

**A RESOLUTION APPROVING THE MINOR MODIFICATION TO THE
CONDITIONAL USE PERMIT FOR THE CELLULAR TOWER
LOCATED AT 515 SOUTH GREENSBORO STREET
Resolution No. 133/2004-05**

WHEREAS, the Carrboro Board of Aldermen approved a Conditional Use Permit for a telecommunications tower at 515 South Greensboro Street on November 10th, 1992; and

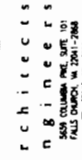
WHEREAS, the Town of Carrboro Land Use Ordinance requires that additional users on a tower shall constitute a minor modification to the original Conditional Use Permit and that one of the conditions of the original CUP for this particular tower requires a public hearing for any modification to the tower; and

WHEREAS, the Board of Aldermen finds that the applicant has satisfied the requirements related to minor modifications for towers contained in the Land Use Ordinance.

NOW, THEREFORE BE IT RESOLVED by the Carrboro Board of Aldermen that the minor modification to the American Tower conditional use permit located at 515 South Greensboro Street allowing improvements to the existing foundation for Nextel Communications and Cingular Wireless to allow improvements to the foundation of the tower, would allow the addition of two (2) new antennas to the tower itself, and would allow the installation of additional equipment within the expanded fenced in area of the leased area of the cellular tower. The resolution includes one recommended condition stating that the additional antenna and related equipment shall not be installed until the Inspections Division grants final approval for all work related to the improvements to the foundation of the tower.



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SITE ADDRESS:
515 S. GREENSBORO ST.
CARRBORO, NC 27510

