



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@po.state.ct.us

Web Site: www.state.ct.us/csc/index.htm

July 25, 2003

Christopher B. Fisher, Esq.
Cuddy & Feder LLP
90 Maple Avenue
White Plains, NY 10601-5196

RE: **TS-AT&T-025-030711** - AT&T Wireless PCS LLC, request for an order to approve tower sharing at an existing telecommunications facility located at 500 Highland Avenue, Cheshire, Connecticut.

Dear Attorney Fisher:

At a public meeting held July 22, 2003, the Connecticut Siting Council (Council) ruled that the shared use of this existing tower site is technically, legally, environmentally, and economically feasible and meets public safety concerns, and therefore, in compliance with General Statutes § 16-50aa, the Council has ordered the shared use of this facility to avoid the unnecessary proliferation of tower structures. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Any additional change to this facility may require an explicit request to this agency pursuant to General Statutes § 16-50aa or notice pursuant to Regulations of Connecticut State Agencies Section 16-50j-73, as applicable. Such request or notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

This decision applies only to this request for tower sharing and is not applicable to any other request or construction.

The proposed shared use is to be implemented as specified in your letter dated July 11, 2003.

Thank you for your attention and cooperation.

Very truly yours,

Pamela B. Katz, P.E.
Chairman

PBK/laf

- c: Honorable Sandra R. Mouris, Council Chairman, Town of Cheshire
Richard A. Pfurr, Town Planner, Town of Cheshire
Thomas Regan, Esq., Brown Rudnick Berlack Israels LLP
Stephen J. Humes, Esq., LeBoeuf, Lamb, Greene & MacRae



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July 17, 2003

Honorable Sandra R. Mouris
Council Chairman
Town of Cheshire
Town Hall
84 South Main Street
Cheshire, CT 06410

RE: **TS-AT&T-025-030711** - AT&T Wireless PCS LLC, request for an order to approve tower sharing at an existing telecommunications facility located at 500 Highland Avenue, Cheshire, Connecticut.

Dear Ms. Mouris:

The Connecticut Siting Council (Council) received this request for tower sharing, pursuant to Connecticut General Statutes § 16-50aa.

The Council will consider this item at the next meeting scheduled for July 22, 2003, at 1:30 p.m. in Hearing Room One, Ten Franklin Square, New Britain, Connecticut.

Please call me or inform the Council if you have any questions or comments regarding this proposal.

Thank you for your cooperation and consideration.

Very truly yours,

S. Derek Phelps
Executive Director

SDP/ld

Enclosure: Notice of Tower Sharing

c: Richard A. Pfurr, Town Planner, Town of Cheshire

CUDDY & FEDER LLP

**90 MAPLE AVENUE
WHITE PLAINS, NEW YORK 10601-5196**

(914) 761-1300

FACSIMILE (914) 761-5372/6405

www.cfwlaw.com

**500 FIFTH AVENUE
NEW YORK, NEW YORK 10110
(212) 944-2841**

FACSIMILE (212) 944-2843

**WESTAGE BUSINESS CENTER
300 SOUTH LAKE DRIVE
FISHKILL, NEW YORK 12524
(845) 896-2229**

FACSIMILE (845) 896-3672

NORWALK, CONNECTICUT

**WILLIAM V. CUDDY
1971-2000**

**WILLIAM S. NULL
DAWN M. PORTNEY
ELISABETH N. RADOW
NEIL T. RIMSKY
RUTH E. ROTH
JONATHAN S. SAUL (also NJ)
JENNIFER L. VAN TUYL
CHAUNCEY L. WALKER (also CA)**

Of Counsel

**ANDREW A. GLICKSON (also CT)
ROBERT L. OSAR (also TX)
MARYANN M. PALERMO
ROBERT C. SCHNEIDER**

**RECEIVED
JUL 15 2003**

**CONNECTICUT
SITING COUNCIL**

July 11, 2003

VIA FEDERAL EXPRESS

Hon. Pamela B. Katz, Chairman and Members
of the Siting Council
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

TS-AT&T-025-030711

Re: Tower Sharing Request by AT&T Wireless
Municipal Police Department Tower Facility
500 Highland Avenue, Cheshire, Connecticut

Hon. Pamela B. Katz, Chairman and Members of the Siting Council:

Pursuant to Connecticut General Statutes (C.G.S.) § 16-50aa, AT&T Wireless PCS LLC, by and through its agent AT&T Wireless Services, Inc., ("AT&T") hereby requests an order from the Connecticut Siting Council (the "Council") to approve the proposed shared use of a municipal communications tower to be replaced by Tower Ventures and located at 500 Highland Avenue in the Town of Cheshire. It is our understanding from Tower Ventures representatives that they have completed and executed an agreement with the Town to replace an existing police department tower with a 160' tower which will be owned by the Town of Cheshire and used by the police department. We also understand that Tower Ventures' will be corresponding with the Council to withdraw their pending application in Docket No. 231 and explain the municipal nature of this communications tower.

July 11, 2003

Page 2

AT&T Wireless' Proposed Facility

The enclosed plans in Exhibit A as prepared for Tower Ventures by URS include a survey of existing conditions, a compound plan and tower elevation and other details of the new police department tower facility being built by Tower Ventures for the Town. AT&T Wireless proposes shared use of the facility to provide its FCC licensed services in the area. AT&T Wireless will install 6 panel antennas at the approximate 137.5 foot level of the Tower and associated equipment cabinets (2 proposed, 2 future, each 76"H x 30" W x 30" D) located on a concrete pad within the fenced compound as shown on the enclosed drawings.

Connecticut General Statutes § 16-50aa provides that, upon written request for shared use approval, an order approving such use shall be issued, "if the council finds that the proposed shared use of the facility is technically, legally, environmentally and economically feasible and meets public safety concerns." (C.G.S. § 16-50aa(c)(1).) Further, upon approval of such shared use, it is exclusive and no local zoning or land use approvals are required. C.G.S. § 16-50x. Shared use of the proposed police department tower in this case satisfies the approval criteria set forth in C.G.S. § 16-50aa as follows:

- A. Technical Feasibility As evidenced in the signed sealed tower drawings prepared by Sabre Communications Corp. and annexed hereto as Exhibit B, Tower Ventures is building a tower for the Town that has been designed and built to structurally support the Town's, AT&T's and other carriers' antennas. The proposed shared use of this Tower is therefore technically feasible.
- B. Legal Feasibility Pursuant to C.G.S. § 16-50aa, the Council has been authorized to issue an order approving AT&T's proposed shared use of the new police department tower. (C.G.S. § 16-50aa(c)(1)).
- C. Environmental Feasibility The proposed shared use would have a minimal environmental effect, for the following reasons:
 - 1. The proposed AT&T installation would have a de minimis visual impact, and would not cause any significant change or alteration in the physical or environmental characteristics of the municipally approved facility;
 - 2. The proposed installation by AT&T Wireless would not increase the height of the municipally approved tower nor extend the site boundaries as approved by the Town;

July 11, 2003

Page 3

3. The proposed installation would not increase noise levels at the approved facility boundaries by six decibels or more;
 4. Operation of AT&T Wireless' antennas at this site would not exceed the total radio frequency electromagnetic radiation power density level adopted by the FCC and Connecticut Department of Health. The worst case exposure calculated for the operation of this facility for all carriers, would be approximately 17.39% of the standard. See Cumulative Emissions Compliance Report dated July 10, 2003, prepared for Tower Ventures by C Squared Systems, LLC and annexed hereto as Exhibit C;
 5. The proposed shared use of the police department tower would not require any water or sanitary facilities, or generate air emissions or discharges to water bodies. Further, the installation will not generate any traffic other than for periodic maintenance visits.
- D. Economic Feasibility AT&T has an agreement to share use of the police department tower facility. The proposed tower sharing is therefore economically feasible.
- E. Public Safety As stated above and evidenced in the Cumulative Emissions Compliance Report annexed hereto as Exhibit C, the operation of AT&T Wireless' antennas at this site would not exceed the total radio frequency electromagnetic radiation power density level adopted by the FCC and Connecticut Department of Health. Further, the addition of AT&T Wireless' telecommunications service in the Cheshire area is expected to enhance the safety and welfare of local residents and travelers through the area resulting in an improvement to public safety in this area of Cheshire.

