

RESOLUTION NO. 2010-629

Adopted by the Sacramento City Council

November 4, 2010

ADOPTING FINDINGS OF FACT AND APPROVING THE AT & T ODD FELLOWS CEMETERY MONOPINE PROJECT (P10-001)

BACKGROUND

- A. On August 12, 2010, the City Planning Commission conducted a public hearing on, and approved with conditions the AT & T Odd Fellows Cemetery Monopine.
- B. On August 23, 2010, a third party filed a timely appeal of the Planning Commission's action to the City Council.
- C. On November 4, 2010, the City Council conducted a public hearing, for which notice was given pursuant Sacramento City Code Section 17.200.010(C)(1)(d), and received and considered evidence concerning the AT & T Odd Fellows Cemetery Monopine.

BASED ON THE FACTS SET FORTH IN THE BACKGROUND, THE CITY COUNCIL RESOLVES AS FOLLOWS:

- Section 1. Based on the verbal and documentary evidence received at the hearing on the AT & T Odd Fellows Cemetery Monopine, the City Council approves the Project entitlements based on the findings of fact and subject to the conditions of approval as set forth below.
- Section 2. The City Council approves the Project entitlements based on the following findings of fact:
 - A. Environmental Determination: The **CEQA Categorical Exemption** for the Project have been adopted by Resolution No.2010-630.
 - B. The Special Permit to construct a 104-foot Monopine (pine tree monopole) at the Odd Fellows Cemetery in the Single-Family Residential (R-1) Zone is hereby approved based upon the following findings:
 - 1. Granting the Special Permit is based upon sound principles of land use in that:
 - A. The facility will improve telecommunications coverage for the area;
 - B. The proposed monopole complies with the intent of the Guidelines for Telecommunications Facilities to create "invisible" cellular facilities in that the monopine design is appropriate the subject location that has a number of mature trees.

- C. The proposed location allows the monopine to be of such height that future collocation opportunities will be available.
2. Granting the Special Permit would not be detrimental to the public welfare nor result in the creation of a public nuisance in that:
- A. Installation of the monopole and antennas will be subject to building permits;
 - B. The monopole will be located approximately 100 feet from the nearest residential use and has been designed to mimic the existing trees on the subject site.
 - C. The monopole and equipment shelter will be within a fenced area restricted from easy public access; and
 - D. The electronic equipment will be within an enclosed shelter with locked access.
3. The proposed project is consistent with the General Plan Policy of promoting and supporting communications facilities within the City as well as the Guidelines for Telecommunications Facilities (GP Section 7-10).

Conditions Of Approval

- B. The Special Permit to construct a 104-foot Monopine (pine tree monopole) at the Odd Fellows Cemetery in the Single-Family Residential (R-1) Zone is approved subject to the following conditions:
 - B1. The applicant shall obtain all necessary building and/or encroachment permits prior to commencing construction.
 - B2. The facility shall be constructed in substantial conformance to the submitted plans. Any modification to the project shall be subject to review and approval by Planning staff prior to the issuance of building permits.
 - B3. The applicant shall obtain all necessary federal telecommunications permits prior to commencing construction.
 - B4. Size and location of the panels shall conform to the plans submitted. The panels shall be painted to match the monopole. The applicant shall use non-reflective paint on all equipment on the tower to prevent glare. Each new item on the tower including cables, brackets, supports, etc. shall be painted to match the monopole.
 - B5. The height of the antennas and related support structure shall be limited to 104 feet with the top of the antennas not exceeding 95 feet.

- B6. Full bark cladding shall be provided for the monopine as noted on the attached plans.
- B7. The minimum height for attached needles shall be no greater than 20' as noted on the attached plans.
- B8. Should the applicant ever discontinue using the tower for wireless services then the applicant shall remove all equipment on the tower and the equipment cabinets within six months of termination.
- B9. KNOX access shall be provided, per Fire Department.
- B10. Any graffiti and garbage/trash shall be removed in a timely manner.
- B11. The chain link fence for the equipment enclosure shall have vinyl slats painted to match the existing building facade. It shall remain graffiti free and in sound structural condition for the duration of the operation of the facility. No barbed wire or concertina wire shall be permitted. Removal of graffiti and /or repair of damage to the monopole or fencing are the responsibility of AT & T.
- B12. The applicant shall be responsible for all maintenance of the tower, antennas, and associated equipment and shall maintain such equipment so as to be consistent with the approved plans.

Adopted by the City of Sacramento City Council on November 4, 2010 by the following vote:

Ayes: Councilmembers Cohn, Fong, Hammond, McCarty, Pannell, Sheedy, Tretheway, Waters, and Mayor Johnson.

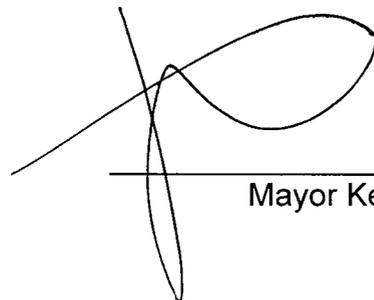
Noes: None.

Abstain: None.

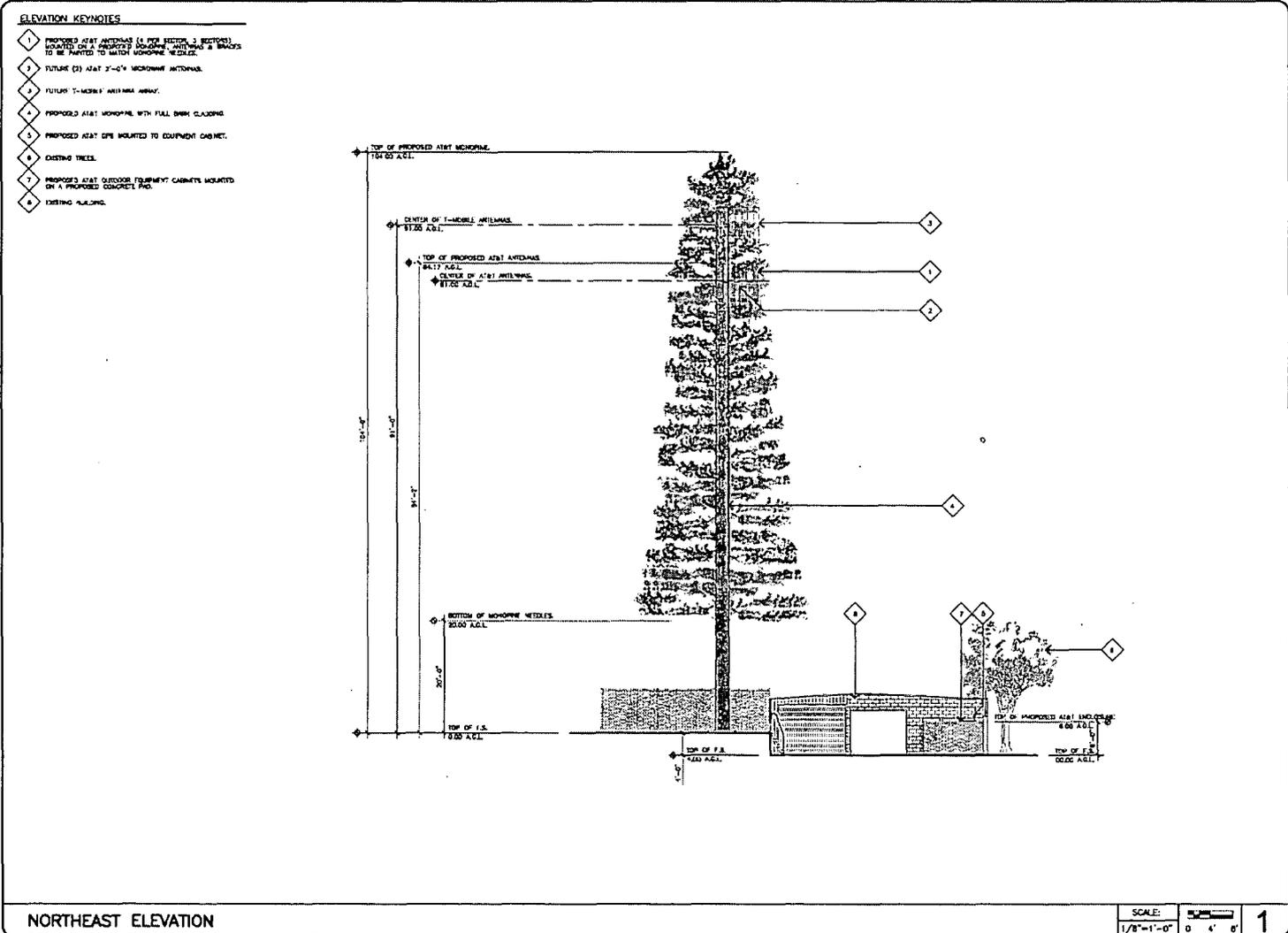
Absent: None.

