/2	Diag	L3x3x3/16	A36	Bolted	2-0.625	A325X	1.250	1.500	0.250	3.000		
10/2	SecH1	L2x2x3/16	A36	Bolted	1-0.625	A325X	1.250	0.875	0.250	1.875		
10/1	Leg	SR 3 1/4	A572 gr.	50Tension	6-1.000	A325X						
10/1	Diag	L3x3x3/16	A36	Bolted	2-0.625	A325X	1.250	1.500	0.250	3.000		
10/1	SecH1	L2x2x3/16	A36	Bolted	1-0.625	A325X	1.250	0.875	0.250	1.875		
9/2	Leg	SR 3 1/2	A572 gr.	50Tension	6-1.000	A325X						
9/2	Diag	L3x3x3/16	A36	Bolted	2-0.625	A325X	1.250	1.500	0.250	3.000		
9/2	SecH1	L2 1/2x2 1/2x3/16	A36	Bolted	1-0.625	A325X	1.250	1.250	0.250	1.875		
9/1	Leg	SR 3 1/2	A572 gr.	50Tension	6-1.000	A325X						
9/1	Diag	L3x3x3/16	A36	Bolted	2-0.625	A325X	1.250	1.500	0.250	3.000		
9/1	SecH1	L2 1/2x2 1/2x3/16	A36	Bolted	1-0.625	A325X	1.250	1.250	0.250	1.875		
8/2	Leg	SR 3 1/2	A572 gr.	50Tension	6-1.000	A325X						
8/2	Diag	L3x3x1/4	A36	Bolted	2-0.625	A325X	1.250	1.500	0.250	3.000		
8/2	SecH1	L2 1/2x2 1/2x3/16	A36	Bolted	1-0.625	A325X	1.250	1.250	0.250	1.875		
8/1	Leg	SR 3 1/2	A572 gr.	50Tension	6-1.000	A325X						

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8/1	Diag	L3x3x1/4	A36	Bolted	2-0.625	A325X	1.250	1.500	0.250	3.000	
8/1	SecH1	L2 1/2x2 1/2x3/16	A36	Bolted	1-0.625	A325X	1.250	1.250	0.250	1.875	
7/2	Leg	SR 3 3/4	A572	gr.50Tension	6-1.125	A325X					
7/2	Diag	L3x3x1/4	A36	Bolted	2-0.625	A325X	1.250	1.500	0.375	3.000	
7/2	SecH1	L3x3x3/16	A36	Bolted	1-0.625	A325X	1.250	1.500	0.375	1.875	
7/1	Leg	SR 3 3/4	A572	gr.50Tension	6-1.125	A325X					
7/1	Diag	L3x3x1/4	A36	Bolted	2-0.625	A325X	1.250	1.500	0.375	3.000	
7/1	SecH1	L3x3x3/16	A36	Bolted	1-0.625	A325X	1.250	1.500	0.375	1.875	
6/2	Leg	SR 4	A572	gr.50Tension	6-1.250	A325X					
6/2	Diag	L3 1/2x3 1/2x1/4	A36	Bolted	2-0.625	A325X	1.250	1.750	0.375	3.000	
6/2	SecH1	L3x3x3/16	A36	Bolted	1-0.625	A325X	1.250	1.500	0.375	1.875	
6/1	Leg	SR 4	A572	gr.50Tension	6-1.250	A325X					
6/1	Diag	L3 1/2x3 1/2x1/4	A36	Bolted	2-0.625	A325X	1.250	1.750	0.375	3.000	
6/1	SecH1	L3x3x3/16	A36	Bolted	1-0.625	A325X	1.250	1.500	0.375	1.875	
5/2	Leg	SR 4 1/4	A572	gr.50Tension	6-1.375	A325X					
5/2	Diag	L4x4x1/4	A36	Bolted	2-0.625	A325X	1.250	2.000	0.375	3.000	
5/2	SecH1	L3 1/2x3 1/2x1/4	A36	Bolted	1-0.625	A325X	1.250	1.750	0.375	1.875	
5/1	Leg	SR 4 1/4	A572	gr.50Tension	6-1.375	A325X					
5/1	Diag	L4x4x1/4	A36	Bolted	2-0.625	A325X	1.250	2.000	0.375	3.000	
5/1	SecH1	L3 1/2x3 1/2x1/4	A36	Bolted	1-0.625	A325X	1.250	1.750	0.375	1.875	
4/1	Leg	SR 4 1/4	A572	gr.50Tension	6-1.375	A325X					
4/1	Diag	2L3x3x1/4	A36	Bolted	2-0.625	A325X	1.250	1.500	0.375	3.000	0.375 4.00
4/1	SecD1	L3x3x3/16	A36	Bolted	1-0.625	A325X	1.250	1.500	0.375	1.875	
4/1	SecD2	L3x3x3/16	A36	Bolted	1-0.625	A325X	1.250	1.500	0.375	1.875	
4/1	SecH1	L3 1/2x3 1/2x1/4	A36	Bolted	1-0.625	A325X	1.250	1.750	0.375	1.875	
4/1	SecH2	L2 1/2x2 1/2x3/16	A36	Bolted	1-0.625	A325X	1.250	1.250	0.375	1.875	
4/1	SecH3	L2 1/2x2 1/2x3/16	A36	Bolted	1-0.625	A325X	1.250	1.250	0.375	1.875	
4/1	PlanH1	L3x3x3/16	A36	Bolted	1-0.625	A325X	1.125	1.500	0.375	1.875	
3/1	Leg	SR 4 1/2	A572	gr.50Tension	6-1.500	A325X					
3/1	Diag	2L3x3x1/4	A36	Bolted	2-0.625	A325X	1.250	1.500	0.375	3.000	0.375 4.00
3/1	SecD1	L3x3x3/16	A36	Bolted	1-0.625	A325X	1.250	1.500	0.375	1.875	
3/1	SecD2	L3x3x3/16	A36	Bolted	1-0.625	A325X	1.250	1.500	0.375	1.875	
3/1	SecH1	2L2 1/2x2 1/2x3/16	A36	Bolted	1-0.625	A325X	1.250	1.250	0.375	1.875	0.375 4.00
3/1	SecH2	L3x3x1/4	A36	Bolted	1-0.625	A325X	1.250	1.500	0.375	1.875	
3/1	SecH3	L3x3x1/4	A36	Bolted	1-0.625	A325X	1.250	1.500	0.375	1.875	
3/1	PlanH1	L3x3x3/16	A36	Bolted	1-0.625	A325X	1.125	1.500	0.375	1.875	
2/1	Leg	SR 4 1/2	A572	gr.50Tension	6-1.500	A325X					
2/1	Diag	2L3x3x1/4	A36	Bolted	2-0.625	A325X	1.250	1.500	0.375	3.000	0.375 4.00
2/1	SecD1	L3x3x3/16	A36	Bolted	1-0.625	A325X	1.250	1.500	0.375	1.875	
2/1	SecD2	L3x3x3/16	A36	Bolted	1-0.625	A325X	1.250	1.500	0.375	1.875	
2/1	SecH1	2L2 1/2x2 1/2x3/16	A36	Bolted	1-0.625	A325X	1.250	1.250	0.375	1.875	0.375 4.00
2/1	SecH2	L3x3x1/4	A36	Bolted	1-0.625	A325X	1.250	1.500	0.375	1.875	
2/1	SecH3	L3x3x1/4	A36	Bolted	1-0.625	A325X	1.250	1.500	0.375	1.875	
2/1	PlanH1	L3 1/2x3 1/2x1/4	A36	Bolted	1-0.625	A325X	1.125	1.750	0.375	1.875	
1/1	Leg	SR 4 3/4	A572	gr.50Tension	6-1.500	A325X					
1/1	Diag	2L3x3x1/4	A36	Bolted	2-0.625	A325X	1.250	1.500	0.750	3.000	0.500 4.00
1/1	SecD1	L3 1/2x3 1/2x1/4	A36	Bolted	1-0.625	A325X	1.250	1.750	0.500	1.875	
1/1	SecD2	L3 1/2x3 1/2x1/4	A36	Bolted	1-0.625	A325X	1.250	1.750	0.500	1.875	
1/1	SecH1	2L3x3x3/16	A36	Bolted	1-0.625	A325X	1.250	1.500	0.500	1.875	0.500 4.00
1/1	SecH2	L3x3x1/4	A36	Bolted	1-0.625	A325X	1.250	1.500	0.500	1.875	
1/1	SecH3	L3x3x1/4	A36	Bolted	1-0.625	A325X	1.250	1.500	0.500	1.875	



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1/1 PlanH1 L3 1/2x3 1/2x1/4 A36 Bolted 1-0.625 A325X 1.125 1.750 0.375 1.875

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Section C: ANTENNA DATA

Structure Azimuth from North: 0

ANTENNAS

Ant No.	Elev. (ft)	Antenna (#) Type	Ant. Azim.	Mount. Radius (ft)	Mount Type	Mount Azim.	Tx Line (#) Type	Mounting Pipe Size (in)	Length (ft)	Full Shielded	Ka
1	260.00	(1) Lightning Rod	0	0.00		0					1.00
		Vert. Offset 0.00 (ft)									
2	260.00	(4) IMBX-6517-R2M	0	6.30	AM110-P-12'	0	(18)LDF7P-50A	2.375	8.00	6.91	0.80
		Vert. Offset 0.00 (ft)									
3	260.00	(4) IMBX-6517-R2M	120	6.30	AM110-P-12'	120		2.375	8.00	6.91	0.80
		Vert. Offset 0.00 (ft)									
4	260.00	(4) IMBX-6517-R2M	240	6.30	AM110-P-12'	240		2.375	8.00	6.91	0.80
		Vert. Offset 0.00 (ft)									
5	250.00	(4) IMBX-6517-R2M	0	6.30	AM110-P-12'	0	(12)LDF7P-50A	2.375	7.00	6.91	0.80
		Vert. Offset 0.00 (ft)									
6	250.00	(4) IMBX-6517-R2M	120	6.30	AM110-P-12'	120		2.375	7.00	6.91	0.80
		Vert. Offset 0.00 (ft)									
7	250.00	(4) IMBX-6517-R2M	240	6.30	AM110-P-12'	240		2.375	7.00	6.91	0.80
		Vert. Offset 0.00 (ft)									
8	240.00	(4) IMBX-6517-R2M	0	6.30	AM110-P-12'	0	(12)LDF7P-50A	2.375	7.00	6.91	0.80
		Vert. Offset 0.00 (ft)									
9	240.00	(4) IMBX-6517-R2M	120	6.30	AM110-P-12'	120		2.375	7.00	6.91	0.80
		Vert. Offset 0.00 (ft)									
10	240.00	(4) IMBX-6517-R2M	240	6.30	AM110-P-12'	240		2.375	7.00	6.91	0.80
		Vert. Offset 0.00 (ft)									
11	230.00	(4) IMBX-6517-R2M	0	6.88	AM110-P-12'	0	(4)LDF7P-50A	2.375	7.00	6.91	0.80
		Vert. Offset 0.00 (ft)									
12	230.00	(4) IMBX-6517-R2M	120	6.88	AM110-P-12'	120	(4)LDF7P-50A	2.375	7.00	6.91	0.80
		Vert. Offset 0.00 (ft)									
13	230.00	(4) IMBX-6517-R2M	240	6.88	AM110-P-12'	240	(4)LDF7P-50A	2.375	7.00	6.91	0.80
		Vert. Offset 0.00 (ft)									
14	220.00	(4) IMBX-6517-R2M	0	7.46	AM110-P-12'	0	(4)LDF7P-50A	2.375	7.00	6.91	0.80
		Vert. Offset 0.00 (ft)									
15	220.00	(4) IMBX-6517-R2M	120	7.46	AM110-P-12'	120	(4)LDF7P-50A	2.375	7.00	6.91	0.80
		Vert. Offset 0.00 (ft)									
16	220.00	(4) IMBX-6517-R2M	240	7.46	AM110-P-12'	240	(4)LDF7P-50A	2.375	7.00	6.91	0.80
		Vert. Offset 0.00 (ft)									

ANTENNA AND MOUNT WIND AREAS AND WEIGHIS

Ant No.	Antenna/Mount	Frontal Bare Area (ft) ²	Lateral Bare Area (ft) ²	Frontal Iced Area (ft) ²	Lateral Iced Area (ft) ²	Weight Bare (lbs)	Weight Iced (lbs)	Frequency GHz	Allowable Signal Loss dB	Gh Mount Ka
1	Lightning Rod	0.75	0.75	4.58	4.58	14.00	77.14	N/A	N/A	0.85
2	IMBX-6517-R2M	6.02	3.80	8.96	6.65	16.00	161.67	N/A	N/A	0.85
2	AM110-P-12'	14.60	7.54	18.57	9.99	707.00	1545.41			0.80
3	IMBX-6517-R2M	6.02	3.80	8.96	6.65	16.00	161.67	N/A	N/A	0.85
3	AM110-P-12'	14.60	7.54	18.57	9.99	707.00	1545.41			0.80
4	IMBX-6517-R2M	6.02	3.80	8.96	6.65	16.00	161.67	N/A	N/A	0.85
4	AM110-P-12'	14.60	7.54	18.57	9.99	707.00	1545.41			0.80
5	IMBX-6517-R2M	6.02	3.80	8.95	6.64	16.00	161.06	N/A	N/A	0.85
5	AM110-P-12'	14.60	7.54	18.57	9.99	707.00	1542.68			0.80
6	IMBX-6517-R2M	6.02	3.80	8.95	6.64	16.00	161.06	N/A	N/A	0.85
6	AM110-P-12'	14.60	7.54	18.57	9.99	707.00	1542.68			0.80
7	IMBX-6517-R2M	6.02	3.80	8.95	6.64	16.00	161.06	N/A	N/A	0.85

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7	AM110-P-12'	14.60	7.54	18.57	9.99	707.00	1542.68			0.80
8	TMBX-6517-R2M	6.02	3.80	8.94	6.62	16.00	160.43	N/A	N/A	0.85
8	AM110-P-12'	14.60	7.54	18.57	9.99	707.00	1539.86			0.80
9	TMBX-6517-R2M	6.02	3.80	8.94	6.62	16.00	160.43	N/A	N/A	0.85
9	AM110-P-12'	14.60	7.54	18.57	9.99	707.00	1539.86			0.80
10	TMBX-6517-R2M	6.02	3.80	8.94	6.62	16.00	160.43	N/A	N/A	0.85
10	AM110-P-12'	14.60	7.54	18.57	9.99	707.00	1539.86			0.80
11	TMBX-6517-R2M	6.02	3.80	8.93	6.61	16.00	159.78	N/A	N/A	0.85
11	AM110-P-12'	14.60	7.54	18.57	9.99	707.00	1536.93			0.80
12	TMBX-6517-R2M	6.02	3.80	8.93	6.61	16.00	159.78	N/A	N/A	0.85
12	AM110-P-12'	14.60	7.54	18.57	9.99	707.00	1536.93			0.80
13	TMBX-6517-R2M	6.02	3.80	8.93	6.61	16.00	159.78	N/A	N/A	0.85
13	AM110-P-12'	14.60	7.54	18.57	9.99	707.00	1536.93			0.80
14	TMBX-6517-R2M	6.02	3.80	8.92	6.60	16.00	159.10	N/A	N/A	0.85
14	AM110-P-12'	14.60	7.54	18.57	9.99	707.00	1533.88			0.80
15	TMBX-6517-R2M	6.02	3.80	8.92	6.60	16.00	159.10	N/A	N/A	0.85
15	AM110-P-12'	14.60	7.54	18.57	9.99	707.00	1533.88			0.80
16	TMBX-6517-R2M	6.02	3.80	8.92	6.60	16.00	159.10	N/A	N/A	0.85
16	AM110-P-12'	14.60	7.54	18.57	9.99	707.00	1533.88			0.80

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Engineer: HD/tw

Section D: TRANSMISSION LINE DATA

Transmission Lines Position

No.	Bot El (ft)	Top El (ft)	Desc.	Radius (ft)	Az.	Orient.	No.	No. of Rows	Part of Face	Vert.	Antenna	User Ka
1	0.00	260.00	LDF7P-50A	14.38	60.00	4.20	18	2		No	TMBX-6517-R2M	
2	0.00	250.00	LDF7P-50A	14.57	180.00	123.70	12	2		No	TMBX-6517-R2M	
3	0.00	240.00	LDF7P-50A	14.57	300.00	243.70	12	2		No	TMBX-6517-R2M	
4	0.00	230.00	LDF7P-50A	13.22	60.00	7.70	4	2		No	TMBX-6517-R2M	
5	0.00	230.00	LDF7P-50A	13.72	180.00	126.10	4	2		No	TMBX-6517-R2M	
6	0.00	230.00	LDF7P-50A	13.72	300.00	246.10	4	2		No	TMBX-6517-R2M	
7	0.00	220.00	LDF7P-50A	13.04	60.00	8.30	4	2		No	TMBX-6517-R2M	
8	0.00	220.00	LDF7P-50A	13.37	180.00	127.20	4	2		No	TMBX-6517-R2M	
9	0.00	220.00	LDF7P-50A	13.37	300.00	247.20	4	2		No	TMBX-6517-R2M	

Transmission Lines Details

No.	Desc.	Width (in)	Depth (in)	Unit Mass (lb/ft)	Line Spacing (in)	Row Spacing (in)
1	LDF7P-50A	2.01	2.01	0.92	2.500	2.000
2	LDF7P-50A	2.01	2.01	0.92	2.500	2.000
3	LDF7P-50A	2.01	2.01	0.92	2.500	2.000
4	LDF7P-50A	2.01	2.01	0.92	2.500	2.000
5	LDF7P-50A	2.01	2.01	0.92	2.500	2.000
6	LDF7P-50A	2.01	2.01	0.92	2.500	2.000
7	LDF7P-50A	2.01	2.01	0.92	2.500	2.000
8	LDF7P-50A	2.01	2.01	0.92	2.500	2.000
9	LDF7P-50A	2.01	2.01	0.92	2.500	2.000



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Section E: LADDER DATA

Ladder Position

No.	Bot El (ft)	Top El (ft)	Width (in)	Height (in)	Az.	Radius (ft)	Orient.	Part Of Face
1	0.00	260.00	30.00	36.00	60.00	14.06	5.10	No
2	0.00	250.00	30.00	36.00	180.00	14.06	125.10	No
3	0.00	240.00	30.00	36.00	300.00	14.06	245.10	No

Ladder Details

No.	Rung Desc.	Rail Desc.
1	L2x2x1/8	L2x2x3/16
2	L2x2x1/8	L2x2x3/16
3	L2x2x1/8	L2x2x3/16

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Engineer: HD/tw

Section G: WIND LOAD DATA

Load Combination Wind Only

Wind Direction 0.00 (deg)

Wind Pressure

Section	Panel	Bot Elev (ft)	Top Elev (ft)	Kz	Kzt	Wind Pressure (psf)	Ice Thickness (tiz) (in)
13	4	255.00	260.00	1.54	1.00	36.99	0.000
	3	250.00	255.00	1.54	1.00	36.83	0.000
	2	245.00	250.00	1.53	1.00	36.68	0.000
	1	240.00	245.00	1.53	1.00	36.52	0.000
12	4	235.00	240.00	1.52	1.00	36.36	0.000
	3	230.00	235.00	1.51	1.00	36.20	0.000
	2	225.00	230.00	1.50	1.00	36.03	0.000
	1	220.00	225.00	1.50	1.00	35.87	0.000
11	4	215.00	220.00	1.49	1.00	35.69	0.000
	3	210.00	215.00	1.48	1.00	35.52	0.000
	2	205.00	210.00	1.48	1.00	35.34	0.000
	1	200.00	205.00	1.47	1.00	35.16	0.000
10	2	190.00	200.00	1.46	1.00	34.88	0.000
	1	180.00	190.00	1.44	1.00	34.50	0.000
9	2	170.00	180.00	1.42	1.00	34.10	0.000
	1	160.00	170.00	1.41	1.00	33.68	0.000
8	2	150.00	160.00	1.39	1.00	33.24	0.000
	1	140.00	150.00	1.37	1.00	32.77	0.000
7	2	130.00	140.00	1.35	1.00	32.28	0.000
	1	120.00	130.00	1.33	1.00	31.77	0.000
6	2	110.00	120.00	1.30	1.00	31.21	0.000
	1	100.00	110.00	1.28	1.00	30.62	0.000
5	2	90.00	100.00	1.25	1.00	29.98	0.000
	1	80.00	90.00	1.22	1.00	29.29	0.000
4	1	60.00	80.00	1.17	1.00	28.12	0.000
3	1	40.00	60.00	1.09	1.00	26.19	0.000
2	1	20.00	40.00	0.98	1.00	23.52	0.000
1	1	0.00	20.00	0.85	1.00	20.36	0.000

Calculated Effective Wind Areas

Sec	Pan.	Flat Area (ft^2)	App. Flat Area (ft^2)	Round Area (ft^2)	App. Round Area (ft^2)	Ice Area (ft^2)	Solid Ratio	Flat Drag	Round Drag	Flat Dir	Round Dir	Eff. Area (ft^2)
13	4	3.33	0.00	1.67	0.00	0.00	0.24	2.47	1.44	0.80	1.00	8.98
	3	2.68	0.00	1.67	0.00	0.00	0.21	2.57	1.48	0.80	1.00	7.97
	2	2.68	0.00	1.67	0.00	0.00	0.21	2.57	1.48	0.80	1.00	7.97
	1	2.68	0.00	1.67	0.00	0.00	0.21	2.57	1.48	0.80	1.00	7.97
12	4	2.87	0.00	2.09	0.00	0.00	0.22	2.52	1.46	0.80	1.00	8.84
	3	2.99	0.00	2.09	0.00	0.00	0.20	2.58	1.48	0.80	1.00	9.26
	2	3.11	0.00	2.09	0.00	0.00	0.19	2.63	1.51	0.80	1.00	9.68
	1	3.23	0.00	2.09	0.00	0.00	0.18	2.67	1.52	0.80	1.00	10.08
11	4	3.37	0.00	2.30	0.00	0.00	0.18	2.68	1.53	0.80	1.00	10.75
	3	3.51	0.00	2.30	0.00	0.00	0.17	2.71	1.54	0.80	1.00	11.16
	2	3.64	0.00	2.30	0.00	0.00	0.16	2.74	1.56	0.80	1.00	11.56
	1	3.78	0.00	2.30	0.00	0.00	0.15	2.76	1.57	0.80	1.00	11.96
10	2	8.91	0.00	5.43	0.00	0.00	0.16	2.72	1.55	0.80	1.00	27.81



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1	9.41	0.00	5.43	0.00	0.00	0.15	2.76	1.57	0.80	1.00	29.33
9	2	10.50	0.00	5.84	0.00	0.00	0.15	2.77	1.57	0.80	32.40
	1	11.08	0.00	5.84	0.00	0.00	0.14	2.80	1.58	0.80	34.03
8	2	11.81	0.00	5.84	0.00	0.00	0.14	2.82	1.60	0.80	35.94
	1	12.42	0.00	5.84	0.00	0.00	0.13	2.84	1.61	0.80	37.57
7	2	13.76	0.00	6.26	0.00	0.00	0.14	2.83	1.60	0.80	41.11
	1	14.43	0.00	6.26	0.00	0.00	0.13	2.84	1.61	0.80	42.88
6	2	16.83	0.00	6.68	0.00	0.00	0.14	2.81	1.57	0.80	48.29
	1	17.58	0.00	6.68	0.00	0.00	0.14	2.82	1.58	0.80	50.25
5	2	20.97	0.00	7.10	0.00	0.00	0.15	2.78	1.53	0.80	57.43
	1	21.85	0.00	7.10	0.00	0.00	0.15	2.79	1.54	0.80	59.66
4	1	35.22	0.00	14.19	0.00	0.00	0.12	2.90	1.61	0.80	104.54
3	1	36.53	0.00	15.02	0.00	0.00	0.11	2.92	1.60	0.80	109.53
2	1	38.31	0.00	15.02	0.00	0.00	0.11	2.94	1.64	0.80	114.92
1	1	42.88	0.00	15.86	0.00	0.00	0.11	2.94	1.65	0.80	126.85

Calculated Effective UDL Wind Areas

Sec.	Pan.	Flat Area (ft^2)	Round Area (ft^2)	Flat Drag	Round Drag	Ka	Eff. Area (ft^2)
13	4	5.39	0.00	1.67	1.20	0.63	5.64
	3	5.39	0.00	1.67	1.20	0.63	5.64
	2	13.79	0.00	1.65	1.20	0.69	15.80
	1	13.79	0.00	1.65	1.20	0.69	15.80
12	4	18.40	0.00	1.66	1.20	0.72	21.97
	3	18.40	0.00	1.66	1.20	0.72	21.97
	2	23.72	0.00	1.63	1.20	0.69	26.76
	1	23.72	0.00	1.63	1.20	0.69	26.76
11	4	29.04	0.00	1.60	1.20	0.68	31.55
	3	29.04	0.00	1.60	1.20	0.68	31.55
	2	29.04	0.00	1.60	1.20	0.68	31.55
	1	29.04	0.00	1.60	1.20	0.68	31.55
10	2	58.08	0.00	1.60	1.20	0.68	63.09
	1	58.08	0.00	1.60	1.20	0.68	63.09
9	2	58.08	0.00	1.60	1.20	0.68	63.09
	1	58.08	0.00	1.60	1.20	0.68	63.09
8	2	58.08	0.00	1.60	1.20	0.68	63.09
	1	58.08	0.00	1.60	1.20	0.68	63.09
7	2	58.08	0.00	1.60	1.20	0.68	63.09
	1	58.08	0.00	1.60	1.20	0.68	63.09
6	2	58.08	0.00	1.60	1.20	0.68	63.09
	1	58.08	0.00	1.60	1.20	0.68	63.09
5	2	58.08	0.00	1.60	1.20	0.68	63.09
	1	58.08	0.00	1.60	1.20	0.68	63.09
4	1	116.160	0.00	1.60	1.20	0.68	126.18
3	1	116.160	0.00	1.60	1.20	0.68	126.18
2	1	116.160	0.00	1.60	1.20	0.68	126.18
1	1	116.160	0.00	1.60	1.20	0.68	126.18

App. Concentrated Loads

Ant.	Description	Qty	Mount	Desc.	Elev. (ft)	CaAc X-Dir E-W (ft^2)	CaAc Y-Dir N-S (ft^2)	XForce E-W (Kips)	YForce N-S (Kips)	ZForce (Kips)	M-x (kipsft)	M-y (kipsft)	M-z (kipsft)
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Engineer: HD/tw

1	Lightning Rod	1		260	0.00	-0.75	0.00	-0.03	-0.01	0.00	0.00	0.00
2	IMBX-6517-R2M	4	AM110-P-12'	260	0.00	-31.77	0.00	-1.18	-0.89	-3.37	0.00	0.00
3	IMBX-6517-R2M	4	AM110-P-12'	260	0.00	-26.15	0.00	-0.97	-0.89	1.69	2.92	-6.04
4	IMBX-6517-R2M	4	AM110-P-12'	260	0.00	-26.15	0.00	-0.97	-0.89	1.69	-2.92	6.04
5	IMBX-6517-R2M	4	AM110-P-12'	250	0.00	-31.01	0.00	-1.14	-0.87	-3.28	0.00	0.00
6	IMBX-6517-R2M	4	AM110-P-12'	250	0.00	-25.39	0.00	-0.93	-0.87	1.64	2.84	-5.84
7	IMBX-6517-R2M	4	AM110-P-12'	250	0.00	-25.39	0.00	-0.93	-0.87	1.64	-2.84	5.84
8	IMBX-6517-R2M	4	AM110-P-12'	240	0.00	-31.01	0.00	-1.13	-0.87	-3.28	0.00	0.00
9	IMBX-6517-R2M	4	AM110-P-12'	240	0.00	-25.39	0.00	-0.93	-0.87	1.64	2.84	-5.79
10	IMBX-6517-R2M	4	AM110-P-12'	240	0.00	-25.39	0.00	-0.93	-0.87	1.64	-2.84	5.79
11	IMBX-6517-R2M	4	AM110-P-12'	230	0.00	-31.01	0.00	-1.12	-0.87	-3.58	0.00	0.00
12	IMBX-6517-R2M	4	AM110-P-12'	230	0.00	-25.39	0.00	-0.92	-0.87	1.79	3.10	-6.26
13	IMBX-6517-R2M	4	AM110-P-12'	230	0.00	-25.39	0.00	-0.92	-0.87	1.79	-3.10	6.26
14	IMBX-6517-R2M	4	AM110-P-12'	220	0.00	-31.01	0.00	-1.11	-0.87	-3.88	0.00	0.00
15	IMBX-6517-R2M	4	AM110-P-12'	220	0.00	-25.39	0.00	-0.91	-0.87	1.94	3.36	-6.73
16	IMBX-6517-R2M	4	AM110-P-12'	220	0.00	-25.39	0.00	-0.91	-0.87	1.94	-3.36	6.73

Load Combination Wind Only - Max Tension

Wind Direction 0.00 (deg)

Wind Pressure

Section	Panel	Bot Elev (ft)	Top Elev (ft)	Kz	Kzt	Wind Pressure (psf)	Ice Thickness (tiz) (in)
13	4	255.00	260.00	1.54	1.00	36.99	0.000
	3	250.00	255.00	1.54	1.00	36.83	0.000
	2	245.00	250.00	1.53	1.00	36.68	0.000
12	1	240.00	245.00	1.53	1.00	36.52	0.000
	4	235.00	240.00	1.52	1.00	36.36	0.000
	3	230.00	235.00	1.51	1.00	36.20	0.000
11	2	225.00	230.00	1.50	1.00	36.03	0.000
	1	220.00	225.00	1.50	1.00	35.87	0.000
	4	215.00	220.00	1.49	1.00	35.69	0.000
10	3	210.00	215.00	1.48	1.00	35.52	0.000
	2	205.00	210.00	1.48	1.00	35.34	0.000
	1	200.00	205.00	1.47	1.00	35.16	0.000
9	2	190.00	200.00	1.46	1.00	34.88	0.000
	1	180.00	190.00	1.44	1.00	34.50	0.000
	2	170.00	180.00	1.42	1.00	34.10	0.000
8	1	160.00	170.00	1.41	1.00	33.68	0.000
	2	150.00	160.00	1.39	1.00	33.24	0.000
	1	140.00	150.00	1.37	1.00	32.77	0.000
7	2	130.00	140.00	1.35	1.00	32.28	0.000
	1	120.00	130.00	1.33	1.00	31.77	0.000
	2	110.00	120.00	1.30	1.00	31.21	0.000
6	1	100.00	110.00	1.28	1.00	30.62	0.000
	2	90.00	100.00	1.25	1.00	29.98	0.000
	1	80.00	90.00	1.22	1.00	29.29	0.000
4	1	60.00	80.00	1.17	1.00	28.12	0.000
3	1	40.00	60.00	1.09	1.00	26.19	0.000
2	1	20.00	40.00	0.98	1.00	23.52	0.000
1	1	0.00	20.00	0.85	1.00	20.36	0.000



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Revision: 0

Site: LV1149 Green River North- Taylor

Engineer: HD/tw

Calculated Effective Wind Areas

Sec.	Pan.	Flat Area (ft ²)	App. Flat Area (ft ²)	Round Area (ft ²)	App. Round Area (ft ²)	Solid. Ice Area (ft ²)	Ratio	Flat Drag	Round Drag	Flat Dir	Round Dir	Eff. Area (ft ²)
13	4	3.33	0.00	1.67	0.00	0.00	0.24	2.47	1.44	0.80	1.00	8.98
	3	2.68	0.00	1.67	0.00	0.00	0.21	2.57	1.48	0.80	1.00	7.97
	2	2.68	0.00	1.67	0.00	0.00	0.21	2.57	1.48	0.80	1.00	7.97
	1	2.68	0.00	1.67	0.00	0.00	0.21	2.57	1.48	0.80	1.00	7.97
12	4	2.87	0.00	2.09	0.00	0.00	0.22	2.52	1.46	0.80	1.00	8.84
	3	2.99	0.00	2.09	0.00	0.00	0.20	2.58	1.48	0.80	1.00	9.26
	2	3.11	0.00	2.09	0.00	0.00	0.19	2.63	1.51	0.80	1.00	9.68
	1	3.23	0.00	2.09	0.00	0.00	0.18	2.67	1.52	0.80	1.00	10.08
11	4	3.37	0.00	2.30	0.00	0.00	0.18	2.68	1.53	0.80	1.00	10.75
	3	3.51	0.00	2.30	0.00	0.00	0.17	2.71	1.54	0.80	1.00	11.16
	2	3.64	0.00	2.30	0.00	0.00	0.16	2.74	1.56	0.80	1.00	11.56
	1	3.78	0.00	2.30	0.00	0.00	0.15	2.76	1.57	0.80	1.00	11.96
10	2	8.91	0.00	5.43	0.00	0.00	0.16	2.72	1.55	0.80	1.00	27.81
	1	9.41	0.00	5.43	0.00	0.00	0.15	2.76	1.57	0.80	1.00	29.33
9	2	10.50	0.00	5.84	0.00	0.00	0.15	2.77	1.57	0.80	1.00	32.40
	1	11.08	0.00	5.84	0.00	0.00	0.14	2.80	1.58	0.80	1.00	34.03
8	2	11.81	0.00	5.84	0.00	0.00	0.14	2.82	1.60	0.80	1.00	35.94
	1	12.42	0.00	5.84	0.00	0.00	0.13	2.84	1.61	0.80	1.00	37.57
7	2	13.76	0.00	6.26	0.00	0.00	0.14	2.83	1.60	0.80	1.00	41.11
	1	14.43	0.00	6.26	0.00	0.00	0.13	2.84	1.61	0.80	1.00	42.88
6	2	16.83	0.00	6.68	0.00	0.00	0.14	2.81	1.57	0.80	1.00	48.29
	1	17.58	0.00	6.68	0.00	0.00	0.14	2.82	1.58	0.80	1.00	50.25
5	2	20.97	0.00	7.10	0.00	0.00	0.15	2.78	1.53	0.80	1.00	57.43
	1	21.85	0.00	7.10	0.00	0.00	0.15	2.79	1.54	0.80	1.00	59.66
4	1	35.22	0.00	14.19	0.00	0.00	0.12	2.90	1.61	0.80	1.00	104.54
3	1	36.53	0.00	15.02	0.00	0.00	0.11	2.92	1.60	0.80	1.00	109.53
2	1	38.31	0.00	15.02	0.00	0.00	0.11	2.94	1.64	0.80	1.00	114.92
1	1	42.88	0.00	15.86	0.00	0.00	0.11	2.94	1.65	0.80	1.00	126.85

Calculated Effective UDL Wind Areas

Sec.	Pan.	Flat Area (ft ²)	Round Area (ft ²)	Flat Drag	Round Drag	Ka	Eff. Area (ft ²)
13	4	5.39	0.00	1.67	1.20	0.63	5.64
	3	5.39	0.00	1.67	1.20	0.63	5.64
	2	13.79	0.00	1.65	1.20	0.69	15.80
	1	13.79	0.00	1.65	1.20	0.69	15.80
12	4	18.40	0.00	1.66	1.20	0.72	21.97
	3	18.40	0.00	1.66	1.20	0.72	21.97
	2	23.72	0.00	1.63	1.20	0.69	26.76
	1	23.72	0.00	1.63	1.20	0.69	26.76
11	4	29.04	0.00	1.60	1.20	0.68	31.55
	3	29.04	0.00	1.60	1.20	0.68	31.55
	2	29.04	0.00	1.60	1.20	0.68	31.55
	1	29.04	0.00	1.60	1.20	0.68	31.55
10	2	58.08	0.00	1.60	1.20	0.68	63.09
	1	58.08	0.00	1.60	1.20	0.68	63.09
9	2	58.08	0.00	1.60	1.20	0.68	63.09
	1	58.08	0.00	1.60	1.20	0.68	63.09

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Engineer: HD/tw

8	2	58.08	0.00	1.60	1.20	0.68	63.09
	1	58.08	0.00	1.60	1.20	0.68	63.09
7	2	58.08	0.00	1.60	1.20	0.68	63.09
	1	58.08	0.00	1.60	1.20	0.68	63.09
6	2	58.08	0.00	1.60	1.20	0.68	63.09
	1	58.08	0.00	1.60	1.20	0.68	63.09
5	2	58.08	0.00	1.60	1.20	0.68	63.09
	1	58.08	0.00	1.60	1.20	0.68	63.09
4	1	116.160.00		1.60	1.20	0.68	126.18
3	1	116.160.00		1.60	1.20	0.68	126.18
2	1	116.160.00		1.60	1.20	0.68	126.18
1	1	116.160.00		1.60	1.20	0.68	126.18

App. Concentrated Loads

Ant.	Description	Qty	Mount	Desc.	Elev. (ft)	CaAc X-Dir E-W (ft^2)	CaAc Y-Dir N-S (ft^2)	XForce E-W (Kips)	YForce N-S (Kips)	ZForce (Kips)	M-x (kipsft)	M-y (kipsft)	M-z (kipsft)
1	Lightning Rod	1			260	0.00	-0.75	0.00	-0.03	-0.01	0.00	0.00	0.00
2	TMBX-6517-R2M	4	AM110-P-12'		260	0.00	-31.77	0.00	-1.18	-0.89	-3.37	0.00	0.00
3	TMBX-6517-R2M	4	AM110-P-12'		260	0.00	-26.15	0.00	-0.97	-0.89	1.69	2.92	-6.04
4	TMBX-6517-R2M	4	AM110-P-12'		260	0.00	-26.15	0.00	-0.97	-0.89	1.69	-2.92	6.04
5	TMBX-6517-R2M	4	AM110-P-12'		250	0.00	-31.01	0.00	-1.14	-0.87	-3.28	0.00	0.00
6	TMBX-6517-R2M	4	AM110-P-12'		250	0.00	-25.39	0.00	-0.93	-0.87	1.64	2.84	-5.84
7	TMBX-6517-R2M	4	AM110-P-12'		250	0.00	-25.39	0.00	-0.93	-0.87	1.64	-2.84	5.84
8	TMBX-6517-R2M	4	AM110-P-12'		240	0.00	-31.01	0.00	-1.13	-0.87	-3.28	0.00	0.00
9	TMBX-6517-R2M	4	AM110-P-12'		240	0.00	-25.39	0.00	-0.93	-0.87	1.64	2.84	-5.79
10	TMBX-6517-R2M	4	AM110-P-12'		240	0.00	-25.39	0.00	-0.93	-0.87	1.64	-2.84	5.79
11	TMBX-6517-R2M	4	AM110-P-12'		230	0.00	-31.01	0.00	-1.12	-0.87	-3.58	0.00	0.00
12	TMBX-6517-R2M	4	AM110-P-12'		230	0.00	-25.39	0.00	-0.92	-0.87	1.79	3.10	-6.26
13	TMBX-6517-R2M	4	AM110-P-12'		230	0.00	-25.39	0.00	-0.92	-0.87	1.79	-3.10	6.26
14	TMBX-6517-R2M	4	AM110-P-12'		220	0.00	-31.01	0.00	-1.11	-0.87	-3.88	0.00	0.00
15	TMBX-6517-R2M	4	AM110-P-12'		220	0.00	-25.39	0.00	-0.91	-0.87	1.94	3.36	-6.73
16	TMBX-6517-R2M	4	AM110-P-12'		220	0.00	-25.39	0.00	-0.91	-0.87	1.94	-3.36	6.73

Load Combination Wind and Ice

Wind Direction 0.00 (deg)

Wind Pressure

Section	Panel	Bot Elev (ft)	Top Elev (ft)	Kz	Kzt	Wind Pressure (psf)	Ice Thickness (tiz) (in)
13	4	255.00	260.00	1.54	1.00	2.57	1.843
	3	250.00	255.00	1.54	1.00	2.56	1.840
	2	245.00	250.00	1.53	1.00	2.55	1.836
12	1	240.00	245.00	1.53	1.00	2.54	1.832
	4	235.00	240.00	1.52	1.00	2.53	1.828
	3	230.00	235.00	1.51	1.00	2.51	1.824
	2	225.00	230.00	1.50	1.00	2.50	1.821
11	1	220.00	225.00	1.50	1.00	2.49	1.816
	4	215.00	220.00	1.49	1.00	2.48	1.812
	3	210.00	215.00	1.48	1.00	2.47	1.808



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 Engineer: HD/tw

	2	205.00	210.00	1.48	1.00	2.45	1.804
	1	200.00	205.00	1.47	1.00	2.44	1.799
10	2	190.00	200.00	1.46	1.00	2.42	1.793
	1	180.00	190.00	1.44	1.00	2.40	1.783
9	2	170.00	180.00	1.42	1.00	2.37	1.773
	1	160.00	170.00	1.41	1.00	2.34	1.763
8	2	150.00	160.00	1.39	1.00	2.31	1.752
	1	140.00	150.00	1.37	1.00	2.28	1.740
7	2	130.00	140.00	1.35	1.00	2.24	1.728
	1	120.00	130.00	1.33	1.00	2.21	1.715
6	2	110.00	120.00	1.30	1.00	2.17	1.700
	1	100.00	110.00	1.28	1.00	2.13	1.685
5	2	90.00	100.00	1.25	1.00	2.08	1.668
	1	80.00	90.00	1.22	1.00	2.03	1.650
4	1	60.00	80.00	1.17	1.00	1.95	1.618
3	1	40.00	60.00	1.09	1.00	1.82	1.565
2	1	20.00	40.00	0.98	1.00	1.63	1.487
1	1	0.00	20.00	0.85	1.00	1.41	1.332

Calculated Effective Wind Areas

Sec.	Pan.	Flat Area (ft^2)	App. Flat Area (ft^2)	Round Area (ft^2)	App. Round Area (ft^2)	Area Ice (ft^2)	Solid Ratio	Flat Drag	Round Drag	Flat Dir	Round Dir	Eff. Area (ft^2)
13	4	3.29	0.00	1.67	0.00	8.02	0.62	1.79	1.36	0.80	1.00	17.88
	3	2.61	0.00	1.67	0.00	6.76	0.53	1.86	1.31	0.80	1.00	14.91
	2	2.61	0.00	1.67	0.00	6.75	0.53	1.87	1.31	0.80	1.00	14.89
	1	2.61	0.00	1.67	0.00	6.73	0.53	1.87	1.31	0.80	1.00	14.88
12	4	2.79	0.00	2.09	0.00	6.81	0.52	1.87	1.31	0.80	1.00	15.81
	3	2.91	0.00	2.09	0.00	7.02	0.48	1.92	1.30	0.80	1.00	16.32
	2	3.04	0.00	2.09	0.00	7.23	0.45	1.97	1.30	0.80	1.00	16.91
	1	3.17	0.00	2.09	0.00	7.45	0.43	2.01	1.31	0.80	1.00	17.55
11	4	3.31	0.00	2.30	0.00	7.66	0.41	2.05	1.31	0.80	1.00	18.46
	3	3.45	0.00	2.30	0.00	7.89	0.39	2.08	1.32	0.80	1.00	19.16
	2	3.59	0.00	2.30	0.00	8.12	0.37	2.12	1.32	0.80	1.00	19.87
	1	3.73	0.00	2.30	0.00	8.35	0.36	2.15	1.33	0.80	1.00	20.59
10	2	8.76	0.00	5.43	0.00	15.99	0.34	2.19	1.34	0.80	1.00	44.05
	1	9.27	0.00	5.43	0.00	16.61	0.32	2.24	1.36	0.80	1.00	46.57
9	2	10.35	0.00	5.84	0.00	17.22	0.31	2.27	1.37	0.80	1.00	50.33
	1	10.93	0.00	5.84	0.00	17.86	0.29	2.31	1.38	0.80	1.00	52.95
8	2	11.67	0.00	5.84	0.00	18.49	0.28	2.35	1.39	0.80	1.00	55.79
	1	12.28	0.00	5.84	0.00	19.12	0.27	2.38	1.40	0.80	1.00	58.42
7	2	13.61	0.00	6.26	0.00	19.73	0.27	2.39	1.41	0.80	1.00	62.55
	1	14.28	0.00	6.26	0.00	20.35	0.26	2.41	1.42	0.80	1.00	65.24
6	2	16.67	0.00	6.68	0.00	20.93	0.26	2.40	1.41	0.80	1.00	70.96
	1	17.43	0.00	6.68	0.00	21.51	0.26	2.42	1.42	0.80	1.00	73.75
5	2	20.79	0.00	7.10	0.00	22.05	0.26	2.39	1.41	0.80	1.00	80.89
	1	21.68	0.00	7.10	0.00	22.57	0.26	2.41	1.42	0.80	1.00	83.84
4	1	34.81	0.00	14.19	0.00	44.56	0.22	2.53	1.46	0.80	1.00	156.59
3	1	36.14	0.00	15.02	0.00	45.27	0.21	2.58	1.48	0.80	1.00	163.82
2	1	37.94	0.00	15.02	0.00	45.17	0.19	2.62	1.50	0.80	1.00	169.84
1	1	42.52	0.00	15.86	0.00	42.43	0.18	2.65	1.52	0.80	1.00	178.50

Calculated Effective UDL Wind Areas

Sec.	Pan.	Flat	Round	Flat	Round	Ka	Eff.
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Engineer: HD/tw

		Area	Area	Drag	Drag		Area
		(ft^2)	(ft^2)				(ft^2)
13	4	6.92	3.39	1.63	1.20	0.41	6.32
	3	6.92	3.39	1.63	1.20	0.50	7.67
	2	16.85	7.71	1.62	1.20	0.63	22.95
	1	16.84	7.70	1.62	1.20	0.63	22.95
12	4	22.97	11.05	1.63	1.20	0.67	33.80
	3	22.96	11.02	1.63	1.20	0.69	35.05
	2	32.82	11.00	1.59	1.20	0.67	44.16
	1	32.80	10.97	1.59	1.20	0.69	45.36
11	4	42.63	10.95	1.57	1.20	0.68	54.82
	3	42.60	10.92	1.57	1.20	0.69	55.36
	2	42.57	10.90	1.57	1.20	0.69	55.31
	1	42.54	10.87	1.57	1.20	0.69	55.25
10	2	84.97	21.66	1.57	1.20	0.69	110.32
	1	84.83	21.55	1.57	1.20	0.69	110.07
9	2	84.68	21.43	1.57	1.20	0.69	109.81
	1	84.52	21.30	1.57	1.20	0.69	109.54
8	2	84.36	21.17	1.57	1.20	0.69	109.25
	1	84.18	21.03	1.57	1.20	0.69	108.94
7	2	84.00	20.88	1.57	1.20	0.69	108.61
	1	83.80	20.72	1.57	1.20	0.69	108.26
6	2	83.59	20.55	1.57	1.20	0.69	107.89
	1	83.36	20.36	1.57	1.20	0.69	107.48
5	2	83.10	20.16	1.57	1.20	0.69	107.04
	1	82.83	19.94	1.57	1.20	0.69	106.56
4	1	164.70	39.10	1.57	1.20	0.69	211.44
3	1	163.10	37.81	1.57	1.20	0.69	208.62
2	1	160.76	35.93	1.58	1.20	0.69	204.51
1	1	156.12	32.19	1.58	1.20	0.69	196.36

App. Concentrated Loads

Ant.	Description	Qty	Mount	Desc.	Elev. (ft)	CaAc X-Dir E-W (ft^2)	CaAc Y-Dir N-S (ft^2)	XForce E-W (Kips)	YForce N-S (Kips)	ZForce (Kips)	M-x (kipsft)	M-y (kipsft)	M-z (kipsft)
1	Lightning Rod	1			260	0.00	-4.58	0.00	-0.01	-0.01	0.00	0.00	0.00
2	TMBX-6517-R2M	4	AM110-P-12'		260	0.00	-56.20	0.00	-0.14	-0.89	-3.37	0.00	0.00
3	IMBX-6517-R2M	4	AM110-P-12'		260	0.00	-52.16	0.00	-0.13	-0.89	1.69	2.92	-0.85
4	TMBX-6517-R2M	4	AM110-P-12'		260	0.00	-52.16	0.00	-0.13	-0.89	1.69	-2.92	0.85
5	TMBX-6517-R2M	4	AM110-P-12'		250	0.00	-54.17	0.00	-0.14	-0.87	-3.28	0.00	0.00
6	TMBX-6517-R2M	4	AM110-P-12'		250	0.00	-50.12	0.00	-0.13	-0.87	1.64	2.84	-0.82
7	IMBX-6517-R2M	4	AM110-P-12'		250	0.00	-50.12	0.00	-0.13	-0.87	1.64	-2.84	0.82
8	IMBX-6517-R2M	4	AM110-P-12'		240	0.00	-54.08	0.00	-0.14	-0.87	-3.28	0.00	0.00
9	TMBX-6517-R2M	4	AM110-P-12'		240	0.00	-50.02	0.00	-0.13	-0.87	1.64	2.84	-0.81
10	IMBX-6517-R2M	4	AM110-P-12'		240	0.00	-50.02	0.00	-0.13	-0.87	1.64	-2.84	0.81
11	TMBX-6517-R2M	4	AM110-P-12'		230	0.00	-53.98	0.00	-0.14	-0.87	-3.58	0.00	0.00
12	IMBX-6517-R2M	4	AM110-P-12'		230	0.00	-49.92	0.00	-0.13	-0.87	1.79	3.10	-0.87
13	IMBX-6517-R2M	4	AM110-P-12'		230	0.00	-49.92	0.00	-0.13	-0.87	1.79	-3.10	0.87
14	TMBX-6517-R2M	4	AM110-P-12'		220	0.00	-53.88	0.00	-0.13	-0.87	-3.88	0.00	0.00
15	IMBX-6517-R2M	4	AM110-P-12'		220	0.00	-49.81	0.00	-0.12	-0.87	1.94	3.36	-0.93
16	IMBX-6517-R2M	4	AM110-P-12'		220	0.00	-49.81	0.00	-0.12	-0.87	1.94	-3.36	0.93

Load Combination Wind Only - Serviceability



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 Site: LV1149 Green River North- Taylor
 Engineer: HD/tw

Wind Direction 0.00 (deg)

