



## DEPARTMENT OF COMMUNITY DEVELOPMENT SERVICES

*Planning Division*

### **m e m o r a n d u m**

**TO:** The Urbana Plan Commission

**FROM:** Paul Lindahl, Planner I

**DATE:** April 11, 2006

**SUBJECT:** Plan Case No. 1986-SU-06, Request for a Special Use Permit to install an *Antenna with Tower* within 250 feet of a residential zone or land use at 1115 W. Church Street in Urbana's IN, Industrial Zoning District.

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### **Introduction**

The petitioners, CellNet Technology, Inc., propose to install a telecommunications tower at an IN, Industrial zoned property owned by Ameren / Illinois Power. The tower will consist of a 100 foot tall wooden pole with four paddle type cell antennas mounted on it. The installation will be used by Ameren / Illinois Power to remotely communicate with gas and electrical service meter reading equipment installed at customer houses and businesses. The proposed location is approximately 122 feet from the nearest residentially zoned property line. Urbana Zoning Ordinance Article V, Section V-11.Q.1.c, allows *antennas with towers* in the IN Zoning District within 250 feet of a residential zone or land use under the provisions of Special Use Permit review. Pursuant to the Urbana Zoning Ordinance, the Plan Commission must recommend approval or denial of the Special Use Permit and forward it to City Council for action.

### **Background**

Ameren / Illinois Power is introducing the use of cell phone type transmitter and receiver technology for the purpose of remotely reading meters at customer locations. Gas and electrical meters will have an automated reader device installed that will transmit information to antennas mounted on regular power poles around the community. These local nodes will then transmit to the "takeout point" tower which is the subject of this case. The subject tower is the only one proposed in Urbana. The only other tower is located in northwest Champaign. From these towers the signals will be transferred via ground telephone lines to the CellNet system center in Kansas City. The proposed tower will function only as a receiving station and will not have any transmitting capability.

**Description of the Site and Surrounding Properties**

The proposed location is at the Southeast corner of Church Street and Goodwin Avenue within a fenced property containing an electrical substation owned by Illinois Power. The immediate area includes commercial, institutional, and residential uses (see aerial photograph exhibit). To the North across Church Street are houses. To the South is the railway right-of-way and Odman-Hecker Co. hardware suppliers. West across Goodwin Avenue is Barber & DeAtley general contractors offices. To the Southwest is a parking lot owned by Provena Covenant Hospital. To the East is the Illinois American Water Company’s, water treatment facility.

The following is a summary of surrounding zoning and land uses for the subject site:

**Zoning and Land Use Table\***

<i>Location</i>	<b>Zoning</b>	<b>Existing Land Use</b>	<b>Comprehensive Plan Future Land Use</b>
<b>Subject Property</b>	IN, Industrial	Electrical substation	Institutional
<b>North and Northwest</b>	R-2, Single Family Residential	Houses and vacant property	Residential
<b>South</b>	IN, Industrial, then B-3, General Business	Railway then Hardware Supply Warehouse / Offices	Commercial
<b>Southwest</b>	B-3, General Business	Hospital Parking Lot	Institutional
<b>West</b>	IN, Industrial	Contractors Warehouse / Offices	Residential
<b>East</b>	IN, Industrial	Water treatment plant	Institutional

\* (Please refer to the attached Zoning, Existing Land Use, and Future Land Use maps for further information.)

**Guidelines for Review of Telecommunications Facilities, Tower, and Antennas**

Urbana Zoning Ordinance Section V-11 is a devoted entirely to the review of telecommunication facilities, towers, and antennas. Its stated purpose is to establish general guidelines for the siting of such facilities. The specific goals of the Section are to:

1. protect residential areas and land uses from potential adverse impacts of towers and antennas;
2. encourage the location of towers in non-residential areas;
3. minimize the total number of towers throughout the community;
4. strongly encourage the joint use of new and existing tower sites as a primary option rather than construction of additional single-use towers;
5. encourage users of towers and antennas to locate them, to the extent possible, in areas where the adverse impact on the community is minimal;

6. encourage users of towers and antennas to configure them in a way that minimizes the adverse visual impact of the towers and antennas through careful design, siting, landscape screening, and innovative camouflaging techniques;
7. enhance the ability of the providers of telecommunications services to provide such services to the community quickly, effectively, and efficiently;
8. consider the public health and safety with respect to communication towers; and
9. avoid potential damage to adjacent properties from tower failure through engineering and careful siting of tower structures.