Attest:


Shirley Concolino, City Clerk



Mayor Kevin Johnson



JRA
Jeffrey R. Anderson, Inc.

Architectural & Engineering Services
2 New Avenue Plaza, Suite 100
Sacramento, California 95811
Phone: (916) 486-8929
Fax: (916) 486-2611

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STAMP
Professional Engineer
No. 14093
State of California
Civil Engineering

PREPARED FOR
at&t
4430 Riverwood Drive
Sacramento, California 95808

APPROVALS

DATE	DATE

PROJECT NAME
S. RIVER

PROJECT NUMBER
CH1412-A

7750 HORTON ROAD
SACRAMENTO, CALIFORNIA 95811
SACRAMENTO COUNTY

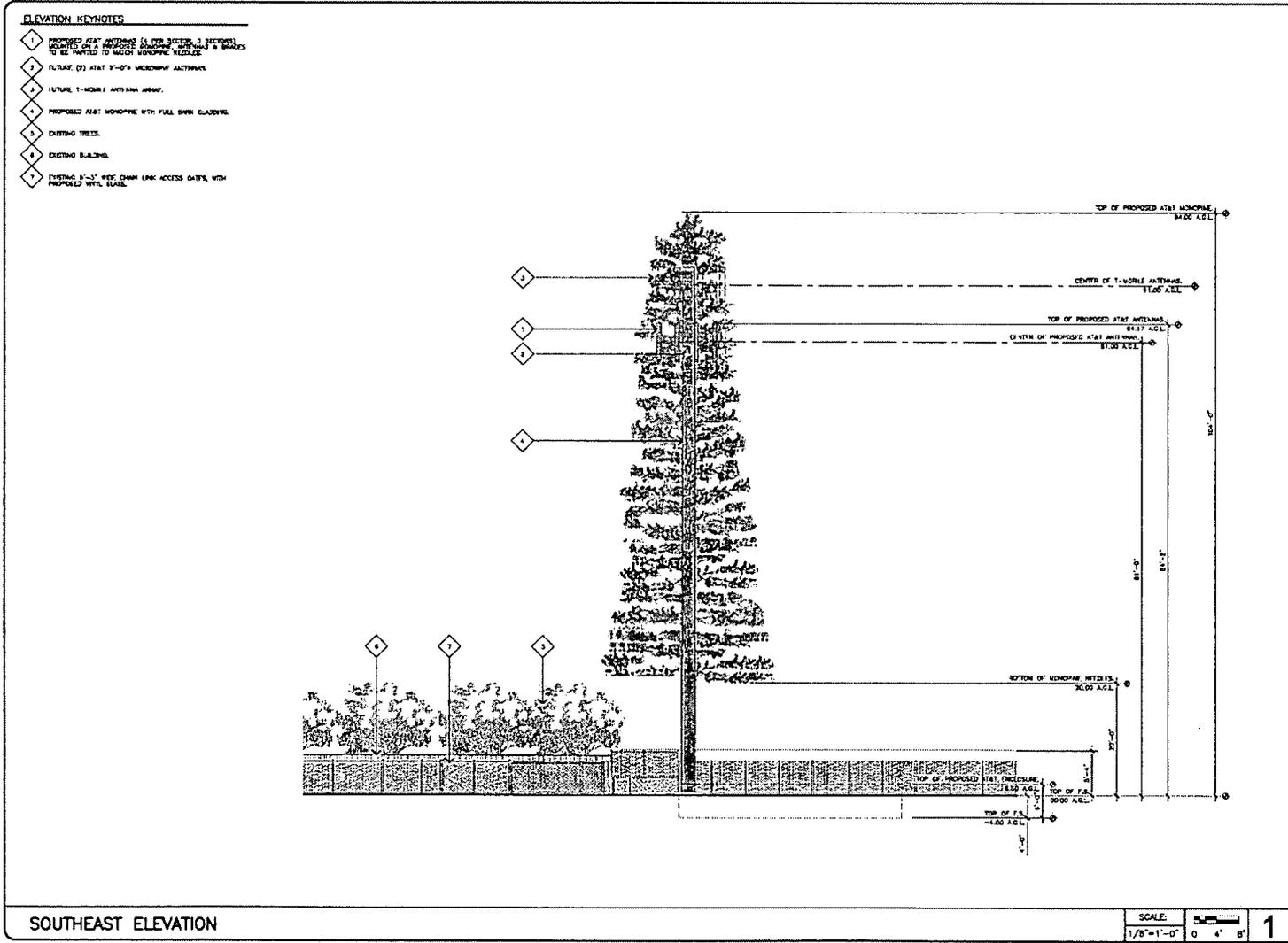
DRAWING DATE
07/27/10 SON 20'S (09)

THIS DRAWING IS A PART OF PROJECT NO. CH1412-A
SACRAMENTO COUNTY

SHEET TITLE
SOUTHWEST ELEVATION

A-2

Exhibit C – Northeast Elevation



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Jeffrey Rowe & Associates, Inc.
Architects & Environmental Planners
3 San Jacinto Plaza, Suite 100
Sacramento, California 95811
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 PREPARED FOR

