Item # BS2005-017

SEMINOLE COUNTY GOVERNMENT
BOARD OF ADJUSTMENT
AGENDA MEMORANDUM

SUBJECT: REQUEST FOR SPECIAL EXCEPTION TO ESTABLISH A 155 FOOT TALL MONOPOLE COMMUNICATION TOWER IN THE C-2 (RETAIL COMMERCIAL DISTRICT); (FRANCO LUGO, APPLICANT).

DEPARTMENT: PLANNING & DEVELOPMENT **DIVISION:** PLANNING

AUTHORIZED BY: KATHY FALL **CONTACT:** KATHY FALL **EXT:** 7389

AGENDA DATE 09-26-05 **REGULAR** ☐ **CONSENT** ☐ **PUBLIC HEARING** ☒

MOTION/RECOMMENDATION:

1. **APPROVE** THE REQUEST FOR SPECIAL EXCEPTION TO ESTABLISH A 155 FOOT TALL MONOPOLE COMMUNICATION TOWER IN THE C-2 (RETAIL COMMERCIAL DISTRICT); (FRANCO LUGO, APPLICANT); OR
2. **DENY** THE REQUEST FOR SPECIAL EXCEPTION TO ESTABLISH A 155 FOOT TALL MONOPOLE COMMUNICATION TOWER IN THE C-2 (RETAIL COMMERCIAL DISTRICT); (FRANCO LUGO, APPLICANT); OR
3. **CONTINUE** THE REQUEST TO A TIME AND DATE CERTAIN.

GENERAL INFORMATION	APPLICANT: FRANCO LUGO/CRAIG AND ASSOCIATES, APPLICANT 845 STATE ROAD 15A OVIEDO, FL 32789	SPECIAL EXCEPTION 30.43(2) CRITERIA
BACKGROUND / REQUEST	THE SUBJECT PROPERTY IS OWNED BY LAKE MONROE DEVELOPMENT AND IS CURRENTLY VACANT WITH AN EXISTING BILLBOARD. THE APPLICANT PROPOSES TO LEASE A PORTION OF THE SUBJECT PROPERTY IN ORDER TO CONSTRUCT A 150 FOOT MONOPOLE WITH AN ANTENNA THAT MAKES THE TOTAL HEIGHT 155 FEET AND ITS ASSOCIATED FACILITIES. • **REQUEST FOR SPECIAL EXCEPTION** THE EXISTING SITE IS LOCATED IN THE C-2 DISTRICT, WHERE MONOPOLE COMMUNICATION TOWERS ARE PERMITTED BY SPECIAL EXCEPTION. • **REQUEST FOR VARIANCES**	

<table>
<tr><td></td><td>THERE ARE NO EXISTING HOMES AND/OR PROPERTIES THAT HAVE A RESIDENTIAL LANDUSE/ZONING WITHIN THE SEPARATION RADIUS OF 465 FEET. THEREFORE NO VARIANCES ARE NEEDED FOR THIS REQUEST.</td></tr>
<tr><td>ZONING & FLU</td><td>
<table>
<tr><th>DIRECTION</th><th>EXISTING ZONING</th><th>EXISTING FLU</th><th>USE OF PROPERTY</th></tr>
<tr><td>SITE</td><td>C-2</td><td>COMMERCIAL</td><td>VACANT/BILLBOARD</td></tr>
<tr><td>NORTH</td><td>A-5</td><td>COMMERCIAL</td><td>VACANT</td></tr>
<tr><td>SOUTH</td><td>PCD</td><td>HIP-TI</td><td>TIRE SERVICE</td></tr>
<tr><td>WEST</td><td colspan="3">C-15A, INTERSTATE 4 ON RAMP AND ASSOCIATED RETENTION POND.</td></tr>
<tr><td>EAST</td><td>A-1</td><td>SUBURBAN ESTATES</td><td>VACANT</td></tr>
</table>
</td></tr>
<tr><td>STANDARDS FOR GRANTING A SPECIAL EXCEPTION</td><td>THE BOARD OF ADJUSTMENT (BOA) SHALL HAVE THE POWER TO HEAR AND DECIDE SPECIAL EXCEPTIONS AND VARIANCES IT IS SPECIFICALLY AUTHORIZED TO PASS UNDER THE TERMS OF THE LAND DEVELOPMENT CODE UPON DETERMINATION THE USE REQUESTED:

<u>IS NOT DETRIMENTAL TO THE CHARACTER OF THE AREA OR NEIGHBORHOOD OR INCONSISTENT WITH TRENDS OF DEVELOPMENT IN THE AREA:</u>

THE TREND OF DEVELOPMENT IN THE AREA HAS INCLUDED A COMBINATION OF INDUSTRIAL/WAREHOUSE BUSINESSES, INTERSTATE 4 AND VACANT CONSERVATION LAND. THE PROPOSED TOWER IS A STANDARD 155 FOOT TALL MONOPOLE STRUCTURE THAT IS NOT DESIGNED TO ASSIMILATE INTO SURROUNDING DEVELOPMENT.

BECAUSE THE PROPOSED TOWER, AT THE HEIGHT PROPOSED, WOULD NOT BLEND INTO EXISTING SURROUNDINGS LIKE A CAMOUFLAGE INSTALLATION, STAFF BELIEVES THE RECOMMENDED DESIGN CONDITIONS SHOULD BE APPLIED IF THE BOARD DECIDES TO APPROVE THE REQUEST.

<u>DOES NOT HAVE AN UNDULY ADVERSE EFFECT ON EXISTING TRAFFIC PATTERNS, MOVEMENTS AND VOLUMES:</u>

THE PROPOSED TOWER WOULD NOT HAVE AN ADVERSE IMPACT ON EXISTING TRAFFIC VOLUMES, SINCE THE FACILITY WOULD BE UNMANNED AND REQUIRE APPROXIMATELY ONE SITE VISIT PER MONTH (2 VEHICLE TRIPS) FOR ROUTINE SERVICE AND MAINTENANCE.</td></tr>
</table>

IS CONSISTENT WITH THE SEMINOLE COUNTY VISION 2020 COMPREHENSIVE PLAN:

THE SEMINOLE COUNTY VISION 2020 COMPREHENSIVE PLAN DESCRIBES THE COMMERCIAL FUTURE LAND USE (FLU) AS A CATEGORY ESTABLISHED FOR COMMUNITY SHOPPING CENTERS, CONVENIENCE STORES, RETAIL SALES, AND HIGHWAY ORIENTED COMMERCIAL USES.

THE COMPREHENSIVE PLAN FURTHER DESCRIBES COMMERCIAL FLU AS APPROPRIATE FOR SPECIAL EXCEPTION USES LIKE UTILITY STRUCTURES. WITH THE IMPOSITION OF STAFF'S RECOMMENDED CONDITIONS, THE PROPOSED COMMUNICATION TOWER WOULD BE CONSISTENT WITH THE COMMERCIAL FLU DESIGNATION.

MEETS ANY ADDITIONAL REQUIREMENTS SPECIFIED IN THE CODE SECTION AUTHORIZING THE USE IN A PARTICULAR ZONING DISTRICT OR CLASSIFICATION:

BASED ON THE SUBMITTED SITE PLAN, THE PROPOSED COMMUNICATION TOWER MEETS THE 465 FT MINIMUM SEPARATION DISTANCE FROM SINGLE FAMILY USES OR LAND USE/ZONING CLASSIFICATIONS.

BASED ON THE SUBMITTED MAPS, REPORTS AND SUPPORTING DOCUMENTATION, THE APPLICANTS HAVE DEMONSTRATED A NEED TO EXPAND NEXTEL'S WIRELESS SERVICE AREA BY ESTABLISHING A COMMUNICATION TOWER IN THE GENERAL VICINITY OF THE SUBJECT PROPERTY. THE APPLICANTS HAVE FURTHER INDICATED THAT ALL COLLOCATION OPPORTUNITIES HAVE BEEN EXPLORED AND DEEMED UNACCEPTABLE FOR MEETING NEXTEL'S CAPACITY GOALS AND THE PROVISION OF HOMOGENEOUS SERVICE ACROSS ITS NETWORK. THE MONOPOLE COMMUNICATION WILL HAVE THE CAPACITY TO HAVE FOUR CARRIERS TO CO-LOCATE.

STAFF HAS FURTHER DETERMINED THAT THE PROPOSED TOWER HEIGHT IS CONSISTENT WITH NEXTEL'S DESIRE TO PROVIDE CAPACITY IN THE AREAS IDENTIFIED ON THE ATTACHED REPORTS AND MAPS. IN GENERAL, THE COMMUNITY GROWTH AND INCREASED SERVICE HAS CREATED A DEFICIENCY IN THE CAPACITY TO ACCOMMODATE THE WIRELESS COMMUNICATION CUSTOMER'S NEEDS IN THIS AREA. THE EXISTING TOWERS LIMITATIONS CAN NOT HANDLE THE HIGH CALL VOLUME IN THIS AREA INCLUDING THE 1-4 CORRIDOR.

WILL NOT ADVERSELY AFFECT THE PUBLIC INTEREST:

WITHIN THE C-2 DISTRICT, COMMUNICATION TOWERS ARE

	CONDITIONAL USES. THE COMMERCIAL CHARACTER OF THE SURROUNDING AREA APPEARS TO SUPPORT THIS TYPE OF FACILITY WITH MINIMAL POTENTIAL IMPACTS TO THE AESTHETICS OF THE COMMUNITY. THE INCORPORATION OF DESIGN ELEMENTS, AS STATED IN THE STAFF CONDITIONS WOULD REDUCE VISUAL IMPACT TO SURROUNDING DEVELOPMENT.
STAFF RECOMMENDATION	BASED ON THE STATED FINDINGS, STAFF RECOMMENDS THE BOARD OF ADJUSTMENT APPROVE THE REQUEST FOR SPECIAL EXCEPTION TO ESTABLISH A 155 FOOT TALL MONOPOLE COMMUNICATION TOWER IN THE C-2 (AGRICULTURE DISTRICT). STAFF'S RECOMMENDATION OF APPROVAL IS CONDITIONED UPON THE FOLLOWING: 1. THE PROPOSED TOWER SHALL NOT EXCEED 155 FEET, AS VERIFIED BY A RF (RADIO FREQUENCY) ENGINEER TO BE THE MINIMUM HEIGHT NEEDED TO FURTHER NEXTEL'S IMMEDIATE WIRELESS COMMUNICATION GOALS IN THE AREA. 2. ANY IMPROVEMENTS AND/OR ADDITIONS TO THE PROPOSED TOWER SHALL BE SUBMITTED FOR APPROVAL TO THE COUNTY. 3. NO COMMERCIAL SIGNAGE OR ADVERTISING SHALL BE PERMITTED ON THE PROPOSED TOWER UNLESS OTHERWISE REQUIRED BY LAW. 4. THE PROPOSED TOWER SHALL NOT BE ARTIFICIALLY LIGHTED EXCEPT TO ASSURE HUMAN SAFETY OR AS REQUIRED BY THE FEDERAL AVIATION ADMINISTRATION. 5. THE MONOPOLE TOWER SHALL HAVE THE CAPACITY TO ACCOMMODATE FOUR (4) CARRIERS. 6. A LISTED SPECIES SURVEY SHALL BE PROVIDED PRIOR TO FINAL ENGINEERING APPROVAL. 7. PRIOR TO THE FINAL DEVELOPMENT ORDER / APPROVAL, AN APPLICATION FOR FULL CONCURRENCY MANAGEMENT SHALL BE PROVIDED.

SEMINOLE COUNTY PLANNING & DEVELOPMENT DEPARTMENT
PLANNING DIVISION
1101 EAST FIRST STREET
SANFORD, FL 32771
(407) 665-7444 PHONE (407) 665-7385 FAX APPL.NO. BS2005-017

APPLICATION TO THE SEMINOLE COUNTY BOARD OF ADJUSTMENT

Applications to the Seminole County Board of Adjustment shall include all applicable items listed in the Board of Adjustment Process Checklist. No application will be scheduled for Board of Adjustment consideration until a complete application (including all information requested below) has been received by the Planning & Development Department, Planning Division. Applications for SPECIAL EXCEPTION shall only be received for processing following pre-application conference.

APPLICATION TYPE:

○ **VARIANCE**

● **SPECIAL EXCEPTION** Wireless Communications Facility

○ **LIMITED USE**

○ SF DWELLING UNDER CONSTRUCTION ○ MEDICAL HARDSHIP
○ NIGHT WATCHMAN ○ FAMILY HARDSHIP
○ YEAR OF MOBILE HOME / RV (EXISTING_____) (PROPOSED_____)
○ SIZE OF MOBILE HOME / RV_____ ○ TIME NEEDED_____
○ PLAN TO BUILD ○ YES ○ NO IF SO, WHEN

RECEIVED
AUG - 4 2005
PLANNING DIVISION

○ **APPEAL FROM DECISION OF THE PLANNING MANAGER**

	PROPERTY OWNER	AUTHORIZED AGENT *
NAME	Lake Monroe Development LLC	Nextel, Franco Lugo of Crais & Associates
ADDRESS	SID Vihlen Jr.	4431 Ironstone Cr., Orlando FL 32812
	204 N. Park Ave. Ste 100, Sanford FL 32771	
PHONE 1	407-321-2007	787-403-3398,
PHONE 2	407-314-5162	
E-MAIL	sidvihlenjunior@aol.com	franco.lugo@candallc.com

PROJECT NAME: North Sanford

SITE ADDRESS: 845 State Road 15A, Sanford, FL 32771

CURRENT USE OF PROPERTY: Bill Board

LEGAL DESCRIPTION: Deed Book 184, Page 382 see attached

SIZE OF PROPERTY: Parent Tract ±3.44 acre(s) PARCEL I.D. 16-19-30-5AC-0000-013A

UTILITIES: ○ WATER ○ WELL ○ SEWER ○ SEPTIC TANK ○ OTHER NA

KNOWN CODE ENFORCEMENT VIOLATIONS NONE

IS PROPERTY ACCESSIBLE FOR INSPECTION ● YES ○ NO

This request will be considered at the Board of Adjustment regular meeting on ___/___/___ (mo/day/yr), in the Board Chambers (Room 1028) at 6:00 p.m. on the first floor of the Seminole County Services Building, located at 1101 East First Street in downtown Sanford, FL.

I hereby affirm that all statements, proposals, and plans submitted with or contained within this application are true and correct to the best of my knowledge.

8/4/05
DATE

ADDITIONAL VARIANCES

VARIANCE 2:

VARINACE 3:

VARIANCE 4:

VARIANCE 5:

VARIANCE 6:

VARIANCE 7:

APPEAL FROM BOA DECISION TO BCC

APPELLANT INFORMATION	
NAME	
ADDRESS	
PHONE 1	
PHONE 2	
E-MAIL	

NATURE OF THE APPEAL

APPELLANT SIGNATURE

FOR OFFICE USE ONLY

PROCESSING:

FEE(S): 370.00 COMMISSON DISTRICT 5 FLU / ZONING C-2/COM

BCC HEARING DATE (FOR APPEAL)

LOCATION FURTHER DESCRIBED AS

PLANNING ADVISOR Kathy FALL DATE

SUFFICIENCY COMMENTS

Seminole County

Special Exception Use Application for: New Communication Tower and Ground Equipment Shelter

August 1, 2005

Applicant: Nextel Communications

Site Reference: FL3121a – North Sanford
Contact Name: Franco Lugo
Contact Phone#: 787.403-3398

Applicant Information

NEXTEL

As of December 31, 2003, the Company provided service to approximately 12.9 million subscribers, excluding subscribers who purchase pre-paid services under its Boost Mobile brand. Nextel, together with its subsidiary, Nextel Partners, Inc., utilizes the Digital Enhanced Network technology to serve 293 of the top 300 United States markets.

Florida HQ
851 Trafalgar Court, Suite 300 East
Maitland, FL 32751
Phone: 407.838-5021
Fax: 407.838-5384

Purpose and Intent

Construction of a New Communication Towers- Nextel FL3121 N. Sanford

Nextel Communications, Inc. is a provider of wireless communications services in the United States. It provides a suite of advanced wireless services that include digital wireless mobile telephone service; Nextel Nationwide Direct Connect walkie-talkie service; and a number of wireless data applications, including e-mail, mobile messaging and Nextel Online services, which provide wireless access to the Internet, an organization's internal databases and other applications.

Nextel is constantly seeking to improve its level of service to consumers by increasing the coverage footprint, improving the quality of signal and reducing blocking and drop call caused by insufficient system capacity. In order to achieve these stated objectives, Nextel needs to add new antenna sites in your community. The proposed wireless communication tower would improve the capacity level and quality of in-building service along the heavily traveled Orange Boulevard and I-4 interchange.

A communication tower facility has primarily the following three purposes:

Expansion/Coverage Site – The objective is locate in areas without signal. These sites would introduced service to new communities and new travel routes. These sites are designed taller and with antenna setups that broadcast the signal a longer distance. Signal strength and frequency management is not a primary concern.

Quality Site – These sites are located in areas with coverage, however due to community growth and changing business patterns the existing coverage does not meet the current expectations of the client. These sites are specifically designed to fulfill a deficiency. The deficiency may range from peak capacity levels to signal strength to provide better in-building coverage. The RF design varies and its customized to the particular need.

Capacity Site – These sites are located in areas with high call volumes. These sites are found in the midst of other communication facilities and perhaps in close proximity to a neighboring site. These site are designed to overcome frequency, equipment and technological limitations. The citing and development requirements of a Capacity Site are very stringent since the site's have a singular function of adding more phone call volume in an already serviced area. The signal strength and frequency range have to be within tightly tolerable parameters, so as not to interfere with surrounding sites, as well as, be able to efficiently hand off calls in a very tight coverage zone.

The proposed Nextel FL3121 communication facility would be a capacity site. It would increase the number of calls processed in the area, thus reducing drop and/or block calls. It would also increase the signal strength helping with in-building coverage for those surrounding commercial and industrial business.

New Communication Tower
General Information

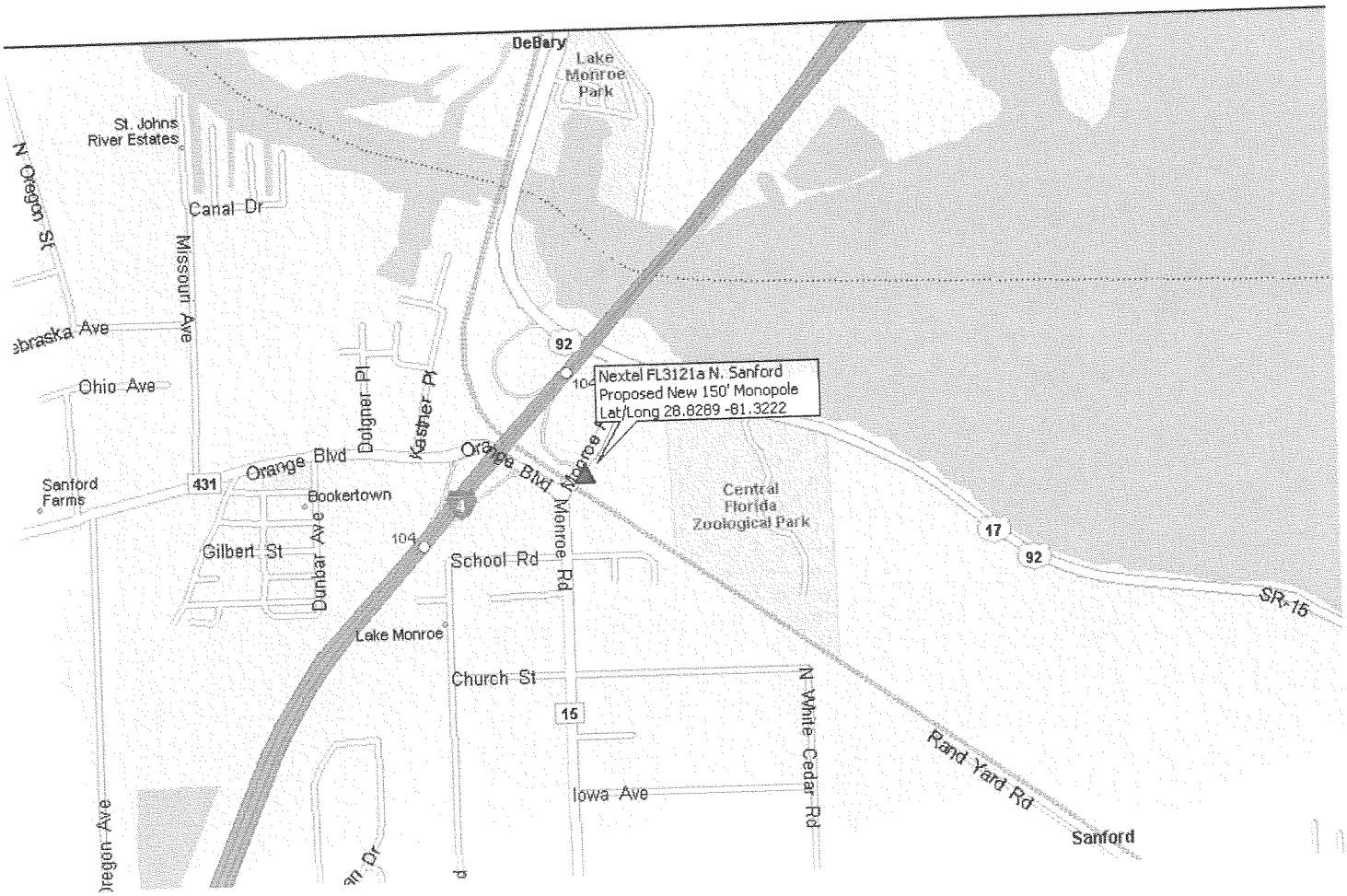
[redacted] 1

Property Ownership

Land Owner: LAKE MONROE DEV LLC
Address: 204 N PARK AVE # 100
Sanford, FL 32771
Warrantee Deed: ST JOSEPHS PB 1 PG 114

Location

Street Address: Monroe Road
Sanford, FL
Parcel#: 16-19-20-5AC-0000-13A
Zoning District: C-2 Retail Commercial



New Communication Tower
Property Information

Legal Description

NEXTEL COMMUNICATIONS
INGRESS / EGRESS AND UTILITY EASEMENT
NORTH SANFORD FL-3121

A PORTION OF THE SOUTH 1/2 OF LOT 13, LYING NORTH OF ATLANTIC COAST LINE RAILROAD RIGHT OF WAY, OF FLORIDA LAND AND COLONIZATION COMPANY LIMITED, W. BEARDALL'S MAP OF ST. JOSEPH'S ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 1, PAGE 114, OF THE PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA, LYING IN SECTION 21, TOWNSHIP 19 SOUTH, RANGE 30 EAST, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE INTERSECTION OF THE EASTERLY RIGHT OF WAY LINE OF INTERSTATE 4 AND THE NORTHERLY RIGHT OF WAY LINE OF THE CSX (FORMERLY ACL RAILROAD) RIGHT OF WAY LINE; THENCE NORTH 35^26'25" EAST, ALONG SAID EASTERLY RIGHT OF WAY LINE, A DISTANCE OF 37.00 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE NORTH 35^26'25" EAST, ALONG SAID EASTERLY RIGHT OF WAY LINE, A DISTANCE OF 30.00 FEET; THENCE DEPARTING SAID EASTERLY RIGHT OF WAY LINE, SOUTH 54^47'42" EAST, A DISTANCE OF 67.70 FEET; THENCE SOUTH 35^26'25" WEST, A DISTANCE OF 30.00 FEET; THENCE NORTH 54^47'42" WEST, A DISTANCE OF 67.70 FEET TO THE POINT OF BEGINNING.

CONTAINING 0.0466 ACRES OR 2031 SQUARE FEET, MORE OR LESS.

NEXTEL COMMUNICATIONS
LEASE PARCEL
NORTH SANFORD FL-3121

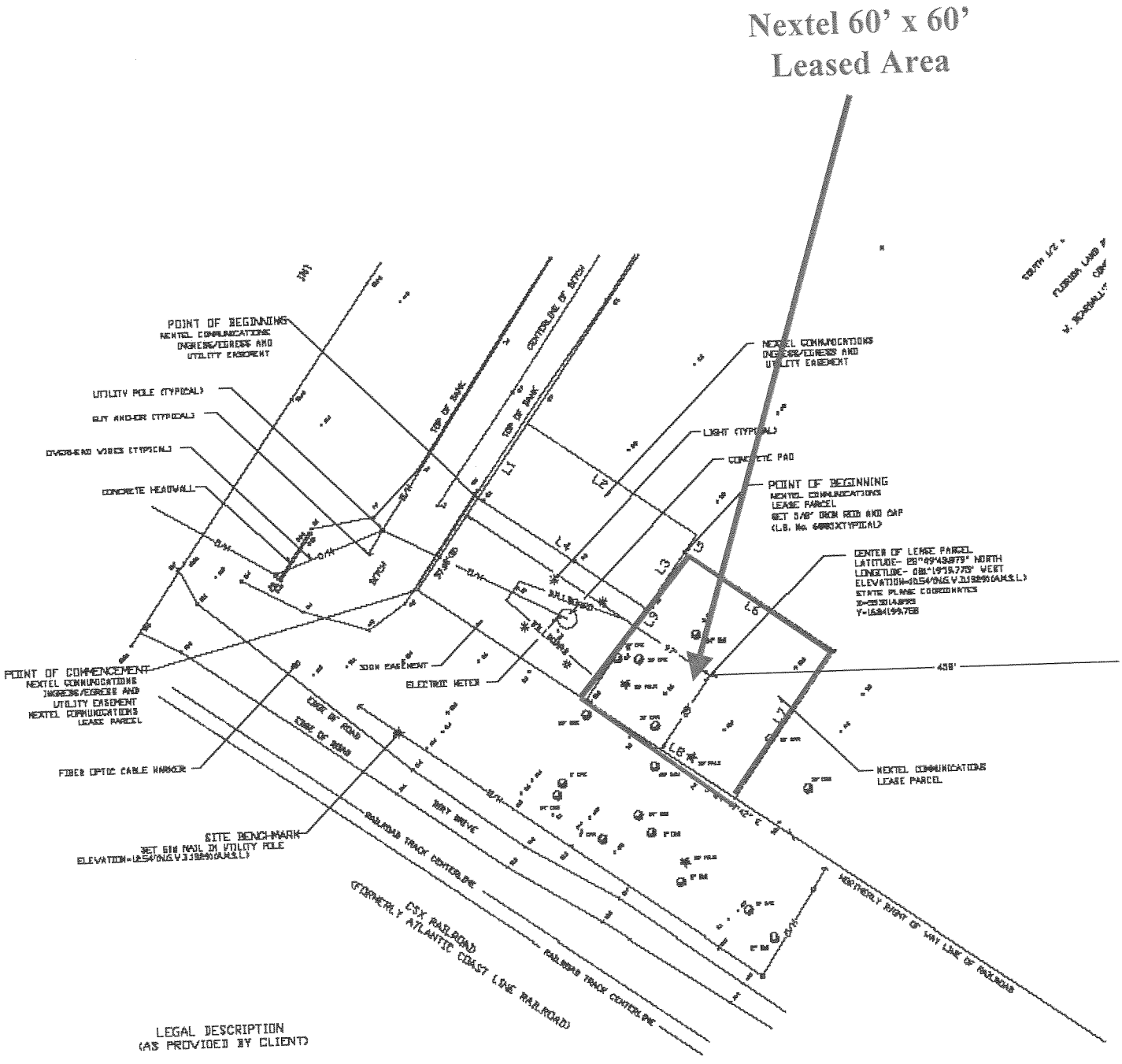
A PORTION OF THE SOUTH 1/2 OF LOT 13, LYING NORTH OF ATLANTIC COAST LINE RAILROAD RIGHT OF WAY, OF FLORIDA LAND AND COLONIZATION COMPANY LIMITED, W. BEARDALL'S MAP OF ST. JOSEPH'S ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 1, PAGE 114, OF THE PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA, LYING IN SECTION 21, TOWNSHIP 19 SOUTH, RANGE 30 EAST, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE INTERSECTION OF THE EASTERLY RIGHT OF WAY LINE OF INTERSTATE 4 AND THE NORTHERLY RIGHT OF WAY LINE OF THE CSX (FORMERLY ACL RAILROAD) RIGHT OF WAY LINE; THENCE NORTH 35^26'25" EAST, ALONG SAID EASTERLY RIGHT OF WAY LINE, A DISTANCE OF 67.00 FEET; THENCE DEPARTING SAID EASTERLY RIGHT OF WAY LINE, SOUTH 54^47'42" EAST, A DISTANCE OF 67.70 FEET; THENCE SOUTH 35^26'25" WEST, A DISTANCE OF 7.00 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 54^33'35" EAST, A DISTANCE OF 60.00 FEET; THENCE SOUTH 35^26'25" WEST, A DISTANCE OF 59.75 FEET; THENCE NORTH 54^47'42" WEST, A DISTANCE OF 60.00 FEET; THENCE NORTH 35^26'25" EAST, A DISTANCE OF 60.00 FEET TO THE POINT OF BEGINNING.

