From: Scala, Mary Joy

Sent: Wednesday, September 28, 2011 2:22 PM

To: 'Wilmer, Jessica'

Subject: BAR ACtion - 819 W Main Street

Jessica Wilmer Ntelos 1150 Shenandoah Village Drive Waynesboro, VA 22980

### **RE: Certificate of Appropriateness Application**

BAR 11-09-01 819 W Main Street Tax Map 31 Parcel 184B Virginia PCS Alliance, LC, Applicant/ Citico Realty Co (Southern RR Co), Owner Add antennas and equipment

Dear Applicant,

The above referenced project was discussed before a meeting of the City of Charlottesville Board of Architectural review (BAR) on September 20,2011.

The following action was taken:

#### The BAR approved (5-0) the application as submitted on the consent agenda.

In accordance with Charlottesville City Code 34-285(b), this decision may be appealed to the City Council in writing within ten working days of the date of the decision. Written appeals, including the grounds for an appeal, the procedure(s) or standard(s) alleged to have been violated or misapplied by the BAR, and/or any additional information, factors or opinions the applicant deems relevant to the application, should be directed to Paige Barfield, Clerk of the City Council, PO Box 911, Charlottesville, VA 22902.

This certificate of appropriateness shall expire in 18 months (March 20, 2013), unless within that time period you have either: been issued a building permit for construction of the improvements if one is required, or if no building permit is required, commenced construction. You may request an extension of the certificate of appropriateness before this approval expires for one additional year for reasonable cause.

Upon completion of construction, please contact me for an inspection of the improvements included in this application.

If you have any questions, please contact me at 434-970-3130 or scala@charlottesville.org.

Sincerely yours,

Mary Joy Scala, AICP Preservation and Design Planner

# Mary Joy Scala, AICP

Preservation and Design Planner
City of Charlottesville
Department of Neighborhood Development Services
City Hall - 610 East Market Street
P.O. Box 911
Charlottesville, VA 22902
Ph 434.970.3130 FAX 434.970.3359
scala@charlottesville.org

# CITY OF CHARLOTTESVILLE BOARD OF ARCHITECTURAL REVIEW STAFF REPORT September 20, 2011



Certificate of Appropriateness Application
BAR 11-09-01
819 W Main Street
Tax Map 31 Parcel 184B
Virginia PCS Alliance, LC, Applicant/ Citico Realty Co (Southern RR Co), Owner Add antennas and equipment

# Background

This property is located in the West Main Street ADC District. The radio tower is a non-conforming use. The zoning is Mixed Use – West Main North Corridor.

<u>April 18, 2006</u> - The BAR approved (7-0) an Alltel emergency generator with diesel fuel tank next to the radio tower and within an existing chain link fence that marks the leased area. The application included approximately 55 feet of brown slat screening on a portion of the existing chain link fence.

November 28, 2006 - The BAR voted (9-0) to approve the request to install an 80" x 17" x 16" antenna on an existing Norfolk Southern tower and a 25 sq. ft. concrete pad to house a 31" x 30" x 84" cabinet with ice bridge above.

November 16, 2010 - The BAR voted (8-0) to add four new antennas at 185 feet, and adding cross bracing between 125-131 feet levels as submitted.

# **Application**

The applicant is seeking to install nine new antennas to an existing tower, and to expand the existing fenced compound to the south. The area currently is vacant and there will be no tree/vegetation removal.

The applicant is seeking to install nine panel type antennas to an existing 225' tower at the 173 ft. height centerline. Each panel antenna measures 51.4 in.(l) x 6.5 in.(w) x 3.3 in.(d).

Part of the existing chain link fence will be relocated to expand the equipment area by approximately 400 sq. ft. An Ntelos equipment frame with ice bridge will be located in this area, and a 5' x 9' pad for a future diesel generator.

### Criteria, Standards, and Guidelines

# **Review Criteria Generally**

Sec. 34-284(b) of the City Code states that,

In considering a particular application the BAR shall approve the application unless it finds:

- (1) That the proposal does not meet specific standards set forth within this division or applicable provisions of the Design Guidelines established by the board pursuant to Sec. 34-288(6); and
- (2) The proposal is incompatible with the historic, cultural or architectural character of the district in which the property is located or the protected property that is the subject of the application.

### Pertinent Standards for Review of Construction and Alterations include:

- (1) Whether the material, texture, color, height, scale, mass and placement of the proposed addition, modification or construction are visually and architecturally compatible with the site and the applicable design control district;
- (2) The harmony of the proposed change in terms of overall proportion and the size and placement of entrances, windows, awnings, exterior stairs and signs;
- (3) The Secretary of the Interior Standards for Rehabilitation set forth within the Code of Federal Regulations (36 C.F.R. §67.7(b)), as may be relevant;
- (4) The effect of the proposed change on the historic district neighborhood;
- (5) The impact of the proposed change on other protected features on the property, such as gardens, landscaping, fences, walls and walks;
- (6) Whether the proposed method of construction, renovation or restoration could have an adverse impact on the structure or site, or adjacent buildings or structures;
- (8) Any applicable provisions of the City's Design Guidelines.

# Pertinent Design Review Guidelines

# Site Design and Elements

# P. 2.7 Utilities and other Site Appurtenances

- 1. Place overhead wires, utility poles and meters, antennae, trash containers, and exterior heat exchangers in locations where they are least likely to detract from the character of the site.
- 2. Encourage the installation of utility services underground.
- 3. Screen utilities and other site elements with fences, walls or plantings.
- 4. Antennae and communication dishes should be placed in inconspicuous rooftop locations.
- 5. Screen all rooftop mechanical equipment with a wall of a material harmonious with the building or structure.

# **Discussion and Recommendations**

The pertinent zoning section on Telecommunication Facilities states:

Sec. 34-1073. Facilities by district.

- (a) Within the city's historic and entrance corridor overlay districts:
- (1) The following shall be permitted uses: antennae or microcells mounted on existing communications towers established prior to February 20, 2001; attached communications facilities utilizing utility poles or other electric transmission facilities as the attachment structure; and other attached communications facilities if such other attached communications facilities are not visible from any adjacent street or property.
- (2) The following shall be prohibited uses: attached communications facilities where such facilities are visible from any adjacent street or property, and communications facilities utilizing alternative tower, monopole tower, guyed tower, lattice tower and self-supporting tower support structures.

This is a permitted use; there are existing antennas in this location; and there is no way to screen the tower. Existing vegetation currently screens the fenced equipment area. Staff recommends approval.

## **Suggested Motion**

Having considered the standards set forth within the City Code, including City Design Guidelines for Site Design and Elements, I move to find that the proposal to add new antennas and expand the equipment area satisfy the BAR's criteria and are compatible with other properties in this district, and that the BAR approves the application as submitted.

P11-014a



# Board of Architectural Review (BAR) Certificate of Appropriateness

Please Return To: City of Charlottesville

Department of Neighborhood Development Services

P.O. Box 911, City Hall Charlottesville, Virginia 22902

Telephone (434) 970-3130 Fax (434) 970-3359

Please submit ten (10) copies of application form and all attachments.

For a new construction project, please include \$350 application fee. For all other projects requiring BAR approval, please include \$100 application fee. For both types of projects, the applicant must pay \$1.00 per required mail notice to property owners. The applicant will receive an invoice for these notices, and project approval is not final until the invoice has been paid. For projects that require only administrative approval, please include \$100 administrative fee. Make checks payable to the City of Charlottesville.

The BAR meets the third Tuesday of the month.