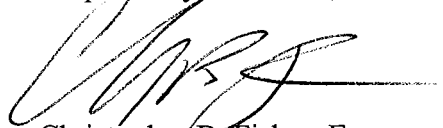
July 11, 2003

Page 4

Conclusion

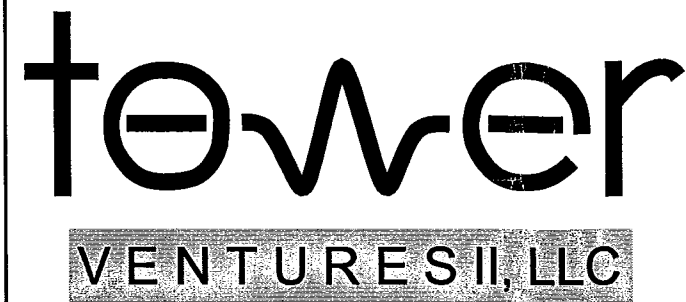
As delineated above, AT&T's proposed shared use of the new police department tower facility satisfies the criteria set forth in C.G.S. § 16-50aa, and advances the General Assembly's and the Siting Council's goal of preventing the proliferation of towers in the State of Connecticut. AT&T Wireless therefore requests the Siting Council issue an order approving its shared use of the municipally approved facility.

Respectfully submitted,



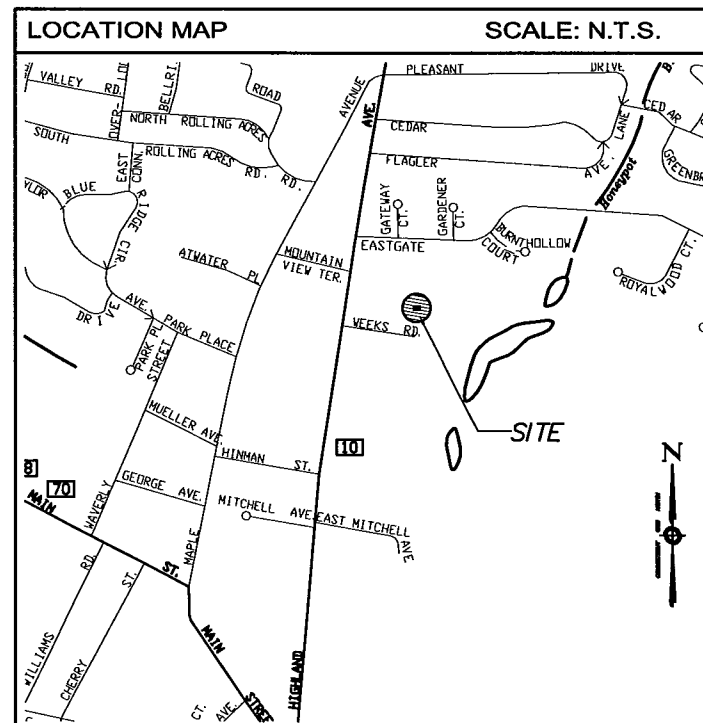
Christopher B. Fisher, Esq.
On behalf of AT&T Wireless

cc: Michael Milone, Town Manager
Scott Penner, Esq., Hurwitz & Sagarin
Johnny Salmon, Bechtel



UNMANNED WIRELESS COMMUNICATIONS EQUIPMENT SITE

CHESHIRE POLICE DEPARTMENT
500 HIGHLAND AVENUE (ROUTE 10)
CHESHIRE, CONNECTICUT 06410



SHEET INDEX	
SHT. NO.	DESCRIPTION
T-1	TITLE SHEET
S-1	SURVEY
C-1	SITE PLAN
C-2	PARTIAL SITE PLAN, DETAILS, SILY FENCE SPECIFICATIONS AND LEGEND
C-3	MONOPOLE ELEVATION AND CIVIL DETAILS

PROJECT DESCRIPTION

PROPOSED REPLACEMENT OF AN EXISTING 140'-0" LATTICE TOWER WITH A 160'-0" MONOPOLE. RELOCATION OF EXISTING TOWN ANTENNAS TO NEW TOWER AND CONSTRUCTION OF COMPOUND AREAS TO ACCOMMODATE SIX CARRIERS.

PROJECT SUMMARY

SITE NAME: CHESHIRE POLICE DEPARTMENT

SITE ADDRESS: 500 HIGHLAND AVENUE (ROUTE 10)
CHESHIRE, CONNECTICUT 06410

CONTACT PERSON: CHRIS CIOLFI
TOWER VENTURES
374 SOUTH STREET
SUITE 202
PITTSFIELD, MA 01201
PHONE NUMBER: (413) 447-7712
FAX NUMBER: (413) 447-9009

PROPERTY OWNER: TOWN OF CHESHIRE
500 HIGHLAND AVENUE
CHESHIRE, CONNECTICUT 06410

CONTACT PERSON: DEPT. CHIEF SIDORUK
CONTACT TELEPHONE: (203) 271-5552

ASSESSOR'S PARCEL NO.: MAP 50, LOT 2

LATITUDE: 41° 30' 40.30"
LONGITUDE: 72° 53' 54.45"

JURISDICTION: TOWN OF CHESHIRE

ARCHITECT: URS CORPORATION A.E.S.
795 BROOK STREET
ROCKY HILL, CT 06067

M/E/P ENGINEER: URS CORPORATION A.E.S.
795 BROOK STREET
ROCKY HILL, CT 06067

SURVEYOR: URS CORPORATION A.E.S.
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067



170 WESTMINSTER STREET
SUITE 701
PROVIDENCE, RI 02903

A&E FIRM

URS CORPORATION A.E.S.

795 BROOK STREET
ROCKY HILL, CONNECTICUT
1-(866)-529-8882

A&E SEAL

PROJECT NO: 36923410/TV1003

DRAWN BY: LMM

CHECKED BY:

APPROVED BY:

ISSUED FOR

06-27-03	REVIEW
07-09-03	ISSUED FOR FINAL

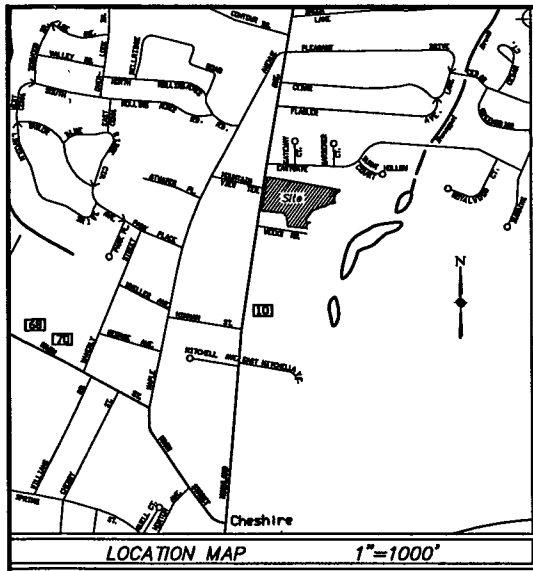
THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO TOWER VENTURES II, LLC IS STRICTLY PROHIBITED.