Wind Pressure

Section	Panel	Bot Elev (ft)	Top Elev (ft)	Kz	Kzt	Wind Pressure (psf)	Ice Thickness (tiz) (in)
13	4	255.00	260.00	1.54	1.00	10.27	0.000
	3	250.00	255.00	1.54	1.00	10.23	0.000
	2	245.00	250.00	1.53	1.00	10.19	0.000
	1	240.00	245.00	1.53	1.00	10.14	0.000
12	4	235.00	240.00	1.52	1.00	10.10	0.000
	3	230.00	235.00	1.51	1.00	10.06	0.000
	2	225.00	230.00	1.50	1.00	10.01	0.000
	1	220.00	225.00	1.50	1.00	9.96	0.000
11	4	215.00	220.00	1.49	1.00	9.92	0.000
	3	210.00	215.00	1.48	1.00	9.87	0.000
	2	205.00	210.00	1.48	1.00	9.82	0.000
	1	200.00	205.00	1.47	1.00	9.77	0.000
10	2	190.00	200.00	1.46	1.00	9.69	0.000
	1	180.00	190.00	1.44	1.00	9.58	0.000
9	2	170.00	180.00	1.42	1.00	9.47	0.000
	1	160.00	170.00	1.41	1.00	9.35	0.000
8	2	150.00	160.00	1.39	1.00	9.23	0.000
	1	140.00	150.00	1.37	1.00	9.10	0.000
7	2	130.00	140.00	1.35	1.00	8.97	0.000
	1	120.00	130.00	1.33	1.00	8.82	0.000
6	2	110.00	120.00	1.30	1.00	8.67	0.000
	1	100.00	110.00	1.28	1.00	8.51	0.000
5	2	90.00	100.00	1.25	1.00	8.33	0.000
	1	80.00	90.00	1.22	1.00	8.14	0.000
4	1	60.00	80.00	1.17	1.00	7.81	0.000
3	1	40.00	60.00	1.09	1.00	7.28	0.000
2	1	20.00	40.00	0.98	1.00	6.53	0.000
1	1	0.00	20.00	0.85	1.00	5.65	0.000

Calculated Effective Wind Areas

Sec.	Pan.	Flat Area (ft^2)	App. Flat Area (ft^2)	Round Area (ft^2)	App. Round Area (ft^2)	Solid. Ratio	Flat Drag	Round Drag	Flat Dir	Round Dir	Eff. Area (ft^2)	
13	4	3.33	0.00	1.67	0.00	0.00	0.24	2.47	1.44	0.80	1.00	8.98
	3	2.68	0.00	1.67	0.00	0.00	0.21	2.57	1.48	0.80	1.00	7.97
	2	2.68	0.00	1.67	0.00	0.00	0.21	2.57	1.48	0.80	1.00	7.97
	1	2.68	0.00	1.67	0.00	0.00	0.21	2.57	1.48	0.80	1.00	7.97
12	4	2.87	0.00	2.09	0.00	0.00	0.22	2.52	1.46	0.80	1.00	8.84
	3	2.99	0.00	2.09	0.00	0.00	0.20	2.58	1.48	0.80	1.00	9.26
	2	3.11	0.00	2.09	0.00	0.00	0.19	2.63	1.51	0.80	1.00	9.68
	1	3.23	0.00	2.09	0.00	0.00	0.18	2.67	1.52	0.80	1.00	10.08
11	4	3.37	0.00	2.30	0.00	0.00	0.18	2.68	1.53	0.80	1.00	10.75
	3	3.51	0.00	2.30	0.00	0.00	0.17	2.71	1.54	0.80	1.00	11.16
	2	3.64	0.00	2.30	0.00	0.00	0.16	2.74	1.56	0.80	1.00	11.56
	1	3.78	0.00	2.30	0.00	0.00	0.15	2.76	1.57	0.80	1.00	11.96
10	2	8.91	0.00	5.43	0.00	0.00	0.16	2.72	1.55	0.80	1.00	27.81
	1	9.41	0.00	5.43	0.00	0.00	0.15	2.76	1.57	0.80	1.00	29.33
9	2	10.50	0.00	5.84	0.00	0.00	0.15	2.77	1.57	0.80	1.00	32.40



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Engineer: HD/tw

1	11.08	0.00	5.84	0.00	0.00	0.14	2.80	1.58	0.80	1.00	34.03
8	2	11.81	0.00	5.84	0.00	0.00	0.14	2.82	1.60	0.80	35.94
	1	12.42	0.00	5.84	0.00	0.00	0.13	2.84	1.61	0.80	37.57
7	2	13.76	0.00	6.26	0.00	0.00	0.14	2.83	1.60	0.80	41.14
	1	14.43	0.00	6.26	0.00	0.00	0.13	2.84	1.61	0.80	42.89
6	2	16.83	0.00	6.68	0.00	0.00	0.14	2.81	1.59	0.80	48.47
	1	17.58	0.00	6.68	0.00	0.00	0.14	2.82	1.60	0.80	50.40
5	2	20.97	0.00	7.10	0.00	0.00	0.15	2.78	1.57	0.80	57.74
	1	21.85	0.00	7.10	0.00	0.00	0.15	2.79	1.58	0.80	59.94
4	1	35.22	0.00	14.19	0.00	0.00	0.12	2.90	1.64	0.80	105.01
3	1	36.53	0.00	15.02	0.00	0.00	0.11	2.92	1.65	0.80	110.22
2	1	38.31	0.00	15.02	0.00	0.00	0.11	2.94	1.66	0.80	115.19
1	1	42.88	0.00	15.86	0.00	0.00	0.11	2.94	1.66	0.80	126.98

Calculated Effective UDL Wind Areas

Sec.	Pan.	Flat Area (ft^2)	Round Area (ft^2)	Flat Drag	Round Drag	Ka	Eff. Area (ft^2)
13	4	5.39	0.00	1.67	1.20	0.63	5.64
	3	5.39	0.00	1.67	1.20	0.63	5.64
	2	13.79	0.00	1.65	1.20	0.69	15.80
	1	13.79	0.00	1.65	1.20	0.69	15.80
12	4	18.40	0.00	1.66	1.20	0.72	21.97
	3	18.40	0.00	1.66	1.20	0.72	21.97
	2	23.72	0.00	1.63	1.20	0.69	26.76
	1	23.72	0.00	1.63	1.20	0.69	26.76
11	4	29.04	0.00	1.60	1.20	0.68	31.55
	3	29.04	0.00	1.60	1.20	0.68	31.55
	2	29.04	0.00	1.60	1.20	0.68	31.55
	1	29.04	0.00	1.60	1.20	0.68	31.55
10	2	58.08	0.00	1.60	1.20	0.68	63.09
	1	58.08	0.00	1.60	1.20	0.68	63.09
9	2	58.08	0.00	1.60	1.20	0.68	63.09
	1	58.08	0.00	1.60	1.20	0.68	63.09
8	2	58.08	0.00	1.60	1.20	0.68	63.09
	1	58.08	0.00	1.60	1.20	0.68	63.09
7	2	58.08	0.00	1.60	1.20	0.68	63.09
	1	58.08	0.00	1.60	1.20	0.68	63.09
6	2	58.08	0.00	1.60	1.20	0.68	63.09
	1	58.08	0.00	1.60	1.20	0.68	63.09
5	2	58.08	0.00	1.60	1.20	0.68	63.09
	1	58.08	0.00	1.60	1.20	0.68	63.09
4	1	116.160	0.00	1.60	1.20	0.68	126.18
3	1	116.160	0.00	1.60	1.20	0.68	126.18
2	1	116.160	0.00	1.60	1.20	0.68	126.18
1	1	116.160	0.00	1.60	1.20	0.68	126.18

App. Concentrated Loads

Ant.	Description	Qty	Mount	Desc.	Elev. (ft)	CaAc X-Dir (ft^2)	CaAc Y-Dir (ft^2)	XForce E-W (Kips)	YForce N-S (Kips)	ZForce (Kips)	M-x (kipsft)	M-y (kipsft)	M-z (kipsft)
1	Lightning Rod	1			260	0.00	-0.75	0.00	-0.01	-0.01	0.00	0.00	0.00



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Engineer: HD/tw

2	TMBX-6517-R2M	4	AM110-P-12'	260	0.00	-31.77	0.00	-0.33	-0.89	-3.37	0.00	0.00
3	TMBX-6517-R2M	4	AM110-P-12'	260	0.00	-26.15	0.00	-0.27	-0.89	1.69	2.92	-1.68
4	TMBX-6517-R2M	4	AM110-P-12'	260	0.00	-26.15	0.00	-0.27	-0.89	1.69	-2.92	1.68
5	TMBX-6517-R2M	4	AM110-P-12'	250	0.00	-31.01	0.00	-0.32	-0.87	-3.28	0.00	0.00
6	TMBX-6517-R2M	4	AM110-P-12'	250	0.00	-25.39	0.00	-0.26	-0.87	1.64	2.84	-1.62
7	TMBX-6517-R2M	4	AM110-P-12'	250	0.00	-25.39	0.00	-0.26	-0.87	1.64	-2.84	1.62
8	TMBX-6517-R2M	4	AM110-P-12'	240	0.00	-31.01	0.00	-0.31	-0.87	-3.28	0.00	0.00
9	TMBX-6517-R2M	4	AM110-P-12'	240	0.00	-25.39	0.00	-0.26	-0.87	1.64	2.84	-1.61
10	TMBX-6517-R2M	4	AM110-P-12'	240	0.00	-25.39	0.00	-0.26	-0.87	1.64	-2.84	1.61
11	TMBX-6517-R2M	4	AM110-P-12'	230	0.00	-31.01	0.00	-0.31	-0.87	-3.58	0.00	0.00
12	TMBX-6517-R2M	4	AM110-P-12'	230	0.00	-25.39	0.00	-0.25	-0.87	1.79	3.10	-1.74
13	TMBX-6517-R2M	4	AM110-P-12'	230	0.00	-25.39	0.00	-0.25	-0.87	1.79	-3.10	1.74
14	TMBX-6517-R2M	4	AM110-P-12'	220	0.00	-31.01	0.00	-0.31	-0.87	-3.88	0.00	0.00
15	TMBX-6517-R2M	4	AM110-P-12'	220	0.00	-25.39	0.00	-0.25	-0.87	1.94	3.36	-1.87
16	TMBX-6517-R2M	4	AM110-P-12'	220	0.00	-25.39	0.00	-0.25	-0.87	1.94	-3.36	1.87

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Engineer: HD/tw

Section H: STRUCTURE DISPLACEMENT DATA

Load Combination Max Envelope

Wind Direction Maximum displacements

Node	Elev. (ft)	N-S Disp (in)	W-E Disp (in)	Vert. Disp (in)	N-S Rot (Deg)	W-E Rot (Deg)	Twist (Deg)
87	260.0	38.2	38.0	-0.5	1.49	1.49	-0.04
84	255.0	36.6	36.5	-0.5	1.45	1.46	0.06
81	250.0	35.1	34.9	-0.5	1.52	1.50	-0.09
78	245.0	33.5	33.4	-0.5	1.39	1.41	0.14
75	240.0	32.0	31.9	-0.5	1.46	1.44	0.13
72	235.0	30.5	30.4	-0.5	1.31	1.33	0.15
69	230.0	29.1	29.0	-0.5	1.40	1.37	0.11
66	225.0	27.7	27.5	-0.5	1.23	1.26	0.14
63	220.0	26.4	26.2	-0.4	1.32	1.29	-0.09
60	215.0	25.0	24.9	-0.4	1.17	1.19	0.11
57	210.0	23.8	23.6	-0.4	1.22	1.20	0.06
54	205.0	22.5	22.4	-0.4	1.09	1.11	0.08
51	200.0	21.4	21.2	-0.4	1.09	1.08	0.04
48	190.0	19.1	19.0	-0.4	0.97	0.98	0.08
45	180.0	17.0	16.9	-0.4	0.94	0.93	0.02
42	170.0	15.1	15.0	-0.4	0.85	0.85	0.05
39	160.0	13.3	13.2	-0.3	0.80	0.79	0.01
36	150.0	11.6	11.5	-0.3	0.71	0.71	0.04
33	140.0	10.1	10.0	-0.3	0.67	0.66	-0.01
30	130.0	8.7	8.7	-0.3	0.60	0.60	0.03
27	120.0	7.5	7.4	-0.3	0.55	0.54	-0.01
24	110.0	6.3	6.3	-0.2	0.49	0.49	0.02
21	100.0	5.3	5.3	-0.2	0.44	0.43	-0.01
18	90.0	4.4	4.3	-0.2	0.40	0.40	0.01
15	80.0	3.6	3.5	-0.2	0.35	0.34	-0.01
12	60.0	2.1	2.1	-0.1	0.24	0.24	0.04
9	40.0	1.1	1.1	-0.1	0.18	0.18	0.00
6	20.0	0.3	-0.3	0.0	0.08	-0.08	0.03
3	0.0	0.0	0.0	0.0	0.00	0.00	0.00

Load Combination Wind Only

Wind Direction Maximum displacements

Node	Elev. (ft)	N-S Disp (in)	W-E Disp (in)	Vert. Disp (in)	N-S Rot (Deg)	W-E Rot (Deg)	Twist (Deg)
87	260.0	38.2	38.0	-0.1	1.49	1.49	0.04
84	255.0	36.6	36.5	-0.1	1.45	1.46	0.06
81	250.0	35.1	34.9	-0.1	1.52	1.50	-0.09
78	245.0	33.5	33.4	-0.1	1.39	1.41	0.14
75	240.0	32.0	31.9	-0.1	1.46	1.44	0.13
72	235.0	30.5	30.4	-0.1	1.31	1.33	0.15
69	230.0	29.1	29.0	-0.1	1.40	1.37	0.11
66	225.0	27.7	27.5	-0.1	1.23	1.26	0.14
63	220.0	26.4	26.2	-0.1	1.32	1.29	-0.09
60	215.0	25.0	24.9	-0.1	1.17	1.19	0.11
57	210.0	23.8	23.6	-0.1	1.22	1.20	0.06
54	205.0	22.5	22.4	-0.1	1.09	1.11	0.08
51	200.0	21.4	21.2	-0.1	1.09	1.08	0.04
48	190.0	19.1	19.0	-0.1	0.97	0.98	0.08



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45	180.0	17.0	16.9	-0.1	0.94	0.93	0.02
42	170.0	15.1	15.0	-0.1	0.85	0.85	0.05
39	160.0	13.3	13.2	-0.1	0.80	0.79	0.01
36	150.0	11.6	11.5	-0.1	0.71	0.71	0.04
33	140.0	10.1	10.0	-0.1	0.67	0.66	-0.01
30	130.0	8.7	8.7	-0.1	0.60	0.60	0.03
27	120.0	7.5	7.4	-0.1	0.55	0.54	-0.01
24	110.0	6.3	6.3	-0.1	0.49	0.49	0.02
21	100.0	5.3	5.3	-0.1	0.44	0.43	-0.01
18	90.0	4.4	4.3	-0.1	0.40	0.40	0.01
15	80.0	3.6	3.5	-0.1	0.35	0.34	-0.01
12	60.0	2.1	2.1	0.0	0.24	0.24	0.04
9	40.0	1.1	1.1	0.0	0.18	0.18	0.00
6	20.0	0.3	-0.3	0.0	0.08	-0.08	0.03
3	0.0	0.0	0.0	0.0	0.00	0.00	0.00

Load Combination

Wind Only - Max Tension

Wind Direction

Maximum displacements

Node	Elev. (ft)	N-S Disp (in)	W-E Disp (in)	Vert. Disp (in)	N-S Rot (Deg)	W-E Rot (Deg)	Twist (Deg)
87	260.0	38.2	38.0	-0.1	1.49	1.49	-0.04
84	255.0	36.6	36.5	-0.1	1.45	1.46	0.06
81	250.0	35.1	34.9	-0.1	1.52	1.50	-0.09
78	245.0	33.5	33.4	-0.1	1.39	1.41	0.14
75	240.0	32.0	31.9	-0.1	1.46	1.44	0.13
72	235.0	30.5	30.4	-0.1	1.31	1.33	0.15
69	230.0	29.1	29.0	-0.1	1.40	1.37	0.11
66	225.0	27.7	27.5	-0.1	1.23	1.26	0.14
63	220.0	26.4	26.2	-0.1	1.32	1.29	-0.09
60	215.0	25.0	24.9	-0.1	1.17	1.19	0.11
57	210.0	23.8	23.6	-0.1	1.22	1.20	0.06
54	205.0	22.5	22.4	-0.1	1.09	1.11	0.08
51	200.0	21.4	21.2	-0.1	1.09	1.08	0.04
48	190.0	19.1	19.0	-0.1	0.97	0.98	0.08
45	180.0	17.0	16.9	-0.1	0.94	0.93	0.02
42	170.0	15.1	15.0	-0.1	0.85	0.85	0.05
39	160.0	13.3	13.2	-0.1	0.80	0.79	0.01
36	150.0	11.6	11.5	-0.1	0.71	0.71	0.04
33	140.0	10.1	10.0	-0.1	0.67	0.66	-0.01
30	130.0	8.7	8.7	-0.1	0.60	0.60	0.03
27	120.0	7.5	7.4	-0.1	0.55	0.54	-0.01
24	110.0	6.3	6.3	-0.1	0.49	0.49	0.02
21	100.0	5.3	5.3	-0.1	0.44	0.43	-0.01
18	90.0	4.4	4.3	0.0	0.40	0.40	0.01
15	80.0	3.6	3.5	0.0	0.35	0.34	-0.01
12	60.0	2.1	2.1	0.0	0.24	0.24	0.04
9	40.0	1.1	1.1	0.0	0.18	0.18	0.00
6	20.0	0.3	-0.3	0.0	0.08	-0.08	0.03
3	0.0	0.0	0.0	0.0	0.00	0.00	0.00

Load Combination

Wind and Ice

Wind Direction

Maximum displacements

Node	Elev.	N-S Disp	W-E Disp	Vert. Disp	N-S Rot	W-E Rot	Twist
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Site: LV1149 Green River North- Taylor

Engineer: HD/tw

	(ft)	(in)	(in)	(in)	(Deg)	(Deg)	(Deg)
87	260.0	4.6	4.6	-0.5	0.19	0.18	0.00
84	255.0	4.5	4.4	-0.5	0.18	0.18	0.01
81	250.0	4.3	4.2	-0.5	0.19	0.19	-0.01
78	245.0	4.1	4.0	-0.5	0.17	0.17	0.02
75	240.0	3.9	3.8	-0.5	0.18	0.18	-0.02
72	235.0	3.7	3.6	-0.5	0.16	0.16	0.02
69	230.0	3.5	3.5	-0.5	0.17	0.17	-0.01
66	225.0	3.3	3.3	-0.5	0.15	0.15	0.02
63	220.0	3.2	3.1	-0.4	0.16	0.16	-0.01
60	215.0	3.0	3.0	-0.4	0.14	0.14	0.01
57	210.0	2.9	2.8	-0.4	0.15	0.15	-0.01
54	205.0	2.7	2.7	-0.4	0.13	0.13	0.01
51	200.0	2.6	2.5	-0.4	0.13	0.13	-0.01
48	190.0	2.3	2.3	-0.4	0.12	0.12	0.01
45	180.0	2.0	2.0	-0.4	0.11	0.11	0.00
42	170.0	1.8	1.8	-0.4	0.10	0.10	0.01
39	160.0	1.6	1.6	-0.3	0.10	0.10	0.00
36	150.0	1.4	1.4	-0.3	0.09	0.08	0.00
33	140.0	1.2	1.2	-0.3	0.08	0.08	0.00
30	130.0	1.0	1.0	-0.3	0.07	0.07	0.00
27	120.0	0.9	0.9	-0.3	0.07	0.06	0.00
24	110.0	0.7	0.7	-0.2	0.06	0.06	0.00
21	100.0	0.6	0.6	-0.2	0.05	0.05	0.00
18	90.0	0.5	0.5	-0.2	0.05	0.05	0.00
15	80.0	0.4	0.4	-0.2	0.04	0.04	0.00
12	60.0	0.2	0.2	-0.1	0.03	0.03	0.00
9	40.0	0.1	0.1	-0.1	0.02	0.02	0.00
6	20.0	0.0	0.0	0.0	0.01	-0.01	0.00
3	0.0	0.0	0.0	0.0	0.00	0.00	0.00

Load Combination Wind Only - Serviceability

Wind Direction Maximum displacements

Node	Elev. (ft)	N-S Disp (in)	W-E Disp (in)	Vert. Disp (in)	N-S Rot (Deg)	W-E Rot (Deg)	Twist (Deg)
87	260.0	10.6	10.6	-0.1	0.41	0.41	0.01
84	255.0	10.2	10.1	-0.1	0.40	0.41	0.02
81	250.0	9.7	9.7	-0.1	0.42	0.42	-0.03
78	245.0	9.3	9.3	-0.1	0.39	0.39	0.04
75	240.0	8.9	8.9	-0.1	0.41	0.40	-0.04
72	235.0	8.5	8.4	-0.1	0.36	0.37	0.04
69	230.0	8.1	8.1	-0.1	0.39	0.38	-0.03
66	225.0	7.7	7.7	-0.1	0.34	0.35	0.04
63	220.0	7.3	7.3	-0.1	0.37	0.36	-0.02
60	215.0	6.9	6.9	-0.1	0.32	0.33	0.03
57	210.0	6.6	6.6	-0.1	0.34	0.33	-0.02
54	205.0	6.3	6.2	-0.1	0.30	0.31	0.02
51	200.0	5.9	5.9	-0.1	0.30	0.30	-0.01
48	190.0	5.3	5.3	-0.1	0.27	0.27	0.02
45	180.0	4.7	4.7	-0.1	0.26	0.26	0.01
42	170.0	4.2	4.2	-0.1	0.24	0.24	0.01
39	160.0	3.7	3.7	-0.1	0.22	0.22	0.00
36	150.0	3.2	3.2	-0.1	0.20	0.20	0.01



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33	140.0	2.8	2.8	-0.1	0.19	0.18	0.00
30	130.0	2.4	2.4	-0.1	0.17	0.17	0.01
27	120.0	2.1	2.1	-0.1	0.15	0.15	0.00
24	110.0	1.8	1.7	-0.1	0.14	0.14	0.00
21	100.0	1.5	1.5	-0.1	0.12	0.12	0.00
18	90.0	1.2	1.2	-0.1	0.11	0.11	0.00
15	80.0	1.0	1.0	0.0	0.10	0.10	0.00
12	60.0	0.6	0.6	0.0	0.07	0.07	0.01
9	40.0	0.3	0.3	0.0	0.05	0.05	0.00
6	20.0	0.1	-0.1	0.0	0.02	-0.02	0.01
3	0.0	0.0	0.0	0.0	0.00	0.00	0.00

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 Site: LV1149 Green River North- Taylor
 Engineer: HD/tw

Section L: STRENGTH ASSESSMENT SORTED DATA

Load Combination	Max Envelope										
Wind Direction	Maximum										
Sec Pnl	Elev	MType	Desc.	Len	kl/r	Gov. comp. cap.	Gov. tens. cap.	Max Compr.	Max Tens.	Asses. Ratio	
	(ft)			(ft)		(Kips)	(Kips)	(Kips)	(Kips)		
13	4	255.00	Leg	SR 2	5.00	120.0	49.3	82.3	5.6	3.2	0.11
13	3	250.00	Leg	SR 2	5.00	120.0	49.3	82.3	7.5	5.5	0.15
13	2	245.00	Leg	SR 2	5.00	120.0	49.3	82.3	21.0	16.0	0.43
13	1	240.00	Leg	SR 2	5.00	120.0	49.3	82.3	31.4	26.4	0.64
12	4	235.00	Leg	SR 2 1/2	5.01	96.2	112.4	182.5	46.6	39.1	0.41
12	3	230.00	Leg	SR 2 1/2	5.01	96.2	112.4	182.5	60.3	51.6	0.54
12	2	225.00	Leg	SR 2 1/2	5.01	96.2	112.4	182.5	73.4	62.6	0.65
12	1	220.00	Leg	SR 2 1/2	5.01	96.2	112.4	182.5	89.2	77.1	0.79
11	4	215.00	Leg	SR 2 3/4	5.01	87.4	153.0	182.5	102.9	88.6	0.67
11	3	210.00	Leg	SR 2 3/4	5.01	87.4	153.0	182.5	120.2	104.5	0.79
11	2	205.00	Leg	SR 2 3/4	5.01	87.4	153.0	182.5	132.9	116.6	0.87
11	1	200.00	Leg	SR 2 3/4	5.01	87.4	153.0	182.5	148.3	130.7	0.97
10	2	190.00	Leg	SR 3 1/4	10.02	78.3	238.6	330.3	166.0	147.4	0.70
10	1	180.00	Leg	SR 3 1/4	10.02	77.8	239.8	330.3	194.0	172.6	0.81
9	2	170.00	Leg	SR 3 1/2	10.02	72.0	296.5	330.3	217.2	193.9	0.73
9	1	160.00	Leg	SR 3 1/2	10.02	71.7	297.3	330.3	243.1	216.9	0.82
8	2	150.00	Leg	SR 3 1/2	10.02	71.5	298.2	330.3	265.9	237.4	0.89
8	1	140.00	Leg	SR 3 1/2	10.02	71.2	299.1	330.3	290.7	259.3	0.97
7	2	130.00	Leg	SR 3 3/4	10.02	66.3	360.6	416.3	313.5	279.4	0.87
7	1	120.00	Leg	SR 3 3/4	10.02	66.2	361.0	416.3	337.8	300.5	0.94
6	2	110.00	Leg	SR 4	10.02	61.9	427.5	528.0	360.7	320.3	0.84
6	1	100.00	Leg	SR 4	10.02	61.8	427.9	528.0	385.0	341.0	0.90
5	2	90.00	Leg	SR 4 1/4	10.02	57.9	499.7	629.6	408.2	360.7	0.82
5	1	80.00	Leg	SR 4 1/4	10.02	57.8	500.2	629.6	432.7	381.2	0.87
4	1	60.00	Leg	SR 4 1/4	20.03	56.5	505.6	629.6	467.6	410.3	0.92
3	1	40.00	Leg	SR 4 1/2	20.03	53.4	581.3	716.3	516.3	450.3	0.89
2	1	20.00	Leg	SR 4 1/2	20.03	53.4	581.3	716.3	563.2	488.4	0.97
1	1	0.00	Leg	SR 4 3/4	20.03	50.6	661.8	765.3	610.3	526.0	0.92
13	4	255.00	Diag	L1 3/4x1 3/4x3/16	6.40	100.2	11.8	17.9	3.5	3.7	0.29
13	3	250.00	Diag	L1 3/4x1 3/4x3/16	6.40	100.2	11.8	17.9	4.0	3.8	0.34
13	2	245.00	Diag	L1 3/4x1 3/4x3/16	6.40	100.2	11.8	17.9	4.6	4.8	0.39
13	1	240.00	Diag	L1 3/4x1 3/4x3/16	6.40	100.2	11.8	17.9	5.3	5.1	0.45
12	4	235.00	Diag	L2x2x3/16	6.56	96.0	14.2	19.3	5.0	4.8	0.35
12	3	230.00	Diag	L2x2x3/16	6.90	100.2	13.5	19.3	4.6	4.7	0.34
12	2	225.00	Diag	L2x2x3/16	7.25	104.7	12.9	19.3	6.3	6.1	0.48
12	1	220.00	Diag	L2x2x3/16	7.62	109.2	12.3	19.3	5.9	6.0	0.48
11	4	215.00	Diag	L2x2x3/16	8.01	113.5	11.7	19.3	7.5	7.2	0.64
11	3	210.00	Diag	L2x2x3/16	8.40	118.3	11.0	19.3	7.2	7.3	0.65
11	2	205.00	Diag	L2x2x3/16	8.81	123.2	10.3	19.3	7.3	7.1	0.71
11	1	200.00	Diag	L2x2x3/16	9.22	128.2	9.7	19.3	7.1	7.3	0.74
10	2	190.00	Diag	L3x3x3/16	13.13	125.1	15.5	22.8	9.9	9.6	0.64
10	1	180.00	Diag	L3x3x3/16	13.80	130.5	14.4	22.8	9.6	9.8	0.67
9	2	170.00	Diag	L3x3x3/16	14.50	136.0	13.3	22.8	9.9	9.7	0.74
9	1	160.00	Diag	L3x3x3/16	15.24	141.9	12.2	22.8	10.0	10.1	0.82
8	2	150.00	Diag	L3x3x1/4	16.01	148.0	14.9	30.4	10.4	10.2	0.70
8	1	140.00	Diag	L3x3x1/4	16.80	154.2	13.7	30.4	10.6	10.7	0.78
7	2	130.00	Diag	L3x3x1/4	17.62	160.5	12.6	30.4	11.1	11.0	0.88
7	1	120.00	Diag	L3x3x1/4	18.45	167.0	11.7	30.4	11.4	11.5	0.98

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6	2	110.00	Diag	L3 1/2x3 1/2x1/4	19.30	152.3	16.5	30.4	12.0	11.9	0.73
6	1	100.00	Diag	L3 1/2x3 1/2x1/4	20.16	158.1	15.3	30.4	12.4	12.4	0.81
5	2	90.00	Diag	L4x4x1/4	21.03	145.0	20.8	30.4	13.0	12.9	0.62
5	1	80.00	Diag	L4x4x1/4	21.92	150.1	19.4	30.4	13.5	13.5	0.70
4	1	60.00	Diag	2L3x3x1/4	29.01	149.3	29.2	60.7	17.9	17.7	0.61
3	1	40.00	Diag	2L3x3x1/4	30.48	154.6	27.2	60.7	18.4	18.4	0.68
2	1	20.00	Diag	2L3x3x1/4	32.02	160.3	25.3	60.7	19.0	18.8	0.75
1	1	0.00	Diag	2L3x3x1/4	33.61	162.0	24.8	60.7	19.3	19.2	0.78
13	4	255.00	Horiz	L2x2x3/16	4.00	113.8	11.6	8.3	2.6	2.4	0.29
10	2	190.00	SecH1	L2x2x3/16	4.26	131.1	9.3	8.3	3.4	3.4	0.42
10	1	180.00	SecH1	L2x2x3/16	4.76	146.4	7.5	8.3	4.0	4.0	0.54
9	2	170.00	SecH1	L2 1/2x2 1/2x3/16	5.26	128.7	12.2	10.9	4.2	4.2	0.39
9	1	160.00	SecH1	L2 1/2x2 1/2x3/16	5.75	140.9	10.3	10.9	4.7	4.7	0.46
8	2	150.00	SecH1	L2 1/2x2 1/2x3/16	6.25	153.1	8.7	10.9	5.2	5.2	0.60
8	1	140.00	SecH1	L2 1/2x2 1/2x3/16	6.75	165.4	7.4	10.9	5.6	5.6	0.76
7	2	130.00	SecH1	L3x3x3/16	7.25	147.5	11.3	11.1	5.8	5.8	0.52
7	1	120.00	SecH1	L3x3x3/16	7.75	157.7	9.9	11.1	6.2	6.2	0.63
6	2	110.00	SecH1	L3x3x3/16	8.25	167.8	8.7	11.1	6.4	6.4	0.73
6	1	100.00	SecH1	L3x3x3/16	8.75	178.0	7.8	11.1	6.8	6.8	0.87
5	2	90.00	SecH1	L3 1/2x3 1/2x1/4	9.25	160.9	14.7	14.8	7.0	7.0	0.48
5	1	80.00	SecH1	L3 1/2x3 1/2x1/4	9.75	169.6	13.3	14.8	7.5	7.5	0.56
4	1	60.00	SecH1	L3 1/2x3 1/2x1/4	10.51	182.8	11.4	14.8	8.1	8.1	0.71
4	1	60.00	SecH2	L2 1/2x2 1/2x3/16	5.26	128.7	12.2	10.9	8.1	8.1	0.74
4	1	60.00	SecH3	L2 1/2x2 1/2x3/16	5.26	128.7	12.2	10.9	8.1	8.1	0.74
4	1	60.00	SecD1	L3x3x3/16	6.91	140.5	12.5	11.1	5.6	5.6	0.50
4	1	60.00	SecD2	L3x3x3/16	7.60	154.5	10.3	11.1	5.6	5.6	0.54
4	1	60.00	PlanH1	L3x3x3/16	10.48	213.1	5.4	9.8	0.1	0.1	0.02
3	1	40.00	SecH1	2L2 1/2x2 1/2x3/16	11.51	177.0	13.0	21.8	8.9	8.9	0.69
3	1	40.00	SecH2	L3x3x1/4	5.75	118.5	15.2	14.8	8.9	8.9	0.60
3	1	40.00	SecH3	L3x3x1/4	5.75	118.5	15.2	14.8	8.9	8.9	0.60
3	1	40.00	SecD1	L3x3x3/16	7.29	148.3	11.2	11.1	5.9	5.9	0.53
3	1	40.00	SecD2	L3x3x3/16	7.95	161.7	9.4	11.1	5.9	5.9	0.63
3	1	40.00	PlanH1	L3x3x3/16	11.48	233.5	4.5	9.8	0.1	0.1	0.03
2	1	20.00	SecH1	2L2 1/2x2 1/2x3/16	12.51	192.4	11.0	21.8	9.7	9.7	0.88
2	1	20.00	SecH2	L3x3x1/4	6.25	127.2	15.2	14.8	9.7	9.7	0.66
2	1	20.00	SecH3	L3x3x1/4	6.25	127.2	15.2	14.8	9.7	9.7	0.66
2	1	20.00	SecD1	L3x3x3/16	7.68	156.3	10.1	11.1	6.2	6.2	0.62
2	1	20.00	SecD2	L3x3x3/16	8.33	169.3	8.6	11.1	6.2	6.2	0.72
2	1	20.00	PlanH1	L3 1/2x3 1/2x1/4	12.48	217.0	8.1	13.1	0.1	0.1	0.02
1	1	0.00	SecH1	2L3x3x3/16	13.51	172.4	16.6	22.3	10.5	10.5	0.64
1	1	0.00	SecH2	L3x3x1/4	6.75	137.3	15.2	14.8	10.5	10.5	0.71
1	1	0.00	SecH3	L3x3x1/4	6.75	137.3	15.2	14.8	10.5	10.5	0.71
1	1	0.00	SecD1	L3 1/2x3 1/2x1/4	8.09	140.7	15.2	14.8	6.5	6.5	0.44
1	1	0.00	SecD2	L3 1/2x3 1/2x1/4	8.71	151.5	15.2	14.8	6.5	6.5	0.44
1	1	0.00	PlanH1	L3 1/2x3 1/2x1/4	13.48	234.5	6.9	13.1	0.2	0.2	0.02

Load Combination
Wind Direction

Wind Only
Maximum

Sec	Pnl	Elev	MType	Desc.	Len	k1/r	Gov. comp. cap.	Gov. tens. cap.	Max Compr.	Max Tens.	Asses. Ratio
		(ft)			(ft)		(Kips)	(Kips)	(Kips)	(Kips)	

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13	4	255.00	Leg	SR 2	5.00	120.0	49.3	82.3	5.6	2.9	0.11
13	3	250.00	Leg	SR 2	5.00	120.0	49.3	82.3	7.5	5.2	0.15
13	2	245.00	Leg	SR 2	5.00	120.0	49.3	82.3	21.0	15.3	0.43
13	1	240.00	Leg	SR 2	5.00	120.0	49.3	82.3	31.4	25.8	0.64
12	4	235.00	Leg	SR 2 1/2	5.01	96.2	112.4	182.5	46.6	38.1	0.41
12	3	230.00	Leg	SR 2 1/2	5.01	96.2	112.4	182.5	60.3	50.5	0.54
12	2	225.00	Leg	SR 2 1/2	5.01	96.2	112.4	182.5	73.4	61.2	0.65
12	1	220.00	Leg	SR 2 1/2	5.01	96.2	112.4	182.5	89.2	75.5	0.79
11	4	215.00	Leg	SR 2 3/4	5.01	87.4	153.0	182.5	102.9	86.8	0.67
11	3	210.00	Leg	SR 2 3/4	5.01	87.4	153.0	182.5	120.2	102.5	0.79
11	2	205.00	Leg	SR 2 3/4	5.01	87.4	153.0	182.5	132.9	114.6	0.87
11	1	200.00	Leg	SR 2 3/4	5.01	87.4	153.0	182.5	148.3	128.6	0.97
10	2	190.00	Leg	SR 3 1/4	10.02	78.3	238.6	330.3	166.0	145.2	0.70
10	1	180.00	Leg	SR 3 1/4	10.02	77.8	239.8	330.3	194.0	170.1	0.81
9	2	170.00	Leg	SR 3 1/2	10.02	72.0	296.5	330.3	217.2	191.3	0.73
9	1	160.00	Leg	SR 3 1/2	10.02	71.7	297.3	330.3	243.1	214.0	0.82
8	2	150.00	Leg	SR 3 1/2	10.02	71.5	298.2	330.3	265.9	234.3	0.89
8	1	140.00	Leg	SR 3 1/2	10.02	71.2	299.1	330.3	290.7	255.9	0.97
7	2	130.00	Leg	SR 3 3/4	10.02	66.3	360.6	416.3	313.5	275.7	0.87
7	1	120.00	Leg	SR 3 3/4	10.02	66.2	361.0	416.3	337.8	296.5	0.94
6	2	110.00	Leg	SR 4	10.02	61.9	427.5	528.0	360.7	316.1	0.84
6	1	100.00	Leg	SR 4	10.02	61.8	427.9	528.0	385.0	336.4	0.90
5	2	90.00	Leg	SR 4 1/4	10.02	57.9	499.7	629.6	408.2	355.8	0.82
5	1	80.00	Leg	SR 4 1/4	10.02	57.8	500.2	629.6	432.7	375.9	0.87
4	1	60.00	Leg	SR 4 1/4	20.03	56.5	505.6	629.6	467.6	404.5	0.92
3	1	40.00	Leg	SR 4 1/2	20.03	53.4	581.3	716.3	516.3	443.6	0.89
2	1	20.00	Leg	SR 4 1/2	20.03	53.4	581.3	716.3	563.2	480.9	0.97
1	1	0.00	Leg	SR 4 3/4	20.03	50.6	661.8	765.3	610.3	517.6	0.92

13	4	255.00	Diag	L1 3/4x1 3/4x3/16	6.40	100.2	11.8	17.9	3.5	3.7	0.29
13	3	250.00	Diag	L1 3/4x1 3/4x3/16	6.40	100.2	11.8	17.9	4.0	3.8	0.34
13	2	245.00	Diag	L1 3/4x1 3/4x3/16	6.40	100.2	11.8	17.9	4.5	4.8	0.38
13	1	240.00	Diag	L1 3/4x1 3/4x3/16	6.40	100.2	11.8	17.9	5.3	5.1	0.45
12	4	235.00	Diag	L2x2x3/16	6.56	96.0	14.2	19.3	5.0	4.8	0.35
12	3	230.00	Diag	L2x2x3/16	6.90	100.2	13.5	19.3	4.6	4.7	0.34
12	2	225.00	Diag	L2x2x3/16	7.25	104.7	12.9	19.3	6.3	6.0	0.48
12	1	220.00	Diag	L2x2x3/16	7.62	109.2	12.3	19.3	5.9	6.0	0.48
11	4	215.00	Diag	L2x2x3/16	8.01	113.5	11.7	19.3	7.5	7.2	0.64
11	3	210.00	Diag	L2x2x3/16	8.40	118.3	11.0	19.3	7.1	7.3	0.65
11	2	205.00	Diag	L2x2x3/16	8.81	123.2	10.3	19.3	7.3	7.1	0.71
11	1	200.00	Diag	L2x2x3/16	9.22	128.2	9.7	19.3	7.1	7.3	0.73
10	2	190.00	Diag	L3x3x3/16	13.13	125.1	15.5	22.8	9.9	9.6	0.64
10	1	180.00	Diag	L3x3x3/16	13.80	130.5	14.4	22.8	9.6	9.8	0.67
9	2	170.00	Diag	L3x3x3/16	14.50	136.0	13.3	22.8	9.9	9.7	0.74
9	1	160.00	Diag	L3x3x3/16	15.24	141.9	12.2	22.8	10.0	10.1	0.82
8	2	150.00	Diag	L3x3x1/4	16.01	148.0	14.9	30.4	10.4	10.2	0.70
8	1	140.00	Diag	L3x3x1/4	16.80	154.2	13.7	30.4	10.6	10.7	0.78
7	2	130.00	Diag	L3x3x1/4	17.62	160.5	12.6	30.4	11.1	11.0	0.88
7	1	120.00	Diag	L3x3x1/4	18.45	167.0	11.7	30.4	11.4	11.5	0.98
6	2	110.00	Diag	L3 1/2x3 1/2x1/4	19.30	152.3	16.5	30.4	12.0	11.9	0.73
6	1	100.00	Diag	L3 1/2x3 1/2x1/4	20.16	158.1	15.3	30.4	12.4	12.4	0.81
5	2	90.00	Diag	L4x4x1/4	21.03	145.0	20.8	30.4	13.0	12.9	0.62
5	1	80.00	Diag	L4x4x1/4	21.92	150.1	19.4	30.4	13.5	13.5	0.70
4	1	60.00	Diag	2L3x3x1/4	29.01	149.3	29.2	60.7	17.9	17.7	0.61
3	1	40.00	Diag	2L3x3x1/4	30.48	154.6	27.2	60.7	18.4	18.4	0.68
2	1	20.00	Diag	2L3x3x1/4	32.02	160.3	25.3	60.7	19.0	18.8	0.75
1	1	0.00	Diag	2L3x3x1/4	33.61	162.0	24.8	60.7	19.3	19.2	0.78

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Revision: 0
Site: LV1149 Green River North- Taylor
Engineer: HD/tw

ID	Sec	Elev	MType	Desc	Len	kl/r	Gov. comp. cap.	Gov. tens. cap.	Max Compr.	Max Tens.	Asses. Ratio
13	4	255.00	Horiz	L2x2x3/16	4.00	113.8	11.6	8.3	2.6	2.4	0.29
10	2	190.00	SecH1	L2x2x3/16	4.26	131.1	9.3	8.3	3.4	3.4	0.42
10	1	180.00	SecH1	L2x2x3/16	4.76	146.4	7.5	8.3	4.0	4.0	0.54
9	2	170.00	SecH1	L2 1/2x2 1/2x3/16	5.26	128.7	12.2	10.9	4.2	4.2	0.39
9	1	160.00	SecH1	L2 1/2x2 1/2x3/16	5.75	140.9	10.2	10.9	4.7	4.7	0.46
8	2	150.00	SecH1	L2 1/2x2 1/2x3/16	6.25	153.1	8.7	10.9	5.2	5.2	0.60
8	1	140.00	SecH1	L2 1/2x2 1/2x3/16	6.75	165.4	7.4	10.9	5.6	5.6	0.76
7	2	130.00	SecH1	L3x3x3/16	7.25	147.5	11.3	11.1	5.8	5.8	0.52
7	1	120.00	SecH1	L3x3x3/16	7.75	157.7	9.9	11.1	6.2	6.2	0.63
6	2	110.00	SecH1	L3x3x3/16	8.25	167.8	8.7	11.1	6.4	6.4	0.73
6	1	100.00	SecH1	L3x3x3/16	8.75	178.0	7.8	11.1	6.8	6.8	0.87
5	2	90.00	SecH1	L3 1/2x3 1/2x1/4	9.25	160.9	14.7	14.8	7.0	7.0	0.48
5	1	80.00	SecH1	L3 1/2x3 1/2x1/4	9.75	169.6	13.3	14.8	7.5	7.5	0.56
4	1	60.00	SecH1	L3 1/2x3 1/2x1/4	10.51	182.8	11.4	14.8	8.1	8.1	0.71
4	1	60.00	SecH2	L2 1/2x2 1/2x3/16	5.26	128.7	12.2	10.9	8.1	8.1	0.74
4	1	60.00	SecH3	L2 1/2x2 1/2x3/16	5.26	128.7	12.2	10.9	8.1	8.1	0.74
4	1	60.00	SecD1	L3x3x3/16	6.91	140.5	12.5	11.1	5.6	5.6	0.50
4	1	60.00	SecD2	L3x3x3/16	7.60	154.5	10.3	11.1	5.6	5.6	0.54
4	1	60.00	PlanH1	L3x3x3/16	10.48	213.1	5.4	9.8	0.1	0.1	0.02
3	1	40.00	SecH1	2L2 1/2x2 1/2x3/16	11.51	177.0	13.0	21.8	8.9	8.9	0.69
3	1	40.00	SecH2	L3x3x1/4	5.75	118.5	15.2	14.8	8.9	8.9	0.60
3	1	40.00	SecH3	L3x3x1/4	5.75	118.5	15.2	14.8	8.9	8.9	0.60
3	1	40.00	SecD1	L3x3x3/16	7.29	148.3	11.2	11.1	5.9	5.9	0.53
3	1	40.00	SecD2	L3x3x3/16	7.95	161.7	9.4	11.1	5.9	5.9	0.63
3	1	40.00	PlanH1	L3x3x3/16	11.48	233.5	4.5	9.8	0.1	0.1	0.03
2	1	20.00	SecH1	2L2 1/2x2 1/2x3/16	12.51	192.4	11.0	21.8	9.7	9.7	0.88
2	1	20.00	SecH2	L3x3x1/4	6.25	127.2	15.2	14.8	9.7	9.7	0.66
2	1	20.00	SecH3	L3x3x1/4	6.25	127.2	15.2	14.8	9.7	9.7	0.66
2	1	20.00	SecD1	L3x3x3/16	7.68	156.3	10.1	11.1	6.2	6.2	0.62
2	1	20.00	SecD2	L3x3x3/16	8.33	169.3	8.6	11.1	6.2	6.2	0.72
2	1	20.00	PlanH1	L3 1/2x3 1/2x1/4	12.48	217.0	8.1	13.1	0.1	0.1	0.02
1	1	0.00	SecH1	2L3x3x3/16	13.51	172.4	16.6	22.3	10.5	10.5	0.64
1	1	0.00	SecH2	L3x3x1/4	6.75	137.3	15.2	14.8	10.5	10.5	0.71
1	1	0.00	SecH3	L3x3x1/4	6.75	137.3	15.2	14.8	10.5	10.5	0.71
1	1	0.00	SecD1	L3 1/2x3 1/2x1/4	8.09	140.7	15.2	14.8	6.5	6.5	0.44
1	1	0.00	SecD2	L3 1/2x3 1/2x1/4	8.71	151.5	15.2	14.8	6.5	6.5	0.44
1	1	0.00	PlanH1	L3 1/2x3 1/2x1/4	13.48	234.5	6.9	13.1	0.2	0.2	0.02

Load Combination Wind Only - Max Tension
Wind Direction Maximum

Sec	Pnl	Elev	MType	Desc	Len	kl/r	Gov. comp. cap.	Gov. tens. cap.	Max Compr.	Max Tens.	Asses. Ratio
		(ft)			(ft)		(Kips)	(Kips)	(Kips)	(Kips)	
13	4	255.00	Leg	SR 2	5.00	120.0	49.3	82.3	5.3	3.2	0.11
13	3	250.00	Leg	SR 2	5.00	120.0	49.3	82.3	7.3	5.5	0.15
13	2	245.00	Leg	SR 2	5.00	120.0	49.3	82.3	20.3	16.0	0.41
13	1	240.00	Leg	SR 2	5.00	120.0	49.3	82.3	30.7	26.4	0.62
12	4	235.00	Leg	SR 2 1/2	5.01	96.2	112.4	182.5	45.7	39.1	0.41
12	3	230.00	Leg	SR 2 1/2	5.01	96.2	112.4	182.5	59.2	51.6	0.53
12	2	225.00	Leg	SR 2 1/2	5.01	96.2	112.4	182.5	72.1	62.6	0.64
12	1	220.00	Leg	SR 2 1/2	5.01	96.2	112.4	182.5	87.7	77.1	0.78
11	4	215.00	Leg	SR 2 3/4	5.01	87.4	153.0	182.5	101.1	88.6	0.66

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Contract: S08-0276-A:J080716003