Deadline for submittals is Tuesday 3 weeks prior to next BAR meeting by 4 p.m.

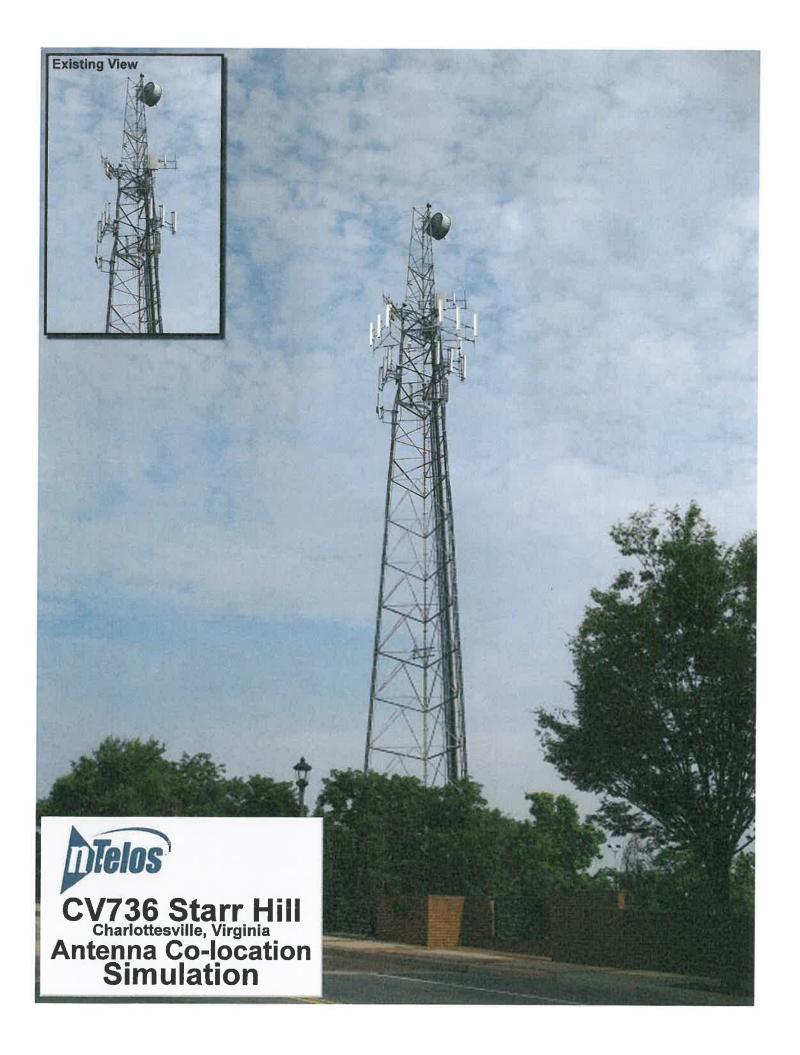
Project Name/Description NTELOS CV736 Sta	rr Hill Parcel Number 310184800			
Address/Location 819 West Main Street, Charlottes ville				
,	applicant Name Virginia PLS Alliance, L.C.			
Applicant Information Address: 1150 Shen and can Village Drive Wayneshord, Va 22980 Email: Wilmer; Ontelos. Com Phone: (W) (540) 941-3610 (M) (540) 241-506 FAX: (546) 932-2210  Property Owner Information (if not applicant) Address: 750 Park of Commerce Blvd., Suite Bota Raton, FL 33487-3612 Email: Phone: (W) (561) 370-8862 (H) FAX: (561) 995-0321  **Property managed by 61061 Tower Partners, L Do you intend to apply for Federal or State Tax Credits for this project?  Description of Proposed Work (attach separate narrative  Attachments (see reverse side for submittal requirements)	Signature of Applicant I hereby attest that the information I have provided is, to the best of my knowledge, correct. (Signature also denotes commitment to pay invoice for required mail notices.)  Signature  Property Owner Permission (if not applicant) I have read this application and hereby give my consent to its submission.  Sec attached Owner Consert Letter  Signature  Date  Date  The if necessary:  See attached  Date  Date			
For Office Use Only	Approved/Disapproved by:			
	Date:			
Fee paid: \(\sum_\circ\) Cash/Ck. #\(\frac{\fint}\fint}{\frac{\frac{\frac{\frac{\frac{\fint}{\fint}}}}}}{\frac{\frac{\frac{\firce{\frac{\frac{\fir}{\fint}}}}}}{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\fir}}}}}{\firac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\fir}}}}}{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\fin}}}{\firac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\fin}}}}{\firac{\firi}}}}{\firac{\fir}{\fir}}}}}{\	Conditions of approval:			
Date Received: 8 25 11				

# NORFOLK SOUTHERN RAILWAY COMPANY OWNER'S CONSENT LETTER

Norfolk Southern Railway Company, hereby grants permission to Virginia PCS Alliance, L.C., d/b/a NTELOS and its authorized contractors/agents to act as "Applicant" in the processing of all applications and permits associated with the modification and placement of NTELOS' antennas on the Norfolk Southern 225-foot tall tower located at 819 West Main Street, Charlottesville, VA 22911 (Tax ID 3101844BO0). This site is further described as the tower compound located in the Norfolk Southern right-of-way, located in the West Main Street Historic District of City of Charlottesville.

This consent includes the permission to file all applications for any required governmental approvals necessary to modify the existing facilities installed by NTELOS on the property to make all presentations necessary during any Board of Architectural Review, zoning, site plan, and building permitting processes with regards to such approvals.

The consent granted in this letter shall expire on 12/16/11
By Owner, Norfolk Southern Railway Company:
Signature: Rikursey
Title: Ast VP C45
Date:









September 2, 2011

City of Charlottesville
Department of Neighborhood Development Services
Attn: Mary Joy Scala
City Hall – 610 East Market Street
P.O. Box 911
Charlottesville, VA 22902

RE: NTELOS Application – Wireless Telecommunications Facility at 819 West Main Street (NTELOS CV736 Starr Hill)

Dear Ms. Scala;

As we discussed, attached are ten (10) sets of revised site plans for the proposed collocation on the existing wireless telecommunication facility by Virginia PCS Alliance, L.C. ('NTELOS') located at 819 West Main Street. NTELOS has applied to the City of Charlottesville Board of Architectural Review ('BAR') scheduled on Tuesday, September 20, 2011. Per the request of Norfolk Southern Railway ('Railway'), the proposed location of the NTELOS ground equipment space has been revised as shown. At the proposed location, the propane tank owned by the Railway will not be relocated.

I look forward to receiving your comments regarding this proposal. Please feel free to contact me if you have any questions or need additional information.

Sincerely,

Jessica L. Wilmer

**NTELOS** 

(540) 941-3610

wilmerj@ntelos.com



August 22, 2011

City of Charlottesville
Department of Neighborhood Development Services
P.O. Box 911, City Hall
Charlottesville, VA 22902

RE: NTELOS Application – Wireless Telecommunications Facility at 819 West Main Street (NTELOS CV736 Starr Hill)

Dear Ms. Scala;

Virginia PCS Alliance, L.C. ('NTELOS') requests the consideration of the City of Charlottesville Board of Architectural Review ('BAR') for the collocation of antennas and associated equipment at an existing wireless telecommunications facility located on property owned by Norfolk Southern Railway Company ('Railway') and managed by Global Tower Partners LLC, described as tax parcel 310184BOO, containing approximately 1.263 acres, and zoned West Main North Corridor in the West Main Street ADC District. The telecommunications facility is located at 819 West Main Street, Charlottesville.