CHESHIRE POLICE DEPARTMENT

RT.10, HIGHLAND AVENUE
CHESHIRE, CONNECTICUT

TITLE SHEET

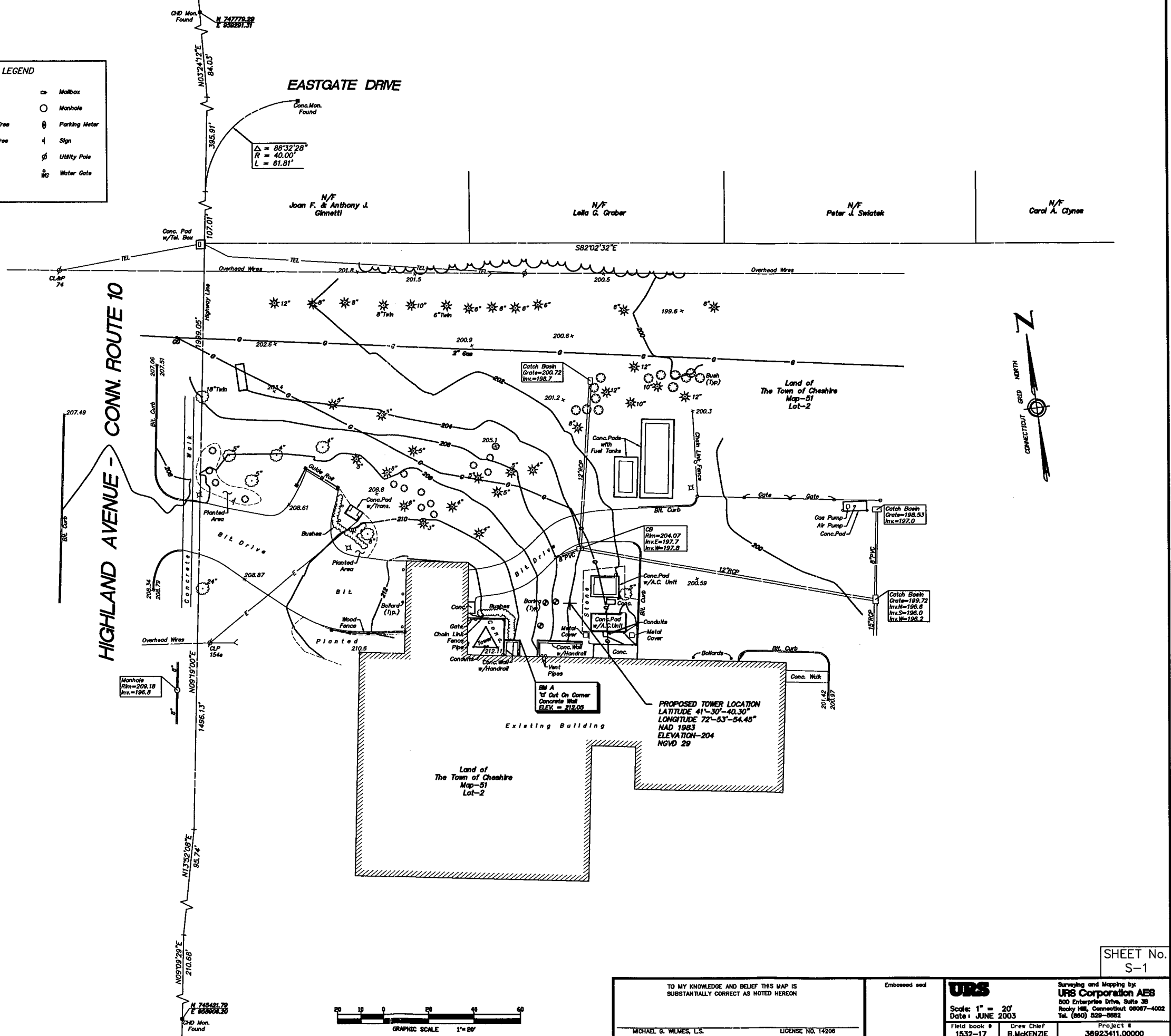
T-1



LEGEND	
	Bush
	Catch Basin
	Coniferous Tree
	Deciduous Tree
	Gas Gate
	Hydrant
	Light Pole
	Mailbox
	Manhole
	Parking Meter
	Sign
	Utility Pole
	Water Gate

NOTES:

- THIS SURVEY AND MAP HAS BEEN PREPARED IN ACCORDANCE WITH THE REGULATIONS OF CONNECTICUT STATE AGENCIES, SECTIONS 20-300B-1 THRU 20-300B-20, AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996. THE TYPE OF SURVEY IS AN IMPROVEMENT LOCATION SURVEY AND A T-2 TOPOGRAPHIC SURVEY. THE BOUNDARY DETERMINATION CATEGORY IS A RESURVEY. THE HORIZONTAL AND VERTICAL ACCURACY CONFORMS TO CLASS A-2 & V-2 ACCURACY.
- BEARINGS REFER TO THE CONNECTICUT COORDINATE SYSTEM, NAD 83/87, BASED UPON CGS MONUMENTS 1820X & 5834 HOLDING THE FOLLOWING PUBLISHED COORDINATE VALUES:
CGS 1820X N 748,764.991 E 959,448.289 CGS 5834 N 746,286.303 E 959,036.827
- ELEVATIONS REFER TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1989, NGVD 29, BASED UPON CGS MONUMENT 5834 HOLDING THE PUBLISHED ELEVATION OF 219.65 FEET.
- REFERENCE IS MADE TO THE FOLLOWING MAPS:
 - "CONNECTICUT STATE HIGHWAY DEPARTMENT RIGHT OF WAY MAP TOWN OF CHESHIRE HIGHLAND AVE. FROM MAIN STREET NORTHERLY TO FLAGLER AVE. ROUTE No. 10." SCALE 1"=40', DATED MAY 29, 1937, REVISED JULY 19, 1966, NUMBER 25-06, SHEET 2 OF 2.
 - "EASTGATE ESTATES CHESHIRE, CONNECTICUT OWNED AND DEVELOPED BY WELCH CONSTRUCTION CO. INC. CHESHIRE, CONN", BY CAHN ENGINEERS INC., SCALE 1"=100', DATED OCTOBER 1971, REVISED TO 9/11/73.
- THE PROPERTY IS SUBJECT TO EASEMENTS AND RIGHTS OF WAY AS OF RECORD MAY APPEAR.
- UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING AND OTHER DATA SUPPLIED BY THE RESPECTIVE UTILITY COMPANIES, GOVERNMENTAL AGENCIES AND/OR OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE, THE EXISTENCE OF WHICH ARE UNKNOWN TO URS CORPORATION AES. THE EXISTENCE, SIZE AND LOCATION OF ALL SUCH FEATURES MUST BE DETERMINED AND VERIFIED IN THE FIELD BY THE APPROPRIATE AUTHORITIES, PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.



