#2015-47 Central States Tower/ Verizon Wireless– Special Use Permit & Zoning Variation Project Review for Planning and Zoning Commission

Meeting Date: August 19, 2015

Request: A Special Use Permit for a wireless communication tower and a variation from Article 2-400 to allow the monopole tower to be setback less than 110% of the height of the tower, 143 feet, from all property lines.

Location: 6521 Commercial Road

Acreage: 43,750 square feet

Existing Zoning: M (Manufacturing)

Surrounding Properties:
North: B-2 (General Commercial)
South: M (Manufacturing)
East: M (Manufacturing)
West: B-2 (General Commercial)

Staff Contact: Kathryn Cowlin (815.356.3798)

Background:

- Existing Use: The property currently improved with an industrial building being used by Le Walt Glass.
- Background: The petitioner explored locating the wireless communication facilities on existing private towers and public utilities. According to the petitioner, there are currently no existing structures that could accommodate the communications facility within the petitioner's targeted area.
- UDO Requirements: A special use permit is required for wireless communication towers. Wireless communication facilities are required to be setback 110% of the height of the tower from all property lines.

Development Analysis:

General

- Request: The petitioner is requesting a special use permit for a wireless communications tower and a zoning variation from Article 2-400 to allow the monopole tower to be setback less than 110% of the height of the tower, 143 feet, from all property lines. The closest that the tower would be to the property lines would be approximately 58 feet.

- Land Use: The land use map shows the area as Industry. This land use designation is appropriate for this use.
- Zoning: The site is zoned M (Manufacturing).



Proposed Development Description

- The height of the tower is 130 feet.
- The communication facility will be enclosed by a 6-foot chain link fence with a barbwire crown.

2030 Comprehensive Land Use Plan Review:

The Comprehensive Plan designates the subject property as Industry, which allows for existing and future manufacturing uses.

This project meets the following goal:

Land Use - Industry

Goal: Support manufacturing uses within the community which contribute to the regional and local economy and Crystal Lake's live, work, play philosophy.

This can be accomplished with the following supporting action:

Supporting Action: Expand and attract manufacturing users which provide jobs, services, and products strengthening the City's economy.

Findings of Fact:

SPECIAL USE PERMIT

Special Uses require a separate review because of their potential to impact surrounding properties

and the orderly development of the City. Section 2-400 of the Unified Development Ordinance establishes standard for all Special Uses in Crystal Lake. The criteria are as follows:

1. That the proposed use is necessary or desirable, at the location involved, to provide a service or facility which will further the public convenience and contribute to the general welfare of the neighborhood or community.

   ☐ *Meets* ☐ *Does not meet*

2. That the proposed use will not be detrimental to the value of other properties or improvements in the vicinity.

   ☐ *Meets* ☐ *Does not meet*

3. That the proposed use will comply with the regulations of the zoning district in which it is located and this Ordinance generally, including, but not limited to, all applicable yard and bulk regulations, parking and loading regulations, sign control regulations, watershed, wetlands, and flood plain regulations, Building and Fire Codes and all other applicable City Ordinances.

   ☐ *Meets* ☐ *Does not meet*

4. That the proposed use will not negatively impact the existing off-site traffic circulation; will adequately address on-site traffic circulation; will provide adequate on-site parking facilities; and, if required, will contribute financially, in proportion to its impact, to upgrading roadway and parking systems.

   ☐ *Meets* ☐ *Does not meet*

5. That the proposed use will not negatively impact existing public utilities and municipal service delivery systems and, if required, will contribute financially, in proportion to its impact, to the upgrading of public utility systems and municipal service delivery systems.

   ☐ *Meets* ☐ *Does not meet*

6. That the proposed use will not impact negatively on the environment by creating air, noise, or water pollution; ground contamination; or unsightly views.

   ☐ *Meets* ☐ *Does not meet*

7. That the proposed use will maintain, where possible, existing mature vegetation; provide adequate screening to residential properties; provide landscaping in forms of ground covers, trees and shrubs; and provide architecture, which is aesthetically appealing, compatible or complementary to surrounding properties and acceptable by community standards, as further detailed in Article 4, Development and Design Standards.

   ☐ *Meets* ☐ *Does not meet*

8. That the proposed use will meet standards and requirements established by jurisdictions other than the City such as Federal, State or County statutes requiring licensing procedures or health/safety inspections, and submit written evidence thereof.

☐ *Meets* ☐ *Does not meet*

9. That the proposed use shall conform to any stipulations or conditions approved as part of a Special Use Permit issued for such use.

   ☐ *Meets* ☐ *Does not meet*

10. That the proposed use shall conform to the standards established for specific special uses as provided in this section.

    ☐ *Meets* ☐ *Does not meet*

Radio transmission towers, wireless communication facilities. All radio transmission towers and wireless communication facilities must comply with the following standards:

1. Towers shall be designed to meet the wind loading requirements specified in the American National Standards Institute TIA-222-F Report, as amended.

   ☐ *Meets* ☐ *Does not meet*

   Meets standard per verification letter from Mr. Tindall of Sabre Industries.

2. The owner/applicant shall provide documentation to the City demonstrating that the structural integrity of the towers and antenna will continue to comply with state and federal standards, local building codes, and the applicable standards for towers published by the American National Standards Institute (ANSI), as amended. If, upon inspection, it is determined a tower fails to comply with such standards and constitutes a danger to persons or property, the owner shall be notified that he/she has 30 days to bring the tower into compliance. Failure to bring the tower into compliance within 30 days shall constitute grounds for the removal of the tower at the owner's expense.

   ☐ *Meets* ☐ *Does not meet*

   Meets standard per verification letter from Mr. Tindall of Sabre Industries.

3. Freestanding wireless communication or radio transmission towers shall not exceed 200 feet in height as measured from the tower base to the highest point of the tower and any attached receiving or transmitting device.

   ☐ *Meets* ☐ *Does not meet*

   Meets standard, the monopole is 130 feet in height.

4. Franchises and licenses: The operator shall provide documentation to the City to demonstrate that all franchises and licenses required by law for the construction and/or operation of a tower or antenna have been obtained.

   ☐ *Meets* ☐ *Does not meet*

   The petitioner's application does not provide sufficient documentation.

5. Towers shall either maintain a galvanized steel finish or, subject to any applicable standards of the FAA, be painted a neutral color (i.e., light grey) to reduce visual

obtrusiveness or painted in a sky-tone above the top of surrounding trees and in an earth-tone below the treetop level.

☐ *Meets* ☐ *Does not meet*

The petitioner's application does not provide sufficient documentation.

6. At a tower site, the design of buildings and related structures shall, to the maximum extent practicable, use materials, colors and architectural styles, that blend into the natural setting and surrounding buildings.

☐ *Meets* ☐ *Does not meet*

The petitioner's application does not provide sufficient documentation.

7. Storage: No outside storage shall be allowed on any facility site.

☐ *Meets* ☐ *Does not meet*

8. Lighting: Towers shall not be artificially lighted, unless required by the FAA or other applicable authority.

☐ *Meets* ☐ *Does not meet*

9. A single sign measuring no more than two square feet in size shall be located on or near the tower, and shall identify the tower owner, the street address of the tower, the owner's identification code for the tower, and a twenty-four-hour emergency contact telephone number.

☐ *Meets* ☐ *Does not meet*

The petitioner's application does not provide signage details, as there is a possibility that they may not plan to include signage.

10. No commercial advertising shall be allowed on the tower or its related facilities.

☐ *Meets* ☐ *Does not meet*

11. Single lot: Towers, guy anchors, equipment buildings, and any other appurtenances related to the tower shall be considered as being located on one zoning lot.

☐ *Meets* ☐ *Does not meet*

The petitioner submitted a site plan demonstrating that all equipment will be located on a single zoning lot.

12. Setbacks: Wireless communications facilities shall comply with the following setback standards. Self supporting and monopole towers shall be setback from all property lines by a distance of 110% of the height of the tower.

☐ *Meets* ☒ *Does not meet*

The petitioner is requesting a zoning variation for this criteria.

13. Equipment buildings associated with a wireless communication facility shall meet the minimum setback requirements for the zoning district where located.

☐ *Meets* ☐ *Does not meet*

Meets standard, all equipment is greater than the 15-foot minimum interior yard setback and the 20-foot rear yard setback requirements.

14. Separation: If an applicant proposes a new wireless communications tower or radio transmission tower within 1,200 feet of an existing tower, the applicant shall submit a statement indicating the reasons why the existing tower(s) was inadequate or unavailable. The Zoning Administrator shall allow the owner of such existing tower an opportunity to comment prior to making a decision.

☐ *Meets* ☐ *Does not meet*

The petitioner submitted an affidavit that there are no existing structures within the 1200-foot radius.

15. Collocation: New wireless communication or radio transmission towers shall provide evidence that the tower is structurally designed to support at least three additional users, and provide a written statement that the owner of the tower is willing to permit other user(s) to attach communication facilities, on a commercially reasonable basis, which do not interfere with the primary purpose of the tower. The site plan shall indicate a location for at least one equipment building in addition to that proposed for use by the applicant. A tower which is modified or reconstructed to accommodate the collocation of an additional antenna shall be of the same tower type as the existing tower, unless a monopole is determined more appropriate at the specific location. If an existing tower is increased in height or reconstructed to accommodate the collocation of additional antenna it shall meet the height restrictions outlined within this section of the Ordinance.

☐ *Meets* ☐ *Does not meet*

The petitioner submitted plans demonstrating that co-location is possible on the proposed tower.

16. Landscaping: Unless existing vegetation provides a buffer strip, all property lines along roadways or visible to existing abutting or nearby buildings (within 1/4 mile radius), for all facilities shall be landscaped as follows:
    a. With six-foot to eight-foot evergreen shrubs planted in an alternate pattern, five feet on center and within 15 feet of the site boundary; or
    b. With at least one row of deciduous trees, not less than 2 1/2 inch to three inches caliper measured three feet above grade, and spaced not more than 30 feet apart and within 25 feet of the site boundary; or
    c. With at least one row of evergreen trees at least four to five feet in height when planted, and spaced not more than 15 feet apart within 40 feet of the site boundary.
    d. In lieu of the foregoing, the Planning and Zoning Commission may determine that the existing vegetation must be supplemented to meet an equivalent means of achieving the desired goal of minimizing the visual impact.

☐ *Meets* ☒ *Does not meet*

The site plan calls for 6-foot tall Arborvitae screening planted in an alternate pattern at ten feet on center. The requirement states the evergreen shrubs shall be planted five feet on center.

17. Security fencing: Towers, guy anchor supports, and ground-based equipment buildings shall be enclosed by security fencing not less than eight feet in height and equipped with an appropriate anti-climbing device.

☐ *Meets* ☐ *Does not meet*

The proposed security fencing is 6 feet in height with a one foot barb wire crown.

18. Radiation reporting: It shall be demonstrated that the proposed tower, antenna, and supporting equipment complies with FCC nonionizing radiation requirements for individual and combined facilities.

☐ *Meets* ☐ *Does not meet*

The petitioner's application does not provide sufficient documentation.

19. Interference: No wireless communications tower, antenna, or supporting equipment shall interfere with equipment operated by the City of Crystal Lake.

☐ *Meets* ☐ *Does not meet*
There are no City utility easements on the subject property.

Recommended Conditions:
If a motion to recommend approval of the petitioner's request is made, it should be with the following conditions:

1. Approved plans, reflecting staff and advisory board recommendations, as approved by the City Council:
   A. Application (received 07/30/15)
   B. Existing Tower Analysis (received 07/30/15)
   C. Plan Set (received 07/30/15, dated 07/28/15)
   D. Plat of Survey (received 07/30/15, dated 05/12/15

2. Towers shall either maintain a galvanized steel finish or, subject to any applicable standards of the FAA, be painted a neutral color (i.e., light grey) to reduce visual obtrusiveness or painted in a sky-tone above the top of surrounding trees and in an earth-tone below the treetop level.

3. The design of buildings and related structures shall, to the maximum extent practicable, use materials, colors and architectural styles, which blend into the natural setting and surrounding buildings.

4. The operator shall provide documentation to the City to demonstrate that all franchises and licenses required by law for the construction and/or operation of a tower or antenna have been obtained.

5. No outside storage shall be allowed on any facility site.

6. Towers shall not be artificially lighted, unless required by the FAA or other applicable authority.

7. A single sign measuring no more than two square feet in size can be located on or near the tower, and shall identify the tower owner, the street address of the tower, the owner's identification code for the tower, and a twenty-four-hour emergency contact telephone number.

8. No commercial advertising shall be allowed on the tower or its related facilities.

9. The petitioner shall work with staff to enhance the landscaping buffer along the property lines.

10. The security fencing shall measure 8 feet in height.

11. The driveway leading to the new cell tower will need to be paved per City standards.

12. It shall be demonstrated that the proposed tower, antenna, and supporting equipment complies with FCC nonionizing radiation requirements for individual and combined facilities.

13. The petitioner shall address all of the review comments and requirements of the Community Development, Public Works, Fire and Police Departments.

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BY:

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City of Crystal Lake Development Application

Office Use Only
File # _____

Project Title: IL-00-5777 Crystal Lake South - CST/Verizon Wireless

Action Requested

- ___ Annexation
- ___ Comprehensive Plan Amendment
- ___ Conceptual PUD Review
- ___ Final PUD
- ___ Final PUD Amendment
- ___ Final Plat of Subdivision
- ___ Preliminary PUD
- ___ Preliminary Plat of Subdivision
- ___ Rezoning
- X Special Use Permit
- X Variation
- ___ Other

Petitioner Information

Name: Central States Tower c/o TNG Wireless
Address: 1829 Foether Drive
Indianapolis, IN 46231
Phone: 317-979-1212
Fax: 317-203-0940
E-mail: Darren@TNGEnterprisesllc.com

Owner Information (if different)

Name: Home State Bank NA; Land Trust #4439
Address: 6521 Commercial Road
Crystal Lake, IL 60014
Phone: 815-459-5252
Fax: _____
E-mail: feddersenc@aol.com

Property Information

Project Description: Installation of a 180' Tall Monopole Wireless Structure and associated ground shelter & Equipment within an enclosed, fenced compound

Project Address/Location: 6521 Commercial Rd. Crystal Lake, IL 60014

PIN Number(s): 19-08-276-007

Development Team

Please include address, phone, fax and e-mail

Developer: Central States Tower 333 South Hale St. #100 Wheaton, IL 60187
630-221-8500 / brianm@centralstatestower.com

Architect: Consolidated Land Surveyors 1300 W. Commerce Dr #700 Peoria, IL 61615
309-692-3434 / John@clsland.com

Attorney: N/A

Engineer: Consolidated Land Surveyors

Landscape Architect: N/A

Planner: N/A

Surveyor: Consolidate Land Surveyors

Other:

Signatures

Darren S. Snodgrass — 7/29/2015
PETITIONER: Print and Sign name (*if different from owner*) — Date

As owner of the property in question, I hereby authorize the seeking of the above requested action.

CHRIS L. JOHNSON
VICE PRESIDENT & SR. TRUST OFFICER — 7/29/15
OWNER: Print and Sign name — Date

NOTE: If the property is held in trust, the trust officer must sign this petition as owner. In addition, the trust officer must provide a letter that names all beneficiaries of the trust.

This instrument is executed by Home State Bank/National Association, Crystal Lake, IL., not personally but solely as Trustee as aforesaid. All the covenants and conditions to be performed hereunder by Home State Bank/National Association are undertaken by it solely as Trustee as aforesaid and not individually, and no personal liability shall be asserted or be enforceable against Home State Bank/National Association by reason of any of the covenants, statements, representations or warranties contained in this instrument.

Development Team

Please include address, phone, fax and e-mail

Developer: Central States Tower 333 South Wabash St. #100 Wheaton, IL 60187
630-221-8500 / brianm@centralstatestower.com

Architect: Consolidated Land Surveyors 1300 W. Commerce Dr #700 Peoria, IL 61615
309-692-3434 / JOHN@CLSLAND.COM

Attorney: N/A

Engineer: Consolidated Land Surveyors

Landscape Architect: N/A

Planner: N/A

Surveyor: Consolidate Land Surveyors

Other: _____

Signatures

Darren S. Snodgrass 7/29/2015

PETITIONER: Print and Sign name (*if different from owner*) **Date**

As owner of the property in question, I hereby authorize the seeking of the above requested action.

_____

OWNER: Print and Sign name **Date**

NOTE: If the property is held in trust, the trust officer must sign this petition as owner. In addition, the trust officer must provide a letter that names all beneficiaries of the trust.

HOME STATE BANK N.A.

We're on your side

TRUST DEPARTMENT

CERTIFICATION OF TRUSTEE

I, Chris L. Johnson, Vice President & Sr. Trust Officer for Home State Bank/National Association, Crystal Lake, Illinois, do hereby certify that Home State Bank/NA is the trustee of the following trust:

Land Trust # 4439

and, as trustee, do further certify that the beneficial ownership of said trust as indicated by its records is as follows:

Beneficial Owner(s)

Douglas Fedderson

Collateral Assignee(s)

Home State Bank, N.A

Home State Bank does not by this certification make any warranties, representations or certifications as to the holdings of the trust, the state of title of any real property held therein, or any assignment of beneficial interest not acknowledged by it as trustee.

Home State Bank/NA as Trustee Under Trust 4439

By_____

Chris L. Johnson
Vice President & Sr. Trust Officer

Subscribed and Sworn to before me
this 29th day of July, 2015.

"OFFICIAL SEAL"
JILL HEFFRON
NOTARY PUBLIC, STATE OF ILLINOIS
My Commission Expires 12/29/2017

_____
Notary Public

ofc : 815.459.2000 • fax : 815.459.9876 • 611 S. Main Street • P.O. Box 1738 • Crystal Lake IL 60039-1738
www.homestateonline.com

PUBLIC NOTICE

BEFORE THE PLANNING AND ZONING COMMISSION OF THE CITY OF CRYSTAL LAKE, MCHENRY COUNTY, ILLINOIS

IN THE MATTER OF THE APPLICATION OF
Central Sates Tower c/o TNG Wireless

LEGAL NOTICE

Notice is hereby given in compliance with the Unified Development Ordinance (UDO) of the City of Crystal Lake, Illinois, that a public hearing will be held before the Planning and Zoning Commission of the City of Crystal Lake upon the application of Central States Tower c/o TNG Wireless seeking a Special Use Permit and variation to allow a wireless communication tower at 6521 Commercial Road, Crystal Lake, Illinois. PIN: 19-08-276-007

This application is filed for the purpose of seeking a Special Use Permit pursuant to Article 2-400 to allow a wireless communications tower and a variation from Article 2-400(C)(48)(ix) to allow the monopole tower to be setback less than 110% of the height of the tower from all property lines, as well as any other variations as necessary to complete the project as proposed. Plans for this project can be viewed at the Crystal Lake Community Development Department at City Hall.