 4425 Riverbank Drive
 Sacramento, California 95825

APPROVALS

R.F. ENGINEER	DATE
SITE AGG. & DESIGN	DATE
INVESTIG. CIV.	DATE
AT&T CIV.	DATE
CIVIL APPROVAL	DATE

PROJECT NAME
S. RIVER

PROJECT NUMBER
CH1412-A

2776 RIVERBANK BOULEVARD
SACRAMENTO, CALIFORNIA 95825
SACRAMENTO COUNTY

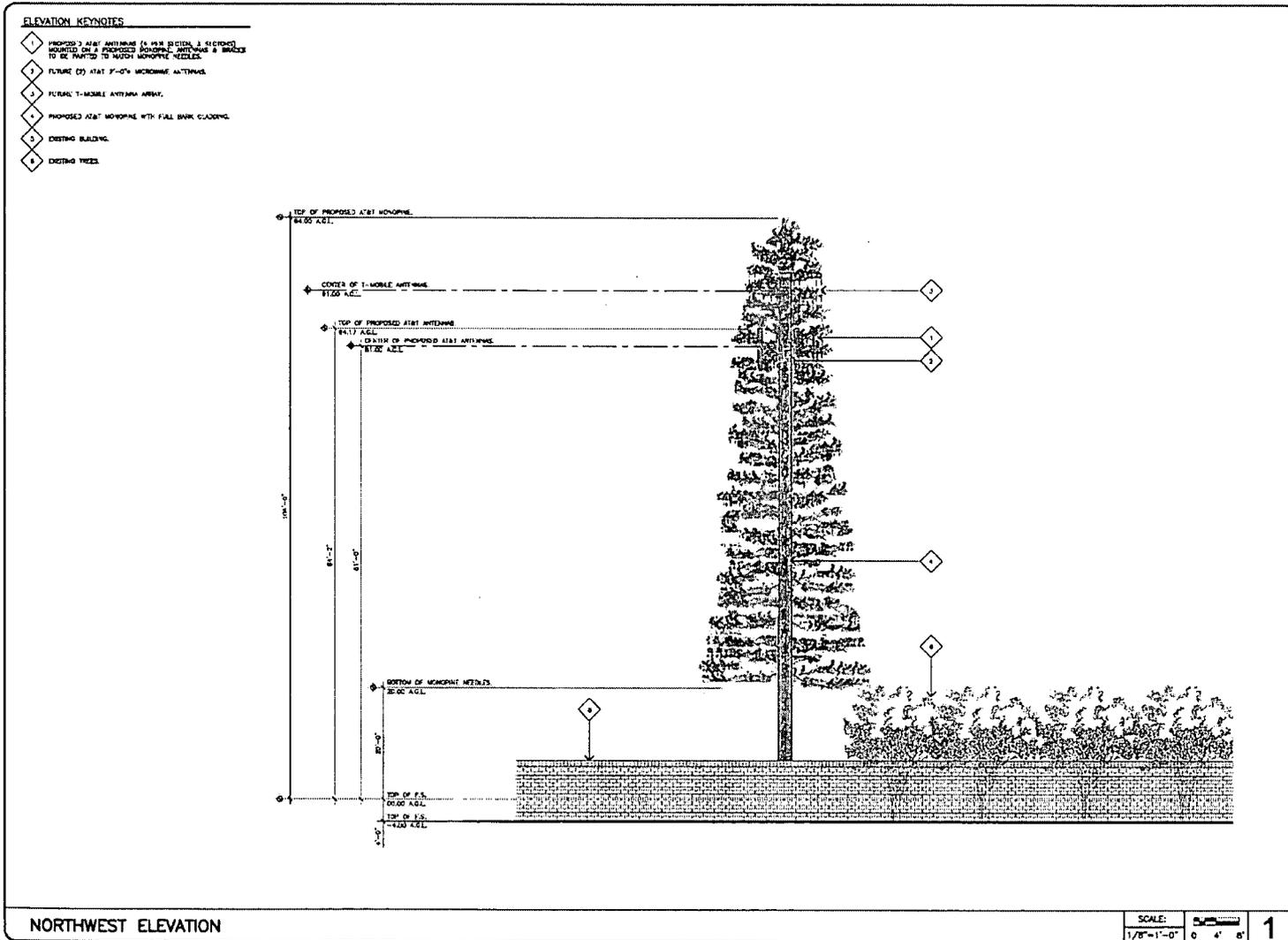
DRAWING DATES
02/27/10 BOX 723 (P4)

NOTES REVISION LEVEL 1.2

SHEET FILE
SOUTHEAST ELEVATION

A-3

Exhibit D – Southeast Elevation



JRA
 Jeffrey Rowe & Associates, Inc.
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PREPARED FOR

 4433 Riverwood Drive
 Placerville, California 95268

APPROVALS

RF, ENGINEER	DATE
SITE MOD. & ZONING	DATE
DESIGNER/DR	DATE
AT&T CW	DATE
OWNER APPROVAL	DATE

PROJECT NAME
 S. RIVER

PROJECT NUMBER
 CN1412-A

2780 RIVERSIDE BOULEVARD
 SACRAMENTO, CALIFORNIA 95834
 SACRAMENTO COUNTY

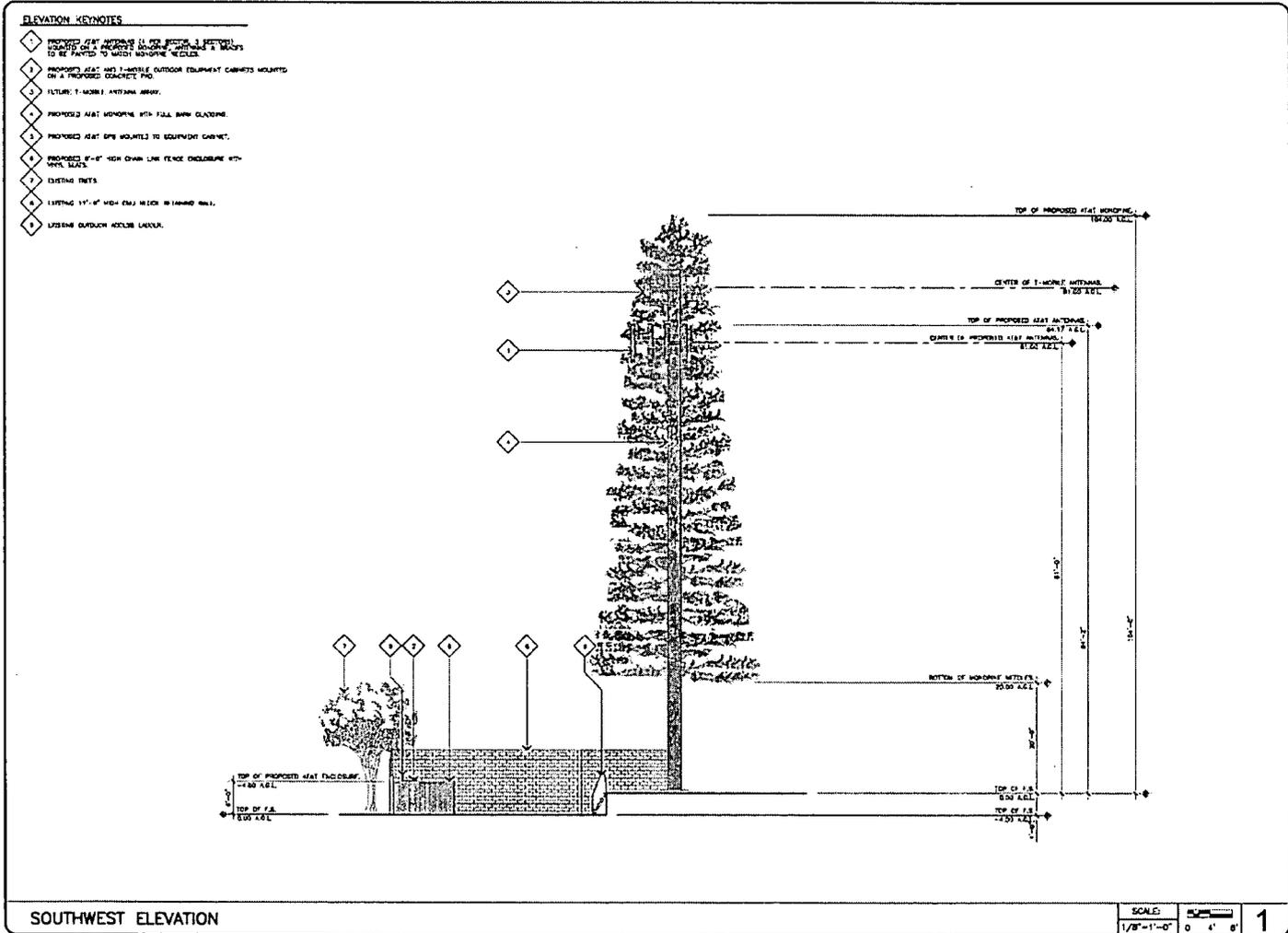
DRAWING DATE
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REVISION LEVEL 1.2

SHEET TITLE
 NORTHWEST ELEVATION

A-4

Exhibit E – Northwest Elevation



SCALE: 1/8"=1'-0" 0 4' 8' 1

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 An Architect & Landscape Architect
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STAMP


PREPARED FOR

 4430 Roseville Circle
 Roseville, California 95668

APPROVALS

PE, ENGINEER	DATE
PE, ARCH & EXTERIOR	DATE
ENGINEER CIVIL	DATE
PLAT CIVIL	DATE
OWNER APPROVAL	DATE

PROJECT NAME
S. RIVER

PROJECT NUMBER
CN1412-A

3726 RIVERSIDE HOLLOW ROAD
 SACRAMENTO, CALIFORNIA 95818
 SACRAMENTO COUNTY

DRAWING DATE
 01/27/10 10:58 778 (PM)

#25 REVISION LEVEL 1.0

SHEET TITLE
NORTHEAST ELEVATION

A-5

Exhibit F – Southwest Elevation

Aerial photograph showing photosimulation viewpoints.