In furtherance of these goals, the City of Urbana shall give due consideration to the City of Urbana's Comprehensive Plan, zoning map, existing land uses, and environmentally sensitive areas in approving sites for the location of towers and antennas.

### **Zoning Requirements for Towers and Antennas**

The Urbana Zoning Ordinance defines an *Antennae* as:

*“Any exterior apparatus designed for telephonic, radio, data, Internet, or television communications through the sending and/or receiving of electromagnetic waves, including equipment attached to a tower or building for the purpose of providing personal wireless services, including unlicensed wireless telecommunications services, wireless telecommunications services utilizing frequencies authorized by the Federal Communications Commission for “cellular,” “enhanced specialized mobile radio” and “personal communications services,” telecommunications services, and its attendant base station.”*

The Urbana Zoning Ordinance defines a *Tower* as:

*“Any structure that is designed and constructed primarily for the purpose of supporting one or more antennas, including self-supporting lattice towers, guy towers, or monopole towers. The term encompasses personal wireless service facilities, radio and television transmission towers, microwave towers, common-carrier towers, cellular telephone towers or personal communications services towers, alternative tower structures, and the like.”*

### **Discussion**

Given the Urbana Zoning Ordinance definitions and criteria, the 100-foot wooden pole proposed by the petitioners is considered a tower for purposes of zoning review. However, this pole/tower differs from the other types of telecommunications and towers in the ordinance in that it is a receiver only antenna. Section V-11.Q.1.c, allows *antennas with towers* in the IN Zoning District within 250 feet of a residential zone or land use under the provisions of Special Use Permit review.

Section VII-1.B of the Urbana Zoning Ordinance states that a Special Use is one which is potentially appropriate in (and compatible with other uses in) its zoning district, but which, because of the potential major impact of its scale and nature on its district and the City of Urbana as a whole, necessitates close examination, site plan review, and individual regulation.

The question for review in this instance is whether the placement of the pole and antennas as proposed in the site plan meets the intent of the Special Use provisions of the Zoning Ordinance to not "... be unreasonably injurious or detrimental to the district in which it shall be located, or otherwise injurious to the public welfare."

The pole is made entirely of wood and will be sunk 10 feet into the ground. The paddle antennas will be bolted to the pole as will some service equipment (see photo exhibit). Ameren Illinois Power has provided technical specifications of the wooden poles they install as well as for CellNet antenna equipment for staff review. However, because of concerns regarding security and proprietary technology this information is not included with this memo. With respect to the structural design of the pole/tower, plans are submitted for review to the Urbana Building Safety Staff and must display the seal of a licensed engineer as assurance that the design is sound. The petitioners will also need to apply for an electrical permit to install the 120-volt service connection to the pole.

Also of concern is the potential visual impact of the tower and antenna as it may be viewed by pedestrians, residents, or occupants of nearby buildings. Tall telephone and electrical poles are common in urban areas and are generally visually compatible with the urban surroundings. The pole in this case is similar to other electrical poles in the immediate vicinity except it will be roughly twice as tall and will not be connected to transmission wires or other poles. Given the nature of the electrical substation and the number of other poles in the area, the new pole/tower would not be visually inconsistent with other existing development at the site.

It should be noted that the IN zoning district does not have a height restriction, so that the 100 foot height of the pole/tower would be consistent with this regulation. There is also no height restriction in the B-3 district to the south and southwest of the subject property. The proposed location is approximately 122 feet from residential zoned property across Church Street. That is greater than the minimum required distance which is equal to 100% of tower's 100 foot height.

### **Petitioner Perspective**

Antennas must be placed in areas that can receive effectively from the target service area. The petitioners state that the subject location is within an area that will meet the technical requirements for placement of antennas to receive signals from the automated meter reading network. In addition, the petitioners state that it is necessary to locate the tower on property they own because it is critical to their long term ability to provide the automated reader service. They do not want to have to renegotiate leases on towers or building owned by other companies.