Pursuant to section 34-1072 "Applicability" of the City of Charlottesville zoning ordinance, towers built prior to February 20, 2001 are considered conforming uses, however, attaching antennas to an existing tower within an Architectural Design Control District requires BAR approval. The existing telecommunications facility was originally constructed by the Railway is 1961. There are currently three (3) other wireless carriers on the telecommunications facility in addition to the Railway.

NTELOS is in the process of improving its wireless services in the core of Charlottesville City. The proposed collocation of antennas on the existing telecommunications facility is for the purpose of expanding coverage based on increased usage, not to improve coverage around the site. There are essentially two general purposes for constructing a wireless facility. Either the area is not served by a carrier's coverage footprint or the traffic (voice and data calls) in the area is quickly saturating the existing wireless facilities, causing a negative impact on coverage. Because the population and amount of traffic are so great in the core area of Charlottesville, utilization of existing wireless facilities exceed or are beginning to exceed capacity. A new wireless facility is needed

to off-load voice and data calls from adjacent wireless sites or overloaded ones to prevent blocking calls, dropping calls, and extremely slow data speeds.

Attached is a site plan of the location and design of the proposed facility. The existing telecommunications facility is a 225 ft. self support tower structure adjacent to the Railway tracks. NTELOS is proposing nine (9) panel type antennas at the 173 ft. center line. Each panel antenna measures 51.4 in. (L) x 6.5 in. (W) x 3.3 in. (D). The proposed ground equipment cabinets will be located adjacent to the telecommunications facility within a 20' x 18' leased area. A propane tank owned by the Railway will be relocated as shown on the plans in order to best locate the NTELOS equipment area. The area will be fenced to match the existing fence on the property.

Attached is a photograph simulation depicting the proposed wireless telecommunication facility from the West Main Street vantage point. The proposed antennas by NTELOS are shown at the 173 ft. center line.

While it is the goal of the City of Charlottesville to protect its natural, scenic and historic resources and to retain the attractiveness of the City, the proposal by NTELOS has maintained those goals by complying with the Design Review Guidelines. NTELOS is proposing to collocate on an existing telecommunications facility rather than proposing to construct a new tower structure. By collocating antennas on the existing facility, the visibility will be minimized while still providing significant improvement to the NTELOS coverage objective.

The proposed collocation will not endanger the safety of adjoining property owners, will be engineered and constructed in accordance with all applicable standards and the design will effectively reduce or eliminate any visual impact on the view shed. The proposed will not restrict uses on adjacent parcels or change the character of the neighborhood.

I look forward to receiving your comments regarding this proposal. Please feel free to contact me if you have any questions or need additional information.

Sincerely,

Jessica L. Wilmer

NTELOS

(540) 941-3610

wilmerj@ntelos.com



# STARR HILL CV736

819 WEST MAIN STREET CHARLOTTESVILLE, VA 22911

GTP SITE ID: VA-5156 CHARLOTTESVILLE, VA

CO-LOCATION ON EXISTING 226' SELF SUPPORT TOWER

DIRECTIONS TO SITE

CO-LOCATION OF NEW OUTDOOR EQUIPMENT WITHIN AN EXISTING FENCED COMPOUND.

NEW UTILITY RUNS TO SITE.

PROJECT DESCRIPTION

PROPERTY OWNER:

NTELOS RF ENGINEER:

NTELOS CONSTRUCTION MANAGER:

NTELOS OPERATIONS MANAGER:

SITE ACQUISITION MANAGER:

-

SIGNATURE (REQUIRED BY DEPARTMENTS)

DATE

SIGNATURE BLOCK

STARR HILL

SITE NUMBER

SITE ADDRESS

819 WEST MAIN STREET CHARLOTTESVILLE, VA 22911

PROPERTY OWNER
CITICO REALTY COMPANY

SITE DATA

NAD 83 LATITUDE - N 38' 01' 56.6" NAD 83 LONGITUDE - W 78' 29' 30.4"

LEASE AREA 399.5 SQUARE FEET

JURISDICTION
CITY OF CHARLOTTESVILLE

CONTACTS

PROJECT INFORMATION

nTELOS (CONSTRUCTION) JEFF HOFFMAN (S40) 945-1895 - PHONE (S40) 943-0705 - FAX

nTELOS (LEASING) DEBBIE BALSER (540) 946-1851 - PHONE (540) 932-2210 - FAX

SHEET T-1 TITLE SHEET SHEET C-1 OVERALL SITE PLAN SHEET C-2 **EXISTING CONDITIONS** SHEET C-3 PROPOSED SITE PLAN SHEET C-4 UTILITY SERVICE PLAN SHEET C-5 GROUNDING PLAN SHEET C-6 TOWER ELEVATION SHEET D-1 MISCELLANEOUS DETAILS SHEET D-2 POWER & TELEPHONE SINGLE LINE DIAGRAM SHEET D-3 MISCELLANEOUS DETAILS SHEET D-4 MISCELLANEOUS DETAILS SHEET D-5 EQUIPMENT FRAME DETAILS SHEET D-6 PPC CABINET DETAILS

GENERAL NOTES

SHEET INDEX

SHEET D-7

POLICE/FIRE/RESCUE

ELECTRIC POWER

DOMINION VIRGINIA POWER
CONTACT: CUSTOMER SERVICE
PHONE: 1-866-366-4357

TELEPHONE SPRINT

SPRINT CONTACT: CUSTOMER SERVICE PHONE#: 1-800-877-4646

EMERGENCY AND UTILITY CONTACTS

nTELOS NOC (540) 941-4800 - PHONE Telos

1150 SHENANDOAH VILLAGE DR. WAYNESBORO, VA 22980

SITE NAME:

STARR HILL

CV736

SITE NUMBER:

SITE ADDRESS:

819 WEST MAIN STREET CHARLOTTESVILLE, VA 22911

AREA:

LEASE AREA = 399.5 SQ. FT.

PROPERTY OWNER:

CITICO REALTY COMPANY PARCEL: 310184B00 CITY OF CHARLOTTESVILLE

CITY: CITY OF CHARLOTTESVILLE, VA

LATITUDE:

....

N 38" 01' 56.6"

LONGITUDE: W 78' 29' 30.4"

 NO.
 REVISION/ISSUE
 DATE

 1
 ISSUE FOR COMMENT
 5/25/11

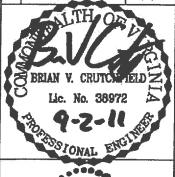
 2
 NS REVISIONS
 8/27/11

 3
 CONST. DRAWINGS
 7/1/11

 4
 NS REVISIONS
 7/13/11

 5
 NTELOS REVISIONS
 8/15/11

 8
 NS REVISIONS
 8/1/11



TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS,

VIRGNIA NORTH CAROLINA
THIS DRAWING PREPARED AT THE
CHARLOTTESVILLE OFFICE
919 2nd Street, S.E.
Charlottesville, VA 22902
TFL 434.327.1683