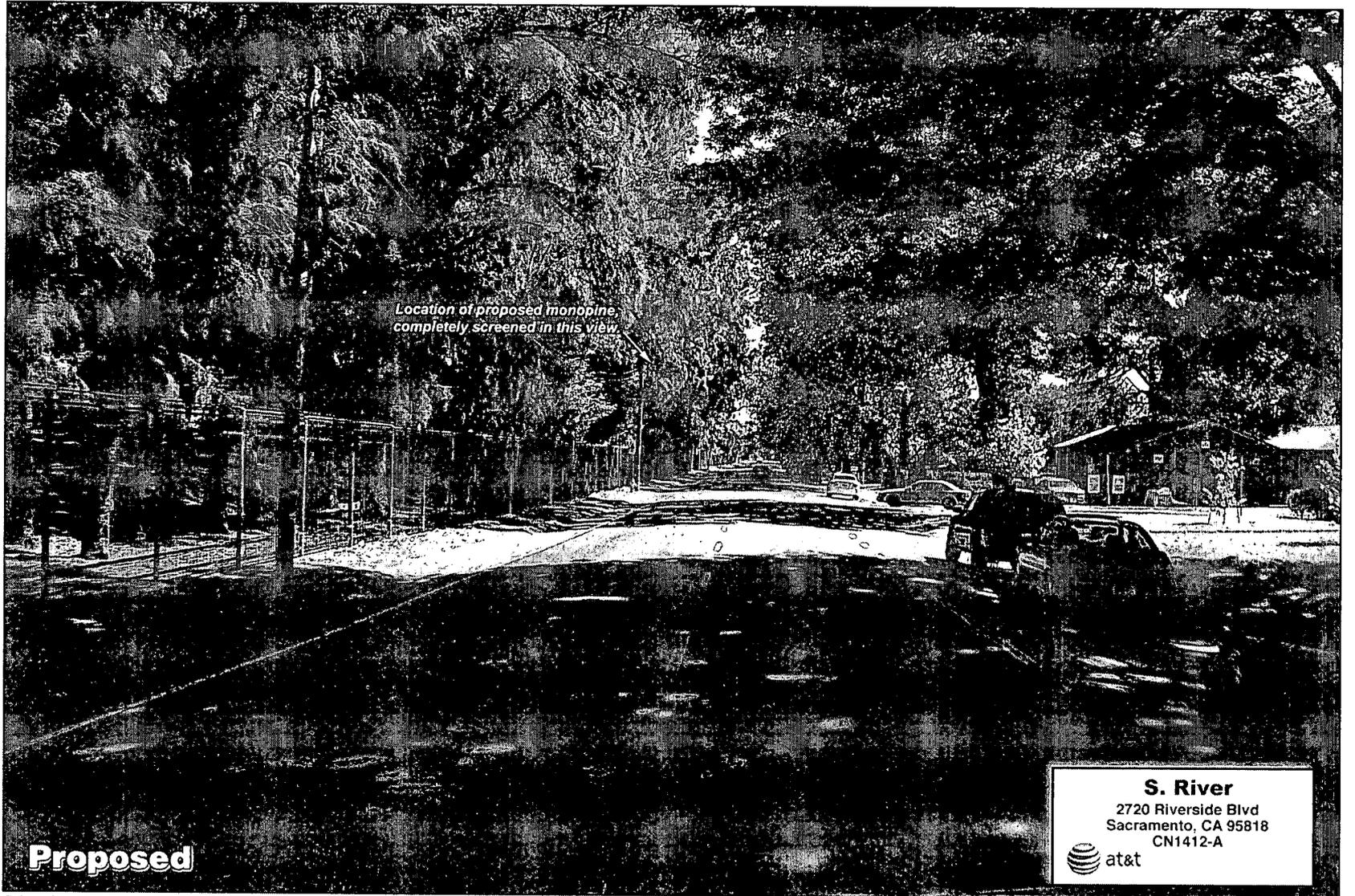


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Cultural Concepts & Graphics, Inc.