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Revision: 0

Site: LV1149 Green River North- Taylor

Engineer: HD/tw

11	3	210.00	Leg	SR 2 3/4	5.01	87.4	153.0	182.5	118.3	104.5	0.77
11	2	205.00	Leg	SR 2 3/4	5.01	87.4	153.0	182.5	130.9	116.6	0.86
11	1	200.00	Leg	SR 2 3/4	5.01	87.4	153.0	182.5	146.2	130.7	0.96
10	2	190.00	Leg	SR 3 1/4	10.02	78.3	238.6	330.3	163.8	147.4	0.69
10	1	180.00	Leg	SR 3 1/4	10.02	77.8	239.8	330.3	191.5	172.6	0.80
9	2	170.00	Leg	SR 3 1/2	10.02	72.0	296.5	330.3	214.6	193.9	0.72
9	1	160.00	Leg	SR 3 1/2	10.02	71.7	297.3	330.3	240.1	216.9	0.81
8	2	150.00	Leg	SR 3 1/2	10.02	71.5	298.2	330.3	262.8	237.4	0.88
8	1	140.00	Leg	SR 3 1/2	10.02	71.2	299.1	330.3	287.3	259.3	0.96
7	2	130.00	Leg	SR 3 3/4	10.02	66.3	360.6	416.3	309.8	279.4	0.86
7	1	120.00	Leg	SR 3 3/4	10.02	66.2	361.0	416.3	333.9	300.5	0.92
6	2	110.00	Leg	SR 4	10.02	61.9	427.5	528.0	356.5	320.3	0.83
6	1	100.00	Leg	SR 4	10.02	61.8	427.9	528.0	380.4	341.0	0.89
5	2	90.00	Leg	SR 4 1/4	10.02	57.9	499.7	629.6	403.3	360.7	0.81
5	1	80.00	Leg	SR 4 1/4	10.02	57.8	500.2	629.6	427.4	381.2	0.85
4	1	60.00	Leg	SR 4 1/4	20.03	56.5	505.6	629.6	461.8	410.3	0.91
3	1	40.00	Leg	SR 4 1/2	20.03	53.4	581.3	716.3	509.7	450.3	0.88
2	1	20.00	Leg	SR 4 1/2	20.03	53.4	581.3	716.3	555.7	488.4	0.96
1	1	0.00	Leg	SR 4 3/4	20.03	50.6	661.8	765.3	601.9	526.0	0.91
13	4	255.00	Diag	L1 3/4x1 3/4x3/16	6.40	100.2	11.8	17.9	3.5	3.7	0.29
13	3	250.00	Diag	L1 3/4x1 3/4x3/16	6.40	100.2	11.8	17.9	4.0	3.8	0.34
13	2	245.00	Diag	L1 3/4x1 3/4x3/16	6.40	100.2	11.8	17.9	4.6	4.8	0.39
13	1	240.00	Diag	L1 3/4x1 3/4x3/16	6.40	100.2	11.8	17.9	5.3	5.1	0.44
12	4	235.00	Diag	L2x2x3/16	6.56	96.0	14.2	19.3	4.9	4.8	0.35
12	3	230.00	Diag	L2x2x3/16	6.90	100.2	13.5	19.3	4.6	4.7	0.34
12	2	225.00	Diag	L2x2x3/16	7.25	104.7	12.9	19.3	6.2	6.1	0.48
12	1	220.00	Diag	L2x2x3/16	7.62	109.2	12.3	19.3	5.9	6.0	0.48
11	4	215.00	Diag	L2x2x3/16	8.01	113.5	11.7	19.3	7.4	7.2	0.64
11	3	210.00	Diag	L2x2x3/16	8.40	118.3	11.0	19.3	7.2	7.3	0.65
11	2	205.00	Diag	L2x2x3/16	8.81	123.2	10.3	19.3	7.3	7.1	0.70
11	1	200.00	Diag	L2x2x3/16	9.22	128.2	9.7	19.3	7.1	7.3	0.74
10	2	190.00	Diag	L3x3x3/16	13.13	125.1	15.5	22.8	9.8	9.6	0.63
10	1	180.00	Diag	L3x3x3/16	13.80	130.5	14.4	22.8	9.6	9.8	0.67
9	2	170.00	Diag	L3x3x3/16	14.50	136.0	13.3	22.8	9.9	9.7	0.74
9	1	160.00	Diag	L3x3x3/16	15.24	141.9	12.2	22.8	10.0	10.1	0.82
8	2	150.00	Diag	L3x3x1/4	16.01	148.0	14.9	30.4	10.4	10.2	0.70
8	1	140.00	Diag	L3x3x1/4	16.80	154.2	13.7	30.4	10.6	10.7	0.78
7	2	130.00	Diag	L3x3x1/4	17.62	160.5	12.6	30.4	11.1	11.0	0.88
7	1	120.00	Diag	L3x3x1/4	18.45	167.0	11.7	30.4	11.4	11.5	0.98
6	2	110.00	Diag	L3 1/2x3 1/2x1/4	19.30	152.3	16.5	30.4	12.0	11.9	0.73
6	1	100.00	Diag	L3 1/2x3 1/2x1/4	20.16	158.1	15.3	30.4	12.4	12.4	0.81
5	2	90.00	Diag	L4x4x1/4	21.03	145.0	20.8	30.4	13.0	12.9	0.62
5	1	80.00	Diag	L4x4x1/4	21.92	150.1	19.4	30.4	13.5	13.5	0.70
4	1	60.00	Diag	2L3x3x1/4	29.01	149.3	29.2	60.7	17.9	17.7	0.61
3	1	40.00	Diag	2L3x3x1/4	30.48	154.6	27.2	60.7	18.4	18.4	0.68
2	1	20.00	Diag	2L3x3x1/4	32.02	160.3	25.3	60.7	19.0	18.8	0.75
1	1	0.00	Diag	2L3x3x1/4	33.61	162.0	24.8	60.7	19.3	19.2	0.78
13	4	255.00	Horiz	L2x2x3/16	4.00	113.8	11.6	8.3	2.6	2.4	0.29
10	2	190.00	SecH1	L2x2x3/16	4.26	131.1	9.3	8.3	3.4	3.4	0.41
10	1	180.00	SecH1	L2x2x3/16	4.76	146.4	7.5	8.3	4.0	4.0	0.53
9	2	170.00	SecH1	L2 1/2x2 1/2x3/16	5.26	128.7	12.2	10.9	4.2	4.2	0.38
9	1	160.00	SecH1	L2 1/2x2 1/2x3/16	5.75	140.9	10.2	10.9	4.7	4.7	0.46
8	2	150.00	SecH1	L2 1/2x2 1/2x3/16	6.25	153.1	8.7	10.9	5.1	5.1	0.59
8	1	140.00	SecH1	L2 1/2x2 1/2x3/16	6.75	165.4	7.4	10.9	5.6	5.6	0.75
7	2	130.00	SecH1	L3x3x3/16	7.25	147.5	11.3	11.1	5.7	5.7	0.51

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Revision: 0

Site: LV1149 Green River North- Taylor

Engineer: HD/tw

Sec	Pnl	Elev	MType	Desc	Len	kl/r	Gov. comp. cap.	Gov. tens. cap.	Max Compr.	Max Tens.	Asses. Ratio
7	1	120.00	SecH1	L3x3x3/16	7.75	157.7	9.9	11.1	6.2	6.2	0.62
6	2	110.00	SecH1	L3x3x3/16	8.25	167.8	8.7	11.1	6.3	6.3	0.72
6	1	100.00	SecH1	L3x3x3/16	8.75	178.0	7.8	11.1	6.7	6.7	0.86
5	2	90.00	SecH1	L3 1/2x3 1/2x1/4	9.25	160.9	14.7	14.8	7.0	7.0	0.47
5	1	80.00	SecH1	L3 1/2x3 1/2x1/4	9.75	169.6	13.3	14.8	7.4	7.4	0.56
4	1	60.00	SecH1	L3 1/2x3 1/2x1/4	10.51	182.8	11.4	14.8	8.0	8.0	0.70
4	1	60.00	SecH2	L2 1/2x2 1/2x3/16	5.26	128.7	12.2	10.9	8.0	8.0	0.73
4	1	60.00	SecH3	L2 1/2x2 1/2x3/16	5.26	128.7	12.2	10.9	8.0	8.0	0.73
4	1	60.00	SecD1	L3x3x3/16	6.91	140.5	12.5	11.1	5.5	5.5	0.49
4	1	60.00	SecD2	L3x3x3/16	7.60	154.5	10.3	11.1	5.5	5.5	0.53
4	1	60.00	PlanH1	L3x3x3/16	10.48	213.1	5.4	9.8	0.1	0.1	0.02
3	1	40.00	SecH1	2L2 1/2x2 1/2x3/16	11.51	177.0	13.0	21.8	8.8	8.8	0.68
3	1	40.00	SecH2	L3x3x1/4	5.75	118.5	15.2	14.8	8.8	8.8	0.59
3	1	40.00	SecH3	L3x3x1/4	5.75	118.5	15.2	14.8	8.8	8.8	0.59
3	1	40.00	SecD1	L3x3x3/16	7.29	148.3	11.2	11.1	5.8	5.8	0.52
3	1	40.00	SecD2	L3x3x3/16	7.95	161.7	9.4	11.1	5.8	5.8	0.62
3	1	40.00	PlanH1	L3x3x3/16	11.48	233.5	4.5	9.8	0.1	0.1	0.03
2	1	20.00	SecH1	2L2 1/2x2 1/2x3/16	12.51	192.4	11.0	21.8	9.6	9.6	0.87
2	1	20.00	SecH2	L3x3x1/4	6.25	127.2	15.2	14.8	9.6	9.6	0.65
2	1	20.00	SecH3	L3x3x1/4	6.25	127.2	15.2	14.8	9.6	9.6	0.65
2	1	20.00	SecD1	L3x3x3/16	7.68	156.3	10.1	11.1	6.1	6.1	0.61
2	1	20.00	SecD2	L3x3x3/16	8.33	169.3	8.6	11.1	6.1	6.1	0.71
2	1	20.00	PlanH1	L3 1/2x3 1/2x1/4	12.48	217.0	8.1	13.1	0.1	0.1	0.02
1	1	0.00	SecH1	2L3x3x3/16	13.51	172.4	16.6	22.3	10.4	10.4	0.63
1	1	0.00	SecH2	L3x3x1/4	6.75	137.3	15.2	14.8	10.4	10.4	0.70
1	1	0.00	SecH3	L3x3x1/4	6.75	137.3	15.2	14.8	10.4	10.4	0.70
1	1	0.00	SecD1	L3 1/2x3 1/2x1/4	8.09	140.7	15.2	14.8	6.5	6.5	0.44
1	1	0.00	SecD2	L3 1/2x3 1/2x1/4	8.71	151.5	15.2	14.8	6.5	6.5	0.44
1	1	0.00	PlanH1	L3 1/2x3 1/2x1/4	13.48	234.5	6.9	13.1	0.1	0.1	0.02

Load Combination
Wind Direction

Wind and Ice
Maximum

Sec	Pnl	Elev	MType	Desc	Len	kl/r	Gov. comp. cap.	Gov. tens. cap.	Max Compr.	Max Tens.	Asses. Ratio
		(ft)			(ft)		(Kips)	(Kips)	(Kips)	(Kips)	
13	4	255.00	Leg	SR 2	5.00	120.0	49.3	82.3	4.3	0.0	0.09
13	3	250.00	Leg	SR 2	5.00	120.0	49.3	82.3	4.3	0.0	0.09
13	2	245.00	Leg	SR 2	5.00	120.0	49.3	82.3	10.3	0.0	0.21
13	1	240.00	Leg	SR 2	5.00	120.0	49.3	82.3	11.5	0.0	0.23
12	4	235.00	Leg	SR 2 1/2	5.01	96.2	112.4	182.5	17.0	0.0	0.15
12	3	230.00	Leg	SR 2 1/2	5.01	96.2	112.4	182.5	20.4	0.0	0.18
12	2	225.00	Leg	SR 2 1/2	5.01	96.2	112.4	182.5	25.1	0.0	0.22
12	1	220.00	Leg	SR 2 1/2	5.01	96.2	112.4	182.5	29.0	0.0	0.26
11	4	215.00	Leg	SR 2 3/4	5.01	87.4	153.0	182.5	33.9	0.0	0.22
11	3	210.00	Leg	SR 2 3/4	5.01	87.4	153.0	182.5	38.4	0.0	0.25
11	2	205.00	Leg	SR 2 3/4	5.01	87.4	153.0	182.5	40.8	0.0	0.27
11	1	200.00	Leg	SR 2 3/4	5.01	87.4	153.0	182.5	44.8	0.0	0.29
10	2	190.00	Leg	SR 3 1/4	10.02	78.3	238.6	330.3	48.4	0.0	0.20
10	1	180.00	Leg	SR 3 1/4	10.02	77.8	239.8	330.3	55.8	0.0	0.23
9	2	170.00	Leg	SR 3 1/2	10.02	72.0	296.5	330.3	61.2	0.0	0.21
9	1	160.00	Leg	SR 3 1/2	10.02	71.7	297.3	330.3	68.2	0.0	0.23
8	2	150.00	Leg	SR 3 1/2	10.02	71.5	298.2	330.3	73.8	0.0	0.25
8	1	140.00	Leg	SR 3 1/2	10.02	71.2	299.1	330.3	80.5	0.0	0.27



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Revision: 0

Site: LV1149 Green River North- Taylor

Engineer: HD/tw

7	2	130.00	Leg	SR 3 3/4	10.02	66.3	360.6	416.3	86.3	0.0	0.24
7	1	120.00	Leg	SR 3 3/4	10.02	66.2	361.0	416.3	92.9	0.0	0.26
6	2	110.00	Leg	SR 4	10.02	61.9	427.5	528.0	99.0	0.0	0.23
6	1	100.00	Leg	SR 4	10.02	61.8	427.9	528.0	105.7	0.0	0.25
5	2	90.00	Leg	SR 4 1/4	10.02	57.9	499.7	629.6	112.1	0.0	0.22
5	1	80.00	Leg	SR 4 1/4	10.02	57.8	500.2	629.6	119.1	0.0	0.24
4	1	60.00	Leg	SR 4 1/4	20.03	56.5	505.6	629.6	128.7	0.0	0.25
3	1	40.00	Leg	SR 4 1/2	20.03	53.4	581.3	716.3	142.7	0.0	0.25
2	1	20.00	Leg	SR 4 1/2	20.03	53.4	581.3	716.3	156.0	0.0	0.27
1	1	0.00	Leg	SR 4 3/4	20.03	50.6	661.8	765.3	169.5	0.0	0.26
13	4	255.00	Diag	L1 3/4x1 3/4x3/16	6.40	100.2	11.8	17.9	0.1	0.8	0.04
13	3	250.00	Diag	L1 3/4x1 3/4x3/16	6.40	100.2	11.8	17.9	0.8	0.1	0.07
13	2	245.00	Diag	L1 3/4x1 3/4x3/16	6.40	100.2	11.8	17.9	0.2	0.9	0.05
13	1	240.00	Diag	L1 3/4x1 3/4x3/16	6.40	118.4	9.6	17.9	0.9	0.3	0.10 *
12	4	235.00	Diag	L2x2x3/16	6.56	96.0	14.2	19.3	0.9	0.3	0.06
12	3	230.00	Diag	L2x2x3/16	6.90	100.2	13.5	19.3	0.4	0.8	0.04
12	2	225.00	Diag	L2x2x3/16	7.25	135.4	8.7	19.3	1.0	0.4	0.12 *
12	1	220.00	Diag	L2x2x3/16	7.62	109.2	12.3	19.3	0.5	1.0	0.05
11	4	215.00	Diag	L2x2x3/16	8.01	150.8	7.0	19.3	1.2	0.5	0.17 *
11	3	210.00	Diag	L2x2x3/16	8.40	118.3	11.0	19.3	0.6	1.2	0.06
11	2	205.00	Diag	L2x2x3/16	8.81	123.2	10.3	19.3	1.2	0.5	0.12
11	1	200.00	Diag	L2x2x3/16	9.22	128.2	9.7	19.3	0.6	1.1	0.06
10	2	190.00	Diag	L3x3x3/16	13.13	164.7	9.1	22.8	1.1	0.7	0.13 *
10	1	180.00	Diag	L3x3x3/16	13.80	130.5	14.4	22.8	1.0	1.3	0.07
9	2	170.00	Diag	L3x3x3/16	14.50	183.1	7.3	22.8	1.0	0.8	0.14 *
9	1	160.00	Diag	L3x3x3/16	15.24	141.9	12.2	22.8	1.0	1.3	0.09
8	2	150.00	Diag	L3x3x1/4	16.01	205.3	7.7	30.4	1.0	0.9	0.13 *
8	1	140.00	Diag	L3x3x1/4	16.80	154.2	13.7	30.4	1.1	1.3	0.08
7	2	130.00	Diag	L3x3x1/4	17.62	160.5	12.6	30.4	1.5	1.0	0.12
7	1	120.00	Diag	L3x3x1/4	18.45	167.0	11.7	30.4	1.3	1.4	0.11
6	2	110.00	Diag	L3 1/2x3 1/2x1/4	19.30	152.3	16.5	30.4	1.6	1.2	0.10
6	1	100.00	Diag	L3 1/2x3 1/2x1/4	20.16	158.1	15.3	30.4	1.4	1.5	0.09
5	2	90.00	Diag	L4x4x1/4	21.03	145.0	20.8	30.4	1.7	1.3	0.08
5	1	80.00	Diag	L4x4x1/4	21.92	150.1	19.4	30.4	1.5	1.6	0.08
4	1	60.00	Diag	2L3x3x1/4	29.01	149.3	29.2	60.7	2.3	1.7	0.08
3	1	40.00	Diag	2L3x3x1/4	30.48	154.6	27.2	60.7	2.1	2.0	0.08
2	1	20.00	Diag	2L3x3x1/4	32.02	160.3	25.3	60.7	2.4	1.8	0.09
1	1	0.00	Diag	2L3x3x1/4	33.61	162.0	24.8	60.7	2.2	2.0	0.09
13	4	255.00	Horiz	L2x2x3/16	4.00	113.8	11.6	8.3	0.5	0.1	0.04
10	2	190.00	SecH1	L2x2x3/16	4.26	131.1	9.3	8.3	1.0	1.0	0.12
10	1	180.00	SecH1	L2x2x3/16	4.76	146.4	7.5	8.3	1.2	1.2	0.15
9	2	170.00	SecH1	L2 1/2x2 1/2x3/16	5.26	128.7	12.2	10.9	1.2	1.2	0.11
9	1	160.00	SecH1	L2 1/2x2 1/2x3/16	5.75	140.9	10.2	10.9	1.3	1.3	0.13
8	2	150.00	SecH1	L2 1/2x2 1/2x3/16	6.25	153.1	8.7	10.9	1.4	1.4	0.17
8	1	140.00	SecH1	L2 1/2x2 1/2x3/16	6.75	165.4	7.4	10.9	1.6	1.6	0.21
7	2	130.00	SecH1	L3x3x3/16	7.25	147.5	11.3	11.1	1.6	1.6	0.14
7	1	120.00	SecH1	L3x3x3/16	7.75	157.7	9.9	11.1	1.7	1.7	0.17
6	2	110.00	SecH1	L3x3x3/16	8.25	167.8	8.7	11.1	1.7	1.7	0.20
6	1	100.00	SecH1	L3x3x3/16	8.75	178.0	7.8	11.1	1.9	1.9	0.24
5	2	90.00	SecH1	L3 1/2x3 1/2x1/4	9.25	160.9	14.7	14.8	1.9	1.9	0.13
5	1	80.00	SecH1	L3 1/2x3 1/2x1/4	9.75	169.6	13.3	14.8	2.1	2.1	0.15
4	1	60.00	SecH1	L3 1/2x3 1/2x1/4	10.51	182.8	11.4	14.8	2.2	2.2	0.19
4	1	60.00	SecH2	L2 1/2x2 1/2x3/16	5.26	128.7	12.2	10.9	2.2	2.2	0.20
4	1	60.00	SecH3	L2 1/2x2 1/2x3/16	5.26	128.7	12.2	10.9	2.2	2.2	0.20
4	1	60.00	SecD1	L3x3x3/16	6.91	140.5	12.5	11.1	1.5	1.5	0.14

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Revision: 0

Site: LV1149 Green River North- Taylor

Engineer: HD/tw

Sec	Pnl	Elev	MType	Desc.	Len	kl/r	Gov. comp. cap.	Gov. tens. cap.	Max Compr.	Max Tens.	Asses. Ratio
		(ft)			(ft)		(Kips)	(Kips)	(Kips)	(Kips)	
4	1	60.00	SecD2	L3x3x3/16	7.60	154.5	10.3	11.1	1.5	1.5	0.15
4	1	60.00	PlanH1	L3x3x3/16	10.48	213.1	5.4	9.8	0.0	0.0	0.01
3	1	40.00	SecH1	2L2 1/2x2 1/2x3/16	11.51	177.0	13.0	21.8	2.5	2.5	0.19
3	1	40.00	SecH2	L3x3x1/4	5.75	118.5	15.2	14.8	2.5	2.5	0.17
3	1	40.00	SecH3	L3x3x1/4	5.75	118.5	15.2	14.8	2.5	2.5	0.17
3	1	40.00	SecD1	L3x3x3/16	7.29	148.3	11.2	11.1	1.6	1.6	0.15
3	1	40.00	SecD2	L3x3x3/16	7.95	161.7	9.4	11.1	1.6	1.6	0.17
3	1	40.00	PlanH1	L3x3x3/16	11.48	233.5	4.5	9.8	0.0	0.0	0.01
2	1	20.00	SecH1	2L2 1/2x2 1/2x3/16	12.51	192.4	11.0	21.8	2.7	2.7	0.24
2	1	20.00	SecH2	L3x3x1/4	6.25	127.2	15.2	14.8	2.7	2.7	0.18
2	1	20.00	SecH3	L3x3x1/4	6.25	127.2	15.2	14.8	2.7	2.7	0.18
2	1	20.00	SecD1	L3x3x3/16	7.68	156.3	10.1	11.1	1.7	1.7	0.17
2	1	20.00	SecD2	L3x3x3/16	8.33	169.3	8.6	11.1	1.7	1.7	0.20
2	1	20.00	PlanH1	L3 1/2x3 1/2x1/4	12.48	217.0	8.1	13.1	0.0	0.0	0.00
1	1	0.00	SecH1	2L3x3x3/16	13.51	172.4	16.6	22.3	2.9	2.9	0.18
1	1	0.00	SecH2	L3x3x1/4	6.75	137.3	15.2	14.8	2.9	2.9	0.20
1	1	0.00	SecH3	L3x3x1/4	6.75	137.3	15.2	14.8	2.9	2.9	0.20
1	1	0.00	SecD1	L3 1/2x3 1/2x1/4	8.09	140.7	15.2	14.8	1.8	1.8	0.12
1	1	0.00	SecD2	L3 1/2x3 1/2x1/4	8.71	151.5	15.2	14.8	1.8	1.8	0.12
1	1	0.00	PlanH1	L3 1/2x3 1/2x1/4	13.48	234.5	6.9	13.1	0.0	0.0	0.01

Note: The asterisk (*) placed after the assessment ratio marks cases where the diagonal's capacity in X-braced panel without support in crossover point is governing due to Tension/Compression ratio below limit.

The slenderness is calculated as per: ANSI/TIA-222-G, Table 4-6

Load Combination Wind Only - Serviceability
Wind Direction Maximum

Sec	Pnl	Elev	MType	Desc.	Len	kl/r	Gov. comp. cap.	Gov. tens. cap.	Max Compr.	Max Tens.	Asses. Ratio
		(ft)			(ft)		(Kips)	(Kips)	(Kips)	(Kips)	
13	4	255.00	Leg	SR 2	5.00	120.0	49.3	82.3	2.3	0.1	0.05
13	3	250.00	Leg	SR 2	5.00	120.0	49.3	82.3	2.7	0.8	0.06
13	2	245.00	Leg	SR 2	5.00	120.0	49.3	82.3	7.4	2.7	0.15
13	1	240.00	Leg	SR 2	5.00	120.0	49.3	82.3	10.1	5.8	0.21
12	4	235.00	Leg	SR 2 1/2	5.01	96.2	112.4	182.5	15.1	8.4	0.13
12	3	230.00	Leg	SR 2 1/2	5.01	96.2	112.4	182.5	19.2	11.6	0.17
12	2	225.00	Leg	SR 2 1/2	5.01	96.2	112.4	182.5	23.4	14.0	0.21
12	1	220.00	Leg	SR 2 1/2	5.01	96.2	112.4	182.5	28.1	17.6	0.25
11	4	215.00	Leg	SR 2 3/4	5.01	87.4	153.0	182.5	32.6	20.1	0.21
11	3	210.00	Leg	SR 2 3/4	5.01	87.4	153.0	182.5	37.7	24.1	0.25
11	2	205.00	Leg	SR 2 3/4	5.01	87.4	153.0	182.5	41.3	27.5	0.27
11	1	200.00	Leg	SR 2 3/4	5.01	87.4	153.0	182.5	45.9	31.0	0.30
10	2	190.00	Leg	SR 3 1/4	10.02	78.3	238.6	330.3	51.0	35.5	0.21
10	1	180.00	Leg	SR 3 1/4	10.02	77.8	239.8	330.3	59.4	41.7	0.25
9	2	170.00	Leg	SR 3 1/2	10.02	72.0	296.5	330.3	66.2	47.3	0.22
9	1	160.00	Leg	SR 3 1/2	10.02	71.7	297.3	330.3	74.0	52.9	0.25
8	2	150.00	Leg	SR 3 1/2	10.02	71.5	298.2	330.3	80.8	58.1	0.27
8	1	140.00	Leg	SR 3 1/2	10.02	71.2	299.1	330.3	88.4	63.5	0.30
7	2	130.00	Leg	SR 3 3/4	10.02	66.3	360.6	416.3	95.2	68.5	0.26
7	1	120.00	Leg	SR 3 3/4	10.02	66.2	361.0	416.3	102.7	73.6	0.28
6	2	110.00	Leg	SR 4	10.02	61.9	427.5	528.0	109.6	78.4	0.26
6	1	100.00	Leg	SR 4	10.02	61.8	427.9	528.0	117.1	83.3	0.27

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Project: 260-FT:SST:13-SECTIONS

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Revision: 0

Site: LV1149 Green River North- Taylor

Engineer: HD/tw

5	2	90.00	Leg	SR 4 1/4	10.02	57.9	499.7	629.6	124.3	88.0	0.25
5	1	80.00	Leg	SR 4 1/4	10.02	57.8	500.2	629.6	132.0	92.7	0.26
4	1	60.00	Leg	SR 4 1/4	20.03	56.5	505.6	629.6	142.8	99.4	0.28
3	1	40.00	Leg	SR 4 1/2	20.03	53.4	581.3	716.3	158.2	108.5	0.27
2	1	20.00	Leg	SR 4 1/2	20.03	53.4	581.3	716.3	173.1	117.0	0.30
1	1	0.00	Leg	SR 4 3/4	20.03	50.6	661.8	765.3	188.3	125.1	0.28
13	4	255.00	Diag	L1 3/4x1 3/4x3/16	6.40	100.2	11.8	17.9	0.9	1.1	0.08
13	3	250.00	Diag	L1 3/4x1 3/4x3/16	6.40	118.4	9.6	17.9	1.0	1.0	0.10 *
13	2	245.00	Diag	L1 3/4x1 3/4x3/16	6.40	100.2	11.8	17.9	1.2	1.4	0.10
13	1	240.00	Diag	L1 3/4x1 3/4x3/16	6.40	100.2	11.8	17.9	1.5	1.3	0.13
12	4	235.00	Diag	L2x2x3/16	6.56	96.0	14.2	19.3	1.4	1.3	0.10
12	3	230.00	Diag	L2x2x3/16	6.90	100.2	13.5	19.3	1.2	1.3	0.09
12	2	225.00	Diag	L2x2x3/16	7.25	104.7	12.9	19.3	1.8	1.6	0.14
12	1	220.00	Diag	L2x2x3/16	7.62	109.2	12.3	19.3	1.6	1.7	0.13
11	4	215.00	Diag	L2x2x3/16	8.01	150.8	7.0	19.3	1.6	1.9	0.23 *
11	3	210.00	Diag	L2x2x3/16	8.40	118.3	11.0	19.3	1.9	2.1	0.17
11	2	205.00	Diag	L2x2x3/16	8.81	123.2	10.3	19.3	2.1	1.9	0.20
11	1	200.00	Diag	L2x2x3/16	9.22	128.2	9.7	19.3	1.9	2.1	0.20
10	2	190.00	Diag	L3x3x3/16	13.13	125.1	15.5	22.8	2.8	2.6	0.18
10	1	180.00	Diag	L3x3x3/16	13.80	130.5	14.4	22.8	2.6	2.8	0.18
9	2	170.00	Diag	L3x3x3/16	14.50	136.0	13.3	22.8	2.8	2.6	0.21
9	1	160.00	Diag	L3x3x3/16	15.24	141.9	12.2	22.8	2.7	2.8	0.22
8	2	150.00	Diag	L3x3x1/4	16.01	148.0	14.9	30.4	2.9	2.8	0.20
8	1	140.00	Diag	L3x3x1/4	16.80	154.2	13.7	30.4	2.9	3.0	0.21
7	2	130.00	Diag	L3x3x1/4	17.62	160.5	12.6	30.4	3.1	3.0	0.25
7	1	120.00	Diag	L3x3x1/4	18.45	167.0	11.7	30.4	3.2	3.2	0.27
6	2	110.00	Diag	L3 1/2x3 1/2x1/4	19.30	152.3	16.5	30.4	3.4	3.3	0.20
6	1	100.00	Diag	L3 1/2x3 1/2x1/4	20.16	158.1	15.3	30.4	3.4	3.5	0.23
5	2	90.00	Diag	L4x4x1/4	21.03	145.0	20.8	30.4	3.7	3.5	0.18
5	1	80.00	Diag	L4x4x1/4	21.92	150.1	19.4	30.4	3.8	3.8	0.19
4	1	60.00	Diag	2L3x3x1/4	29.01	149.3	29.2	60.7	5.0	4.9	0.17
3	1	40.00	Diag	2L3x3x1/4	30.48	154.6	27.2	60.7	5.1	5.1	0.19
2	1	20.00	Diag	2L3x3x1/4	32.02	160.3	25.3	60.7	5.3	5.2	0.21
1	1	0.00	Diag	2L3x3x1/4	33.61	162.0	24.8	60.7	5.4	5.3	0.22
13	4	255.00	Horiz	L2x2x3/16	4.00	113.8	11.6	8.3	0.8	0.6	0.08
10	2	190.00	SecH1	L2x2x3/16	4.26	131.1	9.3	8.3	1.1	1.1	0.13
10	1	180.00	SecH1	L2x2x3/16	4.76	146.4	7.5	8.3	1.2	1.2	0.16
9	2	170.00	SecH1	L2 1/2x2 1/2x3/16	5.26	128.7	12.2	10.9	1.3	1.3	0.12
9	1	160.00	SecH1	L2 1/2x2 1/2x3/16	5.75	140.9	10.2	10.9	1.4	1.4	0.14
8	2	150.00	SecH1	L2 1/2x2 1/2x3/16	6.25	153.1	8.7	10.9	1.6	1.6	0.18
8	1	140.00	SecH1	L2 1/2x2 1/2x3/16	6.75	165.4	7.4	10.9	1.7	1.7	0.23
7	2	130.00	SecH1	L3x3x3/16	7.25	147.5	11.3	11.1	1.8	1.8	0.16
7	1	120.00	SecH1	L3x3x3/16	7.75	157.7	9.9	11.1	1.9	1.9	0.19
6	2	110.00	SecH1	L3x3x3/16	8.25	167.8	8.7	11.1	1.9	1.9	0.22
6	1	100.00	SecH1	L3x3x3/16	8.75	178.0	7.8	11.1	2.1	2.1	0.27
5	2	90.00	SecH1	L3 1/2x3 1/2x1/4	9.25	160.9	14.7	14.8	2.1	2.1	0.15
5	1	80.00	SecH1	L3 1/2x3 1/2x1/4	9.75	169.6	13.3	14.8	2.3	2.3	0.17
4	1	60.00	SecH1	L3 1/2x3 1/2x1/4	10.51	182.8	11.4	14.8	2.5	2.5	0.22
4	1	60.00	SecH2	L2 1/2x2 1/2x3/16	5.26	128.7	12.2	10.9	2.5	2.5	0.23
4	1	60.00	SecH3	L2 1/2x2 1/2x3/16	5.26	128.7	12.2	10.9	2.5	2.5	0.23
4	1	60.00	SecD1	L3x3x3/16	6.91	140.5	12.5	11.1	1.7	1.7	0.15
4	1	60.00	SecD2	L3x3x3/16	7.60	154.5	10.3	11.1	1.7	1.7	0.16
4	1	60.00	PlanH1	L3x3x3/16	10.48	213.1	5.4	9.8	0.0	0.0	0.01
3	1	40.00	SecH1	2L2 1/2x2 1/2x3/16	11.51	177.0	13.0	21.8	2.7	2.7	0.21
3	1	40.00	SecH2	L3x3x1/4	5.75	118.5	15.2	14.8	2.7	2.7	0.18



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3	1	40.00	SecH3	L3x3x1/4	5.75	118.5	15.2	14.8	2.7	2.7	0.18
3	1	40.00	SecD1	L3x3x3/16	7.29	148.3	11.2	11.1	1.8	1.8	0.16
3	1	40.00	SecD2	L3x3x3/16	7.95	161.7	9.4	11.1	1.8	1.8	0.19
3	1	40.00	PlanH1	L3x3x3/16	11.48	233.5	4.5	9.8	0.0	0.0	0.01
2	1	20.00	SecH1	2L2 1/2x2 1/2x3/16	12.51	192.4	11.0	21.8	3.0	3.0	0.27
2	1	20.00	SecH2	L3x3x1/4	6.25	127.2	15.2	14.8	3.0	3.0	0.20
2	1	20.00	SecH3	L3x3x1/4	6.25	127.2	15.2	14.8	3.0	3.0	0.20
2	1	20.00	SecD1	L3x3x3/16	7.68	156.3	10.1	11.1	1.9	1.9	0.19
2	1	20.00	SecD2	L3x3x3/16	8.33	169.3	8.6	11.1	1.9	1.9	0.22
2	1	20.00	PlanH1	L3 1/2x3 1/2x1/4	12.48	217.0	8.1	13.1	0.0	0.0	0.01
1	1	0.00	SecH1	2L3x3x3/16	13.51	172.4	16.6	22.3	3.2	3.2	0.20
1	1	0.00	SecH2	L3x3x1/4	6.75	137.3	15.2	14.8	3.2	3.2	0.22
1	1	0.00	SecH3	L3x3x1/4	6.75	137.3	15.2	14.8	3.2	3.2	0.22
1	1	0.00	SecD1	L3 1/2x3 1/2x1/4	8.09	140.7	15.2	14.8	2.0	2.0	0.14
1	1	0.00	SecD2	L3 1/2x3 1/2x1/4	8.71	151.5	15.2	14.8	2.0	2.0	0.14
1	1	0.00	PlanH1	L3 1/2x3 1/2x1/4	13.48	234.5	6.9	13.1	0.0	0.0	0.01

Note: The asterisk (*) placed after the assessment ratio marks cases where the diagonal's capacity in X-braced panel without support in crossover point is governing due to Tension/Compression ratio below limit.

The slenderness is calculated as per: ANSI/TIA-222-G, Table 4-6

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Section M: SECTION PROPERTIES DATA

Sec	Pan	Memb	Steel	Conn	Bolts	Bolt	Bolt	End	Gusset	kl/r	Comp	Tens	Bolt	Bear	Block
		Type	Grade	Type		Size	Grade	Dist	Thick		Cap	Cap	Cap	Cap	Shear
						(in)		(in)	(in)		(Kips)	(Kips)	(Kips)	(Kips)	(Kips)
13	4	Leg	A572 gr.50	Tension	4	0.625	A325X	0.938	N/A	120.0	49.3	141.5	82.3T	N/A	N/A
13	4	Diag	A36	Bolted	2	0.500	A325X	1.125	0.250	100.2	11.8	17.9	19.4S	20.6	19.1
13	4	Horiz	A36	Bolted	1	0.625	A325X	1.250	0.250	113.8	11.6	20.3	15.2S	11.1	8.3
13	3	Leg	A572 gr.50	Tension	4	0.625	A325X	0.938	N/A	120.0	49.3	141.5	82.3T	N/A	N/A
13	3	Diag	A36	Bolted	2	0.500	A325X	1.125	0.250	100.2	11.8	17.9	19.4S	20.6	19.1
13	2	Leg	A572 gr.50	Tension	4	0.625	A325X	0.938	N/A	120.0	49.3	141.5	82.3T	N/A	N/A
13	2	Diag	A36	Bolted	2	0.500	A325X	1.125	0.250	100.2	11.8	17.9	19.4S	20.6	19.1
13	1	Leg	A572 gr.50	Tension	4	0.625	A325X	0.938	N/A	120.0	49.3	141.5	82.3T	N/A	N/A
13	1	Diag	A36	Bolted	2	0.500	A325X	1.125	0.250	100.2	11.8	17.9	19.4S	20.6	19.1
12	4	Leg	A572 gr.50	Tension	6	0.750	A325X	0.938	N/A	96.2	112.4	221.1	182.5T	N/A	N/A
12	4	Diag	A36	Bolted	2	0.625	A325X	1.250	0.250	96.0	14.2	20.3	30.4S	24.2	19.3
12	3	Leg	A572 gr.50	Tension	6	0.750	A325X	0.938	N/A	96.2	112.4	221.1	182.5T	N/A	N/A
12	3	Diag	A36	Bolted	2	0.625	A325X	1.250	0.250	100.2	13.5	20.3	30.4S	24.2	19.3
12	2	Leg	A572 gr.50	Tension	6	0.750	A325X	0.938	N/A	96.2	112.4	221.1	182.5T	N/A	N/A
12	2	Diag	A36	Bolted	2	0.625	A325X	1.250	0.250	104.7	12.9	20.3	30.4S	24.2	19.3
12	1	Leg	A572 gr.50	Tension	6	0.750	A325X	0.938	N/A	96.2	112.4	221.1	182.5T	N/A	N/A
12	1	Diag	A36	Bolted	2	0.625	A325X	1.250	0.250	109.2	12.3	20.3	30.4S	24.2	19.3
11	4	Leg	A572 gr.50	Tension	6	0.750	A325X	1.125	N/A	87.4	153.0	267.5	182.5T	N/A	N/A
11	4	Diag	A36	Bolted	2	0.625	A325X	1.250	0.250	113.5	11.7	20.3	30.4S	24.2	19.3
11	3	Leg	A572 gr.50	Tension	6	0.750	A325X	1.125	N/A	87.4	153.0	267.5	182.5T	N/A	N/A
11	3	Diag	A36	Bolted	2	0.625	A325X	1.250	0.250	118.3	11.0	20.3	30.4S	24.2	19.3
11	2	Leg	A572 gr.50	Tension	6	0.750	A325X	1.125	N/A	87.4	153.0	267.5	182.5T	N/A	N/A
11	2	Diag	A36	Bolted	2	0.625	A325X	1.250	0.250	123.2	10.3	20.3	30.4S	24.2	19.3
11	1	Leg	A572 gr.50	Tension	6	0.750	A325X	1.125	N/A	87.4	153.0	267.5	182.5T	N/A	N/A
11	1	Diag	A36	Bolted	2	0.625	A325X	1.250	0.250	128.2	9.7	20.3	30.4S	24.2	19.3
10	2	Leg	A572 gr.50	Tension	6	1.000	A325X	1.500	N/A	78.3	238.6	373.6	330.3T	N/A	N/A
10	2	Diag	A36	Bolted	2	0.625	A325X	1.250	0.250	125.1	15.5	32.8	30.4S	24.2	22.8
10	2	SecH1	A36	Bolted	1	0.625	A325X	1.250	0.250	131.1	9.3	20.3	15.2S	11.1	8.3
10	1	Leg	A572 gr.50	Tension	6	1.000	A325X	1.500	N/A	77.8	239.8	373.6	330.3T	N/A	N/A
10	1	Diag	A36	Bolted	2	0.625	A325X	1.250	0.250	130.5	14.4	32.8	30.4S	24.2	22.8
10	1	SecH1	A36	Bolted	1	0.625	A325X	1.250	0.250	146.4	7.5	20.3	15.2S	11.1	8.3
9	2	Leg	A572 gr.50	Tension	6	1.000	A325X	1.500	N/A	72.0	296.5	433.3	330.3T	N/A	N/A
9	2	Diag	A36	Bolted	2	0.625	A325X	1.250	0.250	136.0	13.3	32.8	30.4S	24.2	22.8
9	2	SecH1	A36	Bolted	1	0.625	A325X	1.250	0.250	128.7	12.2	26.5	15.2S	11.1	10.9
9	1	Leg	A572 gr.50	Tension	6	1.000	A325X	1.500	N/A	71.7	297.3	433.3	330.3T	N/A	N/A
9	1	Diag	A36	Bolted	2	0.625	A325X	1.250	0.250	141.9	12.2	32.8	30.4S	24.2	22.8
9	1	SecH1	A36	Bolted	1	0.625	A325X	1.250	0.250	140.9	10.2	26.5	15.2S	11.1	10.9
8	2	Leg	A572 gr.50	Tension	6	1.000	A325X	1.500	N/A	71.5	298.2	433.3	330.3T	N/A	N/A
8	2	Diag	A36	Bolted	2	0.625	A325X	1.250	0.250	148.0	14.9	43.6	30.4S	32.2	30.4
8	2	SecH1	A36	Bolted	1	0.625	A325X	1.250	0.250	153.1	8.7	26.5	15.2S	11.1	10.9
8	1	Leg	A572 gr.50	Tension	6	1.000	A325X	1.500	N/A	71.2	299.1	433.3	330.3T	N/A	N/A
8	1	Diag	A36	Bolted	2	0.625	A325X	1.250	0.250	154.2	13.7	43.6	30.4S	32.2	30.4
8	1	SecH1	A36	Bolted	1	0.625	A325X	1.250	0.250	165.4	7.4	26.5	15.2S	11.1	10.9
7	2	Leg	A572 gr.50	Tension	6	1.125	A325X	1.688	N/A	66.3	360.6	497.4	416.3T	N/A	N/A
7	2	Diag	A36	Bolted	2	0.625	A325X	1.250	0.375	160.5	12.6	43.6	30.4S	32.2	30.4
7	2	SecH1	A36	Bolted	1	0.625	A325X	1.250	0.375	147.5	11.3	32.8	15.2S	11.1	13.0

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7	1	Leg	A572 gr.50	Tension	6	1.125	A325X 1.688	N/A	66.2	361.0	497.4	416.3T	N/A	N/A
7	1	Diag	A36	Bolted	2	0.625	A325X 1.250	0.375	167.0	11.7	43.6	30.4S	32.2	30.4
7	1	SecH1	A36	Bolted	1	0.625	A325X 1.250	0.375	157.7	9.9	32.8	15.2S	11.1	13.0
6	2	Leg	A572 gr.50	Tension	6	1.250	A325X 1.875	N/A	61.9	427.5	565.9	528.0T	N/A	N/A
6	2	Diag	A36	Bolted	2	0.625	A325X 1.250	0.375	152.3	16.5	51.9	30.4S	32.2	32.0
6	2	SecH1	A36	Bolted	1	0.625	A325X 1.250	0.375	167.8	8.7	32.8	15.2S	11.1	13.0
6	1	Leg	A572 gr.50	Tension	6	1.250	A325X 1.875	N/A	61.8	427.9	565.9	528.0T	N/A	N/A
6	1	Diag	A36	Bolted	2	0.625	A325X 1.250	0.375	158.1	15.3	51.9	30.4S	32.2	32.0
6	1	SecH1	A36	Bolted	1	0.625	A325X 1.250	0.375	178.0	7.8	32.8	15.2S	11.1	13.0
5	2	Leg	A572 gr.50	Tension	6	1.375	A325X 2.063	N/A	57.9	499.7	638.8	629.6T	N/A	N/A
5	2	Diag	A36	Bolted	2	0.625	A325X 1.250	0.375	145.0	20.8	60.2	30.4S	32.2	33.7
5	2	SecH1	A36	Bolted	1	0.625	A325X 1.250	0.375	160.9	14.7	51.9	15.2S	14.8	19.9
5	1	Leg	A572 gr.50	Tension	6	1.375	A325X 2.063	N/A	57.8	500.2	638.8	629.6T	N/A	N/A
5	1	Diag	A36	Bolted	2	0.625	A325X 1.250	0.375	150.1	19.4	60.2	30.4S	32.2	33.7
5	1	SecH1	A36	Bolted	1	0.625	A325X 1.250	0.375	169.6	13.3	51.9	15.2S	14.8	19.9
4	1	Leg	A572 gr.50	Tension	6	1.375	A325X 2.063	N/A	56.5	505.6	638.8	629.6T	N/A	N/A
4	1	Diag	A36	Bolted	2	0.625	A325X 1.250	0.375	149.3	29.2	87.1	60.7S	64.4	60.7
4	1	SecH1	A36	Bolted	1	0.625	A325X 1.250	0.375	182.8	11.4	51.9	15.2S	14.8	19.9
4	1	SecH2	A36	Bolted	1	0.625	A325X 1.250	0.375	128.7	12.2	26.5	15.2S	11.1	10.9
4	1	SecH3	A36	Bolted	1	0.625	A325X 1.250	0.375	128.7	12.2	26.5	15.2S	11.1	10.9
4	1	SecD1	A36	Bolted	1	0.625	A325X 1.250	0.375	140.5	12.5	32.8	15.2S	11.1	13.0
4	1	SecD2	A36	Bolted	1	0.625	A325X 1.250	0.375	154.5	10.3	32.8	15.2S	11.1	13.0
4	1	PlanH1	A36	Bolted	1	0.625	A325X 1.125	0.375	213.1	5.4	32.8	15.2S	9.8	12.6
3	1	Leg	A572 gr.50	Tension	6	1.500	A325X 2.250	N/A	53.4	581.3	716.3	765.3T	N/A	N/A
3	1	Diag	A36	Bolted	2	0.625	A325X 1.250	0.375	154.6	27.2	87.1	60.7S	64.4	60.7
3	1	SecH1	A36	Bolted	1	0.625	A325X 1.250	0.375	177.0	13.0	53.0	30.4S	22.3	21.8
3	1	SecH2	A36	Bolted	1	0.625	A325X 1.250	0.375	118.5	22.3	43.6	15.2S	14.8	17.2
3	1	SecH3	A36	Bolted	1	0.625	A325X 1.250	0.375	118.5	22.3	43.6	15.2S	14.8	17.2
3	1	SecD1	A36	Bolted	1	0.625	A325X 1.250	0.375	148.3	11.2	32.8	15.2S	11.1	13.0
3	1	SecD2	A36	Bolted	1	0.625	A325X 1.250	0.375	161.7	9.4	32.8	15.2S	11.1	13.0
3	1	PlanH1	A36	Bolted	1	0.625	A325X 1.125	0.375	233.5	4.5	32.8	15.2S	9.8	12.6
2	1	Leg	A572 gr.50	Tension	6	1.500	A325X 2.250	N/A	53.4	581.3	716.3	765.3T	N/A	N/A
2	1	Diag	A36	Bolted	2	0.625	A325X 1.250	0.375	160.3	25.3	87.1	60.7S	64.4	60.7
2	1	SecH1	A36	Bolted	1	0.625	A325X 1.250	0.375	192.4	11.0	53.0	30.4S	22.3	21.8
2	1	SecH2	A36	Bolted	1	0.625	A325X 1.250	0.375	127.2	19.9	43.6	15.2S	14.8	17.2
2	1	SecH3	A36	Bolted	1	0.625	A325X 1.250	0.375	127.2	19.9	43.6	15.2S	14.8	17.2
2	1	SecD1	A36	Bolted	1	0.625	A325X 1.250	0.375	156.3	10.1	32.8	15.2S	11.1	13.0
2	1	SecD2	A36	Bolted	1	0.625	A325X 1.250	0.375	169.3	8.6	32.8	15.2S	11.1	13.0
2	1	PlanH1	A36	Bolted	1	0.625	A325X 1.125	0.375	217.0	8.1	51.9	15.2S	13.1	19.4
1	1	Leg	A572 gr.50	Tension	6	1.500	A325X 2.250	N/A	50.6	661.8	798.1	765.3T	N/A	N/A
1	1	Diag	A36	Bolted	2	0.625	A325X 1.250	0.750	162.0	24.8	87.1	60.7S	64.4	60.7
1	1	SecH1	A36	Bolted	1	0.625	A325X 1.250	0.500	172.4	16.6	65.6	30.4S	22.3	25.9
1	1	SecH2	A36	Bolted	1	0.625	A325X 1.250	0.500	137.3	17.2	43.6	15.2S	14.8	17.2
1	1	SecH3	A36	Bolted	1	0.625	A325X 1.250	0.500	137.3	17.2	43.6	15.2S	14.8	17.2
1	1	SecD1	A36	Bolted	1	0.625	A325X 1.250	0.500	140.7	19.3	51.9	15.2S	14.8	19.9
1	1	SecD2	A36	Bolted	1	0.625	A325X 1.250	0.500	151.5	16.6	51.9	15.2S	14.8	19.9
1	1	PlanH1	A36	Bolted	1	0.625	A325X 1.125	0.375	234.5	6.9	51.9	15.2S	13.1	19.4

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Contract: S08-0276-A:J080716003

Project: 260-FT:SST:13-SECTIONS

Date and Time: 7/16/2008 6:19:34 PM

Revision: 0

Site: LV1149 Green River North- Taylor

Engineer: HD/tw

Section O: TOWER FOUNDATION DATA

Load Combination Max Envelope
Wind Direction Maximum

Axial Load (Kips)	Shear Load-X (Kips)	Shear Load-Z (Kips)	Total Shear (Kips)	Moment-X (Kipsft)	Moment-Y (Kipsft)	Moment-Z (Kipsft)	Total Moment (Kipsft)
75.93	49.37	85.54	98.77	12538.39	-5.13	-7238.21	14477.67
75.93	49.37	85.54	98.77	12538.39	-5.13	-7238.21	14477.67

Load Combination Wind Only
Wind Direction Maximum

Axial Load (Kips)	Shear Load-X (Kips)	Shear Load-Z (Kips)	Total Shear (Kips)	Moment-X (Kipsft)	Moment-Y (Kipsft)	Moment-Z (Kipsft)	Total Moment (Kipsft)
101.19	49.35	85.50	98.72	12538.38	-5.13	-7237.93	14477.52
101.19	49.35	85.50	98.72	12538.38	-5.13	-7237.93	14477.52

Load Combination Wind Only - Max Tension
Wind Direction Maximum

Axial Load (Kips)	Shear Load-X (Kips)	Shear Load-Z (Kips)	Total Shear (Kips)	Moment-X (Kipsft)	Moment-Y (Kipsft)	Moment-Z (Kipsft)	Total Moment (Kipsft)
75.93	49.37	85.54	98.77	12538.39	-5.13	-7238.21	14477.67
75.93	49.37	85.54	98.77	12538.39	-5.13	-7238.21	14477.67

Load Combination Wind and Ice
Wind Direction Maximum

Axial Load (Kips)	Shear Load-X (Kips)	Shear Load-Z (Kips)	Total Shear (Kips)	Moment-X (Kipsft)	Moment-Y (Kipsft)	Moment-Z (Kipsft)	Total Moment (Kipsft)
311.39	5.45	9.44	10.90	1427.96	-0.29	-815.75	1644.54
311.39	5.45	9.44	10.90	1427.96	-0.29	-815.75	1644.54

Load Combination Wind Only - Serviceability
Wind Direction Maximum

Axial Load (Kips)	Shear Load-X (Kips)	Shear Load-Z (Kips)	Total Shear (Kips)	Moment-X (Kipsft)	Moment-Y (Kipsft)	Moment-Z (Kipsft)	Total Moment (Kipsft)
84.22	13.76	23.83	27.52	3483.80	-1.43	-2010.46	4022.29
84.22	13.76	23.83	27.52	3483.80	-1.43	-2010.46	4022.29

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Contract: S08-0276-A:J080716003

Project: 260-FT:SST:13-SECTIONS

Date and Time: 7/16/2008 6:19:34 PM

Revision: 0

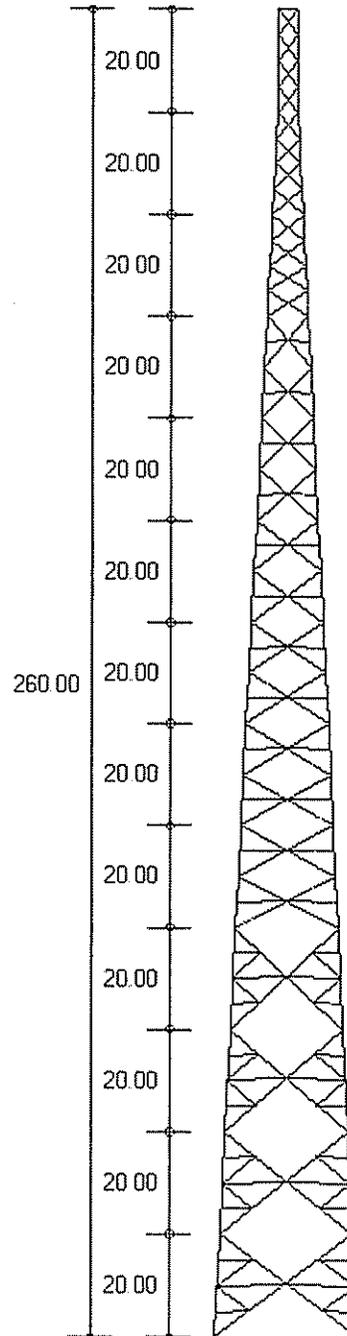
Site: LV1149 Green River North- Taylor

Engineer: HD/tw

DESIGN SPECIFICATION

Design Standard: ANSI/TIA-222-G-2005 Add 1
 Basic Wind Speed (No Ice) = 90.0 (mph)
 Basic Wind Speed (With Ice) = 30.0 (mph)
 Design Ice Thickness = 0.75 (in)
 Structure Class = II
 Exposure Category = C
 Topographic Category = 1

Sct	Length (ft)	Top Width (in)	Bot Width (in)
1	20.00	312.00	336.00
2	20.00	288.00	312.00
3	20.00	264.00	288.00
4	20.00	240.00	264.00
5	20.00	216.00	240.00
6	20.00	192.00	216.00
7	20.00	168.00	192.00
8	20.00	144.00	168.00
9	20.00	120.00	144.00
10	20.00	96.00	120.00
11	20.00	72.00	96.00
12	20.00	48.00	72.00
13	20.00	48.00	48.00



MAXIMUM BASE REACTIONS

	Bare	Iced
Download (Kips)	630.8	171.6
Uplift (Kips)	544.8	0.0
Shear (Kips)	59.3	12.6

GENERAL NOTES

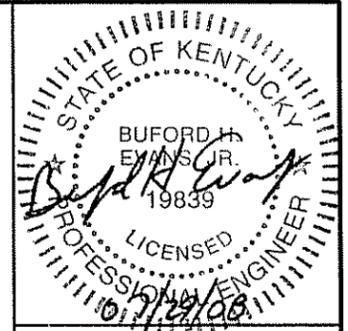
- G1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS. ALL DISCREPANCIES SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER.
- G2. THE SIZE AND SPACING OF STRUCTURAL ELEMENTS SHALL NOT BE CHANGED WITHOUT THE ENGINEER'S APPROVAL.
- G3. DETAILS SHOWN ARE TYPICAL; THEREFORE, SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
- G4. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
- G5. ALL STRUCTURAL AND NON-STRUCTURAL ITEMS SHALL BE TEMPORARILY BRACED DURING CONSTRUCTION UNTIL ALL STRUCTURAL ELEMENTS THAT ARE REQUIRED FOR STABILITY, SUCH AS LATERAL BRACING, ANCHOR BOLTS, ETC., HAVE BEEN INSTALLED.
- G6. CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF EXISTING UTILITIES, GROUND DRAINS, DRAIN PIPES, VENTS, OR ANY OTHER MECHANICAL DEVICES PRESENT BEFORE COMMENCING WORK. CONTRACTOR SHALL PROTECT EXISTING FACILITIES, UTILITIES, COAX AND UTILITY LINES FROM DAMAGE. NOTIFY ENGINEER IMMEDIATELY OF ANY CONFLICTS ARISING FROM THIS VERIFICATION.
- G7. INCORRECTLY FABRICATED, DAMAGED, MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE OWNER PRIOR TO REMEDIAL OR CORRECTIVE ACTION.
- G8. CONTRACTOR(S) SHALL COOPERATE WITH THE OWNER'S REPRESENTATIVE, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
- G9. CONSTRUCTION SHALL BE IN ACCORDANCE WITH APPLICABLE OSHA REGULATIONS, PER THE KENTUCKY STATE BUILDING CODE (IBC 2006), AND ANSI/TIA-222-G (2005), AND SHALL BE PERFORMED ONLY IN "GOOD WEATHER". GOOD WEATHER MEANS LITTLE OR NO WIND AND RAIN AND MINIMUM TEMPERATURE OF 50 DEGREES F. CONTACT ENGINEER FOR ADDITIONAL INSTRUCTIONS IF "GOOD WEATHER" CANNOT BE ACHIEVED.
- G10. DESIGN WIND SPEED IS 90 MPH PER ANSI/TIA-222-G (2005).