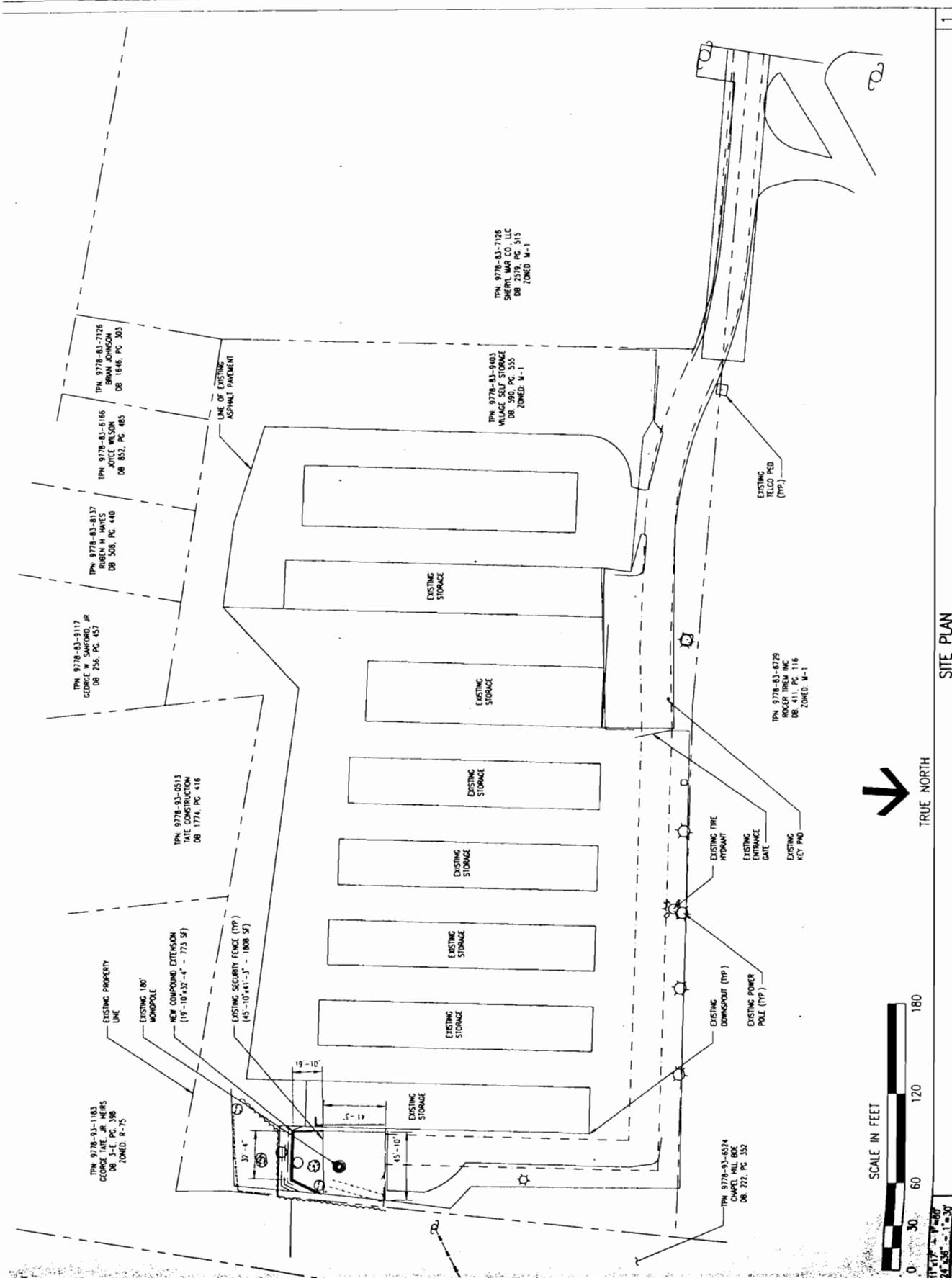


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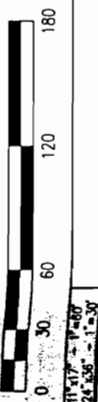
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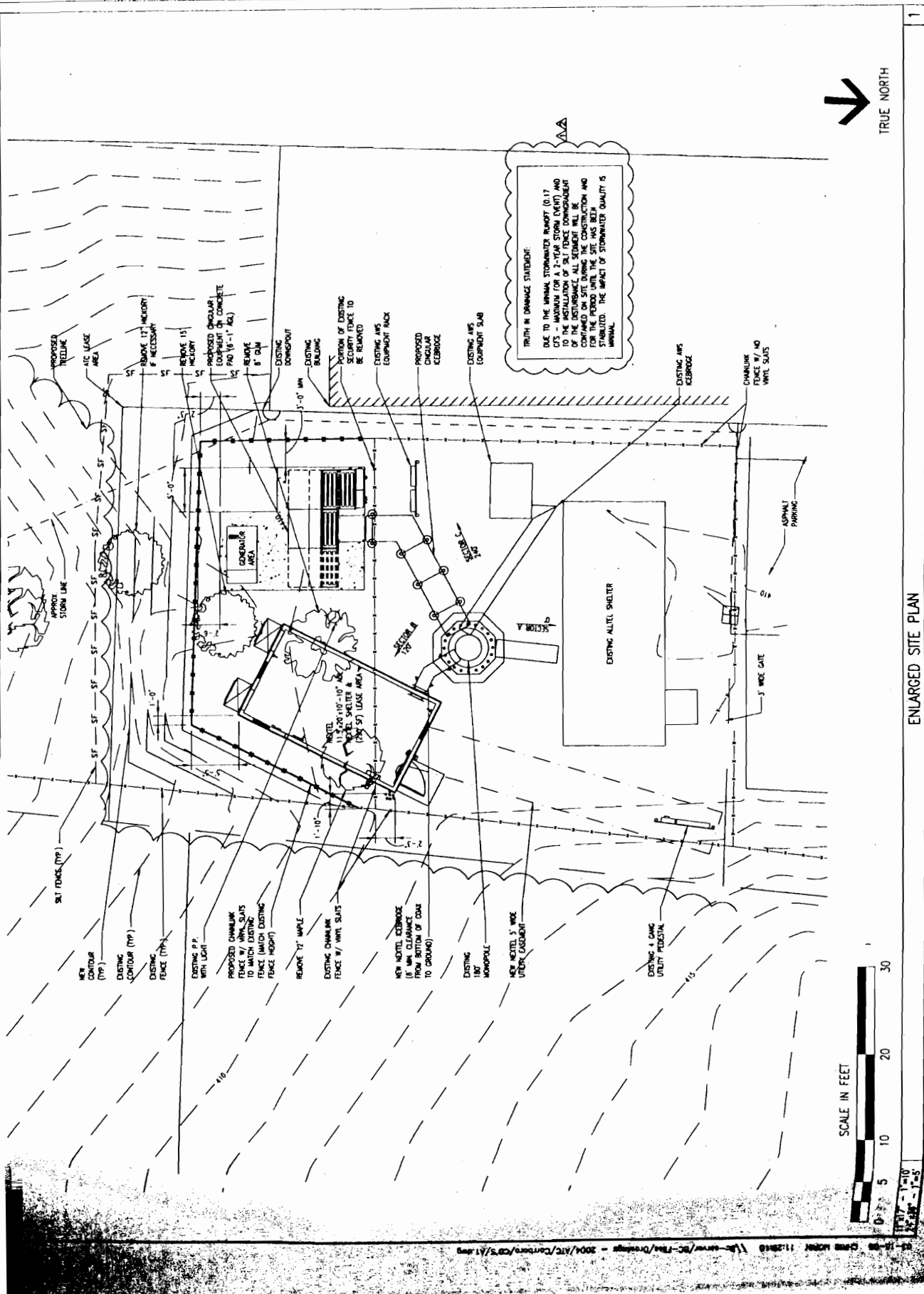