### **Waivers Requested**

Section V-11.Q.4 of the Urbana Zoning Ordinance states that in addition to the usual standards for consideration of any other Special Use Permit applications, the Plan Commission and City Council shall consider the following factors regarding towers when recommending that the City Council waive or reduce the burden on the applicant of one or more of these criteria if the Plan Commission concludes that the goals of this ordinance are better served thereby:

- a) Height of the proposed tower;

- b) Proximity of the tower to residential structures and residential district boundaries;
- c) Nature of uses on adjacent and nearby properties;
- d) Surrounding topography;
- e) Surrounding tree coverage and foliage;
- f) Proposed ingress and egress; and
- g) Availability of suitable existing towers, other structures, or alternative technologies not requiring the use of towers or structures.

Under Sec. VI-11.Q.4 the Petitioners are asking for four reductions of Telecommunication Regulations as part of the Special Use Permit:

- 1) Table VI-1 - the requirement to locate the tower outside the 25-foot front yard setback in the IN, Industrial zoning district.

The petitioners would like to place the tower and its 6x6 foot fence enclosure within the 25-foot front yard setback on the Goodwin Avenue frontage of the property. They want to have as much separation as possible from the tower to the electrical equipment on the property. They also want to have the tower near the edge of the property for access purposes so that CellNet employees can get to the tower to service the antennas but still deny them access to the rest of the electrical power substation property. The proposed location will be inside the existing chain link fence that encloses the entire substation at the property line.

- 2) Sec. V-11.G.2 - the requirement to provide a residential quality wood privacy fence around the tower.
- 3) Sec. V-11.G.2 and 4 - the requirement to screen a chain link security fence with evergreen vegetation of six feet in height.
- 4) Sec. V-11.Q.7.a - the requirement to provide a landscape buffer.

The tower will be located within the barbed wire topped - chain link fenced substation property that contains electrical equipment of industrial appearance. The requirement to use a residential quality wood fence or to provide plant screening of the second smaller chain link fence surrounding the tower's base would not be beneficial in the existing visual environment. (Zoning Ordinance Sec. V-11.Q.7.b also authorizes the waiver of the buffer required in Sec. V-11.Q.7.a.)

**Consideration of Special Use Permits**

The Plan Commission shall determine whether the reasons set forth in the application, and the evidence adduced during the public hearing, justify the granting of the Special Use Permit, and whether the proposed use will be in harmony with the general purpose and intent of the Zoning Ordinance, and will not be unreasonably injurious or detrimental to the district in which it shall be located, or otherwise injurious or detrimental to the public welfare.

In addition, the Plan Commission shall make a recommendation to the City Council for or against the proposed Special Use Permit, and may also recommend such additional conditions and

requirements on the operation of the proposed use as are appropriate or necessary for the public health, safety, and welfare, and to carry out the purposes of the Zoning Ordinance, including but not limited to the following:

1. Regulate the location, extent, and intensity of such use;
2. Require adherence to an approved site plan;
3. Require landscaping and the screening of such use by means of fences, walls, or vegetation;
4. Stipulate a required minimum lot size, minimum yards, and maximum height of buildings and structures;
5. Regulate vehicular access and volume, and the design and location of parking and loading areas and structures;
6. Require conformance to health, safety, and sanitation requirements as necessary;
7. Regulate signs and outdoor lighting;
8. Any other conditions deemed necessary to affect the purposes of the Ordinance.

## **Summary of Findings**

### **Relating to Section VII-6 of the Urbana Zoning Ordinance, Special Use Permit Requirements**

According to Section VII-6 of the Urbana Zoning Ordinance, an application for any Special Use Permit shall demonstrate the following:

- 1. That the proposed use is conducive to the public convenience at that location.*

The proposed use is conducive to the public convenience because it would facilitate the efficient operation of remote meter reading of electrical and gas service for residential and business customers in the area.

- 2. That the proposed use is designed, located, and proposed to be operated so that it will not be unreasonably injurious or detrimental to the district in which it shall be located, or otherwise injurious to the public welfare.*

The proposed use should not pose a detriment to the district in which it is proposed to be located or any adjoining properties. The addition of the pole/tower and antennas would not be visually disharmonious with its urban surroundings and should not have a significant negative visual impact on the surrounding property.

- 3. That the proposed use conforms to the applicable regulations and standards of, and preserves the essential character of, the district in which it shall be located, except where such regulations and standards are modified by Section VII-7.*

The proposed use is consistent with the Industrial zoning designation of the subject site, and the character of the existing electrical substation, and the adjacent railway and commercial properties.

