



**NEPA ENVIRONMENTAL SUMMARY REPORT  
AND CHECKLIST**

**Pyramid Network Services, LLC  
Motorola MARC RAMBIS Project  
Trimble Site - 3625 Malcolm Lake Road  
3 Miles West of Trimble, Missouri 64492  
ATC Project Number 17.29788.0001 (Task 17004)**

**Prepared for:**

Mr. T.J. Sauthoff  
Pyramid Network Services, LLC  
6519 Towpath Road  
East Syracuse, New York 13057  
(315) 701-1300

**Prepared by:**

ATC Associates Inc.  
8246 Marshall Drive  
Lenexa, Kansas 66214  
(913) 438-2800

August 3, 2007



ATC Associates Inc.  
8246 Marshall Drive  
Lenexa, Kansas 66214  
(913) 438-2800  
Fax (913) 438-1784  
[www.atc-enviro.com](http://www.atc-enviro.com)

---

August 3, 2007

Mr. T.J. Sauthoff  
**Pyramid Network Services, LLC**  
6519 Towpath Road  
East Syracuse, New York 13057

**Re: NEPA Environmental Summary Report and Checklist**  
**Pyramid Network Services, LLC**  
**Motorola MARC RAMBIS Project**  
**Trimble Site - 3625 Malcolm Lake Road**  
**3 Miles West of Trimble, Missouri 64492**  
**ATC Project Number 17.29788.0001 (Task 17004)**

Dear Mr. Sauthoff:

ATC Associates Inc. (ATC) has completed an environmental screening of the Federal Communications Commission (FCC) special interest items as outlined in Title 47 of the Code of Federal Regulations (47 CFR) Section 1.1307 (a) (1) through (8), for Motorola as part of the MARC RAMBIS project (Motorola), **Trimble Site**, located at 3625 Malcolm Lake Road, 3 miles west of Trimble, Platte County, Missouri (the "site"). Pyramid Network Services, LLC (Pyramid) will be performing the work at this site on behalf of Motorola, a wireless telecommunications carrier, for the purpose of providing wireless telecommunications service. The NEPA land use checklist summarizing the findings of this report is included within Appendix A.

Additionally, the site has been evaluated with regard to its applicability to Appendix C to Part 1--*Nationwide Programmatic Agreement Regarding the Section 106 National Historic Preservation Act Review Process* contained in 47 CFR 1.1307, specifically, the commonly referred to Replacement Tower exclusion (Section III - Undertakings Excluded From Section 106 Review).

For the purposes of this assessment, the site consists of the existing telecommunications facility, including the existing tower, lease area/tower compound, access easements, and any necessary utility easements. The site parcel includes the parcel of land on which the site is located, associated parking areas and access driveways.

## SITE INFORMATION

The site parcel consists of an existing 300-foot guyed tower and an equipment shelter. The site is contained within an existing chain-link fence.

According to the information provided by the Platte County Assessor's Office, the site parcel is identified as Assessor's Parcel Number (APN) 10-9.0-29-000-000-002-001. The current owner of the site is the State of Missouri. The site parcel is located in Township 54 North, Range 33 West, Section 29, as shown on United States Geological Survey (USGS) Smithville Quadrangle, Missouri 7.5 Minute Series (Topographic) map, dated 1975. Based on the USGS Smithville

Pyramid Network Services, LLC  
Trimble Site  
Platte County, Missouri  
August 3, 2007

Quadrangle map, the site is located approximately 968 feet above mean sea level in an area of relatively flat topography. No on-site surface water features were observed during the site visit.

Please refer to Appendix B, Figure 1, for a map showing the proposed site location.

The site can be accessed from the north via Malcolm Lake Road. According to the plans provided by Pyramid (Site Plan, Enlarged Site Plan, and Tower Elevation, Infinigy Engineering, April 26, 2006), the proposed activities at the site will consist of the construction of a new 300 foot guyed tower within approximately 50 feet southeast of the existing tower location, a new 11' 8" x 16' 6" equipment shelter and generator installed on a 4 foot by 9 foot concrete pad, and a 1,000-gallon propane aboveground storage tank (AST). Two VHF antennas will be installed at a height of approximately 225 feet. Two UHF antennas will be installed at a height of approximately 250 feet. Two 800MHz antennas will be installed at a height of approximately 300 feet. One 6 foot MW dish will be installed at a height of approximately 95 feet and one 8 foot MW dish will be installed at a height of approximately 180 feet. Additionally, three new guy wire anchor locations will be installed within the existing 400 foot by 400 foot fenced area.