CONTAINING 0.0824 ACRES OR 3592 SQUARE FEET, MORE OR LESS.

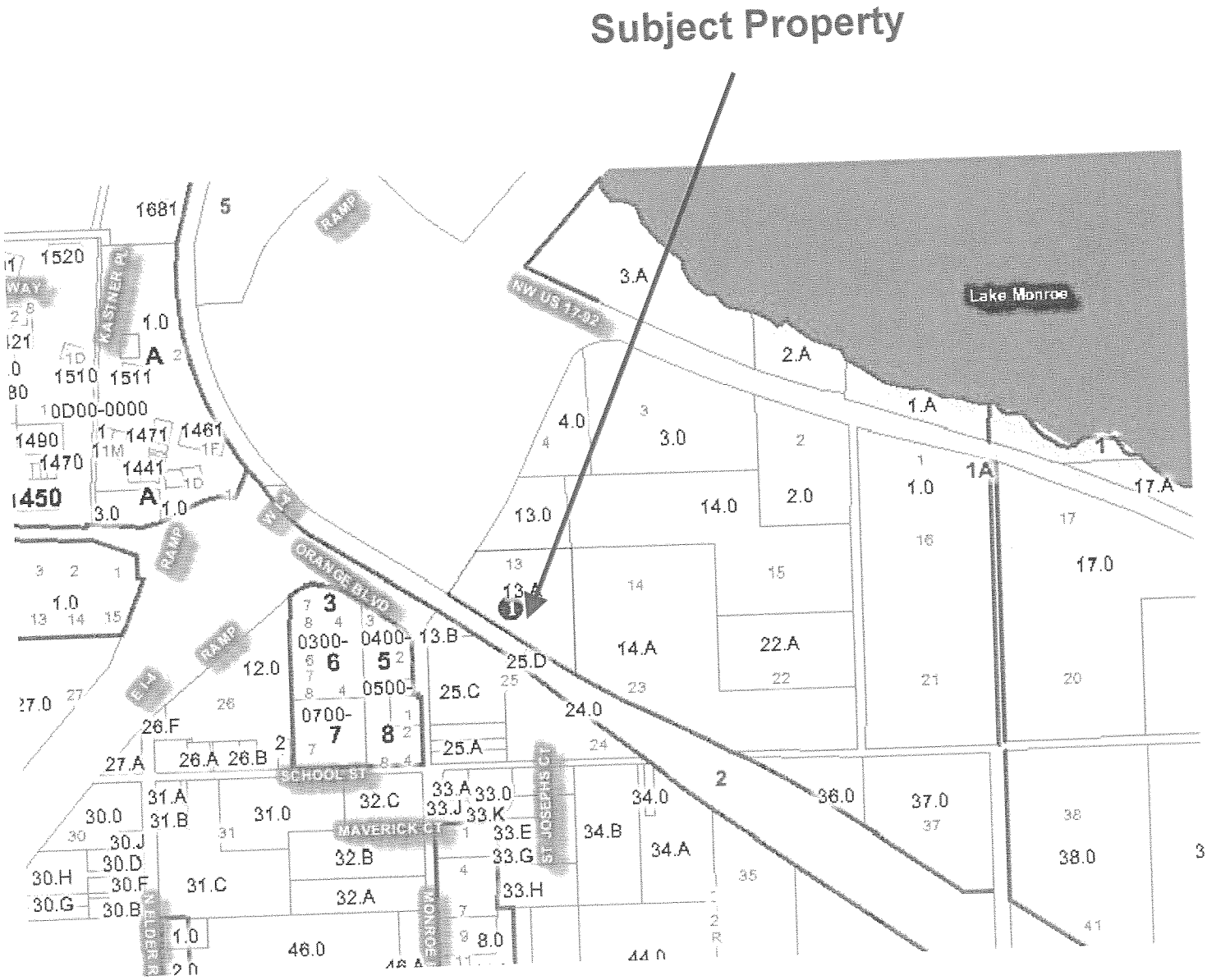
New Communication Tower Property Information

Survey (see attached engineering drawings)



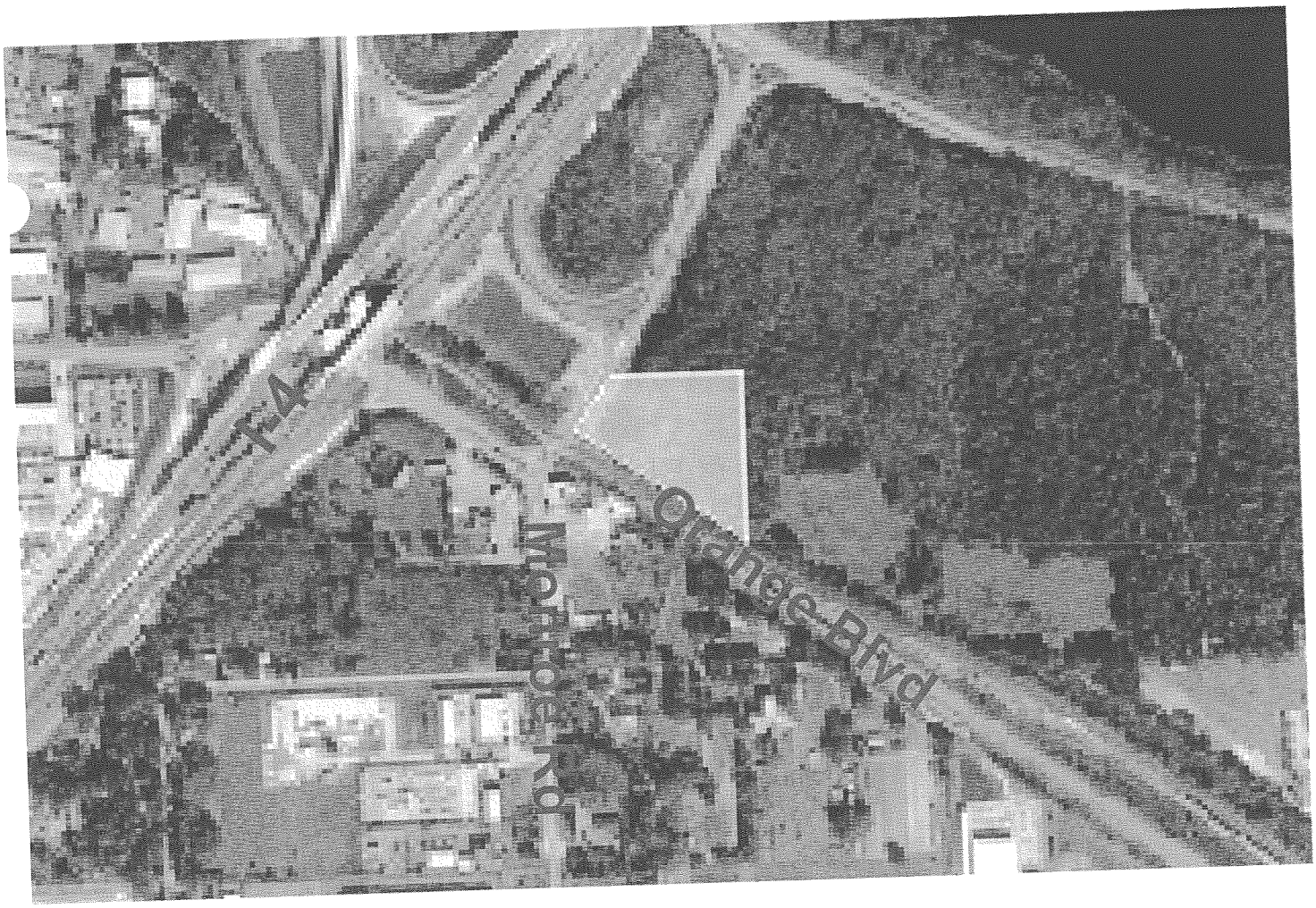
New Communication Tower
Property Information

Tax Map



New Communication Tower Property Information

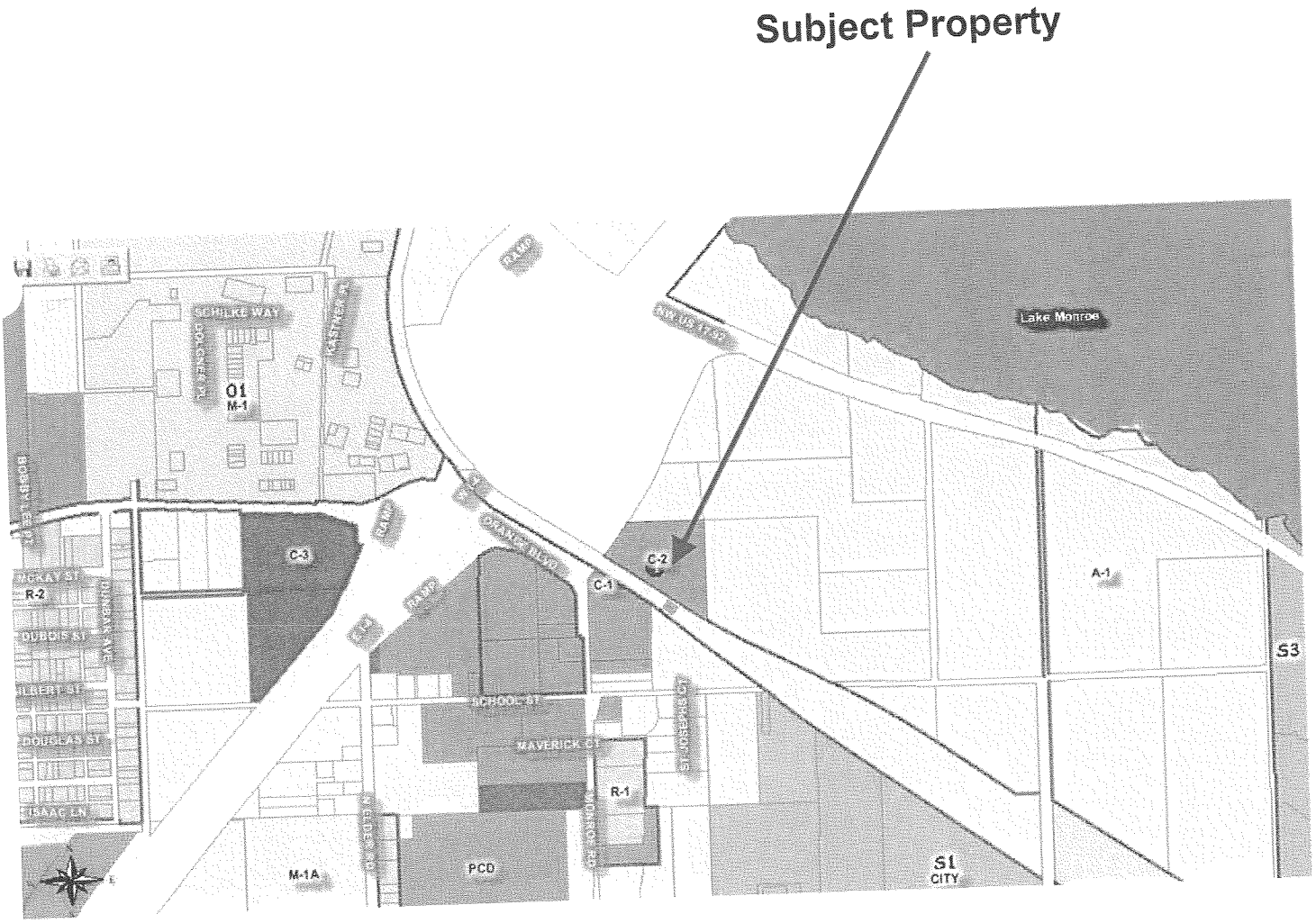
Aerial Photo- Year 2003



New Communication Tower Property Information

Zoning Map

Subject property is zoned C-2 Retail Commercial

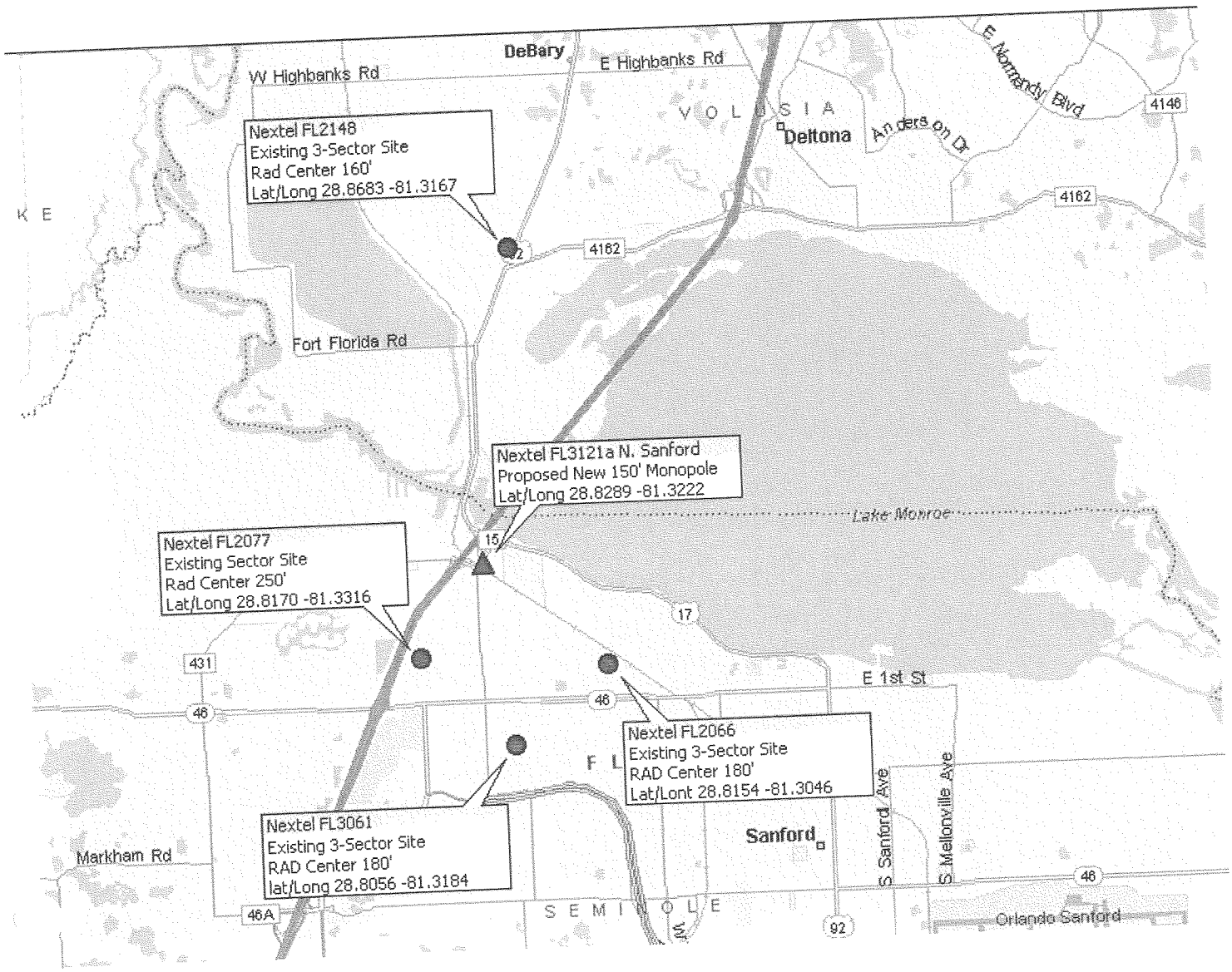


New Communication Tower Network Information

[redacted]

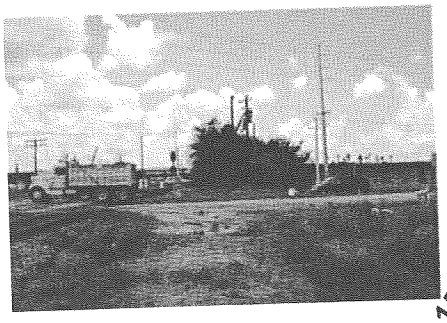
Nextel Neighbor Sites to Proposed New Site

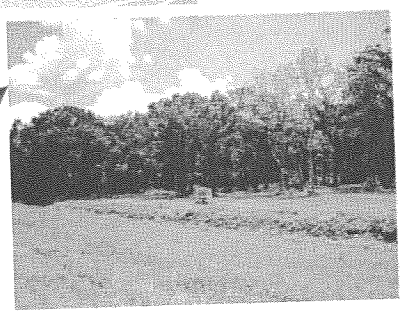
Map shows Nextel On-Air sites.
August 17, 2005

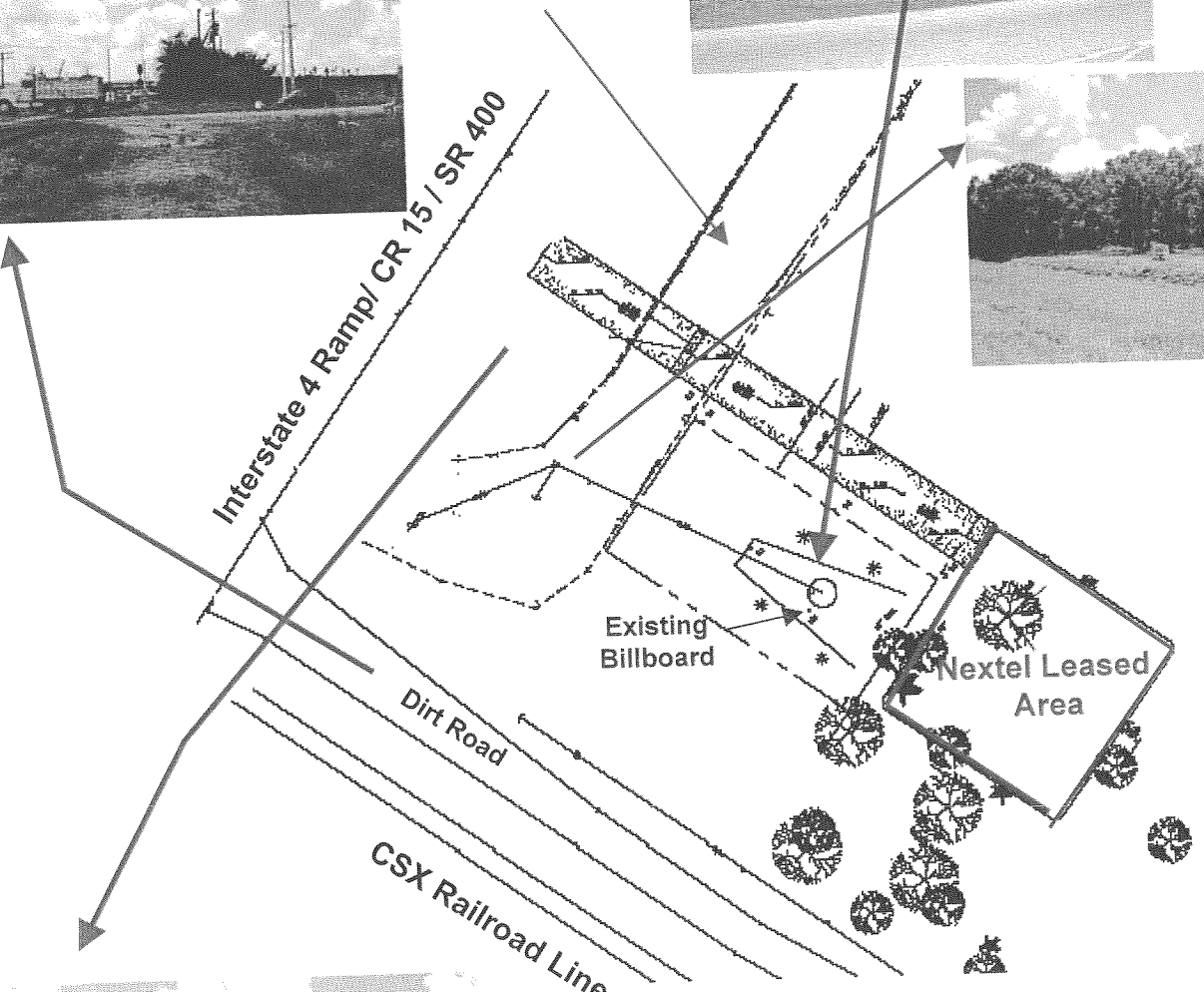


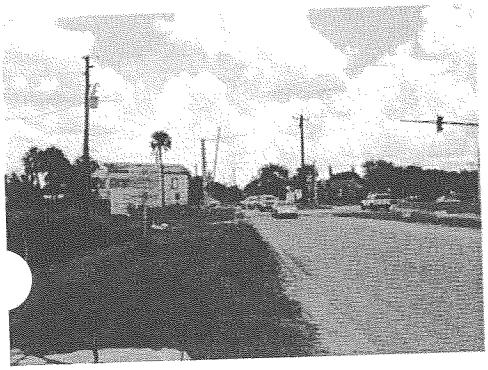
New Communication Tower Development Information

Site Views









New Communication Tower Development Information

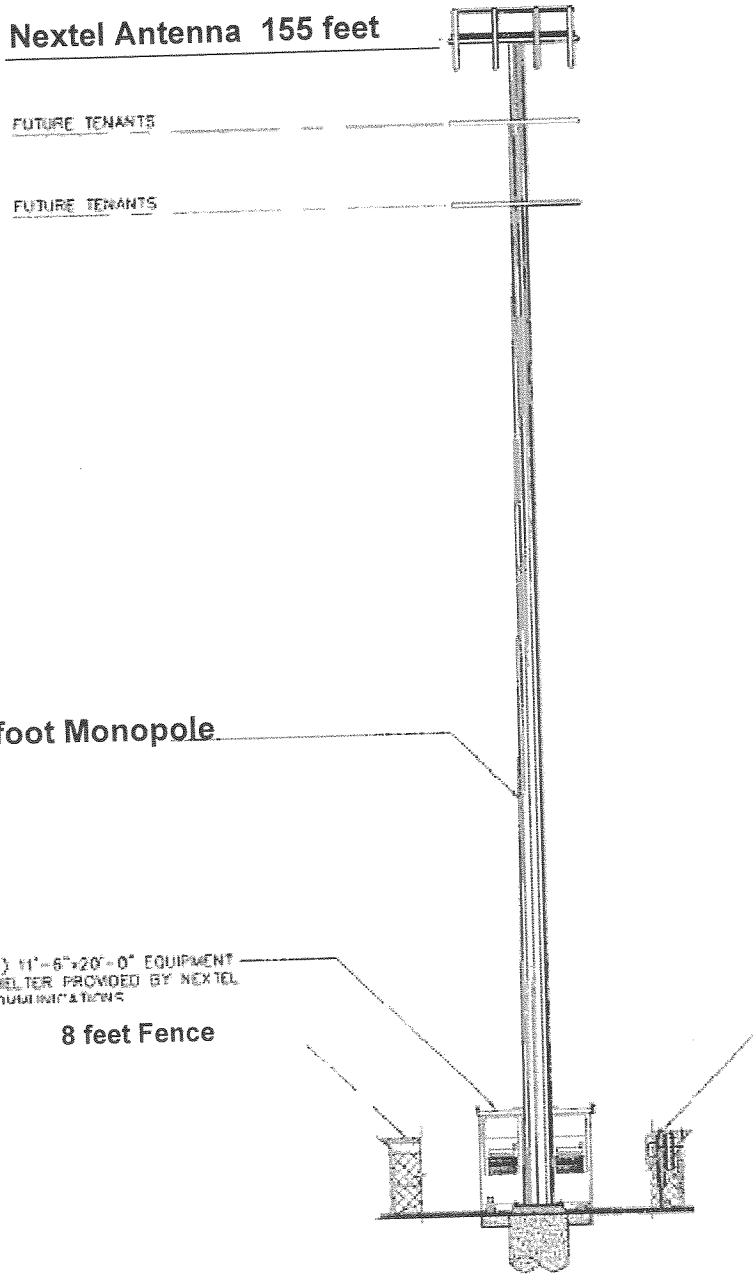
Tower

A 150 foot Monopole Tower with loading capacity for 3 antenna arrays similar to Nextel's proposed antenna configuration.