A public hearing before the Planning and Zoning Commission for this request will be held at 7:30 p.m. on Wednesday August 19, 2015, at the Crystal Lake City Hall, 100 West Woodstock Street, at which time and place any person determining to be heard may be present.

Tom Hayden, Chairperson
Planning and Zoning Commission
City of Crystal Lake

(Published in the Northwest Herald August 4th, 2015.) NW 7121

City of Crystal Lake Illinois



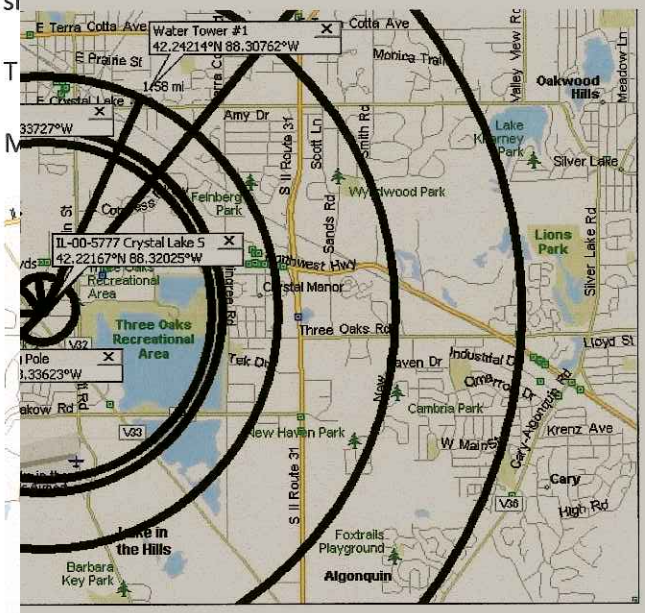
nVicinity

ower Analysis – City of Crystal Lake

nates were provided by the City of Crystal Lake.

a mapping software. The subject property is
577 Crystal Lake S. We then used the software to

ired under the ordinance.

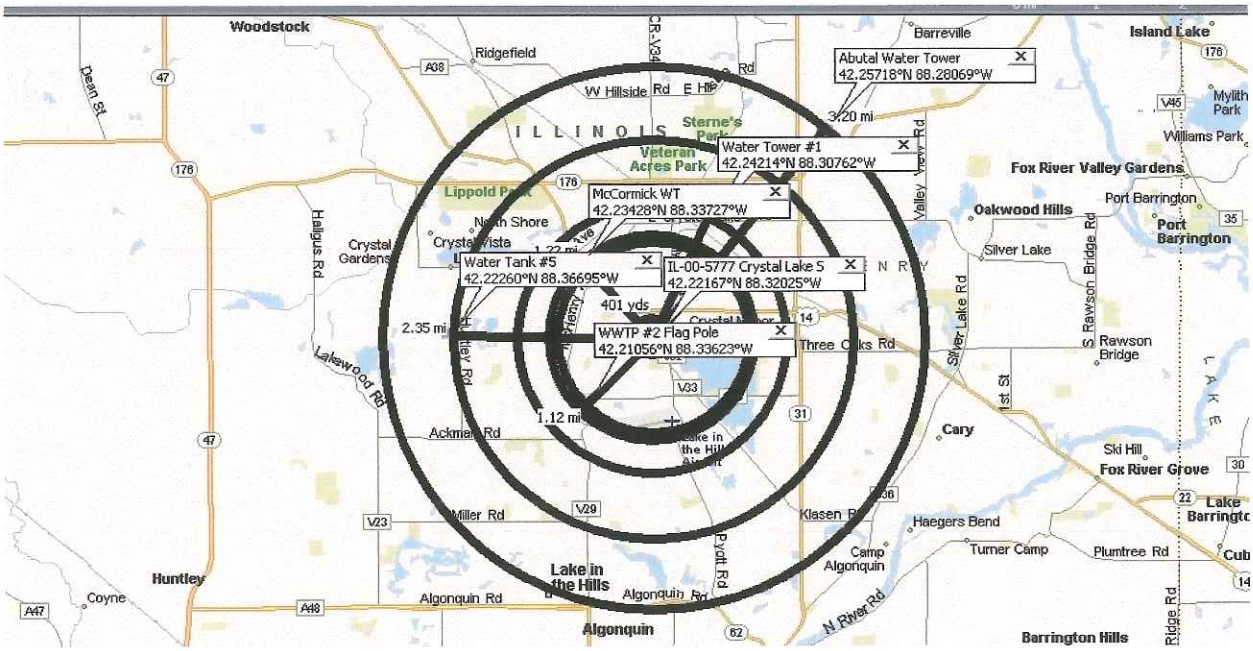


Flag Pole is located 1.12 miles southwest of the
McCormick WT which is 1.22 miles to the Northwest.
miles to the northeast. Last site indicated on this
to the West of the subject property.

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BY:

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Map #2

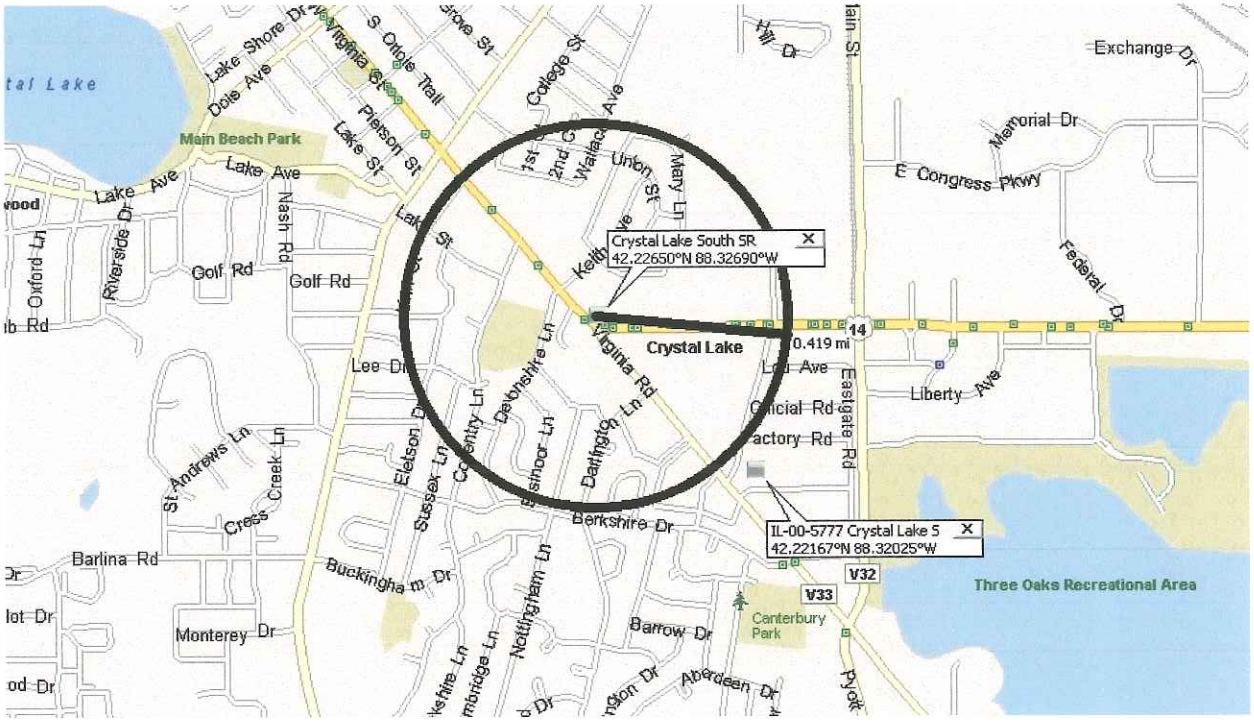


Map # 2 shows the remaining existing structures provided by the City of Crystal Lake, Abutal Water Tower. That Tank is located 3.20 Miles to the northeast of the subject property.

The original target coordinates for our search were 42.2265 / -088.3269 and we were given a search ring of approximately 4/10's of a mile. To find a willing landowner in the area that had a property that was allowable under a special exception we need to go outside our search area a small amount. Even that distance required RF Engineering approval.

Search Area map on next page:

Search Area Map:



All of the existing structures are too far away from the target area and would create service issues within the target area and also cause interference issues with existing sites. Each of the closest exiting sites are approximately 7/10's of a mile beyond the acceptable search parameters.

STATE OF INDIANA)
)
COUNTY OF HENDRICKS)

AFFIDAVIT

Darren S. Snodgrass, after being first duly sworn, states upon his oath that:

As the President of TNG Wireless and working on behalf of our client, Verizon Wireless and their tower development company, Central States Tower, I made all diligent efforts to locate and identify existing structures of height that would meet the needs of my client having given me a target coordinate of 42.2265 / -088.3269 and a search radius of one half mile. Further I made all diligent efforts to locate any existing structures of height within the 1200 foot radius of the selected candidate with coordinates of 42.22167 / -088.32025 as required under the wireless ordinance for the City of Crystal Lake. Having performed said effort I swear under oath that no structure of height currently exists that meets my client's criteria.

Darren S. Snodgrass
President
TNG Wireless
A Division of TNG Enterprises LLC
Email: Darren@TNGEnterprisesllc.com

Subscribed and sworn to before me this 29th day of July, 2015

OFFICIAL SEAL
RICKEY J. DODSON, JR.
NOTARY PUBLIC – INDIANA
HENDRICKS COUNTY
My Comm. Expires May 11, 2016

Notary Public

RECEIVED
JUL 30 2015
BY:

WARRANTY DEED

Sole Tenancy Illinois ...ory

MAIL TO:

Maksymonko & Slater
109 North Main Street
Algonquin, Illinois 60102

NAME & ADDRESS OF TAXPAYER:

Douglas Feddersen
6521 Commercial Drive
Crystal Lake, Illinois 60014

I HEREBY CERTIFY THIS TO BE A TRUE AND EXACT COPY OF THE ORIGINAL.
X
PROFESSIONAL NATIONAL TITLE ... WORK, INC.

RECORDER'S STAMP

THE GRANTOR **Raymond E.** and **Susan L. Ramos,** a married couple
of the **Village** of **Cary** County of **McHenry** State of **Illinois**
for and in consideration of **Ten (10)** DOLLARS
and other good and valuable considerations in hand paid,
CONVEY and WARRANT to **Home State Bank NA; Trust Number 4439, Dated June 13, 1996**
(GRANTEE'S ADDRESS) **40 Grant Street**
of the **City** of **Crystal Lake** County of **McHenry** State of **Illinois**
as Sole Tenant, all interest in the following described Real Estate situated in the County of McHenry, State of Illinois, to wit:

THE EAST 175 FEET OF LOT 4 IN BLOCK 3 IN PARKER'S CRYSTAL LAKE INDUSTRIAL CENTER, A SUBDIVISION OF PART OF SECTION 8, TOWNSHIP 43 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED MAY 10, 1955 AS DOCUMENT NO. 292393, IN BOOK 12 OF PLATS, PAGE 27 IN MCHENRY COUNTY, ILLINOIS.

hereby releasing and waiving all rights under and by virtue of the Homestead Exemption Laws of the State of Illinois.
TO HAVE AND TO HOLD said premises Sole Tenant.

Permanent Index Number(s) **19-08-276-007**

Property Address: **6521 Commercial Drive, Crystal Lake, Illinois 60014**

DATED this **1st** day of **May** 20**00**.

(Seal) **Raymond E. Ramos**

(Seal) **Susan L. Ramos**

(Seal)

(Seal)

NOTE: PLEASE TYPE OR PRINT NAME BELOW ALL SIGNATURES

RECEIVED
JUL 30 2015
BY:

STATE OF ILLINOIS)
County of McHenry) ss

I, the undersigned, a Notary Public in and for said County, in the State aforesaid, DO HEREBY CERTIFY THAT **Raymond E. Ramos** and **Susan L. Ramos**

personally known to me to be the same person(s) whose name(s) subscribed to the foregoing instrument, appeared before me this day in person, and acknowledged that **they** signed, sealed and delivered the said instrument as **their** free and voluntary act, for the uses and purposes therein set forth, including the release and waiver of the right of homestead.

Given under my hand and notarial seal, this **1st** day of **May**, 20**00**.

Kelly Phinney
Notary Public

My commission expires on May 1, 2000

OFFICIAL SEAL
KELLY PHINNEY
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES:06/21/03

IMPRESS SEAL HERE

McHENRY COUNTY - ILLINOIS TRANSFER STAMP

EXEMPT UNDER PROVISIONS OF PARAGRAPH _____
SECTION 4, REAL ESTATE TRANSFER ACT.
DATE:

NAME and ADDRESS OF PREPARER:

R. Winston Slater
109 N. Main Street
Algonquin, Illinois 60102
847-658-1400

Buyer, Seller or Representative

**This conveyance must contain the name and address of the Grantee for tax billing purposes: (Chap. 55 ILCS 5/3-5020) and name and address of the person preparing the instrument: (Chap. 55 ILCS 5/3-5022).

Sabre Industries™
Towers and Poles

July 29, 2015

Mr. Yuri Dobrowolsky
Central States Tower
323 South Hale Street, Suite 100
Wheaton, IL 60187

RE: Proposed 125 ft Sabre Monopole for #IL-00-5777, Crystal Lake South, IL

Dear Mr. Dobrowolsky,

Upon receipt of order, we propose to design and supply the above referenced Sabre monopole for a Basic Wind Speed of 90 mph with no ice and 40 mph with 3/4" ice, Structure Class II, Exposure Category C, and Topographic Category 1, in accordance with the Telecommunications Industry Association Standard ANSI/TIA-222-G, "Structural Standard for Antenna Supporting Structures and Antennas".

When designed according to this standard, the wind pressures and steel strength capacities include several safety factors, resulting in an overall minimum safety factor of 25%. Therefore, it is highly unlikely that the monopole will fail structurally in a wind event where the design wind speed is exceeded within the range of the built-in safety factors.

Should the wind speed increase beyond the capacity of the built-in safety factors, to the point of failure of one or more structural elements, the most likely location of the failure would be within one of the monopole shaft sections. This would result in a buckling failure mode, where the steel shaft would bend beyond its elastic limit (beyond the point where the shaft would return to its original shape upon removal of the wind load).

Therefore, the overall effect of an extreme wind event would be localized buckling of the monopole shaft. Assuming that the wind pressure profile is similar to that used to design the monopole, the shaft will buckle at the location of the highest combined stress ratio in the upper portion of the monopole. This would result in the portion of the monopole above "folding over" onto the portion below, essentially collapsing upon itself. ***Please note that this letter only applies to a monopole designed and manufactured by Sabre Towers & Poles.***

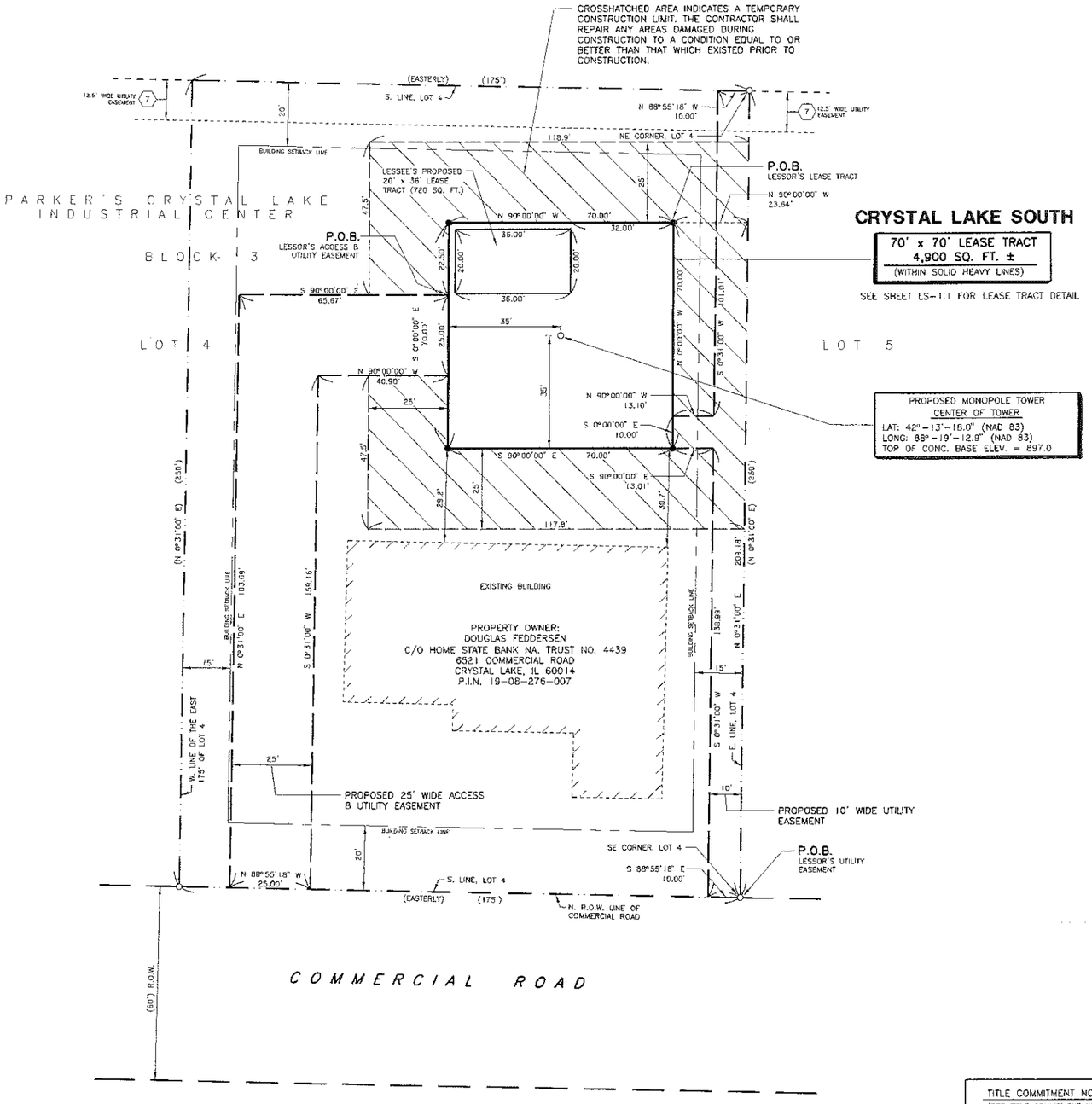
Sincerely,

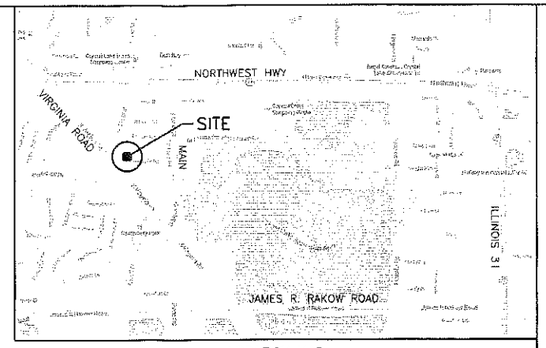
LICENSED STRUCTURAL ENGINEER
KEITH J. TINDALL
081-006014
SIOUX CITY
IOWA
STATE OF ILLINOIS
license expires 11-30-16

7/29/15

Keith J. Tindall, S.E.
Vice President of Engineering

RECEIVED
JUL 30 2015
BY:





LOCATION MAP
NOT TO SCALE

STATE OF ILLINOIS
COUNTY OF PEORIA

WE, CONSOLIDATED LAND SURVEYING, INC. DO HEREBY CERTIFY THAT WE HAVE SURVEYED AND PREPARED A PLAT OF SURVEY OF A PART OF THE EAST 175 FEET OF LOT 4 IN BLOCK 3 IN PARKER'S CRYSTAL LAKE INDUSTRIAL CENTER, A SUBDIVISION OF PART OF SECTION 8, TOWNSHIP 43 NORTH RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, MCHENRY COUNTY, ILLINOIS, AND THAT THE ABOVE PLAT IS A CORRECT REPRESENTATION OF SAID SURVEY
AS MADE BY US AND DRAWN TO A SCALE OF 1 INCH = 20 FEET.