Please refer to Appendix B for copies of selected construction drawings showing the proposed overall development of the site.

## **NEPA ASSESSMENT**

The NEPA Land Use Checklist table and supporting documentation are attached to this letter report. In accordance with 47 CFR Section 1.1307 (a) (1) through (8), an evaluation has been made to determine whether any of the listed FCC special interest items would be significantly affected if a tower structure and/or antenna and associated equipment were constructed at the proposed site location. In the event that the site affects one of the items, the FCC requires that an Environmental Assessment (EA) be prepared regarding that particular item. ATC conducted this research by consulting with appropriate state and federal agency personnel and reviewing readily available published data.

Site selection criterion was based on the need for coverage in the area and the desire to avoid or minimize possible environmental impact (as defined in 47 CFR). Other important factors included site accessibility, construction and other logistical considerations and financial requirements. The site selection process results from one of three outcomes: (1) selected site; (2) site alternative to the selected site; and (3) no action. The "no action" alternative was not considered since it would not meet the project's objectives. The selected site was best able to meet all of the above outlined criteria and is the preferred alternative.

### **(1) *Wilderness Areas***

In addressing the issue of officially designated wilderness areas, ATC reviewed information from the National Wilderness Preservation System (NWPS, <http://www.wilderness.net/nwps>). The NWPS is comprised of lands designated as wilderness areas by the United States Forest Service (USFS), United States Fish and Wildlife Service (USFWS), United States Bureau of Land Management (BLM), and the National Park Service (NPS).

There are currently 677 wilderness areas in the United States, eight of which are located in the State of Missouri. The eight wilderness areas (Paddy Creek, Bell Mountain, Rockpile Mountain,

Mingo, Irish, Devils Background, Hercules-Glades, and Piney Creek) are found in the southern part of the state and located along the southern border of the state. According to the NWPS information reviewed, the site is not located in a designated wilderness area.

Designated wilderness areas are also delineated on USGS 7.5-minute series topographic quadrangle maps. Therefore, ATC reviewed the USGS Smithville Quadrangle map, and determined that the site is not located within a designated wilderness area. In addition, a review of the DeLorme *Missouri Atlas & Gazetteer*, 1998 edition, did not indicate the presence of a designated wilderness area in the site vicinity.

## **(2) Wildlife Preserves**

There are eight designated National Wildlife Refuges (NWRs) in the State of Missouri, including the Squaw Creek NWR, the Great River NWR, the Swan Lake NWR, the Clarence Canyon NWR, the Big Muddy NWR, the Pilot Knob NWR, the Mingo NWR, and the Ozark Cavefish NWR.

The site is located 3 miles west of Trimble, which is in western Missouri State. The nearest NWR to the site is the Squaw Creek NWR, which is located approximately 70 miles north of Trimble. Therefore, the site is not located within or adjacent to an officially designated wildlife preserve.

Officially designated wildlife preserves are also delineated on USGS 7.5-minute series topographic quadrangle maps. Therefore, ATC reviewed the USGS Smithville Quadrangle map and determined that the site is not located within a designated wildlife preserve. Additionally, a review of the DeLorme *Missouri Atlas & Gazetteer*, 1998 edition, did not indicate the presence of a designated wildlife preserve in the site vicinity.

## **(3) Listed and/or Proposed Threatened or Endangered Species or Designated Critical Habitats**

Section 7 of the Endangered Species Act (Act) of 1973 (16 U.S.C. §§ 1536) directs federal agencies to utilize their authorities in furtherance of the purposes of the Act by carrying out programs for the conservation of listed species or designated critical habitats. In addition, Section 7 of the Act sets out the consultation process, which is further implemented by regulation 50 CFR § 402.

The following represents an Informal Biological Assessment for the proposed activities.

### **ENDANGERED AND THREATENED SPECIES**

In order to determine if the site is located in an area documented to have occurrences of listed and/or proposed threatened or endangered species, ATC submitted a Section 7 consultation package to the USFWS and the Missouri Department of Conservation (MDC), including site maps, site photographs, and the site location designated on the USGS Smithville Topographic Map.

The consultation response letter from the MDC dated May 24, 2006 indicated that no state-listed species will be significantly affected by the project. Based on the response from MDC, endangered or threatened species are not known to exist on or near the site and further

Pyramid Network Services, LLC  
Trimble Site  
Platte County, Missouri  
August 3, 2007

evaluation is not warranted. The consultation response letter from the MDC is included in Appendix C.