Antenna Installation

RAD Center: 155 Feet AGL
Quantity of Antennas: 12
Antenna Make: Decibel
Antenna Model: DB848H105

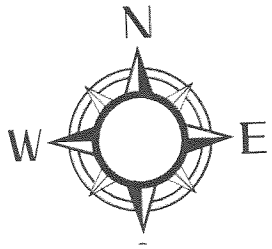
Weight: 28 lbs
Dimensions:
Length- 96 inches
Width- 6.5 inches
Depths- 8 inches

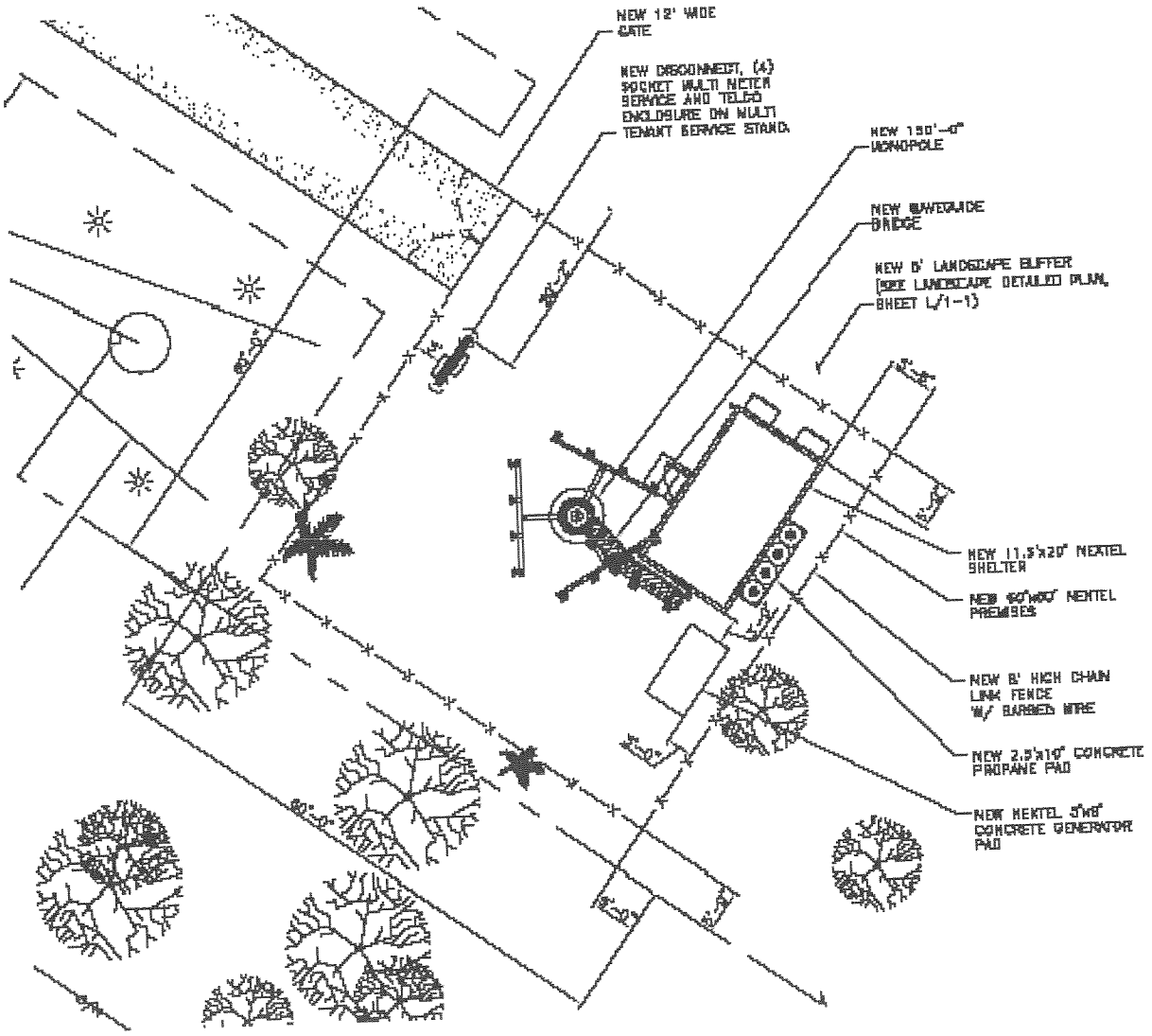


New Communication Tower Development Information

Site Plan

Leased Area of 60ft. X 60ft.
Fenced Area of 50 ft. x 50 ft. Height: 8ft. Type: Chain Link
Landscape Buffer – 5 ft.
Tower Location – Approximately in the Center of the Compound/Leased Area
Equipment Shelter- 11.5ft. X 20ft Modular Building





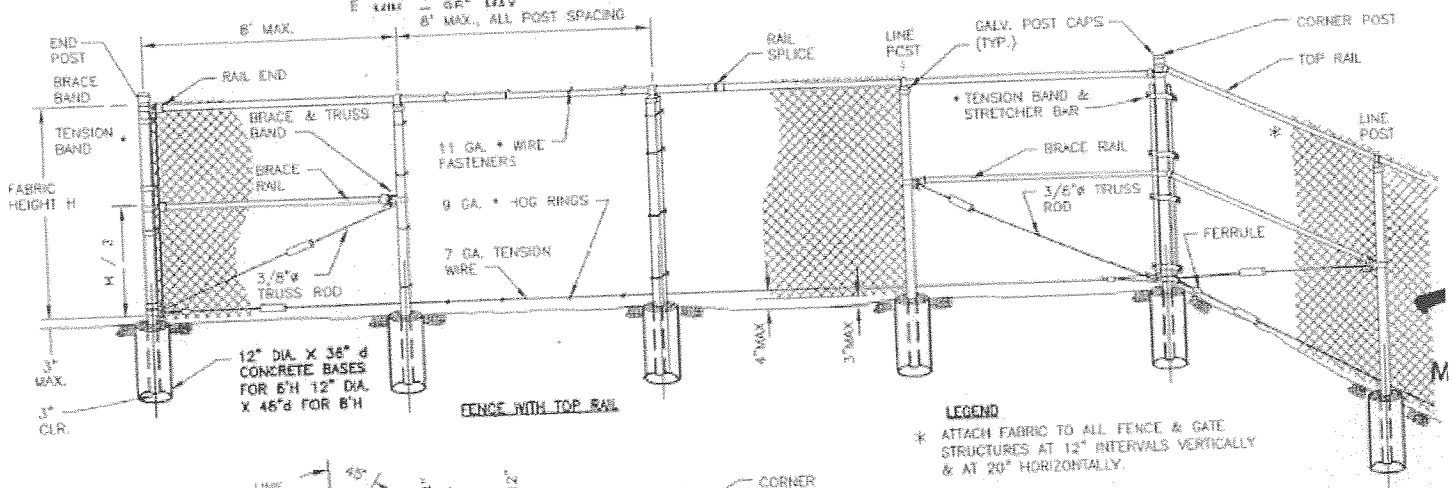
New Communication Tower Development Information

Fencing

Installation of fence per 2224 FBC. The fence would be a minimum of 72 inches with 3 strands of double stranded barbed wire. Please see details below.

FENCE NOTES:

1. INSTALL FENCING PER 2224 FBC)
2. GATE POST, CORNER, TERMINAL OR PULL POST SHALL BE 2 7/8"ø SCHEDULE 40 FOR GATE WIDTHS UP THROUGH 6 FEET OR 12 FEET FOR DOUBLE SWING GATE PER ASTM-F1083.
3. LINE POST: 2-3/8"ø SCHEDULE 40 PIPE PER ASTM-F1083.
4. GATE FRAME: 1 1/2"ø SCHEDULE 40 PIPE PER ASTM-F1083. & ASTM F900.
5. TOP RAL & BRACE RAIL: 1 3/8"ø SCHEDULE 40 PIPE PER ASTM-F1083.
6. FABRIC: 2" MESH No. 9 GAGE GALVANIZED WIRE SECURELY FASTENED TO TENSION WIRE, LINEPOST, BARS CONFORMING TO ASTM-A392, & AASHTO M 181.
7. TIE WIRE: MINIMUM 11 GA GALVANIZED STEEL INSTALL A SINGLE WRAP TIE WIRE AT POSTS AND RAILS AT MAX. 12" INTERVALS VERT & 20" HORZ. INSTALL HOG RINGS ON TENSION WIRE AT 20" INTERVALS.
8. TENSION WIRE: 7 GA. GALVANIZED STEEL.
9. BARBED WIRE: 3 STRANDS OF DOUBLE STRANDED 12-1/2 GAUGE TWISTED WIRE, 4 PT. BARBS SPACED ON APPROXIMATELY 5" CENTERS CONFORMING TO AASHTO M 280.
10. GATE LATCH: SEE DETAIL A/A-7
11. LOCAL ORDINANCE FOR BARBED WIRE PERMIT SHALL COVERN INSTALLATION.
12. (HEIGHT OF FABRIC) SHALL BE AS SHOWN ON THE COMPOUND PLANS. 72"

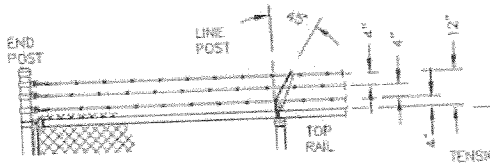


FENCE WITH TOP RAIL

LEGEND

* ATTACH FABRIC TO ALL FENCE & GATE STRUCTURES AT 12" INTERVALS VERTICALLY & AT 20" HORIZONTALLY.

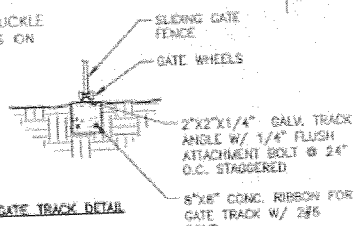
TIGHTENER OR TURNBUCKLE SYMBOL (SEE DETAILS ON SHEETS 2 & 3)



BARBED WIRE TOP

(USE ONLY WHEN SPECIFIED ON COMPOUND PLAN)

NOTE:
1. SLOPE TOP OUT OF COMPOUND 45°
2. BARBED WIRE OVER GATES SHALL NOT BE SLOPED.



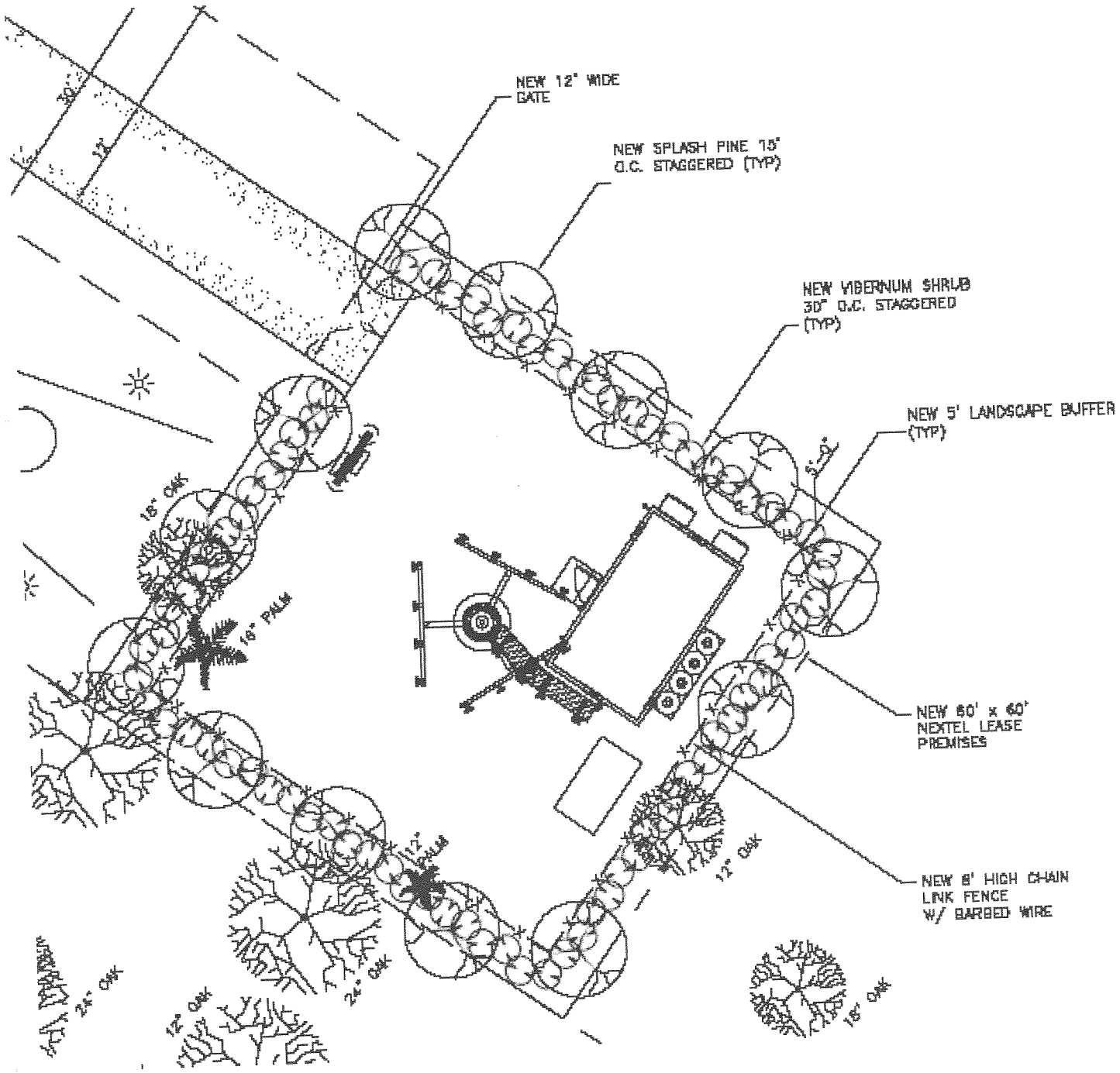
GATE TRACK DETAIL

C/A-7 FENCE DETAIL

NOT TO SCALE

New Communication Tower Development Information

Landscaping



New Communication Tower Development Information

13

Latitude and Longitude Coordinates

ADVANCED *LAND SURVEYING AND MAPPING, INC.*

GPS And Conventional Survey Services

FAA 1A CERTIFICATION
Project No: 164-0043

Date: January 04, 2005

RE: **Nextel Communications North Sanford FL-3121**
Located at : 845 15A Road
Sanford, Florida 32771

I certify that the Latitude of **28°49'43.879"** North and Longitude of **81°19'19.775"** West are accurate to within +/- 3' or **(0.914m)** horizontally and that the site elevation of **10.14'** or **(3.09m)** AMSL is accurate to within +/- 3' or **(0.914m)** vertically. the horizontal Datum (coordinates) are in terms of the North American Datum of 1983 (NAD-83) and expressed as degrees, minutes and seconds, to the nearest tenth or hundredth of a second. The vertical Datum (heights) are in terms of the National Geodetic Vertical Datum of 1929, and are determined to the nearest foot .

Kirk B. Mitchell P.S.M.
Florida Professional Land Surveyor No. 5682
Certificate of Authorization No. L.B. 6885
NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED
SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

New Communication Tower Development Information

Photo Simulation

New Communication Tower Development Information

Environmental – NEPA

NEPA Compliance Checklist

April 1, 2005
Site Name: North Sanford
Site Number: FL3121
Site Address: 845 SR 15A, Sanford, FL 32771

☐ Yes	☒ No	☐ Pending	Is the proposed facility located in an officially designated wilderness area?
☐ Yes	☒ No	☐ Pending	Is the proposed facility located in an officially designated wildlife preserve?
☐ Yes	☒ No	☐ Pending	Will the proposed facility likely affect threatened or endangered species or designated critical habitats?
☐ Yes	☒ No	☐ Pending	Will the proposed facility likely jeopardize the continued existence of any proposed endangered or threatened species?
☐ Yes	☒ No	☐ Pending	Will the proposed facility likely result in the destruction or adverse modification of critical habitats (as determined by the Endangered Species Act of 1973)?
☐ Yes	☒ No	☐ Pending	Will the facility affect Native American religious site(s)?
☐ Yes	☒ No	☐ Pending	Is the facility located in a flood plain?
☐ Yes	☒ No	☐ Pending	Will construction of the proposed facility involve significant change in surface features (e.g., wetland fill, deforestation or water diversion)?
☐ Yes	☒ No	☐ Pending	Will the facility be located in a residential area and require high intensity white lights by the FCC?
☐ Yes	☒ No	☐ Pending	Will the facility affect districts, sites, buildings, structures or objects, significant in American History, architecture, archaeology, engineering or culture that are listed (or eligible for listing) in the National Register of Historic Places per Section 106 and subject to the State Historic Preservation Office?

If any of the above questions results in a "YES" answer, an Environmental Assessment must be prepared and filed with the FCC. Construction may not start on any of these sites prior to the receipt of a finding of no significant impact with the FCC.

New Communication Tower Development Information

Environmental – Phase I Summary

Damiano Long Engineering & Planning LLC

EXECUTIVE SUMMARY

Damiano Long Engineering & Planning, LLC has conducted this Phase I Environmental Site Assessment (ESA) at the request of Eric Pegoda of Nextel Communications. The assessment was performed on the following property, hereafter referred to as "the site", or "the subject property":

Site Name: North Sanford
Site Number: FL 3121
Site Address: 845 SR 15A, Sanford, FL 32771
Prospective Lessor: Rand Yard Railway Dev., Inc

The inspection was performed by Jason M. Turner, Environmental Scientist on December 16, 2004. In conducting this ESA, Damiano Long has adhered to the standards set forth in ASTM E-1527-00, The Standard Practice for Environmental Site Assessments.

The purpose of the assessment was to identify any recognized environmental conditions on the subject property. The term recognized environmental conditions means the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws.

The subject of this Phase I assessment is a property identified as 845 SR 15A, Sanford, Florida. The site is located northeast of the intersection of Monroe Road and Orange Boulevard north of the railroad tracks. Access to the site is achieved via parking on the dirt drive off of Monroe Road. A swale is located 60 feet to the west of the site. A sparsely wooded grassy area was observed to the north and east. Railroad tracks are directly to the south running in an east west direction. The greater surrounding vicinity can best be described as commercial and residential properties and vacant land. Conclusions of this Phase I Site Assessment can be found in Section 9.0 of this report.

9.0 CONCLUSIONS

We have performed a Phase I Environmental Site Assessment of FL3121, North Sanford, 845 SR 15A, Sanford, Seminole County, Florida, 32771 in conformance with the scope and limitations of the Agreement between Nextel and Damiano Long Engineering & Planning, LLC and ASTM Standard E-1527-00. Any exceptions to, or deletions from, this practice are described in Section 1 of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the subject property.

New Communication Tower
RF Site Criteria

[redacted] 17

Statement of No Collocation Opportunity

1. Collocation Opportunity: After a query of tower databases and several drive-by surveys, the Nextel team could not identify any tower structure within a tolerable range from the designed Search Ring.

2. Roof-top/Tall Structure: A site drive of the area shows no tall buildings.

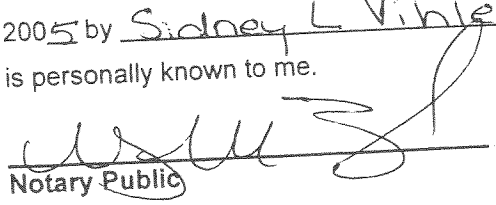
3. Property for New Tower: This is the only viable option for Nextel to enhance and improve the capacity of its network. The property selected is near the original search ring. The land owner is contracted to lease the property. The surrounding property uses and zoning are industrial and commercial. There are no nearby residential zoning districts.

Letter of Limited Agency

I, Sid Vihlen Jr., hereby grant and authorize to **Franco Lugo and Chad Caudill**, of Charlie Craig and Associates, LLC ("Agent"), the authority to represent Nextel Communications, as agent for Nextel Communications in connection with filing for zoning / building / electrical / historical / landscape, and any / all other required permits and/ or jurisdictional approvals, required by The City of Sanford, County of Seminole, Florida in connection with the construction of telecommunications facilities at the following location [845 State Road 15A, Sanford, FL 32771]. The agency and authority granted hereby shall expire on August 30th 2006, or upon written notice to Agent, if earlier.

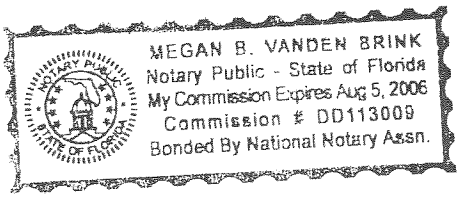
Sid Vihlen, Jr.

The foregoing instrument was acknowledged before me this 4 day of August, 2005 by Sidney L. Vihlen, for and on behalf of Nextel South Corp., who is personally known to me.

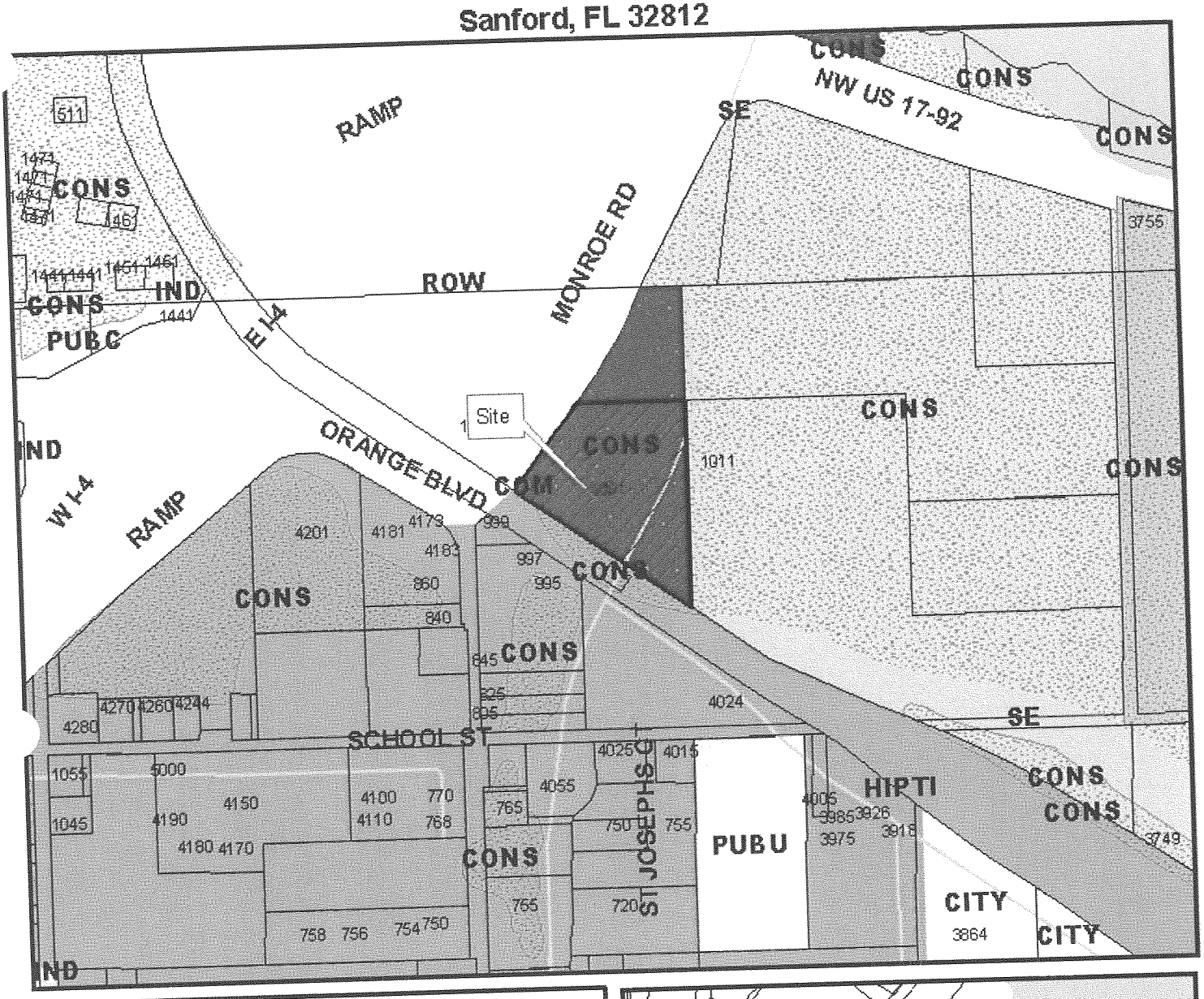


Notary Public

SEAL



Nextel/Franco Lugo of Craig & Associates
845 S.R. 15A
Sanford, FL 32812



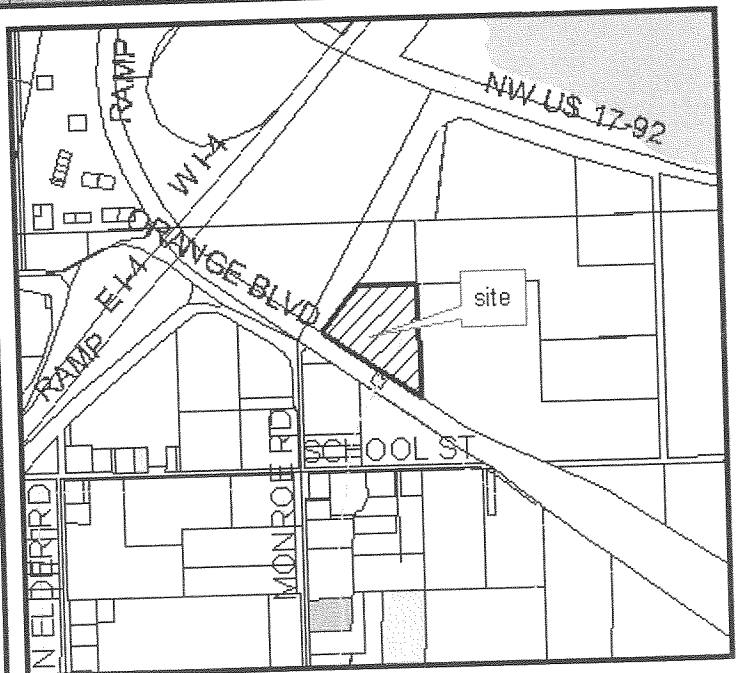
Seminole County Board of Adjustment
September 26, 2005
Case: BS2005-017
Parcel No: 16-19-30-5AC-0000-013A

Future Land Use

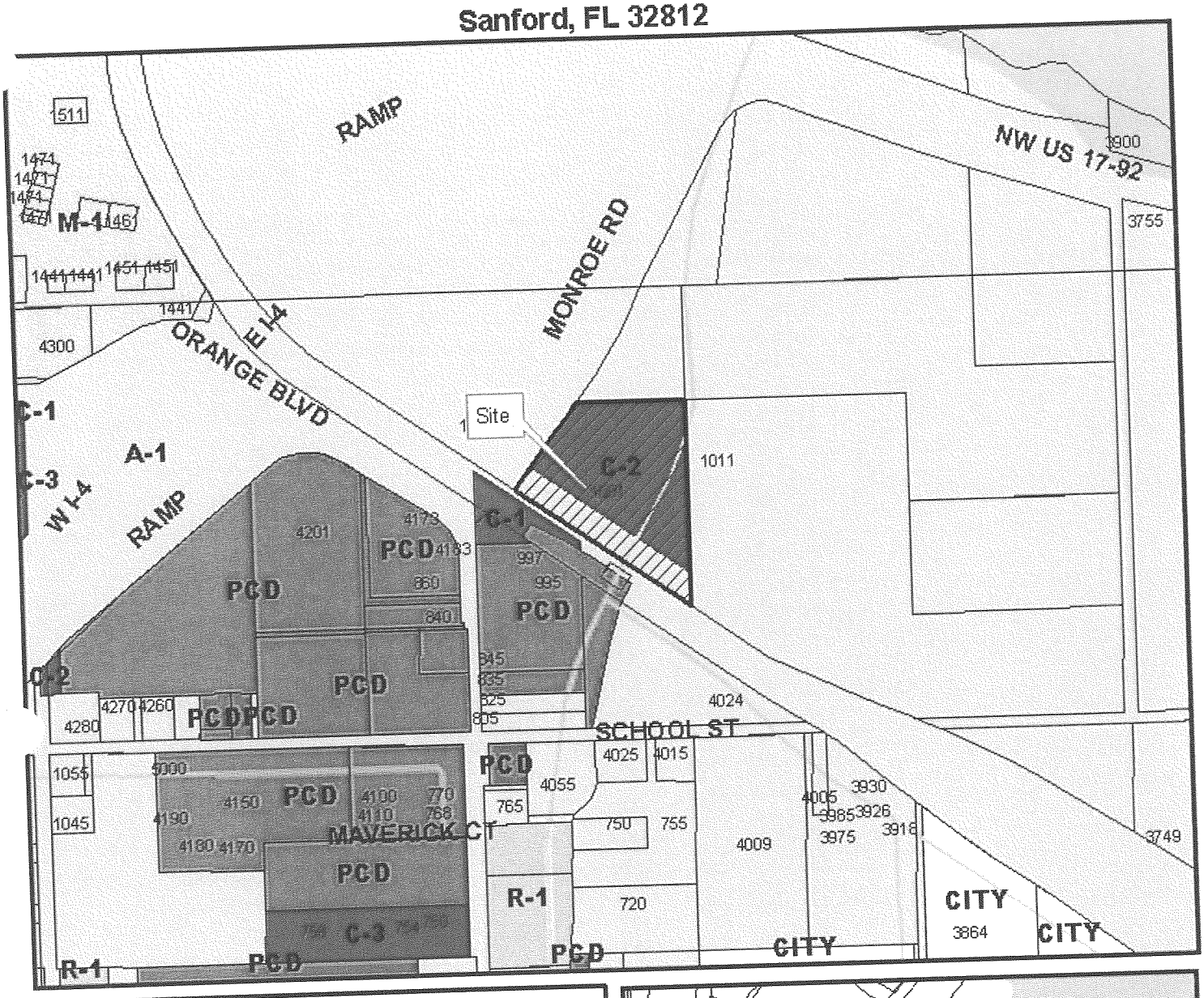
CONS, REC	PUBU, NONE
CONS, PUBC	SE, NONE
CONS, SE	COM, NONE
CONS, COM	IND, NONE
CONS, IND	HIPTI, NONE
CONS, HIPTI	BS2005-017
REC, NONE	All Other Values
PUBC, NONE	Vacant Residential
	Single Family Residential
	Mobile Home

Feet
0 85170 340 510 680

N



Nextel/Franco Lugo of Craig & Associates
845 S.R. 15A
Sanford, FL 32812



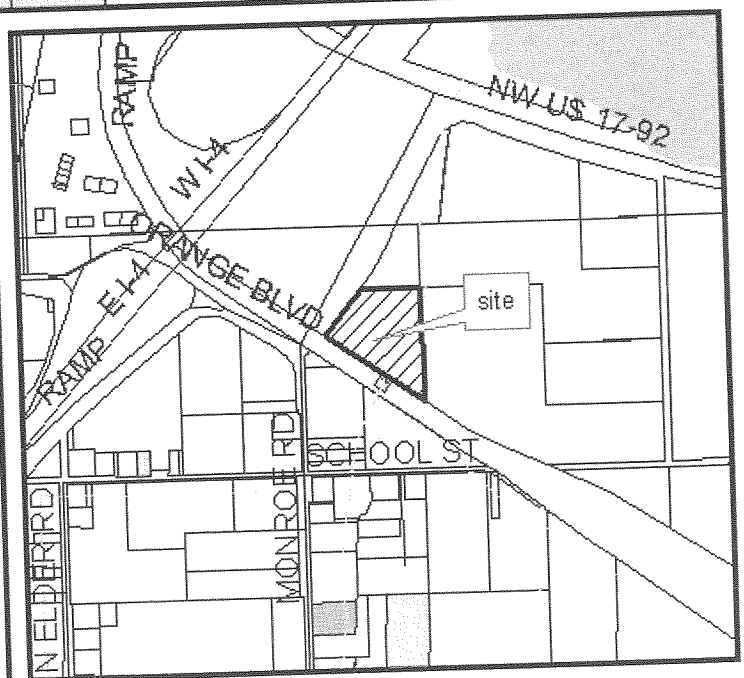
Seminole County Board of Adjustment
September 26, 2005
Case: BS2005-017
Parcel No: 16-19-30-5AC-0000-013A

Zoning

- A-1 Agricultural-1Ac
- R-1 Single Fam-8400
- C-1 Retail Commercial
- C-2 Retail Commercial
- C-3 Gen Commercial & Wholesale
- M-1 Industrial
- PCD Planned Commercial Dist.
- BS2005-017
- All Other Values
- Vacant Residential
- Single Family Residential
- Mobile Home

N

Feet



July 19th, 2005

Carolyn V. Wilkinson
T-Mobile
3111 West Dr. Martin Luther King Blvd.
Suite 400
Tampa, FL 33607
813-348-2505

Re: Nextel Communications new telecommunications site

Ms. Wilkinson:

Please be advised that Nextel Communications, Inc. is proposing to build a new tower located at N28° 49' 43.879" / W81° 19' 19.775", 845 S.R. 15A, Sanford, FL 32771, Seminole County, Florida.