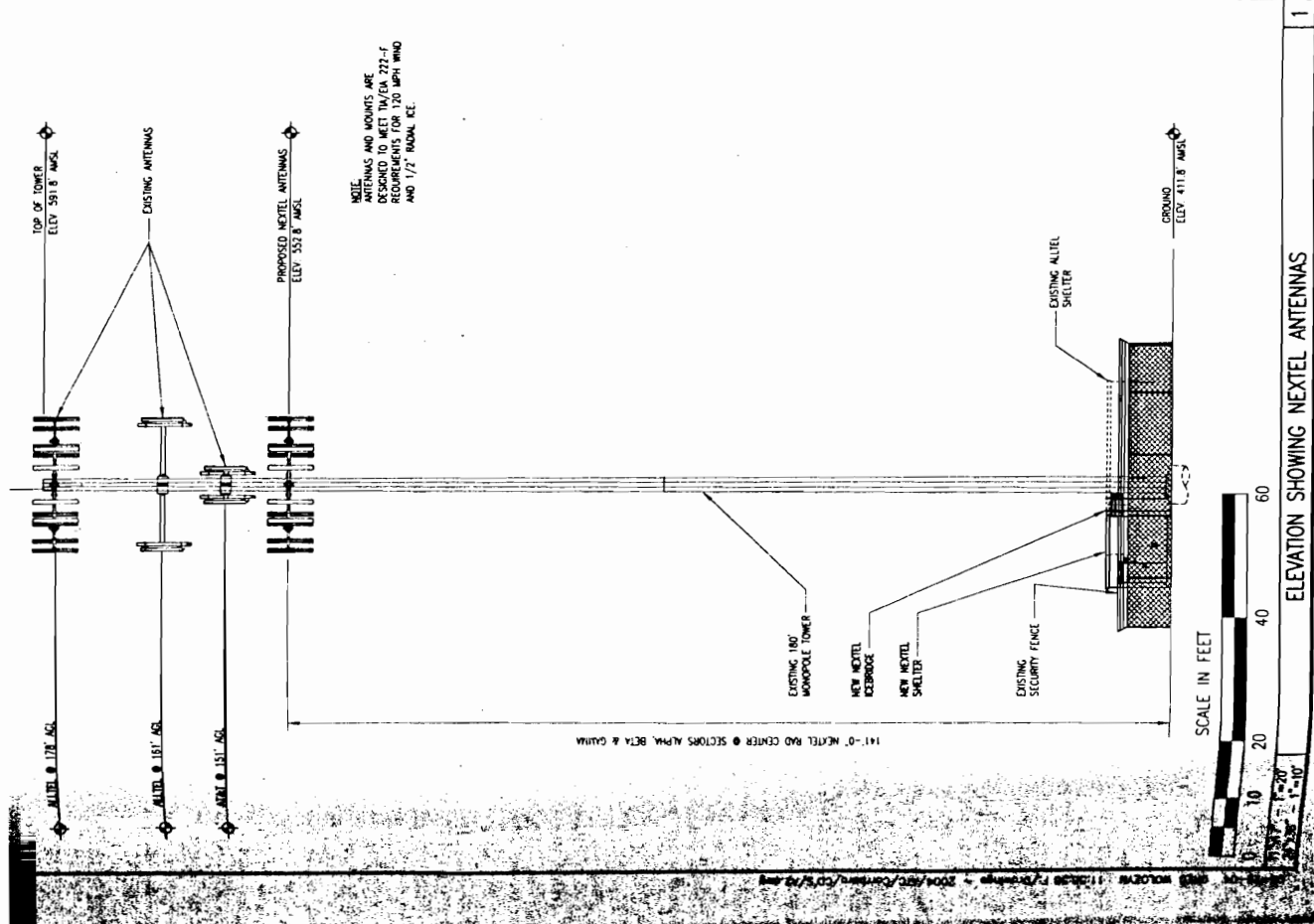
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TRUE NORTH