GIVEN UNDER MY HAND AND SEAL THIS 12TH DAY OF MAY A.D. 2015.

CONSOLIDATED LAND SURVEYING, INC.

H. RALPH HODGES, ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 2812

H. RALPH HODGES ILLINOIS LAND SURVEYOR 2812 PEORIA, ILLINOIS

EXPIRES: 11-30-16

TITLE COMMITMENT NOTES:
(PER TITLE COMMITMENT NUMBER 50791-IL 1503-5030, DATED MARCH 12, 2015)

1. SCHEDULE B, ITEM NUMBER 7: EASEMENTS AS NOTED ON THE PARKER'S CRYSTAL LAKE INDUSTRIAL CENTER PLAT DATED 4/26/1955 RECORDED 5/10/1955 IN BOOK 12 PAGE 27.

SEE SHEET LS-1.1 FOR LEGAL DESCRIPTIONS

SEE SHEET LS-1.1 FOR LEASE TRACT DETAIL

LEGEND

- BOUNDARY LINE OF LEASE SITE
- PARENT PARCEL
- RIGHT OF WAY LINE
- BUILDING SETBACK LINE
- EXISTING PROPERTY LINE
- PROPOSED EASEMENT LINE
- EXISTING EASEMENT LINE
- SURVEY PIPE OR ROD FOUND
- IRON ROD SET
- (250') INFORMATION OF RECORD
- P.O.B. POINT OF BEGINNING

0 20 40
scale feet

2015 47

RECEIVED
JUL 30 2015
BY:

CHICAGO SMSA LIMITED PARTNERSHIP, D.B.A. VERIZON WIRELESS

REAL ESTATE MANAGER:
OCTAVIO HERRERA
1515 EAST WOODFIELD RD.
SCHAUMBURG, IL 60173
OFFICE: (847) 619-4142

CONSTRUCTION MANAGER:
RON PAULY
500 TECHNOLOGY DRIVE
2ND FLOOR
WELDON SPRING, MO 63304
OFFICE: (636) 793-9278

CLS
CONSOLIDATED LAND SURVEYING
1300 W. COMMERCE DR. STE. 700
PEORIA, ILLINOIS 61615
LAND SURVEYORS AND PROFESSIONAL ENGINEERS
PHONE: 309-692-3434
FAX: 309-692-3433
PROFESSIONAL DESIGN FIRM NO. 184-002756

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PREPARED BY: HRH 5-12-15

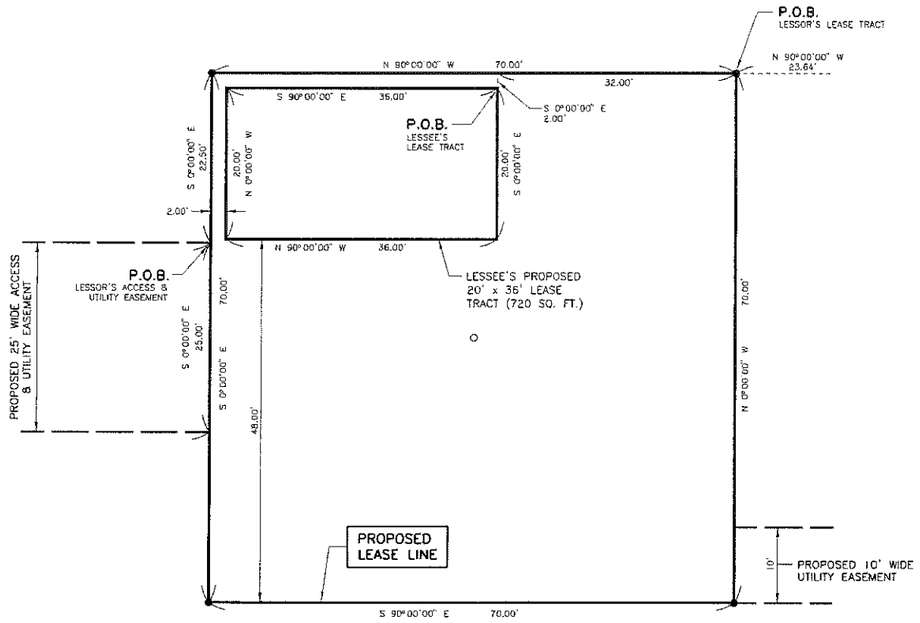
CST
IL 00-5777

SITE NAME:
CRYSTAL LAKE SOUTH

SHEET NAME
LESSEE
PLAT OF SURVEY

SHEET NUMBER
LS-1

JOB NUMBER
9468-43-8-88-03



PROPOSED LEASE TRACT DETAIL
NOT TO SCALE

SEE SHEET LS-1 FOR PLAT OF SURVEY

LEGAL DESCRIPTION
PROPOSED 20' x 36' LEASE TRACT
720 SQ. FT. ±

A 20 FOOT BY 36 FOOT LEASE TRACT AND UTILITY EASEMENT BEING A PART OF LOT 4 IN BLOCK 3 IN PARKER'S CRYSTAL LAKE INDUSTRIAL CENTER, A SUBDIVISION OF PART OF SECTION 8, TOWNSHIP 43 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF SAID LOT 4; THENCE NORTH 00°-31'-00" EAST (BEARINGS ASSUMED FOR THE PURPOSE OF DESCRIPTION ONLY) ALONG THE EAST LINE OF SAID LOT 4, A DISTANCE OF 209.18 FEET; THENCE NORTH 90°-00'-00" WEST, A DISTANCE OF 23.64 FEET; THENCE CONTINUING NORTH 90°-00'-00" WEST, A DISTANCE OF 32.00 FEET; THENCE SOUTH 00°-00'-00" EAST, A DISTANCE OF 2.00 FEET TO THE POINT OF BEGINNING OF THE TRACT TO BE DESCRIBED; THENCE CONTINUING SOUTH 00°-00'-00" EAST, A DISTANCE OF 20.00 FEET; THENCE NORTH 90°-00'-00" WEST, A DISTANCE OF 36.00 FEET; THENCE NORTH 00°-00'-00" WEST, A DISTANCE OF 20.00 FEET; THENCE SOUTH 90°-00'-00" EAST, A DISTANCE OF 36.00 FEET TO THE POINT OF BEGINNING, CONTAINING 720 SQUARE FEET, MORE OR LESS, SITUATED IN THE COUNTY OF MCHENRY AND STATE OF ILLINOIS.

LEGAL DESCRIPTION
PROPOSED 70' x 70' LEASE TRACT
4,900 sq. ft. ±

A 70 FOOT BY 70 FOOT LEASE TRACT AND UTILITY EASEMENT BEING A PART OF LOT 4 IN BLOCK 3 IN PARKER'S CRYSTAL LAKE INDUSTRIAL CENTER, A SUBDIVISION OF PART OF SECTION 8, TOWNSHIP 43 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF SAID LOT 4; THENCE NORTH 00°-31'-00" EAST (BEARINGS ASSUMED FOR THE PURPOSE OF DESCRIPTION ONLY) ALONG THE EAST LINE OF SAID LOT 4, A DISTANCE OF 209.18 FEET; THENCE NORTH 90°-00'-00" WEST, A DISTANCE OF 23.64 FEET TO THE POINT OF BEGINNING OF THE TRACT TO BE DESCRIBED; THENCE CONTINUING NORTH 90°-00'-00" WEST, A DISTANCE OF 70.00 FEET; THENCE SOUTH 00°-00'-00" EAST, A DISTANCE OF 70.00 FEET; THENCE SOUTH 90°-00'-00" EAST, A DISTANCE OF 70.00 FEET; THENCE NORTH 00°-00'-00" WEST, A DISTANCE OF 70.00 FEET TO THE POINT OF BEGINNING, CONTAINING 4,900 SQUARE FEET, MORE OR LESS, SITUATED IN THE COUNTY OF MCHENRY AND STATE OF ILLINOIS.

LEGAL DESCRIPTION
PROPOSED 25' WIDE ACCESS & UTILITY EASEMENT

A 25 FOOT WIDE ACCESS AND UTILITY EASEMENT BEING A PART OF LOT 4 IN BLOCK 3 IN PARKER'S CRYSTAL LAKE INDUSTRIAL CENTER, A SUBDIVISION OF PART OF SECTION 8, TOWNSHIP 43 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF SAID LOT 4; THENCE NORTH 00°-31'-00" EAST (BEARINGS ASSUMED FOR THE PURPOSE OF DESCRIPTION ONLY) ALONG THE EAST LINE OF SAID LOT 4, A DISTANCE OF 209.18 FEET; THENCE NORTH 90°-00'-00" WEST, A DISTANCE OF 23.64 FEET; THENCE CONTINUING NORTH 90°-00'-00" WEST, A DISTANCE OF 70.00 FEET; THENCE SOUTH 00°-00'-00" EAST, A DISTANCE OF 22.50 FEET TO THE POINT OF BEGINNING OF THE EASEMENT TO BE DESCRIBED; THENCE CONTINUING SOUTH 00°-00'-00" EAST, A DISTANCE OF 25.00 FEET; THENCE NORTH 90°-00'-00" WEST, A DISTANCE OF 40.90 FEET; THENCE SOUTH 00°-31'-00" WEST, PARALLEL WITH THE EAST LINE OF SAID LOT 4, A DISTANCE OF 159.16 FEET TO A POINT ON THE SOUTH LINE OF SAID LOT 4; THENCE NORTH 88°-55'-18" WEST ALONG THE SOUTH LINE OF SAID LOT 4, A DISTANCE OF 25.00 FEET; THENCE NORTH 00°-31'-00" EAST, PARALLEL WITH THE EAST LINE OF SAID LOT 4, A DISTANCE OF 183.69 FEET; THENCE SOUTH 90°-00'-00" EAST, A DISTANCE OF 65.67 FEET TO THE POINT OF BEGINNING, SITUATED IN THE COUNTY OF MCHENRY AND STATE OF ILLINOIS.

LEGAL DESCRIPTION
PROPOSED 10' WIDE UTILITY EASEMENT

A 10 FOOT WIDE UTILITY EASEMENT BEING A PART OF LOT 4 IN BLOCK 3 IN PARKER'S CRYSTAL LAKE INDUSTRIAL CENTER, A SUBDIVISION OF PART OF SECTION 8, TOWNSHIP 43 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF SAID LOT 4 AS THE POINT OF BEGINNING OF THE EASEMENT TO BE DESCRIBED; THENCE NORTH 00°-31'-00" EAST (BEARINGS ASSUMED FOR THE PURPOSE OF DESCRIPTION ONLY) ALONG THE EAST LINE OF SAID LOT 4, A DISTANCE OF 250 FEET TO THE NORTHEAST CORNER OF SAID LOT 4; THENCE NORTH 88°-55'-18" WEST ALONG THE NORTH LINE OF SAID LOT 4, A DISTANCE OF 10.00 FEET; THENCE SOUTH 00°-31'-00" WEST, PARALLEL WITH THE EAST LINE OF SAID LOT 4, A DISTANCE OF 101.01 FEET; THENCE NORTH 90°-00'-00" WEST, A DISTANCE OF 13.10 FEET; THENCE SOUTH 00°-00'-00" EAST, A DISTANCE OF 10.00 FEET; THENCE SOUTH 90°-00'-00" EAST, A DISTANCE OF 13.01 FEET; THENCE SOUTH 00°-31'-00" WEST, PARALLEL WITH THE EAST LINE OF SAID LOT 4, A DISTANCE OF 138.99 FEET TO A POINT ON THE SOUTH LINE OF SAID LOT 4; THENCE SOUTH 88°-55'-18" EAST ALONG THE SOUTH LINE OF SAID LOT 4, A DISTANCE OF 10.00 FEET TO THE POINT OF BEGINNING, SITUATED IN THE COUNTY OF MCHENRY AND STATE OF ILLINOIS.

LEGAL DESCRIPTION
EXISTING PARENT PARCEL

THE EAST 175 FEET OF LOT 4 IN BLOCK 3 IN PARKER'S CRYSTAL LAKE INDUSTRIAL CENTER, A SUBDIVISION OF PART OF SECTION 8, TOWNSHIP 43 NORTH RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED MAY 10, 1955 AS DOCUMENT NO. 292393, IN BOOK 12 OF PLATS, PAGE 27 IN MCHENRY COUNTY, ILLINOIS.

CHICAGO SMSA LIMITED PARTNERSHIP, D.B.A. VERIZON WIRELESS

REAL ESTATE MANAGER:
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OFFICE: (847) 619-4142

CONSTRUCTION MANAGER:
RON PAULY
500 TECHNOLOGY DRIVE
2ND FLOOR
WELDON SPRING, MO 63304
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PREPARED BY: HRH 5-12-15

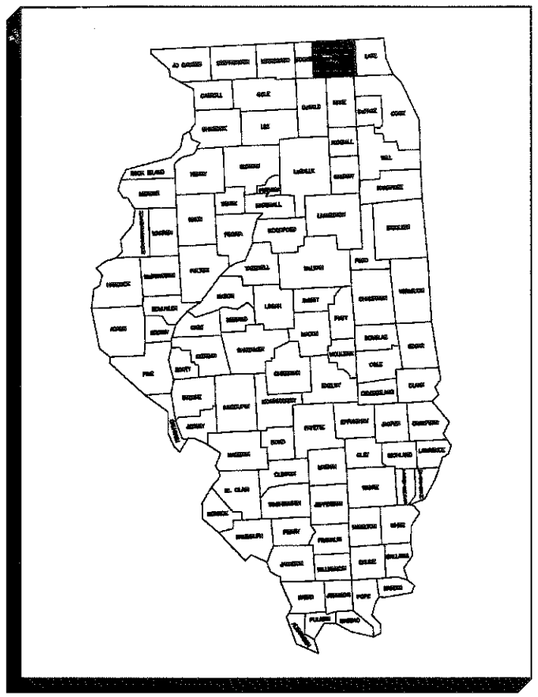
CST
IL 00-5777

SITE NAME:
CRYSTAL LAKE SOUTH

SHEET NAME
LESSEE
PLAT OF SURVEY
LEGAL DESCRIPTIONS

SHEET NUMBER
LS-1.1

JOB NUMBER
9468-43-8-88-03



CHICAGO SMSA LIMITED PARTNERSHIP

D.B.A. VERIZON WIRELESS

SITE NAME: CRYSTAL LAKE SOUTH

CST SITE #: IL 00-5777

SITE NAME: CRYSTAL LAKE

PROJECT NUMBER: 20130992166

LOCATION CODE: 281875

2015 47

RECEIVED
JUL 30 2015
BY:

SITE DATA:

1. PROPOSED RAWLAND SITE
2. PROPOSED OVERALL HEIGHT OF THE MONOPOLE TOWER STRUCTURE TO BE 130'-0" A.G.L. TO THE TOP OF THE LIGHTNING ROD
3. PROPOSED CENTERLINE OF ANTENNAS TO BE MOUNTED AT 120'-0" A.G.L.
4. PROPOSED RIGHT-HANDED PREFABRICATED UNMANNED EQUIPMENT SHELTER (11'-6" x 21'-9 1/2")
5. PROPOSED DIESEL GENERATOR (48KW MAX)
6. PROPOSED 70' x 70' LEASE TRACT

FIBER COORDINATION IS NOT COMPLETE (PENDING FIBER CONTACT). PRIOR TO CONSTRUCTION, CONTACT DESIGNER FOR UPDATE.