The telecommunications facility will consist of a 150' Monopole tower with Nextel Communications occupying the 150' RCL, it will support up to 3 additional carriers, and the compound area is approximately 60' x 60' (3600 square feet).

Please contact Marie Tirrell with Nextel Communications at (307) 433-8537 or marie.tirrell@nextel.com for collocation information.

Thanks,

Nextel Communications

Nextel Communications
851 Trafalgar Court
Suite 300E
Phone (407) 838-5200

NEXTEL

July 19th, 2005

Jan Lapolito
Verizon Wireless
100 Tampa Oaks Blvd.
Temple Terrace, FL 33637

Re: Nextel Communications new telecommunications site

Ms. Lapolito:

Please be advised that Nextel Communications, Inc. is proposing to build a new tower located at N28° 49' 43.879" / W81° 19' 19.775", 845 S.R. 15A, Sanford, FL 32771, Seminole County, Florida.

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Please contact Marie Tirrell with Nextel Communications at (307) 433-8537 or marie.tirrell@nextel.com for collocation information.

Thanks,

Nextel Communications

Nextel Communications
851 Trafalgar Court
Suite 300E
Phone (407) 838-5200

NEXTEL

July 19th, 2005

Cingular
Michael S. Brown
15814 Muirfield Drive
Odessa, FL 33556-2857
813-376-3591

Re: Nextel Communications new telecommunications site

Mr. Brown:

Please be advised that Nextel Communications, Inc. is proposing to build a new tower located at N28° 49' 43.879" / W81° 19' 19.775", 845 S.R. 15A, Sanford, FL 32771, Seminole County, Florida.

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Please contact Marie Tirrell with Nextel Communications at (307) 433-8537 or marie.tirrell@nextel.com for collocation information.

Thanks,

Nextel Communications

Nextel Communications
851 Trafalgar Court
Suite 300E
Phone (407) 838-5200

NEXTEL

July 19th, 2005

Sprint
Michael A. Curry
6120 Powers Ferry Road NW
Suite 200
Atlanta, GA 30339
404-948-3164

Re: Nextel Communications new telecommunications site

Mr. Curry:

Please be advised that Nextel Communications, Inc. is proposing to build a new tower located at N28° 49' 43.879" / W81° 19' 19.775", 845 S.R. 15A, Sanford, FL 32771, Seminole County, Florida.

The telecommunications facility will consist of a 150' Monopole tower with Nextel Communications occupying the 150' RCL, it will support up to 3 additional carriers, and the compound area is approximately 60' x 60' (3600 square feet).

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Thanks,

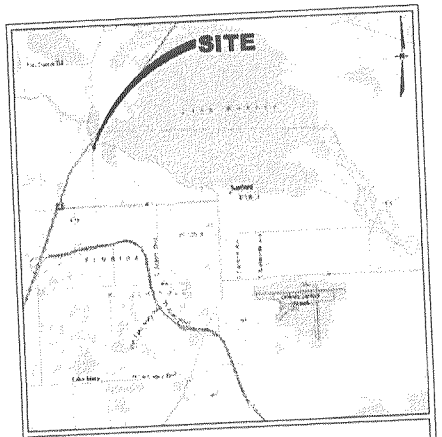
Nextel Communications

Nextel Communications
851 Trafalgar Court
Suite 300E
Phone (407) 838-5200

NEXTEL

NEXTEL®

NORTH SANFORD
SITE ID#: FL3121A
845 S.R. 15A
SANFORD, FL 32771
SEMINOLE COUNTY



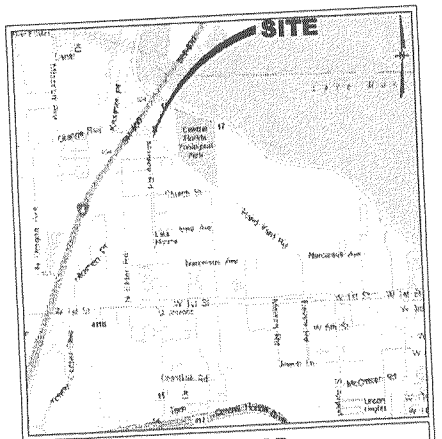
KEY MAP
SANFORD, FL

SITE LOCATION INFORMATION

SITE I.D.:	FL3121A
SITE NAME:	NORTH SANFORD
SITE ADDRESS:	845 S.R. 15A SANFORD, FL 32771
JURISDICTION:	SEMINOLE COUNTY
CURRENT ZONING:	ZONED A-1 AND C-2
SITE COORDINATES:	N 28° 46' 42.575" W 81° 16' 16.776" NAD 83
PROPERTY OWNER:	RANS YARD RAILWAY DEVELOPMENT, INC. 284 S. PARK AVE. SUITE 100 SANFORD, FL 32771
APPLICANT:	NEXTEL COMMUNICATIONS 851 TRAFALGAR CIRCLE SUITE 3002 MAITLAND, FL 32751-7425
CONTACT:	SITE DEVELOPMENT (407) 838-8290
POWER COMPANY:	FPL WAYNE MASSIE (800) 376-3434
TELCO COMPANY:	BELL SOUTH CARL MOELTKE (407) 246-3088

SHEET INDEX

SHEET NO	SHEET DESCRIPTION	ISSUE
T-1	TITLE SHEET	1
---	SURVEY	---
C-1	SITE PLAN	1
C-1.1	SITE PLAN	1
C-2	DETAILED PLAN & ELEVATION	1
C-3	CONSTRUCTION DETAILS AND NOTES	1
C-4	CONSTRUCTION DETAILS AND NOTES	1
C-5	CONSTRUCTION DETAILS AND NOTES	1
C-6	CONSTRUCTION DETAILS AND NOTES	1
A-1	ANTENNA PLAN, DETAILS & NOTES	1
E-1	ELECTRICAL NOTES	1
E-2	ELECTRICAL PLAN & DETAILS	1
G-1	GROUNDING NOTES	1
G-2	GROUNDING PLAN & DETAILS	1
L-1	LANDSCAPE DETAILS & NOTES	1
L-2	LANDSCAPE DETAILS & NOTES	1



AREA MAP
SANFORD, FL

DIRECTIONS:
FROM ORLANDO: TAKE I-4 EAST 21 MILES TO EXIT 104 GOING EAST ON S.R. 431/ ORANGE BLVD. TAKE A LEFT ONTO S.R. 15 GOING OVER RAILROAD TRACKS. IMMEDIATELY TURN RIGHT ONTO ACCESS ROAD ALONG R.R. TRACKS. SITE LOCATED ON THE LEFT, EAST OF THE BILLBOARD.

DL Dumiano Long LLC
2323 HERSCHEL ST.
JACKSONVILLE, FL 32204
TEL (904) 387-0869 FAX (904) 387-0880

NEXTEL®
NEXTEL COMMUNICATIONS
851 TRAFALGAR CIRCLE SUITE 3002
MAITLAND, FL 32751-7425
OFFICE: (407) 838-8290
FAX: (407) 838-8400

SAC :
CONST :
RF :
A&E :

SCHEDULE OF REVISIONS

REV NO.	DATE	DESCRIPTION OF CHANGES
7		
6		
5		
4		
3		
2		
1	7/30/05	ISSUED FOR REVISION
0	7/30/05	ISSUED FOR CONSTRUCTION

DRAWN BY: JJC	CHECKED BY: DSC
SCALE: AS NOTED	JOB NO: 100-04004/NX
FIRST ISSUE: 7/30/05	PRINT DATE: 7/30/05

APPROVALS

SAC MGR : _____
SAC : _____
OPER : _____
CM : _____
RF : _____
CONST : _____
A&E : _____

NORTH SANFORD
SITE ID#: FL3121A
845 S.R. 15A
SANFORD, FL 32771
SEMINOLE COUNTY

DRAWING TITLE:

TITLE SHEET

DRAWING SHEET:

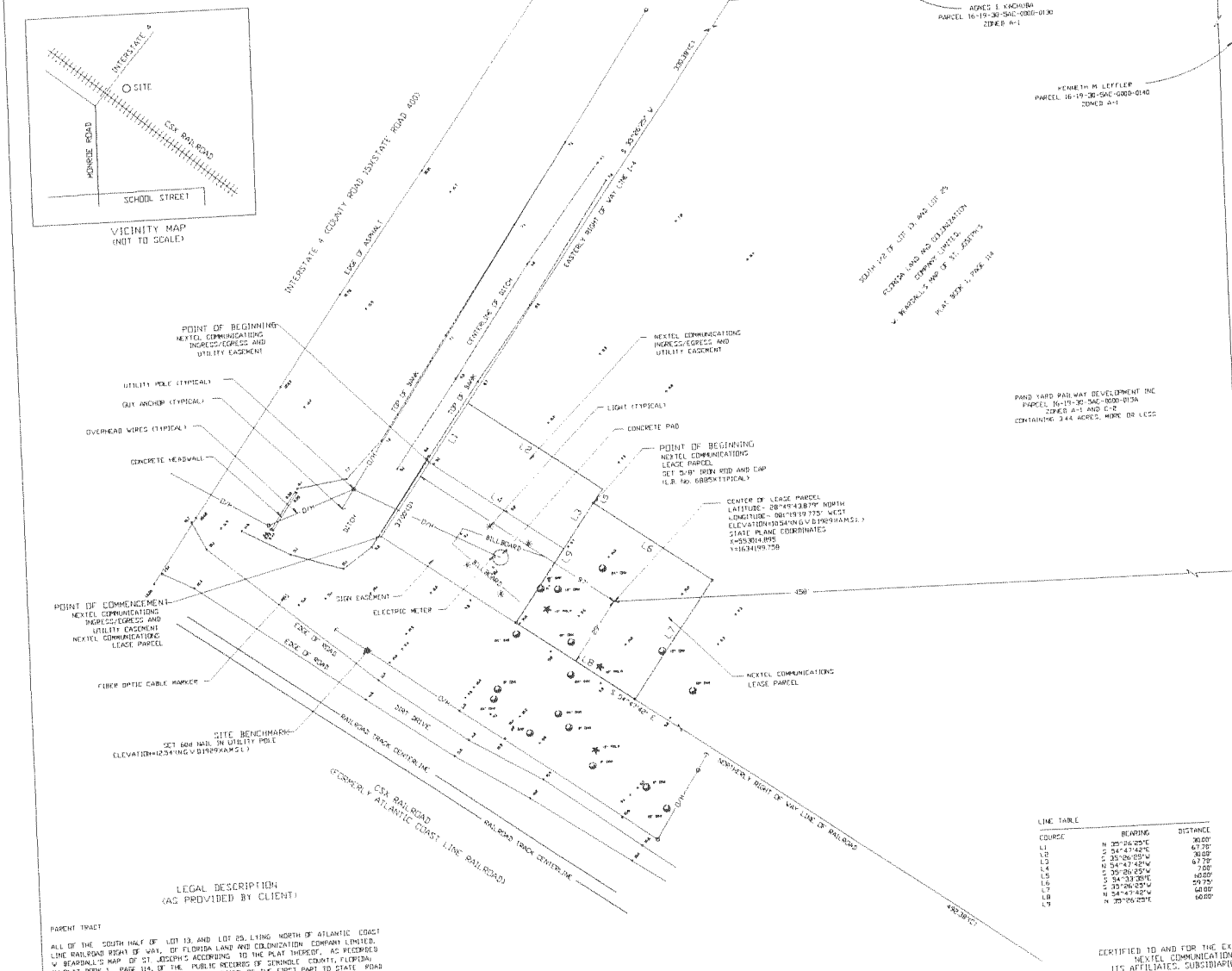
T-1

SHEET NO. 1 OF 19

8/3/05

GEOFF D. [illegible], PE
FL PROFESSIONAL ENGINEER [illegible]
FL CERTIFICATE OF AUTHORIZATION [illegible]

VICINITY MAP
(NOT TO SCALE)



LEGAL DESCRIPTION
(AS PROVIDED BY CLIENT)

PARENT TRACT

ALL OF THE SOUTH HALF OF LOT 13, AND LOT 25, LYING NORTH OF ATLANTIC COAST LINE RAILROAD RIGHT OF WAY, OF FLORIDA LAND AND COLONIZATION COMPANY LIMITED, W. BEARDALL'S MAP OF ST. JOSEPH'S ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 1, PAGE 114, OF THE PUBLIC RECORDS OF THE FIRST PART TO STATE ROAD LESS THE LAND DESCRIBED IN DEED FROM PARTIES OF THE FIRST PART TO STATE ROAD DEPARTMENT OF THE STATE OF FLORIDA, DATED AUGUST 22, 1958, RECORDED IN OFFICIAL RECORDS BOOK 184, PAGE 382, OF THE PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA

LINE TABLE

COURSE	BEARING	DISTANCE
L1	N 35°26'25"E	30.00'
L2	S 54°47'42"E	67.78'
L3	S 35°26'25"W	30.00'
L4	N 54°47'42"W	67.79'
L5	S 35°26'25"W	7.00'
L6	S 34°33'35"E	60.00'
L7	S 35°26'25"W	59.75'
L8	N 54°47'42"W	60.00'
L9	N 35°26'25"E	60.00'

LEGAL DESCRIPTIONS
(AS PREPARED BY SURVEYOR)

NEXTEL COMMUNICATIONS
INGRESS / EGRESS AND UTILITY EASEMENT
NORTH SANFORD FL-3121

A PORTION OF THE SOUTH 1/2 OF LOT 13, LYING NORTH OF ATLANTIC COAST LINE RAILROAD RIGHT OF WAY, OF FLORIDA LAND AND COLONIZATION COMPANY LIMITED, W. BEARDALL'S MAP OF ST JOSEPHS ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 1, PAGE 114, OF THE PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA, LYING IN SECTION 16, TOWNSHIP 19 SOUTH, RANGE 30 EAST, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE INTERSECTION OF THE EASTERLY RIGHT OF WAY LINE OF INTERSTATE 4 AND THE NORTHERLY RIGHT OF WAY LINE OF THE CSX (FORMERLY ACL RAILROAD) RIGHT OF WAY LINE; THENCE NORTH 35°26'25" EAST, ALONG SAID EASTERLY RIGHT OF WAY LINE, A DISTANCE OF 37.88 FEET TO THE POINT OF BEGINNING THENCE CONTINUE NORTH 35°26'25" EAST, ALONG SAID EASTERLY RIGHT OF WAY LINE, SOUTH 54°47'42" EAST, A DISTANCE OF 67.78 FEET; THENCE DEPARTING SAID EASTERLY RIGHT OF WAY LINE, SOUTH 54°47'42" EAST, A DISTANCE OF 67.79 FEET; THENCE SOUTH 35°26'25" WEST, A DISTANCE OF 30.00 FEET; THENCE NORTH 54°47'42" WEST, A DISTANCE OF 67.78 FEET TO THE POINT OF BEGINNING

CONTAINING 0.0466 ACRES OR 2031 SQUARE FEET, MORE OR LESS.

NEXTEL COMMUNICATIONS
LEASE PARCEL
NORTH SANFORD FL-3121

A PORTION OF THE SOUTH 1/2 OF LOT 13, LYING NORTH OF ATLANTIC COAST LINE RAILROAD RIGHT OF WAY, OF FLORIDA LAND AND COLONIZATION COMPANY LIMITED, W. BEARDALL'S MAP OF ST JOSEPHS ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 1, PAGE 114, OF THE PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA, LYING IN SECTION 16, TOWNSHIP 19 SOUTH, RANGE 30 EAST, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

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CONTAINING 0.0824 ACRES OR 3592 SQUARE FEET, MORE OR LESS.

SURVEYOR'S NOTES

1. THIS IS A BOUNDARY SURVEY OF THE NEXTEL COMMUNICATIONS LEASE PARCEL. THE PARENT TRACT INFORMATION SHOWN HEREON IS BASED ON A BOUNDARY SURVEY PREPARED BY WALTER T. MIMS, JOB NUMBER #20020, DATED NOVEMBER 22, 2000, AND IS FOR INFORMATIONAL PURPOSES ONLY.
2. THE NEXTEL COMMUNICATIONS LEASE PARCEL DEPICTED HEREON LIES ENTIRELY WITHIN THE DESCRIBED PARENT TRACT.
3. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE SEARCH.
4. BEARINGS SHOWN HEREON ARE ASSUMED AND BASED ON THE NORTHERLY RIGHT OF WAY LINE OF CSX RAILROAD BEING SOUTH 54°47'42" EAST PER ABOVE REFERENCED SURVEY (SEE NOTE 1).
5. UNDERGROUND UTILITIES AND IMPROVEMENTS HAVE NOT BEEN LOCATED.
6. INTERIOR IMPROVEMENTS HAVE NOT BEEN LOCATED.
7. AFTER REVIEW OF FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NO. 12117E 0030 E, DATED APRIL 17, 1995, THE NEXTEL COMMUNICATIONS LEASE PARCEL DEPICTED HEREON LIES PARTIALLY IN ZONE "X" (AREAS OF 500-YEAR FLOOD; AREAS OF 100-YEAR FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 100-YEAR FLOOD), AND PARTIALLY IN ZONE "AE" (SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100 YEAR FLOOD, BASE FLOOD ELEVATION UNDETERMINED).
8. (D) DENOTES DESCRIPTION (FT) DENOTES FIELD MEASURED; (P) DENOTES PLAT; (C) DENOTES CALCULATED.
9. GEODETIC AND VERTICAL INFORMATION SHOWN HEREON IS BASED ON G.P.S. OBSERVATIONS PERFORMED HOLDING NGS STATION DESIGNATION 14 73 A13, NAD83(1990), ELEVATION=52.50 FEET (N.G.V.D.1929). SITE BENCHMARK IS CT 60d NAIL IN UTILITY POLE, ELEVATION=12.54 FEET (N.G.V.D.1929), AS SHOWN HEREON. ALL ELEVATIONS SHOWN HEREON ARE ABOVE MEAN SEA LEVEL (M.A.S.L.).
10. ALL GEODETIC AND VERTICAL DATA, DEPICTED HEREON IS WITHIN THE 1a ACCURACY TOLERANCES AS SET FORTH BY THE F.A.A.
11. THE DISTANCE TO THE NEAREST ADJACENT RESIDENCE IS GREATER THAN 1000 FEET.

SURVEYOR'S CERTIFICATION

I HEREBY CERTIFY THAT THIS BOUNDARY SURVEY PERFORMED ON JANUARY 04, 2005, IS IN ACCORDANCE WITH THE TECHNICAL STANDARDS AS REQUIRED BY CHAPTER 61G17-6, FLORIDA ADMINISTRATIVE CODE.

KIRK B. MITCHELL P.S.M. L.S. NO. 5682
CERTIFICATE OF AUTHORIZATION NO L.B. 6885
NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER

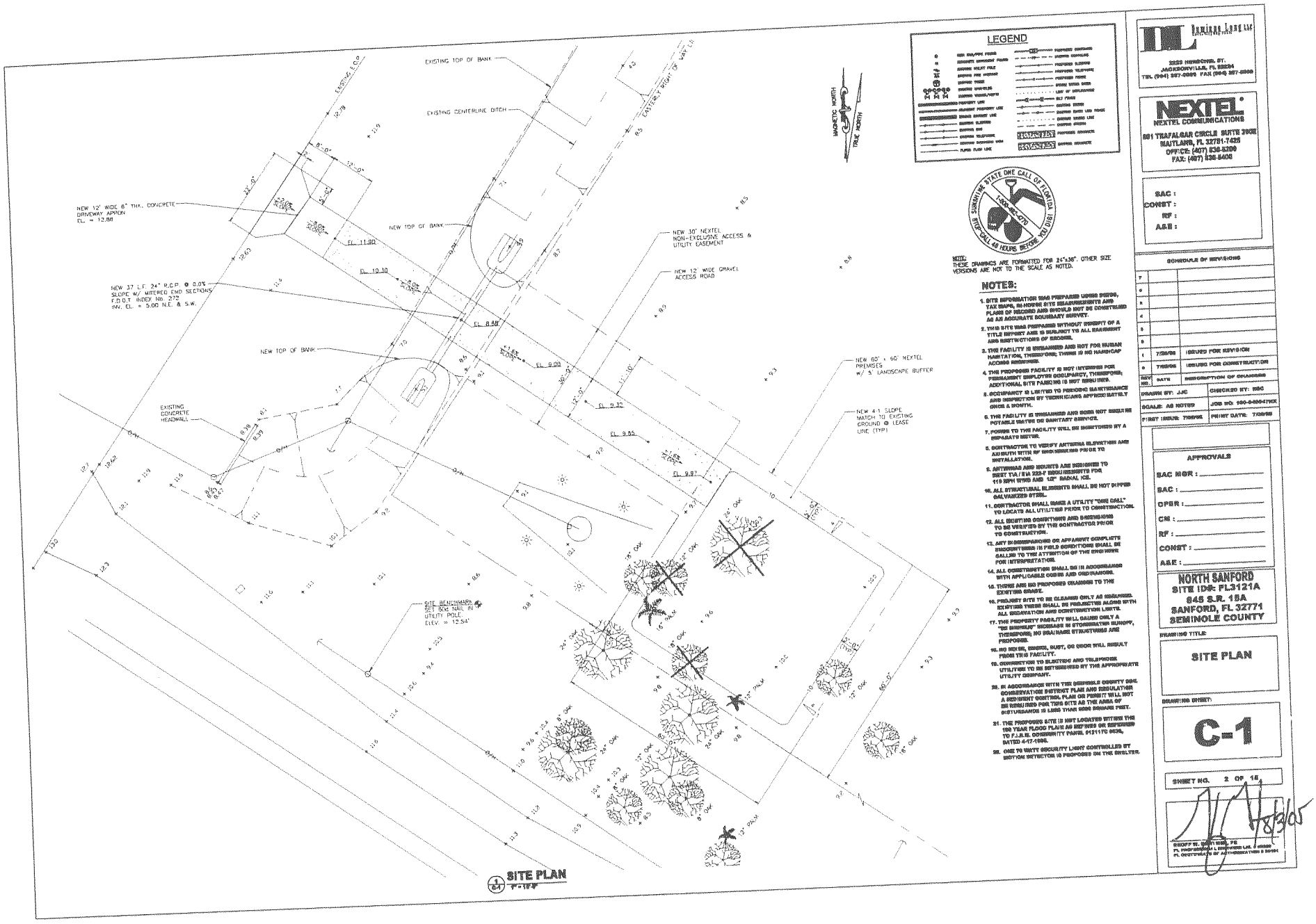
CERTIFIED TO AND FOR THE EXCLUSIVE BENEFIT OF:
NEXTEL COMMUNICATIONS,
ITS AFFILIATES, SUBSIDIARIES AND LENDERS.

REVISIONS								
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

ADVANCED LAND SURVEYING & MAPPING
709 EAST MICHIGAN STREET
ORLANDO, FLORIDA 32806
PHONE (407) 302-2905
FAX (407) 540-0497
GPS and Conventional Survey Services

BOUNDARY SURVEY
PREPARED FOR
NEXTEL COMMUNICATIONS
NORTH SANFORD FL-3121
A PORTION OF SECTION 16, TOWNSHIP 19 SOUTH, RANGE 30 EAST
SEMINOLE COUNTY, FLORIDA

DRAWN	J. DAVIS
FIELD DATE	JANUARY 04, 2005
FIELD BOOK	PRINT
SCALE	1" = 20'
PROJECT NO.	164-0043
FILE NAME	164-0043.DGN
SHEET	1 OF 1



LEGEND

CALL SUNSHINE STATE ONE CALL OF FLORIDA, INC. 1-800-432-4770 — CALL 48 HOURS BEFORE YOU DIG!

NOTE: THESE DRAWINGS ARE FORMATTED FOR 24"x36". OTHER SIZE VERSIONS ARE NOT TO THE SCALE AS NOTED.

NOTES:

1. SITE INFORMATION WAS PREPARED USING DEEDS, TAX MAPS, IN-HOUSE SITE MEASUREMENTS AND PLANS OF RECORD AND SHOULD NOT BE CONSTRUED AS AN ACCURATE BOUNDARY SURVEY.
2. THIS SITE WAS PREPARED WITHOUT BENEFIT OF A TITLE REPORT AND IS SUBJECT TO ALL EASEMENT AND RESTRICTIONS OF RECORD.
3. THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION, THEREFORE; THERE IS NO HANDICAP ACCESS REQUIRED.
4. THE PROPOSED FACILITY IS NOT INTENDED FOR PERMANENT EMPLOYEE OCCUPANCY, THEREFORE; PERMANENT EMPLOYEE OCCUPANCY, THEREFORE; ADDITIONAL SITE PARKING IS NOT REQUIRED.
5. OCCUPANCY IS LIMITED TO PERIODIC MAINTENANCE AND INSPECTION BY TECHNICIANS APPROXIMATELY ONCE A MONTH.
6. THE FACILITY IS UNMANNED AND SIGN NOT NEED BE POTABLE WATER OR SANITARY SERVICE.
7. POWER TO THE FACILITY WILL BE INVESTIGATED BY A SEPARATE METER.
8. CONTRACTOR TO VERIFY ANTENNA ELEVATIONS ARE AS SHOWN WITH RF ENGINEERING PRIOR TO INSTALLATION.
9. ANTENNAS AND MOUNTS ARE DESIGNED TO MEET TIA/EIA 222-F REQUIREMENTS FOR 110 MPH WIND AND 1/2" RADIAL ICE.
10. ALL STRUCTURAL ELEMENTS SHALL BE HOT DIPPED GALVANIZED STEEL.
11. CONTRACTOR SHALL MAKE A UTILITY "ONE CALL" TO LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION.
12. ALL EXISTING CONDITIONS AND DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
13. ANY DISCREPANCIES OR APPARENT INCOMPLETE INFORMATION IN FIELD CONDITIONS SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER FOR INTERPRETATION.
14. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH APPLICABLE CODES AND ORDINANCES.
15. THERE ARE NO PROPOSED CHANGES TO THE EXISTING GRADE.
16. PROJECT SITE TO BE CLEARED ONLY AS REQUIRED. NO OTHER TREES SHALL BE REMOVED ALONG WITH ALL EXCAVATION AND CONSTRUCTION LIMITS.
17. THE PROPERTY FACILITY WILL CAUSE ONLY A "DE MINIMIS" INCREASE IN STORMWATER RUNOFF, THEREFORE, NO DRAINAGE STRUCTURES ARE PROPOSED.
18. NO NOISE, SMOKE, DUST, OR ODOR WILL RESULT FROM THIS FACILITY.
19. CONNECTION TO ELECTRIC AND TELEPHONE UTILITIES TO BE DETERMINED BY THE APPROPRIATE UTILITY COMPANY.
20. IN ACCORDANCE WITH THE SEMINOLE COUNTY SOIL CONSERVATION DISTRICT PLAN AND REGULATION A SEDIMENT CONTROL PLAN OR PERMIT WILL NOT BE REQUIRED FOR THIS SITE AS THE AREA OF DISTURBANCE IS LESS THAN ONE ACRE IN SIZE.
21. THE PROPOSED SITE IS NOT LOCATED WITHIN THE 100 YEAR FLOOD PLAIN AS DEFINED OR REFERENCED TO F.I.R.M. COMMUNITY PANEL #12117C 0535, DATED 4-17-1995.
22. ONE TO WAY SECURITY LIGHT CONTROLLED BY MOTION DETECTOR IS PROPOSED ON THE SHELTER.