SITE PLAN





STAFF REPORT

TO: Board of Aldermen

DATE: April 26th, 2005

PROJECT: Minor Modification to Conditional Use Permit for Cellular Tower at 515 South Greensboro Street

APPLICANT: Nextel Communications & Cingular Wireless- David Hockey (Agent for Applicant)
796 Johnnie Dodds Blvd.
Mount Pleasant, SC 29464

PURPOSE: The proposed modification will consist of two steps: 1. improvements to the existing foundation of the cell tower in order to allow the addition of the proposed two (2) co-locations 2. addition of two (2) new antennas to the tower. This will require the expansion of the fenced in area at the base of the tower in order to allow the placement of additional equipment and the clearing of four (4) trees within the leased area for the expansion of the fenced in area.

EXISTING ZONING: M-1 (Light Manufacturing)

TAX MAP NUMBER: 7.100.C.33A

LOCATION: 515 South Greensboro Street

TRACT SIZE: Approximately 4.38 acres (leased area = .08 acres or 336 square feet)

EXISTING LAND USE: Storage Facility- #10.210
Towers and Antennas more than 50 feet tall- #18.200

PROPOSED LAND USE: No change

SURROUNDING LAND USES: North: M-1, Commercial Use
South: R-7.5, Single Family Residential
East: Chapel Hill Planning Jurisdiction, Single Family Residential
West: M-1, Commercial Use

ZONING HISTORY: B1-G (General Business), 1986
O-I (Office/Assembly), 1973

RELEVANT

ORDINANCE SECTIONS: 15-146 Table of Permissible Uses
15-64 Amendment to and Modification of Permits
15-176 Towers and Antennas

ANALYSIS

Background

The Board of Aldermen granted a conditional use permit (**see attachment F**) on November 10th, 1992 to Sprint Cellular, which allowed them to erect and operate a 180 foot tall cellular telecommunication tower at the rear of the Village Self Storage facility at 515 South Greensboro Street. The original CUP included a condition (#10), which indicated that the tower was approved as presented at the public hearing and that any changes to the tower would require a modification to the existing CUP via a public hearing.

The current request related to the telecommunication tower is a two-step process: 1. improvements to the existing foundation of the cell tower in order to allow the addition of the proposed two (2) co-locations 2. addition of two (2) new antennas to the tower. This will require the expansion the fenced in area at the base of the tower in order to allow the placement of additional equipment and the clearing of four (4) trees within the leased area for the expansion of the fenced in area.