### **Relating to Article V-11 of the Urbana Zoning Ordinance for the review of telecommunication facilities, towers, and antennas.**

1. Antennae with towers are permitted in the IN, Industrial zoning district within 250 feet of residential zoning districts and land uses under Special Use Permit review.
2. The proposed location will avoid potential damage to adjacent properties because it is approximately 122 feet from residential zoned property which is greater than the minimum required distance which is equal to 100% of tower's 100 foot height.
3. The proposed use is compatible with the existing land use pattern of the general area.
4. The location of the tower in a largely non-residential area minimizes adverse impacts on the community.
5. The use of the tower for remote meter reading will enhance the ability of the providers to provide services to the community quickly, effectively, and efficiently.
6. The proposed facility will be reviewed under applicable regulations and standards of the Urbana Building Code as well as applicable Federal Communications Commission regulations.
7. The requested waiver of the Sec. V-11.G.2 and 4 requirement for residential quality wood fence screening and evergreen landscape screening is reasonable given the conditions and function of the subject property and is compatible with the intent of the Zoning Ordinance to protect the health, safety, and general welfare of the community.
8. The requested waiver of Table VI-1 the requirement to locate the tower outside the 25-foot front yard setback in the IN, Industrial zoning district is reasonable given the conditions and function of the subject property, and is compatible with the intent of the Zoning Ordinance to protect the health, safety, and general welfare of the community.

## **Options**

The Plan Commission has the following options for recommendations to the City Council regarding Plan Case No. 1986-SU-06:

1. Recommend approval of the Special Use Permit request, without any additional conditions.
2. Recommend approval of the Special Use Permit request, with any conditions deemed appropriate or necessary for the public health, safety, and welfare, and to carry out the purposes of the Zoning Ordinance.
3. Recommend denial of the request for a Special Use Permit.

## **Staff Recommendation**

Based on the evidence presented in the discussion above, and without the benefit of considering additional evidence that may be presented at the public hearing, staff recommends that the Plan Commission recommend **approval** of the proposed special use permit in Plan Case No. 1986-SU-06 to the City Council as presented for the reasons articulated above **including the approval of the requested reductions in telecommunications requirements as follows:**

- 1) Table VI-1 - the requirement to locate the tower outside the 25-foot front yard setback in the IN, Industrial zoning district.
- 2) Sec. V-11.G.2 - the requirement to provide a residential quality wood privacy fence around the tower.
- 3) Sec. V-11.G.2 and 4 - the requirement to screen a chain link security fence with evergreen vegetation of six feet in height.
- 4) Sec. V-11.Q.7.a - the requirement to provide a landscape buffer.

**And with the following conditions:**

1. The design, installation, and operation of the pole, equipment enclosure and associated antenna equipment shall be in accordance with the submitted site plans, and technical specifications.

Attachments: Exhibit A, Location Map  
Exhibit B, Zoning map  
Exhibit C, Existing Land Use on Aerial Photo map  
Exhibit D, Future Land Use map  
Exhibit E, Site Diagram  
Exhibit F, Special Use Application  
Exhibit G, Photo of example pole

Cc:

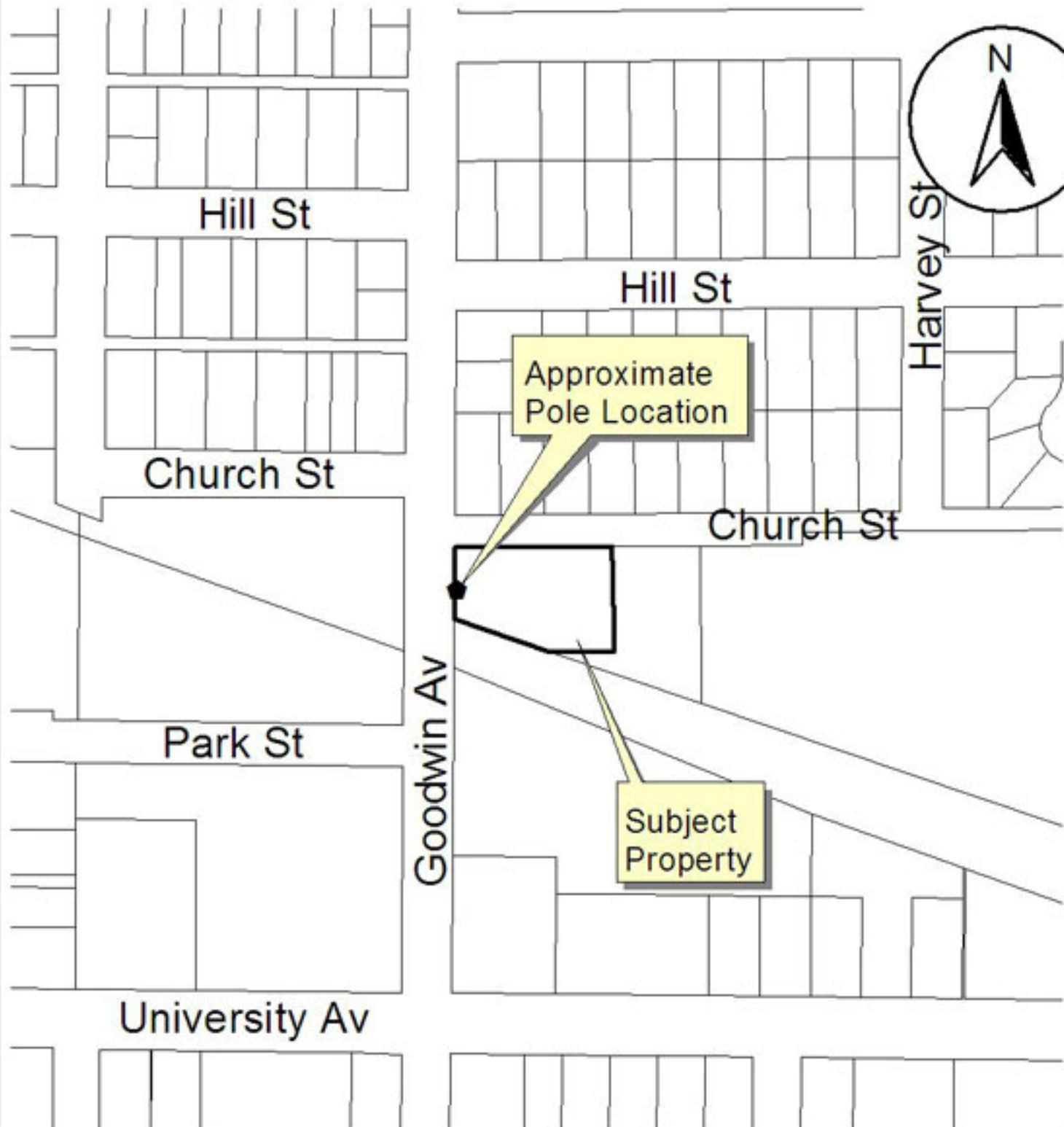
AmerenIP	CellNet
Attn: Daniel L. Wilson	Attn: Doug Delashmutt
370 S. Main St. e-20	1918 Innerbelt Business Centerline Drive
Decatur, IL 62523	Overland, MO 63114