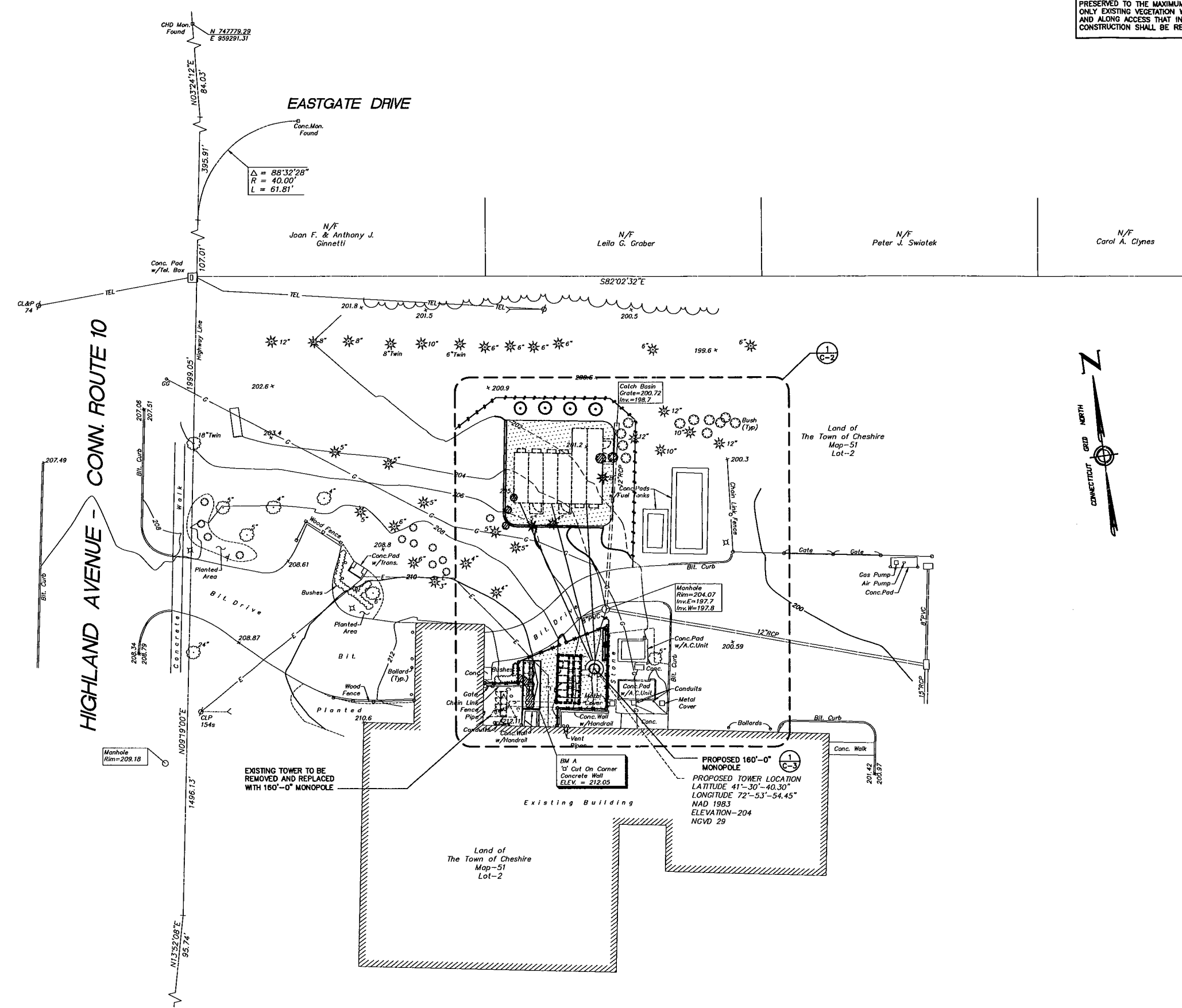
IMPROVEMENT LOCATION & TOPOGRAPHIC SURVEY
 LAND OF
THE TOWN OF CHESHIRE
 500 HIGHLAND AVENUE
 CHESHIRE, CONNECTICUT
 PREPARED FOR
TOWER VENTURES II, LLC

SHEET No.
 S-1

TO MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON		Embossed seal	
MICHAEL G. WILMES, L.S. LICENSE NO. 14206		URS Surveying and Mapping by URS Corporation AES 500 Enterprise Drive, Suite 3B Rocky Hill, Connecticut 06067-4002 Tel. (860) 829-8882	
TRUE AND VALID COPIES OF THIS MAP OR PLAN MUST BEAR THE ORIGINAL SIGNATURE AND EMBOSSED SEAL OF THE ABOVE NAMED LAND SURVEYOR. UNAUTHORIZED REPRODUCTION OR ALTERATION IS FORBIDDEN.		Scale: 1" = 20' Date: JUNE 2003 Field book # 1532-17 Search # 3848	Project # 38923411.00000 Crew Chief B. MCKENZIE Drawn by K. COOLBETH Checked by Map File # 1148-44

P:\SURVEY_TOWER_VENTURES\36923411.DWG\36923411.DWG

EXISTING ON-SITE VEGETATION SHALL BE PRESERVED TO THE MAXIMUM EXTENT POSSIBLE. ONLY EXISTING VEGETATION WITHIN COMPOUND AND ALONG ACCESS THAT INTERFERE WITH CONSTRUCTION SHALL BE REMOVED.



tower
VENTURES II, LLC

170 WESTMINSTER STREET
SUITE 701
PROVIDENCE, RI 02903

A&E FIRM
URS CORPORATION A&E
795 BROOK STREET
ROCKY HILL, CONNECTICUT
1-(860)-529-8882

A&E SEAL

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CHECKED BY:
APPROVED BY:

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07-09-03	ISSUED FOR FINAL

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CHESHIRE POLICE DEPARTMENT
RT.10, HIGHLAND AVENUE
CHESHIRE, CONNECTICUT

SITE PLAN

C-1

1 SITE PLAN
SCALE: 1"=20'-0"
SCALE: 1" = 20'

SILT FENCE SPECIFICATIONS

MAINTENANCE

- 1) SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY.
- 2) IF THE FABRIC ON A SILT FENCE SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY.
- 3) SEDIMENT DEPOSITS SHOULD BE INSPECTED AFTER EVERY STORM EVENT, THE DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
- 4) SEDIMENT DEPOSITS THAT ARE REMOVED OR LEFT IN PLACE AFTER THE FABRIC HAS BEEN REMOVED SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATION.

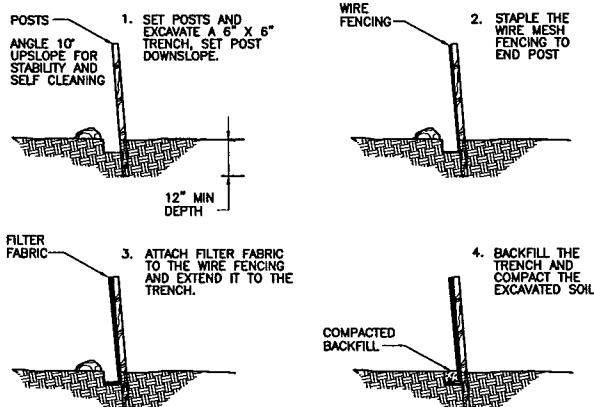
CONSTRUCTION SEQUENCE

- 1) THE GEOTEXTILE FABRIC SHALL MEET THE DESIGN CRITERIA FOR SILT FENCES
- 2) THE FABRIC SHALL BE EMBEDDED A MINIMUM OF 8 INCHES INTO THE GROUND AND THE SOIL COMPACTED OVER THE EMBEDDED FABRIC.
- 3) WOVEN WIRE FENCES SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES OR STAPLES.
- 4) FILTER CLOTH SHALL BE FASTENED SECURELY TO THE WOVEN WIRE FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP, MID-SECTION, AND BOTTOM.
- 5) WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6 INCHES, FOLDED AND STAPLED.
- 6) FENCE POSTS SHALL BE A MINIMUM OF 36 INCHES LONG AND DRIVEN A MINIMUM OF 16 INCHES INTO THE GROUND. WOOD POSTS SHALL BE OF SOUND QUALITY HARDWOOD AND SHALL HAVE A MINIMUM CROSS SECTIONAL AREA OF 3.0 SQUARE INCHES.
- 7) MAINTENANCE SHALL BE PERFORMED AS NEEDED TO PREVENT BULGES IN THE SILT FENCE DUE TO DEPOSITION OF SEDIMENT.