Structural Engineering Report

The applicant has provided a structural engineering report dealing with the foundation improvements and additional antennas, which has been sealed by a professional engineer that all improvements are sound. Further, the Town of Carrboro Building Inspectors will inspect the improvements to the foundation and require a professional engineer to verify by a sealed letter that the foundation was installed per the approved plans.

The Nextell Communications antenna addition will consist of three panels (**see attachment B**) at a height of 141 feet. The Cingular Wireless antenna addition will consist of three panels (**see attachment B**) at a height of 131 feet.

Power Output

Per condition #10(b) of the CUP, the Board may request a 2nd opinion by any expert with regard to potential health issues. In this case, the Town of Carrboro Zoning Division consults with an electrical engineer from Duke University dealing with electromagnetic safety and per his report, the additional antenna and related cabinets within the fenced in area are within "safe" parameters (**see attachment E**).

Recommendation

The staff recommends that the Board of Aldermen adopt the attached resolution approving the Minor Modification to the 515 South Greensboro Street Cellular Tower Conditional Use Permit, which would allow improvements to the foundation of the tower, would allow the addition of two (2) new antennas to the tower itself, and would allow the installation of additional equipment within the expanded fenced in area of the leased area of the cellular tower. The resolution includes one recommended condition stating that the additional antenna and related equipment shall not be installed until the Inspections Division grants final approval for all work related to the improvements to the foundation of the tower.

NEXTEL COMMUNICATIONS AND CINGULAR WIRELESS
CARRBORO COLOCATION

- (1) A tower may not be located within 1,500 of an another tower (measured in a straight line and not by street distance)*

Response:

This section is not applicable since the proposal is to collocate Nextel Communications and Cingular Wireless' equipment on an existing tower.

- (2) As set for in subsection 15-184r the base of the tower shall be set back from a street right of way line and every lot boundary line a distance that is not less than the height of the tower*

Response:

This section is not applicable since the proposal is to collocate Nextel and Cingular's equipment on an existing tower.

- (3) Lighting shall not exceed the FAA minimum if lighting is required by FAA. To the extent allowed by the FAA, strobes shall not be used for nighttime lighting. The lights shall be oriented so as not to project onto surrounding residential property, consistent with FAA requirements*

Response:

This section is not applicable since the proposal is to collocate Nextel and Cingular's equipment on an existing tower.

- (4) Towers and antennas shall be constructed and operated so as not to disturb or interfere with the use or operation on adjoining properties of radios, televisions, telephones or similar equipment*

Response:

Please refer to Nextel and Cingular's letters discussing the issue of non interference and their full compliance with FCC requirements, thus providing the assurance that they will be in compliance with this requirement.

- (5) Commercial messages shall not be displayed on any tower*

Response:

The tower current has no commercial messages displayed and shall not have any as a result of Nextel and Cingular's collocation. Therefore, this requirement has been fulfilled

- (6) The output from the tower may not exceed federally approved levels for exposure to EMF. The applicant shall be required to submit documentation with the application verifying compliance with this standard.*

Response:

Please refer to both Nextel and Cingular's letters discussing compliance with FCC regulations, including EMF output. Therefore, it is in full compliance with this requirement.

- (7) If the tower is up to 180 feet, the tower shall be engineered and constructed to accommodate at least one additional carrier. If the tower exceeds 180' the tower shall be engineered and constructed to accommodate at least two additional telecommunication users. Furthermore, the site plan must show locations for accessory buildings necessary to accommodate a minimum of two users, even if the tower is proposed for a single user.*

Response:

This section is not applicable since the proposal is to collocate Nextel and Cingular's equipment on the existing tower at the heights of 141' and 131', respectively.

- (8) The base of the tower and each guyed anchor shall be surrounded by a fence or wall at least 8 feet in height and constructed of materials that cannot be easily climbed or penetrated unless the tower and all guy wires are mounted entirely on a building at least 8 feet in height.*

Response:

Nextel and Cingular's ground equipment will be located within the fenced compound. This compound will require expansion in order to accommodate both carrier's equipment, however, the fencing details will match the existing height and material requirements. Therefore, this requirement has been satisfied.