1/64 SITE PLAN
1"=10'-0"

Dominion Land LLC
2222 HERSCHEL ST.
JACKSONVILLE, FL 32204
TEL (904) 387-0999 FAX (904) 387-0998

NEXTEL
NEXTEL COMMUNICATIONS
601 TRAFALGAR CIRCLE SUITE 200E
MAITLAND, FL 32751-7425
OFFICE: (407) 838-8200
FAX: (407) 838-8408

SAC :
CONST :
RF :
A&E :

SCHEDULE OF REVISIONS

REV NO.	DATE	DESCRIPTION OF CHANGES
F		
E		
D		
C		
B		
A		
1	7/26/05	ISSUED FOR REVISION
0	7/05/05	ISSUED FOR CONSTRUCTION

DRAWN BY: JJC | CHECKED BY: DSC
SCALE: AS NOTED | JOB NO: 150-040047WR
PRINT ISSUE: 7/26/05 | PRINT DATE: 7/26/05

APPROVALS

SAC NSR : _____
SAC : _____
OPER : _____
CM : _____
RF : _____
CONST : _____
A&E : _____

NORTH SANFORD
SITE ID#: FL3121A
645 S.R. 15A
SANFORD, FL 32771
SEMINOLE COUNTY

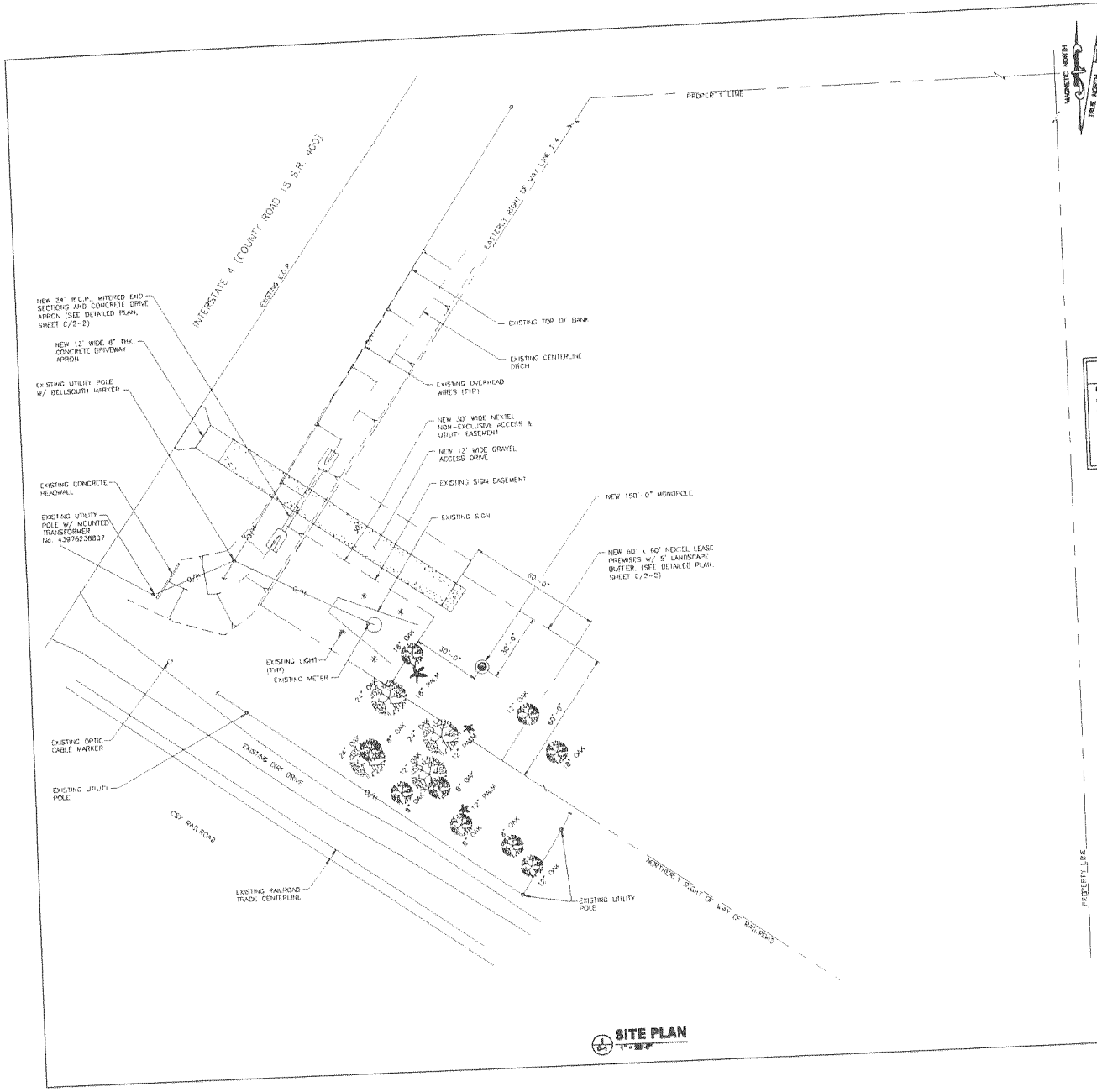
DRAWING TITLE:
SITE PLAN

DRAWING SHEET:
C-1

SHEET NO. 2 OF 15

GEOFF W. SMITH, PE
FL PROFESSIONAL ENGINEER LIC. # 49886
FL CERTIFICATE OF AUTHORIZATION # 28164

8/3/05



1 SITE PLAN
1" = 30'-0"

LEGEND

[illegible]	[illegible]

SUNSHINE STATE ONE CALL OF FLORIDA 1910 1-800-482-4770 STATE CALL 48 HOURS BEFORE YOU DIG

NOTE:
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SITE CHARACTERISTICS

GROUND ELEV. (AMSL):	18.84' AMSL
STRUCTURE TYPE:	PROPOSED MONOPOLE TOWER
LOCATION OF RADIO EQUIPMENT:	GROUND
PRIMARY USE OF STRUCTURE:	COMMUNICATIONS
STRUCTURE HEIGHT:	150'-0"
APPROX. ANTENNA HEIGHT: (RAD CENTER)	150'-0"

DL Dominion Land LLC
2223 BENSONS ST.
JACKSONVILLE, FL 32234
TEL (904) 387-6000 FAX (904) 387-6000

NEXTEL
NEXTEL COMMUNICATIONS
801 TRAFALGAR CIRCLE SUITE 300E
MAITLAND, FL 32751-7425
OFFICE: (407) 838-8200
FAX: (407) 838-8400

SAC :
CONST :
RF :
A&E :

SCHEDULE OF REVISIONS

REV NO.	DATE	DESCRIPTION OF CHANGES
7		
6		
5		
4		
3		
2		
1	7/28/05	ISSUED FOR REVISION
0	7/28/05	ISSUED FOR CONSTRUCTION

DRAWN BY: JJC	CHECKED BY: RRC
SCALE: AS NOTED	JOB NO: 100-04004TRX
FIRST ISSUE: 7/28/05	PRINT DATE: 7/28/05

APPROVALS

SAC MGR : _____
SAC : _____
OPER : _____
CM : _____
RF : _____
CONST : _____
A&E : _____

NORTH SANFORD
SITE ID#: FL3121A
845 S.R. 15A
SANFORD, FL 32771
SEMINOLE COUNTY

DRAWING TITLE:

SITE PLAN

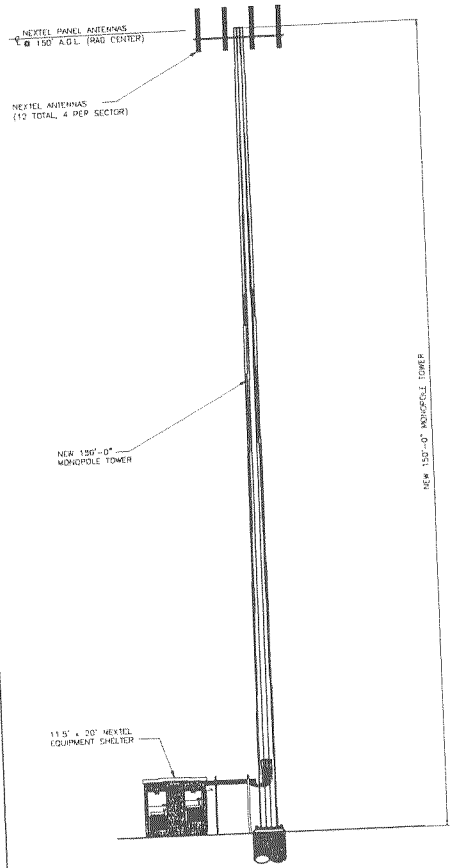
DRAWING SHEET:

C-1.1

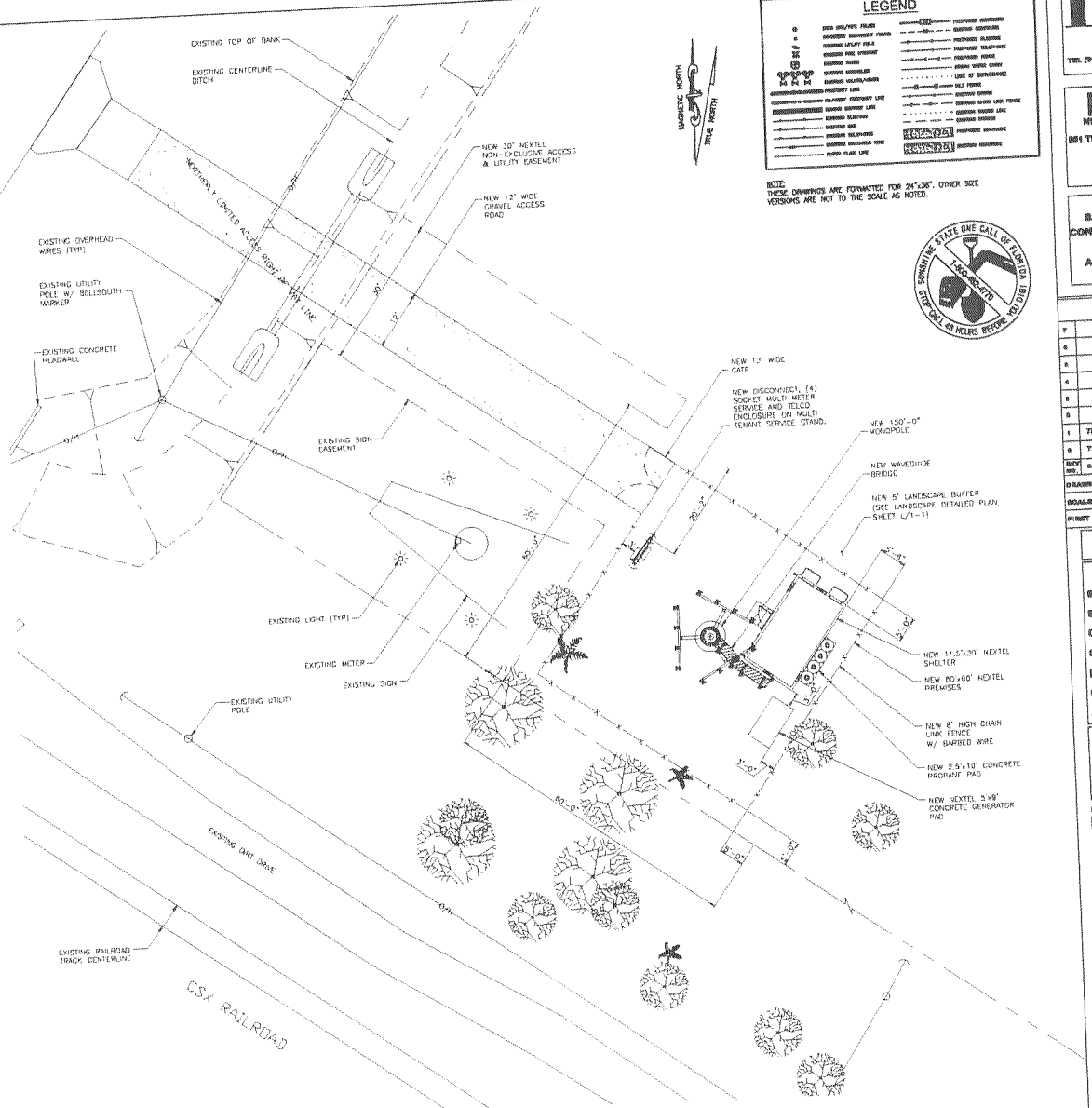
SHEET NO. 3 OF 12

8/3/05

GEOFF W. SCHUTTEN, PE
FL PROFESSIONAL ENGINEER LIC. # 50888
FL CERTIFICATE OF AUTHORIZATION # 26101



ELEVATION
1/8" = 1'-0"



SITE PLAN
1" = 50'-0"

LEGEND

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CALL SUNSHINE STATE ONE CALL OF FLORIDA, INC. 1-800-432-4770 (TOLL FREE) 48 HOURS BEFORE YOU DIG

LANDMARK LAND LLC
2285 HENDRICKS ST.
JACKSONVILLE, FL 32204
TEL. (904) 387-0999 FAX (904) 387-0998

NEXTEL
NEXTEL COMMUNICATIONS
851 TRAFALGAR CIRCLE SUITE 210E
MAITLAND, FL 32751-7425
OFFICE: (407) 539-2200
FAX: (407) 539-5400

SAC :
CONST :
RF :
A&E :

SCHEDULE OF REVISIONS

REV NO.	DATE	DESCRIPTION OF CHANGES
7		
6		
5		
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3		
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1	7/25/05	ISSUED FOR REVISION
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DRAWN BY: JJC | CHECKED BY: RSC
SCALE: AS NOTED | JOB NO: 102-0-0004-FNOX
FIRST ISSUE: 7/05/05 | PRINT DATE: 7/25/05

APPROVALS

SAC MGR : _____
SAC : _____
OPER : _____
CM : _____
RF : _____
CONST : _____
A&E : _____

NORTH SANFORD
SITE ID#: FL3121A
645 S.R. 15A
SANFORD, FL 32771
SEMINOLE COUNTY

DRAWING TITLE:
DETAILED PLAN & ELEVATION

DRAWING SHEET:
C-2

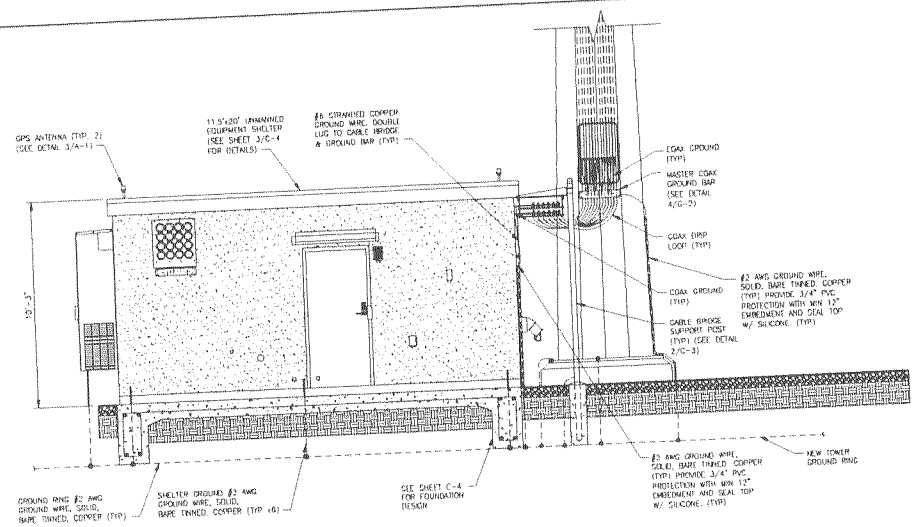
SHEET NO. 4 OF 14

RENDELL BAPTISTE, P.E.
FL. PROFESSIONAL ENGINEER LIC. # 60666
FL. CERTIFICATE OF AUTHORIZATION # 8745

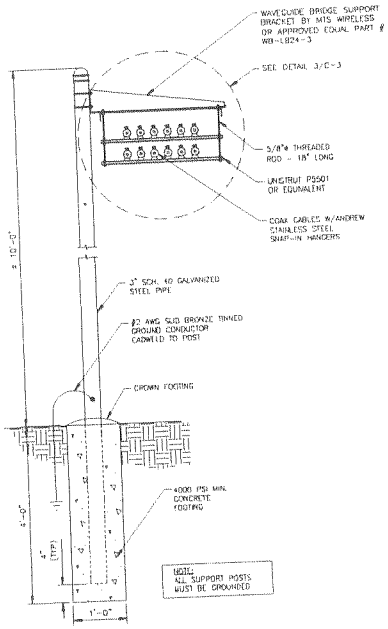
03/06

STRUCTURAL NOTES

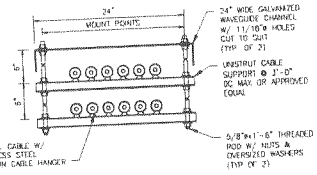
1. FOUNDATION & BUILDING DESIGN REQUIREMENTS PER 2001 FLORIDA BUILDING CODE, ASCE 7-98 BASIC WIND SPEED 110 MPH (3 SECOND GUST).
2. INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED BY FIELD MEASUREMENT AND FROM THE EXISTING STRUCTURAL DRAWINGS. THE GENERAL CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE ENGINEER OF RECORD OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIALS OR PROCEEDING WITH CONSTRUCTION.
3. THE GENERAL CONTRACTOR AND M/E SUB CONSULTANTS SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK.
4. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS – ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN INCLUDING THE COMMENTARY AND THE AISC CODE FOR STANDARD PRACTICE.
5. STRUCTURAL STEEL PLATES AND SHAPES SHALL CONFORM TO ASTM A992. ALL STRUCTURAL STEEL PIPES SHALL CONFORM TO ASTM A53 GRADE B. ALL STRUCTURAL STEEL COMPONENTS AND FABRICATED ASSEMBLIES SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.
6. ALL THREADED STRUCTURAL FASTENERS FOR ANTENNA SUPPORT ASSEMBLIES SHALL CONFORM TO ASTM A307 OR ASTM A36. ALL STRUCTURAL FASTENERS FOR STRUCTURAL STEEL FRAMING SHALL CONFORM TO ASTM A325. FASTENERS SHALL BE 5/8 INCH MIN. DIAMETER BEARING TYPE CONNECTIONS WITH THREADS INCLUDED IN THE SHEAR PLANE. ALL EXPOSED FASTENERS, NUTS AND WASHERS SHALL BE GALVANIZED UNLESS OTHERWISE NOTED. CONCRETE EXPANSION ANCHORS SHALL BE HILTI KWIK BOLTS UNLESS OTHERWISE NOTED.
7. IF APPLICABLE, ROOF PROTECTION PADS UNDER THE CONCRETE PAVERS AND WAVEGUIDE SUPPORTS SHALL BE BE 1/2" INCH THICK RUBBER FIRESTONE PROTECTION PADS. THE ROOF PROTECTION PADS SHALL EXTEND A MINIMUM OF TWO INCHES BEYOND THE PERIMETER OF THE PVC SLEEPERS AND SHALL BE PLACED WITH A MINIMUM 1/2" SPACE BETWEEN ADJACENT PADS TO FACILITATE DRAINAGE. PROVIDE A 28 LB HOROANIC PAD DIRECTLY ON THE ROOF. REMOVE ALL LOOSE STONES PRIOR TO PLACING THE SEPARATOR SHEET.
8. ALL COAXIAL CABLE CONNECTORS AND TRANSMITTER EQUIPMENT SHALL BE AS SPECIFIED BY THE OWNER AND IS NOT INCLUDED IN THESE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL FURNISH ALL CONNECTION HARDWARE REQUIRED TO SECURE THE CABLES. CONNECTION HARDWARE SHALL BE STAINLESS STEEL.
9. NORTH ARROW SHOWN ON PLANS REFERS TO MAGNETIC NORTH. CONTRACTOR SHALL VERIFY TRUE NORTH AND INFORM ENGINEER OF RECORD OF ANY DISCREPANCY BEFORE STARTING CONSTRUCTION.
10. PROVIDE A CABLE DRIP LOOP AT THE BOTTOM OF THE TOWER BELOW THE TOWER BOTTOM GROUND CONNECTIONS AND AS THE CABLE TRANSITIONS TO THE SHELTER/CABINET.
11. THREADED RODS ON THE POLY PHASOR RACK TO BE CUT 4" BELOW THE BOTTOM CROSS MEMBER AND CAPPED.
12. RUBBER CAPS WILL BE PLACED ON ALL UNI-STRUT ENDS.
13. REPAIR ALL METAL SURFACES THAT HAVE BEEN CUT OR DAMAGED BY REMOVING ANY EXISTING RUST AND APPLYING COLD GALVANIZATION.



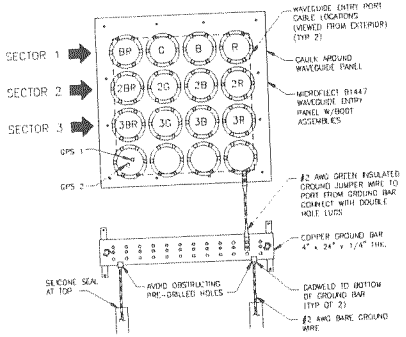
1 C-3 **EQUIPMENT ELEVATION**
3/8" = 1'-0"



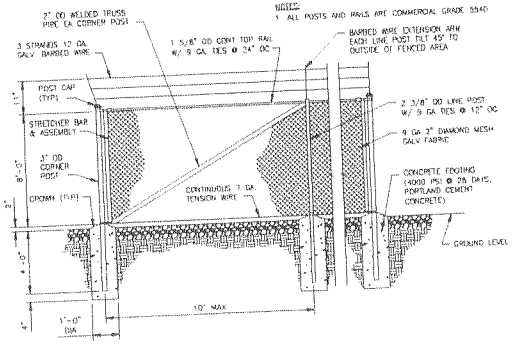
2 C-3 NTS **CABLE BRIDGE DETAIL**



3 C-3 NTS **COAX ROUTING SECTION**



4 C-3 NTS **COAX ENTRY PORT DETAIL**



5 C-3 NTS **TYPICAL FENCE DETAIL W/ GATE**

DAMIANO ASSOCIATES, LLC
2233 HIRSCHEL ST.
JACKSONVILLE, FL 32204
TEL. (904) 387-0999 FAX (904) 387-0998

NEXTEL COMMUNICATIONS
331 TRAFALGAR CIRCLE SUITE 2002
MAITLAND, FL 32751-7425
OFFICE: (407) 838-8200
FAX: (407) 838-8400

SAC :
CONST :
RF :
A&E :

SCHEDULE OF REVISIONS

REV NO.	DATE	DESCRIPTION OF CHANGES
F		
G		
H		
J		
K		
L		
1	7/25/06	ISSUED FOR REVISION
0	7/03/06	ISSUED FOR CONSTRUCTION

DRAWN BY: JJC | CHECKED BY: BBC
SCALE: AS NOTED | JOB NO: 100-04004760X
PLOT ISSUE: 7/06/06 | PRINT DATE: 7/03/06

APPROVALS
SAC MGR : _____
SAC : _____
OPER : _____
CM : _____
RF : _____
CONST : _____
A&E : _____

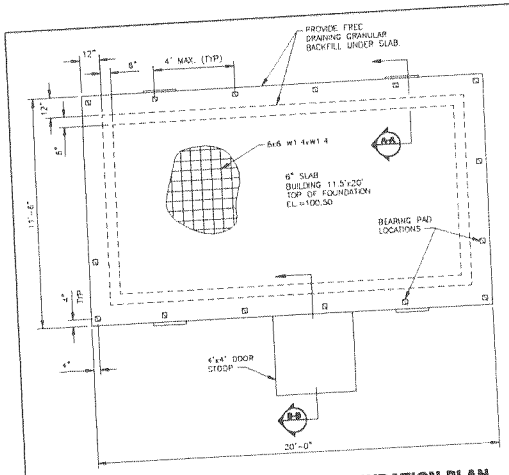
NORTH SANFORD
SITE ID#: FL3121A
645 S.R. 15A
SANFORD, FL 32771
SEMINOLE COUNTY

DRAWING TITLE:
CONSTRUCTION DETAILS & NOTES

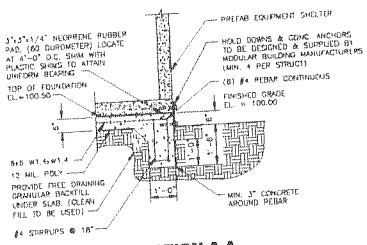
DRAWING SHEET:
C-3

SHEET NO. 8 OF 12

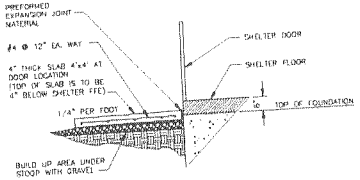
RECEIVED
FL PROFESSIONAL ENGINEER No. 62 OF
FL CERTIFICATE OF AUTHORIZATION No. 8



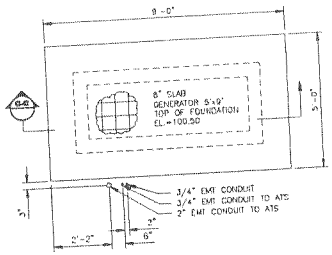
EQUIPMENT SHELTER FOUNDATION PLAN



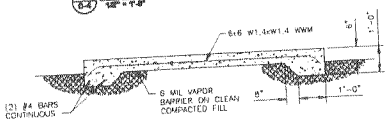
SECTION A-A



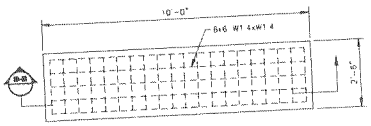
SECTION B-B



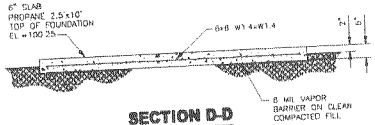
5'x9' GENERATOR FOUNDATION



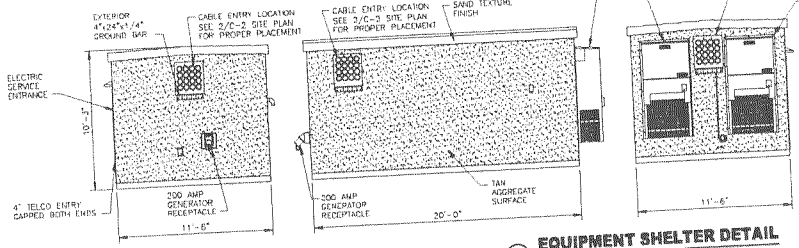
SECTION C-C



PROPANE FOUNDATION PLAN



SECTION D-D



EQUIPMENT SHELTER DETAIL

FOUNDATION NOTES:

1. DESIGN INFORMATION AND GENERAL REQUIREMENTS

1.1 CODES

a. DESIGN CONFORMS TO FBC 2001

b. AMERICAN CONCRETE INSTITUTE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE," ACI 318-02.