The consultation response letter from the USFWS, dated June 5, 2006, indicated that no federally-listed species or designated critical habitat occurs within the project area. Based on the response the USFWS, further evaluation is not warranted. The consultation response letter from the USFWS is included in Appendix C.

Appendix C contains a copy of the USFWS tower siting guidelines, entitled *Service Interim Guidelines For Recommendations On Communications Tower Siting, Construction, Operation, and Decommissioning*, dated September 14, 2000. As these guidelines may minimize the potential for avian collisions, the USFWS has recommended that they be implemented on existing and future telecommunication tower projects. Since migratory birds are documented to occur within the State of Missouri, ATC has recommended that Pyramid and Motorola review and implement the USFWS tower siting guidelines when feasible.

### **MIGRATORY BIRDS**

The USFWS has made the following recommendations that may help reduce potential bird/tower strikes:

- Collocation on other structures, self supporting structures (instead of towers requiring guy wires for support) and total tower heights under 200 feet;
- Use white flashing strobe lights as dim and brief as legally possible, and flash time intervals as long as legally possible, instead of red lights when night lighting is necessary;
- Locate new towers in urban and suburban areas whenever possible and in rural areas only if absolutely necessary, preferably on disturbed sites and not in, on, or near wetlands, hill tops, forests, prairie grasslands, and other known major migratory bird stopover sites, or feeding, nesting, or roosting routes; and
- If tower height requires guy wires, use no more than absolutely necessary to insure tower stability, and attach bird deflector devices to warn birds of the existing hazard.

The voluntary USFWS guidelines are included within Appendix C. Based on the information provided by Pyramid and Motorola, consideration has been given to the noted guidelines, and various measures (i.e., dual medium intensity lighting system), have been incorporated into the project.

In order to determine if the tower design will minimize potential avian mortality, ATC submitted a Section 7 consultation package to the USFWS, including site maps, site photographs, and the site location designated on the USGS Smithville Topographic Map. The consultation response letter from the USFWS, dated June 5, 2006, indicated that the tower design will adequately minimize bird strikes; therefore, further evaluation is not warranted. The consultation response letter from the USFWS is included in Appendix C.

### **DESIGNATED CRITICAL HABITATS**

According to the USFWS, critical habitat "identifies specific areas that have the physical and biological features that are essential to the conservation of a listed species, and that may require special management considerations or protection." ATC reviewed 50 CFR, Wildlife and Fisheries, Parts 17.94 through 17.96 and Parts 226.101 through 226.213 (dated October 1,

2005), for designated critical habitats that may exist in the vicinity of the site. The review of 50 CFR did not reveal the presence of designated critical habitats within a one mile radius of the site.

Based on the findings of this review, impacts to threatened and endangered species and designated critical habitats are not anticipated, and further evaluation of biological resources is not warranted.

***(4) Historic Places. May affect districts, sites, buildings, structures, or objects, significant in American history, architecture, archeology, engineering or culture that are eligible for listing in the National Register of Historic Places***

As stated earlier, ATC has reviewed the project stated herein for its applicability to the commonly referred to Replacement Tower exclusion contained 47 CFR 1.1307, Appendix C to Part 1--*Nationwide Programmatic Agreement Regarding the Section 106 National Historic Preservation Act Review Process* (NPA, Section III)

As stated in Section III, "Undertakings that fall within the provisions listed in the following sections III.A. through III.F. are excluded from Section 106 review by the SHPO/THPO, the Commission, and the Council, and, accordingly, shall not be submitted to the SHPO/THPO for review."

Section III. B. of the NPA outlines the applicable provisions of the commonly referred to Replacement Tower exclusion:

- *Construction of a replacement for an existing communications tower and any associated excavation that does not substantially increase the size of the existing tower under elements 1–3 of the definition as defined in the Collocation Agreement (see Attachment 1 to this Agreement, Stipulation 1.c.1–3) (hereafter referred to as Provision 1)*
- *and that does not expand the boundaries of the leased or owned property surrounding the tower by more than 30 feet in any direction or involve excavation outside these expanded boundaries or outside any existing access or utility easement related to the site. ) (hereafter referred to as Provision 2)*
- *For towers constructed after March 16, 2001, this exclusion applies only if the tower has completed the Section 106 review process and any associated environmental reviews required by the Commission's rules. (hereafter referred to as Provision 3)*

Provision 1 has been met under the described exclusion. According to drawings provided to Pyramid Network Services, LLC by Infinigy Engineering (Site Plan, Drawing C3 Rev 3, dated March 7, 2007) the construction of the proposed replacement tower and any associated excavation will not substantially increase the size of the existing tower. See Appendix B for drawings of the proposed construction.