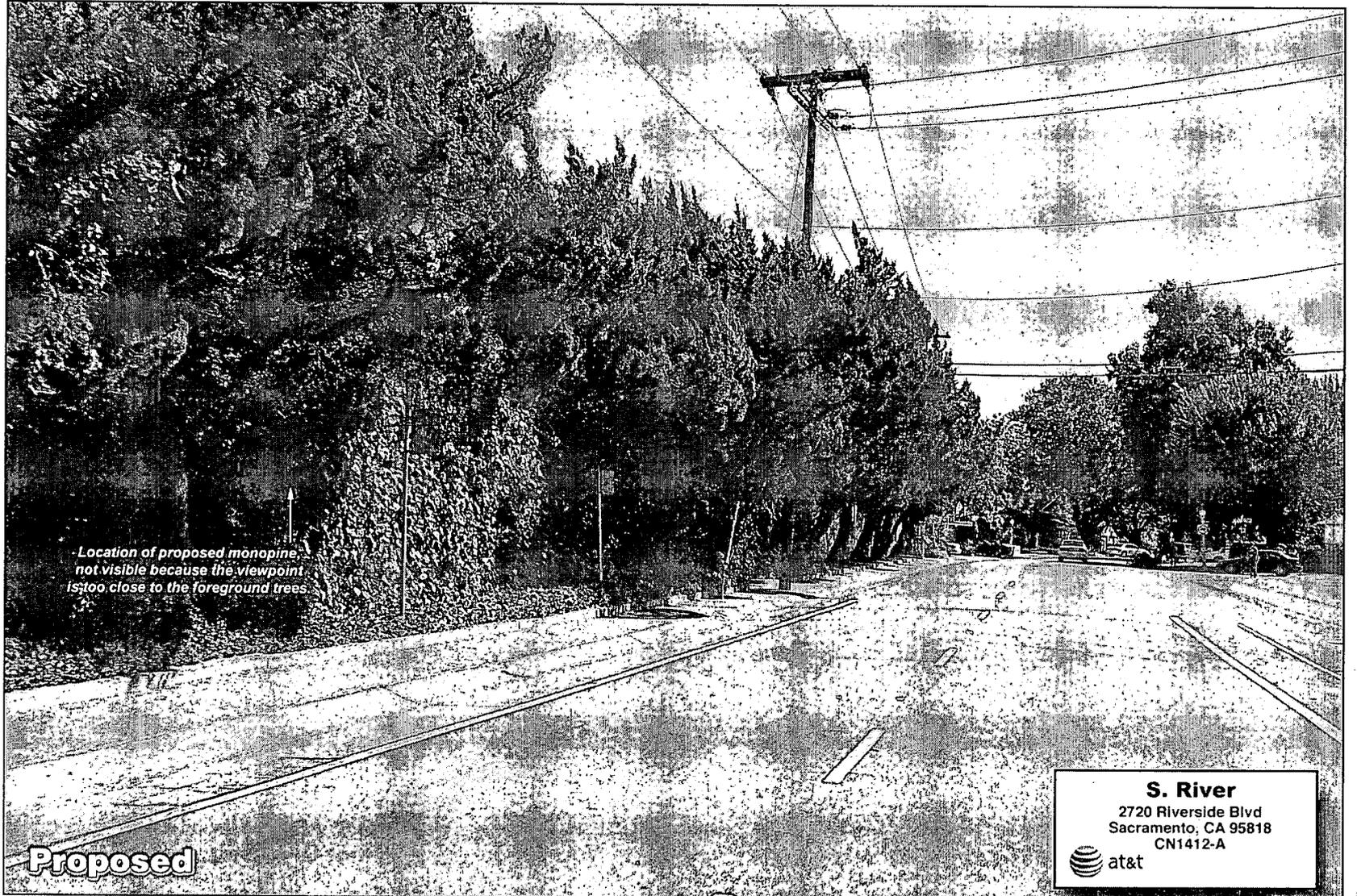
Exhibit H - Photosimulations

Photosimulation of view looking south along Muir Way.



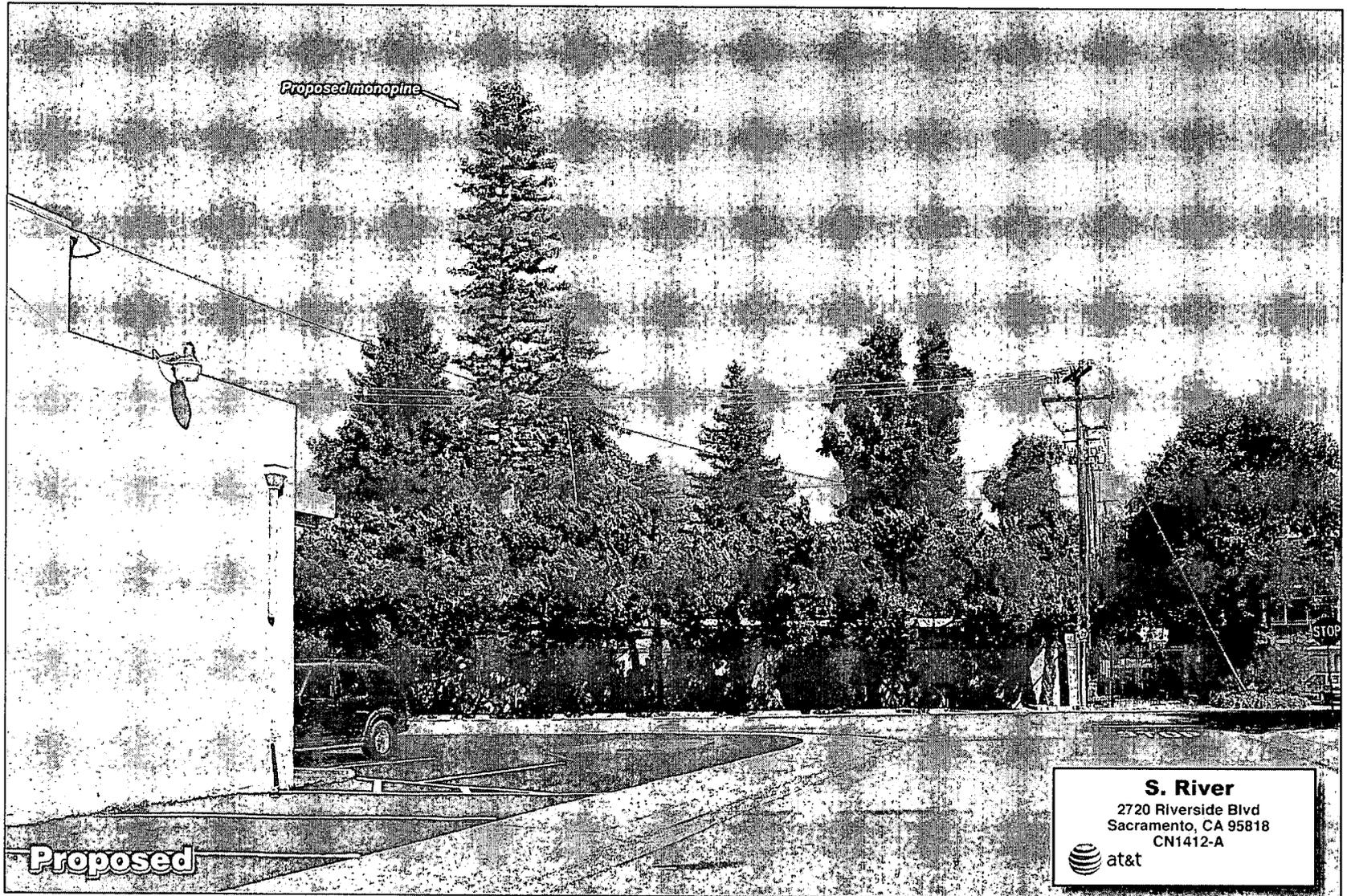
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Photosimulation of view looking southeast from Muir Way.



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Photosimulation of view looking east from McClatchy Way towards Muir Way, south of the market.