2. EARTHWORK

2.1 FOUNDATIONS

a. FOUNDATIONS HAVE BEEN DESIGNED TO BEAR ON UNDISTURBED RESIDUAL SOILS/COMPACTED STRUCTURAL FILL CAPABLE OF SAFELY SUPPORTING A NET ALLOWABLE BEARING PRESSURE OF 2000 PSF. IF FOUNDATION CONDITIONS PROVE UNACCEPTABLE AT ELEVATIONS SHOWN, EXCAVATION SHALL BE CARRIED DEEPER AND SHALL BE BACKFILLED WITH LEAN CONCRETE TO PLAN FOOTING BOTTOM, OR REDESIGN OF FOUNDATIONS WILL BE REQUIRED AT THE DIRECTION OF THE ENGINEER OF RECORD.

b. DESIGN, FURNISH AND INSTALL ALL TEMPORARY SHEETING, SHORING AND DRAINAGE NECESSARY TO MAINTAIN THE EXCAVATION AND PROTECT SURROUNDING STRUCTURES AND UTILITIES.

c. THOROUGHLY COMPACT ALL BOTTOM OF FOOTINGS PRIOR TO PLACING ANY CONCRETE.

3. CONCRETE

3.1 FORMWORK

a. CONCRETE CONSTRUCTION SHALL CONFORM TO "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS." (ACI 318-02).

b. FORMWORK SHALL CONFORM TO ACI 318-02 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS."

3.2 REINFORCEMENT

a. REINFORCING STEEL ASTM A615, GRADE 60. WELDED WIRE ASTM A185 (FLAT SHEET). LAPS 40 BAR DIAMETERS UNLESS NOTED. BARS SHALL BE SECURELY HELD IN ACCURATE POSITION BY SUITABLE ACCESSORIES, TIE BARS, SUPPORT BARS, ETC. HOOK LENGTHS SHALL BE 12 BAR DIAMETERS.

b. CONCRETE COVER FOR REINFORCING BARS SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED.
FOOTINGS & SLABS CAST AGAINST GROUND . . . . . 3"
CONCRETE TO BE IN CONTACT WITH GROUND OR WEATHER
AT BARS GREATER THAN #5 . . . . . 2"
AT BARS #5 OR LESS . . . . . 1 1/2"
CONCRETE NOT TO BE EXPOSED TO GROUND OR WEATHER
BEAMS, ORDERS & COLUMNS . . . . . 1 1/2"
SLABS & WALLS . . . . . 3/4"

3.3 CAST-IN-PLACE-CONCRETE

a. MINIMUM 28 DAY CYLINDER STRENGTH AND MAXIMUM SLUMP, PRIOR TO ADDITION OF SUPER PLASTICIZERS, AS FOLLOWS:

	f'c (PSI)	SLUMP
CLASS I FOOTINGS	4000	3"
CLASS II INTERIOR ELEVATED SLABS & WALLS	4000	4"
CLASS V OTHER WORK	4000	4"
CLASS VI LEAN CONCRETE FOR OVER-EXCAVATION OF FOUNDATIONS	2000	N/A

b. MIX DESIGN TO BE IN ACCORDANCE WITH ACI 318-02, CHAPTER 6. NO CALCIUM CHLORIDE OR ADMIXTURE CONTAINING CHLORIDES SHALL BE USED IN ANY CONCRETE.

c. COARSE AGGREGATE FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C33 SIZE #67. COARSE AGGREGATE FOR LIGHT WEIGHT CONCRETE SHALL CONFORM TO ASTM C330 GRADED 3/4" TO 1/4".

d. COLD WEATHER PLACEMENT SHALL COMPLY WITH ACI 306.1

e. HOT WEATHER PLACEMENT SHALL COMPLY WITH ACI 305 R.

f. CHAMFER ALL EXPOSED EDGES 3/4".

g. THE MAXIMUM TEMPERATURE OF ALL CONCRETE AT DELIVERY TO THE SITE SHALL BE 85 F. TOTAL DELIVERY TIME SHALL BE LESS THEN 75 MIN.

Dominion Engineering Inc.
2223 NEWCOMB ST.
JACKSONVILLE, FL 32204
TEL (904) 387-6888 FAX (904) 387-6889

NEXTEL
NEXTEL COMMUNICATIONS
851 TRAFALGAR CIRCLE SUITE 200E
MAITLAND, FL 32751-7425
OFFICE: (407) 536-5200
FAX: (407) 536-5400

SAC :
CONST :
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SCHEDULE OF REVISIONS

REV NO.	DATE	DESCRIPTION OF REVISION
7		
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1	7/28/05	ISSUED FOR REVISION
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DRAWN BY: JJC | CHECKED BY: DSC
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APPROVALS

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NORTH SANFORD
SITE ID#: FL3121A
845 S.R. 15A
SANFORD, FL 32771
SEMINOLE COUNTY

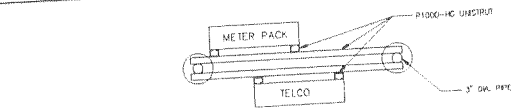
DRAWING TITLE:
CONSTRUCTION DETAILS & NOTES

DRAWING SHEET:
C-4

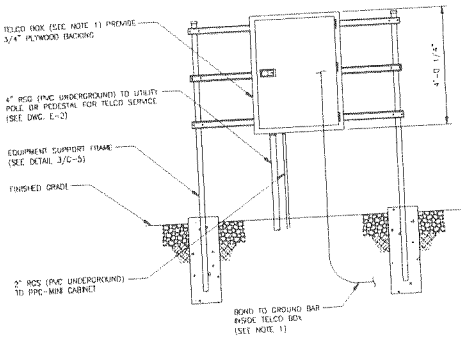
SHEET NO. 8 OF 17

7/28/05

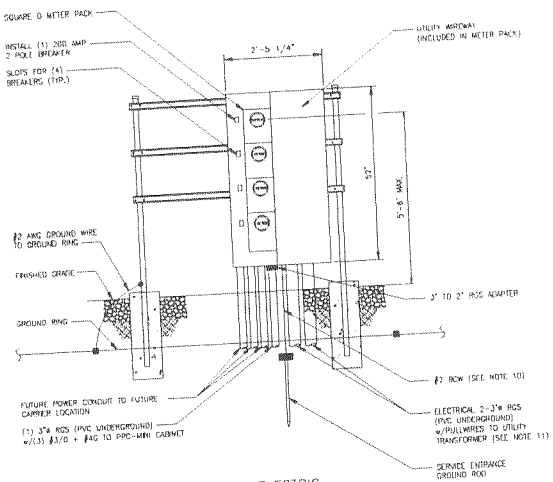
DEPT'S EL. MARTINEZ, PE
FL PROFESSIONAL ENGINEER LIC. # 60603
FL CERTIFICATE OF AUTHORIZATION # 00904



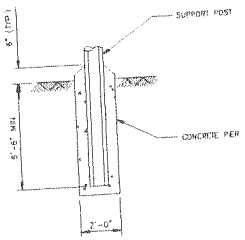
TOP VIEW



BACK VIEW – TELCO

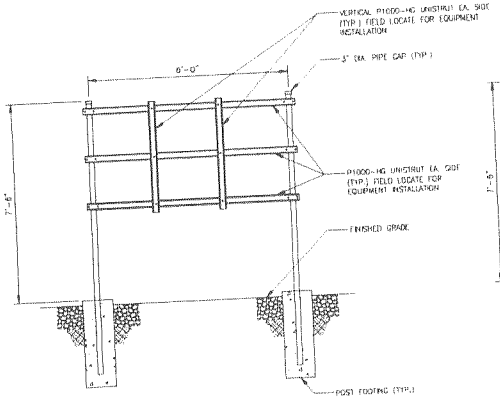


FRONT VIEW – ELECTRIC

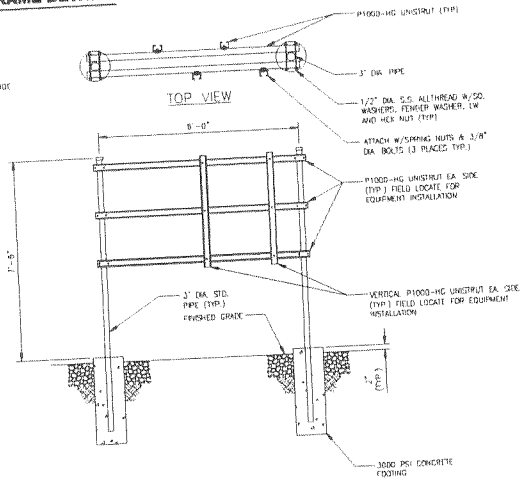


3/C-5 N.T.S. **SUPPORT POST FOOTING**

3/C-5 N.T.S. **EQUIPMENT SUPPORT FRAME DETAILS**



BACK VIEW – TELCO



TOP VIEW

FRONT VIEW – ELECTRIC

3/C-5 N.T.S. **EQUIPMENT SUPPORT FRAME DETAILS**

NOTES:

1. PROVIDE 1"x6" GROUND BAR IN TELCO BOX SUITABLE FOR CONNECTING TO #6 AWG STRANDED WIRE. PROVIDE 3'-0" SECTION OF #6 WIRE FOR USE BY TELEPHONE COMPANY.
2. PROVIDE 3'x4'x8" TELCO DISTRIBUTION PANEL (MINIMUM 50 PAIR TERMINAL) MOUNTED TO VERTICAL UNISTRUT ON EQUIPMENT SUPPORT FRAME OPPOSITE OF UTILITY METERS.
3. COORDINATE METER ENCLOSURE AND FUSED/BREAKER DISCONNECT SWITCH ACCEPTABILITY WITH LOCAL UTILITY COMPANY PRIOR TO ORDERING AND INSTALLATION.
4. METER ENCLOSURE SHALL BE SQUARE D OR APPROVED EQUIVALENT, AND SHALL INCLUDE ACCESSORIES AND MOUNTING BRACKETS SUITABLE FOR OUTDOOR INSTALLATION. ENCLOSURE SHALL BE MOUNTED TO THE VERTICAL UNISTRUT ATTACHED TO THE EQUIPMENT SUPPORT FRAME.
5. FUSED SERVICE DISCONNECT SWITCH SHALL BE SQUARE D OR APPROVED EQUIVALENT, 200A/2P, 250V IN A NEMA 3R ENCLOSURE. FUSES SHALL BE 200A RATED AND SHALL BE PER LOCAL UTILITY COMPANY REQUIREMENTS.
6. DETAIL DEPICTS SQUARE D PRODUCTS, AS DESCRIBED ABOVE. ACTUAL DIMENSIONS MAY VARY DEPENDING ON INSTALLED EQUIPMENT.
7. CONNECT NEUTRAL TERMINAL IN DISCONNECTING DEVICE TO SERVICE ENTRANCE GROUND ROD.
8. REFER TO ELECTRICAL SITE PLAN AND POWER & TELEPHONE DIAGRAM FOR CONDUIT AND CONDUCTOR REQUIREMENTS.
9. ALL WORK SHALL CONFORM TO NATIONAL ELECTRICAL CODE (NEC) AND THE LOCAL BUILDING CODES. ALL COMPONENTS SHALL BE U.L. APPROVED.
10. THE SERVICE ENTRANCE GROUND WIRE MUST GO DIRECTLY TO THE SERVICE ENTRANCE GROUND ROD WITHOUT CONNECTING TO ANYTHING ELSE. IF THE SERVICE ENTRANCE GROUND ROD IS PART OF THE GROUND RING, THEN THE GROUND RING WIRES CAN CONNECT TO THIS GROUND ROD ALSO. OTHERWISE, A #2 AWG GROUND WIRE IS TO CONNECT THIS GROUND ROD TO THE GROUND RING.
11. THESE CONDUITS WERE SHOWN FOR DESIGN CONCEPT ONLY. COORDINATE EXACT QUANTITY AND SIZE CONDUIT WITH THE ELECTRIC POWER UTILITY.

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SCHEDULE OF REVISIONS

REV NO.	DATE	DESCRIPTION OF CHANGES
7		
6		
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3		
2		
1	7/28/05	ISSUED FOR REVISION
0	7/20/05	ISSUED FOR CONSTRUCTION

DRAWN BY: JJC | CHECKED BY: RBC
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FIRST ISSUE: 7/20/05 | PRINT DATE: 7/28/05

APPROVALS

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SAC :
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CM :
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NORTH SANFORD
SITE ID#: FL3121A
845 S.R. 15A
SANFORD, FL 32771
SEMINOLE COUNTY

DRAWING TITLE:

CONSTRUCTION DETAILS & NOTES

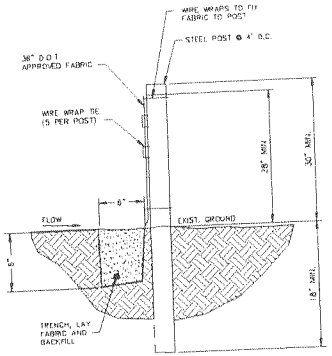
DRAWING # SHEET:

C-5

SHEET NO. 7 OF 15

7/28/05

DISCLAIMER: THESE PLANS ARE NOT VALID UNLESS SIGNED, DATED AND SEALED BY A FLORIDA REGISTERED PROFESSIONAL ENGINEER. IT IS A VIOLATION OF FLORIDA STATUTES TO ALTER THESE PLANS IN ANY WAY WITHOUT THE WRITTEN CONSENT OF THE ENGINEER OF RECORD.



SILT FENCE DETAIL

C-6 N.T.S.

SILT FENCE NOTES:

1.) THE FILTER FABRIC USED SHALL BE TYPE I, OR II AND SHALL MEET THE REQUIREMENTS OF THE DEPARTMENT OF TRANSPORTATION, STATE OF FLORIDA STANDARD SPECIFICATIONS CONSTRUCTION OF ROADS AND BRIDGES.

2.) SILT FENCE HEIGHT SHALL BE A MINIMUM OF 2.5 FEET ABOVE GROUND HEIGHT.

3.) CONSTRUCT SILT FENCE OF A CONTINUOUS ROLL CUT THE LENGTH OF THE BARRIER TO AVOID JOINTS. FABRIC TO BE FASTENED SECURELY TO FENCE POSTS WITH 1 INCH STAPLES OR TIE WIRES.

4.) SUPPORT FABRIC WITH WOVEN WIRE MESH (TOP AND BOTTOM WIRES SHALL BE 10 GA. OTHER WIRES SHALL BE AT LEAST 12.5 GA.) OPENING SHALL BE 6" MAX SPACING WOVEN WIRE FENCE TO BE FASTENED SECURELY TO POSTS WITH 1" STAPLES, NAILS OR TIE WIRES AT THE TOP OF THE WOVEN WIRE FENCE AND AT THE MIDPOINT BETWEEN POSTS.

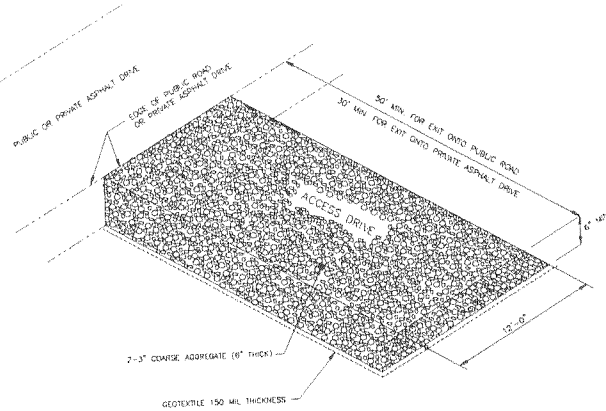
5.) POST FOR SILT FENCE SHALL BE STEEL.

6.) FENCE POST SPACING SHALL NOT EXCEED 4 FEET O.C.

7.) EXCAVATE A TRENCH APPROXIMATELY 8 INCHES WIDE AND 8 INCHES DEEP ALONG THE PROPOSED LINE OF POSTS AND UP SLOPE FROM THE BARRIER. BACK FILL THE TRENCH WITH #57 STONE PLACED OVER THE FILTER FABRIC.

8.) DO NOT ATTACH FILTER FABRIC TO EXISTING FENCES, TREES, ETC.

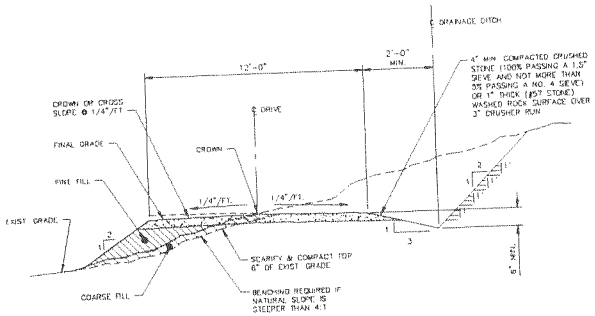
9.) REMOVE FENCING FOLLOWING STABILIZATION OF SLOPES AND ALL DISTURBED AREAS.



CONSTRUCTION EXIT DETAIL

C-6 N.T.S.

NOTES:
IT IS THE RESPONSIBILITY OF THE SITE CONTRACTOR TO PROVIDE BUFFER AREA WHERE VEHICLES CAN DROP THEIR MUD AND SEDIMENT TO AVOID TRANSPORTING IT ONTO PUBLIC ROADS OR ADJACENT PRIVATE ASPHALT DRIVES.



GRAVEL DRIVE SECTION

C-6 N.T.S.

EROSION & SEDIMENT CONTROL NOTES:

1.) ADDITIONAL EROSION CONTROL MEASURES WILL BE EMPLOYED WHERE DETERMINED NECESSARY BY ACTUAL SITE CONDITIONS.

2.) PRIOR TO COMMENCING LAND DISTURBING ACTIVITY, THE LIMITS OF LAND DISTURBANCE SHALL BE CLEARLY AND ACCURATELY DEMARCATED WITH STAKES, RIBBONS, OR OTHER APPROPRIATE MEANS.

3.) THE CONSTRUCTION OF THE SITE WILL INITIATE WITH THE INSTALLATION OF EROSION CONTROL MEASURES SUFFICIENT TO CONTROL SEDIMENT DEPOSITS AND EROSION. ALL SEDIMENT CONTROL WILL BE MAINTAINED UNTIL ALL UPSTREAM GROUND WITHIN THE CONSTRUCTION AREA HAS BEEN COMPLETELY STABILIZED.

4.) THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM THAT SHOWN ON THE PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE FINAL PROPOSED DRAINAGE PATTERNS. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.

5.) EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

6.) THE CONTRACTOR SHALL REMOVE ACCUMULATED SILT WHEN THE SILT IS WITHIN 12" OF THE TOP OF THE SILT FENCE.

7.) SILT BARRIERS TO BE PLACED AT DOWNSTREAM TOE OF ALL CUT AND FILL SLOPES.

8.) ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 7 DAYS SHALL BE STABILIZED WITH SEEDING.

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NORTH SANFORD
SITE ID#: FL3121A
845 S.R. 15A
SANFORD, FL 32771
SEMINOLE COUNTY

DRAWING TITLE:

CONSTRUCTION DETAILS & NOTES

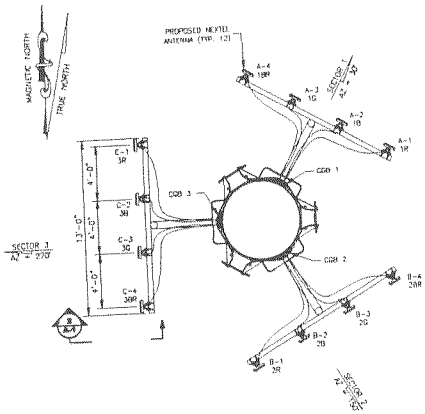
DRAWING SHEET

C-6

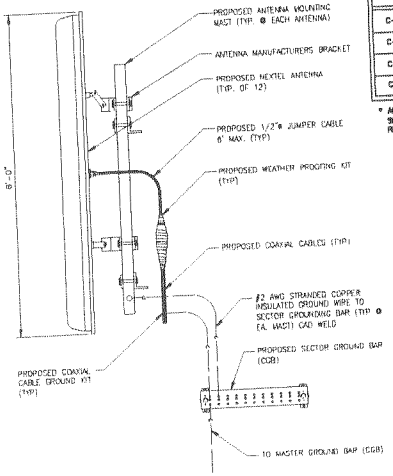
SHEET NO. 8 OF 18

7/29/05

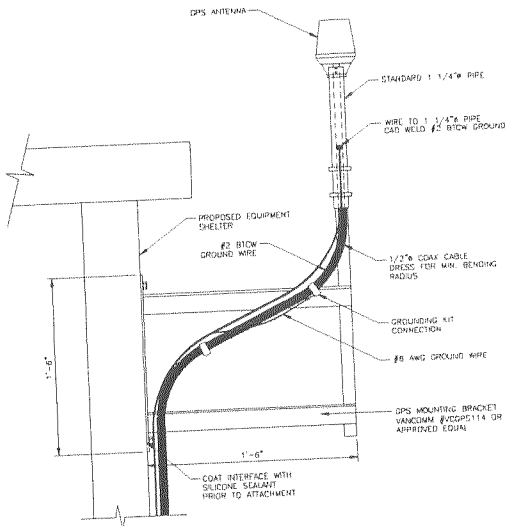
DWIGHT E. GAETHER, PE
FL PROFESSIONAL ENGINEER LIC. # 61805
FL CERTIFICATE OF AUTHORIZATION # E 8944



ANTENNA LAYOUT PLAN



ANTENNA DETAIL



GPS ANTENNA ELEVATION DETAIL

ANTENNA AND COAXIAL CABLE SCHEDULE

LOCATION	AZIMUTH	MOUNTING HEIGHT	ANT TYPE	APPROXIMATE ANTENNA SPECIFICATIONS	REMARKS	DOWNTILT	COAX	COAX LENGTH	COLOR CODE
A-1	30°	180'-0"	DB848H90E-XY	H-96" W-6.5" D-8"	850	0°	1 5/8"	190'-0"	1 RED
A-2	30°	180'-0"	DB848H90E-XY	H-96" W-6.5" D-8"	850	0°	1 5/8"	190'-0"	1 BLUE
A-3	30°	150'-0"	DB848H90E-XY	H-96" W-6.5" D-8"	850	0°	1 5/8"	190'-0"	1 GREEN
A-4	30°	150'-0"	DB848H90E-XY	H-96" W-6.5" D-8"	850	0°	1 5/8"	190'-0"	1 BROWN
B-1	150°	150'-0"	DB848H90E-XY	H-96" W-6.5" D-8"	850	0°	1 5/8"	190'-0"	2 RED
B-2	150°	150'-0"	DB848H90E-XY	H-96" W-6.5" D-8"	850	0°	1 5/8"	190'-0"	2 BLUE
B-3	150°	150'-0"	DB848H90E-XY	H-96" W-6.5" D-8"	850	0°	1 5/8"	190'-0"	2 GREEN
B-4	150°	150'-0"	DB848H90E-XY	H-96" W-6.5" D-8"	850	0°	1 5/8"	190'-0"	2 BROWN
C-1	270°	150'-0"	DB848H90E-XY	H-96" W-6.5" D-8"	850	0°	1 5/8"	190'-0"	3 RED
C-2	270°	150'-0"	DB848H90E-XY	H-96" W-6.5" D-8"	850	0°	1 5/8"	190'-0"	3 BLUE
C-3	270°	150'-0"	DB848H90E-XY	H-96" W-6.5" D-8"	850	0°	1 5/8"	190'-0"	3 GREEN
C-4	270°	150'-0"	DB848H90E-XY	H-96" W-6.5" D-8"	850	0°	1 5/8"	190'-0"	3 BROWN
							1 5/8"*	190'-0"	
								2280'	

* ANTENNA & COAXIAL INFORMATION TAKEN FROM THE NEXTEL SITE SELECTION WORKSHEET DATED 10/28/2004. RF ENGINEER OF RECORD = BRIAN C. ALTER

*-INCLUDE 1/2" COAX FOR GPS ANTENNAS MOUNTED ON THE SHELTER

NOTES

1. ALL ANTENNAS TO BE FURNISHED WITH DOWNTILT BRACKETS. CONTRACTOR TO COORDINATE REQUIRED MECHANICAL DOWNTILT FOR EACH ANTENNA WITH RF ENGINEER.
2. ANTENNA CENTERLINE HEIGHT IS IN REFERENCE TO ELEVATION 0.0'.
3. PROVIDE AT LEAST 6' OF SLACK IN THE MAIN COAXIAL CABLES AT THE TOWER TOP TO PROVIDE FOR FUTURE CONNECTOR REPLACEMENT.
4. PROVIDE A CABLE DRIP LOOP AT THE BOTTOM OF THE TOWER BELOW THE TOWER BOTTOM GROUND CONNECTIONS AND AS THE CABLE TRANSITIONS TO THE SHELTER/CABINET.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING AND SUPPLYING THE TYPE-WRITTEN SWEEP TESTS. ONE (1) HARD COPY TO BE LEFT IN THE SHELTER, ONE (1) SOFT COPY TO BE SENT IMMEDIATELY TO RF ENGINEER. ONE (1) HARD COPY AND ONE (1) SOFT COPY TO BE INCLUDED WITH THE NEXTEL CLOSE-OUT DOCUMENTS.
6. THE CONTRACTOR SHALL VERIFY COAX CABLE TYPE, ANTENNA TYPE, AZIMUTHS, AND DOWN-TILTS WITH THE NEXTEL CONSTRUCTION MANAGER IMMEDIATELY PRIOR TO CONSTRUCTION.
7. ALL COAXIAL CABLE WILL BE SECURED TO THE DESIGNED SUPPORT STRUCTURE AT DISTANCES NOT TO EXCEED 3' OR THE CABLE MANUFACTURE'S SPECIFICATIONS WHICHEVER IS LESS, WITH HARDWARE SPECIFIED IN THE COAXIAL CABLE ROUTING DETAILS OF THE SUPPLIED STRUCTURAL REPORT.
8. ALL MAIN CABLES WILL BE COLOR CODED AT FOUR LOCATIONS: A) AT ANTENNA PRIOR TO JUMPER, B) AT THE BOTTOM OF THE TOWER, C) EXTERIOR PART OF THE WAVE GUIDE ENTRY PORT (AT THE SHELTER/CABINET WALL), D) INTERIOR OF THE SHELTER/CABINET.