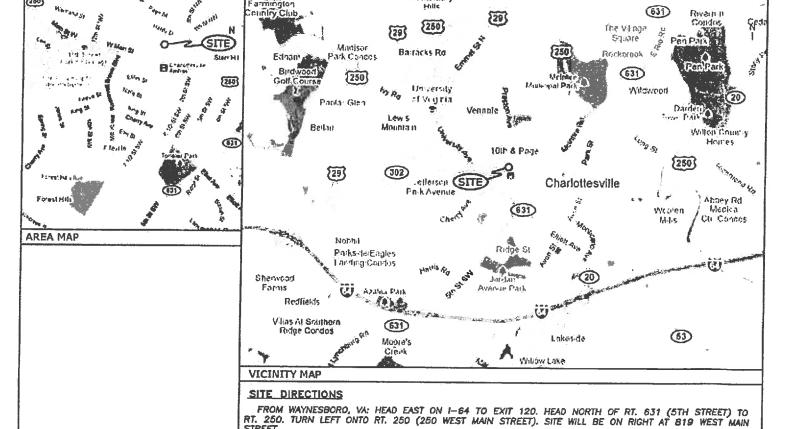
FAX 434.295,8317 www,timmons.com Site Development | Residential | Infrastructure | Technology

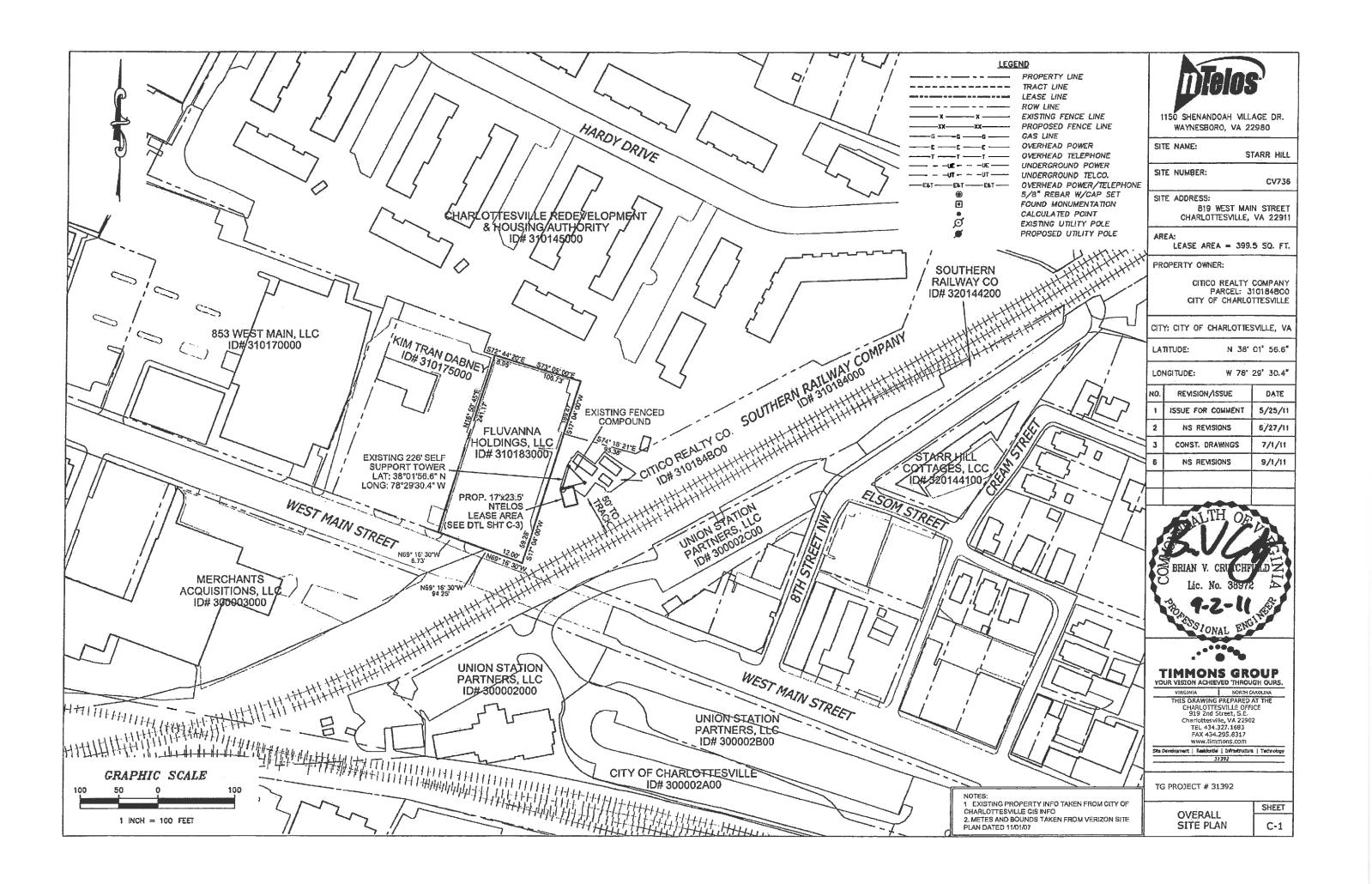
TG PROJECT # 31392

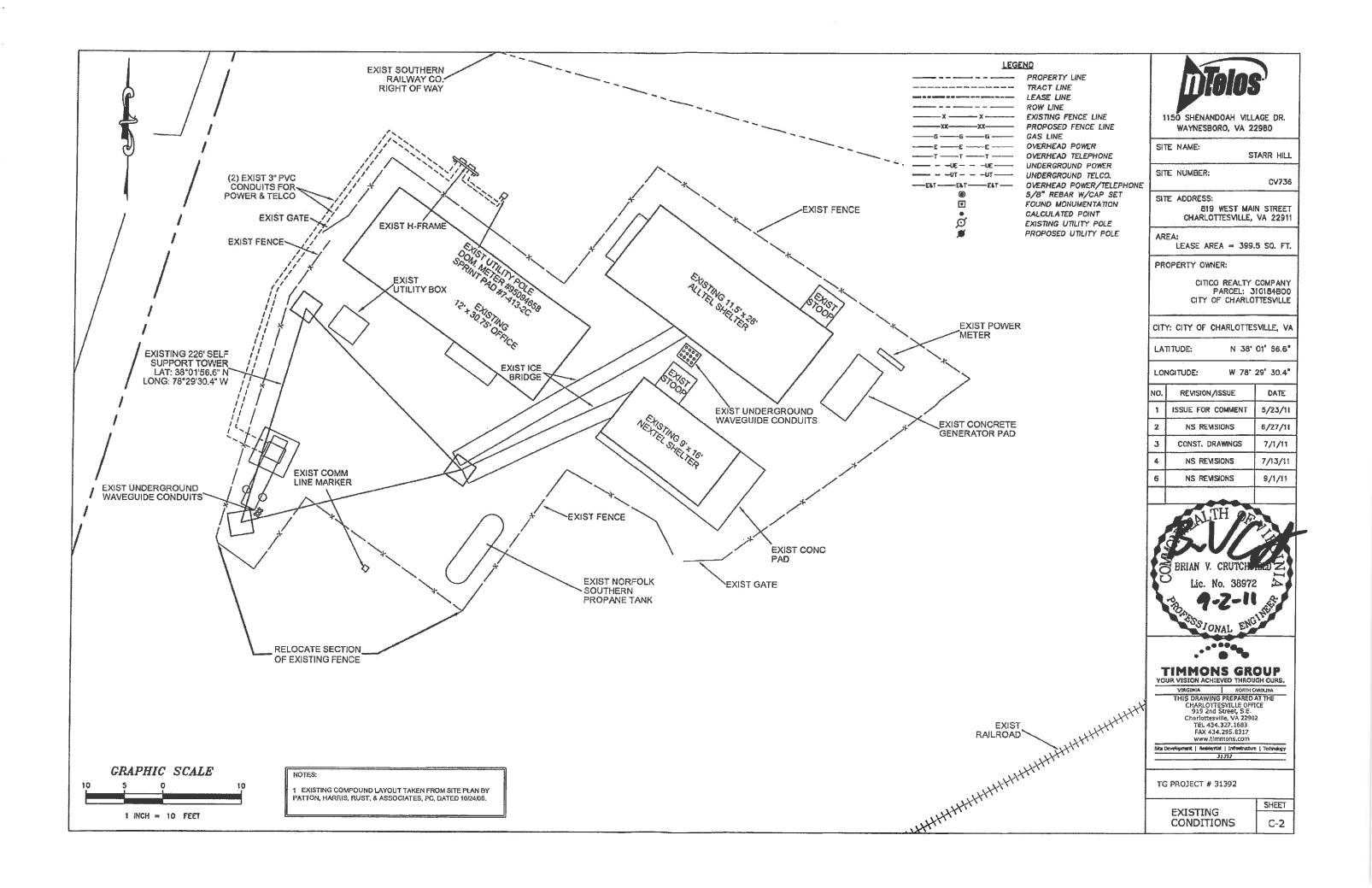
TITLE SHEET

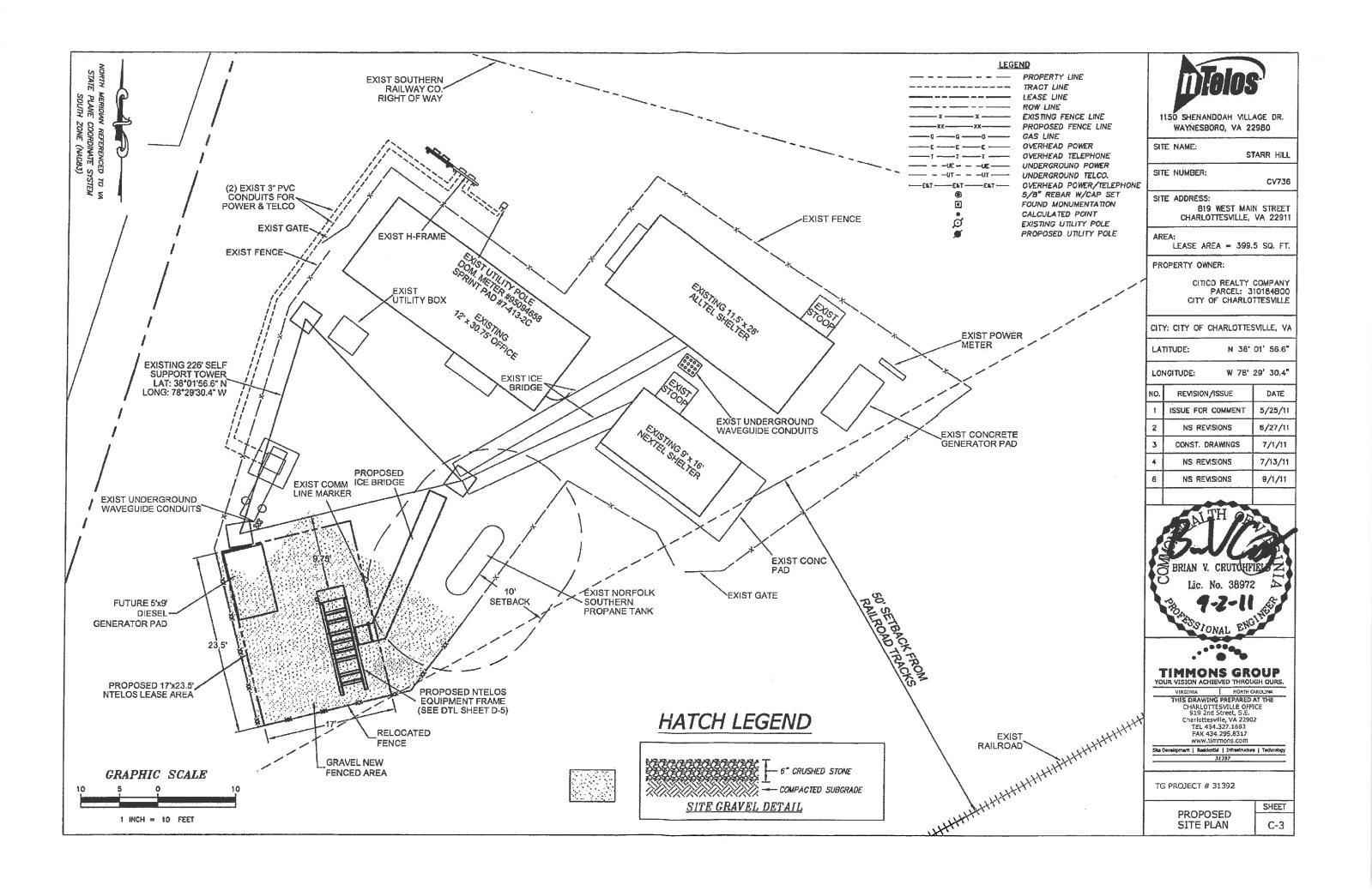
HEET T-1

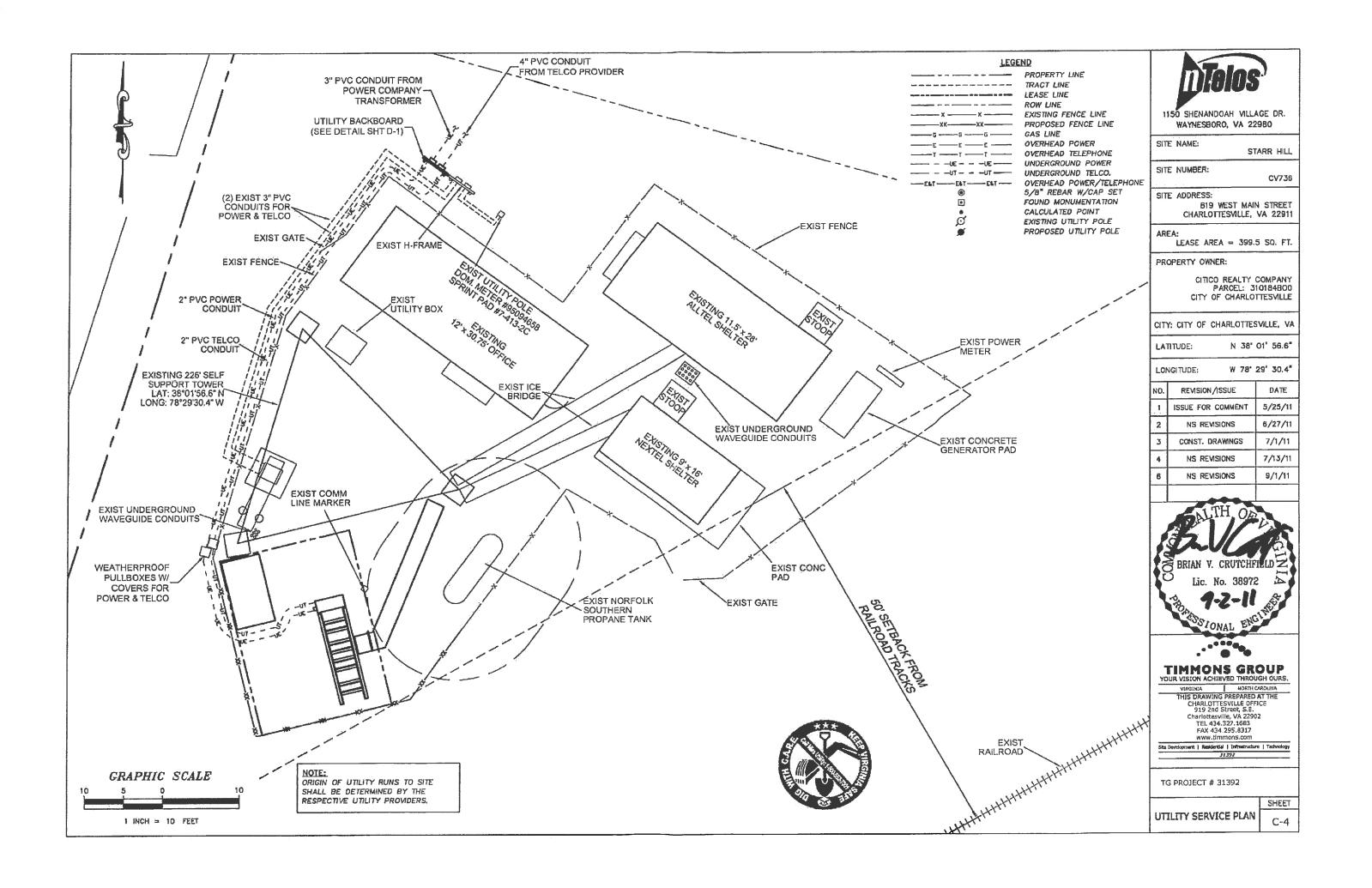
SHEET

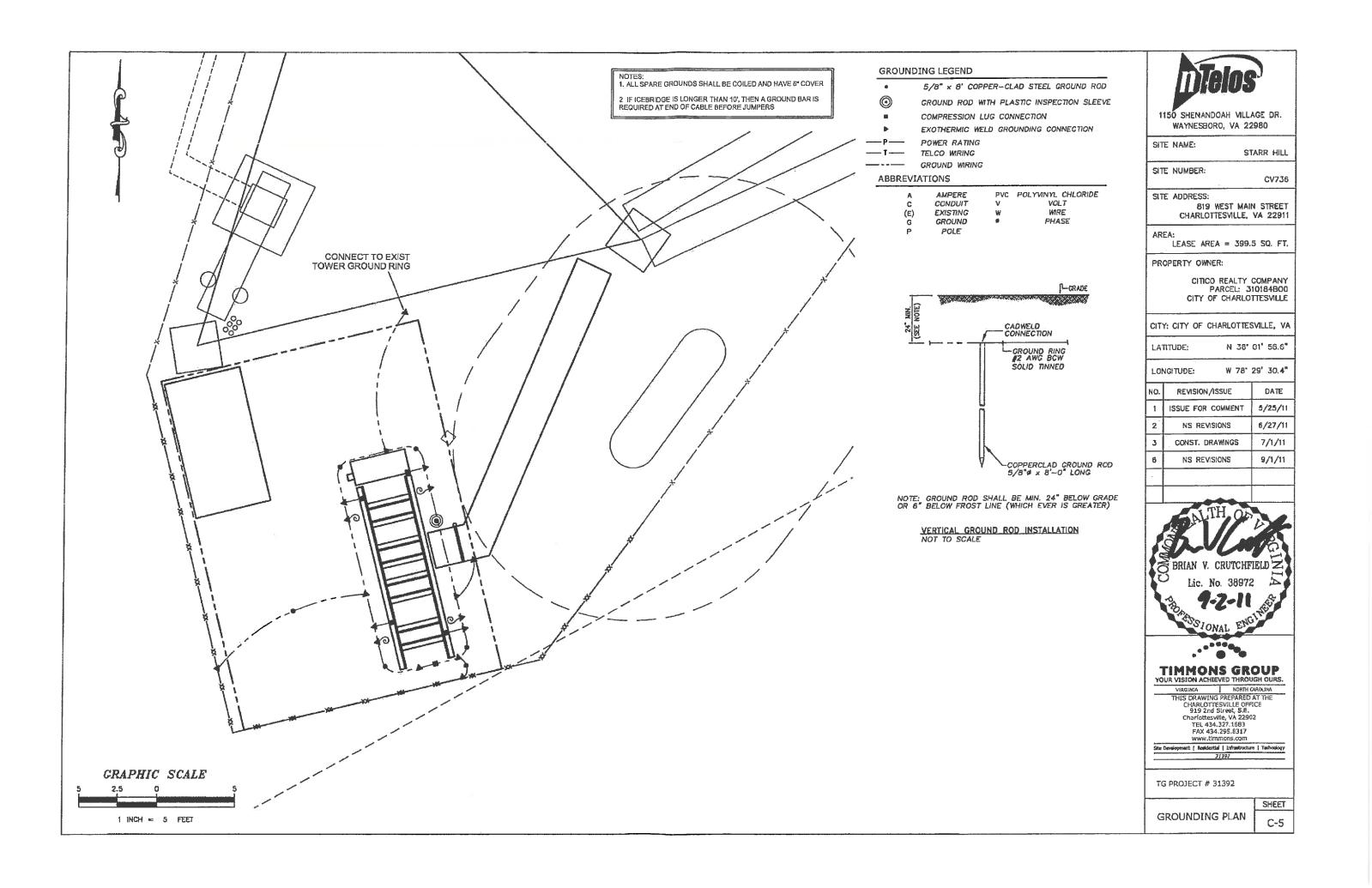












EXISTING ANTENNA EXISTING 8' LIGHTNING ROD EXISTING BEACON TOP OF TOWER @ 225' (2)-EXIST MW DISHES @ 211 EXIST ANTENNA @ 195' EXIST ANTENNAS @ 183' PROPOSED (9) NTELOS PANEL ANTENNAS @ 173' EXIST ANTENNAS @ 159' EXIST 5' OMNI ANTENNA @ 150' EXIST 225' EXIST SCALA GROUND PLANE ANTENNA @ 79' SELF-SUPPORT TOWER EXIST SCALA CL-FM ANTENNA @ 30' TOWER ELEVATION NOT TO SCALE

NOTE:

CONTRACTOR TO VERIFY ANTENNA