EROSION CONTROL NOTES

- 1) DURING CONSTRUCTION AND THEREAFTER EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED AS NOTED. NOT GREATER THAN 80,000 SQ. FT. OF LAND SHALL BE EXPOSED AT ANY ONE TIME DURING DEVELOPMENT. WHEN LAND IS EXPOSED DURING DEVELOPMENT, THE EXPOSURE SHOULD BE KEPT TO THE SHORTEST PRACTICAL PERIOD OF TIME AND SHALL NOT EXCEED 90 DAYS. LAND SHOULD NOT BE LEFT EXPOSED DURING THE WINTER MONTHS.
- 2) SILTATION FENCING SHALL BE INSTALLED WHERE SHOWN PRIOR TO ANY ON SITE GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL. IT SHOULD BE MAINTAINED DURING AND AFTER DEVELOPMENT TO REMOVE SEDIMENT FROM RUNOFF WATER AND FROM LAND UNDERGOING DEVELOPMENT. WHERE POSSIBLE NATURAL DRAINAGE-WAYS SHOULD BE UTILIZED AND LEFT OPEN TO REMOVE EXCESS SURFACE WATER.
- 3) ALL DISTURBED AREAS AND SIDE SLOPES WHICH ARE FINISH GRADED WITH NO FURTHER CONSTRUCTION TO TAKE PLACE SHALL BE LOAMED AND SEEDED. A MINIMUM OF 4" OF LOAM SHALL BE INSTALLED.
- 4) ANY DISTURBED AREAS WHICH ARE TO BE LEFT TEMPORARILY, AND WHICH WILL BE REGRADED LATER DURING CONSTRUCTION SHALL BE MACHINE HAY MULCHED AND SEEDED WITH RYE GRASS TO PREVENT EROSION. HAY OR STRAW MULCH SHALL BE APPLIED TO ALL FRESHLY SEEDED AREAS AT A RATE OF 2 TONS PER ACRE. BALES SHALL BE UNSPOOLED, AIR-DRIED, AND FREE FROM WEED, SEEDS AND ANY COARSE MATERIAL.

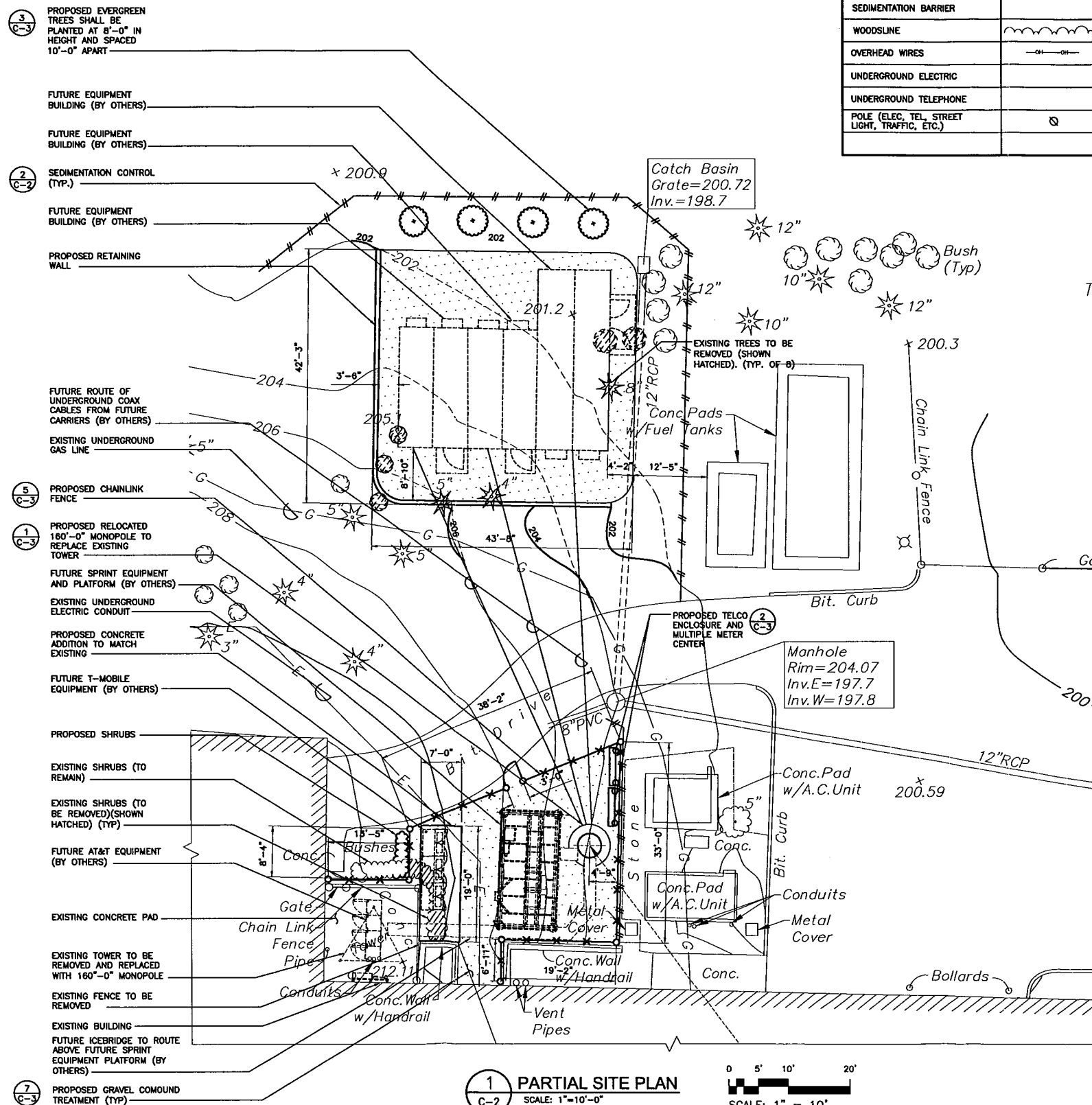
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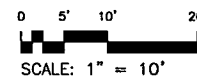
2 SEDIMENTATION CONTROL BARRIER - SILT FENCE
SCALE: N.T.S.