SHOP FABRICATION DRAWING SUBMITTAL

- F1. THE GENERAL CONTRACTOR/CONSTRUCTION MANAGER IS RESPONSIBLE FOR ASSURING THAT ALL SUBMITTALS COMPLY WITH THE LATEST PROJECT PLANS, SPECIFICATIONS, GOVERNING CODES AND REGULATIONS, AND IS SOLELY RESPONSIBLE FOR CONFIRMING ALL QUANTITIES, DIMENSIONS, FABRICATION TECHNIQUES, AND COORDINATING WORK WITH ALL TRADES.
- F2. SHOP DRAWINGS SHALL BE SUBMITTED IN A TIMELY MANNER TO ALLOW ADEQUATE TIME FOR PROCESSING.
- F3. ALL SUBMITTALS ARE TO BE ACCOMPANIED BY A LETTER OF TRANSMITTAL.
- F4. ALL SHOP DRAWINGS MUST BEAR EVIDENCE OF THE CONTRACTOR'S APPROVAL PRIOR TO SUBMITTAL.
- F5. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER PRIOR TO FABRICATION.

REINFORCED CONCRETE NOTES

- C1. CONCRETE SHALL CONFORM TO ACI 301 & 318, AND SHALL HAVE A COMPRESSIVE STRENGTH OF 3000 PSI AFTER 28 DAYS.
- C2. AGGREGATES SHALL BE CLEAN AND WELL-GRADED WITH A MAXIMUM SIZE OF 1-1/2". CONCRETE COMPRESSIVE TESTS SHALL CONFORM TO ASTM C39.
- C3. USE NORMAL WEIGHT CONCRETE.
- C4. USE ASTM A615 GRADE 60 FOR ALL CONCRETE REINFORCING STEEL.
- C5. ALL CONCRETE REINFORCEMENT SHALL BE ACCURATELY PLACED, RIGIDLY SUPPORTED, AND FIRMLY TIED IN PLACE WITH BAR SUPPORTS AND SPACERS IN ACCORDANCE WITH ACI 301 & 318.
- C6. MAXIMUM PERMISSIBLE SLUMP = 4".
- C7. APPLY A WATER REPELLENT SEALANT TO ALL EXPOSED CONCRETE SURFACES. USE W.R MEADOWS "SEAL-TIGHT #1200," OR EQUIVALENT, APPLIED IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- C8. FIELD-VERIFY SOIL PARAMETERS PRIOR TO CONSTRUCTION, AND REPORT ANY DISCREPANCIES TO THE ENGINEER. SOIL PARAMETERS FOR FOUNDATION DESIGN WERE OBTAINED FROM THE "GEOTECHNICAL ENGINEERING REPORT," DATED 7/14/08, BY TERRACON CONSULTANTS, INC., PROJECT No 57087341.



WALKER ENGINEERING INCORPORATED
 ATLANTA • BIRMINGHAM
 8451 Dunwoody Place, Building 8, Sandy Springs, Georgia 30350
 (770) 647-7306 Fax: (770) 587-2196 www.walkerengineer.com

REV.	DATE	BY

ENGINEER: TTG
 DRAWN BY: BMC
 CHECKED BY: BHE
 ORIG. ISSUE DATE: 07/25/08

SITE No: 9LV1149
 GREEN RIVER N.
 WEI JOB No: 0807-356FDN
 MITRIX, inc.
 260ft SST FOUNDATION DESIGN NOTES
 494 CAPPS ROAD
 TAYLOR COUNTY, CAMPBELLVILLE, KY

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SCALE: AS NOTED
 THIS DWG SET CONSISTS OF:
 2 SHEETS
 S1 THRU S2

DRAWING No: **S2**

GEOTECHNICAL ENGINEERING REPORT
GREEN RIVER NORTH TELECOMMUNICATION TOWER
494 CAPPS ROAD
CAMPBELLSVILLE, TAYLOR COUNTY, KENTUCKY
TERRACON PROJECT NO.: 57087341
July 14, 2008

Prepared For:

T-MOBILE
Nashville, Tennessee

Prepared by:

Terracon
Nashville, Tennessee

Terracon

July 14, 2008



T-Mobile
3800 Ezell Road, Suite 815
Nashville, Tennessee 37211

Terracon Consultants, Inc
5217 Linbar Drive, #309
Nashville, Tennessee 37211
Phone 615 333 6444
Fax 615 333 6443
www.terracon.com

Attention: Hamlet Hope

**Re: Geotechnical Engineering Report
Proposed Green River North Telecommunication Tower
494 Capps Road
Campbellsville, Taylor County, Kentucky
Terracon Project No. 57087341**

Dear Mr. Hope:

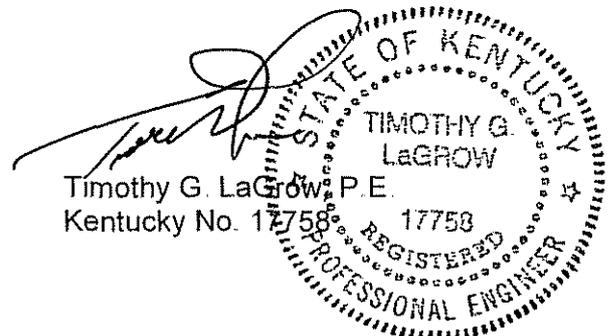
The results of our subsurface exploration are attached. The purpose of this exploration was to obtain information on subsurface conditions at the proposed project site and, based on this information, to provide recommendations regarding the design and construction of foundations for the proposed tower.

Terracon's geotechnical design parameters and recommendations within this report apply to the existing planned tower height and would apply to adjustments in the tower height, up to a 20% increase or decrease in height, as long as the type of tower does not change. If changes in the tower height dictate a change in tower type (i.e. - monopole to a self-support, self-support to a guyed tower), Terracon should be contacted to evaluate our recommendations with respect to these changes.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report, or if we may be of further service to you in any way, please feel free to contact us.

Sincerely,
Terracon

Shaikh Z. Rahman, EIT.
Staff Engineer



Timothy G. LaGrow, P.E.
Kentucky No. 17758

n:\Projects\2008\57087341\G57087341.doc

Attachments: Geotechnical Engineering Report

Copies: (5 hard copies, 1 pdf)

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GEOTECHNICAL ENGINEERING REPORT

PROPOSED GREEN RIVER NORTH TELECOMMUNICATION TOWER 494 CAPPS ROAD CAMPBELLSVILLE, TAYLOR COUNTY, KENTUCKY TERRACON PROJECT NO.: 57087341 July 14, 2008

1.0 INTRODUCTION

The purpose of this report is to describe the subsurface conditions encountered in the boring, analyze and evaluate the test data, and provide recommendations regarding the design and construction of foundations and earthwork for the proposed tower. One boring extending to a depth of about 36½ feet below the existing ground surface was drilled at the site. Individual boring log and a boring location diagram are included with this report.

2.0 PROJECT DESCRIPTION

Terracon understands the proposed project will consist of the construction of a 250-foot self supporting tower. Exact tower loads are not available, but based on our experience are anticipated to be as follows:

Vertical Load:	600 kips
Horizontal Shear:	80 kips
Uplift:	500 kips

A small, lightly loaded equipment building will also be constructed. Wall and floor loads for this building are not anticipated to exceed 1 kip per linear foot and 100 pounds per square foot, respectively. At the time of the site visit, the property was a gently sloping wooded tract. Existing grades within the 100-foot by 100-foot tower leasehold area reportedly vary between about El. 878 to El. 885. The tower will be constructed at about El. 883. Based on the existing grades, less than 3 feet of cut/fill is anticipated.

3.0 EXPLORATION PROCEDURES

3.1 Field Exploration

The subsurface exploration consisted of drilling and sampling one boring at the site to a depth of about 36½ feet below existing grade. Due to access difficulty, the boring was drilled near the western boundary of the leased area, about 50 feet west of the proposed tower center. Ground surface elevation at the boring location was interpolated from the site plan prepared by the project surveyor. The location and elevation of the boring should be considered accurate only to the degree implied by the means and methods used to define them.

The boring was drilled with a truck-mounted rotary drill rig. Hollow stem augers were used to advance the borehole. Representative samples were obtained by the split-barrel sampling procedure. In the split-barrel sampling procedure, the number of blows required to advance a standard 2-inch O.D. split-barrel sampler the last 12 inches of the typical total 18-inch penetration by means of a 140-pound hammer with a free fall of 30 inches, is the standard penetration resistance value (N). This value is used to estimate the in-situ relative density of cohesionless soils and the consistency of cohesive soils. The sampling depths and penetration distance, plus the standard penetration resistance values, are shown on the boring log. The samples were sealed and returned to the laboratory for testing and classification.

Auger refusal was encountered at a depth of about 26½ feet below the existing ground surface. The boring was extended into the refusal materials using a diamond bit attached to the outer barrel of a double core barrel. The inner barrel collected the cored material as the outer barrel was rotated at high speeds to cut the rock. The barrel was retrieved to the surface upon completion of each drill run. Once the core samples were retrieved, they were placed in a box and logged. The rock was later classified by an engineer and the "percent recovery" and rock quality designation (RQD) were determined.

The "percent recovery" is the ratio of the sample length retrieved to the drilled length, expressed as a percent. An indication of the actual in-situ rock quality is provided by calculating the sample's RQD. The RQD is the percentage of the length of broken cores retrieved which have core segments at least 4 inches in length compared to each drilled length. The RQD is related to rock soundness and quality as illustrated in Table 1.

Table 1
Rock Quality Designation (RQD)

Relation of RQD and In-situ Rock Quality	
RQD (%)	Rock Quality
90 - 100	Excellent
75 - 90	Good
50 - 75	Fair
25 - 50	Poor
0 -25	Very Poor

A field log of the boring was prepared by a subcontract driller. This log included visual classifications of the materials encountered during drilling as well as the driller's interpretation of the subsurface conditions between samples. The final boring log included with this report represents an interpretation of the driller's field log and a visual classification of the soil samples made by the Geotechnical Engineer.

3.2 Laboratory Testing

The samples were classified in the laboratory based on visual observation, texture and plasticity. The descriptions of the soils indicated on the boring log are in accordance with the enclosed General Notes and the Unified Soil Classification System. Estimated group symbols according to the Unified Soil Classification System are given on the boring log. A brief description of this classification system is attached to this report.

The laboratory testing program consisted of performing water content tests and an Atterberg Limits test on representative soil samples. Results of these tests are provided on the boring log at the appropriate horizon.

Classification and descriptions of rock core samples are in accordance with the enclosed General Notes, and are based on visual and tactile observations. Petrographic analysis of thin sections may indicate other rock types. Percent recovery and rock quality designation (RQD) were calculated for these samples and are noted at their depths of occurrence on the boring log.

4.0 EXPLORATORY FINDINGS

4.1 Subsurface Conditions

Conditions encountered at the boring location are indicated on the boring log. Stratification boundaries on the boring log represent the approximate location of changes in soil types and the transition between materials may be gradual. Water levels shown on the boring log represent the conditions only at the time of our exploration. Based on the results of the boring, subsurface conditions on the project site can be generalized as follows.

The boring encountered native fat clay (CH) and sandy silt (ML) with varying amounts of chert sand and gravel, extending to a depth of about 22 feet below grade. Below 22 feet, the profile transitioned into chert gravel (GP) with sandy silt extending to auger refusal at about 26½ feet below grade. The clays and silts exhibited a very stiff to hard consistency based on standard penetration test (N) values in the range of about 19 to 55 blows per foot (bpf). The chert gravel was medium dense based on an N-value of 13 bpf. The presence of chert within the cohesive soil matrix most likely inflated the higher blow counts.

Below about 26½ feet, rock coring techniques were used to advance the borehole. The core consisted of slightly weathered to unweathered, moderately hard, thin to medium bedded limestone. Core recovery was 99 percent. Bedrock quality is considered excellent as defined by an RQD value of 91 percent. Coring operations were terminated at a depth of about 36½ feet below grade.

4.2 Site Geology

A review of the Geologic Map of Campbellsville Quadrangle, Kentucky published by the United States Geological Survey (1965) indicates that the site is underlain by the Salem and Warsaw formation over the Fort Payne formation of the Mississippian period.

The Salem and Warsaw formation consist of limestone with beds of shale and siltstone. The limestone is yellowish and bluish gray, medium to coarse grained and medium to thick bedded and cherty. The upper part of the limestone contains very fine sand that weathers into thin plates of sandstone in residual soils. This formation is over 100 feet thick.

The Fort Payne formation consists of siltstone and limestone. The siltstone is medium to dark gray, medium to very thick bedded with shale partings. Chert beds of 1 to 2 feet thick occur in the uppermost part of the formation. The limestone is yellowish gray to dark gray, medium to coarse grained, medium to thick bedded, locally shaley and cherty.

It should be noted that the site is underlain by formations that are highly susceptible to dissolution along joints and bedding planes in the rock mass. This results in voids and solution channels within the rock strata and a highly irregular bedrock surface. The weathering of the bedrock and subsequent collapse or erosion of the overburden into these openings results in what is referred to as a karst topography. Any construction in karst topography is accompanied by some degree of risk for future internal soil erosion and ground subsidence that could affect the stability of the proposed structures. Our review of the available topographic and geologic mapping did not note any sinkholes on or around the site, or within a 1 mile radius of the property. Furthermore, the borings drilled at the site did not disclose any obvious signs of impending overburden collapse.

4.3 Groundwater Conditions

No groundwater was encountered during the auger drilling portion of the borehole. Water was used to advance the borehole during rock coring operations. The introduction of water into the borehole precluded obtaining accurate groundwater level readings at the time of drilling operations. Long term observation of the groundwater level in monitoring wells, sealed from the influence of surface water, would be required to obtain accurate groundwater levels on the site.

It should be recognized that fluctuations of the groundwater table may occur due to seasonal variations in the amount of rainfall, runoff and other factors not evident at the time the boring was performed. Therefore, groundwater levels during construction or at other times in the life of the structure may be higher or lower than the levels indicated on the boring log. The possibility of groundwater level fluctuations should be considered when developing the design and construction plans for the project.

5.0 ENGINEERING RECOMMENDATIONS

Based on the encountered subsurface conditions at the boring location, we believe the tower can be constructed on drilled piers or on a mat foundation. The lightly loaded equipment building can be supported on shallow spread footings. Shallow foundation and drilled pier recommendations are presented in the following paragraphs.

5.1 Tower Foundation

Drilled Pier Alternative: Based on the results of the boring, the following tower foundation design parameters have been developed:

Table 2
Drilled Pier Foundation Design Parameters

Depth * (feet)	Description **	Allowable Skin Friction (psf)	Allowable End Bearing Pressure (psf)	Allowable Passive Pressure (psf)	Internal Angle of Friction (Degree)	Cohesion (psf)	Lateral Subgrade Modulus (pci)	Strain, ϵ_{50} (in/in)
0 - 2	Topsoil and Fat Clay	Ignore	Ignore	Ignore	-	-	Ignore	Ignore
2 - 22	Fat Clay	450	3,500	1,750	0	1,750	140	0.006
22 - 26½	Chert Gravel	450 - 500***	3,500	1,750 - 2,500***	34	0	90	0.001
26½ - 36½	Limestone	3,500****	20,000	7,000****	0	70,000****	3,000	0.00001

* Profile based on boring drilled about 50 feet west of the tower center. Pier inspection is recommended to adjust pier length if variable soil/rock conditions are encountered

** A total unit weight of 120, 125 and 140 pcf can be estimated for the clays/sills, gravel and limestone, respectively.

*** Increases linearly. Skin friction values for gravel assume uplift controls design. Compression skin friction values for gravel can be increased by 50%, if necessary.

**** The pier should be embedded a minimum of 3 feet into limestone to mobilize these higher rock strength parameters. Furthermore, it is assumed the rock socket will be extended using coring techniques rather than blasting/shooting.

The cohesion, friction angle, lateral subgrade modulus and strain values indicated in Table 2 have no factors of safety, and the allowable skin friction and the passive resistances have factors of safety of 2. The cohesion, internal friction angle, lateral subgrade modulus and strain values given in the above table are based on the boring, published correlation values and Terracon's experience with similar soil/rock types. These values should, therefore, be considered approximate. To mobilize the higher rock strength parameters, the pier should be socketed at least 3 feet into relatively continuous bedrock. Furthermore, it is assumed that the rock socket is developed using coring rather than blasting techniques. The allowable end bearing pressure provided in the table has an approximate factor of safety of at least 3. Total settlement of drilled piers designed using the above parameters is not anticipated to exceed 1 inch.

The upper 2 feet of topsoil and fat clay should be ignored due to the potential effects of frost action and construction disturbance. To avoid a reduction in lateral and uplift resistance caused by variable subsurface conditions and or bedrock depths, we recommend that drawings instruct the contractor to notify the engineer if subsurface conditions significantly different than encountered in our boring are disclosed during drilled pier installation. Under these circumstances, it may be necessary to adjust the overall length of the pier. To facilitate these adjustments and assure that the pier is embedded in suitable materials, it is recommended that a Terracon representative observe the drilled pier excavation.

If a bedrock socket is required, it is recommended that a minimum pier length and minimum competent rock socket length be stated on the design drawings. Competent rock was encountered in our boring below a depth of about 26½ feet, but could vary at the tower legs or if significant grade changes occur at the site. If the subsurface conditions vary significantly at the tower legs, our office should be notified to review our recommendations and determine whether an additional boring is required. To facilitate pier length adjustments that may be necessary because of variable rock conditions, it is recommended that a Terracon representative observe the drilled pier excavation.

A drilled pier foundation should be designed with a minimum shaft diameter of 30 inches to facilitate clean out and possible dewatering of the pier excavation. Temporary casing may be required during the pier excavation in order to control possible groundwater seepage and support the sides of the excavation in weak soil zones. Care should be taken so that the sides and bottom of the excavations are not disturbed during construction. The bottom of the shaft should be free of loose soil or debris prior to reinforcing steel and concrete placement.

A concrete slump of at least 6 inches is recommended to facilitate temporary casing removal. It should be possible to remove the casing from a pier excavation during concrete placement provided that the concrete inside the casing is maintained at a sufficient level to resist any earth and hydrostatic pressures outside the casing during the entire casing removal procedure.

Mat Foundation Alternative: The mat foundation can be designed using the natural soil/engineered fill parameters provided in Table 3. These parameters are based on the findings of the boring, a review of published correlation values and Terracon's experience with similar soil conditions. These design parameters also assume that the base of the mat foundation will rest on natural soils or well-graded crushed stone that is compacted and tested on a full time basis

Table 3
Mat Foundation Design Parameters

Depth (feet)	Description	Allowable Contact Bearing Pressure (psf)	Allowable Passive Pressure (psf)	Coefficient of Friction, $\tan \delta$	Vertical Modulus of Subgrade Reaction (pci)
0 - 3	Topsoil and Fat Clays	Ignore	Ignore	-	
≥ 3	Fat Clay or Crushed Stone Fill	3,500	Ignore	0.35	125

To assure that soft soils are not left under the mat foundation, it is recommended that a geotechnical engineer observe the foundation subgrade prior to concrete placement. Provided the above recommendations are followed, total mat foundation settlements are not anticipated to exceed about 1 inch. Differential settlement should not exceed 50 percent of the total settlement.

5.2 Equipment Building Foundations

The proposed equipment shed may be supported on shallow footings bearing on stiff natural soils or engineered fill. The equipment building foundations should be dimensioned using a net allowable soil bearing pressure of 2,500 pounds per square foot (psf). In using net allowable soil pressures for footing dimensioning, the weight of the footings and backfill over the footings need not be considered. Furthermore, the footings should be at least 12 inches wide and a minimum of 2.0 feet square.

The geotechnical engineer or a qualified representative should observe the foundation excavations to verify that the bearing materials are suitable for support of the proposed loads. If, at the time of such observation, any soft soils are encountered at the design foundation elevation, the excavations should be extended downward so that the footings rest on stiff soils. If it is inconvenient to lower the footings, the proposed footing elevations may be re-established by backfilling after the undesirable material has been removed.

The recommended soil bearing value should be considered an upper limit, and any value less than that listed above would be acceptable for the foundation system. Using the value given, total settlement would be about 1 inch or less with differential settlements being less than 75 percent of total settlement. Footings should be placed at a depth of 1.5 feet, or greater, below finished exterior grade for protection against frost damage.

Equipment cabinets may be supported on ground supported concrete slabs. The slabs should bear on firm soils. Any soft, wet, unsuitable soils present in the pad area should be undercut or stabilized in-place prior to pad construction. If necessary, the slabs may be supported on a compacted layer of free draining, granular subbase material to help

distribute concentrated loads and act as a capillary break beneath the slab. The slabs should be appropriately reinforced to support the proposed equipment loads.

5.3 Parking and Drive Areas

The drive that accesses the site will be surfaced with crushed stone. Parking and drive areas that are surfaced with crushed stone should have a minimum thickness of 6 inches and be properly placed and compacted as outlined herein. The crushed stone should meet Kentucky Transportation Cabinet specifications and applicable local codes.

A paved section consisting only of crushed graded aggregate base course should be considered a high maintenance section. Regular care and maintenance is considered essential to the longevity and use of the section. Site grades should be maintained in such a manner as to allow for adequate surface runoff. Any potholes, depressions or excessive rutting that may develop should be repaired as soon as possible to reduce the possibility of degrading the soil subgrade.

5.4 Site Preparation

Site preparation should begin with the removal of topsoil, any loose, soft or otherwise unsuitable materials from the construction area. The geotechnical engineer should evaluate the actual stripping depth, along with any soft soils that require undercutting at the time of construction.

Any fill and backfill placed on the site should consist of approved materials that are free of organic matter and debris. Suitable fill materials should consist of well graded crushed stone below the tower foundation and well graded crushed stone or low plasticity cohesive soil elsewhere. Low-plasticity cohesive soil should have a liquid limit of less than 45 percent and a plasticity index of less than 25 percent. The on-site fat clays are not recommended for reuse directly beneath the slab due to their high plasticity. It is recommended that during construction these soils should be further tested and evaluated prior to use as fill. Fill should not contain frozen material and it should not be placed on a frozen subgrade.

The fill should be placed and compacted in lifts of 9 inches or less in loose thickness. Fill placed below structures or used to provide lateral resistance should be compacted to at least 98 percent of the material's maximum standard Proctor dry density (ASTM D-698). Cohesive fill should be placed, compacted, and maintained at moisture contents within minus 1 to plus 3 percent of the optimum value determined by the standard Proctor test.

The geotechnical engineer should be retained to monitor fill placement on the project and to perform field density tests as each lift of fill is placed in order to evaluate compliance with the design requirements. Standard Proctor and Atterberg limits tests should be performed on the representative samples of fill materials before their use on the site.

6.0 GENERAL COMMENTS

Terracon should be retained to review the final design plans and specifications so comments can be made regarding interpretation and implementation of our geotechnical recommendations in the design and specifications. Terracon also should be retained to provide testing and observation during excavation, grading, foundation and construction phases of the project.

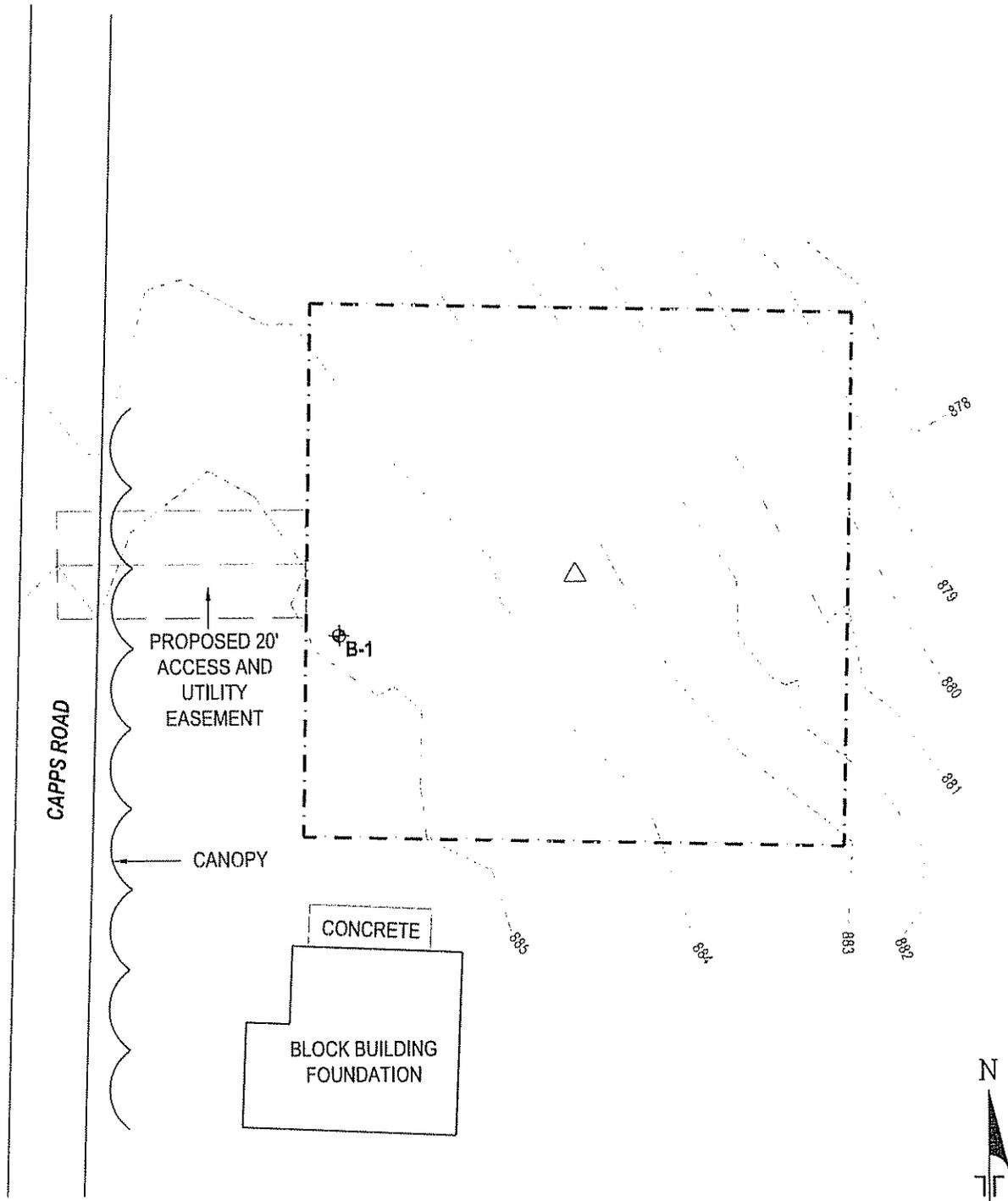
The analysis and recommendations presented in this report are based upon the data obtained from the boring performed at the indicated location and from other information discussed in this report. This report does not reflect variations that may occur across the site, or due to the modifying effects of weather. The nature and extent of such variations may not become evident until during or after construction. If variations appear, we should be immediately notified so that further *evaluation and supplemental recommendations* can be provided.

The scope of services for this project does not include either *specifically or by implication* any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

This report has been prepared for the exclusive use of our client for specific application to the project discussed and has been prepared in accordance with generally accepted geotechnical engineering practices. No warranties, either express or implied, are intended or made. Site safety, excavation support, and dewatering requirements are the responsibility of others. In the event that changes in the nature, design, or location of the project as outlined in this report are planned, the conclusions and recommendations contained in this report shall not be considered valid unless Terracon reviews the changes and either verifies or modifies the conclusions of this report in writing.

APPENDIX

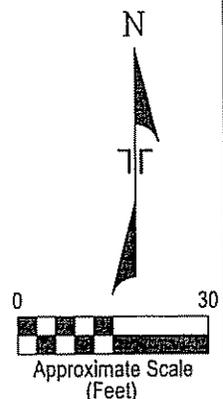
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LEGEND

-  SUBJECT SITE
-  APPROXIMATE BORING LOCATION

THIS DIAGRAM IS FOR GENERAL LOCATION ONLY AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES



Project Mgr: SZR	Project No. 57087341	 Consulting Engineers and Scientists 4545 Bishop Lane, Suite 101 Louisville, KY 40218 (502) 456-1256 (502) 456-1278	BORING LOCATION DIAGRAM GEOTECHNICAL ENGINEERING REPORT GREEN RIVER NORTH TOWER 494 CAPPS ROAD CAMPBELLSVILLE, KENTUCKY	FIG. No.
Drawn By: TLY	Scale: AS SHOWN			1
Checked By: MRF/SZR	File No. GEO57087341-1			
Approved By: EH	Date: JULY 2008			

LOG OF BORING NO. B-1

CLIENT T-Mobile/Mittrix, Inc.		PROJECT Green River North								
SITE 494 Capps Road Campbellsville, Kentucky										
GRAPHIC LOG	DESCRIPTION	DEPTH, ft.	USCS SYMBOL	SAMPLES				TESTS		
				NUMBER	TYPE	RECOVERY, in.	SPT - N BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf	UNCONFINED STRENGTH, psf
Approx. Surface Elev.: 885 ft										
[Hatched Pattern]	FAT CLAY , with fine to coarse chert sand & gravel, brown, very stiff to hard, slightly moist large chert gravel at 3.5 feet mottled red & yellowish brown, moist below 8 feet	5 10 15	CH	1	SS	18	22	15		
			CH	2	SS	18	44	15		
			CH	3	SS	14	46	30		
			CH	4	SS	12	55	12		
			CH	5	SS	9	25	12		
	18 ----- 867		ML	6	SS	18	19	42		
	22 ----- 863		GP	7	SS	8	13	16		
	26.5 ----- 858.5			R-1	DB	99%	RQD 91%			
	36.5 ----- 848.5									
	CORING TERMINATED									

LL = 52
PL = 18
PI = 34

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft	
WL	▽
WL	▽
WL	▽
Dry Upon Completion	



BORING STARTED	7-1-08
BORING COMPLETED	7-1-08
RIG Mobile B-61	FOREMAN JS
APPROVED TGL	JOB # 57087341

BOREHOLE 58 57087341 LOGS.GPJ TERRACON.GDT 7/14/08

GENERAL NOTES

DRILLING & SAMPLING SYMBOLS:

SS:	Split Spoon - 1- ³ / ₈ " I.D., 2" O.D., unless otherwise noted	HS:	Hollow Stem Auger
ST:	Thin-Walled Tube - 2" O.D., unless otherwise noted	PA:	Power Auger
RS:	Ring Sampler - 2.42" I.D., 3" O.D., unless otherwise noted	HA:	Hand Auger
DB:	Diamond Bit Coring - 4", N, B	RB:	Rock Bit
BS:	Bulk Sample or Auger Sample	WB:	Wash Boring or Mud Rotary

The number of blows required to advance a standard 2-inch O.D. split- spoon sampler (SS) the last 12 inches of the total 18-inch penetration with a 140-pound hammer falling 30 inches is considered the "Standard Penetration" or "N-value".

WATER LEVEL MEASUREMENT SYMBOLS:

WL:	Water Level	WS:	While Sampling
WCI:	Wet Cave in	WD:	While Drilling
DCI:	Dry Cave in	BCR:	Before Casing Removal
AB:	After Boring	ACR:	After Casing Removal

Water levels indicated on the boring logs are the levels measured in the borings at the times indicated. Groundwater levels at other times and other locations across the site could vary. In pervious soils, the indicated levels may reflect the location of groundwater. In low permeability soils, the accurate determination of groundwater levels may not be possible with only short-term observations.

DESCRIPTIVE SOIL CLASSIFICATION: Soil classification is based on the Unified Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

CONSISTENCY OF FINE-GRAINED SOILS

<u>Unconfined Compressive Strength, Qu, psf</u>	<u>Standard Penetration or N-value (SS) Blows/Ft.</u>	<u>Consistency</u>
< 500	<2	Very Soft
500 - 1,000	2-3	Soft
1,001 - 2,000	4-6	Medium Stiff
2,001 - 4,000	7-12	Stiff
4,001 - 8,000	13-26	Very Stiff
8,000+	26+	Hard

RELATIVE DENSITY OF COARSE-GRAINED SOILS

<u>Standard Penetration or N-value (SS) Blows/Ft.</u>	<u>Relative Density</u>
0 - 3	Very Loose
4 - 9	Loose
10 - 29	Medium Dense
30 - 49	Dense
50+	Very Dense

RELATIVE PROPORTIONS OF SAND AND GRAVEL

<u>Descriptive Term(s) of other constituents</u>	<u>Percent of Dry Weight</u>
Trace	< 15
With	15 - 29
Modifier	> 30

GRAIN SIZE TERMINOLOGY

<u>Major Component of Sample</u>	<u>Particle Size</u>
Boulders	Over 12 in. (300mm)
Cobbles	12 in. to 3 in. (300mm to 75 mm)
Gravel	3 in. to #4 sieve (75mm to 4.75 mm)
Sand	#4 to #200 sieve (4.75mm to 0.075mm)
Silt or Clay	Passing #200 Sieve (0.075mm)

RELATIVE PROPORTIONS OF FINES

<u>Descriptive Term(s) of other constituents</u>	<u>Percent of Dry Weight</u>
Trace	< 5
With	5 - 12
Modifiers	> 12

PLASTICITY DESCRIPTION

<u>Term</u>	<u>Plasticity Index</u>
Non-plastic	0
Low	1-10
Medium	11-30
High	30+

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GENERAL NOTES

Sedimentary Rock Classification

DESCRIPTIVE ROCK CLASSIFICATION:

Sedimentary rocks are composed of cemented clay, silt and sand sized particles. The most common minerals are clay, quartz and calcite. Rock composed primarily of calcite is called limestone; rock of sand size grains is called sandstone, and rock of clay and silt size grains is called mudstone or claystone, siltstone, or shale. Modifiers such as shaly, sandy, dolomitic, calcareous, carbonaceous, etc. are used to describe various constituents. Examples: sandy shale; calcareous sandstone.

LIMESTONE	Light to dark colored, crystalline to fine-grained texture, composed of CaCO ₃ . reacts readily with HCl.
DOLOMITE	Light to dark colored, crystalline to fine-grained texture, composed of CaMg(CO ₃) ₂ , harder than limestone, reacts with HCl when powdered.
CHERT	Light to dark colored, very fine-grained texture, composed of micro-crystalline quartz (SiO ₂), brittle, breaks into angular fragments, will scratch glass
SHALE	Very fine-grained texture, composed of consolidated silt or clay, bedded in thin layers. The unlaminated equivalent is frequently referred to as siltstone, claystone or mudstone.
SANDSTONE	Usually light colored, coarse to fine texture, composed of cemented sand size grains of quartz, feldspar, etc. Cement usually is silica but may be such minerals as calcite, iron-oxide, or some other carbonate.
CONGLOMERATE	Rounded rock fragments of variable mineralogy varying in size from near sand to boulder size but usually pebble to cobble size (½ inch to 6 inches) Cemented together with various cementing agents. Breccia is similar but composed of angular, fractured rock particles cemented together.

PHYSICAL PROPERTIES:

DEGREE OF WEATHERING

Slight	Slight decomposition of parent material on joints. May be color change.
Moderate	Some decomposition and color change throughout.
High	Rock highly decomposed, may be extremely broken.

BEDDING AND JOINT CHARACTERISTICS

Bed Thickness	Joint Spacing	Dimensions
Very Thick	Very Wide	> 10'
Thick	Wide	3' - 10'
Medium	Moderately Close	1' - 3'
Thin	Close	2" - 1'
Very Thin	Very Close	4" - 2"
Laminated	—	1" - .4"

HARDNESS AND DEGREE OF CEMENTATION

Limestone and Dolomite:

Hard	Difficult to scratch with knife.
Moderately Hard	Can be scratched easily with knife, cannot be scratched with fingernail.
Soft	Can be scratched with fingernail.

Shale, Siltstone and Claystone

Hard	Can be scratched easily with knife, cannot be scratched with fingernail.
Moderately Hard	Can be scratched with fingernail.
Soft	Can be easily dented but not molded with fingers.

Sandstone and Conglomerate

Well Cemented	Capable of scratching a knife blade.
Cemented	Can be scratched with knife.
Poorly Cemented	Can be broken apart easily with fingers.

Bedding Plane A plane dividing sedimentary rocks of the same or different lithology.

Joint Fracture in rock, generally more or less vertical or transverse to bedding, along which no appreciable movement has occurred.

Seam Generally applies to bedding plane with an unspecified degree of weathering.

SOLUTION AND VOID CONDITIONS

Solid	Contains no voids
Vuggy (Pitted)	Rock having small solution pits or cavities up to ½ inch diameter, frequently with a mineral lining.
Porous	Containing numerous voids, pores, or other openings, which may or may not interconnect.
Cavernous	Containing cavities or caverns, sometimes quite large

UNIFIED SOIL CLASSIFICATION SYSTEM

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests^A

				Soil Classification		
				Group Symbol	Group Name ^B	
Coarse-Grained Soils More than 50% retained on No. 200 sieve	Gravels More than 50% of coarse fraction retained on No. 4 sieve	Clean Gravels Less than 5% fines ^C	$Cu \geq 4$ and $1 \leq Cc \leq 3^E$	GW	Well-graded gravel ^F	
			$Cu < 4$ and/or $1 > Cc > 3^E$	GP	Poorly graded gravel ^F	
			Fines classify as ML or MH	GM	Silty gravel ^{F, G, H}	
	Sands 50% or more of coarse fraction passes No. 4 sieve	Clean Sands Less than 5% fines ^E	$Cu \geq 6$ and $1 \leq Cc \leq 3^E$	SW	Well-graded sand ^I	
			$Cu < 6$ and/or $1 > Cc > 3^E$	SP	Poorly graded sand ^I	
			Fines classify as ML or MH	SM	Silty sand ^{G, H, I}	
Fine-Grained Soils 50% or more passes the No. 200 sieve	Silt and Clays Liquid limit less than 50	inorganic	$PI > 7$ and plots on or above "A" line ^J	CL	Lean clay ^{K, L, M}	
			$PI < 4$ or plots below "A" line ^J	ML	Silt ^{K, L, M}	
		organic	$\frac{\text{Liquid limit — oven dried}}{\text{Liquid limit — not dried}} < 0.75$	OL	Organic clay ^{K, L, M, N}	
				OH	Organic silt ^{K, L, M, O}	
		Silt and Clays Liquid limit 50 or more	inorganic	PI plots on or above "A" line	CH	Fat clay ^{K, L, M}
	PI plots below "A" line			MH	Elastic silt ^{K, L, M}	
	organic		$\frac{\text{Liquid limit — oven dried}}{\text{Liquid limit — not dried}} < 0.75$	OH	Organic clay ^{K, L, M, P}	
			OH	Organic silt ^{K, L, M, Q}		
	Highly organic soils	Primarily organic matter, dark in color, and organic odor			PT	Peat

^ABased on the material passing the 3-in. (75-mm) sieve.

^BIf field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

^CGravels with 5 to 12% fines require dual symbols:

GW-GM well-graded gravel with silt
GW-GC well-graded gravel with clay
GP-GM poorly graded gravel with silt
GP-GC poorly graded gravel with clay

^DSands with 5 to 12% fines require dual symbols:

SW-SM well-graded sand with silt
SW-SC well-graded sand with clay
SP-SM poorly graded sand with silt
SP-SC poorly graded sand with clay

$$C_u = D_{60}/D_{10} \quad C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$$

^FIf soil contains $\geq 15\%$ sand, add "with sand" to group name.

^GIf fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

^HIf fines are organic, add "with organic fines" to group name.

^IIf soil contains $\geq 15\%$ gravel, add "with gravel" to group name.

^JIf Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

^KIf soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel", whichever is predominant.

^LIf soil contains $\geq 30\%$ plus No. 200 predominantly sand, add "sandy" to group name.

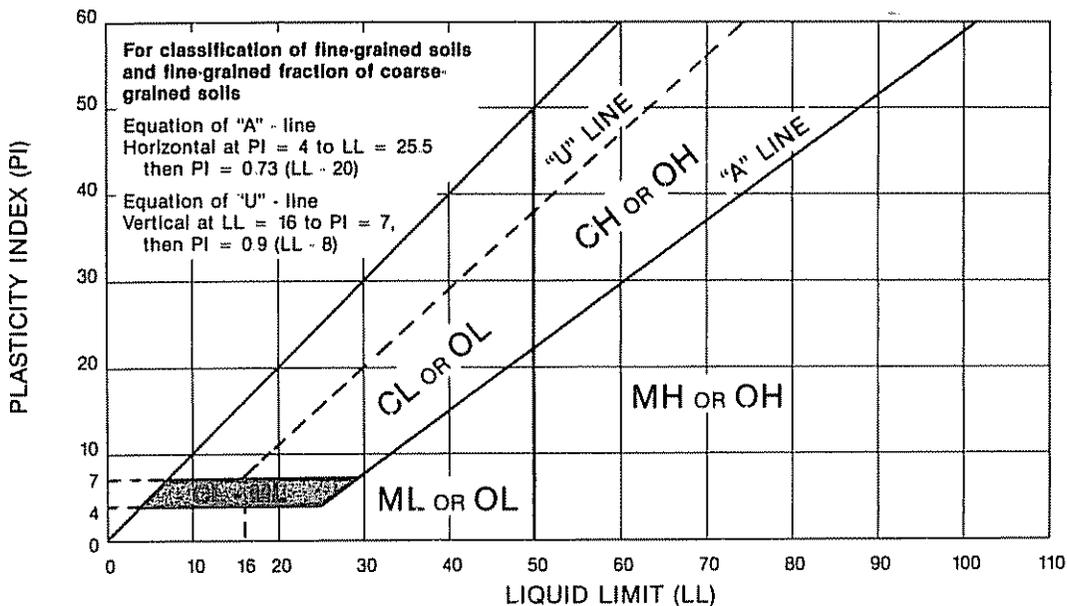
^MIf soil contains $\geq 30\%$ plus No. 200, predominantly gravel, add "gravelly" to group name.

^N $PI \geq 4$ and plots on or above "A" line.

^O $PI < 4$ and plots below "A" line.

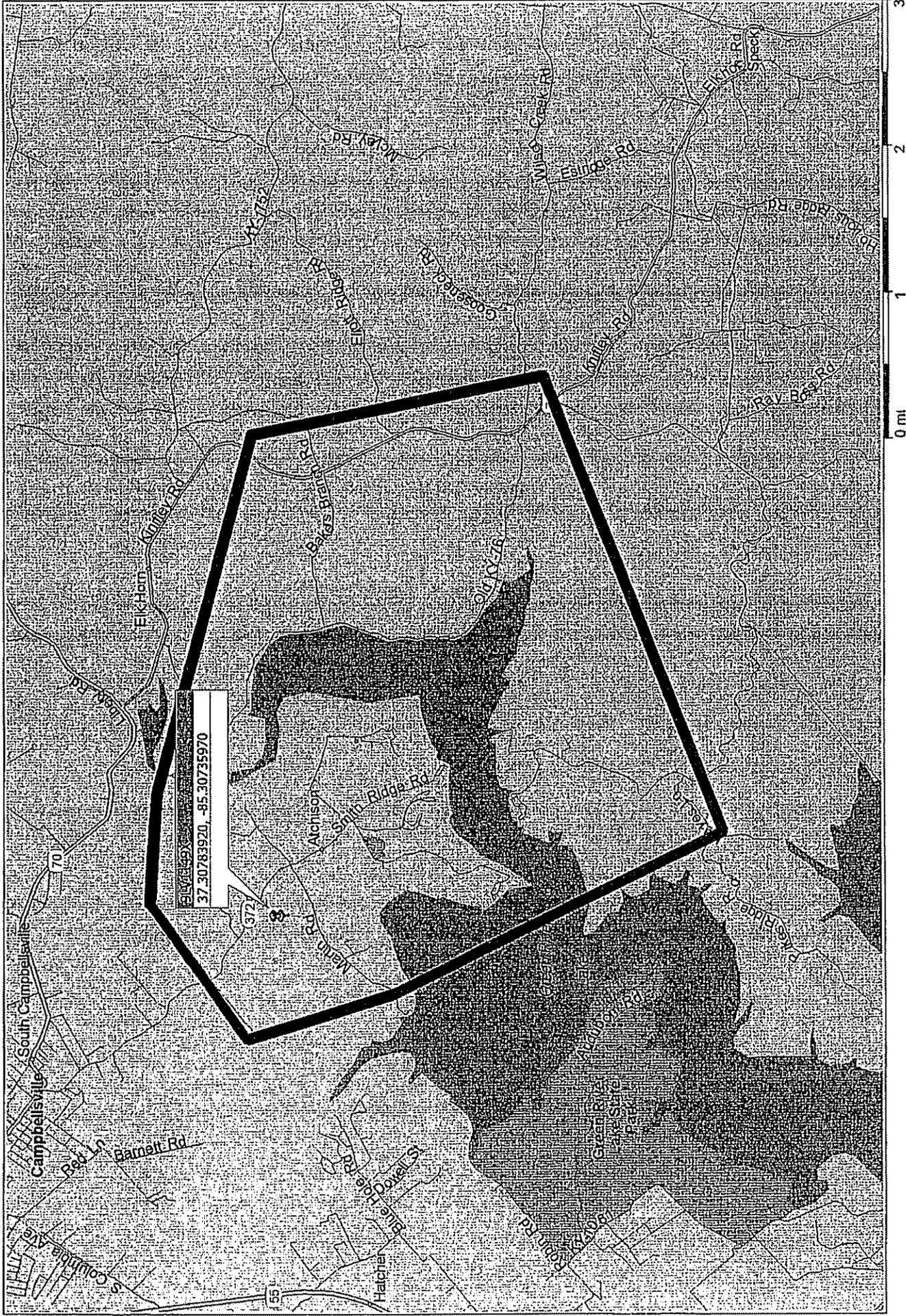
^P PI plots on or above "A" line.