INFORMATION 48 HOURS PRIOR

TO INSTALLATION.

NOTE: COLOCATION SHALL BE IN ACCORDANCE WITH ORIGINAL TOWER DESIGN AND/OR CURRENT STRUCTURAL ANALYSIS BY OTHERS



WAYNESBORO, VA 22980

SITE NAME:

STARR HILL

SITE NUMBER:

CV736

SITE ADDRESS:

819 WEST MAIN STREET CHARLOTTESVILLE, VA 22911

LEASE AREA = 399.5 SO. FT.

PROPERTY OWNER:

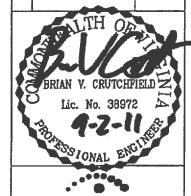
CITICO REALTY COMPANY PARCEL: 310184B00 CITY OF CHARLOTTESVILLE

CITY: CITY OF CHARLOTTESVILLE, VA

LATITUDE: N 38" 01" 56.6"

W 78' 29' 30.4" LONGITUDE:

NO.	REVISION/ISSUE	DATE
1	ISSUE FOR COMMENT	5/25/11
2	NS REVISIONS	6/27/11
3	CONST. DRAWINGS	7/1/11
5	NTELOS REVISIONS	8/15/11



# TIMMONS GROUP YOUR VISION ACHIEVED THROUGH DURS.

VIRGINIA MONTEVED THROUGH OUR
VIRGINIA | ROBATH CADURA
THIS DRAWING PREPARED AT THE
CHARLOTTES VILLE OFFICE
919 2nd Street, S.E.
Charlottes VIII.e. VA 22902
TEL 434.327.1683
FAX 434.295.8317
www.limmons.com www.timmons.com

Site Development | Residential | Infrastructure | Technology

TG PROJECT # 31392

TOWER ELEVATION

SHEET C-6

#### GENERAL NOTES - ELECTRIC WORK

#### A. WORK INCLUDED:

THIS SPECIFICATION AND ACCOMPANYING DRAWINGS CONTEMPLATE THE PROVISIONS AND INSTALLATION, BY THE ELECTRICAL CONTRACTOR OF ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO INSTALL THE ELECTRICAL WORK COMPLETE IN CONNECTION WITH THIS NITELOS TOWER SITE AND SHALL INCLUDE, BUT NOT BE LIMITED TO THE

- 1. THE PROVISIONS, INSTALLATION AND CONNECTION OF A CROUNDING ELECTRODE SYSTEM COMPLETE WITH A EQUIPMENT CABINET AND SECONDARY GROUNDING, EX. TOWER GROUNDING AND CONNECTIONS
- TO THE INCOMING ELECTRICAL DISTRIBUTION EQUIPMENT.