ABBREVIATIONS

APPROX	APPROXIMATE
BTS	BASE TRANSMISSION STATION
BCW	BARE COPPER WIRE
CAB	CABINET
CGB	COLLECTOR GROUND BAR
CONC	CONCRETE
CONT	CONTINUOUS
DIA	DIAMETER
DWG	DRAWING
EGB	EQUIPMENT GROUND BAR
EA	EACH
ELEC	ELECTRICAL
EL	ELEVATION
EQ	EQUAL
EQUIP	EQUIPMENT
GA	GAUGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GRND	GROUND
LG	LONG
MAX	MAXIMUM
MECH	MECHANICAL
MFR	MANUFACTURER
MGB	MASTER GROUND BAR
MIN	MINIMUM
NTS	NOT TO SCALE
OC	ON CENTER
PCS	PERSONAL COMMUNICATIONS SERVICES
RGS	RIGID GALVANIZED STEEL
SF	SQUARE FOOT
SHT	SHEET
SIM	SIMILAR
SS	STAINLESS STEEL
TYP	TYPICAL
VIF	VERIFY IN FIELD
UON	UNLESS OTHERWISE NOTED
WWF	WELDED WIRE FABRIC
W/	WITH
A-1	ANTENNA MARK NO.
CL	CENTERLINE
PL	PLATE
&	AND
@	AT
	NEW ANTENNA
	CONCRETE
	GRAVEL, SURFACING OR CRUSHED STONE
	EARTH
	SAND
	SETBACK LINE
	CENTER LINE

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NORTH SANFORD
SITE ID#: FL3121A
845 S.R. 15A
SANFORD, FL 32771
SEMINOLE COUNTY

DRAWING TITLE:
ANTENNA PLANS, DETAILS & NOTES

DRAWING SHEET:
A-1

SHEET NO. 8 OF 13

8/30/05

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GENERAL NOTES

1. EXAMINE THE SITE CONDITIONS VERY CAREFULLY AND THE SCOPE OF PROPOSED WORK TOGETHER WITH THE WORK OF ALL OTHER TRADES AND INCLUDE IN THE BID PRICE ALL COSTS FOR WORK SUCH AS EQUIPMENT AND WIRING MADE NECESSARY TO ACCOMMODATE THE ELECTRICAL SYSTEMS SHOWN AND SYSTEMS OF OTHER TRADES.
2. SUBMITTAL OF BID INDICATES CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED UNDER THIS CONTRACT.
3. PERFORM DETAILED VERIFICATION OF WORK PRIOR TO ORDERING THE ELECTRICAL EQUIPMENT AND COMMENCING CONSTRUCTION. ISSUE A WRITTEN NOTICE TO THE CONSULTANT OF ANY DISCREPANCIES.
4. OBTAIN ALL PERMITS, PAY ASSOCIATED FEES AND SCHEDULE INSPECTION.
5. PROVIDE ALL LABOR, MATERIAL, EQUIPMENT, INSURANCE, AND SERVICES TO COMPLETE THIS PROJECT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND PRESENT IT AS FULLY OPERATIONAL TO THE SATISFACTION OF THE OWNER.
6. CARRY OUT WORK IN ACCORDANCE WITH ALL GOVERNING STATE, COUNTY AND LOCAL CODES AND O.S.H.A.
7. PRIOR TO BEGINNING WORK COORDINATE ALL POWER AND TELCO WORK WITH THE LOCAL UTILITY COMPANY AS IT MAY APPLY TO THIS SITE. ALL WORK TO COMPLY WITH THE RULES AND REGULATIONS OF THE UTILITIES INVOLVED.
8. FABRICATION AND INSTALLATION OF THE COMPLETE ELECTRICAL SYSTEM SHALL BE DONE IN A FIRST CLASS WORKMANSHIP PER NECA STANDARD 1-2000 BY QUALIFIED PERSONNEL EXPERIENCED IN SUCH WORK AND SHALL SCHEDULE THE WORK IN AN ORDERLY MANNER SO AS NOT TO IMPEDE PROGRESS OF THE PROJECT.
9. DURING PROGRESS OF THE WORK, MAINTAIN AN ACCURATE RECORD OF THE INSTALLATION OF THE ELECTRICAL SYSTEMS, LOCATING EACH CIRCUIT PRECISELY AND DIMENSIONING EQUIPMENT, CONDUIT AND CABLE LOCATIONS. UPON COMPLETION OF THE INSTALLATION, TRANSFER ALL RECORD DATA TO BLACK LINE PRINTS OF THE ORIGINAL DRAWINGS AND SUBMIT THESE DRAWINGS AS RECORD DRAWINGS TO THE CONSULTANT.
10. COMPLETE JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF JOB ACCEPTANCE BY OWNER. ANY WORK, MATERIAL, OR EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE CONTRACTOR.
11. GENERAL CONTRACTOR IS RESPONSIBLE FOR REQUESTING CONNECTION OF COMMERCIAL POWER FROM THE POWER COMPANY. ELECTRICAL CONTRACTOR SHALL COORDINATE THIS WORK WITH THE GENERAL CONTRACTOR.
12. COORDINATE EXACT TELEPHONE REQUIREMENTS AND SERVICE ROUTING WITH LOCAL TELEPHONE COMPANY. APPLY FOR TELEPHONE SERVICE IMMEDIATELY UPON AWARD OF CONTRACT.

BASIC MATERIALS AND METHODS

1. ALL ELECTRICAL WORK SHALL CONFORM TO THE EDITION OF THE NEC ACCEPTED BY THE LOCAL JURISDICTION AND TO THE APPLICABLE LOCAL CODES AND REGULATIONS.
2. ALL MATERIALS AND EQUIPMENT SHALL BE NEW. MATERIALS AND EQUIPMENT SHALL BE THE STANDARD PRODUCTS OF MANUFACTURER'S CURRENT DESIGN. ANY FIRST-CLASS PRODUCT MADE BY A REPUTABLE MANUFACTURER MAY BE USED PROVIDING IT CONFORMS TO THE CONTRACT REQUIREMENTS AND MEETS THE APPROVAL OF THE CONSULTANT AND THE OWNER.
3. ARRANGE CONDUIT, WIRING, EQUIPMENT, AND OTHER WORK GENERALLY AS SHOWN, PROVIDING PROPER CLEARANCES AND ACCESS. CAREFULLY EXAMINE ALL CONTRACT DRAWINGS AND FIT THE WORK IN EACH LOCATION WITHOUT SUBSTANTIAL ALTERATION. WHERE DEPARTURES ARE PROPOSED BECAUSE OF FIELD CONDITIONS OR OTHER CAUSES, PREPARE AND SUBMIT DETAILED DRAWINGS FOR ACCEPTANCE.
4. THE CONTRACT DRAWINGS ARE GENERALLY DIAGRAMMATIC AND ALL OFFSETS, BENDS, FITTINGS AND ACCESSORIES ARE NOT NECESSARILY SHOWN. PROVIDE ALL SUCH ITEMS AS MAY BE REQUIRED TO FIT THE WORK TO THE CONDITIONS.
5. MAINTAIN ALL CLEARANCES AS REQUIRED BY NEC.
6. SEAL AROUND CONDUITS AND AROUND CONDUCTORS WITHIN CONDUITS ENTERING THE PREFABRICATED SHELTER/CABINETS WHERE PENETRATION OCCURS WITH A SILICONE SEALANT TO PREVENT MOISTURE PENETRATION INTO BUILDING/SHELTER.
7. SILICONE SEAL AROUND ALL BOLTS AND SCREWS USED TO SECURE EQUIPMENT TO EXTERIOR OF BUILDING.
8. MAKE NECESSARY CONNECTIONS FOR BATTERY IN EMERGENCY LIGHT FIXTURE. CONNECT EXTERIOR LIGHT FIXTURE (PROVIDED BY SHELTER MANUFACTURER) TO EXTERNAL JUNCTION BOX.

CONDUCTORS AND CONNECTORS

1. UNLESS NOTED OTHERWISE, ALL CONDUCTORS SHALL BE COPPER, MINIMUM SIZE #12 AWG, WITH THERMOPLASTIC INSULATON CONFORMING TO NEMA WC5 OR CROSS-LINKED POLYETHYLENE INSULATION CONFORMING TO NEMA WC7, (TYPES THHN OR THWN). INSULATION SHALL BE RATED FOR 90°C. CONDUCTORS SHALL BE COLOR CODED IN ACCORDANCE WITH NEC.
2. ALL CONDUCTORS USED FOR GROUNDING SHALL BE COPPER AND SHALL HAVE GREEN INSULATION EXCEPT WHERE NOTED.
3. FOR COPPER CONDUCTORS #8 AWG AND SMALLER USE 3M SCOTCH-LOK OR T&B STA-KON COMPRESSION TYPE CONNECTORS WITH INTEGRAL OR SEPARATE INSULATION CAPS. FOR COPPER CONDUCTORS LARGER THAN #8 AWG, USE SOLDERLESS, INDENT HEX SCREW OR BOLT TYPE PRESSURE CONNECTORS OR DOUBLE COMPRESSION C-CLAMP CONNECTORS, UNLESS SPECIFIED OTHERWISE ON THE DRAWINGS.
4. UNLESS NOTED OTHERWISE, ALL LUGS SHALL BE TIN PLATED COPPER, TWO-HOLE, LONG BARREL, COMPRESSION TYPE.
5. CONDUCTOR LENGTHS SHALL BE CONTINOUS FROM TERMINATION TO TERMINATION WITHOUT SPLICES. SPLICES ARE NOT ACCEPTABLE. IF SPLICES ARE UNAVOIDABLE, PRIOR APPROVAL FROM THE ENGINEER MUST BE OBTAINED.

RACEWAYS AND BOXES

1. ALL CONDUIT SHALL BE UL LABELED.
2. ALL EMPTY CONDUITS INSTALLED FOR FUTURE USE SHALL HAVE A PULL CORD.
3. SHEET METAL BOXES SHALL CONFORM TO NEMA OS1; CAST-METAL BOXES SHALL CONFORM TO NEMA 81 AND SHALL BE SIZED IN ACCORDANCE WITH NEC UNLESS NOTED OTHERWISE.

ELECTRICAL GENERAL NOTES

1. SUBMITTAL OF BID INDICATES THAT THE CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED UNDER THIS CONTRACT.
2. CONTRACTOR SHALL PERFORM ALL VERIFICATIONS, OBSERVATION TESTS, AND EXAMINATION WORK PRIOR TO ORDERING OF ANY EQUIPMENT AND THE ACTUAL CONSTRUCTION. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE PROJECT MANAGER LISTING ALL MALFUNCTIONS, FAULTY EQUIPMENT AND DISCREPANCIES.
3. VERIFY HEIGHTS WITH PROJECT MANAGER PRIOR TO INSTALLATION.
4. THESE PLANS ARE DIAGRAMMATIC ONLY, FOLLOW AS CLOSELY AS POSSIBLE.
5. COORDINATE ALL WORK BETWEEN TRADES AND ALL OTHER SCHEDULING AND PROVISIONALLY CIRCUMSTANCES SURROUNDING THE PROJECT.
6. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION CONSTRUCTION TOOLS, TRANSPORTATION, ETC., FOR COMPLETE AND FUNCTIONALLY OPERATING SYSTEMS ENERGIZED AND READY FOR USE THROUGHOUT AS INDICATED ON DRAWINGS, AS SPECIFIED HEREIN AND/OR AS OTHERWISE REQUIRED.
7. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN PERFECT CONDITION WHEN INSTALLED EACH CLASS OR GROUP OF EQUIPMENT. ELECTRICAL MATERIALS SHALL BE LISTED AND APPROVED BY UNDERWRITER'S LABORATORIES AND SHALL BEAR THE INSPECTION LABEL "J" WHERE SUBJECT TO SUCH APPROVAL. MATERIALS SHALL MEET WITH APPROVAL OF ALL GOVERNING BODIES HAVING JURISDICTION OVER THE CONSTRUCTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH ALL CURRENT APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA AND NBFU. ALL MATERIALS AND EQUIPMENT SHALL BE APPROVED FOR THEIR INTENDED USE AND LOCATION.
8. ALL WORK SHALL COMPLY WITH ALL APPLICABLE GOVERNING STATE, COUNTY AND CITY CODES AND OSHA, NFPA, NEC & ASHRAE REQUIREMENTS.
9. ENTIRE JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF JOB ACCEPTANCE. ALL WORK, MATERIAL AND EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE CONTRACTOR.
10. PROPERLY SEAL ALL PENETRATIONS. PROVIDE UL LISTED FIRE-STOPS WHERE PENETRATIONS ARE MADE THROUGH FIRE-RATED ASSEMBLIES. WATER-TIGHT USING SILICONE SEALANT.
11. LOCATE ALL PENETRATIONS SUCH THAT ALL REINFORCEMENT CONTAINED WITHIN THE EXISTING BUILDING CONSTRUCTION REMAINS INTACT AND UNDISTURBED. SUBMIT LOCATING METHOD TO THE PROJECT MANAGER FOR APPROVAL PRIOR TO EXECUTION.
12. DELIVER ALL BROCHURES, OPERATING MANUALS, CATALOGS AND SHOP DRAWINGS TO THE PROJECT MANAGER AT JOB COMPLETION. PROVIDE MAINTENANCE MANUALS FOR MECHANICAL EQUIPMENT. AFFIX MAINTENANCE LABELS TO MECHANICAL EQUIPMENT.
13. ALL CONDUCTORS SHALL BE COPPER. MINIMUM CONDUCTOR SIZE SHALL BE #12 AWG., UNLESS OTHERWISE NOTED. CONDUCTORS SHALL BE TYPE THHW, RATED IN ACCORDANCE WITH NEC.
14. ALL CIRCUIT INTERRUPTING EQUIPMENT SHALL HAVE A MINIMUM FAULT CURRENT RATING OF 22,000 AIC.
15. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE: ARTICLES 250 & 810 AND THE UTILITY COMPANY STANDARDS.
16. CONDUIT:
    a. RIGID CONDUIT SHALL BE U.L. LABEL GALVANIZED ZINC COATED WITH ZINC INTERIOR AND SHALL BE USED IN ALL EXTERIOR CONDITIONS.
    b. ELECTRICAL METALLIC TUBING SHALL HAVE U.L. LABEL, FITTINGS SHALL BE GLAND RING COMPRESSION TYPE. EMT SHALL BE USED ONLY FOR INTERIOR RUNS.
    c. LIQUID-TIGHT FLEXIBLE METAL CONDUIT SHALL BE U.L. LISTED AND SHALL BE USED AT FINAL CONNECTIONS TO MECHANICAL EQUIPMENT & RECTIFIERS AND WHERE PERMITTED BY CODE. ALL CONDUIT IN EXCESS OF SIX FEET IN LENGTH SHALL CONTAIN A FULL-SIZE GROUND CONDUCTOR.
    d. CONDUIT RUNS SHALL BE SURFACE MOUNTED ON CEILINGS OR WALLS UNLESS NOTED OTHERWISE. ALL CONDUIT SHALL RUN PARALLEL OR PERPENDICULAR TO WALLS, FLOOR, CEILING, OR BEAMS. VERIFY EXACT ROUTING OF ALL EXPOSED CONDUIT WITH THE PROJECT MANAGER PRIOR TO INSTALLING.
    e. PVC CONDUIT MAY BE PROVIDED ONLY WHERE SHOWN, OR IN UNDERGROUND INSTALLATIONS. PROVIDE UV-RESISTANT CONDUIT WHERE EXPOSED TO THE ATMOSPHERE. PROVIDE GROUND CONDUCTOR IN ALL PVC RUNS; EXCEPT WHERE PERMITTED BY CODE TO OMIT.
17. ALL ELECTRICAL EQUIPMENT AND METER SHALL BE LABELED "NEXTEL" AND WITH APPROPRIATE ADDRESS WITH PERMANENT ENGRAVED PLASTIC LABELS. BACKGROUND SHALL BE BLACK WITH WHITE LETTERS; EXCEPT AS REQUIRED BY CODE TO FOLLOW A DIFFERENT SCHEME.
18. CONTRACTOR TO PERFORM PRE & POST GROUND TEST. IF PRETEST EXCEEDS 5 OHMS, CONTRACTOR TO NOTIFY D&L AND NEXTEL.
19. CLEAN PREMISES OF ALL DEBRIS RESULTING FROM WORK AND LEAVE WORK IN A COMPLETE AND UNDAMAGED CONDITION. LEGALLY DISPOSE OF ALL REMOVED, UNUSED AND EXCESS MATERIAL GENERATED BY THE WORK OF THIS CONTRACT. DELIVER ITEMS INDICATED ON THE DRAWINGS TO THE OWNER IN GOOD CONDITION. OBTAIN SIGNED RECEIPT UPON DELIVERY.
20. COORDINATE WITH UTILITY COMPANY FOR CONNECTION OF TEMPORARY AND PERMANENT POWER TO THE SITE. THE TEMPORARY POWER AND ALL HOOKUP COSTS SHALL BE PAID BY THE CONTRACTOR.
21. VERIFY ALL EXISTING CIRCUITRY PRIOR TO REMOVAL AND NEW WORK. MAINTAIN POWER TO ALL OTHER AREAS & CIRCUITS NOT SCHEDULED FOR REMOVAL.

LEGEND

- SAFETY DISCONNECT SWITCH
- PANEL BOARD
- (M) KILOWATT HOUR METER
- (T) TRANSFORMER
- CIRCUIT BREAKER
- MANUAL TRANSFER SWITCH
- WEATHERPROOF LIGHT FIXTURE
- WEATHERPROOF LIGHT SWITCH
- AC GENERATOR CONNECTOR
- WEATHERPROOF GFI DUPLEX RECEPTACLE
- COPPER GROUND BAR 1/4 "x4"x12"
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- GROUND ROD
- —— P —— POWER WIRING
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- —— G —— GROUND WIRING

ABBREVIATIONS

A	AMPERE
C	CONDUIT
E.M.T.	ELECTRICAL METALLIC TUBING
G	GROUND
GFI	GROUND FAULT INTERRUPTING
KWH	KILOWATT HOUR
MCB	MAIN CIRCUIT BREAKER
MLO	MAIN LUGS ONLY
NF	NON-FUSIBLE
P	POLE
SN	SOLID NEUTRAL
SW	SWITCH
V	VOLT
W	WIRE
CGB	
MGB	MAIN GROUND BAR

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SAC :
CONST :
RF :
A&E :

SCHEDULE OF REVISIONS

REV NO.	DATE	DESCRIPTION OF CHANGES
7		
6		
5		
4		
3		
2		
1	7/28/08	ISSUED FOR REVISION
0	7/08/08	ISSUED FOR CONSTRUCTION

DRAWN BY: JJC	CHECKED BY: RDM
SCALE: AS NOTED	JOB NO: 100-0400417KX
FIRST ISSUE: 7/08/08	PRINT DATE: 7/28/08

APPROVALS

SAC MGR : ____________
SAC : ____________
OPER : ____________
CM : ____________
RF : ____________
CONST : ____________
A&E : ____________

NORTH SANFORD
SITE ID#: FL3121A
845 S.R. 15A
SANFORD, FL 32771
SEMINOLE COUNTY

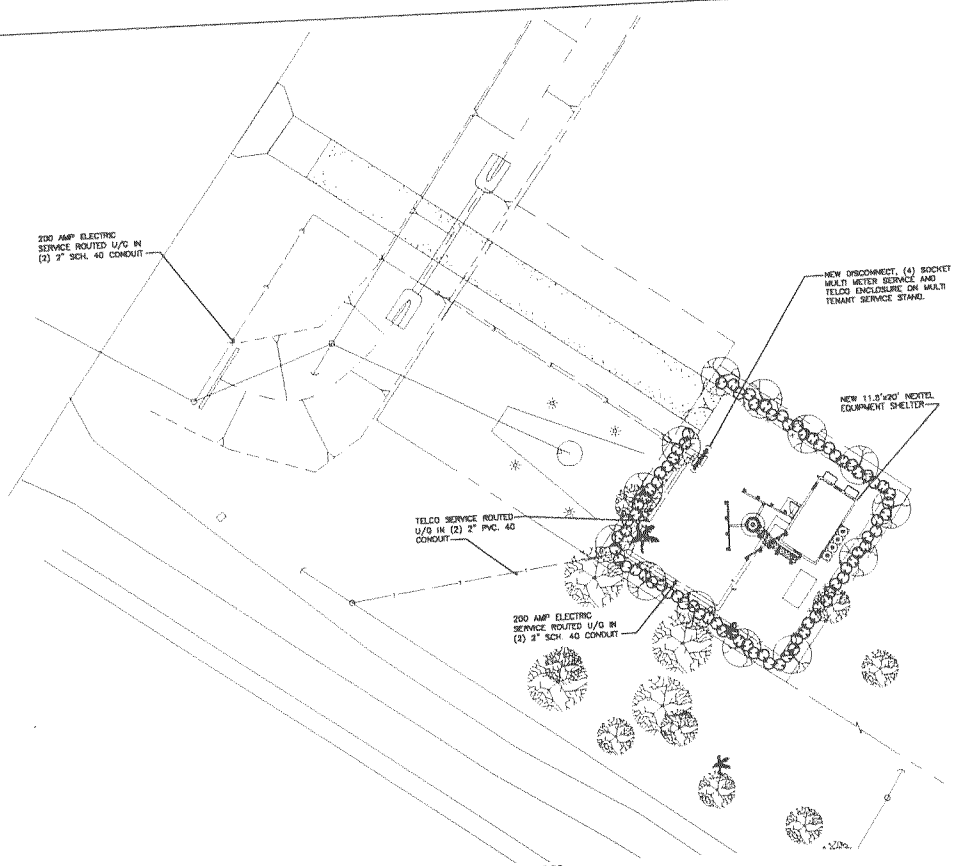
DRAWING TITLE:
ELECTRICAL NOTES

DRAWING SHEET:
E-1

SHEET NO. 10 OF 16

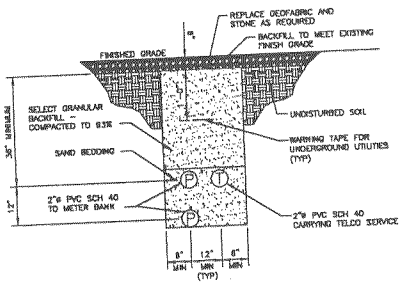
8/3/0

BRENT H. GARTRELL, P.E.
FL PROFESSIONAL ENGINEER LIC. NO.
FL CERTIFICATE OF AUTHORIZATION NO.



ELECTRICAL PLAN

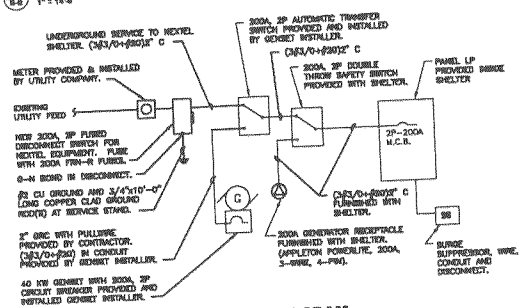
1/E-1 SCALE: 1/4"=1'-0"



NOTE:
1. EXCAVATE EXISTING SUBGRADE AS REQUIRED TO INSTALL CONDUITS IN ACCORDANCE WITH OSHA AND ALL APPLICABLE CODES.

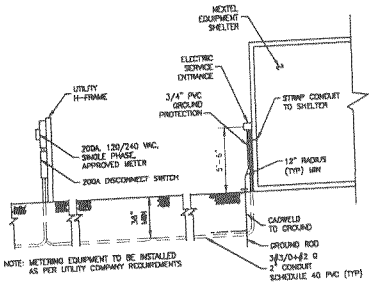
TYPICAL TRENCH DETAIL

2/E-1 NTS



POWER DIAGRAM

4/E-1 NTS



ELECTRICAL SERVICE ENTRANCE DETAIL

3/E-1 NTS

GENERATOR GENERAL NOTES

1. 40 KW, 120/240V, 1Ø GENSET PROVIDED AND INSTALLED BY OTHERS. ELECTRICAL CONTRACTOR SHALL PROVIDE CONDUITS TO GENERATOR PAD AS INDICATED. REFER TO CONCRETE GENERATOR PAD DETAIL, SHEET C-4. GENERATOR INSTALLATION UNDER PHASE 2 WORK.
2. PROVIDE UNDERGROUND GRC CONDUIT FROM GENERATOR PAD TO A.T.S. IN BUILDING. REFER TO ELECTRICAL ONE-LINE DIAGRAM, THIS SHEET, FOR CONDUIT SIZE. AT BUILDING, STUB CONDUIT UP +8" AFG, CAP AND LABEL FOR CONNECTION TO FUTURE A.T.S.. AT PAD, STUB CONDUIT UP +3" AND CAP. CONNECTION TO A.T.S. BY OTHERS.
3. PROVIDE 3/4" GRC CONDUIT FROM GENERATOR PAD TO OUTSIDE BUILDING FOR ALARM AND CONTROL CIRCUITS. AT PAD, STUB CONDUIT UP +3" AND CAP. AT BUILDING, STUB CONDUIT UP +8" AFG, CAP AND LABEL. CONNECTIONS TO ALARMS AND CONTROLS BY OTHERS.
4. PROVIDE 3/4" GRC CONDUIT FROM GENERATOR PAD TO PANEL LP FOR JACKET WATER HEATER AND BATTERY CHARGER. AT PAD, STUB CONDUIT UP +3" AND CAP. AT BUILDING COREDRILL THROUGH FLOOR OR WALL AND EXTEND CONDUIT TO PANEL. CONNECTION TO PANEL BY OTHERS.

LEGEND

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- PANEL BOARD
- M — KILOWATT HOUR METER
- T — TRANSFORMER
- CIRCUIT BREAKER
- MANUAL TRANSFER SWITCH
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- WEATHERPROOF LIGHT SWITCH
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NF	NON-FUSIBLE
P	POLE
SN	SOLID NEUTRAL
SW	SWITCH
V	VOLT
W	WIRE
COB	
MGB	MAIN GROUND BAR

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SAC :
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SCHEDULE OF REVISIONS

REV NO.	DATE	DESCRIPTION OF CHANGES
7		
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1	7/30/03	ISSUED FOR REVISION
0	7/08/03	ISSUED FOR CONSTRUCTION

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SCALE: AS NOTED | JOB NO. 102-0-0004780E
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SAC : _____
OPER : _____
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A&E : _____

NORTH SANFORD
SITE ID#: FL3121A
845 S.R. 15A
SANFORD, FL 32771
SEMINOLE COUNTY

DRAWING TITLE:
ELECTRICAL PLAN & DETAILS

DRAWING NO.:
E-2

SHEET NO. 11 OF 18

7/30/03

THESE PLANS ARE THE PROPERTY OF CUMMINGS LANG LLC. THEY ARE NOT TO BE USED IN WHOLE OR IN PART FOR ANY PURPOSE WITHOUT THE WRITTEN PERMISSION OF CUMMINGS LANG LLC.