CALL J.U.L.I.E. 48 HOURS BEFORE YOU DIG
JULIE
1 (800) 892-0123

CHICAGO SMSA LIMITED PARTNERSHIP, D.B.A. VERIZON WIRELESS

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CONSTRUCTION MANAGER:
RON PAULY
500 TECHNOLOGY DRIVE
2ND FLOOR
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OFFICE: (636) 793-9278

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FAX: 309-692-3433
PROFESSIONAL DESIGN FIRM NO. 184-002760

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REGISTERED PROFESSIONAL ENGINEER
RAMESH CHANDRA BARTH
062-063682
ILLINOIS
EXPIRES: 11-30-15

PREPARED BY: HRH 5-12-15

1	7-28-15	ADDED LANDSCAPING PER CITY COMMENTS

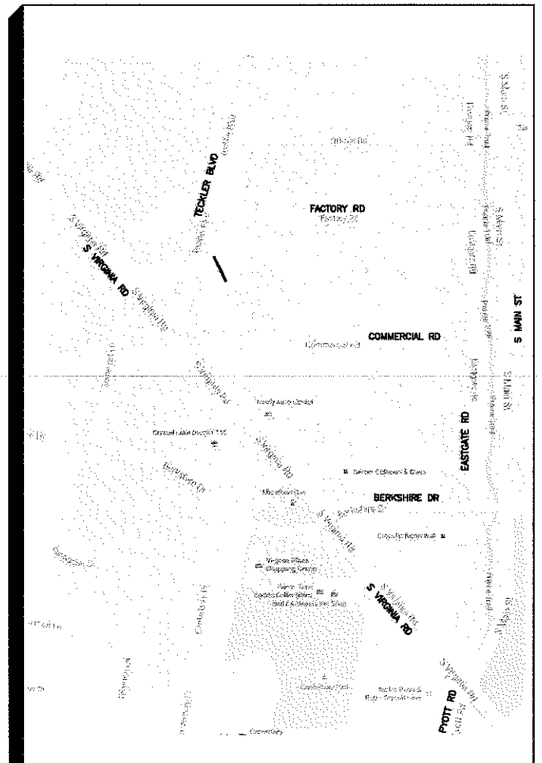
CST
IL 00-5777

SITE NAME:
CRYSTAL LAKE SOUTH

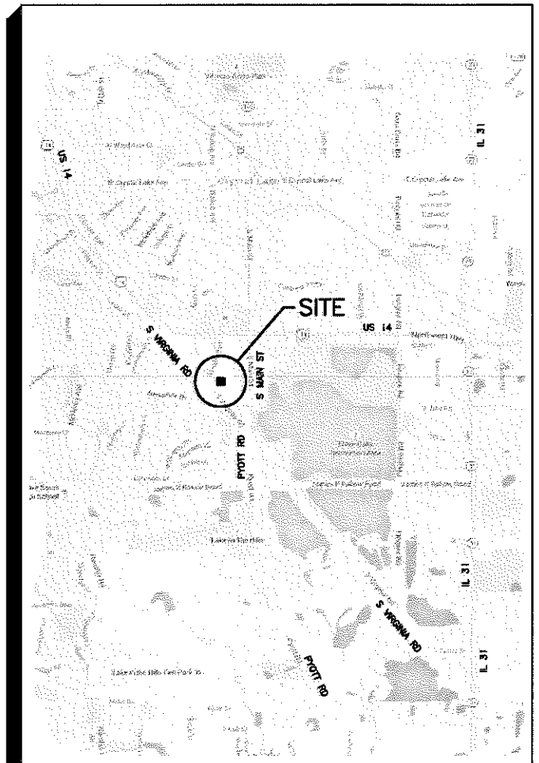
SHEET NAME
TITLE SHEET

SHEET NUMBER
T-1

JOB NUMBER
9468-43-8-8B-03



LOCATION MAP — NO SCALE



VICINITY MAP — NO SCALE

PROJECT SUMMARY

SITE NAME:
CRYSTAL LAKE SOUTH

SITE ADDRESS:
6521 COMMERCIAL ROAD
CRYSTAL LAKE, IL 60014
ALGONQUIN TOWNSHIP
MCHENRY COUNTY

PROPERTY OWNER:
DOUGLAS FEDDERSEN
C/O HOME STATE BANK NA,
TRUST NO. 4439
6521 COMMERCIAL ROAD
CRYSTAL LAKE, IL 60014
815-459-5252

GEOGRAPHIC COORDINATES:
LATITUDE: 42°-13'-18.0" (NAD 83)
LONGITUDE: 088°-19'-12.9" (NAD 83)
A.M.S.L.: ELEV. 897.0

CURRENT ZONING:
M-MANUFACTURING

ZONING OFFICE & BUILDING PERMIT DATA:
CRYSTAL LAKE PLANNING & ECONOMIC DEVELOPMENT DEPARTMENT
100 W. WOODSTOCK STREET
CRYSTAL LAKE, IL 60014
815-356-3615

COST OF BUILDING PERMIT: TO BE DETERMINED

DIRECTIONS TO SITE

FROM SCHAUMBURG, TURN RIGHT ONTO N MEACHAM RD. TURN LEFT ONTO IL-62 W/E ALGONQUIN RD. SLIGHT RIGHT ONTO ALGONQUIN RD. TURN RIGHT ONTO PYOTT RD. TURN LEFT ONTO S VIRGINIA RD. TURN RIGHT ONTO COMMERCIAL RD. SITE IS LOCATED ON THE LEFT (NORTH) SIDE OF THE ROAD BEHIND THE ATHENA GLASS COMPANY.

CONSULTING TEAM

DIRECTOR OF CONSTRUCTION:
YURI DOBROWOLSKY
CENTRAL STATES TOWER III, LLC, A DELAWARE LIMITED LIABILITY COMPANY
323 SOUTH HALE STREET, SUITE 100
WHEATON, IL 30187
PHONE: (630) 221-8500 X104

ELECTRICAL COMPANY:
COMMONWEALTH EDISON
123 ENERGY WAY
ROCKFORD, IL 61109
MIKE PERRON
(815) 477-5204
ACCT# 0899111070

FIBER PROVIDER:

FIRE DEPARTMENT:
CRYSTAL LAKE FIRE STATION #1
100 W. WOODSTOCK STREET
CRYSTAL LAKE, IL 60014
TEL.: (815) 356-3640

SHELTER FOUNDATION STRUCTURAL ENGINEER:
FIBREBOND CORPORATION
1300 Davenport Drive
Minden, Louisiana 71055
1-800-824-2614

SHELTER MANUFACTURER:
FIBREBOND CORPORATION
1300 Davenport Drive
Minden, Louisiana 71055
1-800-824-2614

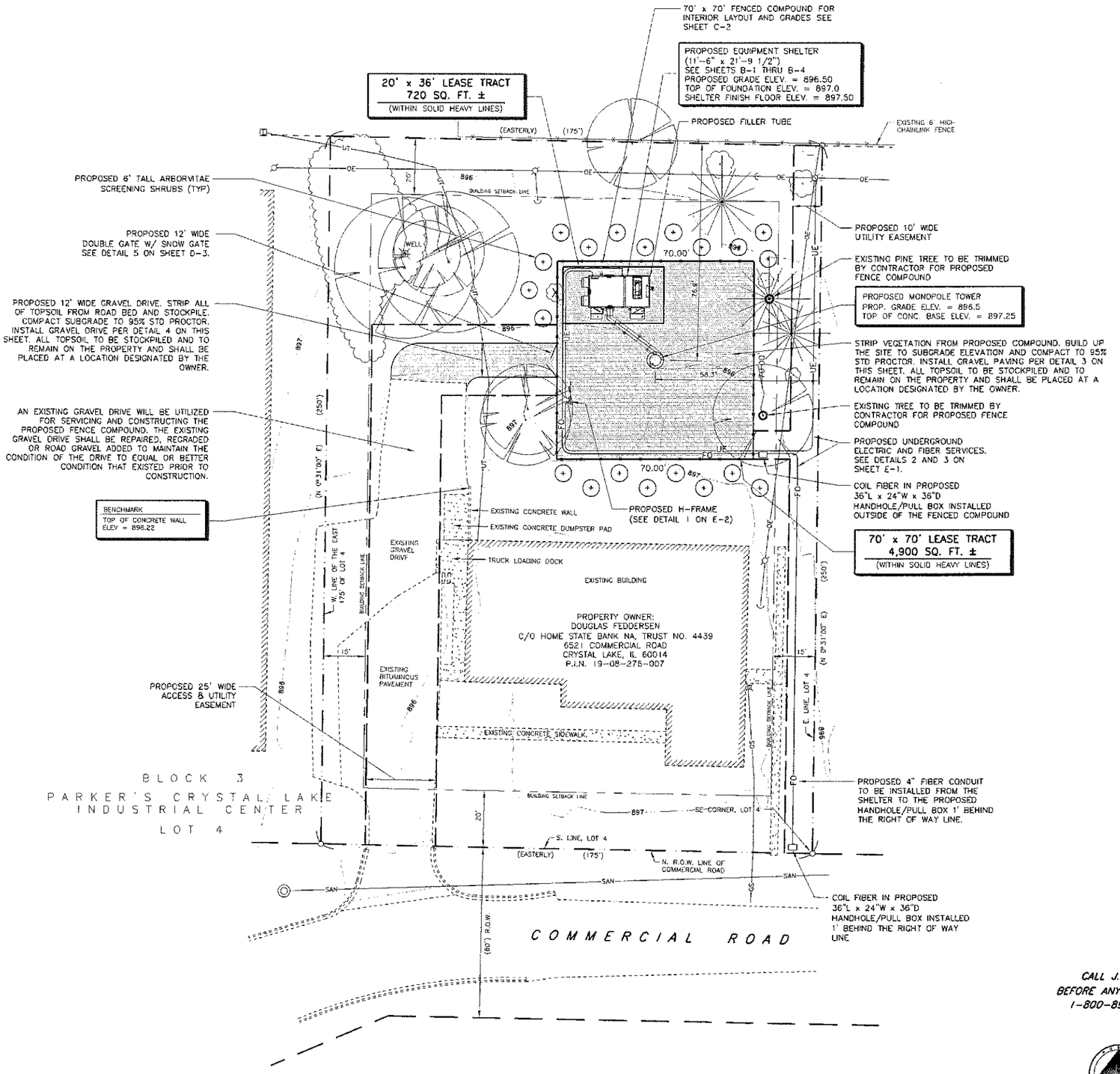
HANDICAP REQUIREMENTS:
FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS REQUIREMENTS DO NOT APPLY.

SURVEYOR/ENGINEER:
CLS
CONSOLIDATED LAND SURVEYING, INC
1300 W. COMMERCE DR. STE. 700 · PEORIA, ILLINOIS 61615
LAND SURVEYORS AND PROFESSIONAL ENGINEERS
309-692-3434
PROFESSIONAL DESIGN FIRM NO. 184-002760
ralphhodges@clsland.com

SHEET INDEX

SHEET No.	DESCRIPTION
T-1	TITLE SHEET
C-1	SITE PLAN
C-2	ENLARGED SITE PLAN
C-3	GENERAL NOTES, EROSION CONTROL
C-4	FOUNDATION PLAN AND DETAILS
LS-1	LESSEE PLAT OF SURVEY
LS-1.1	LESSEE PLAT OF SURVEY LEGAL DESCRIPTIONS
A-1	TOWER ELEVATION & NOTES
A-1.1	ANTENNA INFORMATION
A-1.2	ANTENNA INFORMATION
A-1.3	ANTENNA INFORMATION
A-1.4	ANTENNA INFORMATION
A-1.5	ANTENNA INFORMATION
A-2	ICE BRIDGE/COAX PROFILE WITH GROUNDING
A-3	SHELTER AND GROUNDING SCHEMATIC WITH LEGEND
A-4	GROUNDING DETAILS & NOTES
E-1	UTILITY ROUTING PLAN & NOTES
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SP-1	SPECIFICATIONS
SP-2	SPECIFICATIONS
P-1	SITE PHOTOS
B-1	SHELTER DETAILS
B-2	SHELTER DETAILS
B-3	SHELTER DETAILS
B-4	SHELTER DETAILS
B-5	SHELTER ITEM LIST
NTC-1	NOTICE TO CONTRACTORS

TOWER PLANS AND BUILDING PLANS ARE PROVIDED BY OTHERS AND HAVE BEEN COMBINED AND COMPILED INTO THESE CONSTRUCTION PLANS. SEE GENERAL NOTE 3 ON SHEET C2.



FIBER COORDINATION IS NOT COMPLETE (PENDING FIBER CONTACT). PRIOR TO CONSTRUCTION, CONTACT DESIGNER FOR UPDATE.

CALL J.U.L.I.E. BEFORE ANY EXCAVATION 1-800-892-0123

0 20 40
scale feet

SITE PLAN
SCALE: 1" = 20' 1

BENCHMARK DATUM

LOCATION: TOP OF CONCRETE WALL ADJACENT TO DUMPSTER AREA

ELEVATION: 898.22

LEGEND

- BOUNDARY LINE OF PROPERTY
- EXISTING BUILDING LINE
- IRON ROD SET
- SURVEY PIPE OR ROD FOUND
- 752 EXISTING CONTOUR ELEVATION
- 675.25 OR 675x25 EXISTING SPOT ELEVATION
- EXISTING METER
- EXISTING VALVE
- EXISTING MANHOLE
- UTILITY POLE
- UTILITY POLE WITH TRANSFORMER
- TELEPHONE PEDESTAL
- SAN SANITARY SEWER
- W WATERMAIN
- GS GAS SERVICE
- UE UNDERGROUND ELECTRIC
- OE OVERHEAD ELECTRIC
- UT UNDERGROUND TELEPHONE
- 675.25 OR 675x25 PROPOSED SPOT ELEVATION
- 752 PROPOSED CONTOUR ELEVATION
- CONCRETE SURFACE
- GRAVEL SURFACE
- FENCE LINE
- TREE
- BUSH
- BRUSH LINE
- EXISTING CURB AND GUTTER
- ( ) INFORMATION OF RECORD

ZONING OFFICE & BUILDING PERMIT DATA

CRYSTAL LAKE
PLANNING & ECONOMIC DEVELOPMENT DEPARTMENT
100 W. WOODSTOCK STREET
CRYSTAL LAKE, IL 60014
(815) 356-3614

COST OF BUILDING PERMIT: UNKNOWN

THE CONTRACTOR IS RESPONSIBLE FOR PICKING UP THE BUILDING PERMIT AND FOR PAYING PERMIT FEES

SPECIAL CONSTRUCTION NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST CELL SITE AND RADIO STATION PROTECTION ENGINEERING CONSIDERATIONS, PRACTICE 05-887-030-085, ISSUE 2, DATED JULY 2001,PAGES 1-69.

2. 24 HOURS NOTICE SHALL BE GIVEN TO THE CONSTRUCTION MANAGER AND THE RESPONSIBLE SITE TECHNICIANS PRIOR TO CLOSING TRENCHES FOR INSPECTION OF GROUNDING.

3. THE CONTRACTOR SHALL NOTIFY THE PROPERTY CONTACT OR OWNER A MINIMUM OF 24 HOURS PRIOR TO ENTERING THE PROPERTY.

4. THE CONTRACTOR SHALL COMPLY WITH ALL OCCUPATIONAL SAFETY AND HEALTH STANDARDS ISSUED UNDER THE OSH ACT THAT APPLY TO ACTIONS AND CONDUCT OF WORKERS AND PERSONNEL ON THE JOB SITE.

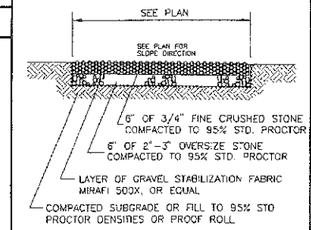
5. THE CONTRACTOR MUST FURNISH ALL EMPLOYEES A SAFE AND HEALTHFUL WORKING ENVIRONMENT FREE FROM RECOGNIZED HAZARDS.

6. THE CONTRACTOR SHALL PROVIDE PERSONAL PROTECTIVE EQUIPMENT FOR ALL WORKERS AND PERSONNEL.

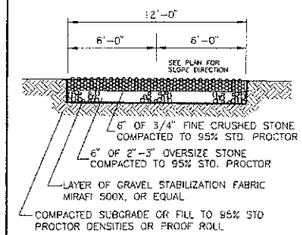
7. THE SITE CONTRACTORS SHALL BE MINDFULL OF KEEPING THE ACCESS DRIVE AND THE PUBLIC STREET CLEAN OF DEBRIS, MUD AND DIRT DURING CONSTRUCTION. THEY SHALL PROVIDE CLEAN-UP AT LEAST TWICE DAILY AS NEEDED OR AS DIRECTED BY THE TOWNSHIP INSPECTIONS DEPARTMENT.

2

GRAVEL SECTION SHOWN SHALL EXTEND TO THE PROPOSED LEASE LINE UNLESS OTHERWISE SHOWN ON THIS PLAN. MATCH EXISTING GRADE.



GRAVEL COMPOUND PAVING DETAIL 3
NOT TO SCALE



GRAVEL ACCESS DRIVE DETAIL 4
NOT TO SCALE

CONSTRUCTION NOTES

1. The locations of existing utilities shown on this sheet are only approximate and may not be complete. The contractor shall verify location of all utilities in the field prior to commencing construction. Protect all existing utilities which are to remain. Upon discovery of unknown or concealed utilities, notify architect/owner immediately. Call J.U.L.I.E. at 1-800-892-0123.

2. All proposed construction work shall be in accordance with the latest edition of the standard specifications for road and bridge construction in Illinois.

3. All utility trenches in structural areas shall be backfilled to subgrade with trench backfill material and compacted to at least 95 percent of maximum dry density as determided by the standard proctor.

4. A minimum of 8 inches of topsoil shall be placed in all unpaved disturbed areas. Topsoil shall be fertile, friable, sandy loam and shall be free of roots, sticks and any other extraneous materials and toxic substances. Finish grade all unpaved disturbed areas to a condition suitable for landscaping.

5. Traffic control during construction shall be in accordance with state and city requirements. At all times traffic control and construction procedures shall be performed in a way as to provide reasonable safety to all involved, including, but not limited to, construction workers, motorists and pedestrians. The safety of all involved shall be the sole responsibility of the contractor.

6. All existing surrounding areas and property shall be properly protected from damage and left undamaged from operations of the contractor. If such damage occurs, it shall be the sole responsibility of the contractor.

7. Contractor shall verify all dimensions shown on the tower plans.

8. Contractor shall acquire all permits that are required by the local authorities, and all construction work shall be performed in compliance with the requirements of all applicable local, state and federal laws, regulations and rules.

9. See tower and building plans for respective site details.

10. Elevations are above mean sea level.

11. Do not scale any dimensions from this drawing.

12. All existing recorded easements are indicated on this drawing to the best of the surveyors knowledge per visual inspection, survey drawings and information received from the developer. Contractor shall contact J.U.L.I.E. at 1-800-892-0123 48 hours prior to start of construction to have underground utilities located and marked.