^Q PI plots below "A" line.



Terracon

9LV1149 - Green River North



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Federal Aviation Administration
 Air Traffic Airspace Branch, ASW-520
 2601 Meacham Blvd.
 Fort Worth, TX 76137-0520

Aeronautical Study No.
 2008-ASO-3492-OE

Issued Date: 07/02/2008

Ken Bischoff
 T-Mobile
 11509 Commonwealth Drive, Suite 9
 Louisville, KY 40299

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Antenna Tower 9LV1149 Green River North
 Location: Campbellsville, KY
 Latitude: 37-18-12.20N NAD 83
 Longitude: 85-17-02.87W
 Heights: 275 feet above ground level (AGL)
 1158 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

As a condition to this Determination, the structure is marked and/or lighted in accordance with FAA Advisory circular 70/7460-1 K Change 2, Obstruction Marking and Lighting, a med-dual system - Chapters 4,8(M-Dual),&12.

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be completed and returned to this office any time the project is abandoned or:

- At least 10 days prior to start of construction (7460-2, Part I)
- Within 5 days after the construction reaches its greatest height (7460-2, Part II)

This determination expires on 01/02/2010 unless:

- (a) extended, revised or terminated by the issuing office.
- (b) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE POSTMARKED OR DELIVERED TO THIS OFFICE AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this determination will be forwarded to the Federal Communications Commission if the structure is subject to their licensing authority.

If we can be of further assistance, please contact our office at (817) 838-1994. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2008-ASO-3492-OE.

Signature Control No: 582199-102290246
Linda Steele
Technician

(DNE)

Attachment(s)
Frequency Data

Frequency Data for ASN 2008-ASO-3492-OE

LOW FREQUENCY	HIGH FREQUENCY	FREQUENCY UNIT	ERP	ERP UNIT
806	824	MHz	500	W
824	849	MHz	500	W
851	866	MHz	500	W
869	894	MHz	500	W
896	901	MHz	500	W
901	902	MHz	7	W
930	931	MHz	3500	W
931	932	MHz	3500	W
932	932.5	MHz	17	dBW
935	940	MHz	1000	W
940	941	MHz	3500	W
1850	1910	MHz	1640	W
1930	1990	MHz	1640	W
2305	2310	MHz	2000	W
2345	2360	MHz	2000	W

9

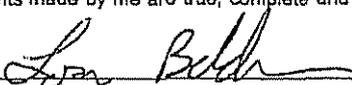
Kentucky Transportation Cabinet, Kentucky Airport Zoning Commission, 200 Mero Street, Frankfort, KY 40622 APPLICATION FOR PERMIT TO CONSTRUCT OR ALTER A STRUCTURE INSTRUCTIONS INCLUDED	Kentucky Aeronautical Study Number
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1. APPLICANT -- Name, Address, Telephone, Fax, etc. T-Mobile USA Attn: Ken Bischoff 11509 Commonwealth Dr Louisville, KY 40299	9 Latitude: <u>37</u> ° <u>18</u> ' <u>12</u> " <u>20</u> " 10 Longitude: <u>85</u> ° <u>17</u> ' <u>2</u> " <u>87</u> " 11. Datum: <input checked="" type="checkbox"/> NAD83 <input type="checkbox"/> NAD27 <input type="checkbox"/> Other _____ 12 Nearest Kentucky City: <u>Campbellsville</u> County <u>Taylor</u> 13. Nearest Kentucky public use or Military airport: <u>AAS: Taylor County</u> 14 Distance from #13 to Structure: <u>20584</u> ft 15 Direction from #13 to Structure: <u>340</u> degrees 16 Site Elevation (AMSL): <u>883.00</u> Feet 17. Total Structure Height (AGL): <u>275.00</u> Feet 18. Overall Height (#16 + #17) (AMSL): <u>1,158.00</u> Feet 19. Previous FAA and/or Kentucky Aeronautical Study Number(s): _____ 20 Description of Location: (Attach USGS 7.5 minute Quadrangle Map or an Airport layout Drawing with the precise site marked and any certified survey) <u>494 Capps Rd</u> <u>Campbellsville, KY 42718</u>
2. Representative of Applicant -- Name, Address, Telephone, Fax T-Mobile USA Attn: Lorne Belden 11509 Commonwealth Dr Louisville, KY 40299 PH: 502-297-6211 FAX: 502-297-6251	
3. Application for: <input checked="" type="checkbox"/> New Construction <input type="checkbox"/> Alteration <input type="checkbox"/> Existing 4. Duration: <input checked="" type="checkbox"/> Permanent <input type="checkbox"/> Temporary (Months _____ Days _____) 5. Work Schedule: Start <u>7/1/2008</u> End <u>9/30/2008</u> 6. Type: <input checked="" type="checkbox"/> Antenna Tower <input type="checkbox"/> Crane <input type="checkbox"/> Building <input type="checkbox"/> Power Line <input type="checkbox"/> Landfill <input type="checkbox"/> Water Tank <input type="checkbox"/> Other _____ 7 Marking/Painting and/or Lighting Preferred: <input type="checkbox"/> Red Lights and Paint <input checked="" type="checkbox"/> Dual - Red & Medium Intensity White <input type="checkbox"/> White - Medium Intensity <input type="checkbox"/> Dual - Red & High Intensity White <input type="checkbox"/> White - High Intensity <input type="checkbox"/> Other _____ 8 FAA Aeronautical Study Number <u>2008-ASO-3492-OE</u>	

21 Description of Proposal:
 erection of a self-support tower

22. Has a "NOTICE OF CONSTRUCTION OR ALTERATION" (FAA Form 7460-1) been filed with the Federal Aviation Administration?
 No Yes, When June 23, 2008

CERTIFICATION: I hereby certify that all the above statements made by me are true, complete and correct to the best of my knowledge and belief.

Lorne Belden, RF Engineer 6/23/2008
 Printed Name and Title  Date

PENALTIES: Persons failing to comply with Kentucky Revised Statutes (KRS 183.861 through 183.990) and Kentucky Administrative Regulations (602 KAR 050:Series) are liable for fines and/or imprisonment as set forth in KRS 183.990(3). Non-compliance with Federal Aviation Administration Regulations may result in further penalties.

Commission Action: Chairman, KAZC Administrator, KAZC

Approved Disapproved _____ Date _____

Notice of Proposed Construction or Alteration - Off Airport

Project Name: T-MOB-000097565-08	Sponsor: T-Mobile
---	--------------------------

Details for Case : 9LV1149 Green River North

Show Project Summary

Case Status	
ASN: 2008-ASO-3492-OE	Date Accepted: 06/23/2008
Status: Accepted	Date Determined:
	Letters: None
Construction / Alteration Information	
Notice Of: Construction	Structure Summary
Duration: Permanent	Structure Type: Antenna Tower
<i>if Temporary :</i> Months: Days:	Structure Name: 9LV1149 Green River North
Work Schedule - Start: 07/01/2008	FCC Number:
Work Schedule - End: 09/30/2008	Prior ASN:
State Filing: Filed with State	
Structure Details	
Latitude: 37° 18' 12.20" N	Common Frequency Bands
Longitude: 85° 17' 2.87" W	Low Freq High Freq Freq Unit ERP ERP Unit
Horizontal Datum: NAD83	806 824 MHz 500 W
Site Elevation (SE): 883 (nearest foot)	824 849 MHz 500 W
Structure Height (AGL): 275 (nearest foot)	851 866 MHz 500 W
Marking/Lighting: Dual-red and medium Intensity	869 894 MHz 500 W
<i>Other :</i>	896 901 MHz 500 W
Nearest City: Campbellsville	901 902 MHz 7 W
Nearest State: Kentucky	930 931 MHz 3500 W
Description of Location: 494 Capps Rd Campbellsville, KY 42718	931 932 MHz 3500 W
Description of Proposal: erection of a 260' self support tower with a 15' lightning rod.	932 932.5 MHz 17 dBW
	935 940 MHz 1000 W
	940 941 MHz 3500 W
	1850 1910 MHz 1640 W
	1930 1990 MHz 1640 W
	2305 2310 MHz 2000 W
	2345 2360 MHz 2000 W
	Specific Frequencies

McBRAYER, MCGINNIS, LESLIE & KIRKLAND, PLLC
ATTORNEYS-AT-LAW

W. BRENT RICE
brice@mmlk.com

201 E. Main Street, Suite 1000
Lexington, Kentucky 40507
(859) 231-8780
(859) 231-6518

August 7, 2008

VIA CERTIFIED MAIL, RETURN RECEIPT REQUESTED

Hon. Eddie Rogers
Taylor County Judge
203 North Court Street, Suite 4
Campbellsville, KY 42718

RE: **Public Notice – Public Service Commission of Kentucky
Case No. 2008-00315 (The North Green River/9LV1149 Facility)**

Dear Judge Rogers:

Powertel/Memphis, Inc. d/b/a T-Mobile has applied to the Public Service Commission of Kentucky for a Certificate of Public Convenience and Necessity to construct and operate an additional cell facility. The facility will be comprised of a 260' self-supporting tower with attached lightning rods extending to 275', and an equipment shelter to be located at 494 Capps Road, Campbellsville, Taylor County, Kentucky. The proposed facility will improve coverage in the Green River area of Taylor County and will provide 911 emergency coverage. A map showing the location of the proposed new facility is enclosed.

The Commission invites your comments regarding the proposed construction. You also have the right to intervene in this matter. Your initial communication to the Commission must be received by the Commission within 20 days of the date of this letter as shown above.

Your comments and request for intervention should be addressed to: Executive Director's Office, Public Service Commission of Kentucky, P.O. Box 615, Frankfort, KY 40602. Please refer to **Case No. 2008-00315** in your correspondence. If I can be of assistance to you, please do not hesitate to call me.

Sincerely,



W. Brent Rice
Counsel for Powertel/Memphis, Inc.

WBR/dkw
Enclosure

Powertel/Memphis, Inc. d/b/a T-Mobile

9L.V1149/North Green River Site

Adjoining Property Owners

Mr. James Lloyd Capps
494 Capps Road
Campbellsville, KY 42718

Mr. Eugene H. Shively
803 Lebanon Avenue
Campbellsville, KY 42718

Mr. and Mrs. Roger L. Carlquist
807 Stray Winds
Campbellsville, KY 42718

Mr. Mark Wright
2570 West Saloma Road
Campbellsville, KY 42718

Mr. Charles Keith McHolan
837 N. Popelick Road
Campbellsville, KY 40243

Green River Reservoir
544 Lake Road
Campbellsville, KY 42718

Ms. Wanda J. French
916 Stray Winds Road
Campbellsville, KY 42718

Mr. and Mrs. Eric K. Serowles
135 Rustic Haven Drive
Campbellsville, KY 42718

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(859) 231-8780
(859) 231-6518

August 7, 2008

VIA CERTIFIED MAIL, RETURN RECEIPT REQUESTED

Mr. James Lloyd Capps
494 Capps Road
Campbellsville, KY 42718

RE: **Public Notice – Public Service Commission of Kentucky
Case No. 2008-00315 (The North Green River/9LV1149 Facility)**

Dear Mr. Capps:

Powertel/Memphis, Inc. d/b/a T-Mobile has applied to the Public Service Commission of Kentucky for a Certificate of Public Convenience and Necessity to construct and operate an additional cell facility. The facility will be comprised of a 260' self-supporting tower with attached lightning rods extending to 275', and an equipment shelter to be located at 494 Capps Road, Campbellsville, Taylor County, Kentucky. The proposed facility will improve coverage in the Green River area of Taylor County and provide 911 emergency coverage. A map showing the location of the proposed new facility is enclosed. This notice is being sent to you because you own property within a 500' radius of the proposed facility or are a contiguous property owner.

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Your comments and request for intervention should be addressed to: Executive Director's Office, Public Service Commission of Kentucky, P.O. Box 615, Frankfort, KY 40602. Please refer to **Case No. 2008-00315** in your correspondence.

Sincerely,



W. Brent Rice
Counsel for Powertel/Memphis, Inc.

WBR/dkw
Enclosure

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August 7, 2008

VIA CERTIFIED MAIL, RETURN RECEIPT REQUESTED

Mr. Eugene H. Shively
803 Lebanon Avenue
Campbellsville, KY 42718

RE: **Public Notice – Public Service Commission of Kentucky
Case No. 2008-00315 (The North Green River/9LV1149 Facility)**

Dear Mr. Shively:

Powertel/Memphis, Inc. d/b/a T-Mobile has applied to the Public Service Commission of Kentucky for a Certificate of Public Convenience and Necessity to construct and operate an additional cell facility. The facility will be comprised of a 260' self-supporting tower with attached lightning rods extending to 275', and an equipment shelter to be located at 494 Capps Road, Campbellsville, Taylor County, Kentucky. The proposed facility will improve coverage in the Green River area of Taylor County and provide 911 emergency coverage. A map showing the location of the proposed new facility is enclosed. This notice is being sent to you because you own property within a 500' radius of the proposed facility or are a contiguous property owner.

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Sincerely,



W. Brent Rice
Counsel for Powertel/Memphis, Inc.

WBR/dkw
Enclosure

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ATTORNEYS-AT-LAW

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brice@mmlk.com

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Lexington, Kentucky 40507
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(859) 231-6518

August 7, 2008

VIA CERTIFIED MAIL, RETURN RECEIPT REQUESTED

Mr. and Mrs. Roger L. Carlquist
807 Stray Winds
Campbellsville, KY 42718

RE: **Public Notice – Public Service Commission of Kentucky
Case No. 2008-00315 (The North Green River/9LV1149 Facility)**

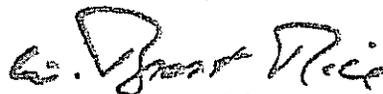
Dear Mr. and Mrs. Carlquist:

Powertel/Memphis, Inc. d/b/a T-Mobile has applied to the Public Service Commission of Kentucky for a Certificate of Public Convenience and Necessity to construct and operate an additional cell facility. The facility will be comprised of a 260' self-supporting tower with attached lightning rods extending to 275', and an equipment shelter to be located at 494 Capps Road, Campbellsville, Taylor County, Kentucky. The proposed facility will improve coverage in the Green River area of Taylor County and provide 911 emergency coverage. A map showing the location of the proposed new facility is enclosed. This notice is being sent to you because you own property within a 500' radius of the proposed facility or are a contiguous property owner.

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Sincerely,



W. Brent Rice
Counsel for Powertel/Memphis, Inc.

WBR/dkw
Enclosure

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brice@mmlk.com

201 E. Main Street, Suite 1000
Lexington, Kentucky 40507
(859) 231-8780
(859) 231-6518

August 7, 2008

VIA CERTIFIED MAIL, RETURN RECEIPT REQUESTED

Mr. Mark Wright
2570 West Saloma Road
Campbellsville, KY 42718

RE: **Public Notice – Public Service Commission of Kentucky
Case No. 2008-00315 (The North Green River/9LV1149 Facility)**

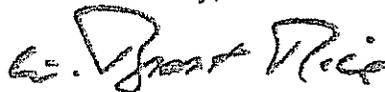
Dear Mr. Wright:

Powertel/Memphis, Inc. d/b/a T-Mobile has applied to the Public Service Commission of Kentucky for a Certificate of Public Convenience and Necessity to construct and operate an additional cell facility. The facility will be comprised of a 260' self-supporting tower with attached lightning rods extending to 275', and an equipment shelter to be located at 494 Capps Road, Campbellsville, Taylor County, Kentucky. The proposed facility will improve coverage in the Green River area of Taylor County and provide 911 emergency coverage. A map showing the location of the proposed new facility is enclosed. This notice is being sent to you because you own property within a 500' radius of the proposed facility or are a contiguous property owner.

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Sincerely,



W. Brent Rice
Counsel for Powertel/Memphis, Inc.

WBR/dkw
Enclosure

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201 E. Main Street, Suite 1000
Lexington, Kentucky 40507
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(859) 231-6518

August 7, 2008

VIA CERTIFIED MAIL, RETURN RECEIPT REQUESTED

Mr. Charles Keith McHolan
837 N. Popelick Road
Campbellsville, KY 40243

RE: **Public Notice – Public Service Commission of Kentucky
Case No. 2008-00315 (The North Green River/9LV1149 Facility)**

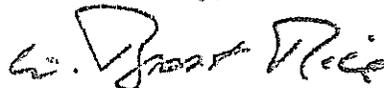
Dear Mr. McHolan:

Powertel/Memphis, Inc. d/b/a T-Mobile has applied to the Public Service Commission of Kentucky for a Certificate of Public Convenience and Necessity to construct and operate an additional cell facility. The facility will be comprised of a 260' self-supporting tower with attached lightning rods extending to 275', and an equipment shelter to be located at 494 Capps Road, Campbellsville, Taylor County, Kentucky. The proposed facility will improve coverage in the Green River area of Taylor County and provide 911 emergency coverage. A map showing the location of the proposed new facility is enclosed. This notice is being sent to you because you own property within a 500' radius of the proposed facility or are a contiguous property owner.

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Sincerely,



W. Brent Rice
Counsel for Powertel/Memphis, Inc.

WBR/dkw
Enclosure

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ATTORNEYS-AT-LAW

W. BRENT RICE
brice@mmlk.com

201 E. Main Street, Suite 1000
Lexington, Kentucky 40507
(859) 231-8780
(859) 231-6518

August 7, 2008

VIA CERTIFIED MAIL, RETURN RECEIPT REQUESTED

Green River Reservoir
544 Lake Road
Campbellsville, KY 42718

RE: **Public Notice – Public Service Commission of Kentucky
Case No. 2008-00315 (The North Green River/9LV1149 Facility)**

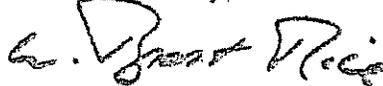
Dear Sir or Madam:

Powertel/Memphis, Inc. d/b/a T-Mobile has applied to the Public Service Commission of Kentucky for a Certificate of Public Convenience and Necessity to construct and operate an additional cell facility. The facility will be comprised of a 260' self-supporting tower with attached lightning rods extending to 275', and an equipment shelter to be located at 494 Capps Road, Campbellsville, Taylor County, Kentucky. The proposed facility will improve coverage in the Green River area of Taylor County and provide 911 emergency coverage. A map showing the location of the proposed new facility is enclosed. This notice is being sent to you because you own property within a 500' radius of the proposed facility or are a contiguous property owner.

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Sincerely,



W. Brent Rice
Counsel for Powertel/Memphis, Inc.

WBR/dkw
Enclosure

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August 7, 2008

VIA CERTIFIED MAIL, RETURN RECEIPT REQUESTED

Ms. Wanda J. French
916 Stray Winds Road
Campbellsville, KY 42718

RE: **Public Notice – Public Service Commission of Kentucky
Case No. 2008-00315 (The North Green River/9LV1149 Facility)**

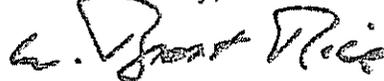
Dear Ms. French:

Powertel/Memphis, Inc. d/b/a T-Mobile has applied to the Public Service Commission of Kentucky for a Certificate of Public Convenience and Necessity to construct and operate an additional cell facility. The facility will be comprised of a 260' self-supporting tower with attached lightning rods extending to 275', and an equipment shelter to be located at 494 Capps Road, Campbellsville, Taylor County, Kentucky. The proposed facility will improve coverage in the Green River area of Taylor County and provide 911 emergency coverage. A map showing the location of the proposed new facility is enclosed. This notice is being sent to you because you own property within a 500' radius of the proposed facility or are a contiguous property owner.

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Sincerely,



W. Brent Rice
Counsel for Powertel/Memphis, Inc.

WBR/dkw
Enclosure

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August 7, 2008

VIA CERTIFIED MAIL, RETURN RECEIPT REQUESTED

Mr. and Mrs. Eric K. Serowles
135 Rustic Haven Drive
Campbellsville, KY 42718

RE: **Public Notice – Public Service Commission of Kentucky
Case No. 2008-00315 (The North Green River/9LV1149 Facility)**

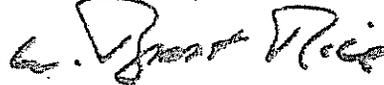
Dear Mr. and Mrs. Serowles:

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Sincerely,



W. Brent Rice
Counsel for Powertel/Memphis, Inc.

WBR/dkw
Enclosure

SITE LEASE WITH OPTION

THIS SITE LEASE WITH OPTION (this "Lease") is by and between James Lloyd Capps, a single individual ("Landlord") and Powertel/Memphis, Inc., a Delaware corporation ("Tenant").

1. Option to Lease.

(a) In consideration of the payment of [REDACTED] (the "Option Fee") by Tenant to Landlord, Landlord hereby grants to Tenant an option to lease a portion of the real property described in the attached Exhibit A (the "Property"), on the terms and conditions set forth herein (the "Option"). The Option shall be for an initial term of twelve (12) months, commencing on the Effective Date (as defined below) (the "Option Period"). The Option Period may be extended by Tenant for an additional twelve (12) months upon written notice to Landlord and payment of the sum of [REDACTED] ("Additional Option Fee") at any time prior to the end of the Option Period.

(b) During the Option Period and any extension thereof, and during the Initial Term and any Renewal Term (as those terms are defined below) of this Lease, Landlord agrees to cooperate with Tenant in obtaining, at Tenant's expense, all licenses and permits or authorizations required for Tenant's use of the Premises (as defined below) from all applicable government and/or regulatory entities (including, without limitation, zoning and land use authorities, and the Federal Communications Commission ("FCC") ("Governmental Approvals"), including all land use and zoning permit applications, and Landlord agrees to cooperate with and to allow Tenant, at no cost to Landlord, to obtain a title report, zoning approvals and variances, land-use permits. Landlord expressly grants to Tenant a right of access to the Property to perform any surveys, soil tests, and other engineering procedures or environmental investigations ("Tests") on the Property deemed necessary or appropriate by Tenant to evaluate the suitability of the Property for the uses contemplated under this Lease. During the Option Period and any extension thereof, and during the Initial Term or any Renewal Term of this Lease, Landlord agrees that it will not interfere with Tenant's efforts to secure other licenses and permits or authorizations that relate to other property. During the Option Period and any extension thereof, Tenant may exercise the Option by so notifying Landlord in writing, at Landlord's address in accordance with Section 12 hereof.

(c) If Tenant exercises the Option, then Landlord hereby leases to Tenant that portion of the Property sufficient for placement of the Antenna Facilities (as defined below), together with all necessary space and easements for access and utilities, as generally described and depicted in the attached Exhibit B (collectively referred to hereinafter as the "Premises"). The Premises, located at 494 Capps Road, Campbellsville, Taylor City, KY, comprises approximately 10,000 square feet.

2. Term. The initial term of this Lease shall be five (5) years commencing on the date of exercise of the Option (the "Commencement Date"), and terminating at midnight on the last day of the initial term (the "Initial Term").

3. Renewal. Tenant shall have the right to extend this Lease for five (5) additional and successive five-year terms (each a "Renewal Term") on the same terms and conditions as set forth herein. This Lease shall automatically renew for each successive Renewal Term unless Tenant notifies Landlord, in writing, of Tenant's intention not to renew this Lease, at least thirty (30) days prior to the expiration of the Initial Term or any Renewal Term. If Tenant shall remain in possession of the Premises at the expiration of this Lease or any Renewal Term without a written agreement, such tenancy shall be deemed a month-to-month tenancy under the same terms and conditions of this Lease.

4. Rent.

(a) From and after the Commencement Date, Tenant shall pay Landlord or designee, as rent, [REDACTED] ("Rent"). The first payment of Rent shall be due within twenty (20) days following the Commencement Date and shall be prorated based on the days remaining in the month following the Commencement Date, and thereafter Rent will be payable monthly in advance by the fifth day of each month to Landlord at the address specified in Section 12 below. If this Lease is terminated for any reason (other than a default by Tenant) at a time other than on the last day of a month, Rent shall be prorated as of the date of termination and all prepaid Rent shall be immediately refunded to Tenant. Landlord, its successors, assigns and/or designee, if any, will submit to Tenant any documents required by Tenant in connection with the payment of Rent, including, without limitation, an IRS Form W-9.

(b) During the Initial Term and any Renewal Terms, monthly Rent shall be adjusted, effective on the first day of each year of the Initial or Renewal Term, and on each such subsequent anniversary thereof, to an amount equal to [REDACTED] of the monthly Rent in effect immediately prior to the adjustment date.

5. Permitted Use. The Premises may be used by Tenant for the transmission and reception of radio communication signals and for the construction, installation, operation, maintenance, repair, removal or replacement of related facilities, including, without limitation, tower and base, antennas, microwave dishes, equipment shelters and/or cabinets and related activities.

6. Interference. Tenant shall not use the Premises in any way which interferes with the use of the Property by Landlord or lessees or licensees of Landlord with rights in the Property prior in time to Tenant's (subject to Tenant's rights under this Lease, including, without limitation, non-interference). Similarly, Landlord shall not use, nor shall Landlord permit its lessees, licensees, employees, invitees or agents to use, any portion of the Property in any way which interferes with the operations of Tenant. Such interference shall be deemed a material breach by the interfering party, who shall, upon written notice from the other, be responsible for terminating said interference. In the event any such interference does not

cease promptly, the parties acknowledge that continuing interference may cause irreparable injury and, therefore, the injured party shall have the right, in addition to any other rights that it may have at law or in equity, to bring a court action to enjoin such interference or to terminate this Lease immediately upon written notice.

7. Improvements; Utilities; Access.

(a) Tenant shall have the right, at its expense, to erect and maintain on the Premises improvements, personal property and facilities necessary to operate its communications system, including, without limitation, radio transmitting and receiving antennas, microwave dishes, tower and base, equipment shelters and/or cabinets and related cables and utility lines and a location based system, as such location based system may be required by any county, state or federal agency/department, including, without limitation, additional antenna(s), coaxial cable, base units and other associated equipment (collectively, the "Antenna Facilities"). Tenant shall have the right to alter, replace, expand, enhance and upgrade the Antenna Facilities at any time during the term of this Lease. Tenant shall cause all construction to occur lien-free and in compliance with all applicable laws and ordinances. Landlord acknowledges that it shall neither interfere with any aspects of construction nor attempt to direct construction personnel as to the location of or method of installation of the Antenna Facilities and the Easements (as defined below). The Antenna Facilities shall remain the exclusive property of Tenant and shall not be considered fixtures. Tenant shall have the right to remove the Antenna Facilities at any time during and upon the expiration or termination of this Lease.

(b) Tenant, at its expense, may use any and all appropriate means of restricting access to the Antenna Facilities, including, without limitation, the construction of a fence.

(c) Tenant shall, at Tenant's expense, keep and maintain the Antenna Facilities now or hereafter located on the Property in commercially reasonable condition and repair during the term of this Lease, normal wear and tear and casualty excepted. Upon termination or expiration of this Lease, the Premises shall be returned to Landlord in good, usable condition, normal wear and tear and casualty excepted.

(d) Tenant shall have the right to install utilities, at Tenant's expense, and to improve the present utilities on the Property (including, but not limited to, the installation of emergency power generators). Landlord agrees to use reasonable efforts in assisting Tenant to acquire necessary utility service. Tenant shall, wherever practicable, install separate meters for utilities used on the Property by Tenant. In the event separate meters are not installed, Tenant shall pay the periodic charges for all utilities attributable to Tenant's use, at the rate charged by the servicing utility. Landlord shall diligently correct any variation, interruption or failure of utility service.

(e) As partial consideration for Rent paid under this Lease, Landlord hereby grants Tenant easements on, under and across the Property for ingress, egress, utilities and access (including access for the purposes described in Section 1) to the Premises adequate to install and maintain utilities, including, but not limited to, the installation of power and telephone service cable, and to service the Premises and the Antenna Facilities at all times during the Initial Term of this Lease and any Renewal Term (collectively, the "Easements"). The Easements provided hereunder shall have the same term as this Lease.

(f) Tenant shall have 24-hours-a-day, 7-days-a-week access to the Premises at all times during the Initial Term of this Lease and any Renewal Term, at no charge to Tenant.

(g) Landlord shall maintain and repair all access roadways from the nearest public roadway to the Premises in a manner sufficient to allow vehicular and pedestrian access at all times, at its sole expense, except for any damage to such roadways caused by Tenant.

8. Termination. Except as otherwise provided herein, this Lease may be terminated, without any penalty or further liability as follows:

(a) upon thirty (30) days' written notice by Landlord if Tenant fails to cure a default for payment of amounts due under this Lease within such thirty (30) day period;

(b) immediately upon written notice by Tenant if Tenant notifies Landlord of any unacceptable results of any Tests prior to Tenant's installation of the Antenna Facilities on the Premises, or if Tenant does not obtain, maintain, or otherwise forfeits or cancels any license (including, without limitation, an FCC license), permit or any Governmental Approval necessary to the installation and/or operation of the Antenna Facilities or Tenant's business;

(c) upon thirty (30) days' written notice by Tenant if Tenant determines that the Property or the Antenna Facilities are inappropriate or unnecessary for Tenant's operations for economic or technological reasons;

(d) immediately upon written notice by Tenant if the Premises or the Antenna Facilities are destroyed or damaged so as in Tenant's reasonable judgment to substantially and adversely affect the effective use of the Antenna Facilities. In such event, all rights and obligations of the parties shall cease as of the date of the damage or destruction, and Tenant shall be entitled to the reimbursement of any Rent prepaid by Tenant. If Tenant elects to continue this Lease, then all Rent shall abate until the Premises and/or the Antenna Facilities are restored to the condition existing immediately prior to such damage or destruction; or

(e) at the time title to the Property transfers to a condemning authority pursuant to a taking of all or a portion of the Property sufficient in Tenant's determination to render the Premises unsuitable for Tenant's use. Landlord and Tenant shall each be entitled to pursue their own separate awards with respect to such taking. Sale of all or part of the Property to a purchaser with the power of eminent domain in the face of the exercise of the power shall be treated as a taking by condemnation.

9. Default and Right to Cure. Notwithstanding anything contained herein to the contrary and without waiving any other rights granted to it at law or in equity, each party shall have the right, but not the obligation, to terminate this Lease on written notice pursuant to Section 12 hereof, to take effect immediately, if the other party fails to perform any covenant or commits a material breach of this Lease and fails to diligently pursue a cure thereof to its completion after thirty (30) days' written notice specifying such failure of performance or default.

10. Taxes. Landlord shall pay when due all real property taxes for the Property, including the Premises. In the event that Landlord fails to pay any such real property taxes or other fees and assessments, Tenant shall have the right, but not the obligation, to pay such owed amounts and deduct them from Rent amounts due under this Lease. Notwithstanding the foregoing, Tenant shall pay any personal property tax, real property tax or any other tax or fee which is directly attributable to the presence or installation of Tenant's Antenna Facilities, only for so long as this Lease remains in effect. If Landlord receives notice of any personal property or real property tax assessment against Landlord, which may affect Tenant and is directly attributable to Tenant's installation, Landlord shall provide timely notice of the assessment to Tenant sufficient to allow Tenant to consent to or challenge such assessment, whether in a Court, administrative proceeding, or other venue, on behalf of Landlord and/or Tenant. Further, Landlord shall provide to Tenant any and all documentation associated with the assessment and shall execute any and all documents reasonably necessary to effectuate the intent of this Section 10. In the event real property taxes are assessed against Landlord or Tenant for the Premises or the Property, Tenant shall have the right, but not the obligation, to terminate this Lease without further liability after thirty (30) days' written notice to Landlord, provided Tenant pays any real property taxes assessed as provided herein.

11. Insurance and Subrogation and Indemnification.

(a) Tenant will maintain Commercial General Liability Insurance in amounts of One Million and no/100 Dollars (\$1,000,000.00) per occurrence and Two Million and no/100 Dollars (\$2,000,000.00) aggregate. Tenant may satisfy this requirement by obtaining the appropriate endorsement to any master policy of liability insurance Tenant may maintain.

(b) Landlord and Tenant hereby mutually release each other (and their successors or assigns) from liability and waive all right of recovery against the other for any loss or damage covered by their respective first party property insurance policies for all perils insured thereunder. In the event of such insured loss, neither party's insurance company shall have a subrogated claim against the other.

(c) Subject to the property insurance waivers set forth in subsection 11(b), Landlord and Tenant each agree to indemnify and hold harmless the other party from and against any and all claims, damages, costs and expenses, including reasonable attorney fees, to the extent caused by or arising out of the negligent acts or omissions or willful misconduct in the operations or activities on the Property by the indemnifying party or the employees, agents, contractors, licensees, tenants and/or subtenants of the indemnifying party, or a breach of any obligation of the indemnifying party under this Lease. The indemnifying party's obligations under this section are contingent upon its receiving prompt written notice of any event giving rise to an obligation to indemnify the other party and the indemnified party's granting it the right to control the defense and settlement of the same.

(d) Notwithstanding anything to the contrary in this Lease, the parties hereby confirm that the provisions of this Section 11 shall survive the expiration or termination of this Lease.

(e) Tenant shall not be responsible to Landlord, or any third-party, for any claims, costs or damages (including, fines and penalties) attributable to any pre-existing violations of applicable codes, statutes or other regulations governing the Property.

12. Notices. All notices, requests, demands and other communications shall be in writing and are effective three (3) days after deposit in the U.S. mail, certified and postage paid, or upon receipt if personally delivered or sent by next-business-day delivery via a nationally recognized overnight courier to the addresses set forth below. Landlord or Tenant may from time to time designate any other address for this purpose by providing written notice to the other party.

If to Tenant, to:
T-Mobile USA, Inc.
12920 SE 38th Street
Bellevue, WA 98006
Attn: PCS Lease Administrator

With a copy to:
Attn: Legal Dept.

And with a copy to:
Powertel/Memphis, Inc.
Four Concourse Pky, Ste 300
Atlanta, GA 30328
Attn: Lease Administration Manager

With a copy to:
Attn: Legal Dept.

If to Landlord, to:
James Lloyd Capps
494 Capps Road
Campbellsville, KY 42718

And with a copy to:

Send Rent payments to:
James Lloyd Capps
494 Capps Road
Campbellsville, KY 42718

13. Quiet Enjoyment, Title and Authority. As of the Effective Date and at all times during the Initial Term and any Renewal Terms of this Lease, Landlord covenants and warrants to Tenant that (i) Landlord has full right, power and authority to execute and perform this Lease; (ii) Landlord has good and unencumbered fee title to the Property free and clear of any liens or mortgages, except those heretofore disclosed in writing to Tenant and which will not interfere with Tenant's rights to or use of the Premises; (iii) execution and performance of this Lease will not violate any laws, ordinances, covenants, or the provisions of any mortgage, lease, or other agreement binding on Landlord; and (iv) Tenant's quiet enjoyment of the Premises or any part thereof shall not be disturbed as long as Tenant is not in default beyond any applicable grace or cure period.

14. Environmental Laws. Landlord represents that it has no knowledge of any substance, chemical or waste (collectively, "Hazardous Substance") on the Property that is identified as hazardous, toxic or dangerous in any applicable federal, state or local law or regulation. Landlord and Tenant shall not introduce or use any Hazardous Substance on the Property in violation of any applicable law. Landlord shall be responsible for, and shall promptly conduct any investigation and remediation as required by any applicable environmental laws, all spills or other releases of any Hazardous Substance not caused solely by Tenant, that have occurred or which may occur on the Property. Each party agrees to defend, indemnify and hold harmless the other from and against any and all administrative and judicial actions and rulings, claims, causes of action, demands and liability (collectively, "Claims") including, but not limited to, damages, costs, expenses, assessments, penalties, fines, losses, judgments and reasonable attorney fees that the indemnitee may suffer or incur due to the existence of any Hazardous Substances on the Property or the migration of any Hazardous Substance to other properties or the release of any Hazardous Substance into the environment (collectively, "Actions"), that relate to or arise from the indemnitor's activities on the Property. Landlord agrees to defend, indemnify and hold Tenant harmless from Claims resulting from Actions on the Property not caused by Landlord or Tenant prior to and during the Initial Term and any Renewal Term. The indemnifications in this section specifically include, without limitation, costs incurred in connection with any investigation of site conditions or any cleanup, remedial, removal or restoration work required by any governmental authority. This Section 14 shall survive the termination or expiration of this Lease.

15. Assignment and Subleasing. Tenant shall have the right to assign or otherwise transfer this Lease and the Easements (as defined above) granted herein upon written notice to Landlord. Upon such assignment, Tenant shall be relieved of all liabilities and obligations hereunder and Landlord shall look solely to the assignee for performance under this Lease and all obligations hereunder. Tenant may sublease the Premises, upon written notice to Landlord.

Landlord shall have the right to assign or otherwise transfer this Lease and the Easements granted herein, upon written notice to Tenant except for the following; any assignment or transfer of this Lease which is separate and distinct from a transfer of Landlord's entire right, title and interest in the Property, shall require the prior written consent of Tenant which may be withheld in Tenant's sole discretion. Upon Tenant's receipt of (i) an executed deed or assignment and (ii) an IRS Form W-9 from assignee, and subject to Tenant's consent, if required, Landlord shall be relieved of all liabilities and obligations hereunder and Tenant shall look solely to the assignee for performance under this Lease and all obligations hereunder.

Additionally, notwithstanding anything to the contrary above, Landlord or Tenant may, upon notice to the other, grant a security interest in this Lease (and as regards the Tenant, in the Antenna Facilities), and may collaterally assign this Lease (and as regards the Tenant, in the Antenna Facilities) to any mortgagees or holders of security interests, including their successors or assigns (collectively "Secured Parties"). In such event, Landlord or Tenant, as the case may be, shall execute such consent to leasehold financing as may reasonably be required by Secured Parties.

16. Successors and Assigns. This Lease and the Easements granted herein shall run with the land, and shall be binding upon and inure to the benefit of the parties, their respective successors, personal representatives and assigns.

17. Waiver of Landlord's Lien. Landlord hereby waives any and all lien rights it may have, statutory or otherwise, concerning the Antenna Facilities or any portion thereof, which shall be deemed personal property for the purposes of this Lease, whether or not the same is deemed real or personal property under applicable laws, and Landlord gives Tenant and Secured Parties the right to remove all or any portion of the same from time to time, whether before or after a default under this Lease, in Tenant's and/or Secured Party's sole discretion and without Landlord's consent.

18. Miscellaneous.

(a) The prevailing party in any litigation arising hereunder shall be entitled to reimbursement from the other party of its reasonable attorneys' fees and court costs, including appeals, if any.

(b) This Lease constitutes the entire agreement and understanding of the parties, and supersedes all offers, negotiations and other agreements with respect to the subject matter and property covered by this Lease. Any amendments to this Lease must be in writing and executed by both parties.

(c) Landlord agrees to cooperate with Tenant in executing any documents necessary to protect Tenant's rights in or use of the Premises. A Memorandum of Lease in substantially the form attached hereto as Exhibit C may be recorded in place of this Lease by Tenant.

(d) In the event the Property is encumbered by a mortgage or deed of trust, Landlord agrees, upon request of Tenant, to obtain and furnish to Tenant a non-disturbance and attornment agreement for each such mortgage or deed of trust, in a form reasonably acceptable to Tenant.

(e) Tenant may obtain title insurance on its interest in the Premises. Landlord agrees to execute such documents as the title company may require in connection therewith.

(f) This Lease shall be construed in accordance with the laws of the state in which the Property is located, without regard to the conflicts of law principles of such state.

(g) If any term of this Lease is found to be void or invalid, the remaining terms of this Lease shall continue in full force and effect. Any questions of particular interpretation shall not be interpreted against the drafter, but rather in accordance with the fair meaning thereof. No provision of this Lease will be deemed waived by either party unless expressly waived in writing by the waiving party. No waiver shall be implied by delay or any other act or omission of either party. No waiver by either party of any provision of this Lease shall be deemed a waiver of such provision with respect to any subsequent matter relating to such provision.

(h) The persons who have executed this Lease represent and warrant that they are duly authorized to execute this Lease in their individual or representative capacities as indicated.

(i) This Lease may be executed in any number of counterparts, each of which shall be deemed an original, but all of which together shall constitute a single instrument.

(j) All Exhibits referred to herein and any Addenda are incorporated herein for all purposes. The parties understand and acknowledge that Exhibits A and B may be attached to this Lease and the Memorandum of Lease, in preliminary form. Accordingly, the parties agree that upon the preparation of final, more complete exhibits, Exhibits A and/or B, as the case may be, may be replaced by Tenant with such final, more complete exhibit(s).

(k) If either party is represented by any broker or any other leasing agent, such party is responsible for all commission fee or other payment to such agent, and agrees to indemnify and hold the other party harmless from all claims by such broker or anyone claiming through such broker.

The effective date of this Lease is the date of execution by the last party to sign (the "Effective Date").

LANDLORD: James Lloyd Capps

By: James Lloyd Capps
Printed Name: James Lloyd Capps
Title: Owner
Date: 6-4-08

SAME AS old contract, less Insurance & Tower Light.
[Signature]
6-4-08
JLL

TENANT: Powertel/Memphis, Inc

By: [Signature]
Printed Name: Dean Davis
Title: Interim Director, Network Engineering and Operations
Date: 7/2/08

T-Mobile Legal Approval

EXHIBIT A
Legal Description

The Property is legally described as follows in the records of the Taylor County Clerk in Deed Book 254, Page 654:

A farm located on the waters of Robinson's Creek in Taylor County Kentucky and more particularly described as follows: First Tract: Beginning at a large forked Elm on the bank of the creek; thence S 30 $\frac{1}{2}$ E 36 poles to some honey Locust Sprouts near a Cedar, thence N 60 E 38 poles to the bank of the creek, thence down the same as it meanders S 14 poles S 11 E 80 poles S 80 E 17 poles S 26 E 8 poles to the old Habbis line to where the same crosses the creek, thence with the same S 46 W 137 poles to a Hickory corner to 20 acres owned by Claboone Brown, thence with a line of same due North 84 poles to a Beech on a hill side, thence N 84 W 31 poles to a hickory and Sugar tree thence due North 128 poles to a white oak and Sassafras on the west bank of the creek thence N 69 E 38 poles crossing the creek thence S 1 W 32 poles to the beginning containing 89 acres, this being the same property conveyed to S.P. Rice by W.W. Johnson, et al by deeds dated August 10, 1903 April 28, 1903, and May 25, 1907 of record in Deed Book 23 at page 378 and book 26 at page 610, Taylor County Court Clerk's Office.

Second Tract: Beginning at a stone in said Carrolls line and corner to said Carroll thence N 12 $\frac{1}{2}$ W 15 poles to a hornbean thence N 2 W 10 poles to a double Pinoak above a waterfall thence N 7 E 14 poles to a beech in a branch thence N 22 E 11 $\frac{1}{2}$ poles to a double hornbean thence N 51 E 11-3/4 poles to the mouth of a branch thence E 10 poles to a Sassafras stump on the bluff of Robinson Creek thence S 5 W 59 3/4 poles with an old line to a stone thence N 86 $\frac{1}{2}$ W 11 poles to the beginning.

Third Tract: Beginning at a Honey Locust, thence N 60 W 38 poles to the creek bank thence up the Creek it being the line N 11 $\frac{1}{2}$ W 56 poles N 70 W 22 poles S 66 W 28 poles thence S. 1 W. 1 crossing same branch of the creek 25 poles to a large forked Elm, thence S 30 $\frac{1}{2}$ E 46 poles to the beginning, but this boundary includes six acres that was sold by E. A. Ford and wife to Marion Rice, containing 14 acres more or less and being the same land conveyed to S.P. Rice by Sam Smith and wife by deed dated December 26, 1936 of record in deed book 55 page 219, Taylor County Court Clerk's Office.

There is also hereby conveyed a 16 ft roadway reserved in deed from S.P. Rice and wife, Toney Williams, as appears of record in Deed Book 61 Page 349 Taylor County Court Clerk's Office.

EXHIBIT B

The location of the Premises within the Property (together with access and utilities) is more particularly described and depicted as follows:

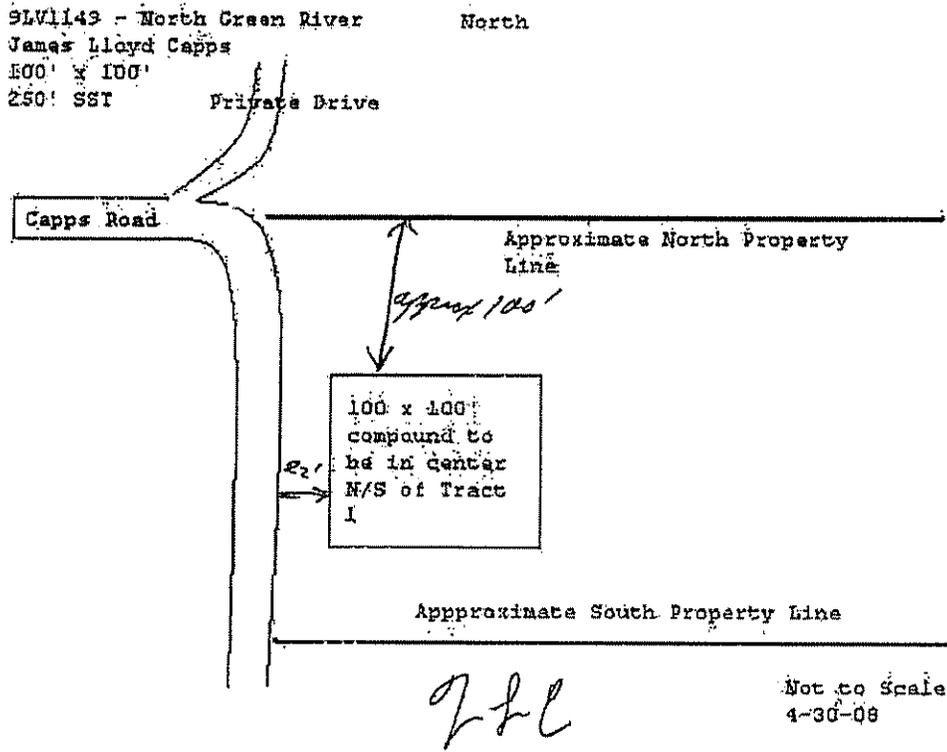


EXHIBIT C

**Memorandum
of
Lease**

Site Number: 9LV1149D
Site Name: Green River North
Market: Kentucky

MEMORANDUM OF LEASE
Assessor's Parcel Number: 53-079
Between James Lloyd Capps ("Landlord") and Powertel/Memphis, Inc. ("Tenant")

A Site Lease with Option (the "Lease") by and between James Lloyd Capps, a(n) single individual ("Landlord") and Powertel/Memphis, Inc., a Delaware corporation ("Tenant") was made regarding a portion of the following property:

See Attached Exhibit "A" incorporated herein for all purposes

The Option is for a term of twelve (12) months after the Effective Date of the Lease (as defined under the Lease), with up to one additional twelve (12) month renewal ("Optional Period").

The Lease is for a term of five (5) years and will commence on the date as set forth in the Lease (the "Commencement Date"). Tenant shall have the right to extend this Lease for five (5) additional and successive five-year terms.

IN WITNESS WHEREOF, the parties hereto have respectively executed this memorandum effective as of the date of the last party to sign.

LANDLORD: James Lloyd Capps

By: _____

Printed Name: _____

Title: _____

Date: _____

TENANT: Powertel/Memphis, Inc.

By: _____

Printed Name: Dean Davis

Title: Interim Director, Network Engineering and Operations

Date: _____

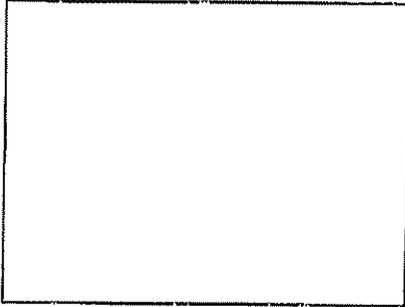
Printed Name: _____

[Notary block for Landlord]

[Landlord Notary block for an Individual]

STATE OF KENTUCKY)
) ss.
COUNTY OF TAYLOR)

This instrument was acknowledged before me on _____ by James Lloyd Capp.
Dated: _____



(Use this space for notary stamp/seal)

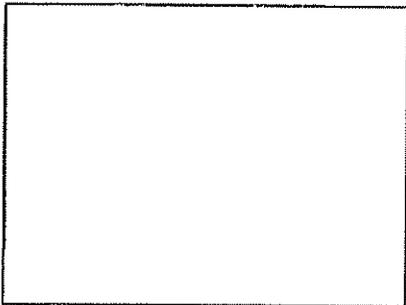
Notary Public
Print Name _____
My commission expires _____

[Notary block for Tenant]

STATE OF _____)
) ss.
COUNTY OF _____)

I certify that I know or have satisfactory evidence that Dean Davis is the person who appeared before me, and said person acknowledged that he signed this instrument, on oath stated that he was authorized to execute the instrument and acknowledged it as the Interim Director, Network Engineering and Operations of Powerte/Memphis, Inc., a Delaware corporation, to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

Dated: _____



(Use this space for notary stamp/seal)

Notary Public
Print Name _____
My commission expires _____

Memorandum of Lease Exhibit A
Legal Description

The Property is legally described as follows in the records of the Taylor County Clerk in Deed Book 254, Page 654:

A farm located on the waters of Rohonson's Creek in Taylor County Kentucky and more particularly described as follows: First Tract: Beginning at a large forked Elm on the bank of the creek; thence S $30\frac{1}{2}$ E 36 poles to some honey Locust sprouts near a Cedar, thence N 60 E 38 poles to the bank of the creek, thence down the same as it meanders S 14 poles S 11 E 80 poles S 80 E 17 poles S 26 E 8 poles to the old Habbis line to where the same crosses the creek, thence with the same S 46 W 137 poles to a Hickory corner to 20 acres owned by Claboone Brown, thence with a line of same due North 84 poles to a Beach on a hill side, thence N 84 W 31 poles to a hickory and Sugar tree thence due North 123 poles to a white oak and Sassafras on the west bank of the creek thence N 69 E 38 poles crossing the creek thence S 1 W 32 poles to the beginning containing 89 acres, this being the same property conveyed to S.P. Rice by W.W. Johnson, et al by deeds dated August 10, 1903 April 28, 1903, and May 25, 1907 of record in Deed Book 23 at page 378 and book 26 at page 610, Taylor County Court Clerk's Office.