GROUNDING NOTES

1. GROUND ALL EXPOSED METALLIC OBJECTS ON BUILDING EXTERIOR INCLUDING BUILDING TIE DOWN BRACKETS.
2. PROVIDE LOCK WASHERS FOR ALL MECHANICAL CONNECTIONS FOR GROUND CONDUCTORS. USE STAINLESS STEEL HARDWARE THROUGHOUT.
3. DO NOT INSTALL GROUND RING OUTSIDE OF PROPERTY LINE.
4. PROVIDE A GROUND RING BURRIED 30" BELOW GRADE OR FROST LINE, WHICHEVER IS DEEPER. THE GROUND RING SHALL BE INSTALLED 18" AWAY FROM THE SHELTER FOUNDATION. (MINIMUM UNLESS SHOWN OTHERWISE ON THE DRAWING)
5. REMOVE ALL PAINT AND CLEAN ALL DIRT FROM SURFACES REQUIRING GROUND CONNECTIONS, REPAINT TO MATCH AFTER CONNECTION IS MADE TO MAINTAIN CORROSION RESISTANCE.
6. ALL EXTERIOR GROUNDING CONDUCTORS INCLUDING GROUND RING SHALL BE #2 AWG SOLID BARE TINNED COPPER UNLESS NOTED OTHERWISE. MAKE ALL GROUND CONNECTIONS AS SHORT AND DIRECT AS POSSIBLE. AVOID SHARP BENDS. THE RADIUS OF ANY BEND SHALL NOT BE LESS THAN 8" AND THE ANGLE OF ANY BEND SHALL NOT EXCEED 90°. GROUNDING CONDUCTORS SHALL BE ROUTED DOWNWARD TOWARD THE BURIED GROUND RING.
7. BOND ALL SECTIONS OF WAVEGUIDE BRIDGE W/ #2 AWG STRANDED COPPER GROUND WIRE.
8. BOND A/C UNITS, GPS ANTENNAS, DOOR FRAMES, METAL STAIRS, HANDRAIL, MISCELLANEOUS METALLIC EQUIPMENT AND MISCELLANEOUS LIFTING HOOKS TO GROUND RING. FRAME EXOTHERMICALLY WELD CONNECTION TO GROUND RING. CONNECTION TO LIFTING HOOK SHALL BE MADE AT THE AXLE BAR WITH AN APPROVED GROUNDING CLAMP.
9. BOND ALL EXTERIOR CONDUITS, PIPES AND CYLINDRICAL METALLIC OBJECTS WITH A PENN-UNION GT SERIES CLAMP, BLACKBURN GUV SERIES CLAMP OR A BURNDY GAR 3900BU SERIES CLAMP ONLY. NO SUBSTITUTES ACCEPTED.
10. ALL GROUND CONNECTIONS SHALL BE APPROVED FOR THE METALS BEING CONNECTED.
11. ALL EXTERNAL GROUND CONNECTIONS SHALL BE EXOTHERMICALLY WELDED. ALL EXOTHERMIC WELDS TO EXTERIOR GROUND RING SHALL BE THE PARALLEL TYPE, EXCEPT FOR THE GROUND RODS WHICH ARE TEE EXOTHERMIC WELDS. REPAIR ALL GALVANIZED SURFACES THAT HAVE BEEN DAMAGED BY EXOTHERMIC WELDING. USE SPRAY GALVANIZER SUCH AS HOLUB LECTROBOL #15-601.
12. CONTRACTOR SHALL PROVIDE A 24 HOUR NOTICE THE CONSTRUCTION MANAGER WHEN THE BURIED GROUND RING IS INSTALLED SO THE REPRESENTATIVE CAN INSPECT THE GROUND RING BEFORE IT IS BACKFILLED WITH SOIL.
13. FOR METAL FENCE POST GROUNDING, USE A HEAVY DUTY TYPE GROUNDING CLAMP OR EXOTHERMIC WELD CONNECTION TO POST. BOND ALL FENCE POST WITHING 8 FEET OF ANY AND ALL EQUIPMENT.
14. FOR ALL EXTERNAL GROUND CONNECTIONS, MECHANICAL CONNECTORS (TWO-HOLE OR CLAMP), AND CAD WELDS, APPLY A LIBERAL PROTECTIVE COATING OF AN ANTI-OXIDE COMPOUND SUCH AS "NO OXIDE A" BY DEARBORN CHEMICAL COMPANY PRIOR TO ASSEMBLY.
15. ALL MAIN CABLES WILL BE GROUNDED AT: A) AT THE ANTENNA MOUNTING PIPE. B) MIDDLE OF THE CABLE RUN IF OVER 200'. C) AT THE BASE OF THE TOWER. D) PRIOR TO ENTERING EQUIPMENT SHELTER/CABINET (WITHIN 1' OF ENTRY).
16. GROUND COAXIAL CABLE SHIELDS AT BOTH ENDS WITH MANUFACTURER'S GROUNDING KITS.
17. CONTRACTOR SHALL TEST AND VERIFY THAT THE IMPEDANCE DOES NOT EXCEED 5 OHMS TO GROUND USING AN EARTH/GROUND RESISTANCE TESTER. CONTRACTOR TO PERFORM PRE & POST GROUND TEST. IF PRETEST EXCEEDS 5 OHMS, CONTRACTOR TO NOTIFY D&L & NEXTEL. ONE (1) HARD COPY TO BE LEFT IN THE SHELTER AND ONE (1) SOFT COPY TO BE INCLUDED WITH THE NEXTEL CLOSE-OUT DOCUMENTS.
18. CORE DRILLS TO BE SEALED WITH FIRE-STOPPING FOAM SEALANT, UL-LISTED FOR THIS PURPOSE, FOLLOWING INSTALLATION OF CONDUITS IN NEW PENETRATIONS. NO HAMMER DRILLING IS PERMITTED. SCHEDULING OF CORE DRILLING TO BE COORDINATED WITH BUILDING OWNER'S REPRESENTATIVE.
19. INSTALL #2 AWG GREEN-INSULATED STRANDED WIRE FOR ABOVE GRADE GROUNDING AND #2 BARE SOLID TIN-COATED WIRE FOR BELOW GRADE GROUNDING UNLESS OTHERWISE NOTED.
20. REFER TO GROUNDING PLAN FOR GROUND BAR LOCATIONS. GROUNDING CONNECTIONS SHALL BE EXOTHERMIC TYPE ("CADWELDS") TO ANTENNA MOUNTS AND FRAME. REMAINING GROUNDING CONNECTIONS SHALL BE COMPRESSION FITTINGS. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO-HOLE LUGS.
21. ALL SHELTER GROUNDS SHALL BE #2 SOLID BARE TINNED COPPER CONDUCTORS & SHALL BE PLACED IN 3/4" PVC CONDUIT EMBEDDED 12" INTO EXISTING GRADE, TOPS SEALED W/ SILICONE CAULK.

LEGEND

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- PANEL BOARD
- KILOWATT HOUR METER
- TRANSFORMER
- CIRCUIT BREAKER
- MANUAL TRANSFER SWITCH
- WEATHERPROOF LIGHT FIXTURE
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ABBREVIATIONS

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NF	NON-FUSIBLE
P	POLE
SN	SOLID NEUTRAL
SW	SWITCH
V	VOLT
W	WIRE
CGB	
MGB	MAIN GROUND BAR

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BAC :	
CONST :	
RF :	
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SCHEDULE OF REVISIONS

REV. NO.	DATE	DESCRIPTION OF CHANGES
7		
6		
5		
4		
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2		
1	7/28/05	ISSUED FOR REVISION
0	7/05/05	ISSUED FOR CONSTRUCTION

DRAWN BY: JJC | CHECKED BY: DBC
SCALE: AS NOTED | JOB NO: 100-0406-47NX
FIRST ISSUE: 7/05/05 | PRINT DATE: 7/28/05

APPROVALS

BAC MGR : _____
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OPER : _____
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CONST : _____
A&E : _____

NORTH SANFORD
SITE ID#: FL3121A
645 S.R. 15A
SANFORD, FL 32771
SEMINOLE COUNTY

DRAWING TITLE:
GROUNDING NOTES

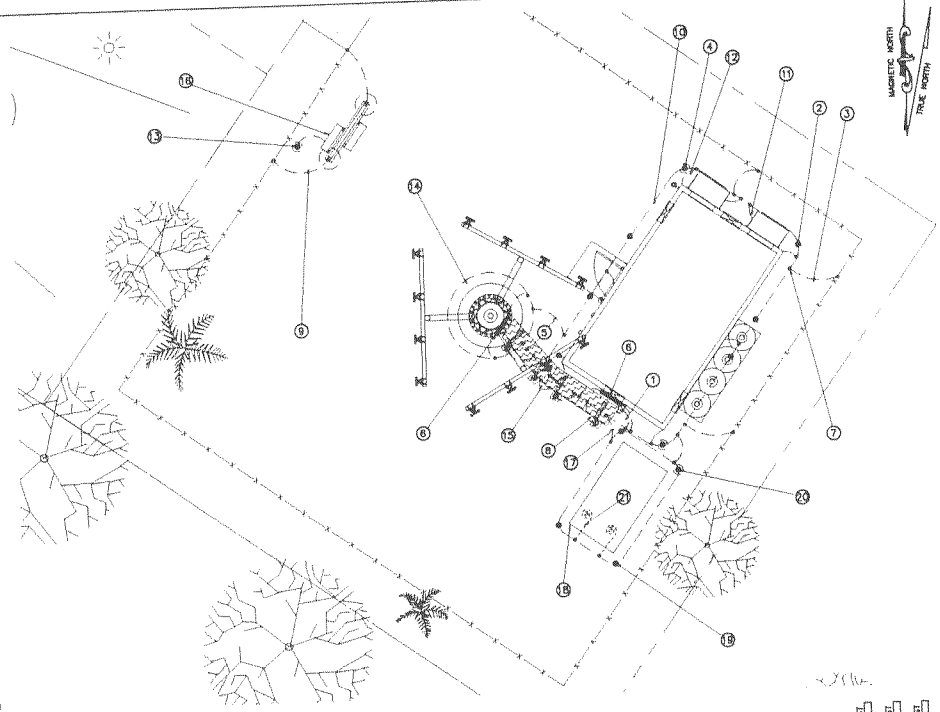
DRAWING NUMBER:
G-1

SHEET NO. 12 OF 18

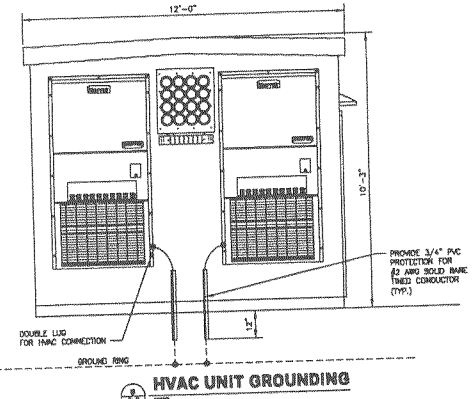
I HEREBY CERTIFY THAT THIS PLAN, DRAWING OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF FLORIDA.
FL. FIRM ELECTRICAL CERTIFICATE NO. X-0000
FL. CERTIFICATE OF AUTHORIZATION # E 00000

DETAIL REF. | GROUNDING KEY

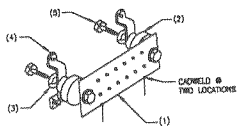
1. GENERATOR RECEPTACLE GROUND
2. 5/8"ø x 10' LONG COPPER CLAD GROUND ROD (TYP 8) (SEE DETAIL 3/G-2)
3. #2 AWG COPPER GROUND WIRE TO NEW FENCE POSTS. (TYP x 3)
4. GROUND INSPECTION WELL, MIN. 2 (SEE DETAIL 2/G-2)
5. TIE INTO NEW RING (TYP. 2 LOCATIONS)
6. 4"x24" MASTER GROUND BAR, PROVIDE (2) #2 AWG SOLID BARE TINNED TAILS TO GROUND RING. PROVIDE 3/4" PVC CONDUIT PROTECTION SEAL TOPS W/ SILICONE. (SEE DETAIL 4/G-2)
7. EXOTHERMIC CAD WELD (TYP.)
8. #2 AWG COPPER GROUND WIRE TO CABLE BRIDGE POSTS. (TYP)
9. #2 AWG COPPER GROUND WIRE TO H-FRAME POST. (TYPE x2)
10. #2 BARE TINNED SOLID COPPER GROUND WIRE 30" BELOW GRADE, (SEE DETAIL 3/G-2)
11. #2 AWG SOLID TINNED BARE COPPER GROUND WIRE TO HVAC UNITS DOUBLE LUG TO HOUSING (TYP. OF 2)
12. #2 AWG SOLID TINNED BARE COPPER GROUND WIRE TO SHELTER GROUNDING POINTS (TYP. OF 6)
13. METER GROUND & GROUND ROD
14. NEW TOWER GROUND RING
15. BOND ALL SECTIONS OF WAVEGUIDE BRIDGE W/ #2 AWG STRANDED COPPER GROUND WIRE (TYP)
16. NEW NEXTEL KWH METER & DISCONNECT INSTALLED ON SHELTER
17. TIE INTO SHELTER RING (TYP. 2 LOCATIONS)
18. NEXTEL 5' x 9' GENERATOR PAD.
19. 5/8"ø x 10' LONG COPPER CLAD GROUND ROD (TYP 4) (SEE DETAIL 3/G-2)
20. GROUND INSPECTION WELL (SEE DETAIL 2/G-2)
21. #2 BARE TINNED SOLID COPPER GROUND WIRE TO GENSET FRAME



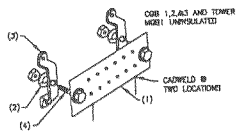
GROUNDING PLAN
1/G-2 1"=8'-0"



HVAC UNIT GROUNDING
3/G-2 NTS



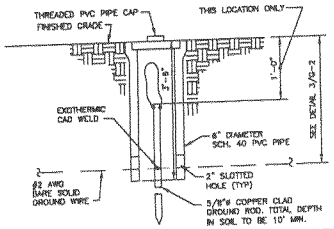
LEGEND
(1) COPPER GROUND BAR, BY HARGER SEE SCHEDULE BELOW.
(2) INSULATORS, BY HARGER CAT. #8263-A6.
(3) 3/8 " LOCKWASHERS, STAINLESS STEEL.
(4) WALL MOUNTING BRACKET, HARGER CAT. #WBKT-2.
(5) 5/8-11x3" H.H.C.S. BOLTS, STAINLESS STEEL.



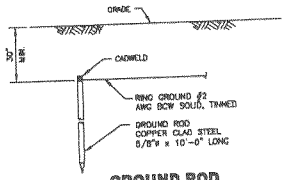
LEGEND
(1) COPPER GROUND BAR, BY HARGER SEE SCHEDULE BELOW.
(2) 5/8 " LOCKWASHERS, STAINLESS STEEL.
(3) WALL MOUNTING BRACKET, HARGER CAT. #WBKT-2.
(4) 5/8-11x3" H.H.C.S. BOLTS, STAINLESS STEEL.

GROUND BAR DETAIL
4/G-2 NTS

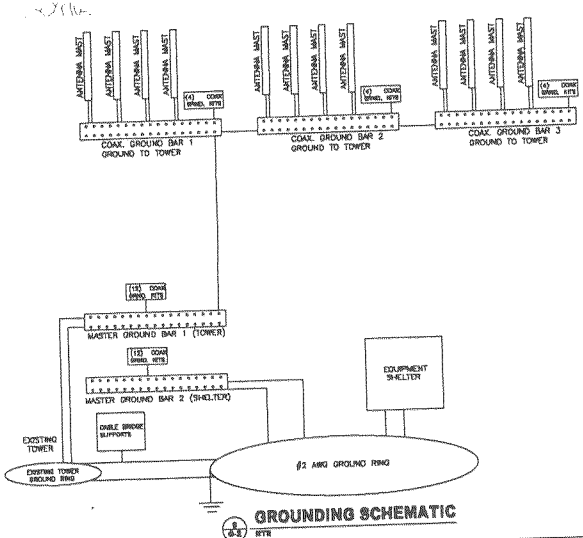
GROUND BAR SCHEDULE				
TYPE	QTY.	MANUFACTURER	CAT. NO.	REMARKS
MOB	2	HARGER	GB144240	OR EQUAL
CGB	3	HARGER	GB144240	OR EQUAL



GROUND ROD INSPECTION WELL DETAIL
2/G-2 NTS



GROUND ROD
2/G-2 NTS



GROUNDING SCHEMATIC
5/G-2 NTS

Dewberry Long LLC
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891 TRAFALGAR CIRCLE SUITE 300E
MAITLAND, FL 32751-7425
OFFICE: (407) 838-8200
FAX: (407) 838-8400

SAC :
CONST :
RF :
A&E :

SCHEDULE OF REVISIONS

REV NO.	DATE	DESCRIPTION OF CHANGES
7		
6		
5		
4		
3		
2		
1	7/29/05	ISSUED FOR REVISION
0	7/05/05	ISSUED FOR CONSTRUCTION

DRAWN BY: JJC | CHECKED BY: BDG
SCALE: AS NOTED | JOB NO: 190-040047NSX
PRINT ISSUE: 7/29/05 | PRINT DATE: 7/29/05

APPROVALS
SAC MGR :
SAC :
OPER :
CM :
RF :
CONST :
A&E :

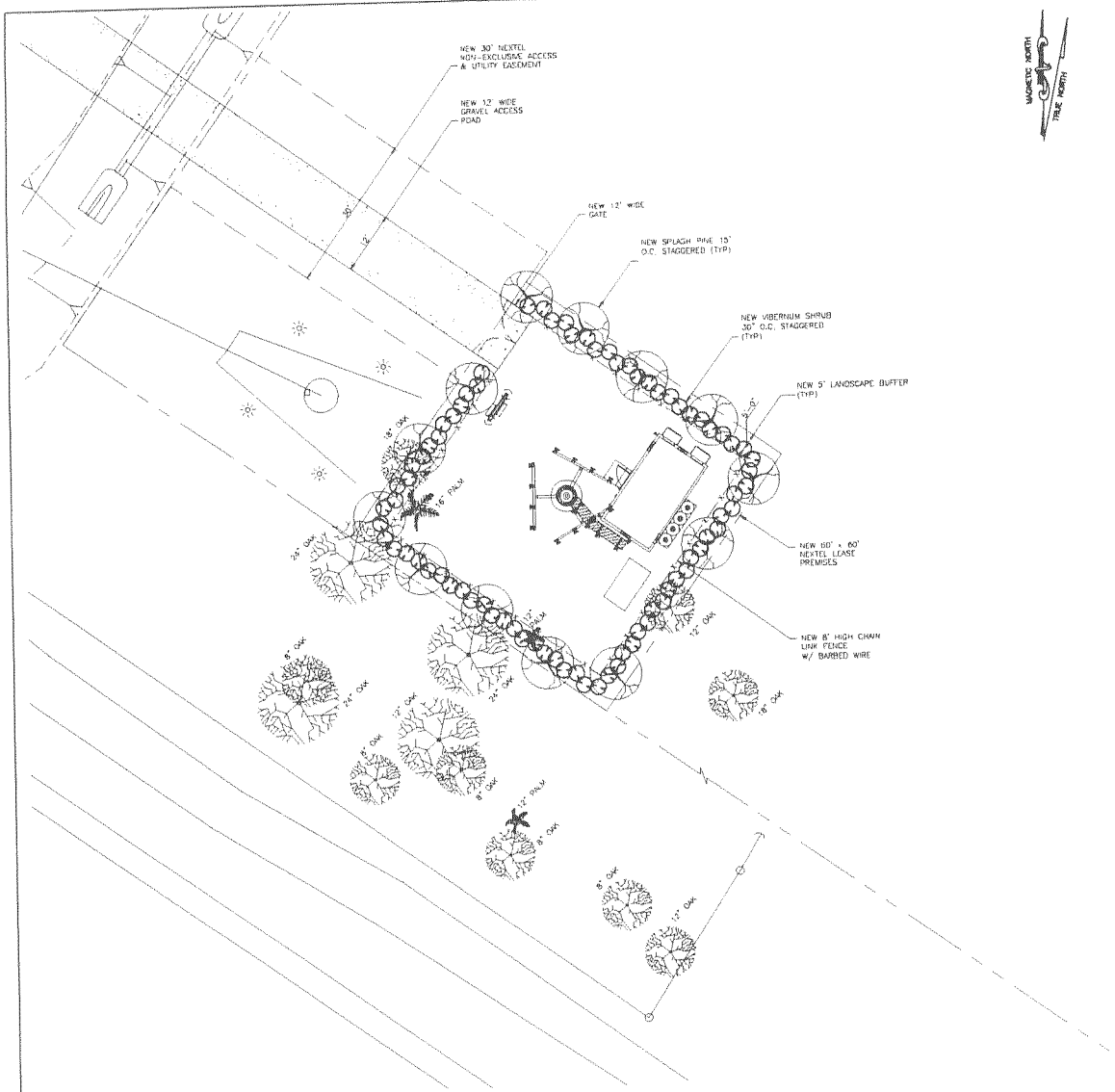
NORTH SANFORD
SITE ID#: FL3121A
845 S.R. 15A
SANFORD, FL 32771
SEMINOLE COUNTY

DRAWING TITLE
GROUNDING NOTES

DRAWING SHEET:
G-2

SHEET NO. 13 OF 18

ROBERT W. CANTRELL, PE
FL PROFESSIONAL ENGINEER LIC # 61855
FL CERTIFICATE OF AUTHORIZATION # 26104



LANDSCAPE PLAN

PLANTING LIST			
SCIENTIFIC NAME	COMMON NAME	SIZE (HEIGHT)	SPACING
PINUS ELLIOTTI	SPLASH PINES	8 FT	15' O.C.
CAPRIFOLIACEAE	VIBERNUM	3 FT	30" O.C.
MULCH ALL DISTURBED AREAS WITH THREE (3) INCH MINIMUM LAYER OF PINE BARK NUGGETS			

Damiano Long LLC
2323 HERSCHEL ST.
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SAC :
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SCHEDULE OF REVISIONS

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FIRST ISSUE: 7/30/05 | PRINT DATE: 7/30/05

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NORTH SANFORD
SITE ID#: FL3121A
845 S.R. 15A
SANFORD, FL 32771
SEMINOLE COUNTY

DRAWING TITLE:
LANDSCAPE DETAILS & NOTES

DRAWING SHEET:
L-1

SHEET NO. 14 OF 18

8/3/05

LANDSCAPE NOTES

A. PROJECT INCLUDES

1. FURNISH, INSTALL, AND MAINTAIN LANDSCAPE WORK AS SHOWN ON THESE CONTRACT DRAWINGS OR AS IDENTIFIED HEREIN

   A. TREES, SHRUBS, AND GROUND COVER.
   B. LAWNS.
   C. TOPSOIL AND SOIL AMENDMENTS.
   D. INITIAL MAINTENANCE OF INSTALLED LANDSCAPE MATERIALS.
   E. PRUNING AND RELOCATION OF EXISTING PLANT MATERIALS.
   F. RECONDITIONING EXISTING LAWNS AFFECTED BY CONSTRUCTION ACTIVITIES.

B. QUALITY ASSURANCE

1. PLANTS AND TREES: BALLED AND BURLAPED PLANTS AND TREES SHALL BE GRADED TO AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z60.1
2. TESTING: LABORATORY TESTING OF EXISTING SOILS AND FILL MATERIALS FOR SUITABLE SOIL AMENDMENTS AND FERTILIZER SHALL BE PERFORMED BY THE LANDSCAPE CONTRACTOR.
3. CONTRACTOR SHALL PREPARE THE SURFACE OF DISTURBED AREAS PRIOR TO SEEDING.
4. FERTILIZER AND SEED SHALL BE APPLIED AT UNIFORM RATES AS DETERMINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
5. CONTRACTOR SHALL WATER SEEDED AREAS AS often AS REQUIRED TO OBTAIN GERMINATION AND TO OBTAIN AND MAINTAIN SATISFACTORY GROWTH.
6. THE STAND OF VEGETATIVE COVER RESULTING FROM SEEDING SHALL NOT BE CONSIDERED SATISFACTORY UNTIL ACCEPTED BY THE ENGINEER. IF AREAS ARE DETERMINED TO BE UNACCEPTABLE, THE MULCH WILL BE REMOVED AND ALL AREAS SHALL BE RESEEDED, REFERTILIZED AND REMULCHED PER RECOMMENDED APPLICATION PROCEDURES AT THE CONTRACTORS EXPENSE.
7. THE CONTRACTOR SHALL BEGIN MAINTENANCE PERIOD IMMEDIATELY AFTER PLANTING OF VEGETATIVE COVER.
8. THE CONTRACTOR SHALL MAINTAIN THE VEGETATIVE COVER AREA, FOR THE PERIODS REQUIRED TO ESTABLISH AN ACCEPTABLE GROWTH, BUT NOT LESS THAN 60 DAYS AFTER THE COMPLETION OF PLANTING OF VEGETATIVE COVER. IF SEEDED IN THE FALL AND NOT GIVEN A FULL 60 DAYS OF MAINTENANCE, OR IF NOT CONSIDERED ACCEPTABLE BY THE ENGINEER AT THAT TIME, CONTINUE MAINTENANCE DURING THE FOLLOWING SPRING UNTIL ACCEPTABLE VEGETATIVE COVER STAND IS ESTABLISHED

C. PRODUCTS

1. PLANT MATERIALS SHALL BE AS SHOWN ON THESE CONTRACT DRAWINGS AND MAY BE ANY COMBINATION OF THE FOLLOWING:

   A. DECIDUOUS TREES.
   B. DECIDUOUS SHRUBS.
   C. CONIFEROUS AND BROAD LEAFED EVERGREEN TREES AND SHRUBS.
   D. GROUND COVER.
   E. PLANTS.

2. LAWNS: LAWN MAY BE ANY OF THE FOLLOWING, AS APPROVED BY THE ENGINEER. SEED, NEW CROP SEED MIXTURE, SOD, STRONGLY ROOTED, 2 YEARS OLD, OR SOD PLUGS AND SPRIGS.
3. TOPSOIL: FERTILE, FRIABLE TOPSOIL FROM OFFSITE, OR FROM SITE STOCKPILE WITH ADDITIONAL MIXED-IN FERTILE, FRIABLE TOPSOIL FROM LOCAL SUPPLIERS OF TOPSOIL.
4. SOIL AMENDMENTS: THE SOIL AMENDMENTS MAY BE ANY OF THE FOLLOWING, AS REQUIRED OR INDICATED IN THE LABORATORY TESTING REPORTS.

   A. LIME: DOLOMATIC LIMESTONE.
   B. ALUMINUM SULFATE: COMMERCIAL GRADE.
   C. PEAT HUMUS: FINELY DIVIDED PEAT.
   D. SUPERPHOSPHATE: 20 PERCENT AVAILABLE PHOSPHORIC ACID.
   E. SAND: CLEAN, WASHED SAND.
   F. PERLITE: NBS PS 23.
   G. SAWDUST: ROTTED SAWDUST FREE OF CHIPS AND STONES.
   H. MANURE: ROTTED STABLE MANURE.
   I. COMMERCIAL FERTILIZER: NEUTRAL CHARACTER FOR PLANT MATERIALS AND LAWNS

   J. MULCH: SHREDDED HARDWOOD MULCH.

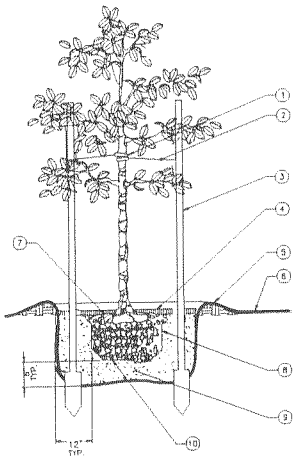
5. LANDSCAPE MATERIALS: THE LANDSCAPE MATERIALS MAY BE ANY OF THE FOLLOWING, AS SHOWN ON THESE CONTRACT DRAWINGS

   A. GRAVEL: WATER-WORN GRAVEL.
   B. ANTI-EROSION MULCH: SEED-FREE SALT HAY OR THRESHED STRAW.

   C. ANTI-DESICCANT: EMULSION TYPE, FILM-FORMING.
   D. PLASTIC SHEET: BLACK POLYETHYLENE, 6 MILS.
   E. FILTRATION FABRIC: WATER PERMEABLE FIBERGLASS OR POLYPROPYLENE FABRIC

   F. WRAPPING: TREE-WRAP TAPE.
   G. STAKES AND GUYS: NEW HARDWOOD, TREATED SOFTWOOD, OR REDWOOD.

   H. METAL EDGING: COMMERCIAL STEEL EDGING.
   I. WOOD HEADERS AND EDGING: ALL HEART REDWOOD OR PRESSURE TREATED SOUTHERN YELLOW PINE.

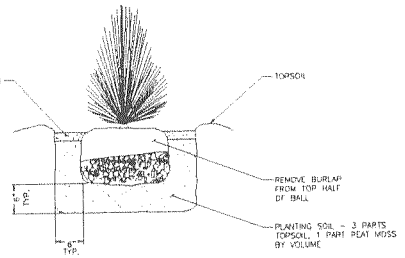


1. PROTECT TREE TRUNK WITH BLACK RUBBER HOSE.
2. #10 GAUGE WIRE (NOTE FOR MULTI-TRUNK TREES, GUY TO STRONGEST TRUNK AT CENTER).
3. TWO 8' COMMERCIAL GRADE "T" - POST SPACED EVENLY AROUND TREE.
4. 3" MINIMUM OF CYPRESS MULCH COMPACTED OR AS SPECIFIED
5. SOIL BERM TO HOLD WATER.
6. FINISHED GRADE (SEE GRADING PLAN)
7. TOP OF ROOTBALL MIN. 1" ABOVE FINISHED GRADE
8. B & B OR CONTAINERIZED (SEE SPECIFICATIONS FOR ROOT BALL REQUIREMENTS).
9. PREPARED PLANTING SOIL AS SPECIFIED.
10. ROOTBALLS GREATER THAN 24" DIAMETER SHALL BE PLACED ON MOUND OF UNDISTURBED SOIL TO PREVENT SETTLING ROOTBALLS SMALLER THAN 24" IN DIA. MAY SIT ON COMPACTED EARTH

NOTES:

A. CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.
B. FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER.
C. "TREE SAVER" ANCHORING SYSTEM MAY BE SUBSTITUTED FOR "T" - POST STAKING SYSTEM UPON APPROVAL BY OWNER OR LANDSCAPE ARCHITECT

TYPICAL TREE PLANTING DETAIL
L-2 N.T.S.



TYPICAL SHRUB PLANTING DETAIL
L-2 N.T.S.

LANDMARK LAND LLC
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FIELD ISSUE: 7/08/05 | PRINT DATE: 7/28/05

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NORTH SANFORD
SITE ID#: FL3121A
845 S.R. 15A
SANFORD, FL 32771
SEMINOLE COUNTY

DRAWING TITLE:
LANDSCAPE DETAILS & NOTES

DRAWING SHEET:
L-2

SHEET NO. 15 OF 15

7/28/05

DWIGHT E. BASTIAN, PE
FL PROFESSIONAL ENGINEER NO. 0 [illegible]
FL REGISTRATION OF AUTHORIZATION # [illegible]