13. All construction shall conform to the 1996 BOCA code, NEC code, IBC 2003 and per local county requirements.

5

CHICAGO SMSA LIMITED PARTNERSHIP, D.B.A. VERIZON WIRELESS

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SCHAUMBURG, IL 60173
OFFICE: (847) 619-4142

CONSTRUCTION MANAGER:
RON PAULY
500 TECHNOLOGY DRIVE
2ND FLOOR
WELDON SPRING, MO 63304
OFFICE: (636) 793-9278

CLS
CONSOLIDATED LAND SURVEYING
1300 W. COMMERCE DR. STE. 700
PEORIA, ILLINOIS 61615
LAND SURVEYORS AND PROFESSIONAL ENGINEERS
PHONE: 309-692-3434
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PROFESSIONAL DESIGN FIRM NO. 184-002756

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PREPARED BY: HRH 5-12-15

1	7-28-15	ADDED LANDSCAPING PER CITY COMMENTS

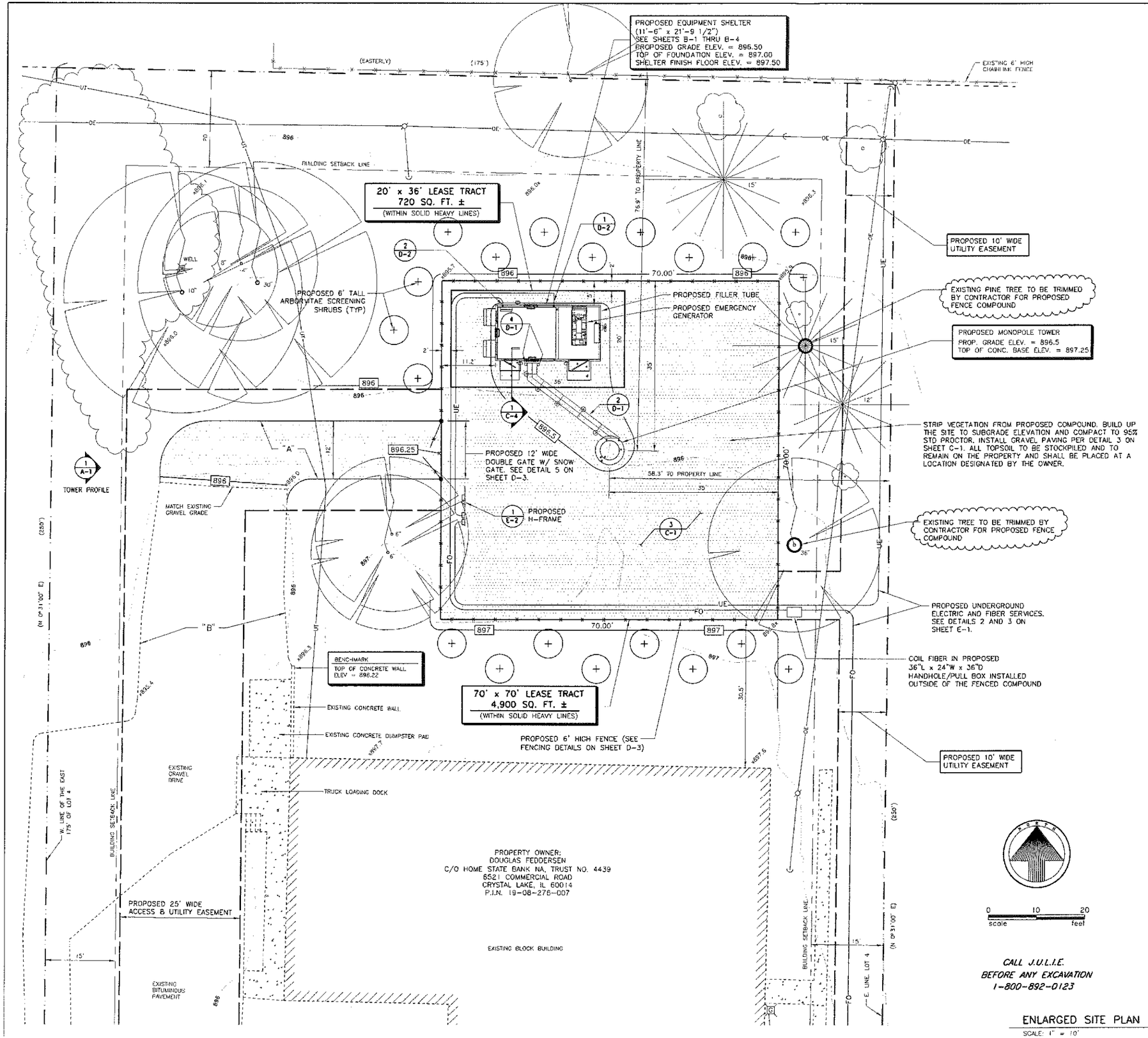
CST
IL 00-5777

SITE NAME:
CRYSTAL LAKE SOUTH

SHEET NAME
SITE PLAN

SHEET NUMBER
C-1

JOB NUMBER
9468-43-8-8B-03



"A" PROPOSED 12' WIDE GRAVEL DRIVE. STRIP ALL OF TOPSOIL FROM ROAD BED AND STOCKPILE. COMPACT SUBGRADE TO 95% STD PROCTOR. INSTALL GRAVEL DRIVE PER DETAIL 4 ON SHEET C-1. MATCH EXISTING ADJACENT GRADES. ALL TOPSOIL TO BE STOCKPILED AND TO REMAIN ON THE PROPERTY AND SHALL BE PLACED AT A LOCATION DESIGNATED BY THE OWNER.

"B" AN EXISTING GRAVEL DRIVE WILL BE UTILIZED FOR SERVICING AND CONSTRUCTING THE PROPOSED FENCE COMPOUND. THE EXISTING GRAVEL DRIVE SHALL BE REPAIRED, REGRADED OR ROAD GRAVEL ADDED TO MAINTAIN THE CONDITION OF THE DRIVE TO EQUAL OR BETTER CONDITION THAT EXISTED PRIOR TO CONSTRUCTION.

FIBER COORDINATION IS NOT COMPLETE (PENDING FIBER CONTACT). PRIOR TO CONSTRUCTION, CONTACT DESIGNER FOR UPDATE.

BENCHMARK DATUM

LOCATION: TOP OF CONCRETE WALL ADJACENT TO DUMPSTER PAD

ELEVATION: 898.22

GENERAL NOTES

1. SEE SHEET C-1 FOR LEGEND.
2. SEE SHEET C-3, SP-1 & SP-2 FOR CONSTRUCTION NOTES & SPECIFICATIONS.
3. TOWER PLANS, BUILDING PLANS, GROUNDING PLANS AND ANTENNA CONFIGURATION DESIGN WERE PROVIDED BY DIFFERENT ENGINEERING FIRMS AND EQUIPMENT MANUFACTURES. CONSOLIDATED LAND SURVEYING, INC. HAS COMBINED AND COMPILED THIS DATA INTO CONSTRUCTION PLANS FOR THIS PROJECT.
4. ALL SITE PREPARATION AND UTILITIES CONSTRUCTION CONCERNING GRAVEL, PAVEMENTS, TRENCHING, BACKFILLING, STORM SEWER, EXCAVATION, ETC., IF NOT SPECIFICALLY DETAILED OR SPECIFIED SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION IN ILLINOIS AND ARE AVAILABLE AT OUR OFFICE FOR EXAMINATION.

CONTRACTOR NOTES

1. IF THE CONTRACTOR ENCOUNTERS A CONFLICT OR DISCREPANCY BETWEEN THE PLAN VERSUS SITE CONDITIONS OR LOCAL CODES, HE SHALL CONTACT THE OWNER OR OWNER'S REPRESENTATIVE TO ADDRESS AND RESOLVE THESE CONFLICTS OR DISCREPANCIES, PRIOR TO BIDDING.
2. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE ELECTRICAL POWER PROVIDER AND INCLUDING THE COST OF OBTAINING ELECTRICAL SERVICE IN THEIR BID.
3. THE CONTRACTOR SHALL INCLUDE IN THEIR BID AND IS RESPONSIBLE FOR THE COST OF THE ANTENNA MOUNTS, COAX SUPPORTS, AS NEEDED, THE COAX BRIDGE AND ALL NECESSARY HARDWARE.
4. THE CONTRACTOR SHALL INCLUDE IN THEIR BID AND IS RESPONSIBLE FOR THE PROPOSED ANTENNA INSTALLATION WORK AND ALL NECESSARY HARDWARE SUCH AS (BUT NOT LIMITED TO), THE TOP TOWER MOUNTS, THE INSIDE TOWER MOUNTS THE COAX BRIDGE, CABLE LADDER, ANTENNA MOUNTS AND MOUNTS FOR THE COAX BRIDGE.
5. THE CONTRACTOR SHALL INCLUDE IN THEIR BID AND IS RESPONSIBLE FOR THE COST OF EXTENDING THE GENERATOR VENT PIPE 6 INCHES ABOVE THE ROOF LINE AFTER THE BUILDING IS IN PLACE.
6. THE CONTRACTOR SHALL INCLUDE IN THEIR BID AND IS RESPONSIBLE FOR THE COST OF INSTALLING THE GPS ANTENNA ON A 1 1/4" DIA. GALVANIZED PIPE, ANTENNA MOUNTS AND ALL NECESSARY HARDWARE AND BRACKETS. THE GPS ANTENNA SHALL BE MOUNTED TO THE COAX BRIDGE AS SHOWN ON THE PLAN.
7. THE CONTRACTOR SHALL SWEEP TEST ALL COAX LINES AND VERIFY WITH OPERATIONS PERSONNEL PRIOR TO PULLING OFF THE JOB. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 48 HOURS NOTICE PRIOR TO THE TIME OF THE SWEEP TEST.
8. THE CONTRACTOR SHALL BRING THE COAX LINES FROM THE COAX BRIDGE TO INSIDE THE EQUIPMENT SHELTER BEFORE CUTTING THE COAX.
9. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING ALL CONSTRUCTION DOCUMENTS AND CONSTRUCTION PLANS PRIOR TO SUBMITTING THEIR BID. THE SUBMITTAL OF THEIR BID ACKNOWLEDGES THAT THEIR REVIEW OF SUCH DOCUMENTS AND PLANS ARE COMPLETE.
10. THE CONTRACTOR SHALL COMPLY WITH ALL OCCUPATIONAL SAFETY AND HEALTH STANDARDS ISSUED UNDER THE OSH ACT THAT APPLY TO ACTIONS AND CONDUCT OF WORKERS AND PERSONNEL ON THE JOB SITE.
11. THE CONTRACTOR MUST FURNISH ALL EMPLOYEES A SAFE AND HEALTHFUL WORKING ENVIRONMENT FREE FROM RECOGNIZED HAZARDS.
12. THE CONTRACTOR SHALL PROVIDE PERSONAL PROTECTIVE EQUIPMENT FOR ALL WORKERS AND PERSONNEL.
13. LOCATION OF ANY FIELD TILE IS UNKNOWN. CONTRACTOR SHALL FIELD VERIFY TILE LOCATIONS PRIOR TO CONSTRUCTION, AS WELL AS USE CAUTION TO PREVENT ANY DAMAGE TO SAID TILE. ANY DAMAGE THAT OCCURS DURING CONSTRUCTION TO FIELD TILE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND/OR REPLACE.

ENLARGED SITE PLAN
SCALE: 1" = 10'
1

CHICAGO SMSA LIMITED PARTNERSHIP, D.B.A. VERIZON WIRELESS

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PREPARED BY: HRH 5-12-15

1	7-28-15	ADDED LANDSCAPING PER CITY COMMENTS

CST
IL 00-5777

SITE NAME:
CRYSTAL LAKE SOUTH

SHEET NAME
ENLARGED SITE PLAN

SHEET NUMBER
C-2

JOB NUMBER
9468-43-8-8B-03

EROSION AND SEDIMENT CONTROL MEASURES:

UNLESS OTHERWISE INDICATED, ALL VEGETATION AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY FOR SOIL EROSION AND SEDIMENT CONTROL.

SCHEDULE OF EROSION AND SEDIMENT CONTROL MEASURES:

THE FOLLOWING SEQUENCE OF EVENTS AND EROSION CONTROL MEASURES SHALL BE INCORPORATED INTO THE CONSTRUCTION SCHEDULE FOR THIS PROJECT AND SHALL APPLY TO ALL CONSTRUCTION ACTIVITIES WITHIN THE PROJECT LIMITS:

1. ALL STORM WATER MANAGEMENT FACILITIES INCLUDING EROSION CONTROL ARE TO BE INSTALLED AND MADE OPERATIONAL AS A FIRST STEP BEFORE THE START OF CLEARING AND GRUBBING OPERATIONS.

2. ALL UNPAVED AREAS AND/OR AREAS DISTURBED BY CONSTRUCTION SHALL HAVE TOPSOIL PLACED AND BE SEEDED.

3. ALL DISTURBED AREAS, WHICH ARE NOT DESIGNATED FOR PAVING, UTILITY OR STRUCTURAL USES OR AREAS THAT HAVE BEEN STRIPPED AND HAVE FINAL GRADE ESTABLISHED, SHALL HAVE PERMANENT SOIL STABILIZATION APPLIED WITHIN SEVEN DAYS THEREAFTER. ALL STRIPPED AREAS THAT DO NOT HAVE FINAL GRADE ESTABLISHED, SHALL HAVE TEMPORARY SOIL STABILIZATION APPLIED WITHIN SEVEN DAYS THEREAFTER.

4. INLET PROTECTION SHALL BE INSTALLED AT ALL STORM WATER STRUCTURES (WHEN PRESENT) TO PREVENT SEDIMENT FROM ENTERING THE STORM SEWER SYSTEM.

5. A WEEKLY RECORD OF EROSION/SEDIMENT CONTROL MEASURES AND MAINTENANCE SHALL BE MAINTAINED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EROSION CONTROL MEASURES AND MAINTENANCE THROUGHOUT THE LIFE OF CONSTRUCTION.

EROSION AND SEDIMENT CONTROL MAINTENANCE:

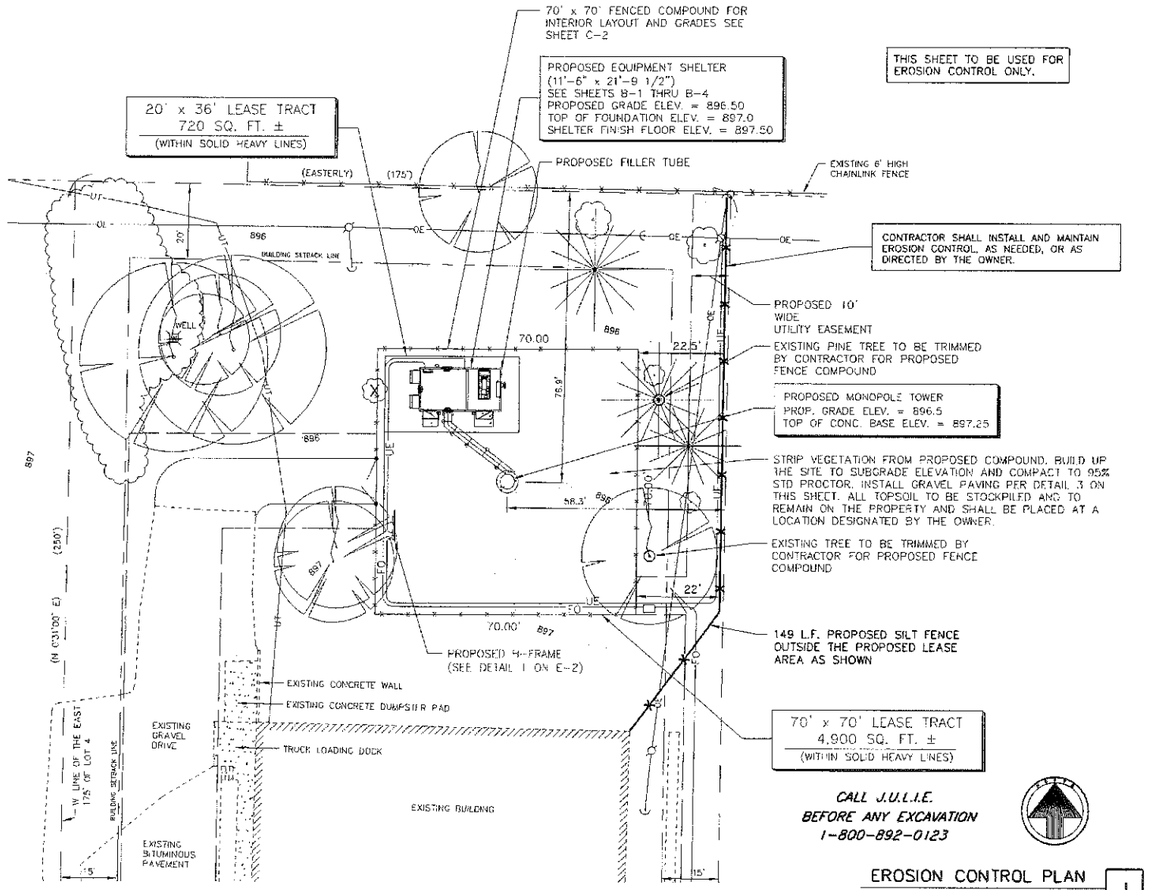
IN GENERAL, ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED AFTER EACH RAINFALL OR WEEKLY, WHICHEVER IS MOST FREQUENT, AND SHOULD BE CLEANED AND REPAIRED ACCORDING TO THE FOLLOWING SCHEDULE:

1. SILT FENCES SHALL BE CHECKED AFTER EVERY RAINFALL AND AT LEAST DAILY DURING PROLONGED PERIODS OF RAIN. SEDIMENTS MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY 1/2 THE HEIGHT OF THE SILT FENCE.

2. STRAW BALE BARRIERS WILL BE CHECKED REGULARLY FOR UNDERMINING OR DETERIORATION OF THE BALES.

3. ALL SEEDED AREAS WILL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RE-SEEDED AS NEEDED.

4. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DISPOSED OF WITHIN 30 DAYS FOLLOWING FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE CONSTRUCTION MANAGER/ ENGINEER.



CALL J.U.L.I.E.
BEFORE ANY EXCAVATION
1-800-892-0123

THIS SHEET TO BE USED FOR EROSION CONTROL ONLY.

EROSION CONTROL PLAN
NOT TO SCALE

1

GENERAL NOTES

1. SCHEDULE: THE CONSTRUCTION OF THE SITE REQUIRES A CERTAIN SEQUENCE OF EVENTS TO MINIMIZE CONSTRUCTION TIME REQUIRED UNTIL AVAILABILITY OF CELLULAR TELEPHONE SERVICE.

2. BENCHMARK: SEE SURVEY FOR ADDITIONAL INFORMATION.

3. CONSTRUCTION STAKING: THE GENERAL CONTRACTOR SHALL CONTACT THE SURVEYOR TO SCHEDULE CONSTRUCTION STAKING AT LEAST 48 HOURS PRIOR TO SITE LAYOUT. SURVEYOR TO STAKE LEASE AREA CORNERS, SHELTER CORNERS, FENCE CORNERS, CENTER OF TOWER AND CENTERLINE OF ALL ACCESS AND UTILITY EASEMENTS. ANY SITE CONSTRUCTION LAYOUT WORK DONE BY ANY OTHER(S) THAN CONSOLIDATED LAND SURVEYING INC., SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR CONSTRUCTING THE PROPOSED IMPROVEMENTS SHALL HAVE A RESPONSIBILITY IN CHECKING AND VERIFYING GRADE ELEVATIONS PRIOR TO INSTALLATION OF SAID IMPROVEMENTS. THE CONTRACTOR SHALL ALSO USE QUALIFIED AND COMPETENT PERSONNEL THAT CAN RECOGNIZE AND UNDERSTAND PROPER CONSTRUCTION TECHNIQUES AND PROCEDURES AND CAN RECOGNIZE IRREGULARITIES OF CONFLICTS ON THE PLANS OR ON THE CONSTRUCTION SITE WHICH WOULD NEED TO BE CORRECTED. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER AND/OR ENGINEER OF ANY DISCREPANCIES, CONFLICTS OR ERRORS FOUND ON THE PLANS OR ON THE CONSTRUCTION SITE IMMEDIATELY.

4. SITE CLEARING – EXCAVATION AND FILL: ALL NEW SHELTER AND TOWER LOCATIONS SHALL BE CLEARED OF ALL TOPSOIL AND VEGETATION. CONTRACTOR SHALL USE EXCAVATED MATERIAL FROM FOUNDATION EXCAVATION AND SHALL PROVIDE SPREAD AND COMPACT GRAVEL AS REQUIRED TO BRING SHELTER UP TO ELEVATIONS AS INDICATED BY THE FINAL GRADE ELEVATIONS AS SHOWN ON THE PLANS.

5. SHELTER LOCATION: THE GENERAL CONTRACTOR SHALL VERIFY THAT THE SHELTER FOUNDATION IS LOCATED CORRECTLY WITH RESPECT TO EXISTING OR PROPOSED SHELTER(S), TOWER AND FENCE CORNERS. THE CONTRACTOR MUST NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES PRIOR TO POURING CONCRETE.