Provision 2 has been met under the described exclusion. Pyramid Network Services, LLC by Infinigy Engineering (Site Plan, Drawing C3 Rev 3, dated March 7, 2007), the construction of the proposed replacement tower will not expand the boundaries of the leased or owned property surrounding the existing tower by more than 30 feet in any direction or involve excavation

Pyramid Network Services, LLC  
Trimble Site  
Platte County, Missouri  
August 3, 2007

outside these expanded boundaries or outside any existing access or utility easement related to the site. See Appendix B for drawings of the proposed construction.

Provision 3 has been met under the described exclusion. According to USGS 7.5 Minute Topographic Maps, Smithville Quadrangle dated 1975 and an aerial photograph of the area including the site parcel dated 1996 obtained from <http://www.terraserver.microsoft.com>, the existing tower was constructed before March 16, 2001. A copy of the referenced Topographic Map and aerial photograph is provided in Appendix B.

Based on review of the readily available documentation noted herein regarding the proposed development at the site, the commonly referred to Replacement Tower exclusion contained within the NPA applies to this project. Therefore, State Historic Preservation Office and/or Tribal Historic Preservation Office review is not required.

However, as a courtesy, ATC contacted the Missouri Department of Natural Resources (MDNR) State Historic Preservation Office (SHPO) to inquire about their desire to review the proposed development at this site. Based on verbal discussions with the MDNR SHPO, it was agreed that the project would be submitted for review.

ATC submitted a Section 106 review package to the MDNR SHPO in May 2006. A copy of the submittal package is included in Appendix D. ATC received a response from the MDNR SHPO dated May 18, 2006. According to Mr. Mark A. Miles, the State Historic Preservation Officer, the MDNR SHPO concurs with the recommended finding of "no historic properties affected." A copy of the response received from the MDNR SHPO is also included in Appendix D.

Based on the referenced information, no further evaluation of historic places is warranted.

#### **(5) Indian Religious Sites**

As stated earlier and as stated in section III of the NPA, "Undertakings that fall within the provisions listed in the following sections III.A. through III.F. are excluded from Section 106 review by the SHPO/THPO, the Commission, and the Council, and, accordingly, shall not be submitted to the SHPO/THPO for review." Additionally, the commonly referred to Replacement Tower exclusion contained Section III. B. of the NPA does not require consultation with Indian Tribes and/or NHO's, as long as the site is not located on tribal lands.

The site is not located on tribal lands, therefore, consultation with Indian Tribes and/or NHOs, is not required.

#### **(6) Located in a Flood Plain (Executive Order 11988)**

According to the Federal Emergency Management Agency (FEMA), Flood Insurance Rate Map, the site is located in Flood Zone C, which is defined by FEMA as "areas of minimal flooding" (Community Number 290475, Panel Number 0075A, dated December 18, 1979).

A copy of the FEMA Flood Insurance Rate Map showing the site location is included in Appendix B.

**(7) Wetlands and Other Bodies, Change in Surface Features, Deforestation and Water Diversion (See Executive Order 11990 if wetlands are on federal property)**

Under the Clean Water Act (40 CFR § 230.3), wetlands are defined as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas." Potential wetlands under the jurisdiction of the United States Army Corps of Engineers (ACOE) include waterways, lakes, streams, and natural springs.

As shown on the USGS Smithville Quadrangle Map, the site is located adjacent to surface waters. The nearest surface water source to the site is a pond, which is located approximately 100 feet southeast of the site.

During the completion of the site inspection performed by ATC, there was no evidence of potential wetlands or hydrophytic vegetation in the area of the site. Further, according to the Environmental Data Resources, Inc. (EDR) The EDR-Radius Map with Geocheck® regulatory database report, soils at the site are classified as Sharpsburg silt loam. According to EDR, Sharpsburg silt loams are not considered to be hydric soils.

ATC reviewed the USFWS *National Wetlands Inventory* map available online at the National Wetlands Inventory website (<http://wetlandsfws.er.usgs.gov>). The review of the USFWS *National Wetlands Inventory* map confirmed that wetlands are not located on the site. In addition, ATC's review of published National Wetlands Inventory data within the EDR database report indicated the site is not located on a designated wetlands area. A copy of the EDR National Wetlands Inventory map showing the site location is included in Appendix B.