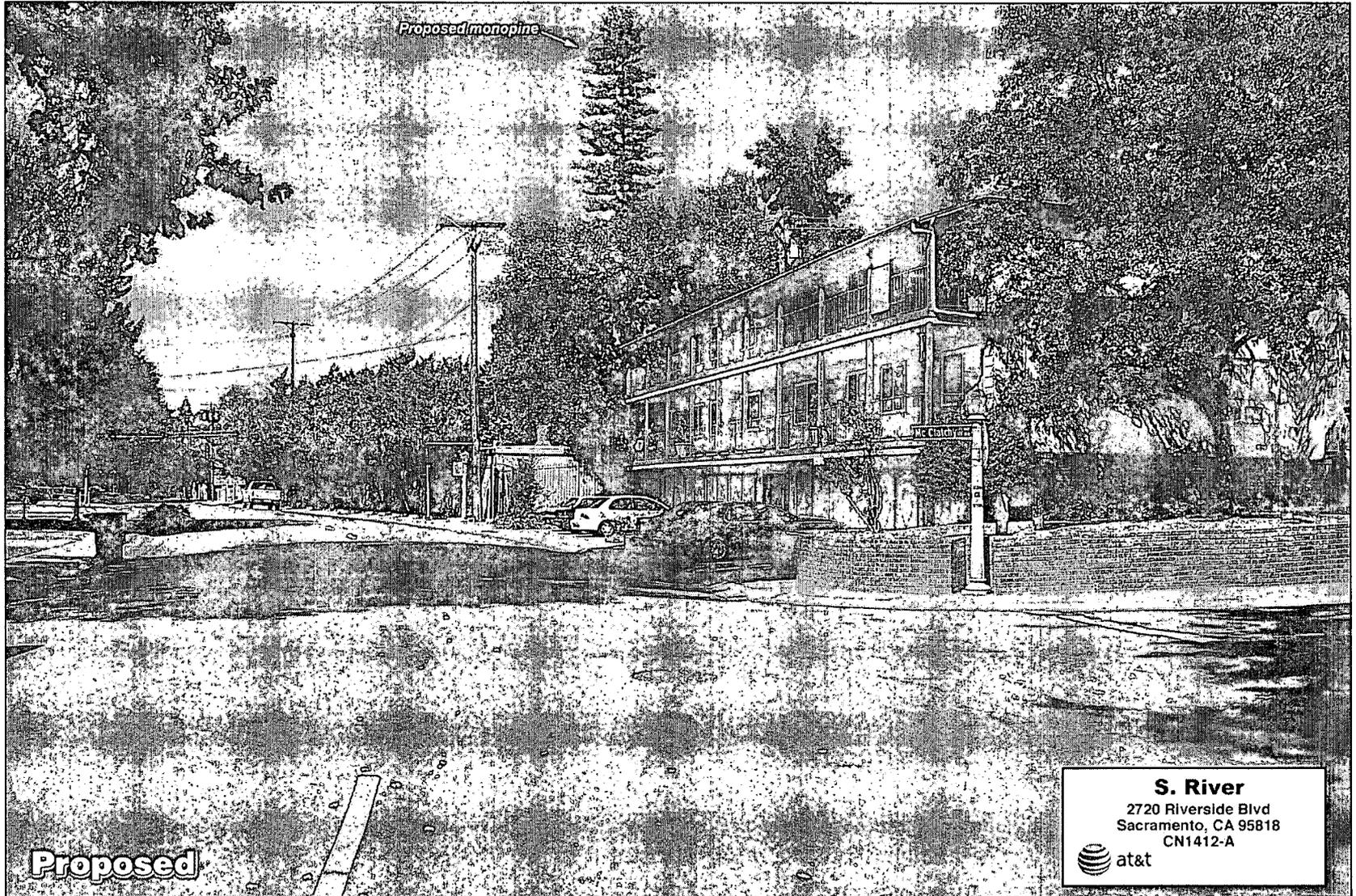


Resolution 2010-629

November 4, 2010

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Photosimulation of view looking north along northbound Muir at McClatchy Way.

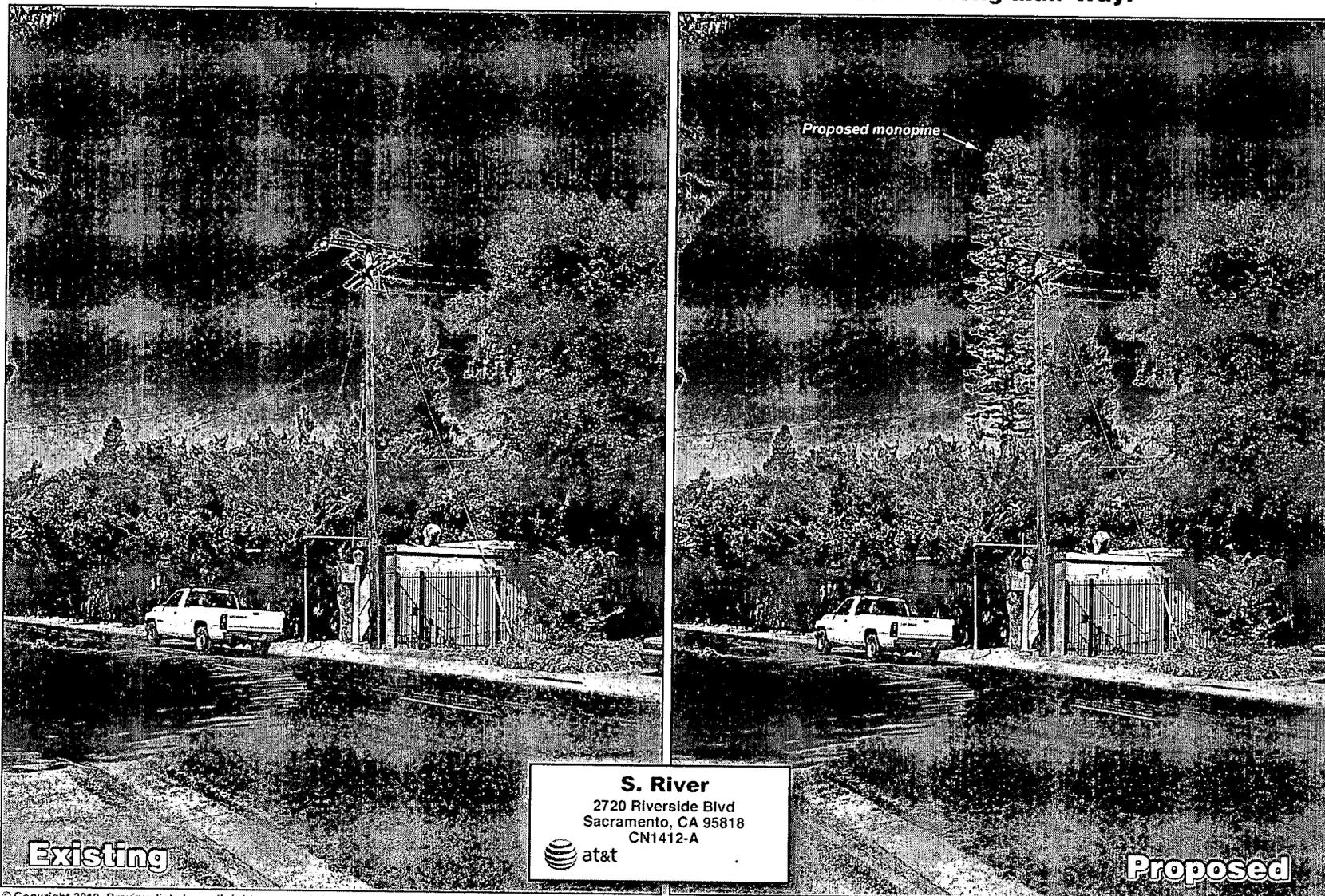


S. River
 2720 Riverside Blvd
 Sacramento, CA 95818
 CN1412-A

at&t

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...The Computer Graphics Firm

Photosimulation of view looking north from the sidewalk along Muir Way.