- (9) The base of the tower, any guyed wires, and any associated structures, walls, or fences shall be surrounded by a Type A screening. The site developer shall have the option of (i) providing the screening around the tower base and associated items or ii) providing the screening around the perimeter of the entire site.*

Response:

This section is not applicable since the proposal is to collocate Nextel and Cingular's equipment on the existing tower. In addition, the site's compound is screened from public view by existing buildings and mature tree and vegetative growth.

- (10) Outdoor storage shall not be permissible on tower sites.*

Response:

No outdoor storage shall occur at this existing tower site.

(11) *In addition to other information that must be submitted with the application, the application for a tower must contain the following information:*

- a. Identification of the intended user(s) of the tower.*
- b. Documentation provided by a registered engineer that the tower has sufficient structural integrity to accommodate more than one user.*
- c. Documentation by the applicant that no suitable existing facilities within the coverage area are available to the applicant. Documentation may include maps, letters from adjacent tower owners, or calculations. Facilities include other towers, or other buildings or structures.*
- d. A statement indicating the owner's intent to allow shared use of the tower and how many other users can be accommodated.*

Response:

Subsections (a), (c) and (d) are not applicable since the proposal is to collocate Nextel and Cingular's equipment on the existing tower. American Tower has included a copy of the structural report verifying that the tower has the capacity to handle Nextel and Cingular's proposed loading with the appropriate structural modifications. Therefore, this requirement has been satisfied.

(12) *The recipient of a permit for a tower shall be required as a continuing condition on the validity of the permit, to submit to the Zoning Administrator by January 31st of each year documentation, including but not limited to an FCC license, that the tower is being utilized. Towers which are not used for a period of 6 months or more shall be removed by the owner within 90 days thereafter. A statement of financial responsibility and performance security shall be posted for each tower to guarantee compliance with this requirement.*

Response:

This section is not applicable since this is a collocation on an existing tower

(13) *In any residential zone, associated buildings or other buildings located on the same lot and owned or used by the applicant, its associates, or any co-users shall not be used as an employment center for any worker. This subsection does not prohibit the periodic maintenance or periodic monitoring of instruments and equipment.*

Response:

This section is not applicable since this is a collocation on an existing tower and the tower is located on an industrially zoned parcel (M-1).

(14) The tower shall be constructed with a grounding system that provides adequate protection from destruction or damage by lightning.

Response:

The tower already has an existing ground system, however, Nextel and Cingular both propose grounding systems for their equipment installation. Please refer to the sheets labeled "Grounding Plan" on the construction drawings (Sheets NE-2 and CE-2). Therefore, this requirement has been satisfied.

(15) The proposed addition of another user's antenna to a pre-existing tower, or any substantial change in the previously approved tower, shall constitute a minor modification as defined in Section 15-64.

Response:

We recognize and acknowledge the process required to collocate Nextel and Cingular on this existing tower within Carrboro's jurisdiction.

(16) In addition to the considerations for conditional or special use permits found in Section 15-54 of this ordinance, the approving bodies in determining whether a tower is in harmony with the area of a tower on the value of adjoining or abutting properties may consider the aesthetic effects of the tower as well as mitigating factors concerning aesthetics, and may disapprove a tower on the grounds that such aesthetic effects are unacceptable. Factors relevant to aesthetic effects are the protection of the view in sensitive or particularly scenic areas and areas specially designated in adopted plans such as unique natural features, scenic roadways and historic sites; the concentration of towers in the proposed areas; and whether the height, design, placement or other characteristics of the proposed tower could be modified to have a less intrusive impact.

Response:

This section is not applicable since it is a collocation on an existing tower. Nextel Communications and Cingular Wireless only propose to mount their antennas on the tower and locate radio equipment within the fenced compound at the base of the tower.