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# Location Map

# Exhibit "A"

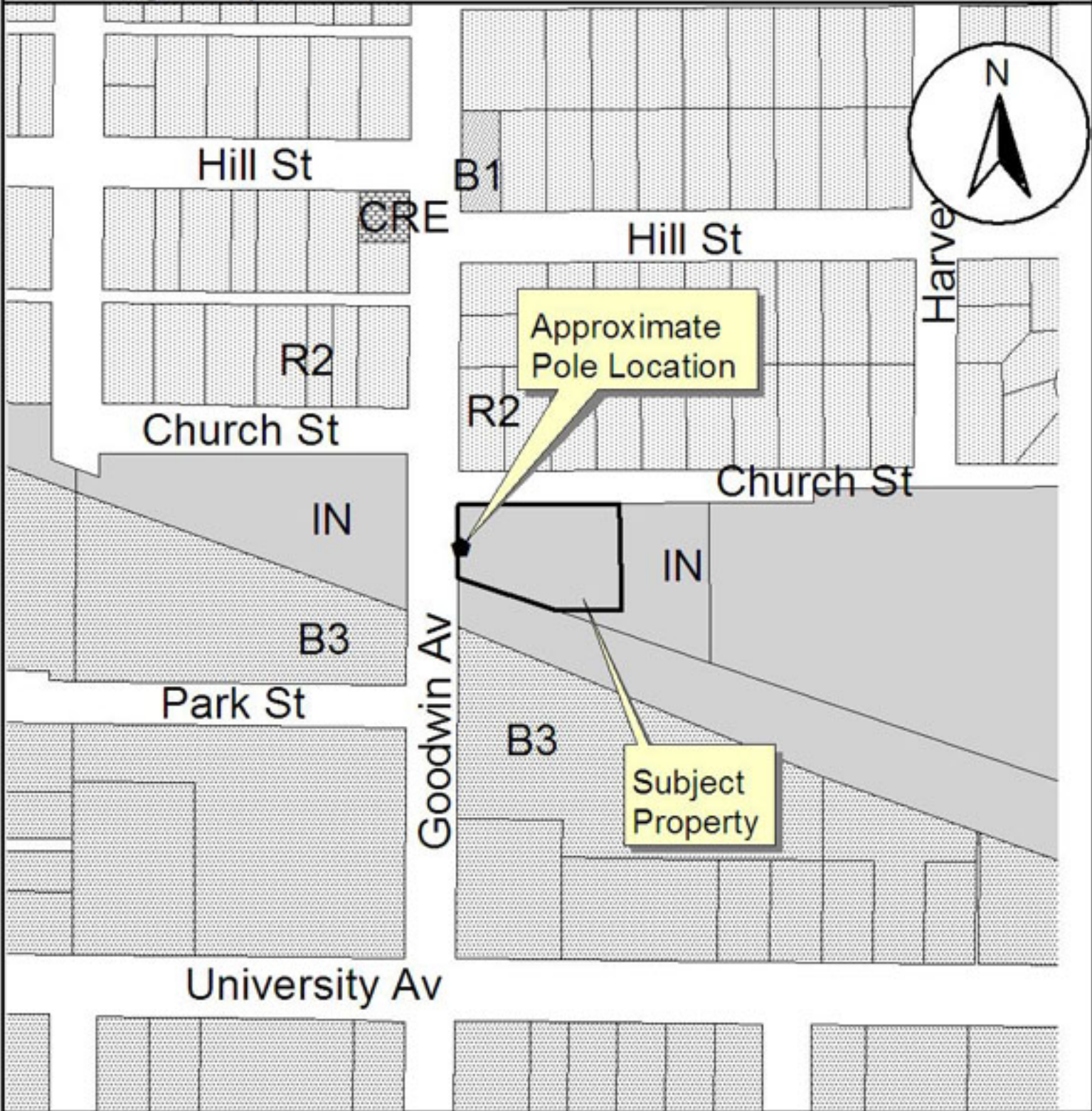


Plan Case: 1986-SU-08  
Petitioner: CellNet  
Location: 1115 W. Church Street  
Zoning: I1 - Industrial  
Description:  
Special Use Permit to install a telecommunications pole with antennas within 250 feet of a residential zoning district.  
Prepared 4/03/06 by Community Development Services - pal

 Subject Property

# Zoning Map

# Exhibit "B"



0 200 400 600 800 Feet



Plan Case: 1986-SU-08  
Petitioner: CellNet  
Location: 1115 W. Church Street  
Zoning: IN - Industrial  
Description:  
Special Use Permit to install a telecommunications pole with antennas within 250 feet of a residential zoning district.  
Prepared 4/03/06 by Community Development Services - pal

B1 - Neighborhood Business  
B3 - General Business  
CRE - Conservation-Recreation-Education  
R2 - Single Family Residential  
IN - Industrial