Existing

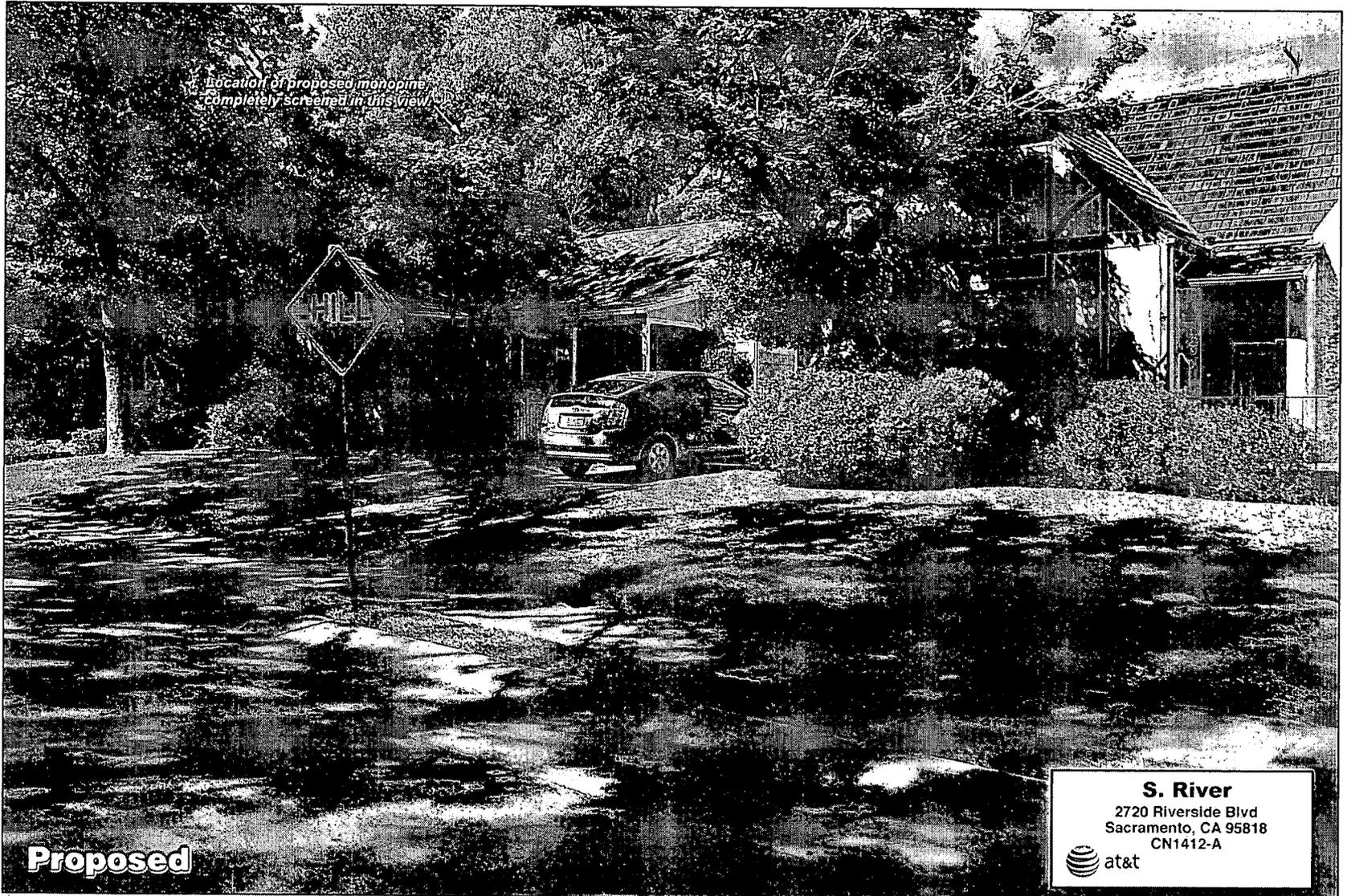
S. River
 2720 Riverside Blvd
 Sacramento, CA 95818
 CN1412-A



Proposed

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Photosimulation of view looking northwest from McClatchy Way, east of Muir Way.



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Radio Frequency Analysis

AT&T Mobility

Site # CN1412

"S. River"

2720 Riverside Boulevard,

Sacramento, CA 95818

By: Evan Wappel

Last Update: Devan Knight

Date: 7/28/2010



Report Summary

Based upon information provided by AT&T Mobility and the design engineer, and using the calculated method for determining RF field strength, it is the engineer's opinion that the proposed AT&T Mobility site to be located at 2720 Riverside Boulevard, Sacramento, CA 95818 will comply with the FCC's current prevailing standard for limiting human exposure to RF energy.

Due to the mounting method utilized, the general public would not normally be able to approach the antennas. Therefore, no significant impact on the general population is expected. The calculated electromagnetic field strength level in publicly accessible areas is less than the existing standard allows for exposure of unlimited duration. Additionally, due to the mounting method used, no significant impact on the environment is expected.

For personnel who work within 11' of the face of an antenna, a training program in exposure to RF fields is recommended. Maintenance personnel should be instructed to contact the appropriate Carrier prior to working in front of an antenna.

Recommended Signage

There is no RF caution signs required at the site.

Background

Evan Wappel is the Market RF Safety Coordinator for AT&T Mobility and is responsible for conducting a Radio Frequency (RF) electromagnetic analysis for the AT&T Mobility site to be located at 2720 Riverside Boulevard, Sacramento, CA 95818. This analysis consists of a review of the proposed site conditions, calculation of the estimated RF field strength of the antennas, and the provision of a comparison of the estimated field strength with the Federal Communication Commission (FCC) recommended guidelines for human exposure to RF electromagnetic fields.



Site Description

Based upon the information provided by AT&T Mobility, 12 AT&T Mobility panel antennas are mounted on a monopine. The antennas will be mounted approximately 78' (to bottom of antennas) above ground level. The antennas will be oriented such that the main lobes are oriented toward the horizon. Normal public access to the front of the antennas is not expected due to the mounting location and method utilized. Occupational access to the front of the antennas is not normally expected.

RF Field Strength Calculation Methodology

A generally accepted method is used to calculate the expected RF field strength. The method uses the FCC's recommended equation¹ which predicts field strength on a worst case basis by

$$\text{Equation 1} \quad S = \frac{(2)^2 PG}{4\pi R^2} = \frac{PG}{\pi R^2} = \frac{EIRP}{\pi R^2}$$

doubling the predicted field strength. The following equation is used to predict maximum RF field strength:

Where:

S = power density

P = power input to the antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

¹ Reference Federal Communication Commission Office of Engineering Technology Bulletin 65



Cumulative Study

The ground level effect of the AT&T Mobility and other carriers' emissions was calculated using a maximum ERP of 349 watts. Results were calculated for a height of 6' above ground level. Using these factors, the maximum calculated AT&T Mobility fields at ground level are 0.15% of the existing standard for general population uncontrolled exposure. The additional antennas are for evaluation purposes only and the calculations for the two additional carriers are not based on actual data for any carrier.

See Table 1 for the FCC's guidelines on Maximum Permissible Exposure (MPE). Note that the RF ranges referenced for this analysis are the ranges of 300 – 1500 Mhz, and 1500 – 100,000 Mhz shown in Table 1, which is included in Appendix A.

Exposure Environments

The FCC guidelines incorporate two separate tiers of exposure limits that are dependent on the situation in which the exposure takes place and/or the status of the individuals who are subject to exposure. The decision as to which tier applies in a given situation should be based on the application of the following definitions.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

General population/uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public always fall under this category when exposure is not employment-related.



For purposes of applying these definitions, awareness of the potential for RF exposure in a workplace or similar environment can be provided through specific training as part of a RF safety program. Warning signs and labels can also be used to establish such awareness as long as they provide information, in a prominent manner, on risk of potential exposure and instructions on methods to minimize such exposure risk. For example, a sign warning of RF exposure risk and indicating that individuals should not remain in the area for more than a certain period of time could be acceptable.

Another important point to remember concerning the FCC's exposure guidelines is that they constitute *exposure* limits (not *emission* limits), and they are relevant only to locations that are *accessible* to workers or members of the public. Such access can be restricted or controlled by appropriate means such as the use of fences, warning signs, etc., as noted above. For the case of occupational/controlled exposure, procedures can be instituted for working in the vicinity of RF sources that will prevent exposures in excess of the guidelines. An example of such procedures would be restricting the time an individual could be near an RF source or requiring that work on or near such sources be performed while the transmitter is turned off or while power is appropriately reduced.

Qualifications of Reporting Engineer

Mr. Wappel has been involved in the analysis of RF emissions since 1999. He has designed numerous RF systems including both site design and RF system design. He is an Electrical Engineer, and all contents of this report are true and correct to the best of his knowledge.

Signed:  Date: 7/28/2010
Evan Wappel, BSc,EE



APPENDIX A Term Definitions

Exposure Exposure occurs whenever and wherever a person is subjected to electric, magnetic or electromagnetic fields other than those originating from physiological processes in the body and other natural phenomena.

Exposure, partial-body. Partial-body exposure results when RF fields are substantially nonuniform over the body. Fields that are nonuniform over volumes comparable to the human body may occur due to highly directional sources, standing-waves, re-radiating sources or in the near field.

General population/uncontrolled exposure. For FCC purposes, applies to human exposure to RF fields when the general public is exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public always fall under this category when exposure is not employment-related.