  2. THE PROVISIONS AND INSTALLATION OF AN ELECTRICAL SERVICE AND ALL ASSOCIATED WIRE AND CONDUIT AS REQUIRED AND/OR INDICATED ON PLANS
- 3. ALL UNDERGROUND CONDUITS SHALL BE SCHEDULE 40 PVC. (UNLESS OTHERWISE NOTED). 4. ALL SPARE CONDUITS SHALL BE LEFT WITH PULL WIRE FOR FUTURE
- USE. STUB BOTH ENDS OF SPARE CONDUIT UP AT 12" ABOVE FINISHED GRADE. INSTALL PLUGS AT BOTH ENDS OF SPARE
- STHE CONTRACTOR SHALL FURNISH AND INSTALL THE ELECTRICAL SERVICE ENTRANCE CONDUCTORS AND CONDUIT AND MAKE THE CONNECTION TO THE SERVICE EQUIPMENT WITHIN THE EQUIPMENT
- 6. THE CONTRACTOR SHALL FURNISH AND INSTALL 200 lbs. TEST PULL LINE IN ALL SPARE CONDUIT 7. CONTRACTOR SHALL NOTIFY ELECTRICAL AND TELEPHONE SERVICES CONTACT AT STARRT OF CONSTRUCTION.
- 8. ABOVE GRADE RISER CONDUIT SHALL BE GALVANIZED STEEL WITH MATCHING FITTINGS.
- 9. THE CONTRACTOR SHALL PERFORM ALL WORK SHOWN ON THE EQUIPMENT DRAWINGS NOTED FIELD WORK OR OTHERWISE NOTED AS WIRING TO BE COMPLETED IN THE FIELD.
- 10. ALL WIRE SHALL BE ALUMINUM WIRE UNLESS NOTED
- 11. CONTRACTOR SHALL MAINTAIN THE DISTANCE OF 12"BETWEEN EXISTING/NEW TELCO & ELECTRIC CONDUITS UNLESS NOTED
- 12. CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF GROUNDING PRIOR TO TRENCHING.

#### CODES, PERMITS AND FEES;

- 1. ALL REQUIRED PERMITS, LICENSES, INSPECTIONS AND APPROVALS SHALL BE SECURED AND ALL FEES FOR SAME PAID BY CONTRACTOR.
- 2. THE INSTALLATION SHALL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES: STATE, LOCAL AND NATIONAL, AND THE DESIGN. PERFORMANCE CHARACTERISTICS AND METHODS OF CONSTRUCTION OF ALL ITEMS AND EQUIPMENT, SHALL BE IN ACCORDANCE WITH THE LATEST ISSUE OF THE VARIOUS APPLICABLE STANDARDS SPECIFICATIONS OF THE FOLLOWING RECOGNIZED AUTHORITIES:
- A.N.S.I. AMERICAN NATIONAL STANDARDS INSTITUTE
  I.E.E.E.— INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS N.E.C. - NATIONAL ELECTRIC CODE
- N.E.M.A. NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION N.F.P.A. — NATIONAL FIRE PROTECTION ASSOCIATION U.L. — UNDERWRITERS LABORATORIES, INC.
- 3. THE CONTRACTOR SHALL BE LICENSED TO PERFORM WORK IN THE STATE, CITY OR COUNTY OF THE PROJECT SITE AS REQUIRED.

# GROUNDING ELECTRODE SYSTEM

ALL GROUNDING CONNECTIONS SHALL BE MADE BY THE EXOTHERMIC WELDED PROCESS (CADWELD OR APPROVED EQUAL). UNLESS OTHERWISE SHOWN. CONNECTIONS SHALL INCLUDE ALL CABLE TO CABLE, SPLICES, TEE's, X's, ETC. ALL CABLE TO GROUND RODS, GROUND ROD SPLICES AND LIGHTING PROTECTION SYSTEM AS INDICATED. ALL MATERIALS USED (MOLDS, WELDING METAL, TOOLS, ETC.) SHALL BE CADWELD AND INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND PROCEDURES.

GROUND RODS

ALL GROUND RODS SHALL BE 5/8" DIAMETER × 8'-0" LONG (MIN.)
STAINLESS STEEL OR COPPER CLAD STEEL COPPERWELD OR
APPROVED EQUAL OF THE NUMBER AND AT LOCATIONS INDICATED; GROUND RODS SHALL BE DRIVEN FULL LENGTH VERTICAL IN UNDISTURBED EARTH SO THAT THE TOP IS 24" BELOW FINISHED GRADE. ALL GROUND RODS SHALL BE AT LEAST 10' APART UNLESS OTHERWISE NOTED.

3. GROUNDING LEADS ALL GROUND RINGS SHALL BE #2 AWG ALL GROUND LEADS TO BURNED GROUND RINGS SHALL BE #2 AWG
TINNED SOLID COPPER.

COIL 6' OF #2 AWG TINNED SOLID COPPER

AT EACH EQUIPMENT CABINET, COAX ENTRY GROUND BAR, PIPE

BRIDGE SUPPORT FOUNDATIONS AND TOWER FOUNDATIONS FOR

TERMINATION BY ELECTRICAL CONTRACTOR. AFTER CABINET

INSTALLATION, ELECTRICAL CONTRACTOR SHALL SPLICE GROUND RING LEAD TO #2 AWG INSULATED STRANDED COPPER WIRE SUPPLIED WITH

#### 4. GROUND RING

THE GROUND RING ENCIRCLING THE EQUIPMENT FRAME SHALL BE #2 AWG TINNED SOLID COPPER CABLE IN DIRECT CONTACT WITH THE EARTH AT A DEPTH OF NOT LESS THAN 24". CONDUCTOR BENDS SHALL HAVE A MINIMUM RADIUS OF 12". MAINTAIN 2" CLEAR OF **FOUNDATIONS** 

#### 5. BACKFILL

NON-CORROSIVE. LOW RESISTIVITY MATERIAL FREE OF STONE, DEBRIS, ETC. AND TAMPED DOWN THOROUGHLY IN LAYERS NOT EXCEEDING SIX (6) INCHES IN DEPTH, TO AT LEAST 95% OF ORIGINAL DENSITY BEFORE EXCAVATION. (PICTURES REQUIRED)