GENERAL LEGEND

DESCRIPTION	EXISTING	PROPOSED
BASE LINE OR CENTER LINE	---	— 7500 —
PROPERTY LINE/STREET LINE/ R.O.W. LINE	---	---
BUILDINGS	▭	▭
FENCE	—○—○—○—	—■—■—■—
CONTOUR LINES	— 436 —	— 388 —
SETBACK LINES	---	---
SPOT ELEVATION	40.56 x 40.58	x 441.8
CURVE RADIUS		↻
SEDIMENTATION BARRIER		—■—■—■—
WOODSLINE	~	~
OVERHEAD WIRES	—○—○—	—○—○—
UNDERGROUND ELECTRIC	—○—○—	—○—○—
UNDERGROUND TELEPHONE	—○—○—	—○—○—
POLE (ELEC, TEL, STREET LIGHT, TRAFFIC, ETC.)	⊙	⊙



1 PARTIAL SITE PLAN
SCALE: 1"=10'-0"



170 WESTMINSTER STREET
SUITE 701
PROVIDENCE, RI 02903

A&E FIRM
URS CORPORATION AES
795 BROOK STREET
ROCKY HILL, CONNECTICUT
1-(860)-529-8882

A&E SEAL

PROJECT NO: 36923410/TV1003
DRAWN BY: LMM
CHECKED BY:
APPROVED BY:

ISSUED FOR	
06-27-03	REVIEW
07-09-03	ISSUED FOR FINAL

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CHESHIRE POLICE DEPARTMENT
RT.10, HIGHLAND AVENUE
CHESHIRE, CONNECTICUT

PARTIAL SITE PLAN,
DETAILS, SILT FENCE,
SPECIFICATIONS
AND LEGEND

C-2

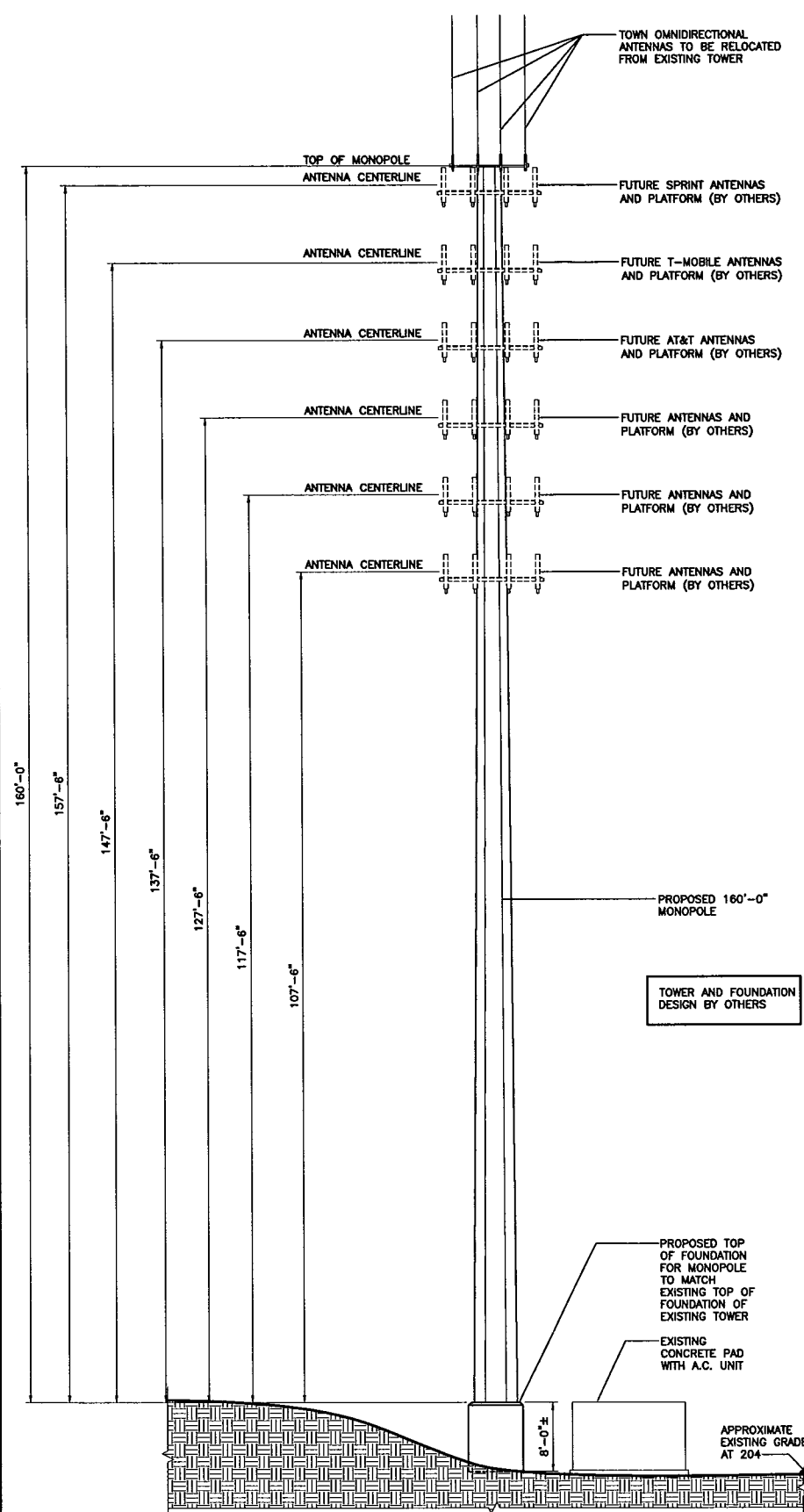
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CHESHIRE POLICE DEPARTMENT

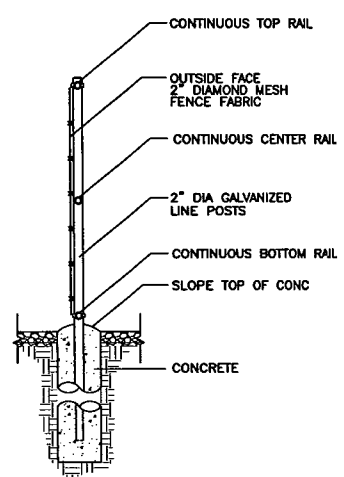
RT.10, HIGHLAND AVENUE
CHESHIRE, CONNECTICUT