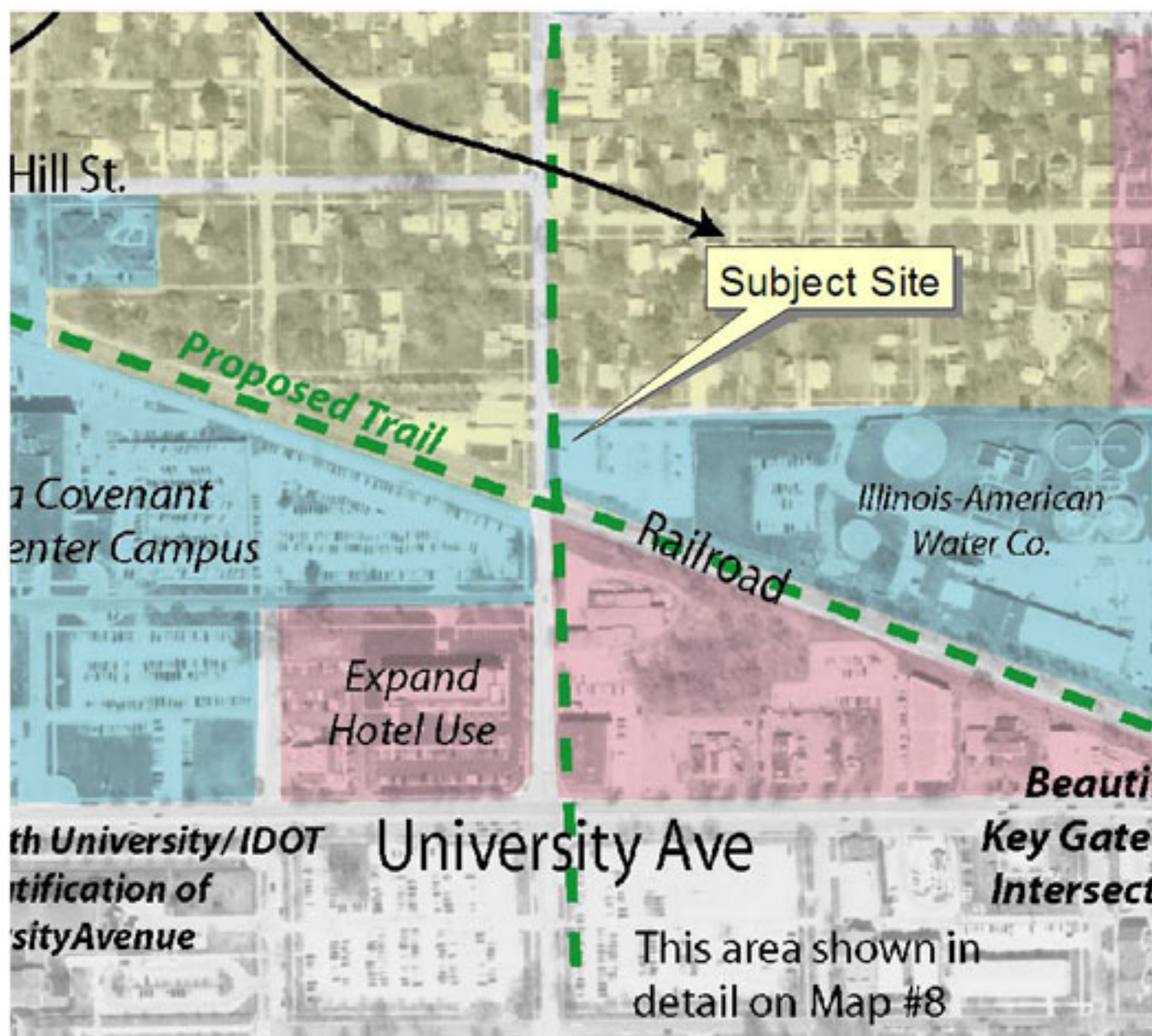
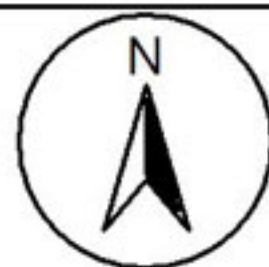
Plan Case: 1986-SU-08  
Petitioner: CellNet  
Location: 1115 W. Church Street  
Zoning: IN - Industrial  
Description:  
Special Use Permit to install a telecommunications pole with antennas within 250 feet of a residential zoning district.  
Prepared 4/03/06 by Community Development Services - pal

SF - Single Family  
COM - Commercial  
PKG - Parking Lot  
VAC - Vacant Land  
IN - Industrial