Second Tract: Beginning at a stone in said Carrolls line and corner to said Carroll thence N $12\frac{1}{2}$ W 15 poles to a hornbean thence N 2 W 10 poles to a double Pinoak above a waterfall thence N 7 E 14 poles to a beech in a branch thence N 22 E $11\frac{1}{2}$ poles to a double hornbean thence N 31 E $11\frac{3}{4}$ poles to the mouth of a branch thence E 10 poles to a Sassafras stump on the bluff of Robinson Creek thence S 5 W $59\frac{3}{4}$ poles with an old line to a stone thence N $86\frac{1}{2}$ W 11 poles to the beginning.

Third Tract: Beginning at a Honey Locust, thence N 60 W 38 poles to the creek bank thence up the Creek it being the line N $11\frac{1}{2}$ W 58 poles N 70 W 22 poles S 66 W 28 poles thence S. 1 W. 1 crossing same branch of the creek 25 poles to a large forked Elm, thence S $30\frac{1}{2}$ E 48 poles to the beginning, but this boundary includes six acres that was sold by E. A. Ford and wife to Marion Rice, containing 14 acres more or less and being the same land conveyed to S.P. Rice by Sam Smith and wife by deed dated December 26, 1938 of record in deed book 55 page 219, Taylor County Court Clerk's Office.

There is also hereby conveyed a 18 ft roadway reserved in deed from S.P. Rice and wife, Toney Williams, as appears of record in Deed Book 61 Page 349 Taylor County Court Clerk's Office.

GENERAL NOTES:

- 1 ALL CONSTRUCTION TO BE IN ACCORDANCE WITH TAYLOR COUNTY REGULATIONS
2. CONTRACTOR SHALL NOTIFY ALL UTILITIES AT LEAST 24 HOURS PRIOR TO START OF CONSTRUCTION TO VERIFY LOCATION OF ALL UTILITIES SHOWN OR NOT SHOWN.
- 3 ALL UTILITIES WITHIN ROADWAY SHALL BE BACKFILLED WITH STONE
4. CONTRACTOR SHALL REPAIR AT HIS EXPENSE DAMAGE TO ANY EXISTING IMPROVEMENTS DURING CONSTRUCTION, SUCH AS, BUT NOT LIMITED TO DRAINAGE, UTILITIES, PAVEMENT, STRIPPING, CURBS, ETC. REPAIRS SHALL BE EQUAL TO OR BETTER THAN EXISTING CONDITIONS
5. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL UNUSABLE MATERIALS FROM THE SITE
6. CONTRACTOR SHALL COORDINATE WITH POWER COMPANY PROVIDING TEMPORARY SERVICE FOR CONSTRUCTION FACILITIES DURING CONSTRUCTION
7. THE CONTRACTOR IS SPECIFICALLY CAUTIONED ABOUT THE LOCATION AND/OR ELEVATIONS OF EXISTING UTILITIES SHOWN ON THIS DRAWING. THEY ARE BASED UPON RECORDS FROM VARIOUS UTILITY COMPANIES, DEEDS, AND PLATS OF RECORD, AND WHERE POSSIBLE ACTUAL FIELD MEASUREMENTS THIS INFORMATION IS NOT TO BE TAKEN EXACT OR COMPLETE
8. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE EXACT LOCATION OF EXISTING UTILITIES WHICH MAY CONFLICT WITH PROPOSED IMPROVEMENTS
9. THIS PROJECT WILL NOT REQUIRE WATER OR SEWER SERVICE.
10. CONTRACTOR SHALL REMOVE ANY DIRT OR MUD FROM TIRES OF ANY CONSTRUCTION VEHICLES PRIOR TO LEAVING SITE
11. REFER TO BUILDING/TOWER PLANS FOR PROPOSED DIMENSIONS AND OTHER SPECIFICS WHICH ARE NOT SHOWN
12. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING A PROPER TRAFFIC CONTROL PLAN FOR PUBLIC SAFETY ADJACENT TO CONSTRUCTION SITE. THE TRAFFIC CONTROL PLAN MUST BE IN ACCORDANCE WITH LATEST MUTCD EDITION.
13. ANTENNA SWEEPS TO BE SUBMITTED TO POWERTEL WITHIN 48 HOURS AFTER FIELD WORK

SITE DEVELOPMENT PLANS FOR POWERTEL / MEMPHIS INC.

SITE NAME: GREEN RIVER NORTH

SITE #: 9LV1149D

SITE ADDRESS: 494 CAPPS ROAD
CAMPBELLSVILLE, KENTUCKY 42714

SIGNATURE AUTHORIZATIONS:

RF ENGINEER APPROVAL:
SIGNATURE _____ DATE: _____

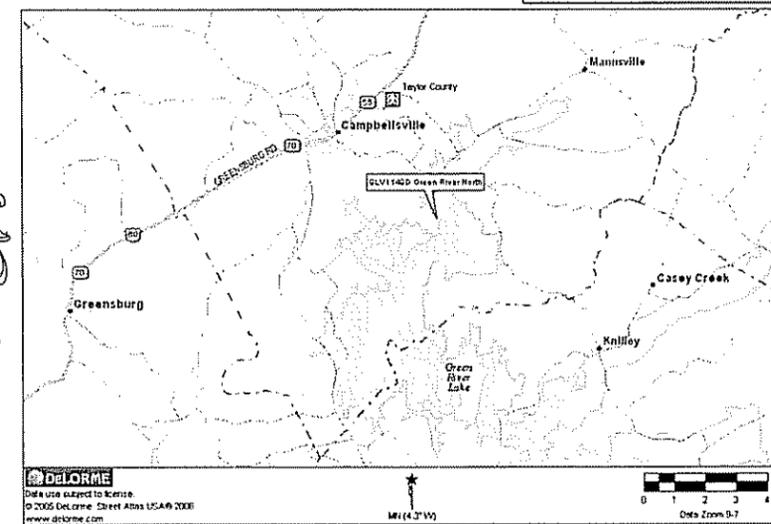
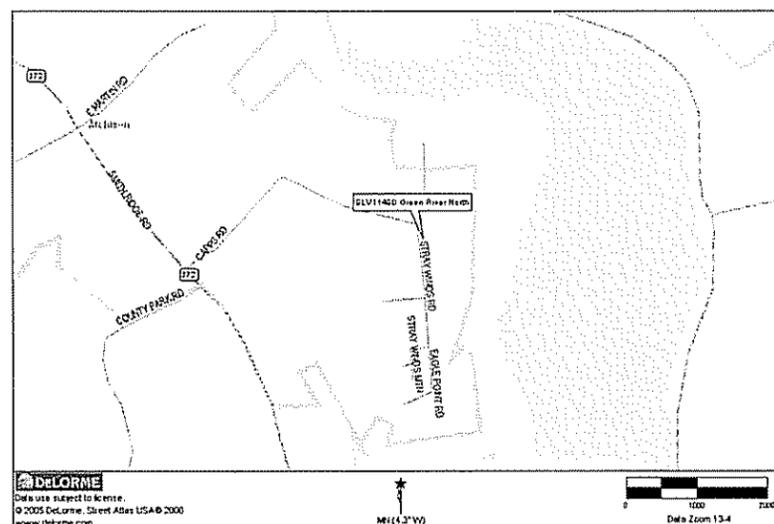
CONSTRUCTION MANAGER APPROVAL:
SIGNATURE _____ DATE: _____

SITE ACQUISITION AGENT APPROVAL:
SIGNATURE _____ DATE: _____

LAND OWNER APPROVAL:
SIGNATURE _____ DATE: _____

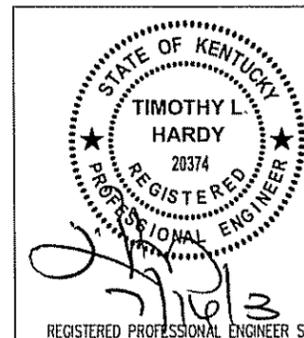
OPS APPROVAL:
SIGNATURE _____ DATE: _____

ZONING/PERMITTING APPROVAL:
SIGNATURE _____ DATE: _____



RECEIVED

AUG 07 2008
PUBLIC SERVICE
COMMISSION



RECEIVED

AUG 07 2008

**PUBLIC SERVICE
COMMISSION**

DIRECTIONS:

FROM LOUISVILLE T-MOBILE OFFICE TAKE I-64 EAST TO GENE SYNDER AND TURN SOUTH TO EXIT 23 (HWY 155) AND GO TO TAYLORSVILLE TAKE HWY 55 SOUTH FROM TAYLORSVILLE THROUGH LEBANON TO CAMPBELLSVILLE. TURN LEFT ON HWY 70 EAST AND GO APPROX 1.2 MILES, THEN TURN RIGHT ONTO HWY 372 (SMITH RIDE ROAD) TO THE GREEN MOUNTAIN MARINA GO APPROX. 3 MILES AND TURN LEFT ONTO CAPPS ROAD. FOLLOW THIS APPROX 1 MILE THE SITE IS ON THE LEFT JUST PAST THE SHARP CURVE

VICINITY MAP

NOT TO SCALE

"SURVEY" COORDINATES:

LATITUDE = 37° 18' 11.89"
LONGITUDE: 85° 17' 03.01"
GROUND ELEV: 883' M.S.L.

INDEX:

		REV.:	DATE:
T1	TITLE SHEET		
	SURVEY		
C1	OVERALL SITE LAYOUT		
C1.5	DETAILED SITE LAYOUT		
C2	TOWER ELEVATION		
C3	ANTENNA & COAX GROUNDING DETAIL		
C3.1	GROUNDING RISER DETAIL		
C3.2	COAX GROUNDING DETAIL		
C4	EQUIPMENT ELEVATION		
C5	ELECTRICAL DETAILS		
C6	GROUNDING LAYOUT		
C7	ELECTRICAL CONDUIT LAYOUT		
C7.1	PANEL BOARD CALCULATIONS		
C8	EQUIPMENT & GENERATOR PAD DETAILS		
C9	WIRING DIAGRAM		
C10	UTILITY TRENCH DETAILS		
C11	FENCE DETAILS		
C12	SILT FENCE DETAILS & NOTES		

TELEPHONE CO.:

WINDSTREAM
PHONE: (800) 843-9214

ELECTRIC CO.:

TAYLOR COUNTY REMC
PHONE: (270) 465-4101

PERMIT JURISDICTION:

TAYLOR COUNTY

ZONING:

KENTUCKY PUBLIC SERVICE COMMISSION
P.O. BOX 615, 211 SOWER BLVD
FRANKFORT, KENTUCKY 40602-0615
PHONE: (502) 564-3940
FAX: (502) 564-3460

LICENSOR:

JAMES LLOYD CAPPS
494 CAPPS ROAD
CAMPBELLSVILLE, KY 42714
PHONE: (270) 465-8475

LICENSEE:



POWERTEL / MEMPHIS, INC
LOUISVILLE MARKET
11509 COMMONWEALTH DRIVE,
SUITE 9
LOUISVILLE, KENTUCKY 40299
CONTACT: REAL ESTATE

ENGINEER:



HARDY ENGINEERING, INC.
209 LINDEN STREET, PO BOX 708
TRUSSVILLE, ALABAMA 35173
CONTACT: TIM HARDY
PHONE: (205) 655-1427
MOBILE: (205) 222-7563

2008-00315

JAMES LLOYD CAPPS
TAX MAP 53, PARCEL 79
DEED BOOK 233, PAGE 461

JAMES LLOYD CAPPS
TAX MAP 53, PARCEL 79
DEED BOOK 233, PAGE 461

JAMES LLOYD CAPPS
TAX MAP 53, PARCEL 79
DEED BOOK 233, PAGE 461

WANDA J. FRENCH
TAX MAP 53, PARCEL 78
DEED BOOK 231, PAGE 552

ROGER L. & ANITA R. CARLQUIST
TAX MAP 53, PARCEL 091-06
DEED BOOK 235, PAGE 086

NOTES:

- BOUNDARY AND EXISTING SITE FEATURES ARE BASED ON THE SURVEY CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THIS DRAWING
- CONTRACTOR SHALL FURNISH ALL MATERIALS FOR 600 AMP SERVICE
- GROUNDING OF ANTENNAS MOUNTS, COAX, AND EQUIPMENT SHALL BE IN ACCORDANCE WITH POWERTEL'S SPECIFICATIONS. COAX SHALL BE GROUNDED JUST BELOW ANTENNAS. AT MID-ELEVATION. AND AT BOTTOM OF TOWER
- SITE TO BE RESTORED BACK TO LESSOR'S ORIGINAL SPECS
- ANY MATERIALS STORED ON SITE SHALL BE STORED IN CLOSED OR COVERED CONTAINERS AND ALL EXCESS WASTE MATERIALS WILL BE PROPERLY DISPOSED OF DAILY AND ALL SOILS REMOVED FROM SITE. NOTE NO BURNING ON SITE AT ANYTIME ACCESS TO OTHER CUSTOMERS ON SITE MUST BE KEPT CLEAR
- ALL HARDWARE TO BE STAINLESS STEEL. NO PLATED METAL TO BE USED
- NO CULVERTS TO BE INSTALLED
- CONTRACTOR AND/OR DEVELOPER SHALL BE RESPONSIBLE FOR CONSTRUCTION & MAINTENANCE OF EROSION AND SEDIMENTATION CONTROLS DURING CONSTRUCTION FOR PROTECTION OF ADJACENT PROPERTIES, ROADWAYS, AND WATERWAYS SILT FENCE SHOULD BE INSTALLED AROUND WORK AREA TO STOP DAMAGE TO OTHER CUSTOMER'S EQUIPMENT
- CONTRACTOR AND/OR DEVELOPER ARE RESPONSIBLE FOR PROVIDING SITE FREE OF DRAINAGE PROBLEMS
- CONTRACTOR AND/OR DEVELOPER SHALL BE RESPONSIBLE FOR MAINTAINING A PROPER TRAFFIC CONTROL PLAN FOR PUBLIC SAFETY ADJACENT TO CONSTRUCTION SITE THE TRAFFIC CONTROL PLAN MUST BE IN ACCORDANCE WITH LATEST (AMUTCO) EDITION CONTRACTOR IS TO ADHERE TO ALL SITE OWNER'S SPECS. SAFETY GUIDELINE, AND OSHA SPECS WHILE ON WORK SITE

DISTURBED AREA NOTES:

PROPOSED DISTURBED AREA = 4,595.85 SQUARE FEET
PROPOSED IMPERVIOUS AREA = 300.00 SQUARE FEET
TOTAL AREA OF SITE = 10,275.85 SQUARE FEET

NOTE:

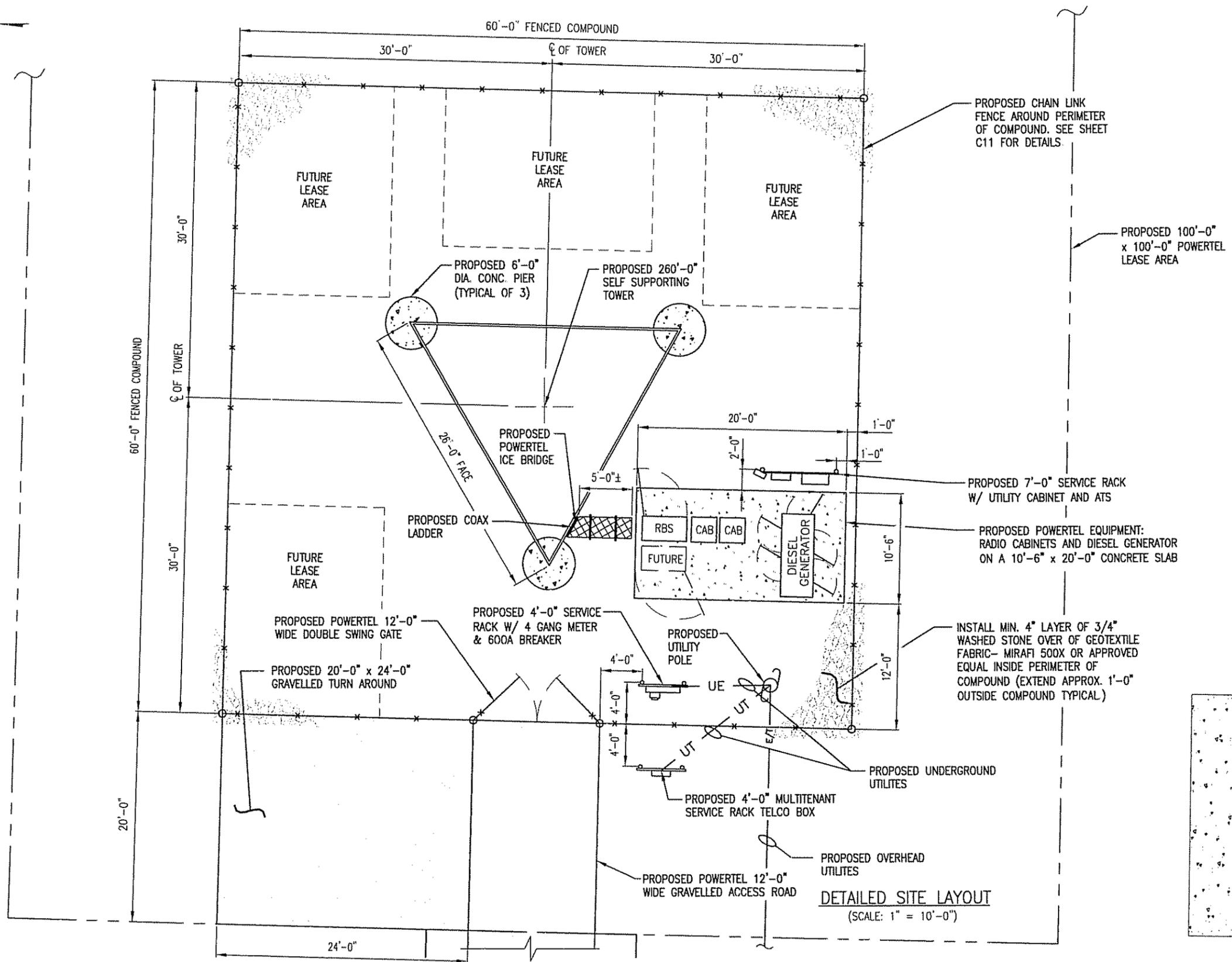
BOUNDARY AND EXISTING SITE FEATURES ARE BASED ON FIELD MEASUREMENTS. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THIS DRAWING.



OVERALL SITE LAYOUT
(SCALE: 1" = 30'-0")

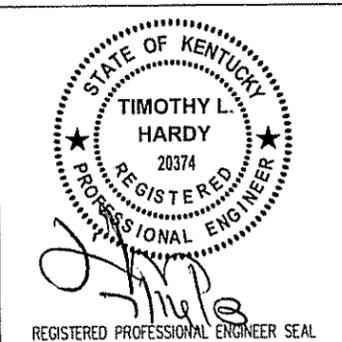
ITEM	REVISIONS	BY	CHK BY	DATE	DWG. NAME:
					OVERALL SITE LAYOUT
					9LV1149D SITE: GREEN RIVER NORTH CAMPBELLSVILLE, KENTUCKY
					FOR POWERTEL / MEMPHIS INC. LOUISVILLE, KENTUCKY
					SCALE: AS SHOWN
					DWG. No: C1

DRAWN BY	DATE	HARDY ENGINEERING, INC. ENGINEERING AND CONSULTING 209 LINDEN STREET, P.O. BOX 708 TRUSSVILLE, AL 35173 PHONE: (205) 655-1427 FAX: (205) 661-9027
J.E. STEGER	7-01-08	
CHECKED BY	DATE	
T.L. HARDY	7-01-08	
APPROVED BY	DATE	



DETAILED SITE LAYOUT
(SCALE: 1" = 10'-0")

EXISTING
BLOCK
BUILDING

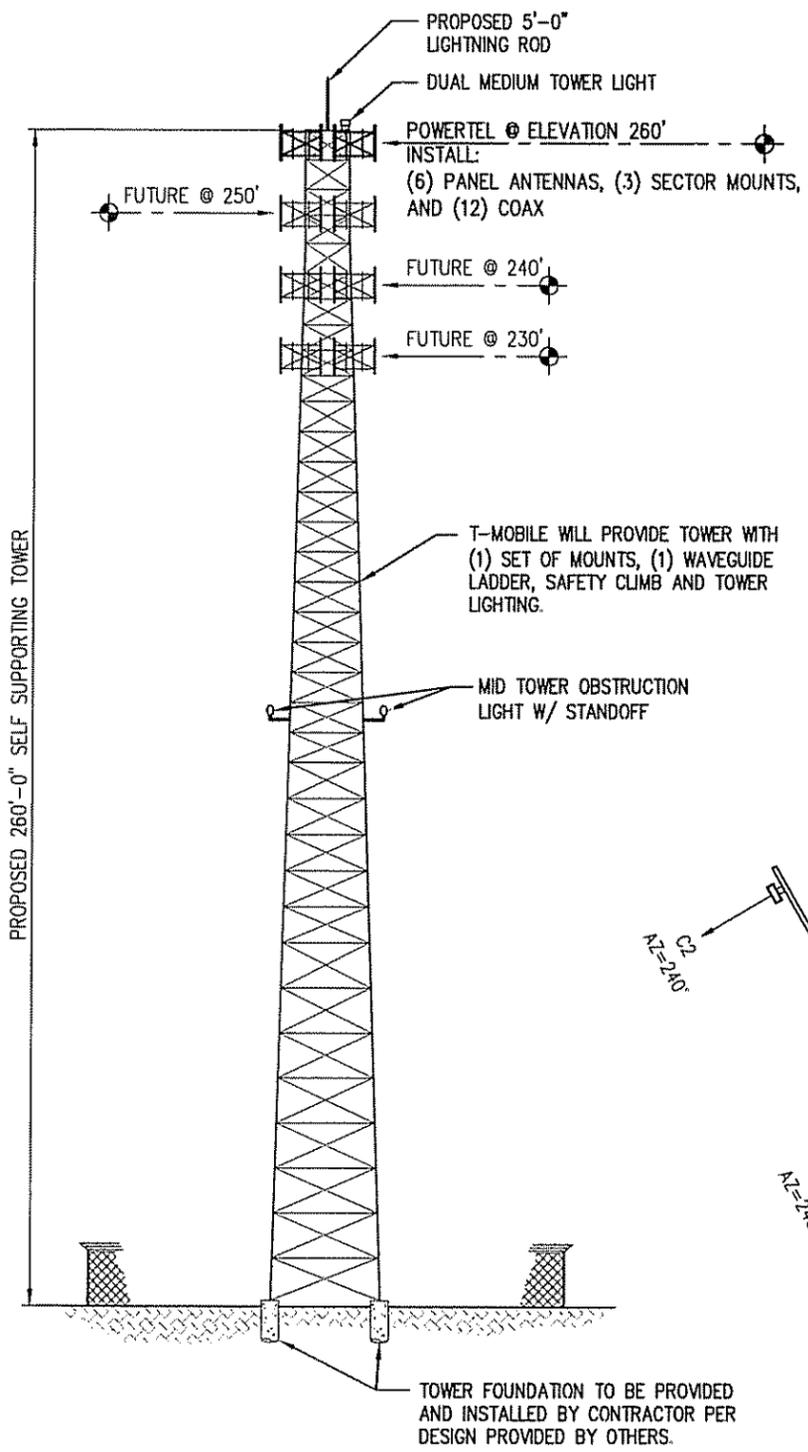


ITEM	BY	CHK BY	DATE

DRAWN BY:	DATE:
J.E. STEGER	7-01-08
CHECKED BY:	DATE:
T.L. HARDY	7-01-08
APPROVED BY:	DATE:

HARDY ENGINEERING, INC.
ENGINEERING AND CONSULTING
209 LINDEN STREET, P.O. BOX 708
TRUSSVILLE, AL 35173
PHONE: (205) 655-1427 FAX: (205) 661-9027

DETAILED COMPOUND LAYOUT		
9LV1149D SITE: GREEN RIVER NORTH CAMPBELLVILLE, KENTUCKY		
FOR POWERTEL / MEMPHIS INC LOUISVILLE, KENTUCKY		
CAD NO: LV1149_C1.5	SCALE: AS SHOWN	DWG. NO: C1.5

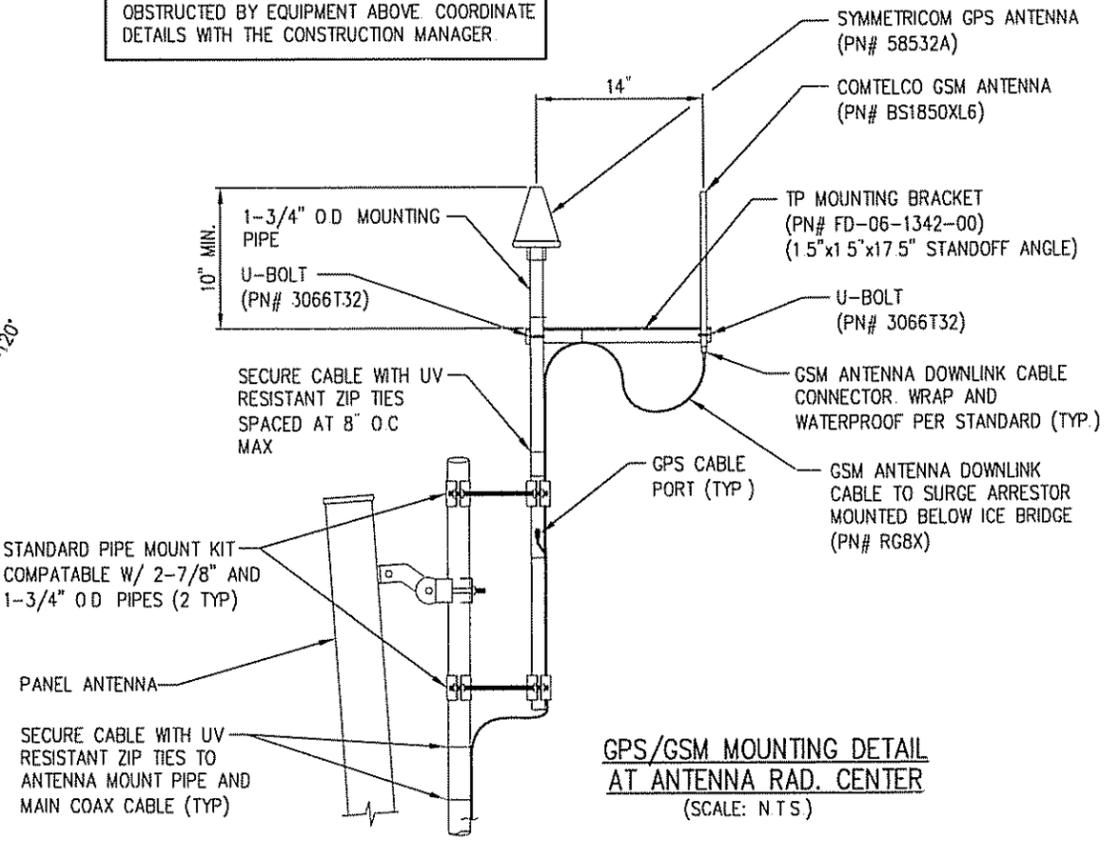
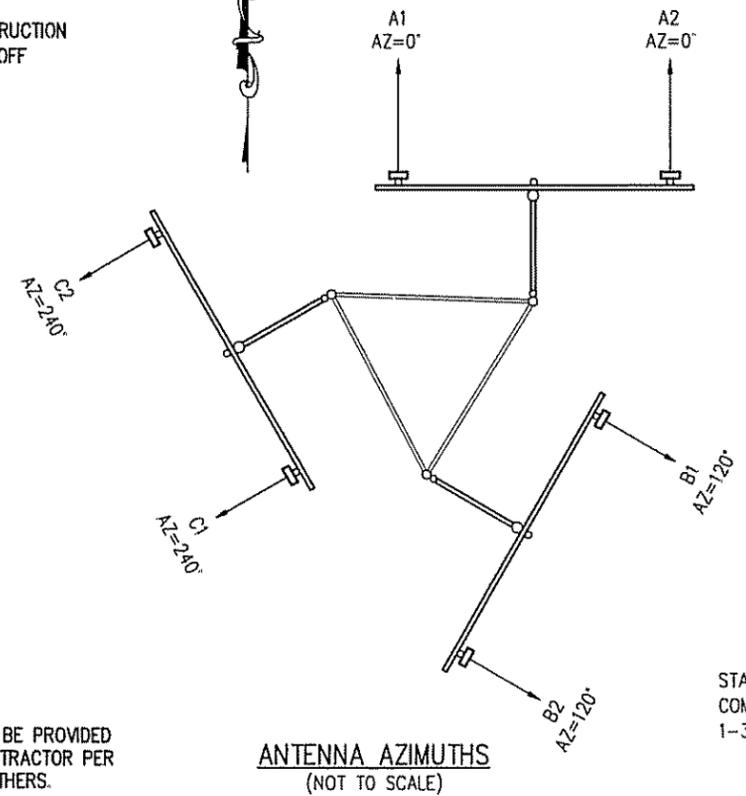


PROPOSED SELF SUPPORTING TOWER ELEVATION
(NOT TO SCALE)

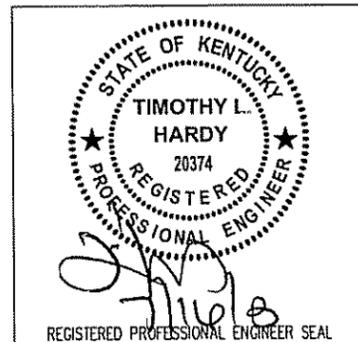
ANTENNA AND COAX SCHEDULE											
ANTENNA MARK	SECTOR	ANTENNA ①	COAX FEED LOCATION	AZIMUTH (0° = NORTH)	COAX COLOR CODE	COAX CABLE SIZE	MECHANICAL DOWN TILT ②	ELECTRICAL DOWN TILT	RADIATION CENTER		
A1	A	TMBX-6517-R2M	BOTTOM	0°	TX/RX - RED TX/RX - RED-GRAY	(4) 1 5/8"φ	0°	2'	260'		
A2	A	TMBX-6517-R2M	BOTTOM	0°	TX/RX - RED-RED-GRAY TX/RX - RED-RED		0°	2'	260'		
A3											
B1	B	TMBX-6517-R2M	BOTTOM	120°	TX/RX - BLUE TX/RX - BLUE-GRAY	(4) 1 5/8"φ	0°	2'	260'		
B2	B	TMBX-6517-R2M	BOTTOM	120°	TX/RX - BLUE-BLUE-GRAY TX/RX - BLUE-BLUE		0°	2'	260'		
B3											
C1	C	TMBX-6517-R2M	BOTTOM	240°	TX/RX - GREEN TX/RX - GREEN-GRAY	(4) 1 5/8"φ	0°	2'	260'		
C2	C	TMBX-6517-R2M	BOTTOM	240°	TX/RX - GREEN-GREEN-GRAY TX/RX - GREEN-GREEN		0°	2'	260'		
C3											

- ① FINAL ANTENNA TYPE TO BE DETERMINED BY POWERTEL, ANTENNAS TO BE PROVIDED BY POWERTEL AND INSTALLED BY CONTRACTOR
- ② ALL ANTENNAS TO BE INSTALLED WITH DOWNTILT BRACKETS

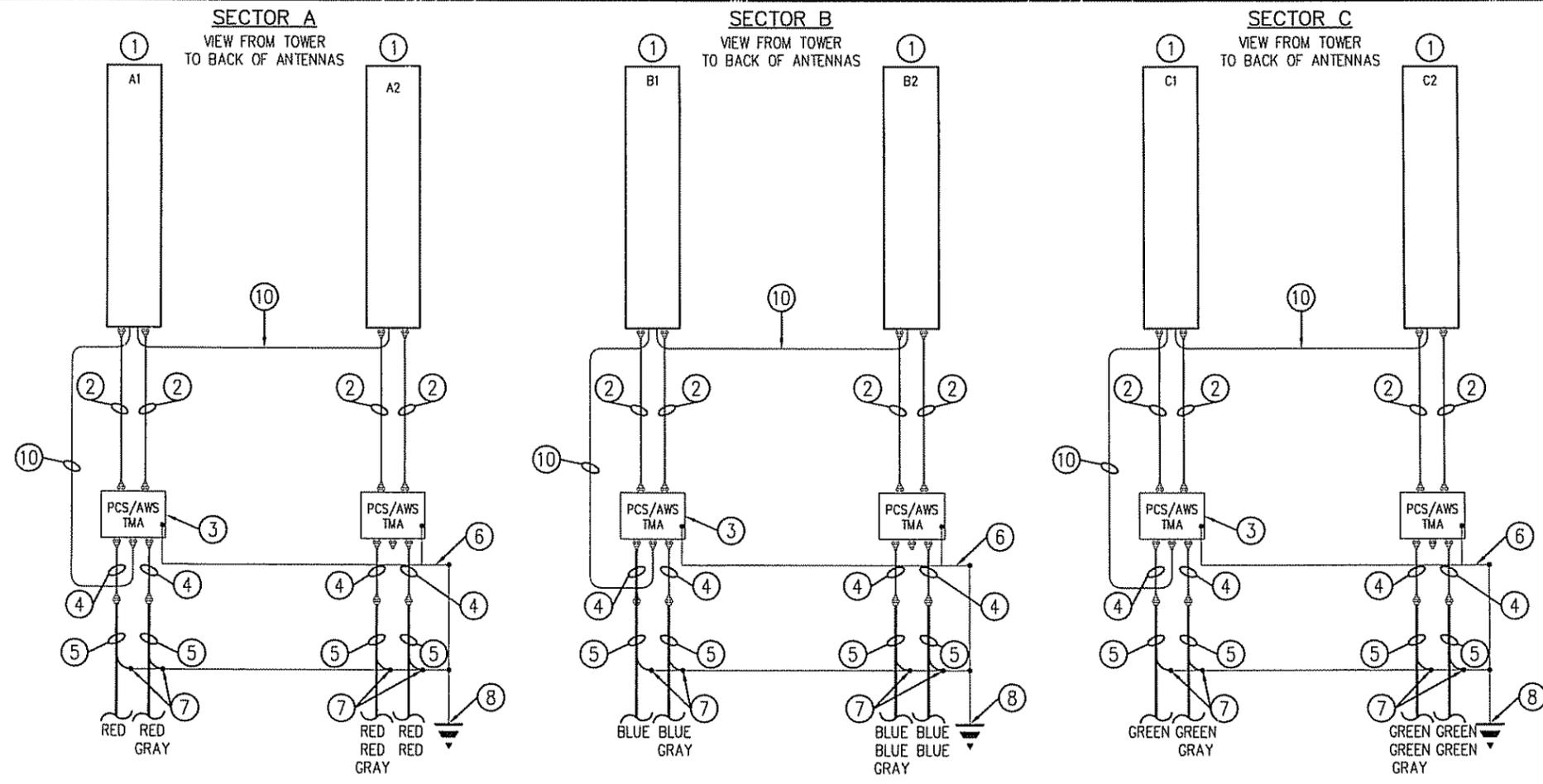
GPS POSITIONING NOTE
THE CONTRACTOR SHALL FIELD VERIFY THE GPS LINE OF SIGHT TO THE SKY AND RELOCATE THE GPS ANTENNA ACCORDINGLY AS REQUIRED IF OBSTRUCTED BY EQUIPMENT ABOVE. COORDINATE DETAILS WITH THE CONSTRUCTION MANAGER.



GPS/GSM MOUNTING DETAIL AT ANTENNA RAD. CENTER
(SCALE: N T S)

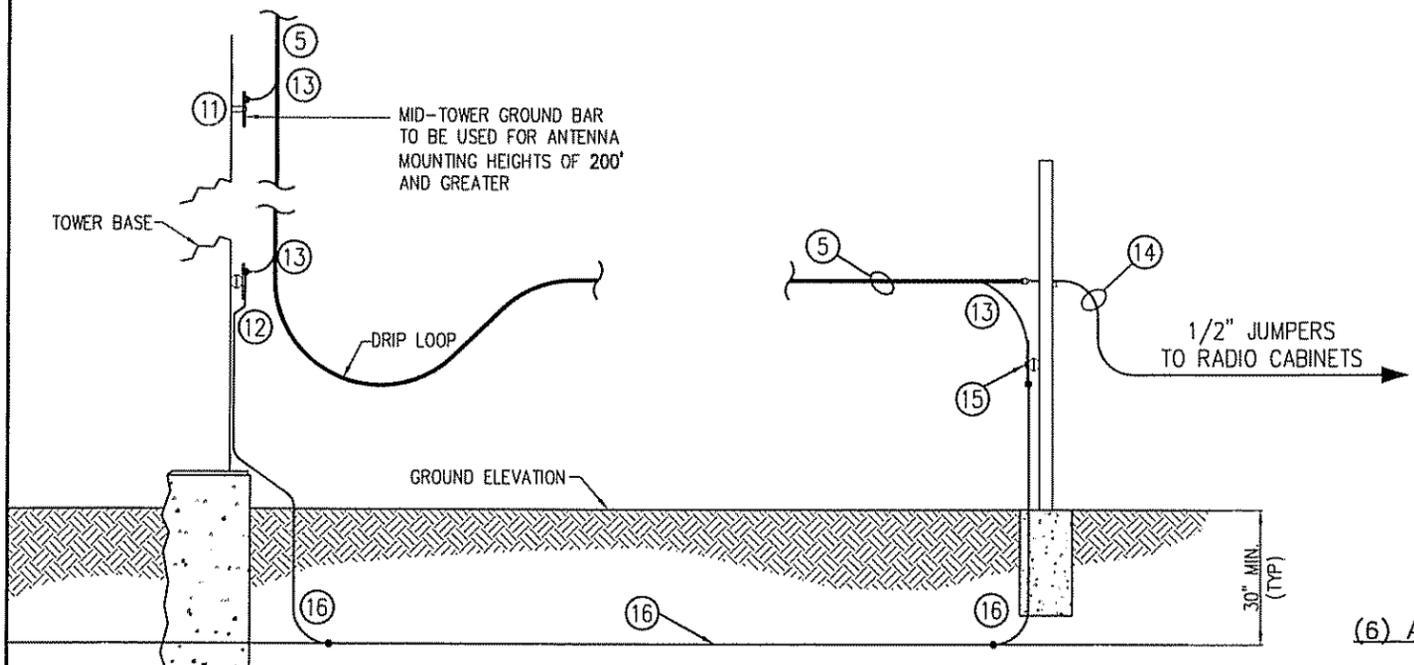


ITEM	REVISIONS	BY	CHK BY	DATE	DRAWN BY	DATE	ENGINEERING AND CONSULTING	DWG NAME
					J.E. STEGER	7-01-08	HARDY ENGINEERING, INC.	TOWER ELEVATION
					T.L. HARDY	7-01-08	209 LINDEN STREET, P.O. BOX 708 TRUSSVILLE, AL 35173	9LV1149D SITE: GREEN RIVER NORTH CAMPBELLSVILLE, KENTUCKY
							PHONE: (205) 655-1427 FAX: (205) 661-9027	FOR POWERTEL / MEMPHIS INC. LOUISVILLE, KENTUCKY
								SCALE: AS SHOWN DWG No. C2

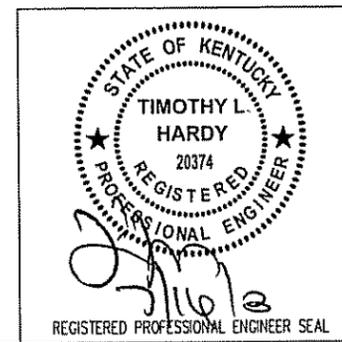


- MATERIAL LIST**
- ① PANEL ANTENNA
 - ② JUMPER, 1/2"φ x 10'
 - ③ TMA
 - ④ JUMPER, 1/2"φ x 6'
 - ⑤ COAX, 7/8"φ OR 1 5/8"φ
 - ⑥ TMA GROUND, #6 THW INSULATED GROUND WIRE
 - ⑦ COAX GROUND KIT
 - ⑧ 4" x 14" x 1/4" GROUND BAR MOUNTED TO TOWER
 - ⑨ (NOT USED)
 - ⑩ AIS6 CABLE PART NO ATCB-B01-010
 - ⑪ GROUND BAR MOUNTED TO TOWER
 - ⑫ GROUND BAR MOUNTED ON CHERRY INSULATORS
 - ⑬ COAX GROUND KIT
 - ⑭ JUMPER, 1/2"φ x 12'
 - ⑮ GROUND TERMINATION BAR ON CHERRY INSULATORS
 - ⑯ #2 Cu SOLID TINNED GROUND WIRE

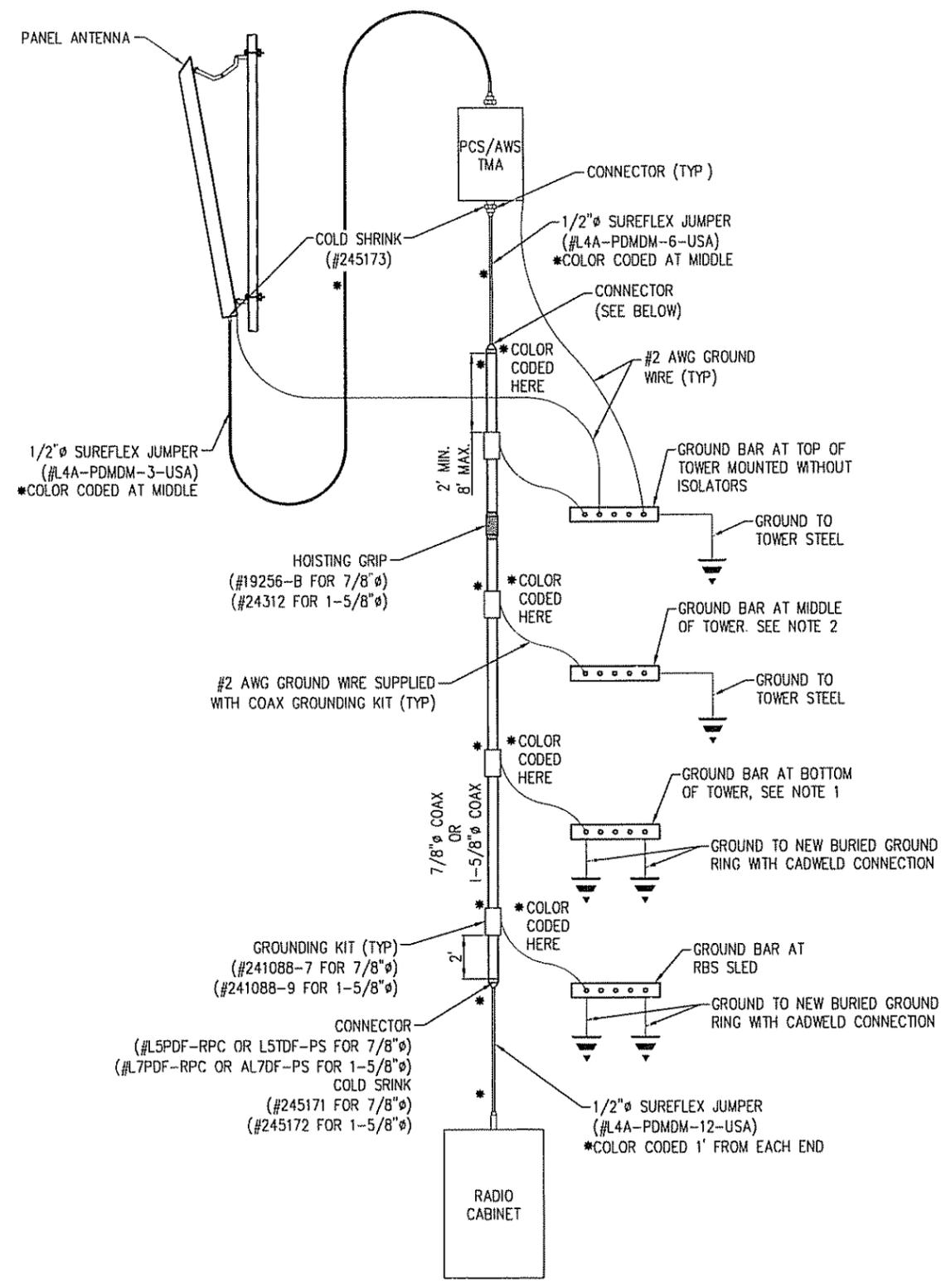
- NOTES:**
- 1 FOR EVERYTHING ABOVE THE TOWER BOTTOM BUSS BAR USE SINGLE HOLE LUG WITH HEAT SHRINK ON ANTENNA, TMA, TMA FILTER & 2 HOLE LUG WITH HEAT SHRINK ON BUSS BAR END OF GROUND WIRE
 - 2 ALL GROUND CONNECTIONS STARTING AT THE TOWER BOTTOM BUSS BAR AND DOWN ARE TO BE EXOTHERMIC WELD OR 2 HOLE CADWELD LUG.
 - 3 NUMBER OF ANTENNAS AND LINES TO BE INSTALLED SHALL BE AS DIRECTED BY THE CONSTRUCTION MANAGER
 - 4 GROUNDING OF ANTENNAS, MOUNTS, COAX, AND EQUIPMENT SHALL BE IN ACCORDANCE WITH T-MOBILE'S SPECIFICATIONS



(6) ANTENNA AND (12) COAX GROUNDING DETAIL
(NOT TO SCALE)



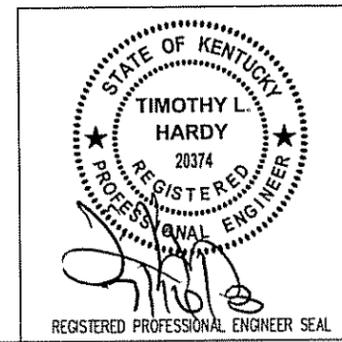
ITEM	REVISIONS	BY	CHK BY	DATE	DRAWN BY	DATE	ENGINEER NAME	SCALE	UNG NO.
					J.E. STEGER	7-01-08	HARDY ENGINEERING, INC	AS SHOWN	C3
					T.L. HARDY	7-01-08	ENGINEERING AND CONSULTING 209 LINDEN STREET, P.O. BOX 708 TRUSSVILLE, AL 35173 PHONE: (205) 655-1427 FAX: (205) 661-9027		
								ANTENNA & COAX GROUNDING DETAIL	
								STANDARD DRAWING	
								FOR POWERTEL / MEMPHIS INC LOUISVILLE, KENTUCKY	
								LV1149_C3	



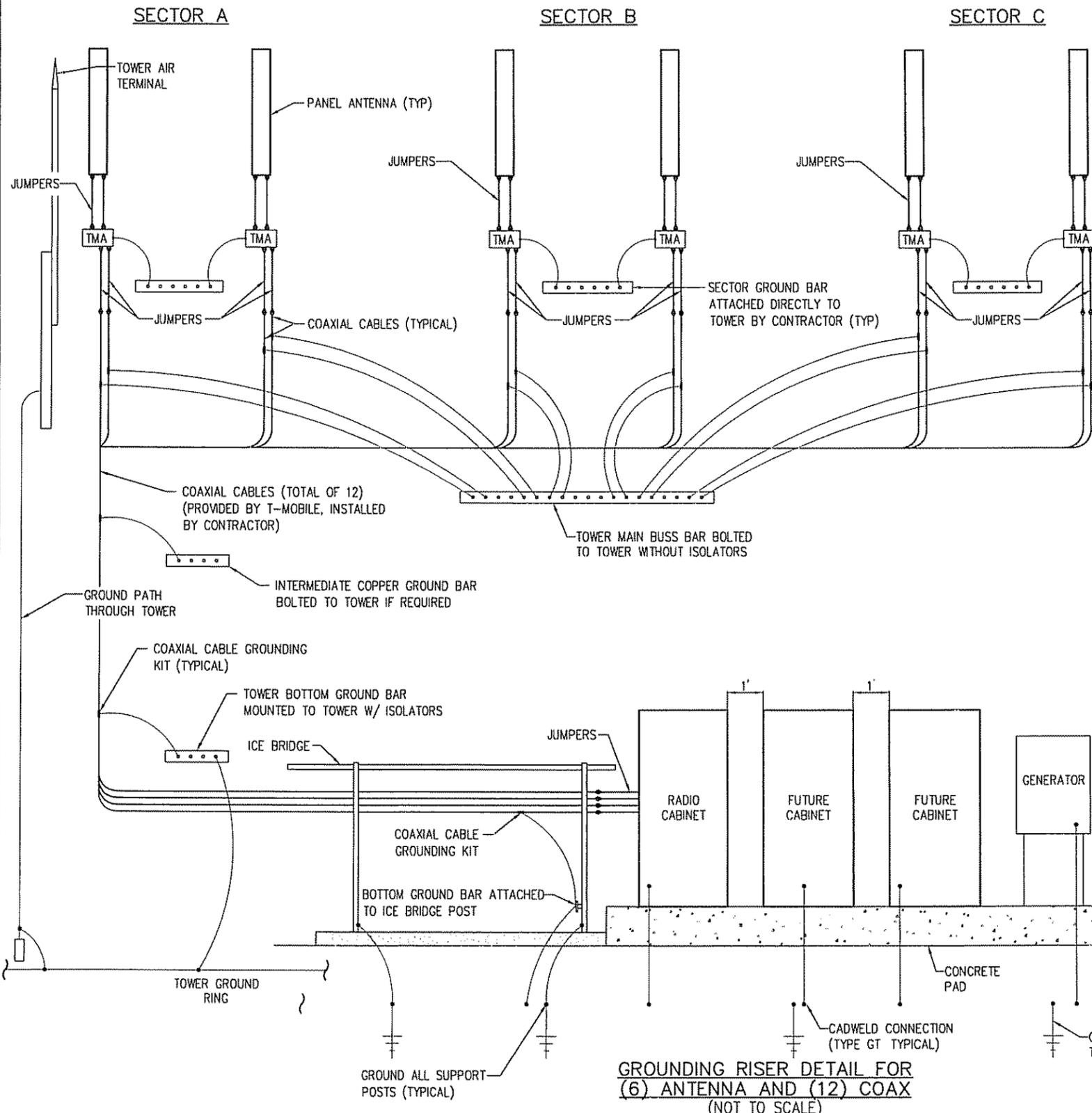
NOTES

1. ATTACH GROUND BAR TO THE EXISTING TOWER USING STANDARD ADAPTER (ISOLATORS)
2. ATTACH GROUND BAR TO THE EXISTING TOWER USING STANDARD ADAPTER (WITHOUT ISOLATORS) INSTALL ONLY WHEN RAD CENTERS EXCEEDS 200' (SELF SUPPORT & GUYED TOWERS ONLY)