#### 6. MISCELLANEOUS

ALL EXTERIOR METAL SHALL BE CONNECTED TO THE GROUNDING SYSTEM WITH HIGH PRESSURE 2-BOLD LUG BY BURNDY OR BY THE EXOTHERMIC WELDED PROCESS (CADWELD OR APPROVED EQUAL) AS APPLICABLE. ALL OTHER CONNECTIONS FOR THE GROUND GRID SYSTEM SHALL BE MADE BY THE EXOTHERMIC WELDED PROCESS (CADWELD OR APPROVED EQUAL), AND INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND PROCEDURES. MECHANICAL FASTENERS CONNECTIONS TO ALL GROUND BARS SHALL BE LUBRICATED WITH A CORROSION INHIBITOR THOMAS AND BETTS

#### 7. UTILITY COMPANY COORDINATION

ELECTRICAL CONTRACTOR SHALL COMPLETE ALL WORK IN ACCORDANCE WITH THE RULES OF THE LOCAL UTILITY COMPANY. BEFORE SUBMITTING HIS BID, THE CONTRACTOR SHALL CHECK WITH THE UTILITY COMPANIES SUPPLYING SERVICE TO THIS PROJECT AND SHALL DETERMINE FROM THEM ALL EQUIPMENT AND CHARGES WHICH THEY WILL REQUIRE AND SHALL INCLUDE THE COST IN HIS BID WHENEVER

GROUND TESTS SHALL BE PERFORMED UTILIZING A BIDDLE GROUND OHMER OR THE METHOD OF USING TWO AUXILIARY GROUND RODS (AS DESCRIBED IN LE.E.E. STANDARD No. 550, PARAGRAPH 3.42) MAY BE USED. THE LE.E.E. METHOD REQUIRES THE USE OF AN A.C. TEST CURRENT. THE AUXILIARY TEST RODS MUST BE SUFFICIENTLY FAR AWAY FROM THE ROD UNDER TEST SO THAT THE REGIONS IN WHICH THEIR RESISTANCE IS LOCATED. DO NOT OVERLAP. CONTRACTOR SHALL MAINTAIN CONTINUITY OF EXISTING GROUND RING BY SPLICING (VIA CADWELD) ANY CUT OR BROKEN SECTIONS WITH #2 SOUD TINNED COPPER TO EXISTING OR NEW GROUNDING.

- 1. ALL TEST SHALL BE PERFORMED BY AUTHORIZED AND QUALIFIED
- 2. CONTRACTOR SHALL CONDUCT GROUND RESISTANCE TEST IN THE FORMAT AS FOLLOWS: PERFORM TEST WITH THE GROUND RODS CONNECTED, WITH DRY SOIL AND WHEN NO STANDING WATER HAS BEEN PRESENT FOR THE PAST TEN DAYS. IF THE RESISTANCE OF THE ENTIRE SYSTEM EXCEEDS 5 OHMS, THE ELECTRICAL CONTRACTOR AND OWNER'S REPRESENTATIVE SHOULD BE NOTIFIED SO THAT THEIR ADDITIONAL AND/OR DEEPER RODS CAN BE
- INSTALLED.

  3. THE CONTRACTOR SHALL CALL AN NTELOS REPRESENTATIVE FOR INSPECTION OF THE GROUNDING SYSTEM 48 HOURS PRIOR TO ITS COMPLETION. THE SYSTEM SHALL BE LEFT UNCOVERED UNTIL
- APPROVED.

  4. UPON COMPLETION OF THE GROUNDING SYSTEM, THE ELECTRICAL CONTRACTOR SHALL MEGGER TEST THE GROUND SYSTEM. THE TEST IS TO BE PERFORMED BEFORE CONNECTING TO TOWER RING AND THEN AFTER. MAXIMUM RESISTANCE LEVEL IS 5 OHMS. A LOCATION, DATE, TIME, AND WEATHER CONDITIONS AND SOIL MOISTURE CONTENT. THE NUMBERS. IF 5 OHMS IS EXCEEDED WITH CURRENT CONFIGURATION, ELECTRICAL CONTRACTOR SHALL SUBMIT A QUOTE TO LOWER RESISTANCE TO 5 OHMS OR LESS.

#### ELECTRICAL LOADS

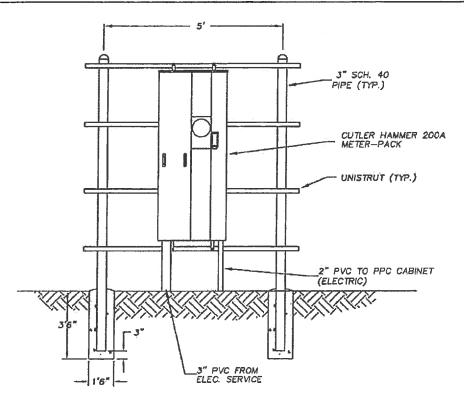
1. THE EQUIPMENT IS SET UP FOR A 200 AMP, 120/240 VOLT, SINGLE PHASE, THREE WIRE ELECTRICAL SERVICE. THE TOTAL CONNECTED LOAD IS 10.1 KILOVOLT-AMPERES (KVA).

### SPECIAL CONTRACTOR NOTES

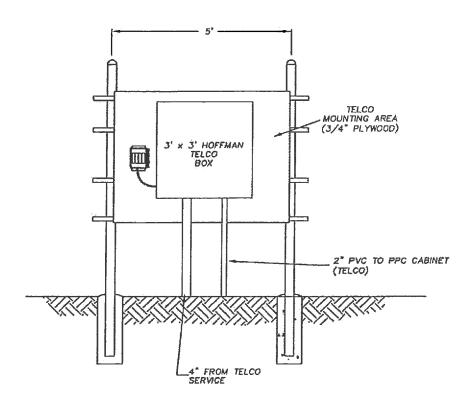
#### NOTE 1:

- 1. CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF GROUNDING PRIOR TO TRENCHING.
  2. CONTRACTOR SHALL MAINTAIN CONTINUITY OF EXISTING GROUND RING
- BY SPLICING (MA CADWELD) ANY CUT OR BROKEN SECTIONS WITH #2 SOLID TINNED COPPER TO EXISTING OR NEW GROUNDING.

1. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITY LINES PRIOR TO ANY EXCAVATION. CONTRACTOR SHALL HAND DIG IN THE VICINITY OF ALL EXISTING



(FRONT VIEW-AWAY FROM TOWER)



(BACK VIEW-TOWARD TOWER)

METERBOARD DETAIL



WAYNESBORO, VA 22980

SITE NAME:

STARR HILL

SITE NUMBER:

SITE ADDRESS:

819 WEST MAIN STREET CHARLOTTESVILLE, VA 2291

LEASE AREA = 399.5 SQ. FT.

PROPERTY OWNER:

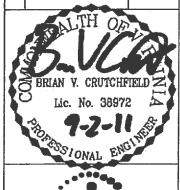
CITICO REALTY COMPANY PARCEL: 310184B00 CITY OF CHARLOTTESVILLE

CITY: CITY OF CHARLOTTESVILLE, VA

N 38' 01' 56.6" LATITUDE:

W 78' 29' 30.4" LONGITUDE:

REVISION/ISSUE ISSUE FOR COMMENT 5/25/11 6/27/11 NS REVISIONS CONST. DRAWINGS 7/1/11



#### **TIMMONS GROUP** YOUR VISION ACHIEVED THROUGH OURS

ANT IO SAN HTROUGH THIS DRAWING PREPARED AT THE CHARLOTTESVILLE OFFICE 919 2nd Street, S.E Charlottesville, VA 22902 TEL 434,327,16B3 FAX 434.295.8317

Site Development | Residential | Infrastructure | Technology 71397

TG PROJECT # 31392

MISCELLANEOUS **DETAILS** 

SHEET D-1