Deforestation is not proposed for the project, as no trees will be required to be removed for construction. In addition, since there are no surface water bodies near the site, water diversion and impacts to surface water features are not anticipated as a result of the project.

Based on the referenced information, wetlands, surface features, deforestation and water diversion are not anticipated to represent an environmental concern for the development of the site.

**(8) High Intensity White Lights**

According to the information provided by Pyramid, as a standard practice, Motorola does not construct facilities requiring high intensity white lights. If the FAA requires such, Motorola will request a dual mode lighting system consisting of red lights for night and medium intensity white lights for daylight and twilight. According to Pyramid, high intensity white lights will not be used for towers less than 500 feet in height.

According to the site plans provided by Pyramid, high intensity white lights will not be used for the site development.

## **(9) Radio Frequency Radiation**

The FCC requires that certain communications services and devices perform environmental evaluation to assess compliance with radio frequency (RF) radiation exposure limits. Motorola confirms that the tower and all associated antennas will not cause human exposure to levels of RF emissions in excess of FCC-adopted guidelines (47 CFR § 1.1307b) and that the tower and all associated antennas will comply with the RF exposure standards as provided within 47 CFR §§ 1.1310 and 2.1093.

## **Additional Environmental Evaluation**

### National Scenic and Historic Trails

In October 1999, the Cellular Telecommunications Industry Association, Personal Communications Industry Association, Appalachian Trail Conference, American Hiking Society, and representative Managing and Supporting Trails Organizations (MSTOs) for the National Scenic Trails signed a resolution for the *Siting of Wireless Telecommunications Facilities Near National Scenic Trails*. This resolution states that if a wireless telecommunications or site management company plans a new or significantly expanded facility within one mile of a National Scenic Trail, it will notify the non-profit group that supports the trail. Therefore, in order to determine if the site is located within one mile of a National Scenic or Historic Trail, ATC reviewed available information from the NPS.

There are six National Historic Trails located in portions of the State of Missouri. The Lewis and Clark Trail is designated from Wood River, Illinois to Washington State and courses through the State of Missouri. The Oregon Trail is designated from Independence, Missouri to Oregon City, Oregon. The California Trail is designated from Independence, Missouri to California. The Pony Express Trail is designated from St. Joseph, Missouri to Sacramento, California. The Santa Fe Trail is designated from Kansas City, Missouri to Santa Fe, New Mexico. The Trail of Tears is designated from sites located in Tennessee, Alabama, Georgia, and North Carolina to Oklahoma, coursing through portions of southern Missouri.

According to the information obtained from the NPS and the information reviewed for the National Historic Trails located in Missouri, the site is not located within one mile of a National Scenic or Historic Trail.

### National Wild and Scenic Rivers

The National Wild and Scenic Rivers Act of 1968 designated "that certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations." According to the National Wild and Scenic Rivers System (<http://www.nps.gov/rivers/information.html>), "the idea behind the National System is not to halt use of a river; instead, the goal is to preserve the character of a river."

ATC reviewed the National Wild and Scenic Rivers System data on National Wild and Scenic Rivers in the State of Missouri (<http://www.nps.gov/rivers/wildriverslist.html>). There are no designated rivers within one mile of the site.

Pyramid Network Services, LLC  
Trimble Site  
Platte County, Missouri  
August 3, 2007

## CONCLUSIONS/RECOMMENDATIONS

ATC Associates Inc. (ATC) has completed an environmental screening of the FCC special interest items as outlined in Title 47 of the Code of Federal Regulations (47 CFR) Section 1.1307 (a) (1) through (8), for Motorola as part of the MARC RAMBIS project (Motorola), **Trimble Site**, located at 3625 Malcolm Lake Road, 3 miles west of Trimble, Platte County, Missouri. Based on the review of readily available records, including published lists, files, and maps regarding FCC issues, the proposed Motorola Trimble Site, will not affect the FCC special interest items outlined in 47 CFR 1.1307 (a) (1) through (8).

The findings of this Environmental Summary Report and Checklist are based on the project location, project type, and construction diagrams provided by Pyramid. Should the project location, project type, and/or construction diagrams be altered, re-submittal of the Section 7 and Section 106 consultation packages will be required.

We appreciate the opportunity to be of service to Pyramid for this project and look forward to working with you on future projects. If you have any questions about information in this report, please contact the undersigned in the ATC-Lenexa, Kansas office at (913) 438-2800.