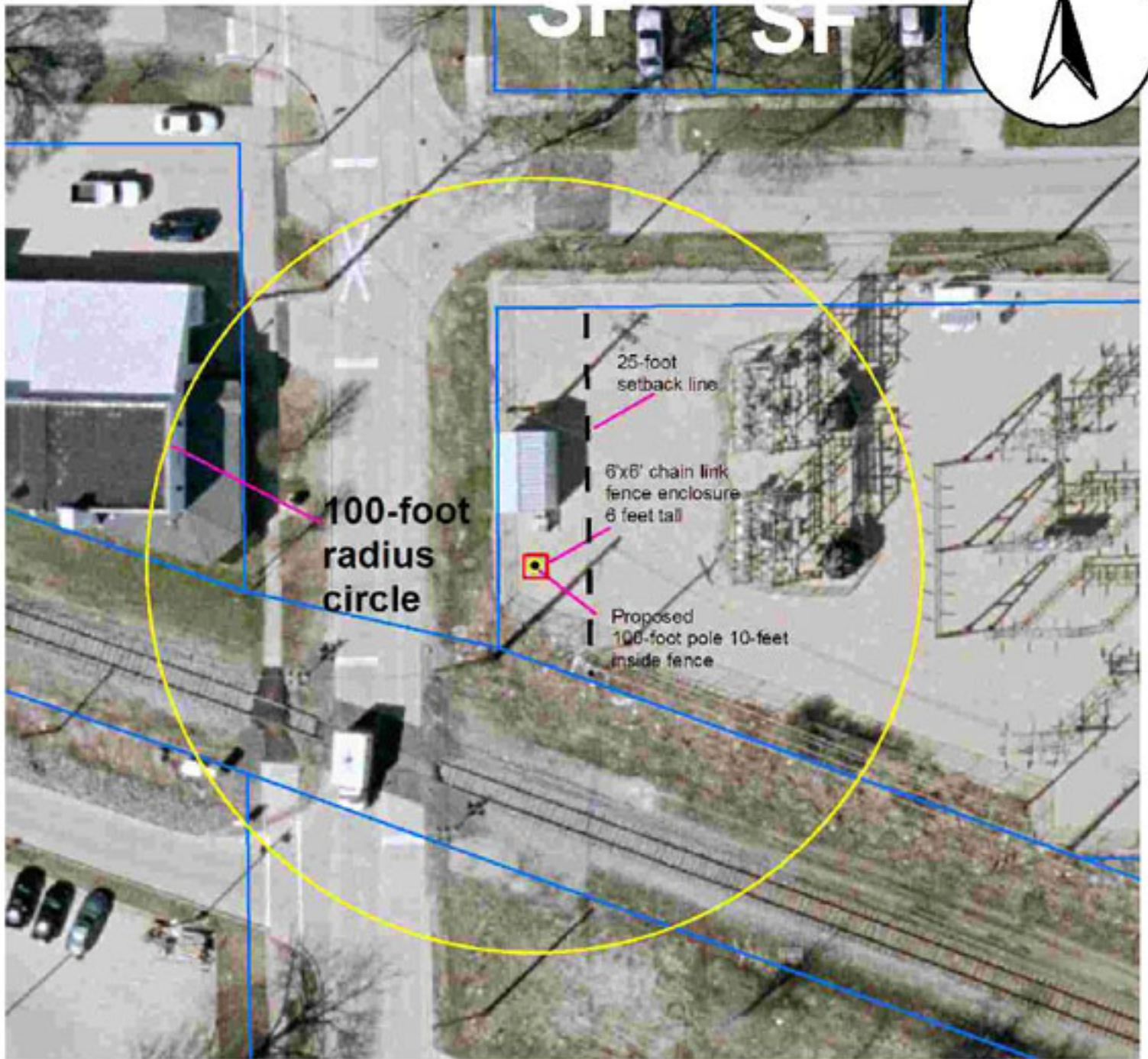
# Future Land Use Map

# Exhibit "D"

Source: Comprehensive Plan Future Land Use Map # 3, p.74



Plan Case: 1986-SU-08  
Petitioner: CellNet  
Location: 1115 W. Church Street  
Zoning: III - Industrial  
Description:  
Special Use Permit to install a telecommunications pole with antennas within 250 feet of a residential zoning district.  
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Plan Case: 1986-SU-08  
Petitioner: CellNet  
Location: 1115 W. Church Street  
Zoning: I1 - Industrial

Description:  
Special Use Permit to install a telecommunications pole with antennas within 250 feet of a residential zoning district.

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