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Pratt School of Engineering
DURHAM, NORTH CAROLINA 27708-0291

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February 26, 2005

Mr. James Thomas
Program Support Assistant II
Zoning Division
Town of Carrboro
301 West Main Street
Carrboro, North Carolina 27510

Re: Impact of Minor Modification to CUP at S. Greensboro Street on
Electromagnetic Safety

Dear Mr. Thomas:

I have received a letter dated 1/31/05 from Mr. David Hockey, Zoning Manager-Carolinas for American Tower Corporation. This letter informed me that American Tower Corporation has submitted an application to amend the existing CUP with the town of Carrboro to co-locate Cingular Wireless and Nextel Communications on the existing monopole located at 515 S. Greensboro Street. From the materials submitted to me for review and comment I have attempted to determine the impact on electromagnetic safety of adding Cingular Wireless and Nextel Communications to present users on the tower, I have extracted the following information from the materials sent to me by Mr. Hockey:

- Name and location of tower - 515 S. Greensboro Street, Chapel

Hill, NC.

- User name - Cingular Wireless.
 - Height of antenna radiation center AGL - 131 feet.
 - Antenna manufacturer and model number - Decibel DB932QDG90T2E-M.
 - Service - PCS
 - Operating frequency band - 1950 to 1965 MHz.
 - Number of channels per sector - 3.
 - EIRP in watts per channel - 316.2 (1640 maximum permissible).
 - Vertical beamwidth between half-power (3-dB) points - 6.5 degrees.
-
- User name - Nextel Communications.
 - Height of antenna radiation center AGL - 141 feet.
 - Antenna manufacturer and model number - Decibel DB848F90-SX.
 - Service - Cellular.
 - Operating frequency band - 851-856 MHz.
 - Number of channels per sector - 5.
 - EIRP in watts per channel - 35 (maximum permissible not specified).
 - Vertical beamwidth between half-power (3-dB) points - 9 degrees.

Current users on the 180' monopole tower are Alltel with two radiating antennas at 161' and 178' AGL providing digital and analog service, and AT&T Wireless at 151' AGL providing PCS service.

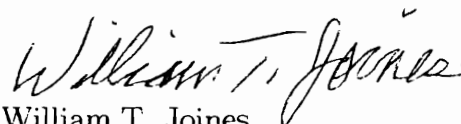
From the above information on the Cingular application it may be as-

sumed that three transmitting channels per 120-degree sector will be added with an EIRP of 316.2 watts per channel. These transmitters would yield 948.6 watts of EIRP at a radiation center of 131 feet above ground level. Due to the Cingular transmitting antennas acting alone, the added ground-level power density would not exceed 0.005 milliwatts per square centimeter.

From the above information on the Nextel application, five transmitting channels per 120-degree sector will be added with an EIRP of 35 watts per channel. These transmitters would yield 175 watts of EIRP at a radiation center of 141 feet above ground level. Due to the Nextel transmitting antennas acting alone, the added ground-level power density would not exceed 0.00075 milliwatts per square centimeter.

When the above maximum power densities are added to the existing ground-level power density due to present users on the tower, the total would still be well below recommended radiation safety guidelines.

Sincerely,

A handwritten signature in black ink, reading "William T. Joines". The signature is written in a cursive style with a large, stylized "W" and "J".

William T. Joines
Professor

Return to: Zoning Division, Town of Carrboro, P. O. Box 829, Carrboro, N. C.

NORTH CAROLINA

ORANGE COUNTY

TOWN OF CARRBORO

CONDITIONAL USE PERMIT GRANTED

On the date(s) listed below, the Board of Aldermen of the Town of Carrboro met and held a public hearing to consider the following application:

Applicant: The Bernstein Group, Inc.Owner: Village Self Storage (Grey B. Moody and James A. Fountain, Jr.)Property Location: 515 South Greensboro Street
(Street Address)Tax Map 100 Block C Lot 33

9778-82-8470

Proposed Use of Property: To allow construction of a 180 foot self supporting monopole, outfitted with two whip antennas and six panel antennas, and a 12 foot x 28 foot equipment shelter.