ANTENNA CABLE GROUNDING SCHEMATIC
(NOT TO SCALE)



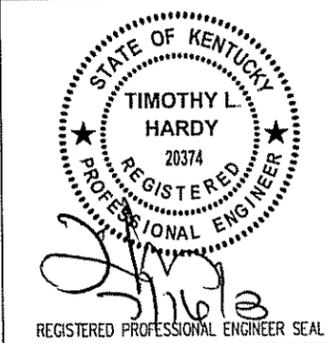
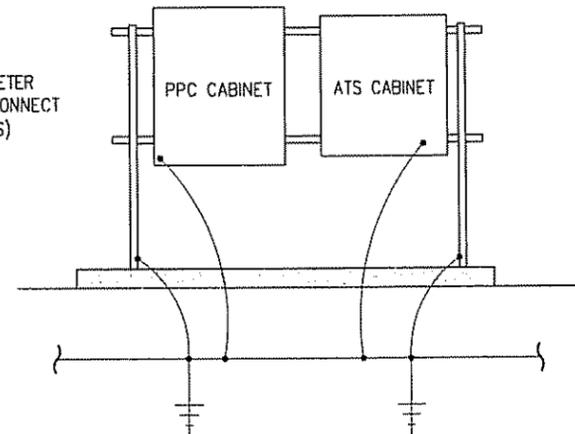
ITEM	REVISIONS	BY	CHK BY	DATE	DRAWN BY:	DATE:	ENGINEERING AND CONSULTING	DWG. NAME:
					J.E. STEGER	7-01-08	HARDY ENGINEERING, INC.	COAX GROUNDING DETAIL
					T.L. HARDY	7-01-08	209 LINDEN STREET, P.O. BOX 708 TRUSSVILLE, AL 35173	STANDARD DRAWING FOR POWERTEL / MEMPHIS INC. LOUISVILLE, KENTUCKY
							PHONE: (205) 655-1427 FAX: (205) 661-9027	CAD No LV1149_C3.1 SCALE AS SHOWN DWG No C3.1



GENERAL GROUNDING NOTES

- 1 SITE GROUNDING SHALL COMPLY WITH T-MOBILE GROUNDING STANDARDS. LATEST ADDITION, AND COMPLY WITH T-MOBILE GROUNDING CHECKLIST, LATEST VERSION WHEN LOCAL AND NATIONAL GROUNDING CODES ARE MORE STRINGENT THEY SHALL GOVERN GROUNDING SHALL BE COMPLETED BEFORE ERECTION OF TOWER
- 2 **GROUND RODS**
 - A 5/8"x10" LONG COPPER CLAD STEEL
 - B MAXIMUM SPACING 10'-0"
 - C TOP SHALL BE A MINIMUM OF 30" BELOW GRADE
- 3 **GROUND CONNECTORS**
 - A #2 AWG BARE TINNED SOLID COPPER UNLESS OTHERWISE NOTED.
 - B WHEN DIRECTION OF CONDUCTOR CHANGES, IT SHALL BE DONE GRADUALLY.
 - C ALL GROUNDING CONDUCTORS SHALL RUN THROUGH SEAL TIGHT SLEEVES WHEREVER CONDUCTORS RUN THROUGH CONCRETE SLABS.
 - D GROUND RINGS SHALL BE BURIED A MINIMUM OF 30" BELOW GRADE AND SHALL BE LOCATED A MINIMUM OF 24" FROM THE OUTSIDE EDGE OF A CABINET. TOWER FOUNDATION AND OTHER SITE OBJECTS
 - E ALL CONNECTIONS SHALL BE EXOTHERMIC (CADWLD OR EQUAL) UNLESS INDICATED OTHERWISE ALL MATERIALS USED SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND INSTRUCTIONS.
 - F CONNECTIONS AT GROUND BARS AND SERVICE DISCONNECTION MEANS SHALL CONSIST OF LUGS CADWELDED TO GROUND CONDUCTORS UNLESS INDICATED OTHERWISE LUGS SHALL BE ATTACHED TO GROUND BARS USING STAINLESS STEEL OR HOT DIPPED GALVANIZED STEEL BOLTS, NUTS AND LOCK WASHERS
- 4 **COAXIAL TRANSMISSION LINE GROUNDING**
 - A VERTICAL RUNS THAT ARE MORE THAN 200' OR LESS SHALL REQUIRE A GROUNDING KIT AT THE TOP AND BOTTOM OF THE TOWER
 - B VERTICAL RUNS WHICH ARE GREATER THAN 200' SHALL REQUIRE A GROUNDING KIT (IN ADDITION TO THE ABOVE) FROM THE TOP EVERY 150' TOWARDS THE GROUND BAR UNTIL THE DISTANCE IS LESS THAN 150' FROM THE GROUND.
 - C SURGE ARRESTOR IS PROVIDED BY OTHERS AND INSTALLED BY CONTRACTOR. CONTRACTOR SHALL MAKE ALL CONNECTIONS REQUIRED FOR INSTALLATION
 - D ALL GROUNDING KITS SHALL BE PROVIDED BY OTHERS AND INSTALLED BY CONTRACTOR
- 5 **MISC. ITEMS TO BE CONNECTED TO GROUNDING SYSTEM**
 - A ANY METAL FENCE POST WITHIN 6'-0" OF GROUND ROAD
 - B TRANSMISSION LINE ENTRANCE HATCH.
 - C METAL CABINET PARTS NOT GROUNDED BY THE INTERNAL GROUND RING.
 - D METAL FUEL STORAGE TANKS
 - E ANY SIGNIFICANT METAL OBJECT WITHIN 6'-0" OF THE GROUNDING SYSTEM OR ANY OTHER GROUNDED OBJECT
 - F EXTERIOR ICE SHIELDS
 - G STEEL EQUIPMENT PLATFORM
- 6 **INSTALLATION AND TESTING**
 - A CONTRACTOR SHALL NOTIFY CONSTRUCTION MANAGER IMMEDIATELY IF THERE ARE ANY DIFFICULTIES INSTALLING GROUNDING SYSTEM DUE TO FIELD CONDITIONS.
 - B CONTRACTOR SHALL NOT COVER UP GROUND RING AND CONNECTIONS UNTIL AN INSPECTION HAS BEEN PERFORMED COORDINATE INSPECTION WITH CONSTRUCTION MANAGER.
 - C PROVIDE TESTING OF GROUNDING SYSTEM AS DIRECTED BY THE CONSTRUCTION MANAGER
- 7 THE MAXIMUM ALLOWABLE RESISTANCE READING SHALL BE 5 OHMS TO THE GROUND IF THE RESISTANCE OF THE ENTIRE GROUND SYSTEM AS MEASURED AT THE MAIN GROUND TEST WELL EXCEEDS 50 OHMS THE ELECTRICAL CONTRACTOR AND OWNERS REPRESENTATIVE SHALL BE NOTIFIED SO THAT ADDITIONAL GROUND LOCATIONS CAN BE UTILIZED
- 8 ALL EXPOSED GROUND LEADS TO GROUND RING, PLACED IN CONCRETE. SHALL BE ENCASED IN 3/4" FLEXIBLE CONDUIT, SEALTIGHT OR EQUAL
- 9 ALL GROUND WIRE CONNECTIONS TO EQUIPMENT GROUND RING THAT ARE RUNNING ABOVE GROUND SHALL BE RUN INSIDE SEALTIGHT FLEX CONDUIT
- 10 ALL CONNECTIONS ABOVE GROUND EXCEPT CONNECTIONS TO GROUND BARS OR ARRESTOR BRACKET SHALL BE WITH DOUBLE LUG CONNECTORS CONNECTIONS TO GROUND BARS AND ARRESTORS SHALL BE CADWELD
- 11 ALL GROUNDING RUNS ON TOWER SHALL BE ROUTED ON THE INSIDE FACE OF THE ICE BRIDGE LADDER
- 12 COMPACT BACKFILL OF ALL TRENCHES FOR GROUND RING. SITE SOIL OR #57 STONE MAY BE USED FOR BACKFILL MATERIALS. CONTRACTOR SHALL OBTAIN APPROVAL FOR BACKFILL MATERIALS FROM CONSTRUCTION MANAGER.
- 13 CONTRACTOR SHALL PROVIDE SS FLAT AND LOCK WASHERS AS REQUIRED FOR COMPLETE INSTALLATION OF GROUND LEADS AT GROUND BUSS

GROUNDING RISER DETAIL FOR (6) ANTENNA AND (12) COAX (NOT TO SCALE)

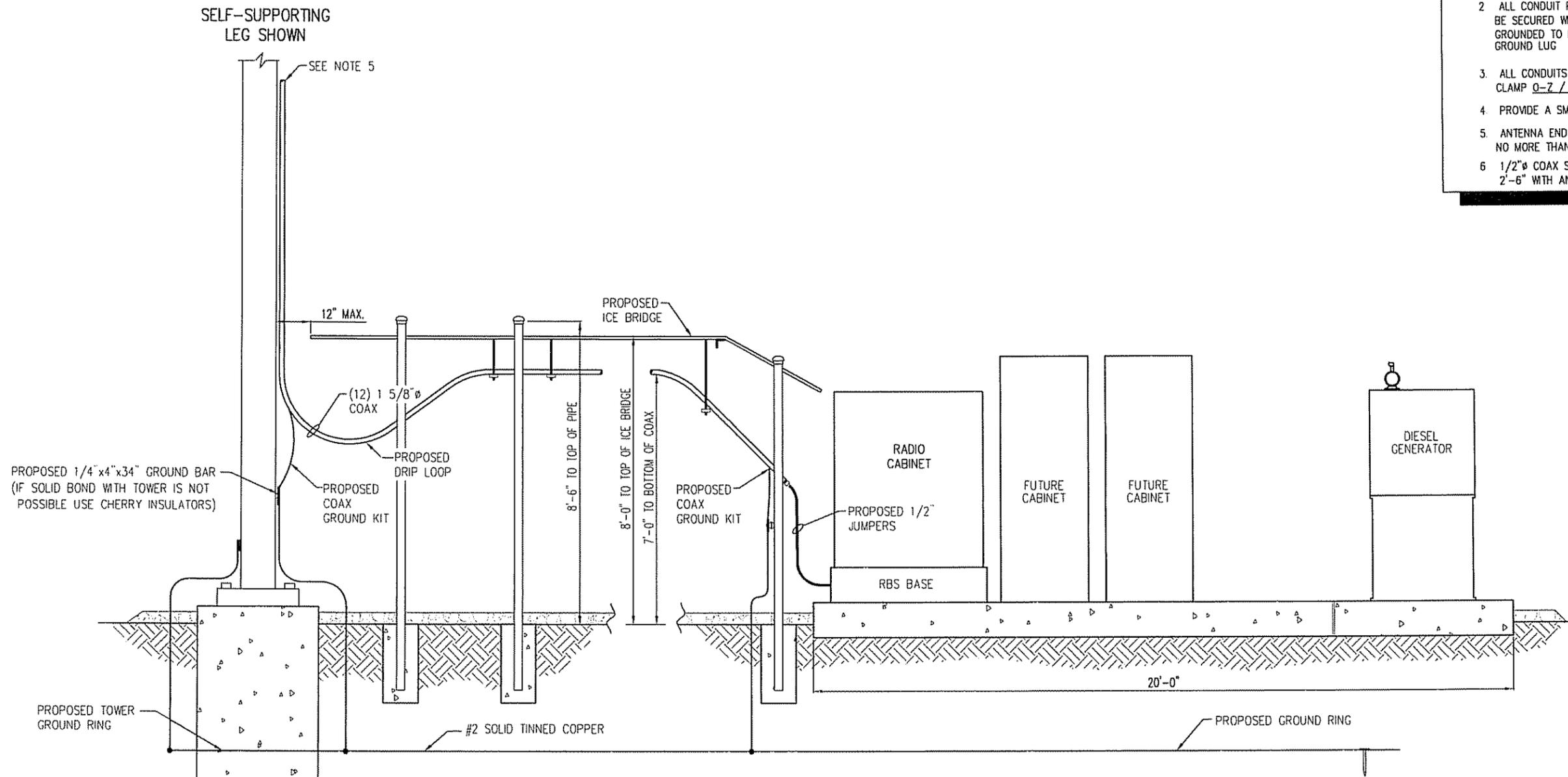


ITEM	REVISIONS	BY	CHK BY	DATE

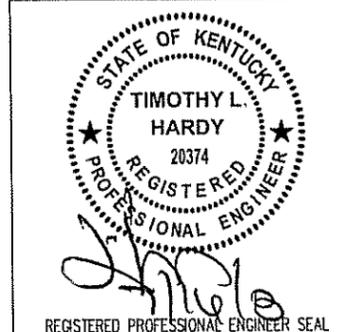
DRAWN BY: J.E. STEGER 7-01-08	DATE: 7-01-08	HARDY ENGINEERING, INC. ENGINEERING AND CONSULTING 209 LINDEN STREET, P.O. BOX 708 TRUSSVILLE, AL 35173 PHONE: (205) 655-1427 FAX: (205) 661-9027	DWG. NAME: GROUNDING RISER DIAGRAM
CHECKED BY: T.L. HARDY 7-01-08	DATE: 7-01-08		STANDARD DRAWING FOR POWERTEL / MEMPHIS INC LOUISVILLE, KENTUCKY
APPROVED BY:	DATE:		SCALE: NOT TO SCALE

NOTES

1. ALL CONDUIT SHALL BE PVC CONDUIT UNLESS OTHERWISE NOTED
2. ALL CONDUIT PENETRATING EQUIPMENT PANELS SHALL BE SECURED WITH A GROUNDING BUSHING AND GROUNDED TO EQUIPMENT GROUND BUSS WITH A GROUND LUG
3. ALL CONDUITS TO BE SECURED WITH CONDUIT BEAM CLAMP Q-7 / GEDNEY TYPE "J"
4. PROVIDE A SMOOTH TRANSITION AND DRIP LOOP
5. ANTENNA END OF 1 5/8" ϕ COAX SHALL BE SUPPORTED NO MORE THAN 1 FOOT FROM END OF CONNECTOR
6. 1/2" ϕ COAX SHALL BE SUPPORTED EVERY 2'-0" TO 2'-6" WITH ANGLE ADAPTORS WITH CLAMP OR EQUIVALENT



EQUIPMENT ELEVATION



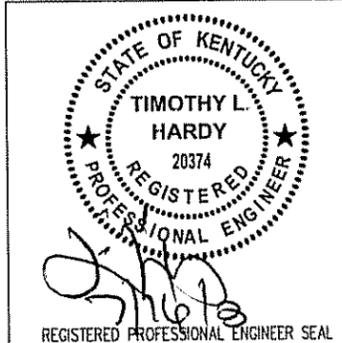
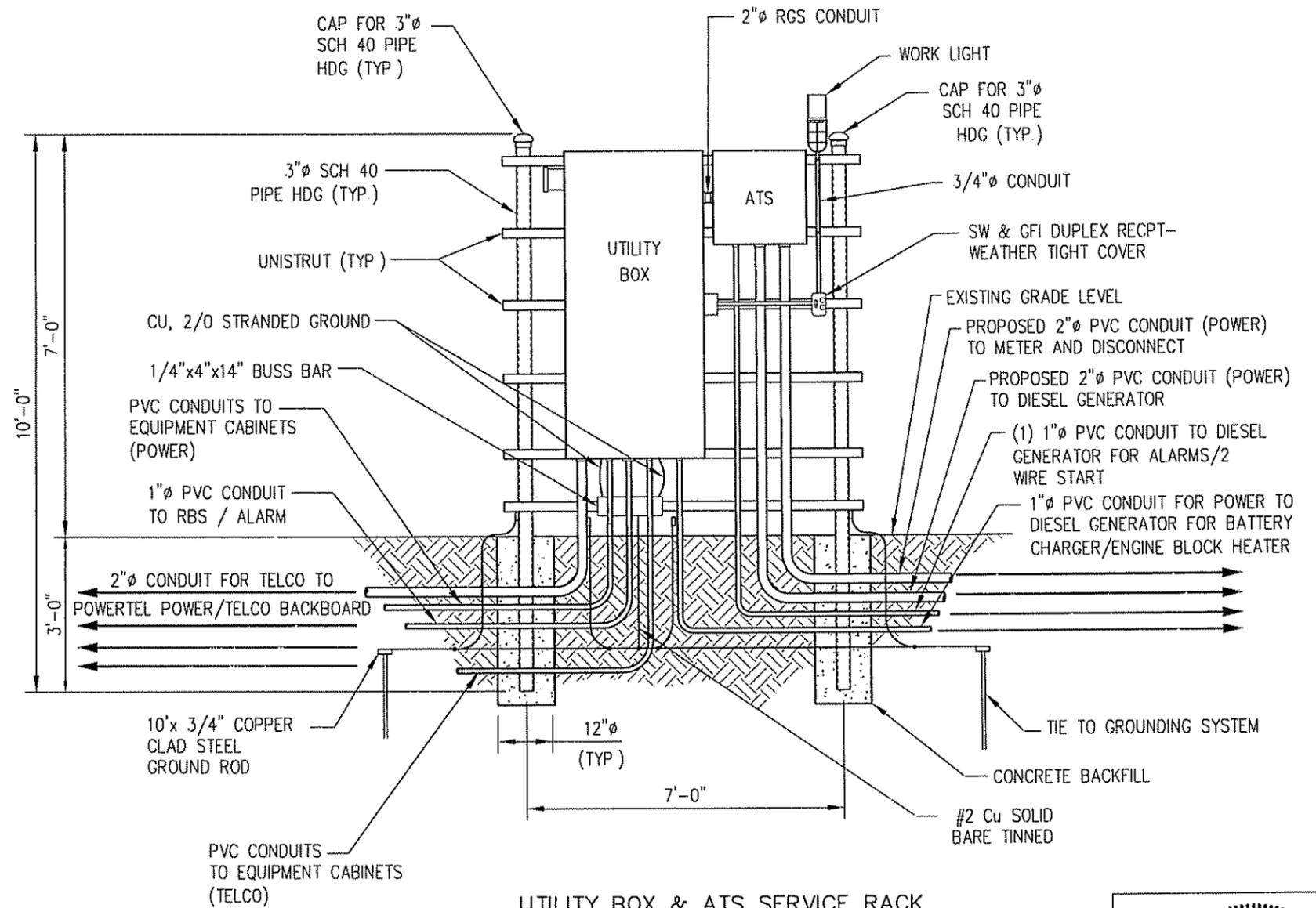
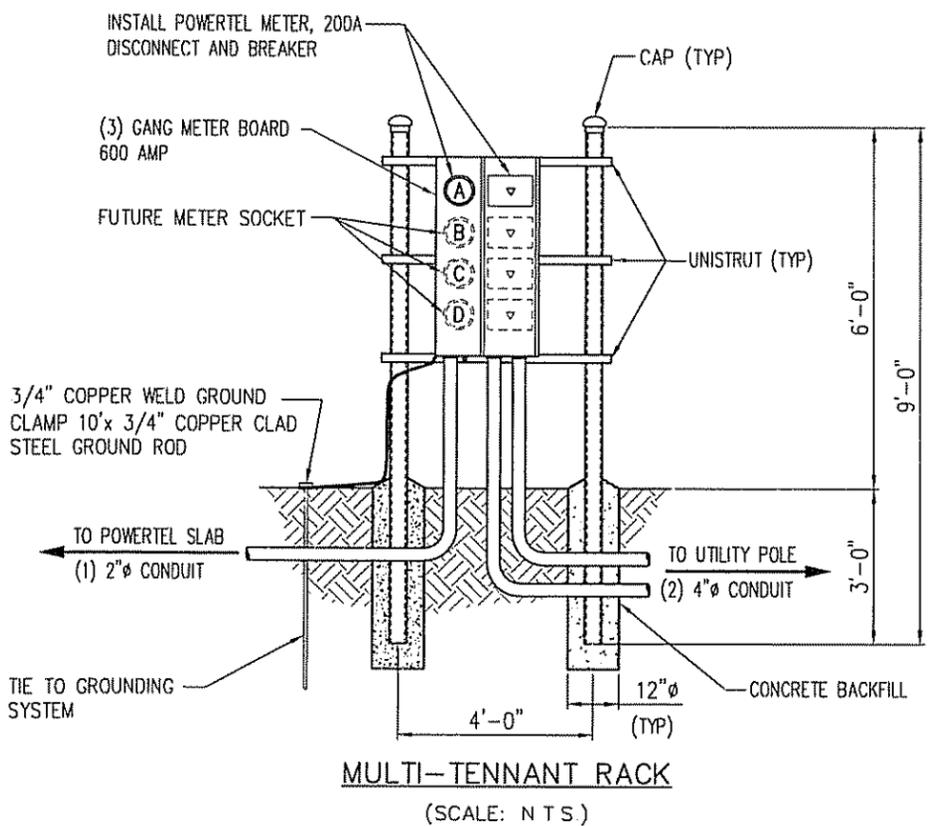
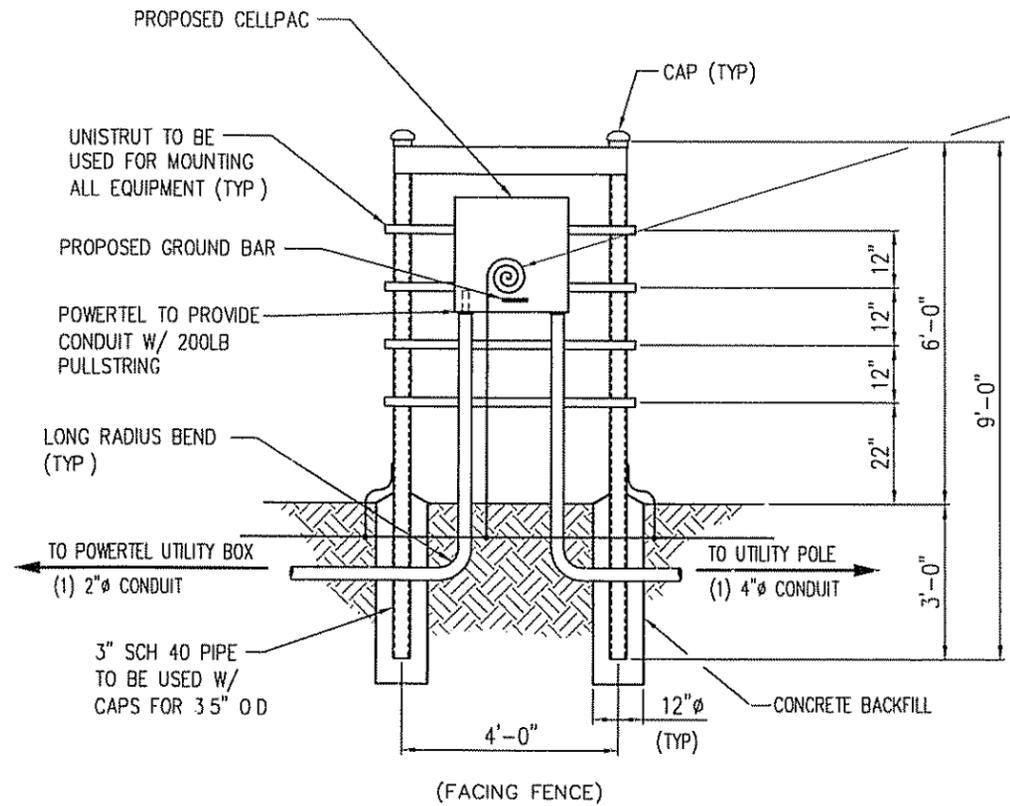
ITEM	REVISIONS	BY	CHK BY	DATE

DRAWN BY:	DATE:
J.E. STEGER	7-01-08
CHECKED BY:	DATE:
T.L. HARDY	7-01-08
APPROVED BY:	DATE:

HARDY ENGINEERING, INC.
 ENGINEERING AND CONSULTING
 209 LINDEN STREET, P.O. BOX 708
 TRUSSVILLE, AL 35173
 PHONE: (205) 655-1427 FAX: (205) 661-9027

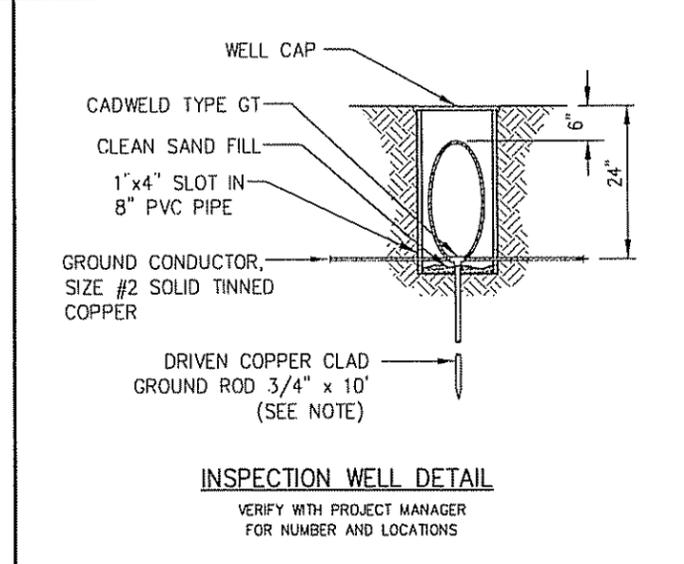
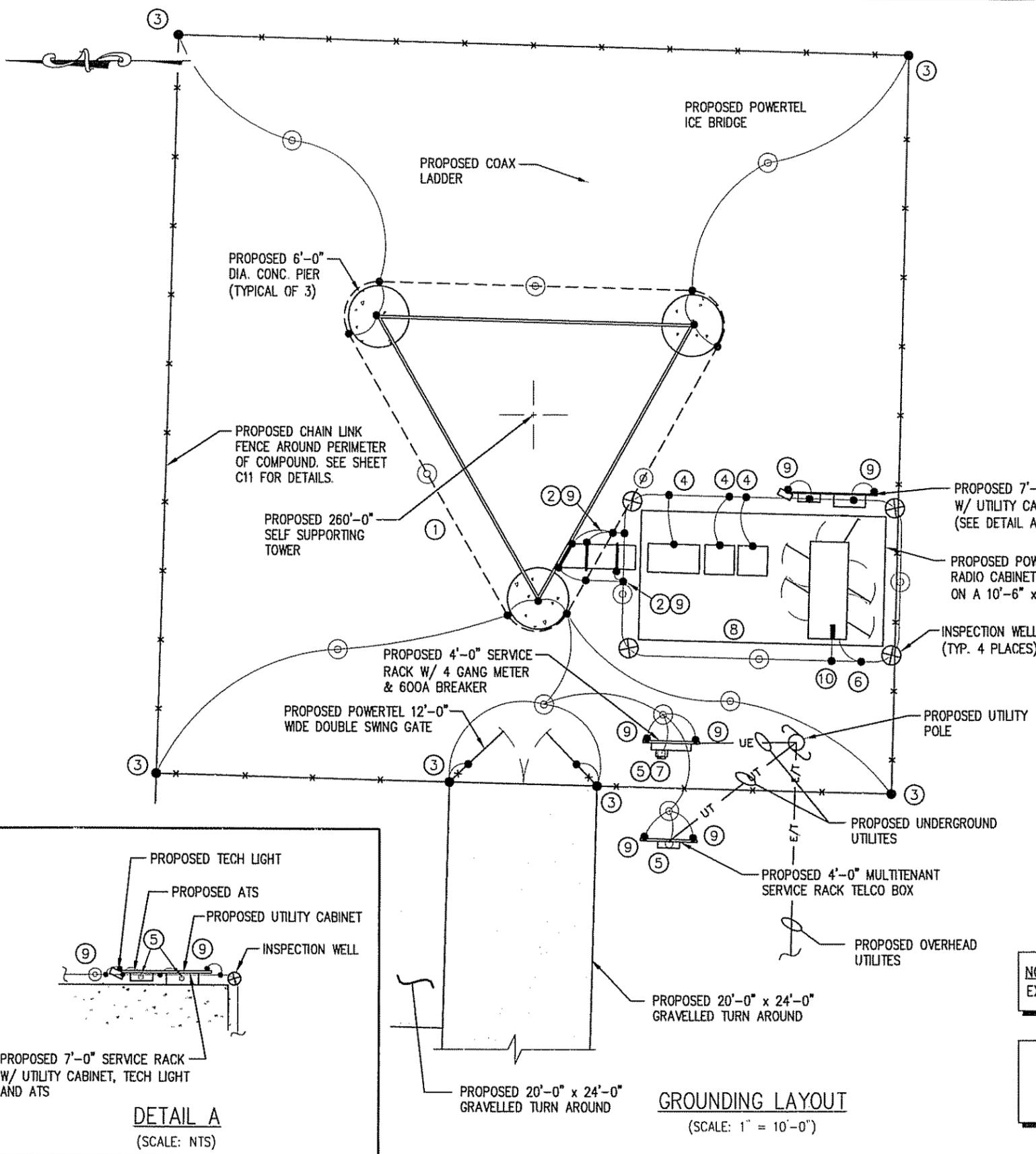
DWG. NAME: EQUIPMENT ELEVATION	
STANDARD DRAWING	
FOR	
POWERTEL / MEMPHIS INC	
LOUISVILLE, KENTUCKY	
CAD No: LV1149_C4	DWG. No: C4
SCALE: NOT TO SCALE	

#6 AWG GROUND WIRE (6'-0") WILL BE PLACED & CAD WELDED TO THE GROUND BED OF THE SITE. A GROUND ROD WILL NOT BE ACCEPTABLE DUE TO TRANSMISSION REQUIREMENTS



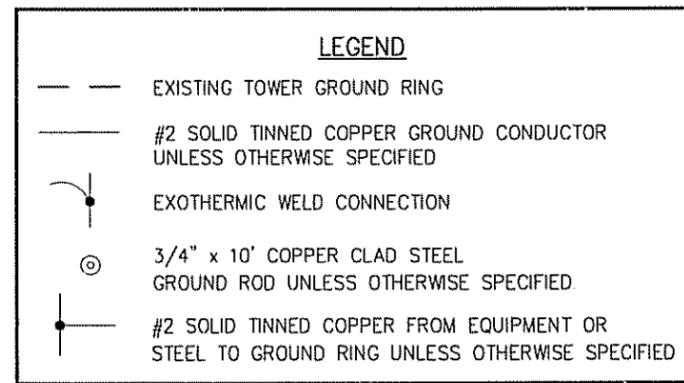
ITEM	REVISIONS	BY	CHK. BY	DATE

DRAWN BY: J.E. STEGER DATE: 7-01-08	DATE: 7-01-08	HARDY ENGINEERING, INC. ENGINEERING AND CONSULTING 209 LINDEN STREET TRUSSVILLE, AL 35173 PHONE: (205) 655-1427 FAX: (205) 661-9027	DWG. NAME: ELECTRICAL DETAILS
CHECKED BY: T.L. HARDY DATE: 7-01-08	DATE: 7-01-08		STANDARD DRAWING FOR POWERTEL / MEMPHIS INC LOUISVILLE, KENTUCKY
APPROVED BY:	DATE:		DWG. NO.: LV1149_C5



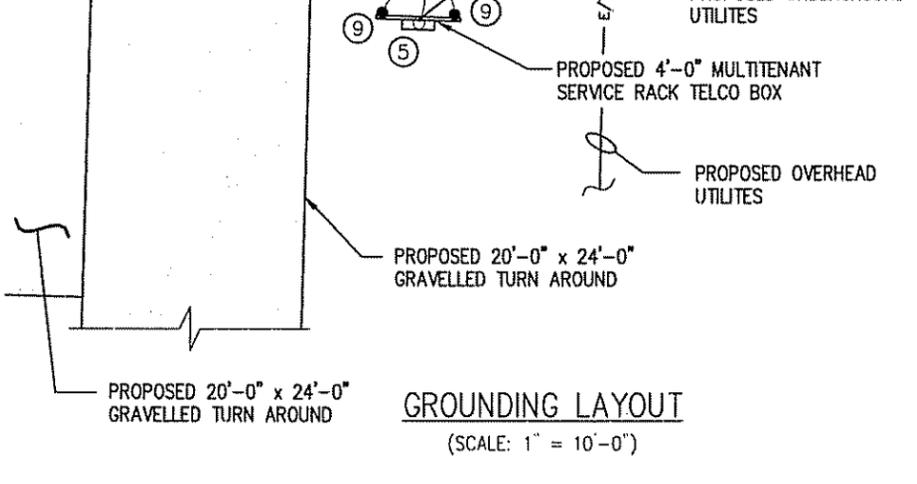
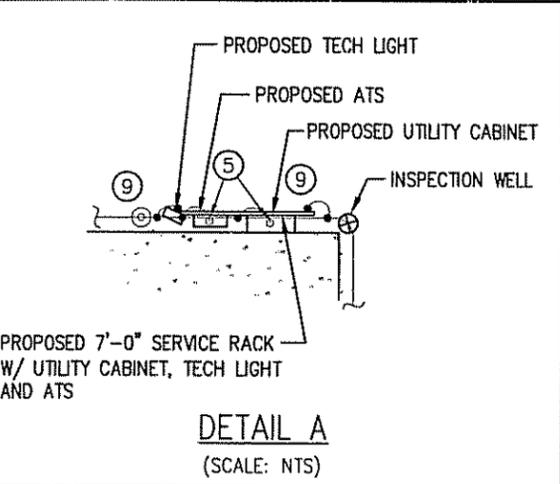
- CALL-OUT NOTES:**
- ① PROPOSED TOWER STRUCTURE GROUND RING, CONTRACTOR TO VERIFY.
 - ② CONNECT EXISTING TOWER RING GROUND TO EQUIPMENT RING GROUND ON BOTH SIDES. KEEP INTERCONNECTING WIRING OF EQUAL LENGTH AND TYPE
 - ③ FENCE GROUND
 - ④ RBS GROUND, TYP. 2 PLACES, MAIN RBS AND FUTURE. INSTALL: CONTRACTOR TO SUPPLY AND INSTALL LUG IN RBS (2106) AND ATTACH TO #2 STRAND COPPER TYPE THHN (GREEN) WIRE TO CONNECT RBS TO EXTERNAL GROUND RING REMOVE INSULATION BELOW GRADE
 - ⑤ ELECTRICAL AND TELCO EQUIPMENT BUSS BARS
 - ⑥ REMOVE PAINT FROM SURFACE OF GENERATOR FRAME BEFORE ATTACHING GROUND CONNECTION. USE DE-OX COMPOUND BETWEEN FRAME AND LUG AFTER TIGHTENING CONNECTION COVER AREA WITH SPRAY ZINC OR COLD GALVANIZING COMPOUND
 - ⑦ NEUTRAL - GROUND BOND AT SERVICE DISCONNECT
 - ⑧ MINIMUM SPACING OF SLED GROUNDING FROM SLED FOUNDATION. 24 INCHES MIN
 - ⑨ ICE BRIDGE & SERVICE BOARD POST GROUND. EACH POST TYP
 - ⑩ FUEL TANK GROUND

- GENERAL NOTES:**
1. GROUND RING TO EARTH SHALL BE 5 OHMS OR LESS. ADDITIONAL GROUND RODS MAY HAVE TO BE ADDED TO THE INITIAL 3/4"x10' RODS. USE TEMPORARY BOLTED CONNECTION TO ROD AND PERFORM GROUND RESISTANCE TEST
 2. ALL GROUNDING CONDUCTOR SWEEPS SHALL BE SMOOTH WITH NO SHARP BENDS (8" MIN BEND RADIUS) SWEEPS SHALL BE CAD-WELDED TO GROUND RING WITH PARALLEL CADWELD
 3. ALL CADWELDS TO BURIED GROUND RING SHALL BE OF PARALLEL TYPE NO "TEE" CONNECTIONS TO BE USED.
 4. USE DE-OX OR NOALOX COMPOUND BETWEEN ALL GROUNDING LUG CONNECTIONS DO NOT COVER LUGS OR HARDWARE WITH COMPOUND.
 5. ALL MOUNTING & CONNECTING HARDWARE FOR GROUNDING TO BE STAINLESS STEEL ONLY, NO PLATED OR GALVANIZED HARDWARE IS TO BE USED.
 6. GROUNDING CONDUCTORS TO BE BURIED A MINIMUM OF 30" DEEP UNLESS OTHERWISE SPECIFIED BY LOCAL CODE
 7. ALL GROUNDING CONDUCTORS TO BE BARE STRANDED. SOFT DRAWN COPPER UNLESS OTHERWISE SPECIFIED.
 8. USE ONLY 2-HOLE CADWELD LUGS ON ENDS OF GROUNDING CONDUCTORS DO NOT USE COMPRESSION OR MECHANICAL TYPE LUGS.



NOTE: CONTRACTOR TO VERIFY ALL EXISTING UTILITIES BEFORE DIGGING

PORTIONS OF SITE LAYOUT HAVE BEEN REMOVED FOR CLARITY. REFER TO SHEET C1 FOR COMPLETE SITE LAYOUT.

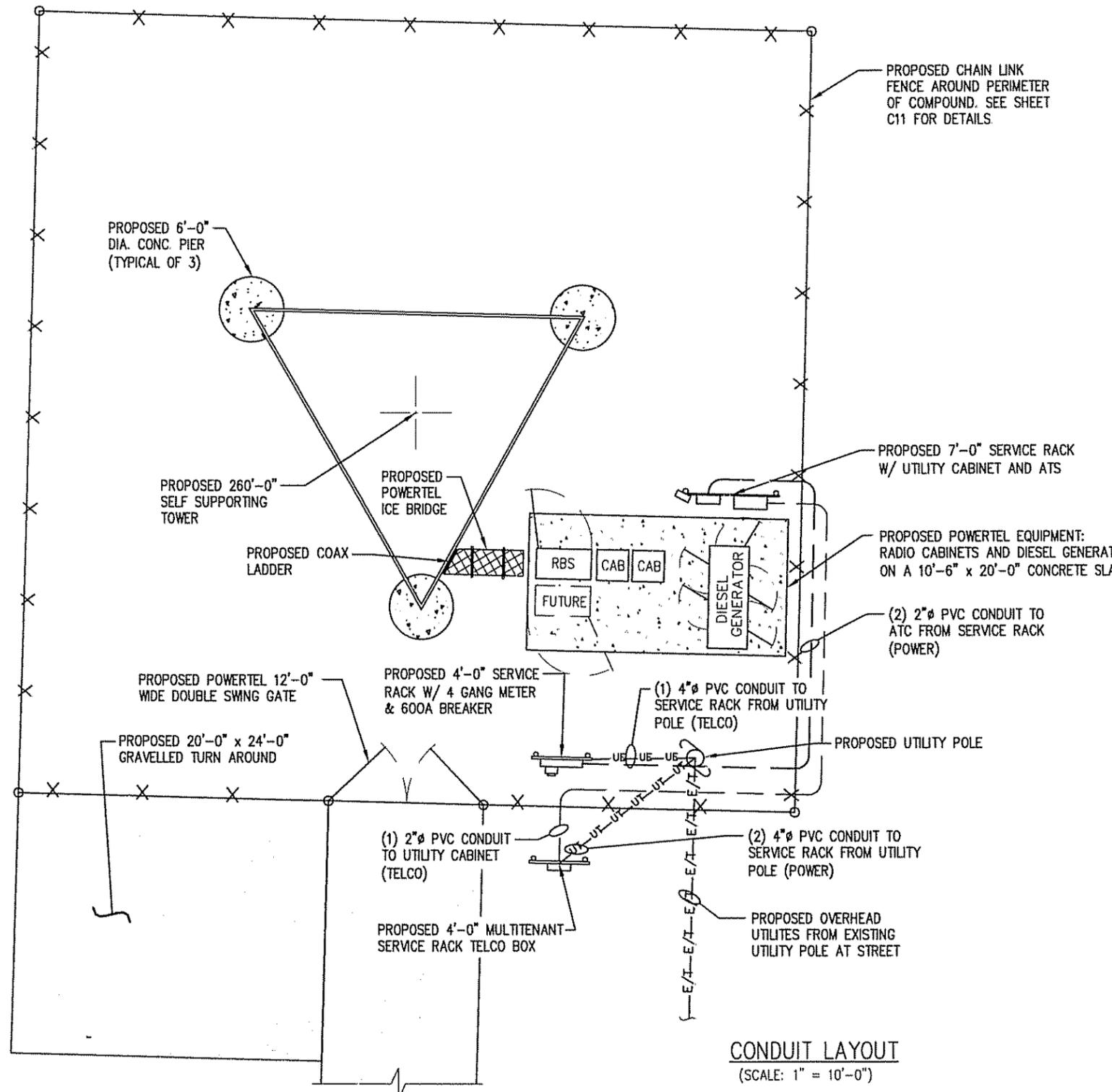


ITEM	REVISIONS	BY	CHK BY	DATE

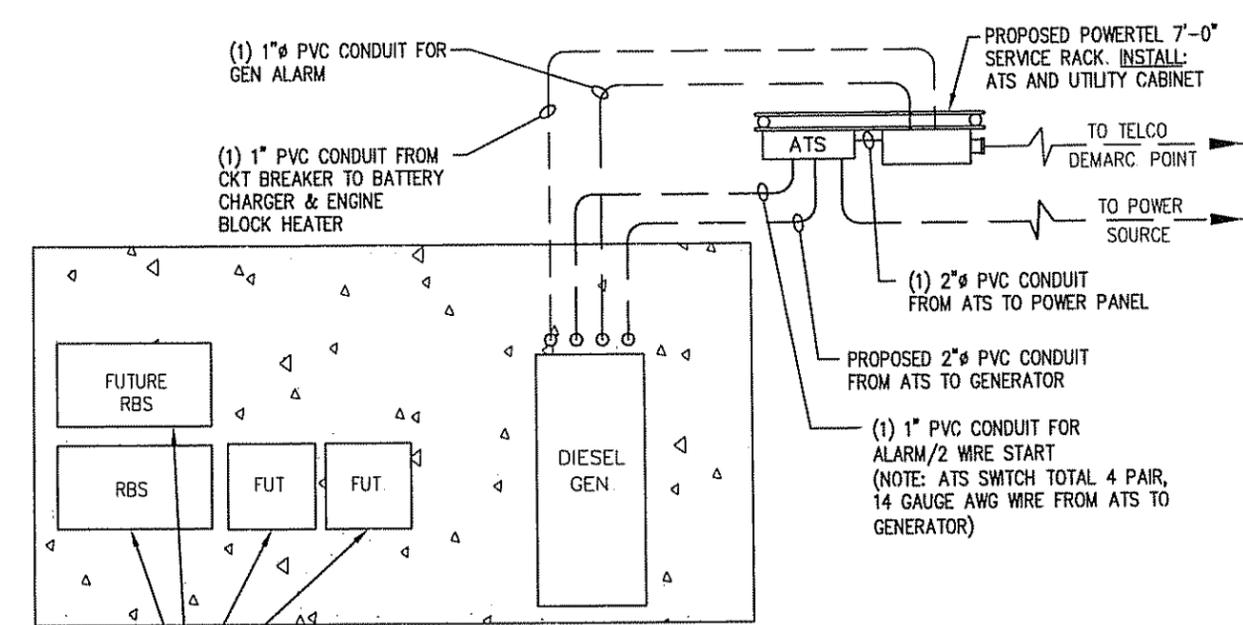
DRAWN BY: J.E. STEGER DATE: 7-01-08	HARDY ENGINEERING, INC ENGINEERING AND CONSULTING 209 LINDEN STREET TRUSSVILLE, AL 35173 PHONE: (205) 655-1427 FAX: (205) 661-9027	DWG NAME: GROUNDING LAYOUT 9LV1149D SITE: GREEN RIVER NORTH CAMPBELLSVILLE, KENTUCKY FOR POWERTEL / MEMPHIS INC LOUISVILLE, KENTUCKY
CHECKED BY: T.L. HARDY DATE: 7-01-08	REGISTERED PROFESSIONAL ENGINEER SEAL 	CAD No: LV1149_C6 SCALE: AS SHOWN DWG No: C6

NOTES:

- 1 THIS INSTALLATION SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE AND ANY APPLICABLE LOCAL CODES AND ORDINANCES SEE LOCAL AUTHORITIES FOR ANY REQUIREMENTS BEYOND THESE LISTED
- 2 CONTRACTOR SHALL PROVIDE ALL MATERIALS NECESSARY FOR 200 AMP SERVICE
- 3 THE LOCAL UTILITY WILL MAKE THE SERVICE CONNECTIONS.
- 4 CONTRACTOR TO INSTALL 8 PAIR, 24 GAUGE, (16 WIRES) FOR ALARMS



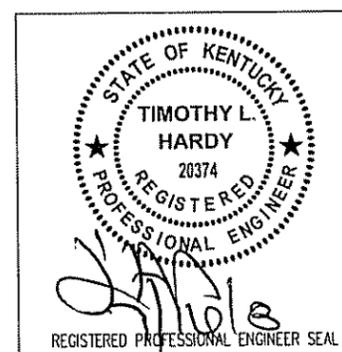
CONDUIT LAYOUT
(SCALE: 1" = 10'-0")



CONDUIT LAYOUT DETAIL
(NTS)

NOTE: CONTRACTOR TO VERIFY ALL EXISTING UTILITIES BEFORE DIGGING

NOTE: BOUNDARY AND SITE FEATURES ARE BASED ON FIELD MEASUREMENTS. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THIS DRAWING



ITEM	REVISIONS	BY	CHK BY	DATE

DRAWN BY:	J.E. STEGER	DATE:	7-01-08
CHECKED BY:	T.L. HARDY	DATE:	7-01-08
APPROVED BY:		DATE:	

HARDY ENGINEERING, INC
ENGINEERING AND CONSULTING
209 LINDEN STREET, P.O. BOX 708
TRUSSVILLE, AL 35173
PHONE: (205) 655-1427 FAX: (205) 661-9027

DWG NAME: **ELECTRICAL CONDUIT LAYOUT**
9LV1149DSITE: GREEN RIVER NORTH
CAMPBELLSVILLE, KENTUCKY
FOR
POWERTEL / MEMPHIS INC.
LOUISVILLE, KENTUCKY
DWG No: C7

PANEL MOUNTING 200 AMP MAIN BREAKER 10 KAIC
 PANEL PNL 200 AMP BUS 120 / 240 VOLT 1 PHASE 3 WIRE

CIRCUIT NUMBER	DIRECTORY	VA		DEVICE			BKR		PHASE A B	BKR		DEVICE			VA		DIRECTORY	CIRCUIT NUMBER
		ØA	ØB	MISC	R'CEPT	LTC	TRIP	POLE		POLE	TRIP	LTC	R'CEPT	MISC	ØA	ØB		
1	TVSS SURGE PROTECTOR	0							1	15				400		INSIDE & OUTSIDE GFI R'CEPT	2	
3			0						2	50						SPARE	4	
5	COOLING FAN	200															6	
7	OUTSIDE LIGHT		400						2	50							8	
9	BLANK																10	
11	BLANK																12	
13	BLANK																14	
15	BLANK																16	
17	BLANK																18	
19	BLANK																20	
21	BLANK																22	
23	BLANK																24	
25	BLANK																26	
27	BLANK																28	
29	BLANK																30	

CONNECTED LOAD (VA)
 PHASE A 600
 PHASE B 400
 TOTAL CONNECTED LOAD = 1.0 KVA = 4.2 AMPS
 CASE 1 - 0 CABINETS INSTALLED

PANEL MOUNTING 200 AMP MAIN BREAKER 10 KAIC
 PANEL PNL 200 AMP BUS 120 / 240 VOLT 1 PHASE 3 WIRE

CIRCUIT NUMBER	DIRECTORY	VA		DEVICE			BKR		PHASE A B	BKR		DEVICE			VA		DIRECTORY	CIRCUIT NUMBER
		ØA	ØB	MISC	R'CEPT	LTC	TRIP	POLE		POLE	TRIP	LTC	R'CEPT	MISC	ØA	ØB		
1	TVSS SURGE PROTECTOR	0							1	15				400		INSIDE & OUTSIDE GFI R'CEPT	2	
3			0						2	50				4800		RBS-1	4	
5	COOLING FAN	200												4800			6	
7	OUTSIDE LIGHT		400						2	50							8	
9	BLANK																10	
11	BLANK																12	
13	BLANK																14	
15	BLANK																16	
17	BLANK																18	
19	BLANK																20	
21	BLANK																22	
23	BLANK																24	
25	BLANK																26	
27	BLANK																28	
29	BLANK																30	