MONOPOLE ELEVATION AND CIVIL DETAILS

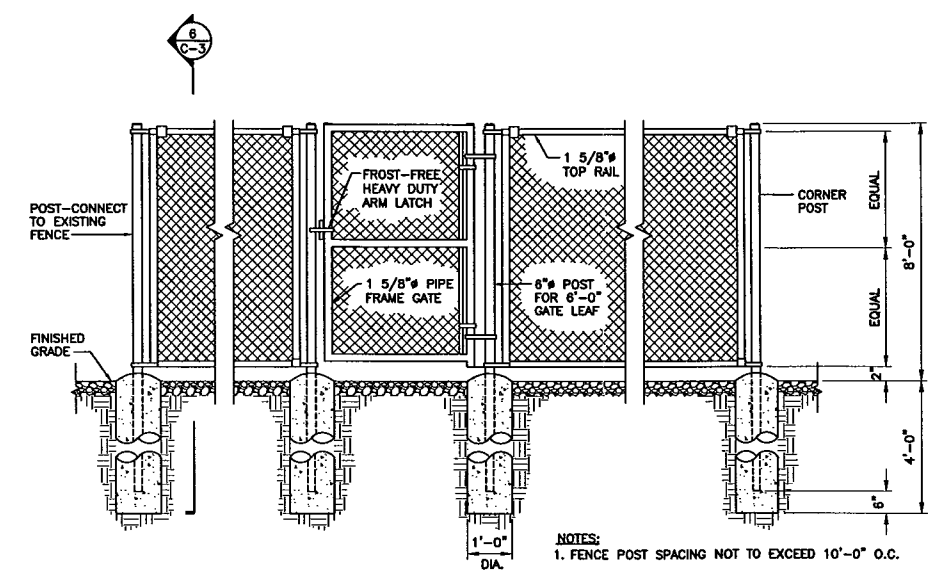
C-3



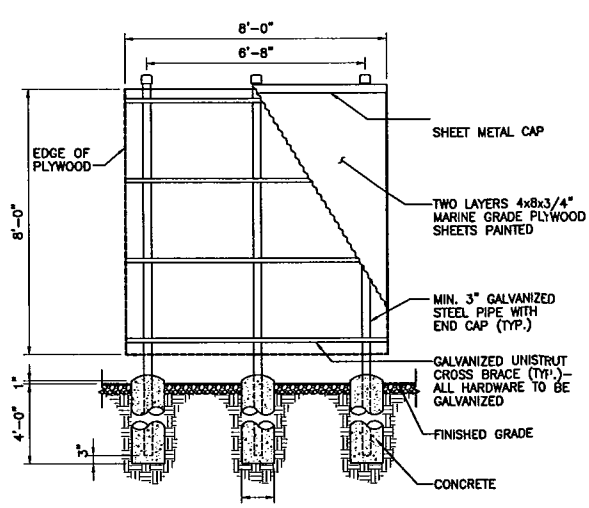
1 MONOPOLE ELEVATION
C-3 SCALE: 1" = 10'-0"



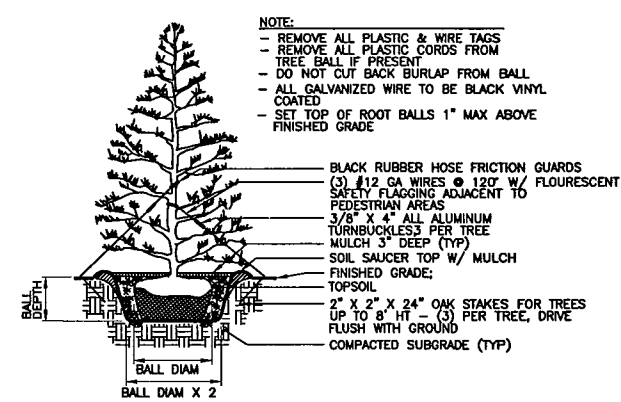
6 TYPICAL CHAIN LINK FENCE SECTION
C-3 SCALE: N.T.S.



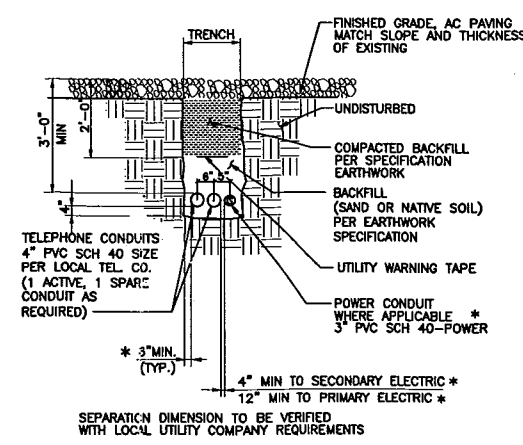
5 CHAIN LINK FENCE DETAIL
C-3 SCALE: N.T.S.



2 ELECTRICAL/TELEPHONE SERVICE FRAME DETAIL
C-3 SCALE: N.T.S.



3 TREE PLANTING - EVERGREEN
C-3 SCALE: N.T.S.



4 UTILITY TRENCH
C-3 SCALE: N.T.S.

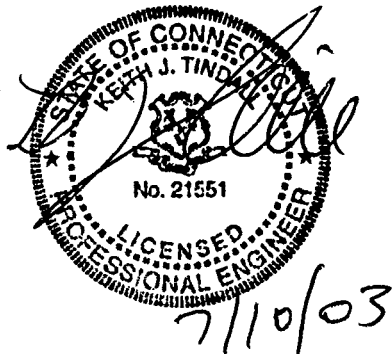
POLE SPECIFICATIONS	
POLE HEIGHT	160.00 FEET
TAPER	.3232 IN/FT
POLE SHAPE	18 SIDED POLYGON
ORIENTATION	

Lev	Qty	Elev ft.	Fut	APPURTENANCE / ANTENNA DESCRIPTION
1	3	157.00	F	12' LP Rotatable Platfor
	6	159.00	f	20' WHIP
	9	159.00	F	58000
2	1	149.00	F	12' LP Rotatable Platfor
	9	149.00	F	5' X 1'
3	1	139.00	F	12' LP Rotatable Platfor
	9	139.00	F	5' X 1'
4	1	129.00	F	12' LP Rotatable Platfor
	12	129.00	F	DB844H90
5	1	119.00	F	12' LP Rotatable Platfor
	12	119.00	F	DB844H90

LOAD CASE DESCRIPTION	WIND (mph)	O.L.F. VERT.	RAD. ICE	FACTORS GUST	Cf	WIND (psf)
1) Max Wind	85.00	1.00		1.69	.65	31.26
2) Max Wind Load x.75	73.61	1.00	.50	1.69	.65	23.44
3) Everyday Operating	50.00	1.00		1.69	.65	10.82

LOAD CASE DESCRIPTION	RES. BASE Axial (kips)	RES. BASE Shear (kips)	REACT MOM (ft-k)	DISP DEF. (ft)	TOP SWAY (deg)
1) Max Wind	46.0	39.1	4836	9.9	7.57
2) Max Wind Load x.75	53.1	31.8	4024	8.3	6.43
3) Everyday Operating	45.4	13.5	1679	3.4	2.63

- 1) FULL HEIGHT STEP BOLTS
- 2) ANTENNA FEED LINES RUN INSIDE POLE



PRELIMINARY - NOT FOR CONSTRUCTION

ESTIMATED STRUCTURE WEIGHT= 35.21 Kips

Tower Ventures

Cheshire Police, CT

167.50 MONOPOLE

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DATE: 10Jul03

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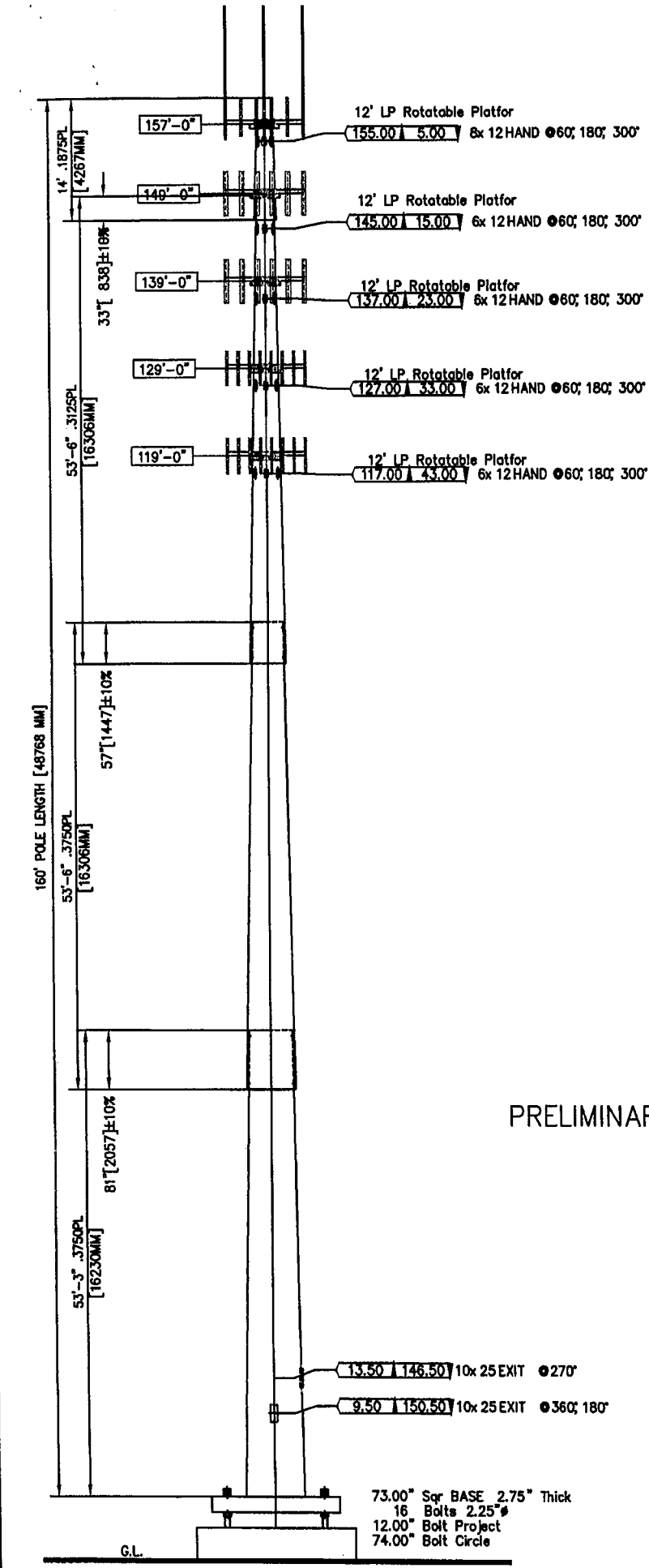
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13 Forest Drive
East Kingston, NH 03827
Phone 603-758-1013