6. PREFABRICATED SHELTER: THE GENERAL CONTRACTOR SHALL PROVIDE ALL LABOR, EQUIPMENT AND MATERIALS FOR THE PROPER LIFTING OF THE SHELTER FROM THE TRANSPORT TRUCK BED TO THE FINAL POSITION ON THE CONCRETE FOUNDATION. THE SHELTER SHALL BE LIFTED INTO PLACE BY USING EIGHT (8) LIFTING EYELETS PROVIDED BY THE SHELTER MANUFACTURER. THE SHELTER MANUFACTURER REQUIRES EIGHT (8) 3/4" DIAMETER, 15' LONG STEEL CABLES CONNECTED TO THE SPREADER BAR. IF THE SPREADER BAR IS AT LEAST TWO FEET WIDER THAN THE SHELTER, CORNER PROTECTORS WILL NOT NEED TO BE USED. THE APPROXIMATE WEIGHT OF THE SHELTER WITH THE TELEPHONE EQUIPMENT IS 72,000 LBS. THE CONTRACTOR SHALL ANCHOR THE SHELTER TO THE CONCRETE SLAB WITH STEEL PLATES AND ANCHOR BOLTS PROVIDED BY THE SHELTER MANUFACTURER. THE EQUIPMENT SHELTER SHALL NOT BE USED FOR THE STORAGE OF ANY MATERIALS, TOOLS, ETC. USED BY THE CONTRACTOR OR SUBCONTRACTORS.

7. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF THE ELECTRICAL DISCONNECT, DOOR CANOPIES (WITH CAULKING), EXTERIOR LIGHT FIXTURE, GENERATOR LOOSE SHIP MATERIALS, INCLUDING FUELING, START UP AND TESTING (COORDINATE WITH OPERATIONS TO SET GENERATOR ROUTINE RUN DATE).

8. UTILITIES: THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE EXCAVATION AND PROPER BACK FILLING OF TRENCHES REQUIRED FOR UNDERGROUND TELEPHONE AND ELECTRICAL UTILITIES. SEE SHEET D-1 AND D-2 FOR THE UTILITY TRENCH PLAN AND DETAILS. COORDINATE SERVICE DATE WITH THE RESPECTIVE UTILITY COMPANIES.

9. THE GENERAL CONTRACTOR SHALL INSTALL THE TOWER FOUNDATION, INCLUDING THE ANCHOR BOLTS AS FURNISHED BY THE TOWER MANUFACTURER. TOWER FABRICATION, ERECTION, AND ANTENNA INSTALLATION SHALL BE BY OTHERS.

10. ACCESS DRIVEWAY: THE GENERAL CONTRACTOR SHALL CONSTRUCT THE ACCESS DRIVEWAY PER THE ALIGNMENT AND CROSS SECTION ON THE DRAWINGS. IF ANY AREA OF CONSTRUCTION REQUIRES MORE FILL OF AGGREGATE STONE THAN SHOWN ON THE DRAWINGS, THE GENERAL CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER AND/OR ENGINEER FOR APPROVAL OF THE SIZE, TYPE AND QUANTITY OF STONE/FILL NECESSARY, AND SHALL NOT BE USED UNTIL APPROVAL BY THE CONSTRUCTION MANAGER/ENGINEER.

11. ANTENNAS INSTALLATION: ALL ANTENNAS AND LINES AND ICE BRIDGE SHALL BE INSTALLED BY THE ANTENNA CONTRACTOR. DURING THIS WORK THE GENERAL CONTRACTOR SHALL BE LIMITED TO THE WORK WHICH CAN BE PERFORMED IN THE VICINITY OF THE TOWER.

12. HERBICIDE: AFTER PLACEMENT AND COMPACTING OF FILL AROUND THE PREFABRICATED SHELTER AND BEFORE PLACEMENT OF LIMESTONE SURFACE, A WEED BARRIER SHALL BE PLACED AND HERBICIDE SHALL BE SPRAYED OVER ALL DISTURBED AREAS.

13. TRASH REMOVAL: THE GENERAL CONTRACTOR SHALL REMOVE ALL TRASH AS CREATED BY HIMSELF AND HIS SUBCONTRACTORS AND ALSO BY OTHER CONTRACTORS, INCLUDING CABLE REELS, CARDBOARD BOXES AND PACKAGING. THE GENERAL CONTRACTOR SHALL PROVIDE A TRASH DUMPSTER (40 YARD ROLL-OFF) ON THE SITE UNTIL ALL CONSTRUCTION WORK AND EQUIPMENT INSTALLATION WORK HAS BEEN COMPLETED. ALL TRASH SHALL BE REMOVED FROM THE SITE IN A TIMELY FASHION TO A LEGAL DISPOSAL AREA. FAILURE TO PROVIDE A DUMPSTER ON SITE WILL RESULT IN A $1,000.00 REDUCTION IN THE CONTRACT AMOUNT.

14. FINAL CLEAN UP: UPON COMPLETION OF ALL WORK BY THE GENERAL CONTRACTOR AND ALL OTHER CONTRACTORS ON THIS PROJECT, THE GENERAL CONTRACTOR SHALL STRIP AND CLEAN THE FLOOR OF THE SHELTER USING AN INDUSTRIAL STRIPPING MACHINE. THE FINISHED FLOOR SHALL BE CLEAN AND DUST FREE. NO SURFACE FINISHES SHALL BE APPLIED. THE GENERAL CONTRACTOR IS ALSO RESPONSIBLE FOR THE REMOVAL OF ALL EXCESS MATERIALS FROM INSIDE THE SHELTER ALONG WITH SHIPMENT OF NOTED MATERIALS BACK TO THE OWNER.

15. GENERAL CONTRACTOR SHALL REQUEST DELIVERY OF ANTENNAS AND MISCELLANEOUS MATERIALS WHEN READY TO RECEIVE AND INVENTORY. ANY SHORTAGES MUST BE REPORTED TO THE CONSTRUCTION MANAGER WITHIN 48 HOURS OF DELIVERY.

16. THE GENERAL CONTRACTOR SHALL PROVIDE AND MAINTAIN A PORTABLE TOILET ON SITE DURING THE DURATION OF THE CONSTRUCTION PROJECT.

17. UNDERGROUND UTILITY LOCATION: CONTACT J.U.L.I.E. (800) 892-0123 AT LEAST 48 HOURS PRIOR TO DIGGING.

18. THE CONTRACTOR WILL, UPON BECOMING AWARE OF SUBSURFACE OR LATENT PHYSICAL CONDITIONS DIFFERING FROM THOSE DISCLOSED BY THE ORIGINAL SOIL INVESTIGATION WORK, PROMPTLY NOTIFY THE OWNER VERBALLY TO PERMIT VERIFICATION OF THE CONDITIONS, AND IN WRITING, AS TO THE NATURE OF THE DIFFERING CONDITIONS. NO CLAIM BY THE CONTRACTOR FOR ANY CONDITIONS DIFFERING FROM THOSE ANTICIPATED IN THE PLANS AND SPECIFICATIONS AND DISCLOSED BY THE STUDIES WILL BE ALLOWED UNLESS THE CONTRACTOR HAS SO NOTIFIED THE OWNER, VERBALLY AND IN WRITING, AS REQUIRED ABOVE, OF SUCH DIFFERING SUBSURFACE CONDITIONS.

19. THE GENERAL CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER 48 HOURS PRIOR TO POURING CONCRETE FOR SHELTER FOUNDATION.

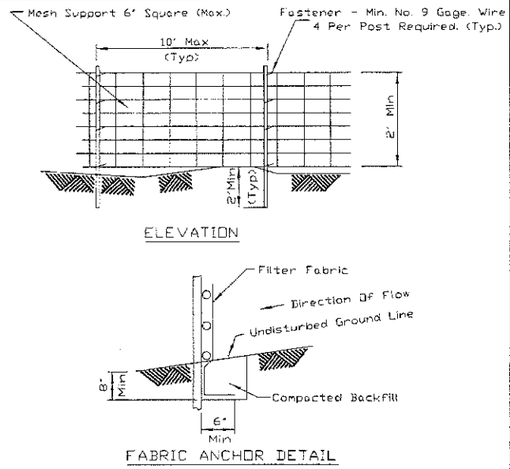
20. CONCRETE CORES (3 CYLINDERS PER TRUCK) ARE TO BE TAKEN AND TESTED BY A QUALIFIED CONCRETE TESTING COMPANY. THE GENERAL CONTRACTOR SHALL PROVIDE THREE (3) COPIES OF TESTING RESULTS TO THE CONSTRUCTION MANAGER. FAILURE TO PROVIDE WRITTEN TESTS WILL RESULT IN A $1,000.00 DEDUCTION FROM CONTRACT. THE GENERAL CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY ADDITIONAL COSTS IN TESTING DUE TO DELAYS BY THE GENERAL CONTRACTOR OR HIS SUBCONTRACTORS.

21. BEFORE AND DURING CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE ADEQUATE EROSION CONTROL AS NECESSARY IN THE FORM OF SILT FENCES FOR THE SITE AND BALES AROUND ANY EXISTING MANHOLES, INLETS, OR CATCHBASINS (WHEN PRESENT) SUSCEPTIBLE TO EROSION. EROSION CONTROL MEASURES SHALL BE PERIODICALLY INSPECTED TO ENSURE PROPER FUNCTION. EROSION CONTROL SHALL BE REMOVED UPON COMPLETION OF WORK BY THE CONTRACTOR.

22. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING PAVED, CONCRETE, OR GRAVEL PARKING AREAS AND DRIVES. CONTRACTORS SHALL PHOTOGRAPH AND VIDEOTAPE EXISTING PARKING AREAS AND DRIVES PRIOR TO CONSTRUCTION. ANY DAMAGE CAUSED DURING CONSTRUCTION SHALL BE REPLACED TO EXISTING OR BETTER CONDITIONS AT NO ADDITIONAL COST.

23. GRADE AND RE-SEED ALL AREAS DISTURBED DURING CONSTRUCTION PER EROSION AND SEDIMENT CONTROL NOTES AND DETAILS ON THIS SHEET TO MATCH EXISTING SURROUNDINGS AFTER WORK IS COMPLETE OR AS WEATHER PERMITS WITH APPROVAL FROM THE PROPERTY OWNER.

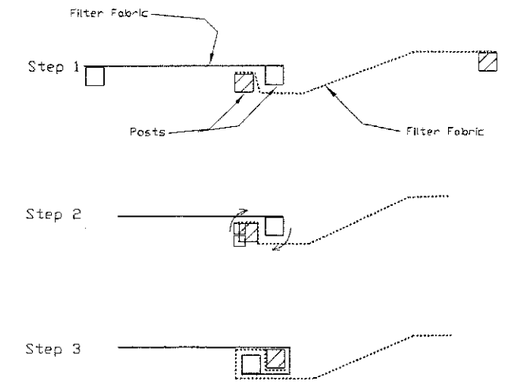
SILT FENCE PLAN



NOTES:
1. Top and bottom wires of mesh support shall be min. gage no.9.
2. Intermediate wires of mesh supports shall be min. gage no. 11.
3. Temporary sediment fence shall be installed prior to any grading work in the area to be protected. They shall be maintained throughout the construction period and removed in conjunction with the final grading.
4. Filter fabric shall meet the requirements of material specification 592 Geotextile Table 1 or 2, Class I with equivalent opening size of at least 30 for nonwoven and 50 for woven.
5. Fence post shall be either standard steel post or wood post with a minimum sectional area 3.0 sq.in.
6. The mesh support may be omitted if a maximun of 5' is used for post post spacing.

REFERENCE			U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE ILLINOIS	STANDARD DWG. NO. IL-620
Project				SHEET 1 OF 1
Designed	Date			DATE 2-3-95
Checked	Date			
Approved	Date			

SILT FENCE



NOTES:
1. Place the end post of the second fence inside the end post of the first fence.
2. Rotate both posts at least 180 degrees in a clockwise direction to create a tight seal with the fabric material.
3. Drive both posts a minimum of 2 feet into the ground and bury the flap.

REFERENCE			USDA NRCS NATURAL RESOURCES CONSERVATION SERVICE ILLINOIS	STANDARD DWG. NO. IL-620
Project				SHEET 2 OF 2
Designed	Date			DATE 1-29-99
Checked	Date			
Approved	Date			

CHICAGO SMSA LIMITED PARTNERSHIP, D.B.A. VERIZON WIRELESS

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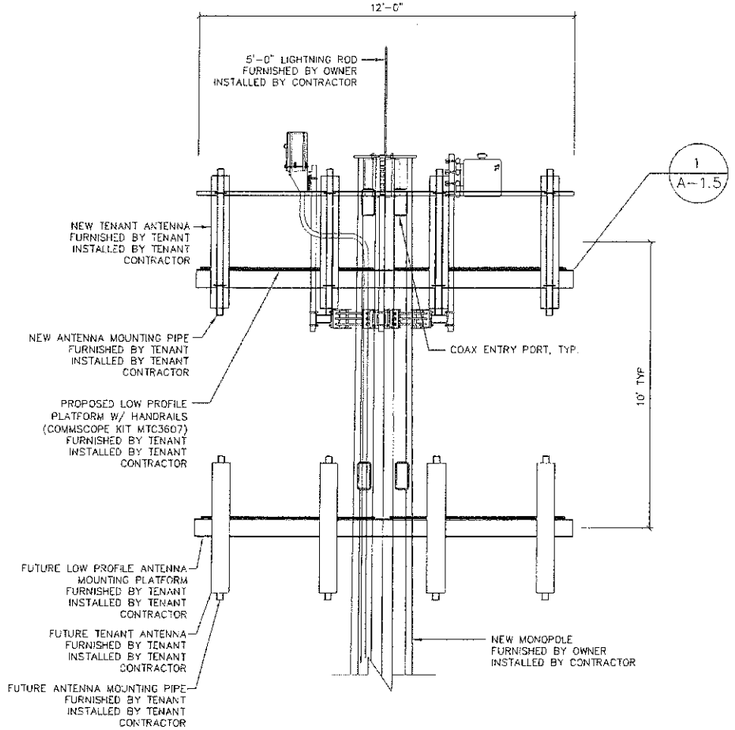
CST
IL 00-5777

SITE NAME:
CRYSTAL LAKE SOUTH

SHEET NAME
GENERAL NOTES EROSION CONTROL

SHEET NUMBER
C-3

JOB NUMBER
9468-43-8-BB-03



ELEVATION VIEW AT TOP OF TOWER

NOT TO SCALE

2

NOTES:

1. VERIFY EACH COAXIAL CABLE LENGTH, ROUTING AND ALL MOUNTING APPURTENANCES WITH OWNER PRIOR TO ORDERING.

2. THE MINIMUM COAXIAL CABLE LENGTH HAS BEEN ESTIMATED AT __167__ FEET EACH WITH A CORRESPONDING CABLE DIAMETER OF 1 5/8". THIS CABLE LENGTH IS APPROXIMATE AND IS NOT TO BE USED FOR CONSTRUCTION. ACTUAL CABLE LENGTHS MAY VARY FROM ESTIMATED MINIMUM LENGTH AND MUST BE VERIFIED.

3. TAG ALL MAIN CABLES (LABELED ACCORDING TO SPECS) AT FOUR (4) LOCATIONS:

   A. 1 ID TAG ON THE BOTTOM 1/2" JUMPER COMING FROM THE LUCENT EQUIPMENT
   B. 1 ID TAG ON THE BOTTOM MAIN LINE INSIDE THE SHELTER NEAR THE MAIN CONNECTOR
   C. 1 ID TAG ON THE TOP MAIN LINE NEAR THE MAIN CONNECTOR
   D. 1 ID TAG ON THE TOP 1/2" JUMPER NEAR THE ANTENNA

4. CONTRACTOR TO AFFIX TAGS ON THE MAIN CABLES USING A MORE PERMANENT METHOD THAT TIE WRAPS. CONTACT CONSTRUCTION MANAGER FOR SUFFICIENT METHODS.

5. IN THE EVENT DIPLEXERS AND/OR OTHER EQUIPMENT IS ADDED INTO THE SYSTEM, TAGGING WILL BE CHANGED FROM NOTE 3. CONTACT CONSTRUCTION MANAGER FOR SUFFICIENT METHODS.

6. EACH COAX SHALL BE SUPPORTED COLUMN GRIP (CHINESE FINGER GRIP) HUNG FROM A J-HOOK AT TOP OF TOWER, (10' ABOVE FOR LATTICE TOWER).