Maximum permissible exposure (MPE). The rms and peak electric and magnetic field strength, their squares, or the plane-wave equivalent power densities associated with these fields to which a person may be exposed without harmful effect and with an acceptable safety factor.

Occupational/controlled exposure. For FCC purposes, applies to human exposure to RF fields when persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see definition above), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.



Table 1
LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

(A) Limits for Occupational/Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time (E ² , H ² or S) (minutes)
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

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time (E ² , H ² or S) (minutes)
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

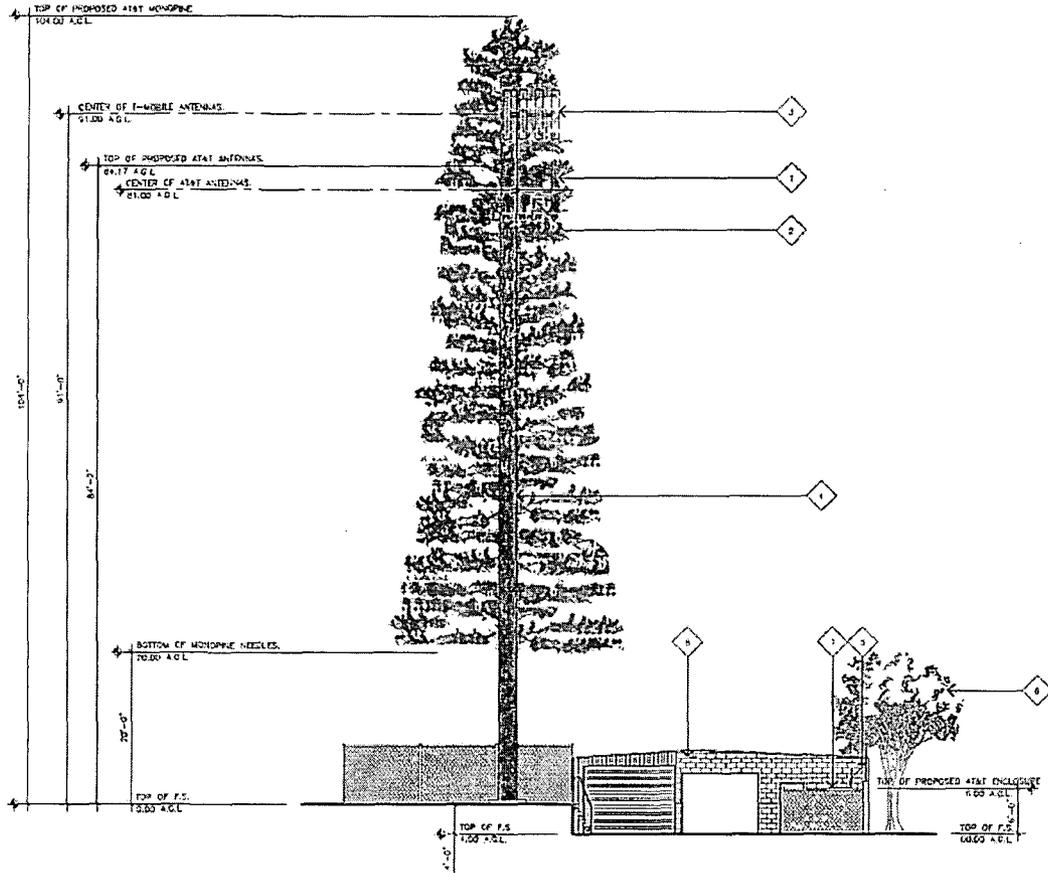
*Plane-wave equivalent power density

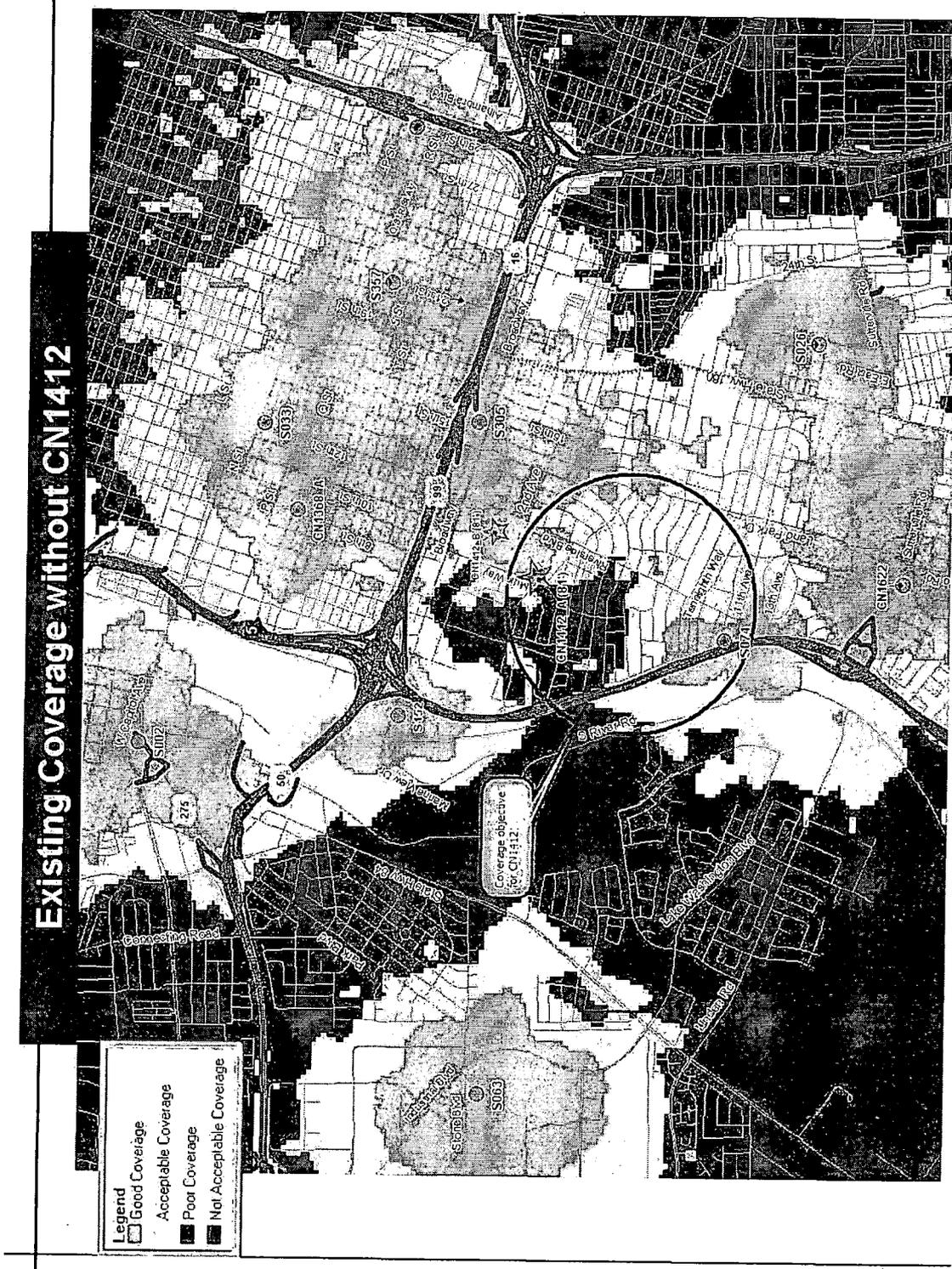
NOTE 1: **Occupational/controlled** limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in 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 can not exercise control over their exposure.



Drawing of site layout:





Existing Coverage with CN1412A_81'

Legend

- Good Coverage
- Acceptable Coverage
- Poor Coverage
- Not Acceptable Coverage



Existing Coverage with CN1412B_81'