CONNECTED LOAD (VA)
 PHASE A 5400
 PHASE B 5200
 TOTAL CONNECTED LOAD = 10.6 KVA = 44.2 AMPS
 CASE 2 - 1 CABINET INSTALLED

PANEL MOUNTING 200 AMP MAIN BREAKER 10 KAIC
 PANEL PNL 200 AMP BUS 120 / 240 VOLT 1 PHASE 3 WIRE

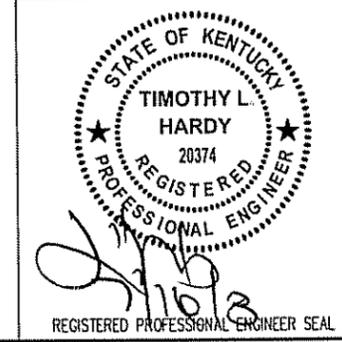
CIRCUIT NUMBER	DIRECTORY	VA		DEVICE			BKR		PHASE A B	BKR		DEVICE			VA		DIRECTORY	CIRCUIT NUMBER
		ØA	ØB	MISC	R'CEPT	LTC	TRIP	POLE		POLE	TRIP	LTC	R'CEPT	MISC	ØA	ØB		
1	TVSS SURGE PROTECTOR	0							1	15				400		INSIDE & OUTSIDE GFI R'CEPT	2	
3			0						2	50				4800		RBS-1	4	
5	COOLING FAN	200												4800			6	
7	OUTSIDE LIGHT		400						2	50				4800		RBS-2	8	
9	BLANK													4800			10	
11	BLANK																12	
13	BLANK																14	
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CONNECTED LOAD (VA)
 PHASE A 10200
 PHASE B 10000
 TOTAL CONNECTED LOAD = 20.2 KVA = 84.2 AMPS
 CASE 3 - 2 CABINETS INSTALLED

PANEL MOUNTING 200 AMP MAIN BREAKER 10 KAIC
 PANEL PNL 200 AMP BUS 120 / 240 VOLT 1 PHASE 3 WIRE

CIRCUIT NUMBER	DIRECTORY	VA		DEVICE			BKR		PHASE A B	BKR		DEVICE			VA		DIRECTORY	CIRCUIT NUMBER
		ØA	ØB	MISC	R'CEPT	LTC	TRIP	POLE		POLE	TRIP	LTC	R'CEPT	MISC	ØA	ØB		
1	TVSS SURGE PROTECTOR	0							1	15				400		INSIDE & OUTSIDE GFI R'CEPT	2	
3			0						2	50				4800		RBS-1	4	
5	COOLING FAN	200												4800			6	
7	OUTSIDE LIGHT		400						2	50				4800		RBS-2	8	
9	BLANK													4800			10	
11	BLANK													4800			12	
13	BLANK								2	50				4800		RBS-3	14	
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21	BLANK																22	
23	BLANK																24	
25	BLANK																26	
27	BLANK																28	
29	BLANK																30	

CONNECTED LOAD (VA)
 PHASE A 15000
 PHASE B 14800
 TOTAL CONNECTED LOAD = 29.8 KVA = 124.2 AMPS
 CASE 4 - 3 CABINETS INSTALLED

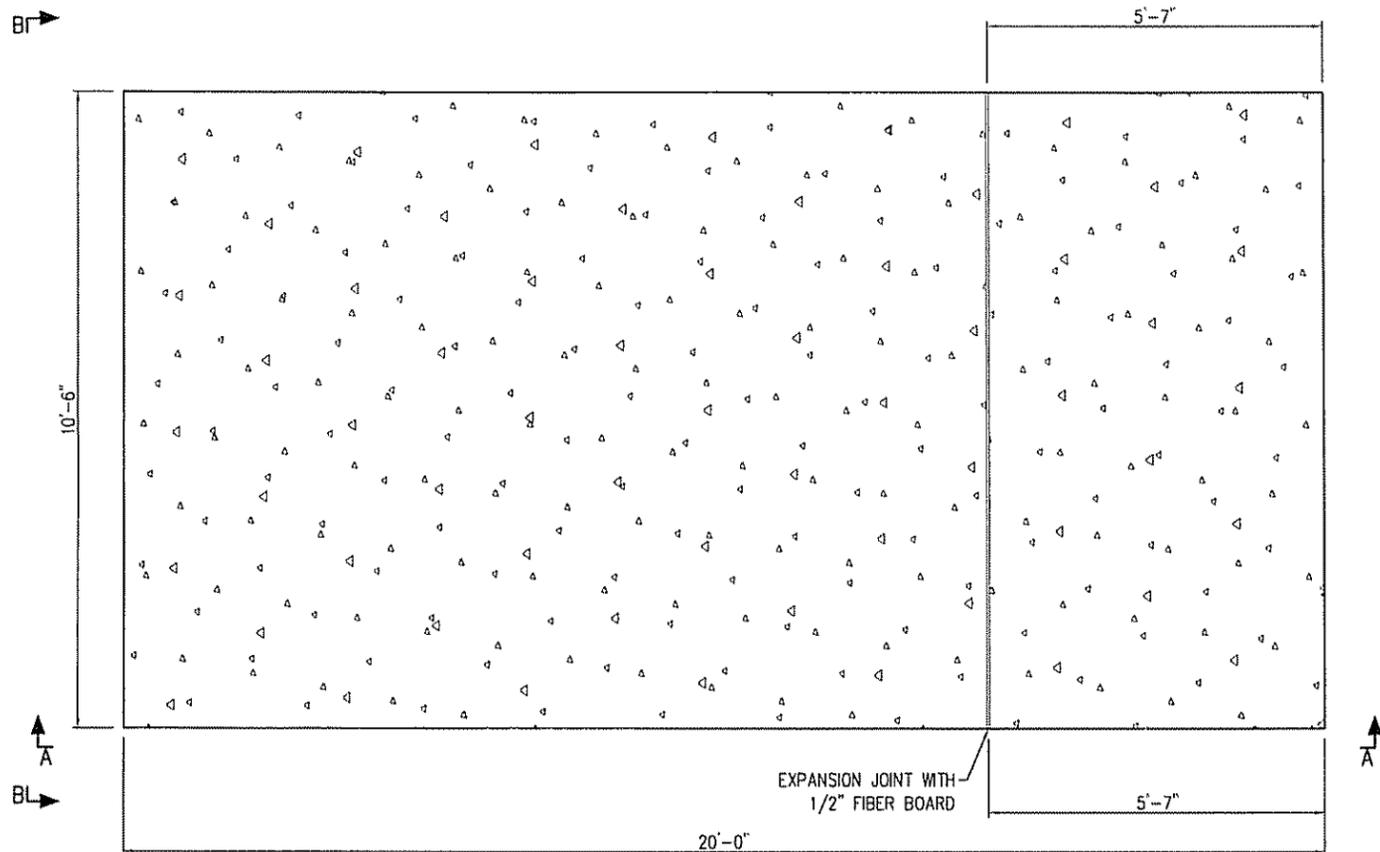


ITEM	REVISIONS	BY	CHK. BY	DATE

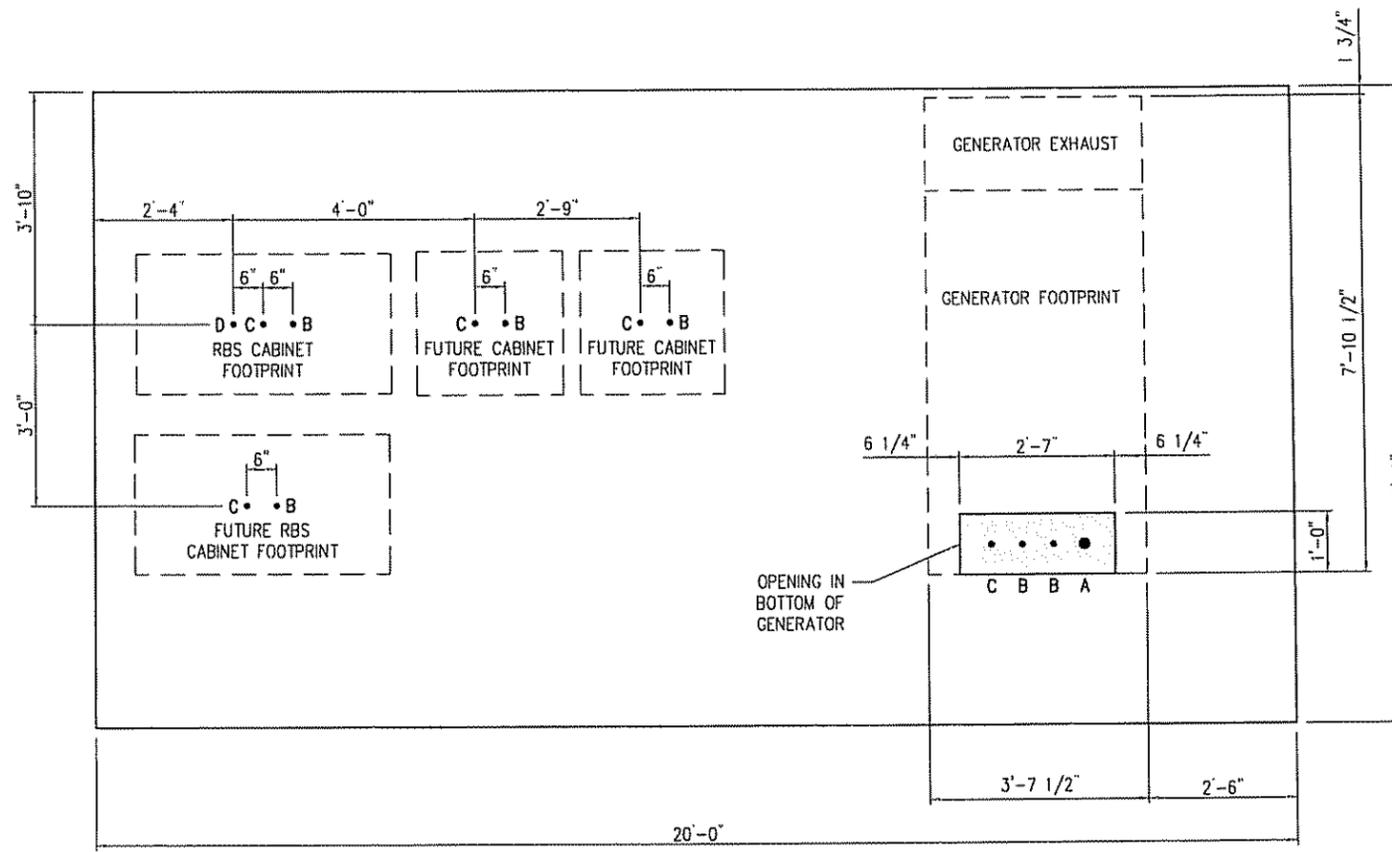
DRAWN BY: J.E. STEGER	DATE: 7-01-08
CHECKED BY: T.L. HARDY	DATE: 7-01-08
APPROVED BY:	DATE:

HARDY ENGINEERING, INC.
 ENGINEERING AND CONSULTING
 209 LINDEN STREET, P.O. BOX 708
 TRUSSVILLE, AL 35173
 PHONE: (205) 655-1427 FAX: (205) 661-9027

DWG NAME: PANEL BOARD CALCULATIONS
 STANDARD DRAWING
 FOR
 POWERTEL / MEMPHIS INC.
 LOUISVILLE, KENTUCKY
 DWG No. 7.1



PLAN VIEW
(CONCRETE SLAB)



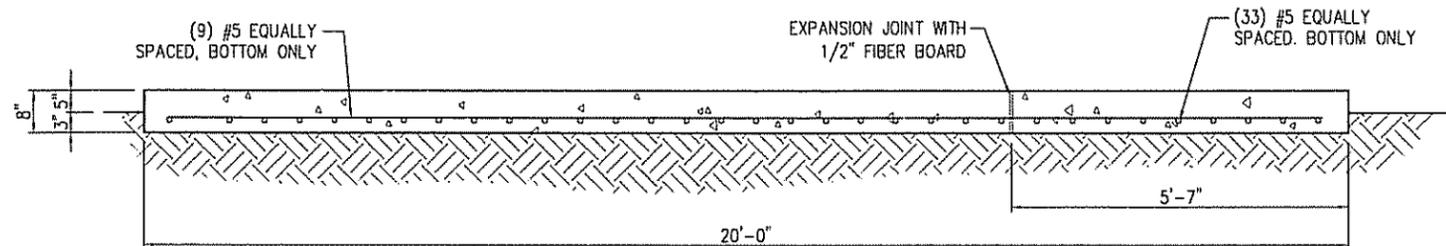
PLAN VIEW
(GENERATOR AND EQPT PAD)

CONDUIT LEGEND:

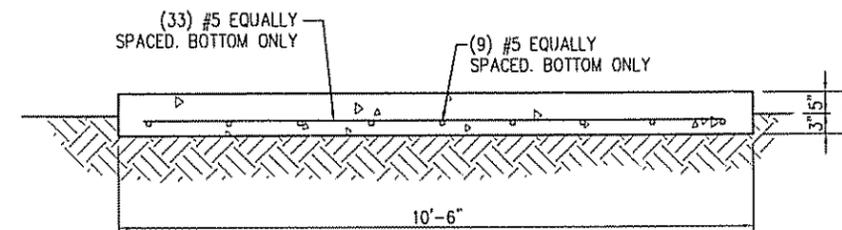
- A ~ 2" DIA. PVC (POWER)
- B ~ 1" DIA. PVC (POWER)
- C ~ 1" DIA. PVC (TELCO)
- D ~ 1" DIA. PVC (ALARM)

CONDUIT LEGEND:

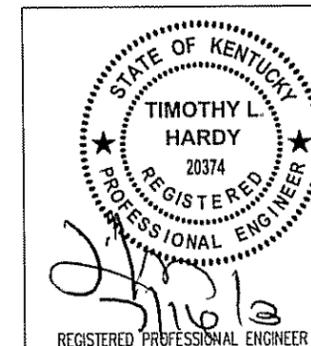
- A ~ 2" DIA. PVC (POWER)
- B ~ 1" DIA. PVC (POWER)
- C ~ 1" DIA. PVC (TELCO)
- D ~ 1" DIA. PVC (ALARM)



SECTION A-A



SECTION B-B

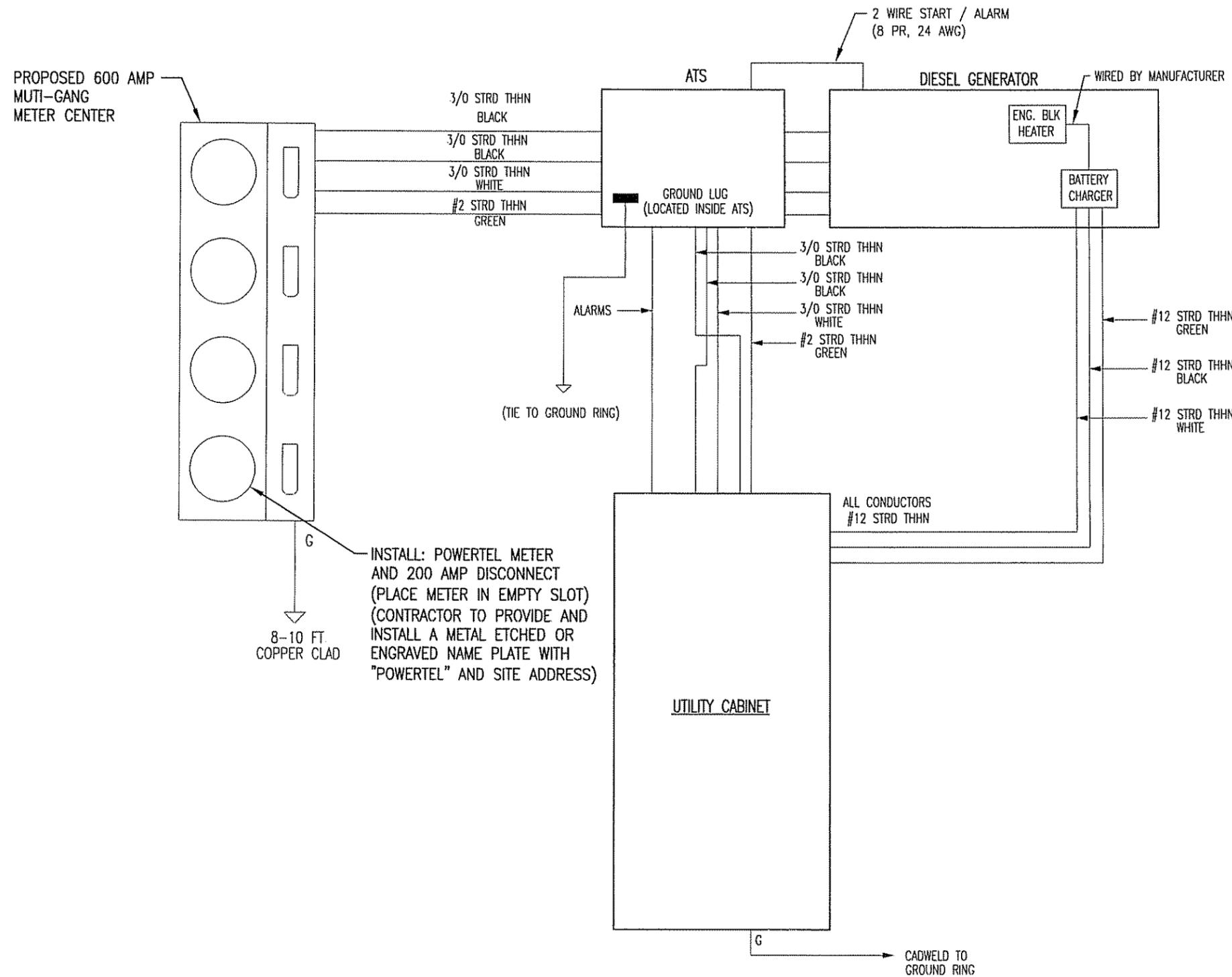


ITEM	REVISIONS	BY	CHK BY	DATE

DRAWN BY: J.E. STEGER	DATE: 7-01-08
CHECKED BY: T.L. HARDY	DATE: 7-01-08
APPROVED BY:	DATE:

T.L. HARDY ENGINEERING, INC.
 ENGINEERING AND CONSULTING
 209 LINDEN STREET, P.O. BOX 708
 TRUSSVILLE, AL 35173
 PHONE: (205) 655-1427 FAX: (205) 661-9027

CONCRETE FOUNDATION DETAILS		
STANDARD DRAWING FOR POWERTEL / MEMPHIS, INC LOUISVILLE, KENTUCKY		
CAD No: LV1149_C8	SCALE: NONE	DRG No: C8



NOTE 1: WHEN INSTALLING TVSS UNIT, USE 3" LONG 1-1/4" CLOSE NIPPLE. USE LOWEST MOST BREAKER POSITIONS FOR 2P-60A BREAKER AND KEEP ALL WIRING TO TVSS AS SHORT AND DIRECT AS POSSIBLE. NO SHARP WIRING BENDS.

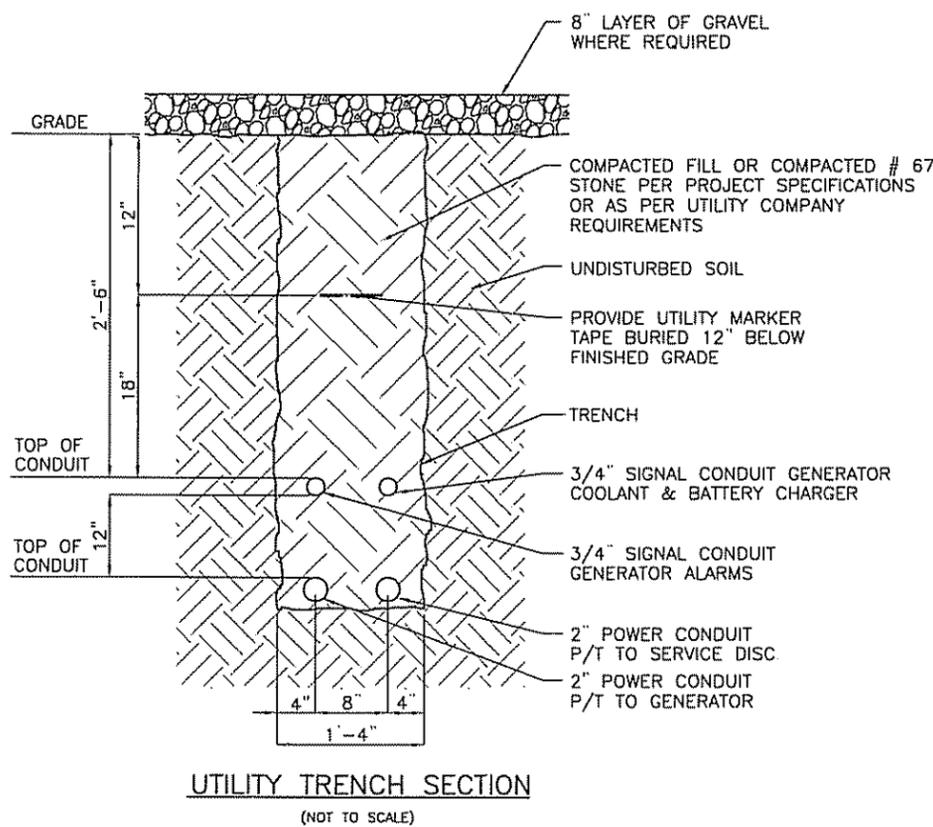
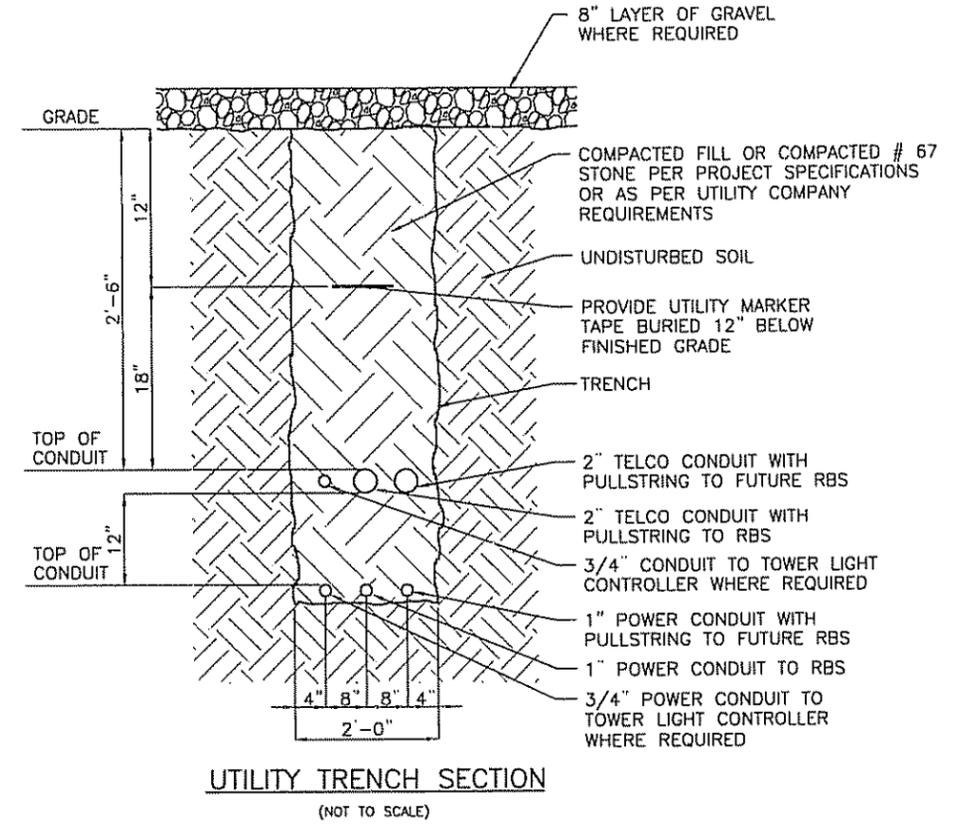
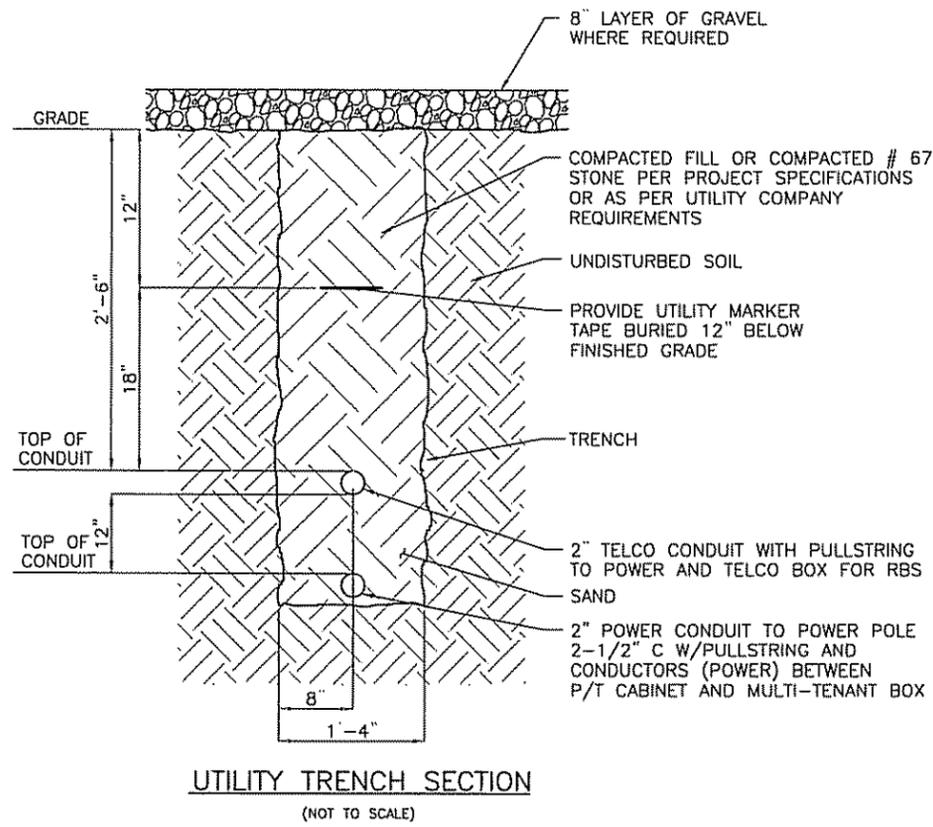
NOTE 2: ALL FLEXIBLE OR SEALTITE CONDUITS ARE TO BE METALLIC TYPE ONLY.

NOTE 3: ALL ELECTRICAL NEUTRAL AND GROUNDING CONDUCTORS ARE TO BE SAME SIZE AS CURRENT CARRYING CONDUCTORS.

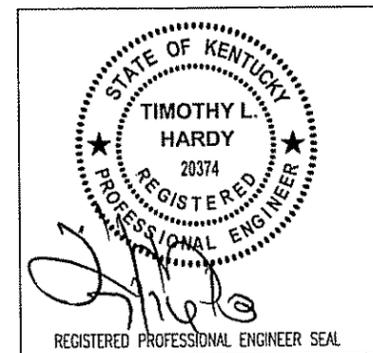
NOTE 4: USE A GROUNDING BUSHING ON ALL CONDUITS THAT ENTER LOAD CENTERS, GENERATOR AND TELCO ENCLOSURE.



ITEM	REVISIONS	BY	CHK BY	DATE	DRAWN BY:	DATE:	ENGINEERING AND CONSULTING	DWG. NAME:
					J.E. STEGER	7-01-08	HARDY ENGINEERING, INC.	WIRING DIAGRAM
					T.L. HARDY	7-01-08	209 LINDEN STREET, P.O. BOX 708 TRUSSVILLE, AL 35173	STANDARD DRAWING
							PHONE: (205) 655-1427 FAX: (205) 661-9027	FOR POWERTEL / MEMPHIS INC LOUISVILLE, KENTUCKY
								SCALE: NOT TO SCALE DWG. No: C9

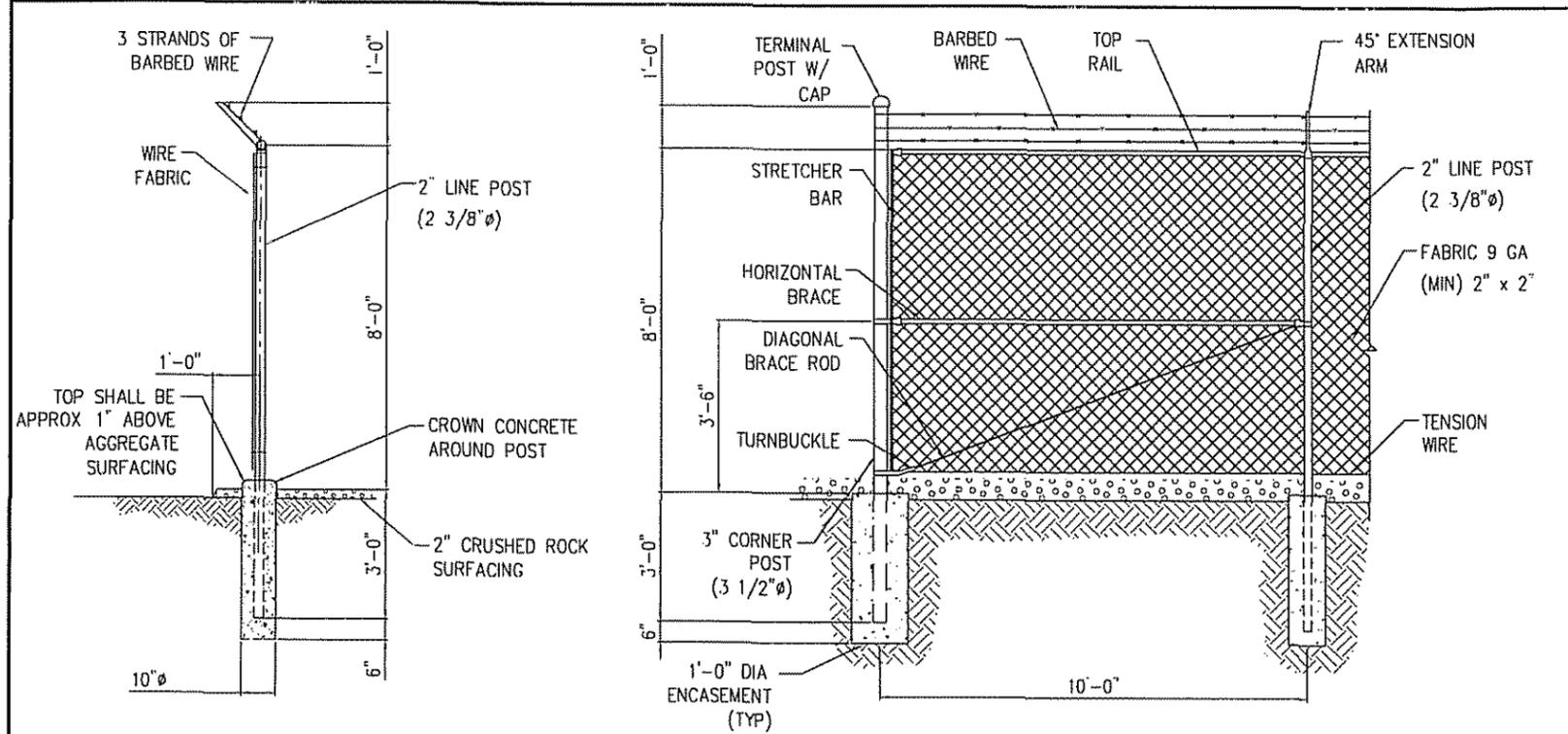


NOTE: ALL BACKFILL IN TRENCH TO BE MECHANICALLY COMPACTED IN LIFTS OF 6 INCHES.



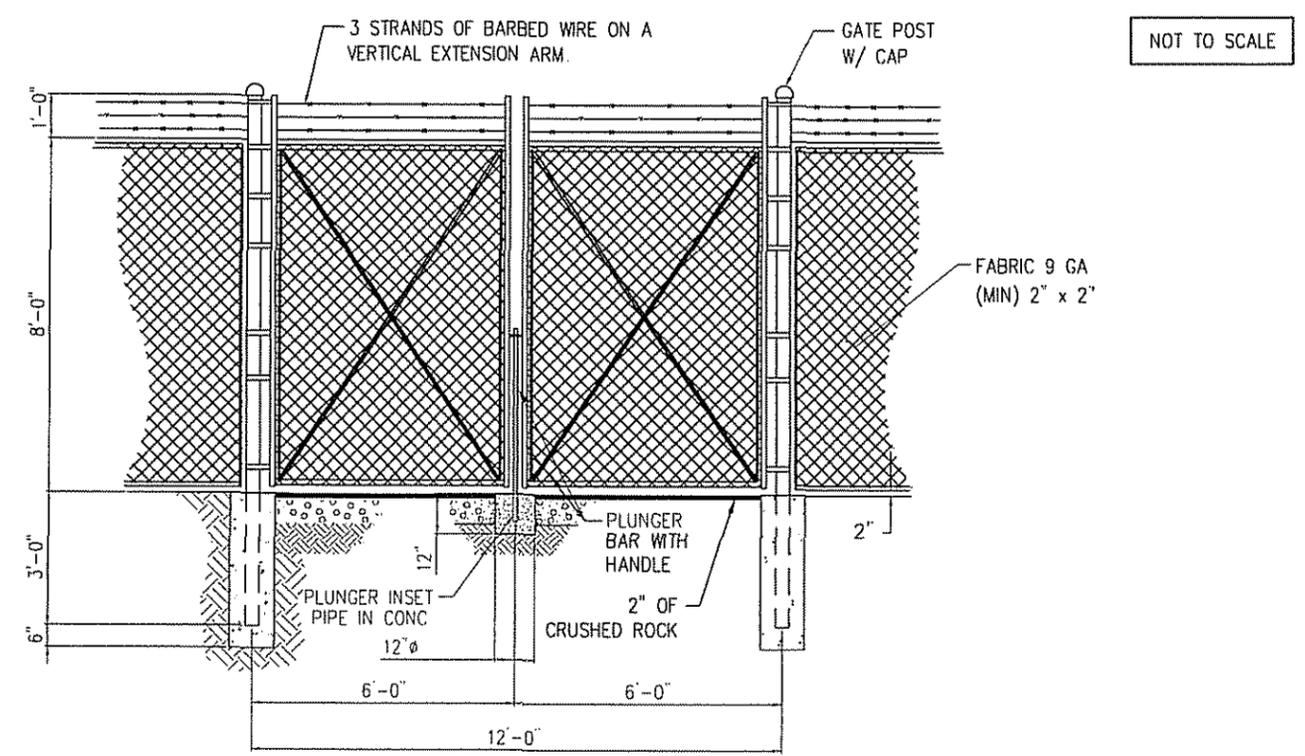
ITEM	REVISIONS	BY	CHK BY	DATE

DRAWN BY: J.E. STEGER	DATE: 7-01-08	HARDY ENGINEERING, INC. ENGINEERING AND CONSULTING 209 LINDEN STREET TRUSSVILLE, AL 35173 PHONE: (205) 655-1427 FAX: (205) 661-9027	DWG NAME: UTILITY TRENCH DETAIL
CHECKED BY: T.L. HARDY	DATE: 7-01-08		STANDARD DRAWING FOR POWERTEL / MEMPHIS INC LOUISVILLE, KENTUCKY
APPROVED BY:	DATE:		CAD No: LV1149_C10 SCALE: NONE DWG. No: C10



TYPICAL FENCE POST

TYPICAL CORNER POST DETAIL



12'-0" DOUBLE SWING GATE DETAIL

NOT TO SCALE

FENCE TYPE:

SHALL CONSIST OF GALVANIZED STEEL FRAMEWORK AND GALVANIZED STEEL FABRIC WITH A HEIGHT OF 8 FEET AND AN OVERALL HEIGHT OF 9 FEET FROM THE BOTTOM OF THE FABRIC TO THE TOP BARBED WIRE. THE FENCE SHALL HAVE A TOP RAIL, BOTTOM TENSION WIRE, AND THREE STRANDS OF BARBED WIRE MOUNTED ON VERTICAL EXTENSION ARMS. THE UPPER STRAND SHALL BE APPROXIMATELY 12 INCHES ABOVE THE TOP OF THE FABRIC. POSTS SHALL BE SET IN CONCRETE OR IN SLEEVES AS DETAILED.

MATERIALS:

MATERIALS FOR CHAIN LINK FENCING SHALL BE AS FOLLOWS. ALL STEEL OR MALLEABLE IRON PARTS AND ACCESSORIES FOR FRAMEWORK SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH RESIDENTIAL STANDARDS:

FABRIC: RESIDENTIAL FABRIC 11-1/2 GAUGE, 2 1/4 INCH MESH; GALVANIZED ASTM A392, CLASS 2; TWISTED SELVAGE ON TOP, KNUCKLED SELVAGE ON BOTTOM.

COMMERCIAL POST: LINE POST ARE 2 1/2 INCH, SCH. 40, 2 1/2 O.D. PIPE
 TERMINAL POSTS (END, CORNER, AND PULL) ARE 2-1/2 INCH, SCH. 40, 2-7/8 INCH O.D. PIPE
 GATE POST (SWING POSTS) ARE GATE OR LEAF 6 FT OR LESS, 2-1/2 INCH, SCH. 40, 2-7/8 INCH O.D. PIPE
 GATE OR LEAF OVER 6 FT WIDE AND UP TO 13 FT, 3-1/2 INCH, SCH. 40, 4 INCH O.D. PIPE
 TOP RAILS ARE 1-5/8 INCH O.D. (17 GAUGE) PIPE.

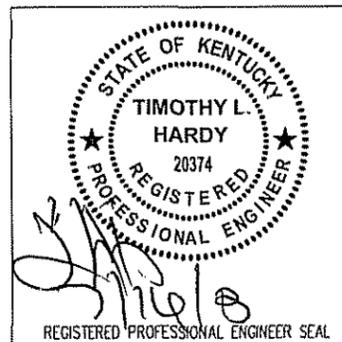
MATERIALS: RAIL COUPLINGS: SLEEVE TPE, 6 INCHES EXPANSION SPRING IN EVERY FIFTH COUPLING
BRACING: PIPE BRACE SAME AS TOP RAIL, WITH 3/8 INCH DIAMETER STEEL ROD TRUSS AND TIGHTENER
POST TOPS: PRESSED STEEL, MALLEABLE IRON WITH PRESSED STEEL EXTENSION ARM, OR ONE-PIECE ALUMINUM CASTING; WITH HOLE FOR TOP RAIL, DESIGNED TO FIT OVER THE OUTSIDE OF THE POST AND TO PREVENT ENTRY OF MOISTURE INTO TUBULAR POST. BARBED WIRE: GALVANIZED, ASTM A121 CLASS 3; THREE 14 GAUGE MINIMUM STEEL WIRES WITH 4 POINT ROUND 14 GAUGE BARBS SPACED 4 INCHES APART
STRETCHER BARS: STEEL, 3/16 BY 3/4 INCH, OR EQUIVALENT CROSS-SECTIONAL AREA
FABRIC TIES: ALUMINUM BANDS AND WIRES
GATE FRAMES: 1-1/2 INCH, SCH. 40, 1-7/8 INCH O.D. PIPE.
TENSION WIRE: GALVANIZED OR ALUMINUM COATED COIL SPRING WIRE, 7 GAUGE.

ITEM	REVISIONS	BY	CHK BY	DATE

DRAWN BY:	DATE:
J.E. STEGER	7-01-08
DESIGNED BY:	DATE:
T.L. HARDY	7-01-08
APPROVED BY:	DATE:

HARDY ENGINEERING, INC.
 ENGINEERING AND CONSULTING
 209 LINDEN STREET, P.O. BOX 708
 TRUSSVILLE, AL 35173
 PHONE: (205) 655-1427 FAX: (205) 661-9027

DATE:	SCALE:	DATE:
	AS SHOWN	

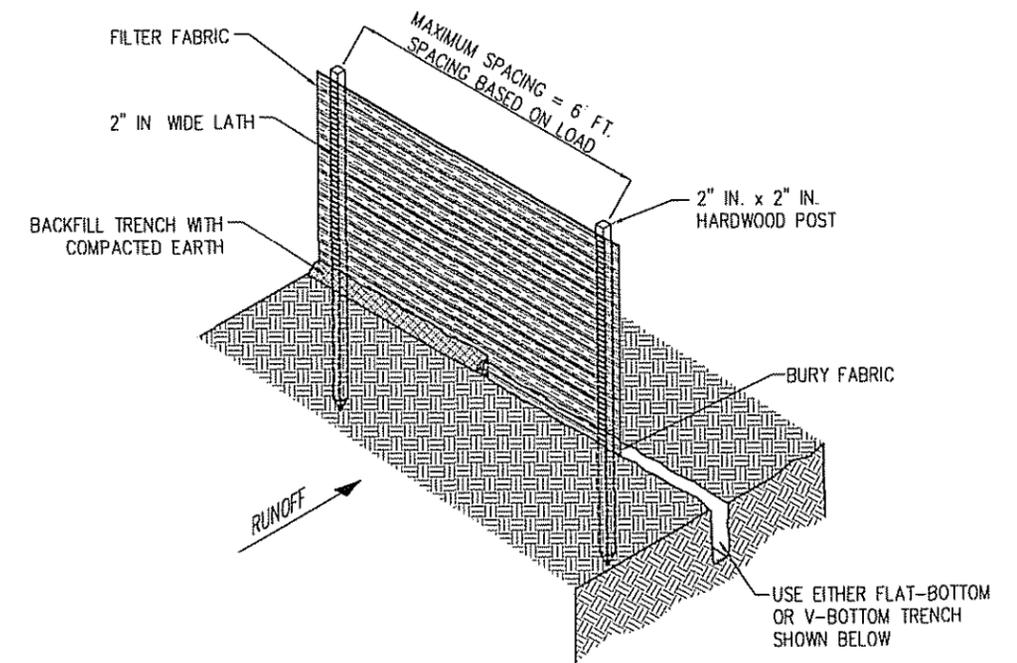


INSTALLATION:

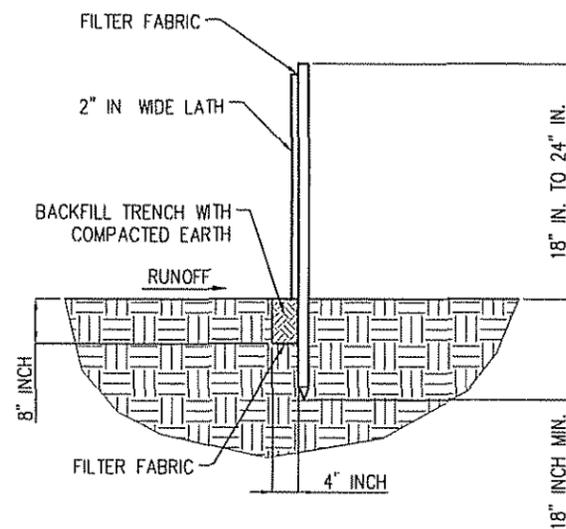
- 1 THE FENCE SHOULD BE PLACED ACROSS THE SLOPE ALONG A LINE OF UNIFORM ELEVATION (PERPENDICULAR TO THE DIRECTION OF THE FLOW). THE FENCE SHOULD BE LOCATED AT LEAST 10' FEET FROM THE TOE OF STEEP SLOPES TO PROVIDE SEDIMENT STORAGE AND ACCESS FOR MAINTENANCE AND CLEANOUT
- 2 A FLAT-BOTTOM TRENCH APPROXIMATELY 4"-INCHES WIDE AND 8"-INCHES DEEP, OR A V-SHAPED TRENCH 8"-INCHES DEEP SHOULD BE EXCAVATED ON THE DOWN SLOPE SIDE OF THE TRENCH, DRIVE THE 2"-IN x 2"-IN WOOD POSTS AT LEAST 18"-INCHES INTO THE GROUND. SPACING THEM NO FURTHER THAN 6'-FEET APART.
- 3 POSTS SHOULD BE INSTALLED, WITH 1" TO 2"-INCHES OF THE POST PROTRUDING ABOVE THE TOP OF THE FABRIC AND NO MORE THAN 3'-FEET OF THE POST SHOULD PROTRUDE ABOVE THE GROUND. THE MINIMUM FENCE HEIGHT (HEIGHT OF FILTER FABRIC ABOVE GRADE) SHALL BE 18"-INCHES. THE MAXIMUM FENCE HEIGHT (HEIGHT OF FILTER FABRIC ABOVE GRADE) SHALL BE 24 INCHES
- 4 THE FILTER FABRIC SHOULD BE PURCHASED IN A CONTINUOUS ROLL AND CUT TO LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHOULD BE WRAPPED TOGETHER ONLY AT A SUPPORT POST WITH BOTH ENDS SECURELY FASTENED TO THE POST, WITH A MINIMUM 6"-INCH OVERLAP
- 5 EXTRA-STRENGTH FILTER CLOTH (50 POUNDS / LINEAR INCH MINIMUM TENSILE STRENGTH) SHOULD BE USED. A 2"-INCH WIDE LATH SHALL BE STAPLED OVER THE FILTER FABRIC TO SECURELY FASTEN IT TO THE UPSLOPE SIDE OF THE POSTS. THE STAPLES USED SHOULD BE 15"-INCH HEAVY-DUTY WIRE STAPLES SPACED A MAXIMUM OF 8"-INCHES APART
- 6 PLACE THE BOTTOM 12"-INCHES OF THE FILTER FABRIC INTO THE 8"-INCH DEEP TRENCH, EXTENDING THE REMAINING 4"-INCHES TOWARDS THE UPSIDE OF THE TRENCH AND BACK FILL THE TRENCH WITH SOIL OR GRAVEL AND COMPACTED

INSPECTION AND MAINTENANCE:

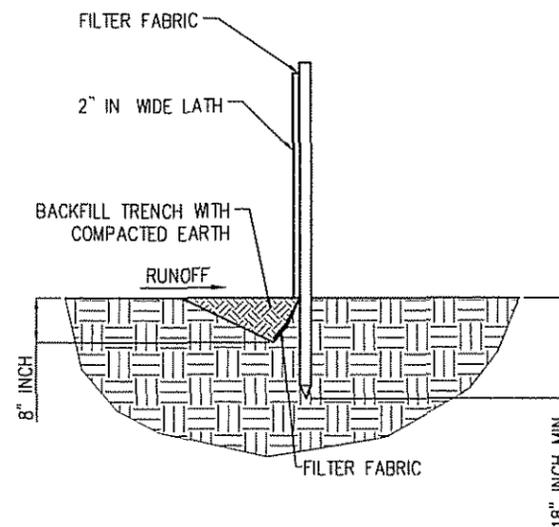
- 1 INSPECT SILT FENCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24-HOURS AFTER EACH RAINFALL EVENT THAT PRODUCES 1/2"-INCH OR MORE OF PRECIPITATION. CHECK FOR AREAS WHERE RUNOFF HAS ERODED A CHANNEL BENEATH THE FENCE, OR WHERE THE FENCE WAS CAUSED TO SAG OR COLLAPSE BY RUNOFF OVER TOPPING THE FENCE
- 2 IF THE FENCE FABRIC TEARS, BEGINS TO DECOMPOSE, OR IN ANY OTHER WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED SECTION OF FENCE IMMEDIATELY.
- 3 SEDIMENT MUST BE REMOVED WHEN IT REACHES APPROXIMATELY 1/3 THE HEIGHT OF THE FENCE, ESPECIALLY IF HEAVY RAINS ARE EXPECTED.
- 4 SILT FENCE SHOULD BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER TEMPORARY BMPs ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHOULD BE REMOVED OR STABILIZED ON SITE. DISTURBED AREAS RESULTING FROM FENCE REMOVAL SHALL BE PERMANENTLY STABILIZED



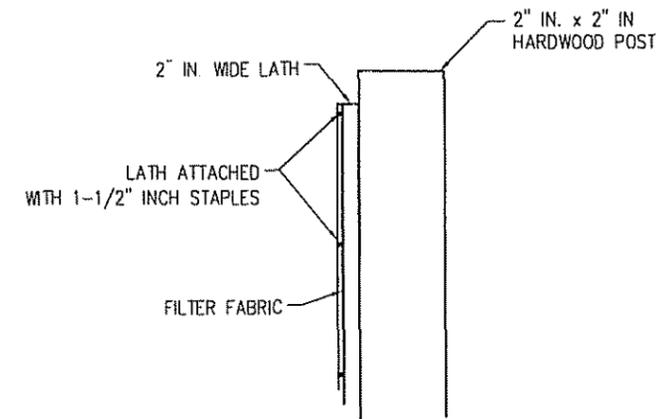
SILT FENCE INSTALLATION



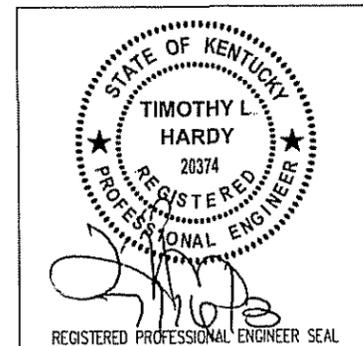
FLAT-BOTTOM TRENCH DETAIL



V-SHAPED TRENCH DETAIL



FABRIC ATTACHMENT DETAIL



ITEM	REVISIONS	BY	CHK BY	DATE	DRWN BY	DATE	DRG NAME
					J.E. STEGER	7-01-08	SILT FENCE DETAILS & NOTES
					T.L. HARDY	7-01-08	STANDARD DETAILS FOR POWERTEL / MEMPHIS, INC LOUISVILLE, KENTUCKY
							SCALE: NTS
							DRG. No. C12

ENGINEERING AND CONSULTING
209 LINDEN STREET, P.O. BOX 708
TRUSSVILLE, AL 35173
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HARDY ENGINEERING, INC

REGISTERED PROFESSIONAL ENGINEER SEAL