Sincerely,  
**ATC ASSOCIATES INC.**



Nicole Cruise  
Staff Geologist



Ed Creaden  
Branch Manager

### Attachments:

- |                   |   |
|-------------------|---|
| <b>Appendix A</b> | NEPA Land Use Checklist   |
| <b>Appendix B</b> | Site Vicinity Map, Site Plans, Federal Emergency Management Agency Flood Insurance Rate Map, USGS 7.5 Minute Series Topographic Map, Aerial Photograph, and USFWS National wetlands Inventory Map |
| <b>Appendix C</b> | Information Obtained from the State Wildlife Agency and the United States Fish and Wildlife Service, Including the United States Fish and Wildlife Service Tower Siting Guidelines                |
| <b>Appendix D</b> | Section 106 State Historical Preservation Office (SHPO) Documentation   |
| <b>Appendix E</b> | Native American Tribal Consultation Letters and TCNS Notification Completed by ATC Associates Inc.  |
| <b>Appendix F</b> | Response Received from Native American Tribal Groups  |

**Appendix A**

**NEPA Land Use Checklist**



Environmental, Geotechnical and Materials Professionals

## NEPA LAND USE CHECKLIST

Prepared for Pyramid Network Services, LLC

<b>Site #: NA</b>	<b>Site Name:</b> Trimble	<b>Site Address:</b> 3625 Malcolm Lake Road 3 miles west of Trimble, Missouri 64492	
<b>Coordinates (NAD 83):</b> N Lat: 39° 28' 11.0" W Lon: 094° 37' 14.0"	<b>Expert Federal / State Jurisdictional Agencies</b>	<b>Summarize any preliminary finding of positive effects</b>	<b>Check one box</b>
<b>FCC Category</b>		<b>YES</b>	<b>NO</b>
1. Will the facility be located in an officially designated wilderness area?	National Park Service, U.S. Forest Service, Bureau of Land Management, National Wilderness Preservation System		X
2. Will the facility be located in an officially designated wildlife preserve	U.S. Dept. of Interior—Fish & Wildlife Service (USFWS), National Wildlife Refuge System		X
3. Will the facility affect listed and proposed threatened or endangered species or designated critical habitat?	United States Fish and Wildlife Service, State Wildlife Agency		X
4. Will the facility affect districts, sites, buildings, structures or objects listed, or eligible for listing, in the National Register of Historic Places?	State Historic Preservation Office		X
5. Will the facility affect Indian Religious sites?	Native American Tribal Groups		X
6. Will the facility be located in a Flood Plain?	Federal Emergency Management Agency		X
7. Will the facility construction involve significant change in surface features?	Provided by Pyramid		X
8. Will the antenna towers and/or supporting structures be equipped with High Intensity White Lights?	Provided by Pyramid		X
9. Will the facility result in human exposure to radiation in excess of the applicable safety standards?	Provided by Pyramid		X
<b>Additional Considerations</b>			
10. Will the facility be located within one mile of a National Scenic or Historic Trail?	National Park Service		X
11. Will the facility affect National Wild and Scenic Rivers?	National Wild and Scenic River System		X