7. EACH COAX SHALL BE GROUNDED AT THREE (3) LOCATIONS:

   A. TOWER PLATFORM OR V-FRAME
   B. TOWER BASE
   C. OUTSIDE EQUIPMENT SHELTER AT THE WAVEGUIDE ENTRY PORT

8. COAXIAL CABLES TO BE SUPPORTED EVERY 3'-0" ON PLATFORM OR V-FRAME WITH STAINLESS STEEL HANGERS.

9. COAXIAL CABLES TO BE SUPPORTED EVERY 18" WITH STAINLESS STEEL HANGERS.

10. ANTENNA CONTRACTOR RESPONSIBLE FOR FABRICATION ENCLOSURE JUMPERS.

11. COAX TYPE WILL BE AVA7-50 AIR FOAM DIELECTRIC CABLE FROM ANDREW TO REPLACE THE OLDER LDF7-50 CABLE.

12. THE CONTRACTOR SHALL USE PPC CONNECTORS ONLY. NO ANDREW CONNECTORS SHALL BE USED.

PROPOSED 5' LIGHTNING ROD AERIAL

PROPOSED ANTENNAS PROVIDED BY OTHERS MOUNTED AT 120'-0" AGL ON LOW PROFILE PLATFORM W/HANDRAILS (COMMSCOPE KIT MTC3607). (ANTENNAS SHOWN ARE FOR REPRESENTATION ONLY. SEE ANTENNA SPECIFICATIONS ON SHEET A-1.1 FOR THE NUMBER OF ANTENNAS, ANTENNA PLACEMENT AND SECTORIZATION)

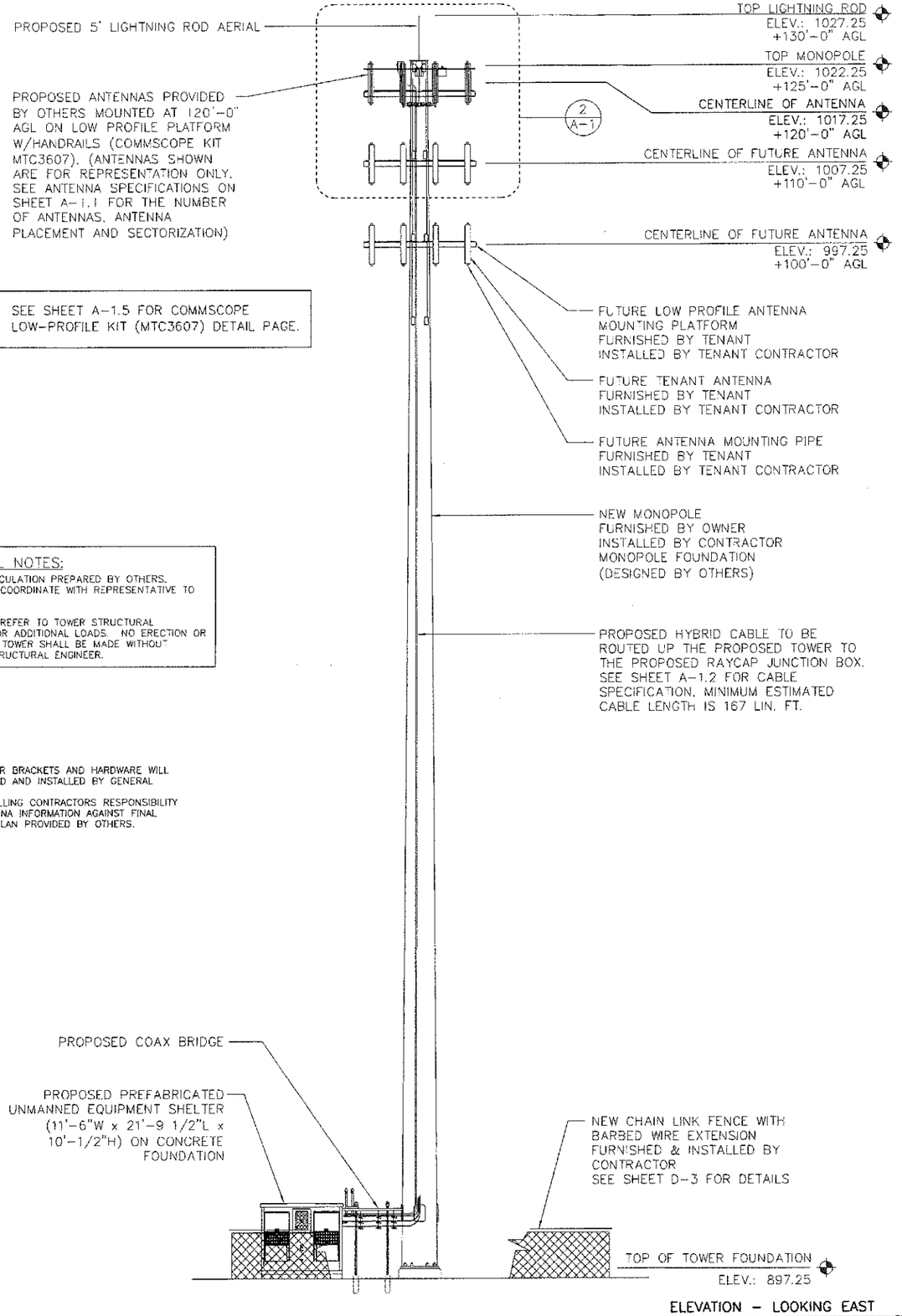
SEE SHEET A-1.5 FOR COMMSCOPE LOW-PROFILE KIT (MTC3607) DETAIL PAGE.

STRUCTURAL NOTES:

1. STRUCTURAL CALCULATION PREPARED BY OTHERS. CONTRACTOR TO COORDINATE WITH REPRESENTATIVE TO OBTAIN A COPY.
2. CONTRACTOR TO REFER TO TOWER STRUCTURAL CALCULATIONS FOR ADDITIONAL LOADS. NO ERECTION OR MODIFICATION OF TOWER SHALL BE MADE WITHOUT APPROVAL OF STRUCTURAL ENGINEER.

TOWER NOTES:

1. COAX LADDER OR BRACKETS AND HARDWARE WILL NEED TO BE PROVIDED AND INSTALLED BY GENERAL CONTRACTOR
2. IT IS THE INSTALLING CONTRACTORS RESPONSIBILITY TO VERIFY ALL ANTENNA INFORMATION AGAINST FINAL RADIO ENGINEERING PLAN PROVIDED BY OTHERS.



ELEVATION - LOOKING EAST

NOT TO SCALE

1

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PROFESSIONAL DESIGN FIRM NO. 184-002756

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PREPARED BY: HRH 5-12-15

(CST)

IL 00-5777

SITE NAME:

CRYSTAL LAKE SOUTH

SHEET NAME

TOWER ELEVATION AND NOTES

SHEET NUMBER

A-1

JOB NUMBER

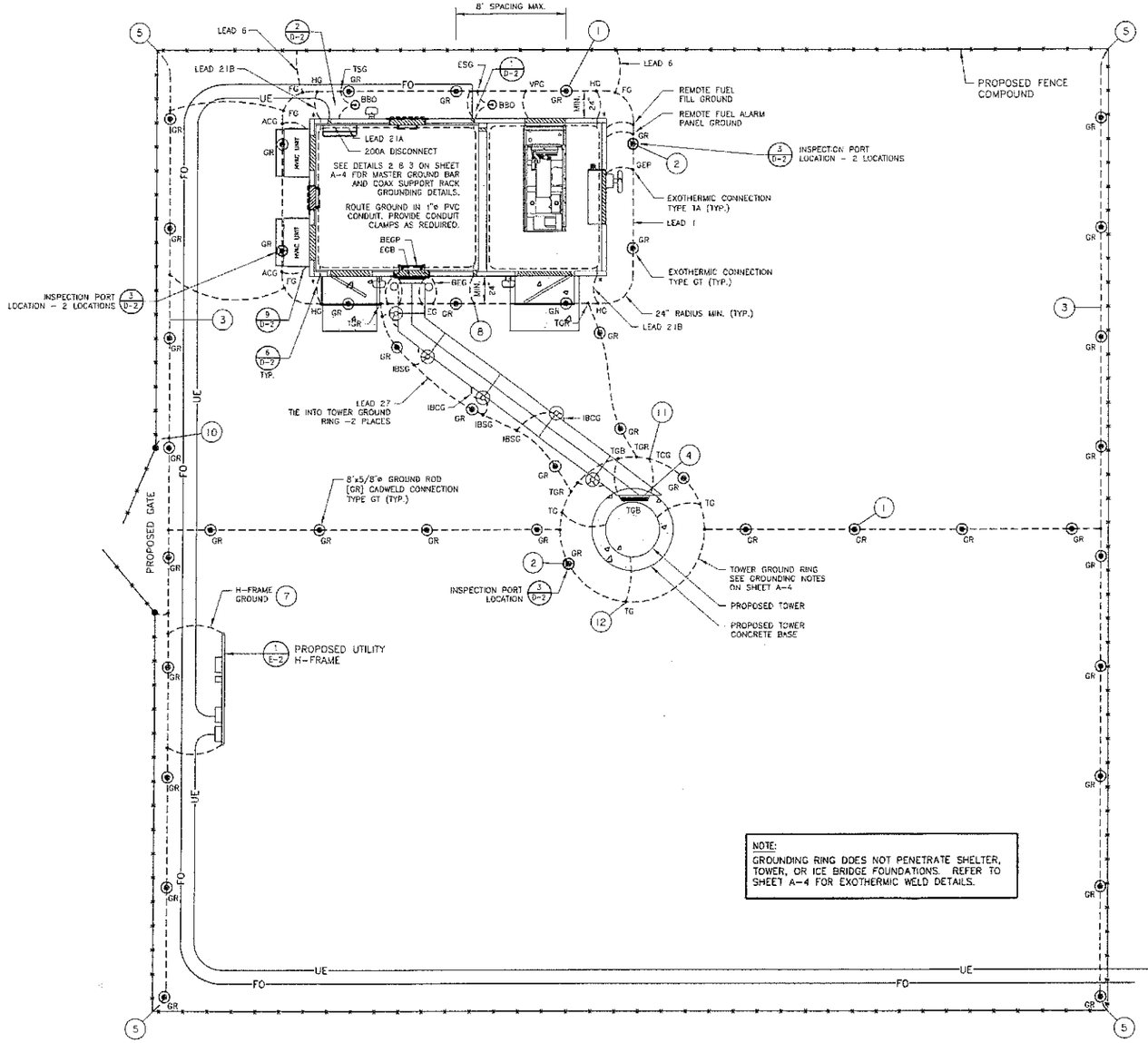
9468-43-8-88-03

LEGEND

LEAD 6	FG	FENCE GROUND: E.C. TO PROVIDE AND INSTALL #2 AWG BARE SOLID TINNED COPPER GROUND WIRE AT EACH FENCE CORNER POST. GROUND WIRE TO BE BE WOVEN THROUGH FENCE FABRIC AND CADWELDED THREE PLACES. CADWELDS REQUIRED AT TOP RAIL, BOTTOM OF CORNER POST, AND GROUND RING
	TG	TOWER GROUND: E.C. SHALL PROVIDE AND INSTALL (1) #2 AWG BARE SOLID TINNED COPPER GROUND WIRE FROM THE TOWER BASE TO GROUNDING RING. BOTH CONNECTIONS ARE CADWELD.
	TCG	TOWER COAX GROUND: E.C. SHALL PROVIDE AND INSTALL (2) #2 AWG BARE SOLID TINNED COPPER GROUND WIRES FROM TOWER COAX GROUND BAR (TGB) TO THE GROUNDING RING. BOTH CONNECTIONS ARE CADWELD.
	IBCG	ICE BRIDGE CHANNEL GROUND: E.C. SHALL PROVIDE AND INSTALL (1) #2 AWG BARE SOLID TINNED COPPER GROUND WIRE FROM ICE BRIDGE CHANNEL TO GROUNDING RING. BOTH CONNECTIONS ARE CADWELD.
	IBSG	ICE BRIDGE SUPPORT GROUND: E.C. SHALL PROVIDE AND INSTALL (1) #2 BARE SOLID TINNED COPPER GROUND WIRE FROM ICE BRIDGE SUPPORT COLUMN TO GROUNDING RING. BOTH CONNECTIONS ARE CADWELD.
	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER: E.C. TO INSTALL PER TOWER MANUFACTURERS REQUIREMENTS.
	TVSG	TRANSIENT VOLTAGE SURGE SUPPRESSER GROUND: E.C. SHALL PROVIDE AND INSTALL (1) #2 BARE SOLID TINNED GROUND WIRE FROM PROVIDED SURGE SUPPRESSER TO GROUNDING RING. CONNECTION TO SURGE SUPPRESSER IS MECHANICAL. CONNECTION TO GROUNDING RING IS CADWELD.
	TGB	TOWER COAX GROUND BAR: E.C. TO PROVIDE AND INSTALL (2) 20"x4"x1/4" COPPER GROUND BARS ON THE TOWER. ONE TO BE LOCATED AT ANTENNA MOUNT ELEVATION (ATTACHED TO TOWER STEEL), THE OTHER AT THE BASE OF TOWER ADJACENT TO ICE BRIDGE (ISOLATED FROM TOWER STEEL).
	ACG	AIR CONDITIONER GROUND: E.C. TO PROVIDE AND INSTALL (1) #2 AWG BARE SOLID TINNED COPPER GROUND WIRE FROM CABINET OF HVAC UNIT TO GROUNDING RING. CONNECTION TO CABINET IS MECHANICAL. CONNECTION TO GROUNDING RING IS CADWELD (TYPICAL OF 2).
	TSG	TELCO SERVICE GROUND: E.C. TO PROVIDE AND INSTALL (1) #2 AWG BARE SOLID TINNED COPPER GROUND FROM TELCO GROUND BAR IN 1 1/2" PVC SLEEVE TO (1) 8'-0"x5/8"ø CLAD STEEL GROUND ROD (TOP AT 42" BELOW FINISH GRADE). SEAL SHELTER PENETRATION WITH CLEAR SILICONE SEALANT.
	ESG	ELECTRICAL SERVICE GROUND: E.C. SHALL PROVIDE AND INSTALL #2 AWG BARE SOLID TINNED COPPER GROUND FROM MAIN A/C SERVICE DISCONNECT SWITCH NEUTRAL BUS BAR TO ONE SEPARATE 8'-0"x5/8"ø COPPER CLAD STEEL GROUND ROD (TOP AT 42" BELOW FINISH GRADE). CONNECTION TO BUS BAR TO BE MECHANICAL. CONNECTION TO GROUND ROD TO BE CADWELD.
	GHG	GENERATOR HOOD GROUND: E.C. TO PROVIDE AND INSTALL (1) #2 AWG BARE SOLID TINNED COPPER GROUND WIRE FROM GENERATOR INTAKE AND EXHAUST HOOD TO GROUNDING RING. CONNECTION TO CABINET IS MECHANICAL. CONNECTION TO GROUNDING RING IS CADWELD (NOT NEEDED IF HOOD IS FIBERGLASS).
LEAD 21B	HG	HALO GROUND: E.C. TO INSTALL #2 AWG BARE SOLID TINNED COPPER GROUND WIRE THROUGH PROVIDED SHELTER PENETRATION TO GROUNDING RING. GROUND WIRE IS PROVIDED. CONNECTION TO GROUNDING RING IS CADWELD. SEAL BOTH SIDES OF SHELTER PENETRATION WITH CLEAR SILICONE SEALANT (TYPICAL OF 4).
	BBD	BOND TO BURIED OBJECTS: E.C. TO PROVIDE AND INSTALL #2 BARE SOLID TINNED COPPER GROUND WIRE FROM GROUND ROD TO GROUNDING RING AT TSG AND ESG. BOTH CONNECTIONS ARE CADWELD.
	BEGP	BUILDING ENTRY GROUND BAR: E.C. TO PROVIDE AND INSTALL 20"x16"x1/4" COPPER GROUND PLATE ON INTERIOR OF SIDE WALL BELOW COAX BUILDING ENTRY LOCATION.
	BEG	BUILDING ENTRY GROUND: E.C. TO PROVIDE AND INSTALL (2) #2 AWG BARE SOLID TINNED COPPER WIRE FROM BEGP TO GROUNDING RING. E.C. TO PROVIDE OPENING IN SIDE WALL SIMILAR TO DETAIL 9/D-2 AND SEAL BOTH ENDS WEATHER TIGHT. BOTH CONNECTIONS ARE CADWELD.
	EGB	EXTERIOR GROUND BAR: E.C. TO PROVIDE AND INSTALL 20"x4"x1/4" COPPER GROUND BAR ON EXTERIOR OF SIDE WALL BELOW COAX BUILDING ENTRY LOCATION.
	EG	EXTERIOR GROUND: E.C. TO PROVIDE AND INSTALL (2) #2 AWG BARE SOLID TINNED COPPER WIRES FROM EGB TO GROUNDING RING. BOTH CONNECTIONS ARE CADWELD.
	CEG	COAX ENTRY GROUND: E.C. TO PROVIDE AND INSTALL (1) #6 AWG BARE SOLID TINNED COPPER WIRE FROM COAX BUILDING ENTRY TO EGB. CONNECTION AT COAX PLATE CADWELD, CONNECTION AT EGB 2 HOLE LUG MECHANICAL.
	PBG	POWER BOARD GROUND: E.C. TO PROVIDE AND INSTALL INSULATED #2 AWG STRANDED COPPER WIRE FROM EXTERIOR GROUND RING WITH SUFFICIENT LENGTH COILED INSIDE TO REACH TOP OF DELTA POWER BOARD. CONNECTION AT GROUND RING TO BE CADWELD.
LEAD 1	GR	8'-0"x5/8"ø COPPER CLAD STEEL GROUND ROD DRIVEN VERTICAL TO 42" BELOW GRADE (OR FROST LINE - WHICHEVER IS GREATER). SPACING OF THE GROUND RODS SHALL BE 8' MAXIMUM. ALL CONNECTIONS TO BE CADWELD.
	*	EXISTING SHELTER PENETRATION LOCATION - REFER TO DETAIL 6/D-2.
LEAD 5	MGB	MASTER GROUND BAR: E.C. TO PROVIDE AND INSTALL (2) #2 AWG BARE SOLID TINNED COPPER WIRES FROM MGB TO GROUNDING RING. CONNECTION TO GROUNDING RING CADWELDED. SEAL BOTH SIDES OF SHELTER PENETRATION WITH CLEAR SILICONE SEALANT. (TYPICAL OF 2)
	GEP	GENERATOR EXHAUST PIPE: E.C. TO PROVIDE AND INSTALL (1) #2 AWG BARE SOLID TINNED COPPER GROUND WIRE FROM GENERATOR EXHAUST PIPE TO GROUNDING RING. CONNECTION TO EXHAUST PIPE AND GROUNDING RING SHOULD BE CADWELDED.
	VPG	VENT PIPE GROUND: E.C. TO PROVIDE AND INSTALL (1) #2 AWG BARE SOLID TINNED COPPER WIRES FROM VENT PIPE TO GROUNDING RING. CONNECTION TO VENT PIPE AND GROUNDING RING SHOULD BE CADWELDED.
LEAD 27	TGR	TOWER GROUND RING: E.C. TO PROVIDE AND INSTALL A MINIMUM OF (2) #2 AWG BARE SOLID TINNED COPPER WIRES FROM LEAD 1 TO THE EXTERNAL RADIO TOWER GROUND RING.
LEAD 21A	IHR	INTERIOR HALO RING: THIS IS THE INTERIOR HALO RING THE E.C. IS TO PROVIDE AND INSTALL #2 AWG INSULATED COPPER WIRE AROUND THE INTERIOR OF THE EQUIPMENT SHELTER.

BALLOON REFERENCE NOTES

1. 5/8"DIA X8' COPPER CLAD GROUND ROD BURIED 36" BELOW GRADE (MIN.)
2. GROUND ROD ACCESS WELL (MIN. OF 4 EACH PER COMPOUND)
3. #2 SOLID, TINNED, BARE COPPER WIRE GROUND RING (CONTINUOUS STRAND)
4. 1/4"X4"X20" TINNED COPPER GROUND BAR. 2 TYP. AT BASE AND TOP OF TOWER. MOUNT DIRECT TO TOWER, DO NOT ISOLATE.
5. #2 SOLID, TINNED, BARE COPPER WIRE GROUND LEAD TO FENCE CORNER POST.
6. NOT USED
7. #2 SOLID, TINNED, BARE COPPER WIRE GROUND LEAD TO UTILITY H-FRAME SUPPORT POST
8. SERVICE ENTRANCE GROUND TO DEDICATED GROUND ROD
9. #2 INSULATED, STRANDED COPPER GROUND LEAD ROUTED IN CONDUIT TO 200A LOAD CENTER.
10. #2 INSULATED, STRANDED COPPER BOND STRAP FROM GATE FRAME TO GATE POST. (TYP EACH GATE)
11. #2 SOLID, TINNED, BARE COPPER GROUND LEAD FROM GROUND BAR AT TOWER BASE TO GROUND RING. ROUTE IN 3/4" FLEX CONDUIT AND WEATHERPROOF OPEN END. (2 TYPICAL)
12. #2 SOLID, TINNED, BARE COPPER GROUND LEAD FROM BASE TO GROUND RING. (2 TYPICAL, 180° SEPARATION)
13. TOWER LIGHT CONTROLLER (GROUND PER MANUFACTURES RECOMMENDATIONS) (IF REQUIRED)



THE INTENT OF THIS DRAWING IS FOR GROUNDING SCHEMATICS ONLY. SEE SHEETS C-1 AND C-2 FOR SITE PLAN LAYOUT AND DIMENSIONS.