E-mail: Kevin.Mosher@csquaredsystems.com

Calculated Radio Frequency Emissions

Site Name: Cheshire, CT

Tower Ventures



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1. Introduction

The purpose of this report is to investigate compliance with applicable federal, state and local EMF regulations for a telecommunications facility at 500 Highland Avenue in Cheshire CT.

Power density values provided are values at the base of the tower. These calculations assume that the antennas are operating at 100 percent capacity, that all antenna channels are transmitting simultaneously, and that the radio transmitters are operating at full power. Obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. These assumptions result in calculated values that will be significantly higher than the actual signal levels will be from the finished installation.

The results will be listed as a percentage of current Maximum Permissible Exposure (% MPE) limits as listed in the FCC OET Bulletin 65 Edition 97-01. Public exposure to radio frequencies is regulated and enforced in units of milliwatts per square centimeter (mW/cm^2). The number of mW/cm^2 emitted is called the power density.

2. Site Data

Existing and proposed antenna information is shown in Table 1 below.

Carrier	Freq (MHz)	Antenna Centerline (Feet)	Total Transmit Power (Watts ERP)
Emergency Services	450	167.5	1200
Sprint PCS	1900	157.5	2750
T-Mobile	1900	147.5	1796
AT&T	1900	137.5	3000
Cellular	869	127.5	371
iDEN	851	117.5	400

Table 1: Proposed Antenna Information

3. RF Exposure Prediction Methods

Power density is calculated in accordance with FCC OET Bulletin 65 formula (6):

$$\text{Power Density} = \frac{2.56*(1.64)*ERP}{(4*\pi *R^2)}$$

Where:

ERP = Effective Radiated Power

R = Radial distance = $\sqrt{(H^2 + V^2)}$

H = Horizontal distance from antenna

V = Vertical distance from antenna*

*6 foot offset used

4. FCC Guidelines for Evaluating RF Radiation Exposure Limits

The Federal Communications Commission (FCC) OET Bulletin 65, Edition 97-01 dated August 1997 outlines requirements for radio frequency exposure and provides guidelines for determining whether proposed or existing transmitting facilities, operations or devices comply with limits for radio frequency exposure. These requirements include limits for Maximum Permissible Exposure (MPE) for transmitters operating between 300 kHz and 100 GHz. The FCC MPE limits are based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP), the exposure limits developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI).

Radiation can be broadly broken into two groupings; ionizing and non-ionizing. Ionizing means that there is enough energy to cause electrons to be stripped from atoms "ionizing" the atom and changing its characteristics. Non-ionizing radiation means that there is not enough energy to create ions. It only causes vibrations or oscillations of the atoms, which results in heat but does not strip electrons from atoms. Non-ionizing radiation is usually absorbed as heat in the human body and its parts. Ionizing radiation occurs at frequencies exceeding 1,000,000,000 MHz. All PCS and Cellular providers operate within a much lower frequency band than those associated with ionizing.

Based on thorough scientific review of the studies and papers, various groups have developed exposure limits below which no health effects are known to occur. Two of the primary groups in the United States are the Institute of Electrical and Electronic Engineers (IEEE) and the National Council on Radiation Protection and Measurement (NCRP). As mentioned previously, the FCC limits are based on exposure limits recommended by these groups. The limits incorporate a safety factor of 50 for the general public populations. This means that the exposure limit set is at least 50 times below the level where any changes are noticeable. The impact of human exposure to levels equivalent to the limit set by the FCC is practically indistinguishable from the impact of normal ambient temperature variation, exposure to the sun, exercise, etc.

Attachment A outlines maximum exposure limits as outlined in OET Bulletin 65. As shown in this attachment, each frequency band has different exposure limits, requiring power density to be reported as a Percentage of Maximum Permissible Exposure (MPE) when dealing with carriers transmitting in different frequency bands.

5. Calculation Results

The calculated results indicate that radio frequency emissions expected from this installation are significantly less than the regulatory emission limits for public exposure.

Table 2 below shows contribution of the percentage of Maximum Permissible Exposure of the FCC limit for each operator for the general public as outlined in FCC OET Bulletin 65 Edition 97-01.

Technology	Max % Limits
Emergency Sevices	5.52
Sprint PCS	4.31
T-Mobile	3.23
AT&T	6.25
Cellular - CDMA	1.56
iDEN	2.04
Total	17.39

Table 2: Percent of Maximum Permissible Exposure

6. Conclusion

This report details percentage of FCC limits using measured values for the existing antennas and calculated values for the proposed antennas in Cheshire, CT. As can be seen from the above tables, the expected aggregate radio frequency emissions are well below the regulatory emission limits for general public exposure, even when using very conservative assumptions. The highest aggregate percent Maximum Permissible Exposure at the base of the tower is 17.39% of the FCC limits for the general public as outlined in FCC OET Bulletin 65 Edition 97-01. Power density decreases by the square of the distance from the source (every time the distance is doubled, the power density is reduced by a factor of four). Therefore, even at small distances from the tower, power density values will be significantly lower than the levels at the base of the tower.

7. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate. The calculations were computed in accordance with and using techniques in compliance with ANSI/IEEE Std. C95.3, ANSI/IEE Std. C95.1 and FCC OET Bulletin 65 Edition 97-01.

Kevin Mosher

Kevin Mosher
C Squared Systems, LLC

7/10/03

Date

References

OET Bulletin 65 - Edition 97-01 - August 1997 Federal Communications Commission Office of Engineering & Technology

ANSI C95.1-1982, American National Standard Safety Levels With Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 300 kHz to 100 GHz. IEEE-SA Standards Board

IEEE Std C95.3-1991 (Reaff 1997), IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave. IEEE-SA Standards Board

Attachment A - Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f ²)	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

f = frequency in MHz

*= Plane-wave equivalent power density

Note 1: Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

Note 2: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.