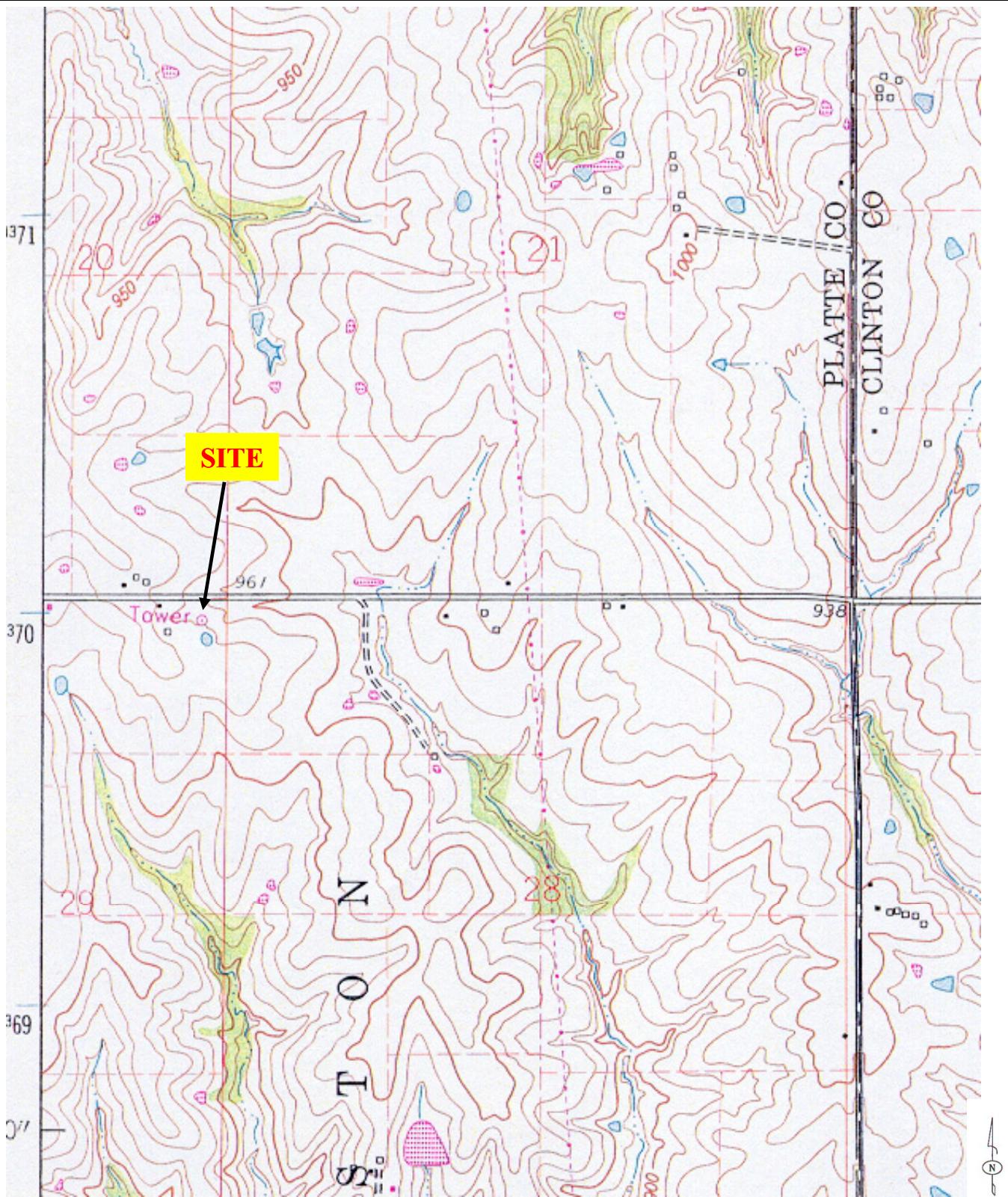
The undersigned has reviewed and approved the completion of this NEPA Checklist for the above-mentioned site.

Prepared by: ATC Associates Inc., 8246 Marshall Drive, Lenexa, Kansas 66214 (913) 438-2800

Signature: Ed Creaden Title: Branch Manager  
Printed Name: Ed Creaden Date: August 3, 2007

## **Appendix B**

**Site Vicinity Map, Site Plans, Federal Emergency Management Agency Flood Insurance Rate Map, USGS 7.5 Minute Series Topographic Map, Aerial Photograph, and USFWS National Wetlands Inventory Map**



SOURCE: USGS SMITHVILLE QUADRANGLE, MISSOURI (7.5 MINUTE SERIES) 1975 TOPOGRAPHIC MAP. OBTAINED FROM EDR.