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PREPARED BY: HRH 5-12-15

CST
IL 00-5777

SITE NAME:
CRYSTAL LAKE SOUTH

SHEET NAME
SHELTER AND TOWER GROUNDING SCHEMATIC WITH LEGEND

SHEET NUMBER
A-3

JOB NUMBER
9468-43-8-88-03

UTILITY GENERAL NOTES

1. UNLESS OTHERWISE NOTED, ALL WORK ON SHEETS A-2 AND E-1 SHALL BE PERFORMED BY THE E.C.
2. THE E.C. MUST BE LICENSED TO PERFORM WORK IN THIS COUNTY, AND SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY ELECTRICAL PERMITS FROM LOCAL BUILDING DEPARTMENTS.
3. UNDERGROUND CONDUIT SHALL BE SCH. 40 PVC PLASTIC DUCT WITH ALL BENDS TO BE MINIMUM 18" RADIUS 90ø SWEEP UNLESS NOTED OTHERWISE
4. ABOVE GRADE RISER CONDUIT TO BE GALVANIZED STEEL WITH MATCHING FITTINGS.
5. METERING PEDESTAL TO BE CONSTRUCTED OF GALVANIZED HARDWARE.
6. E.C. SHALL CONTACT TELEPHONE AND ELECTRIC COMPANIES AT LEAST TWENTY (20) WORKING DAYS PRIOR TO NEEDING INSTALLATION OF ELECTRIC AND TELCO SERVICE. CONTACT NAMES AND PHONE NUMBERS ARE LISTED ON TITLE SHEET T-1.
7. ALL 2/C #22 SHLD CABLE SHALL BE BELDEN #8450 OR EQUAL.
8. ALL WIRE SHALL BE (600V THHN) U.N.O.
9. SEAL ALL PENETRATIONS.
10. ALL WORK IS TO BE IN ACCORDANCE WITH NFPA, NEMA, NEC, & ALL LOCAL CODES.
11. REPAIR AND/OR REPLACE ANY DISTURBED AGGREGATE TO MATCH EXISTING SURROUNDINGS AND GRADE AFTER SUB-GRADE GROUNDING AND UTILITY WORK IS COMPLETE.
12. CAUTION NEEDS TO BE TAKEN WHEN EXCAVATING FOR NEW SHELTER FOUNDATION SO NOT TO DAMAGE ANY EXISTING UNDERGROUND GROUNDING SYSTEM OR UTILITIES.
13. ANY EXCAVATION FOR FOUNDATIONS AND TRENCHING FOR UTILITIES WITHIN COMPOUND SHOULD BE DONE BY HAND, OR AS APPROVED BY THE CONSTRUCTION MANAGER.
14. NOT ALL NOTES OR DETAILS MAY BE APPLICABLE TO THE CONSTRUCTION OF THIS SITE DUE TO EXISTING SITE CONDITIONS.
15. E.C. TO ADJUST LAYOUT TO SITE CONDITIONS WITH APPROVAL FROM CONSTRUCTION MANAGER.
16. ELECTRICAL SERVICE WILL BE 120/240V, 1PH, 3W.

UTILITY GENERAL NOTES
NOT TO SCALE

2

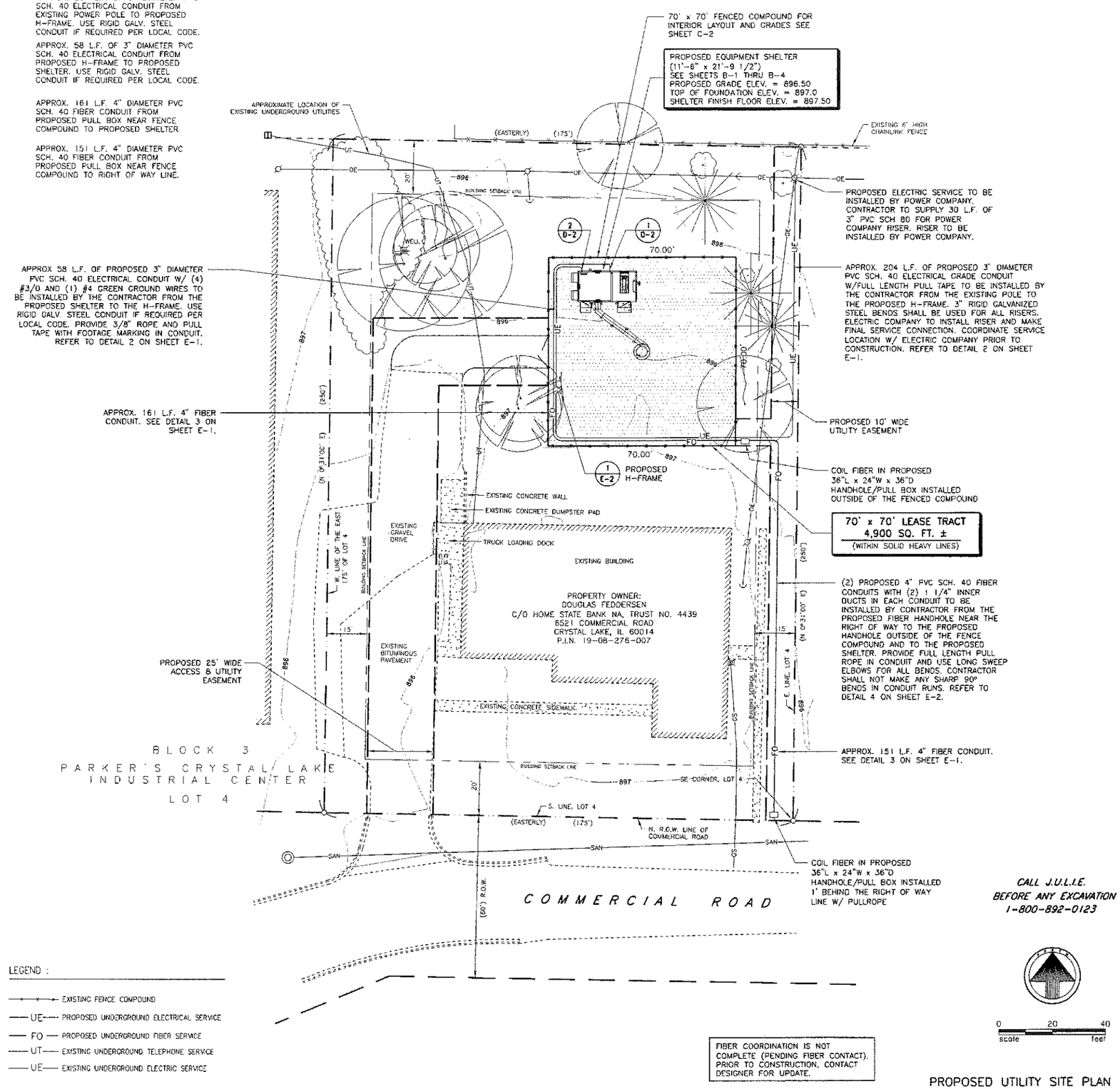
CONDUIT ESTIMATE:

APPROX. 204 L.F. OF 3" DIAMETER PVC SCH. 40 ELECTRICAL CONDUIT FROM EXISTING POWER POLE TO PROPOSED H-FRAME. USE RIGID GALV. STEEL CONDUIT IF REQUIRED PER LOCAL CODE.

APPROX. 58 L.F. OF 3" DIAMETER PVC SCH. 40 ELECTRICAL CONDUIT FROM PROPOSED H-FRAME TO PROPOSED SHELTER. USE RIGID GALV. STEEL CONDUIT IF REQUIRED PER LOCAL CODE.

APPROX. 161 L.F. 4" DIAMETER PVC SCH. 40 FIBER CONDUIT FROM PROPOSED PULL BOX NEAR FENCE COMPOUND TO PROPOSED SHELTER.

APPROX. 151 L.F. 4" DIAMETER PVC SCH. 40 FIBER CONDUIT FROM PROPOSED PULL BOX NEAR FENCE COMPOUND TO RIGHT OF WAY LINE.



LEGEND :

- EXISTING FENCE COMPOUND
- UE — PROPOSED UNDERGROUND ELECTRICAL SERVICE
- FO — PROPOSED UNDERGROUND FIBER SERVICE
- UT — EXISTING UNDERGROUND TELEPHONE SERVICE
- UE — EXISTING UNDERGROUND ELECTRIC SERVICE

FIBER COORDINATION IS NOT COMPLETE (PENDING FIBER CONTACT). PRIOR TO CONSTRUCTION, CONTACT DESIGNER FOR UPDATE.

CALL J.U.L.I.E. BEFORE ANY EXCAVATION 1-800-892-0123

0 20 40
scale feet

PROPOSED UTILITY SITE PLAN
SCALE: 1" = 20

1

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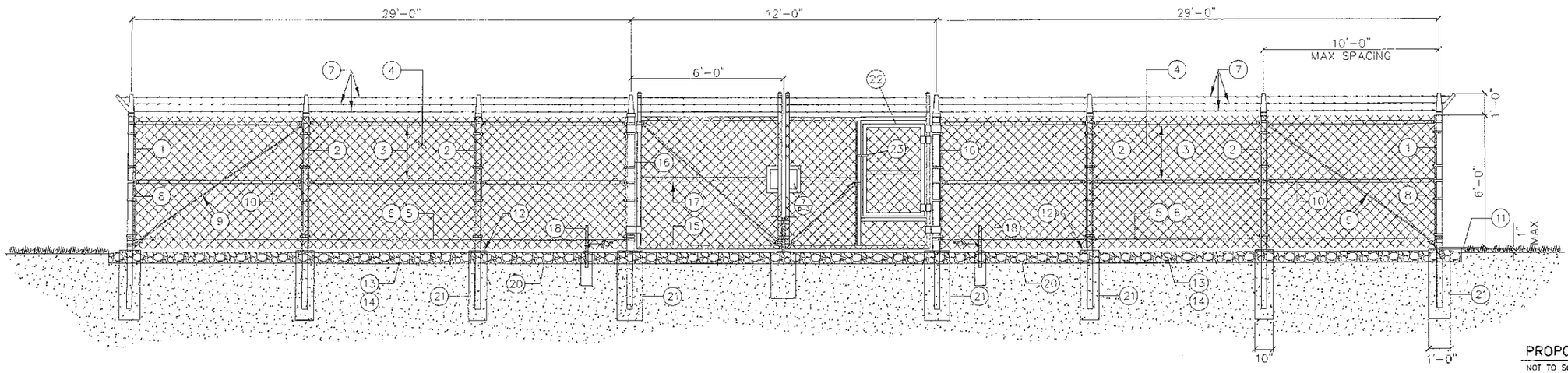
CST
IL 00-5777

SITE NAME:
CRYSTAL LAKE SOUTH

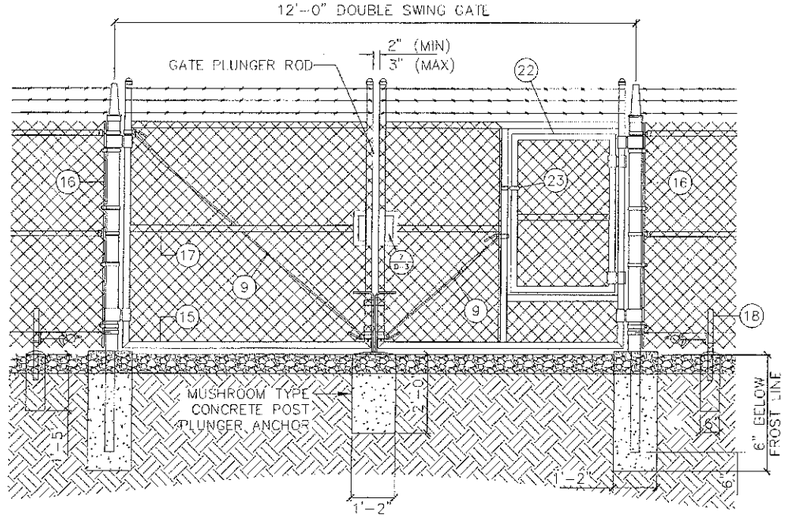
SHEET NAME
UTILITY PLAN, DETAILS AND NOTES

SHEET NUMBER
E-3

JOB NUMBER
9468-43-8-88-03



PROPOSED FENCE SECTION
NOT TO SCALE
1



SWING GATE DETAIL
NOT TO SCALE
5

GENERAL NOTES:

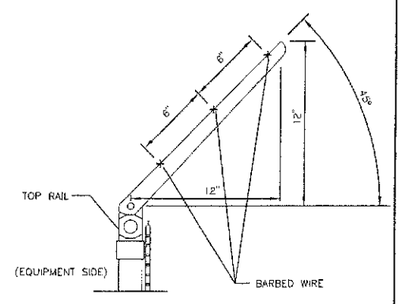
1. INSTALL FENCING PER ASTM F-567
2. INSTALL SWING GATES PER ASTM F- 900
3. LOCAL ORDINANCE OF BARBED WIRE PERMIT REQUIREMENT SHALL BE COMPLIED IF REQUIRED.
4. POST & GATE PIPE SIZES ARE INDUSTRY STANDARDS. ALL PIPE TO BE GALVANIZED (HOT DIP, ASTM A120 GRADE "A" STEEL). ALL GATE FRAMES SHALL BE WELDED. ALL WELDING SHALL BE COATED WITH (3) COATS OF COLD GALV. (OR EQUAL).
5. ALL OPEN POSTS SHALL HAVE END-CAPS.
6. USE GALVANIZED HOG-RING WIRE TO MOUNT ALL SIGNS.
7. ALL SIGNS MUST BE MOUNTED ON INSIDE OF FENCE FABRIC.
8. MUSHROOM ANCHOR & PLUNGER REQUIRED FOR GATE.
9. G.C. RESPONSIBLE FOR GATE LOCK

GENERAL NOTES
NOT TO SCALE
3

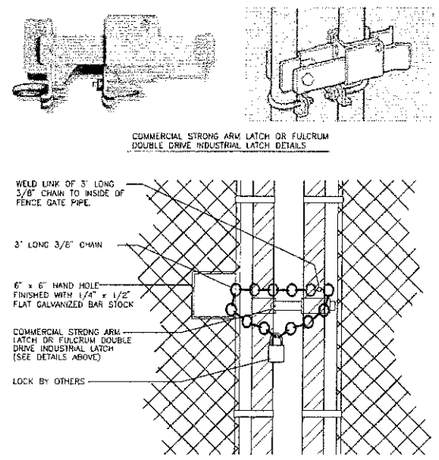
BALLOON REFERENCE NOTES:

(1) CORNER, END OR PULL POST: 3" O.D. SCHEDULE 40 PIPE.
(2) LINE POST: 2 1/2" NOMINAL SCHEDULE 40 PIPE, PER ASTM-F1083. LINE POSTS SHALL BE EQUALLY SPACED AT MAXIMUM 10'-0" O.C.
(3) TOP RAIL & BRACE RAIL: 1-5/8"O.D. STANDARD ROUND PIPE, PER ASTM-F1083.
(4) FABRIC: 9 GA CORE WIRE SIZE 2" MESH, CONFORMING TO ASTM-A392.
(5) TIE WIRE: 9 GA ALUMINUM. A SINGLE WRAP OF FABRIC TIE AND AT TENSION WIRE BY HOG RINGS SPACED 12" O.C. POSTS/GATES AND 24" RAILS/WIRE.
(6) TENSION WIRE: 9 GA ALUMINUM
(7) BARBED WIRE: DOUBLE STRAND 12-1/2" O.D. TWISTED WIRE TO MATCH WITH FABRIC. 14 GA, 4 PT. BARBS SPACED ON APPROXIMATELY 5" CENTERS.
(8) 3/16" X 3/4" (MIN) FULL HEIGHT STRETCHER BAR.
(9) 3/8" DIAGONAL ROD WITH GALVANIZED STEEL TURNBUCKLE OR DIAGONAL THREADED ROD.
(10) FENCE CORNER POST BRACE: 1 5/8" NOMINAL PIPE.
(11) 1" MAXIMUM CLEARANCE FROM FINISH GRADE.
(12) FENCE POST FOUNDATION TO BE 1" FINISH ABOVE FINISHED GRADE
(13) 6" COMPACTED BASE MATERIAL
(14) FINISH GRADE SHALL BE UNIFORM AND LEVEL.
(15) WELDED GATE FRAME: 2" O.D., SCHEDULE 40 PIPE, PER ASTM-F1083.
(16) GATE POST 6 5/8" O.D., SCHEDULE 40 PIPE, PER ASTM-F1083.
(17) GATE FRAME BRACE RAIL: 1 1/2" NOMINAL PIPE, PER ASTM-F1083.
(18) DUCK BILL OPEN GATE HOLDER. VERIFY LOCATION IN FIELD PRIOR TO INSTALLATION.
(19) STYMIE LOCK MULTI-TENANT LOCKING DEVICE
(20) GEOTEXTILE FABRIC
(21) CONCRETE FOUNDATION (MIN 3000 PSI). MINIMUM DEPTH: 6" BELOW FROST LINE
(22) 4' WIDE SNOW GATE WITHIN DOUBLE SWING GATE FRAME.
(23) FORK LATCH WITH COMBINATION LOCK.

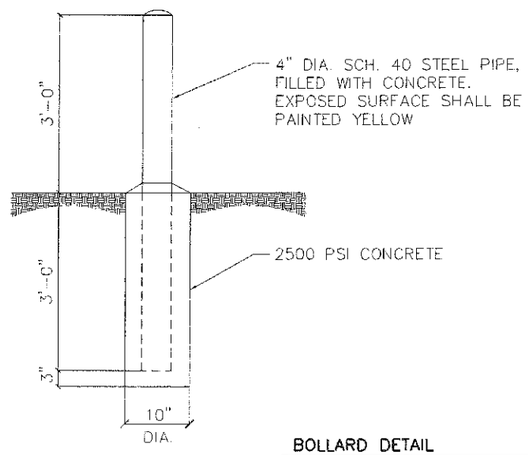
FENCE REFERENCE NOTES
NOT TO SCALE
2



BARBED WIRE ARM DETAIL
NOT TO SCALE
6



TYPICAL GATE LATCH & HAND HOLE DETAILS
NOT TO SCALE
7



BOLLARD DETAIL
NOT TO SCALE
4

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PREPARED BY: HRH 5-12-15

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SITE NAME:
CRYSTAL LAKE SOUTH

SHEET NAME
FENCING DETAILS

SHEET NUMBER
D-3

JOB NUMBER
9468-43-8-8B-03