Carrboro Land Use Ordinance Use Category: 18.200Meeting Dates: October 27, 1992 and November 10, 1992

Having heard all the evidence and arguments presented at the hearing, the Board finds that the application is complete, that the application complies with all of the applicable requirements of the Carrboro Land Use Ordinance for the development proposed, and that therefore the application to make use of the above described property for the purpose indicated is hereby approved, subject to all applicable provisions of the Land Use Ordinance and the following conditions:

1) The applicant shall complete the development strictly in accordance with the plans submitted to and approved by this Board, a copy of which is filed in the Carrboro Town Hall. Any deviations from or changes in these plans must be pointed out specifically to the administrator in writing and specific written approval obtained as provided in Section 15-64 of the Land Use Ordinance.

2) If any of the conditions affixed hereto or any part thereof shall be held invalid or void, then this permit shall be void and of no effect.

3) Additional screening by eleven (11) Burford Hollies shall be placed along the property line that is adjacent to the school (eastern side). Also, the slats that will be placed in the existing eight-foot high chain link fence shall be the brown color as presented by the applicant.

4) The facility shall be a cellular transmitting and receiving facility that would serve the Town of Carrboro. The facility will consist of a 12' x 28' equipment shelter used to house several low-power radio transmitters, and a 180' self supporting monopole, outfitted with two whip antennas and six panel antennas. The panel antennas will be 3' long and 1' wide. The monopole will be approximately 6' in diameter at the base, tapering to a significantly smaller diameter at the top. The pole will be constructed of solid galvanized steel, and will require no lighting or painting. The entire facility will be enclosed and secured by

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TOWN OF CARRBORO
ZONING DIVISION

a 6' high chain link fence. The terms of the Land Use Permit for construction of this tower will specifically provide that no additional antennas or microwave dish antennas may be attached to the pole without the prior approval of the Town of Carrboro. A photograph of the typical monopole construction utilized by Centel Cellular was submitted to the Board of Aldermen for consideration at the Board's meeting held on November 10, 1992.

5) Prior to construction, the applicant shall submit construction drawings of the entire tower as well as any antennas or other tower parts to the town staff for approval. Such submission shall take place within sufficient time for the staff to review the construction drawings. Any construction drawings shall include, but not be limited to, the normal requirements for construction drawings of such towers, as well as a list of the construction materials for the tower itself.

6) Prior to construction, the applicant shall submit studies to the town staff which will indicate that the monopole is not subject to collapse.

7) The applicant shall paint the monopole if the town asks him to do so.

8) The application will be amended in general in accordance with the amended proposal to erect a cellular facility as submitted to the Board on November 10, 1992 and as illustrated in a four-page document. As indicated in this document, the pole will not have any lighting on it at all. Should future federal requirements state that lighting should be placed on the tower, the applicant will be required to come back before the Board of Aldermen for a public hearing on the nature of the lighting and for approval of lighting.

9) No further height will be added to the monopole, nor will any other structure be allowed on the site to increase the height of the tower.

10) No other antennas or other change will be made to the monopole as presented to the Board. If the applicant/owner wishes to add any antennas or any other instrument to the tower itself, the following conditions shall be met.

- a. A public hearing with notification sent to all property owners and residents living within 200 feet of the tower site, plus the usual notice, will be held.
- b. The town will have adequate opportunity to request a second opinion by an expert chosen by Board regarding all health issues.

11) The applicant, as well as any subsequent purchasers or lessees of the property and equipment, as well as any servants, employees, officers and assignees of the applicant, shall take annual measurements at the tower site to measure power densities and radio-frequency emissions and report these measurements to the town for its review.

This permit shall automatically expire within two years of the date of issuance if the use has not commenced or less than 10 percent (10%) of total cost of construction has been completed or there has been non-compliance with any other requirements of Section 15-62 of the Carrboro Land Use Ordinance.

If this permit authorizes development on a tract of land in excess of one acre, nothing authorized by the permit may be done until the property owner properly executes and returns to the Town of Carrboro the attached acknowledgment of the issuance of this permit so that the town may have it recorded in the Orange County Registry.