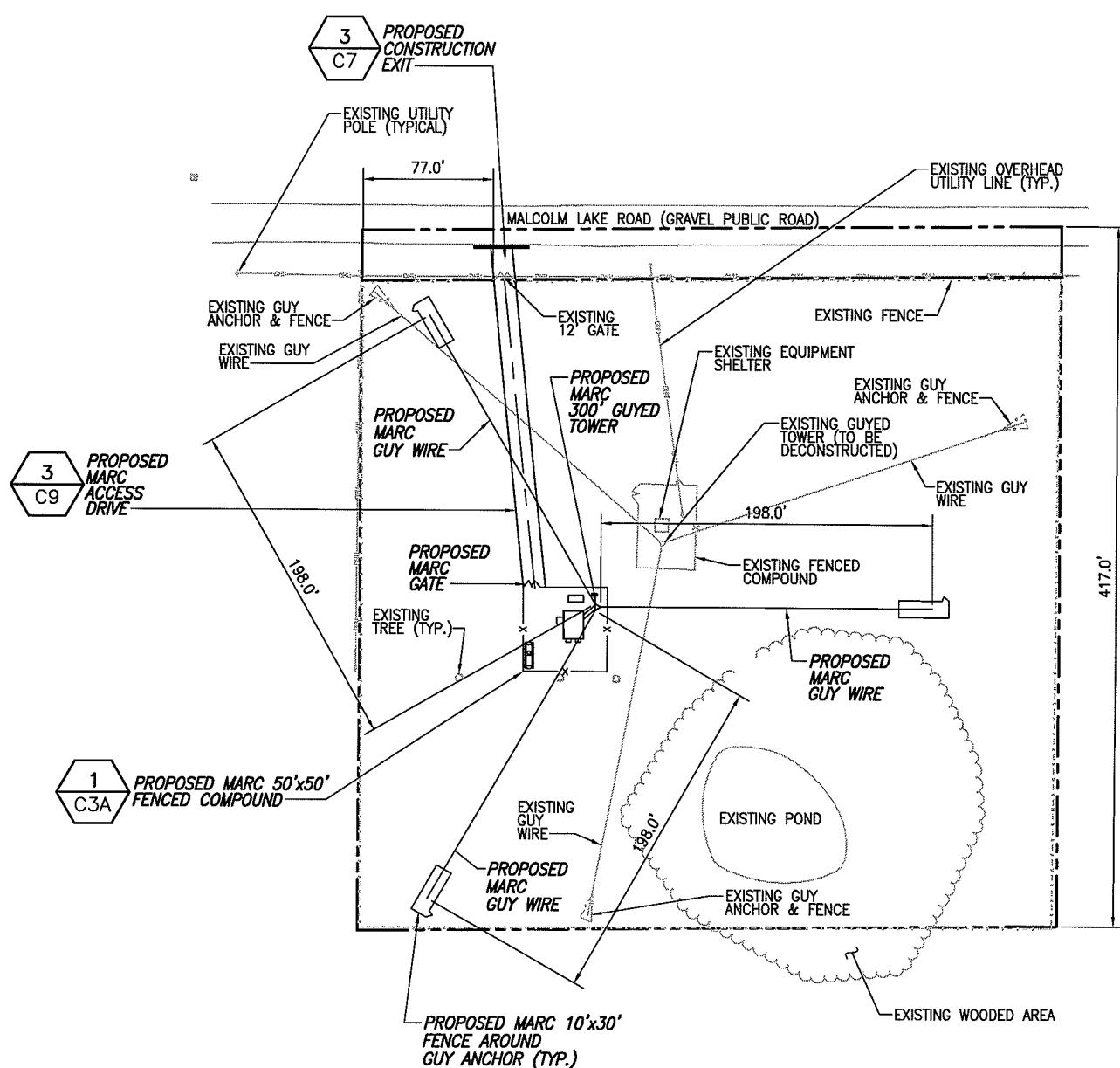
8246 Marshall Drive  
Lenexa, KS 66214  
(913) 438-2800

PROJECT NO.: 17.29788.0001

DESIGNED BY: ATC	SCALE:N/A	REVIEWED BY: ESC
DRAWN BY: NMC	DATE: 08/07	FILE: FIG 1.PPT

### FIGURE 1 - SITE VICINITY MAP

PYRAMID NETWORK SERVICES, LLC  
MOTOROLA – MARC RAMBIS PROJECT  
3625 MALCOLM LAKE ROAD  
TRIMBLE, MISSOURI 64492

GRAPHIC SCALE

SCALE: 1" = 100'-0"



NORTH

1 SITE PLAN

SCALE: 1" = 100'-0"

NOTE:  
FOR GRADING, EROSION, & SEDIMENT CONTROL NOTES, SEE PAGE C6.

	COUNTY COMMENTS	DAD	CJW	CJW
3	03/07/07			
2	02/08/07			
1	05/26/08			
0	05/01/08			
NO.	DATE	REVISIONS	BY	CHK APPD

infiniti  
engineering  
co.  
B10 MARIETTA HIGHWAY  
ROSWELL, GA 30075  
OFFICE #: (770) 640-9969  
FAX #: (770) 640-7363  
127-101

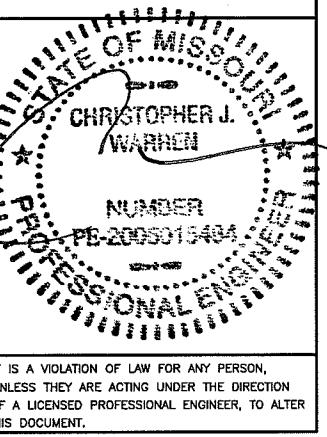
MARC  
Mid-America Regional Council  
Kansas City Regional Area  
Multi-Band Integrated System  
(RAMBIS)  
127-101

Pyramid Network Services, LLC

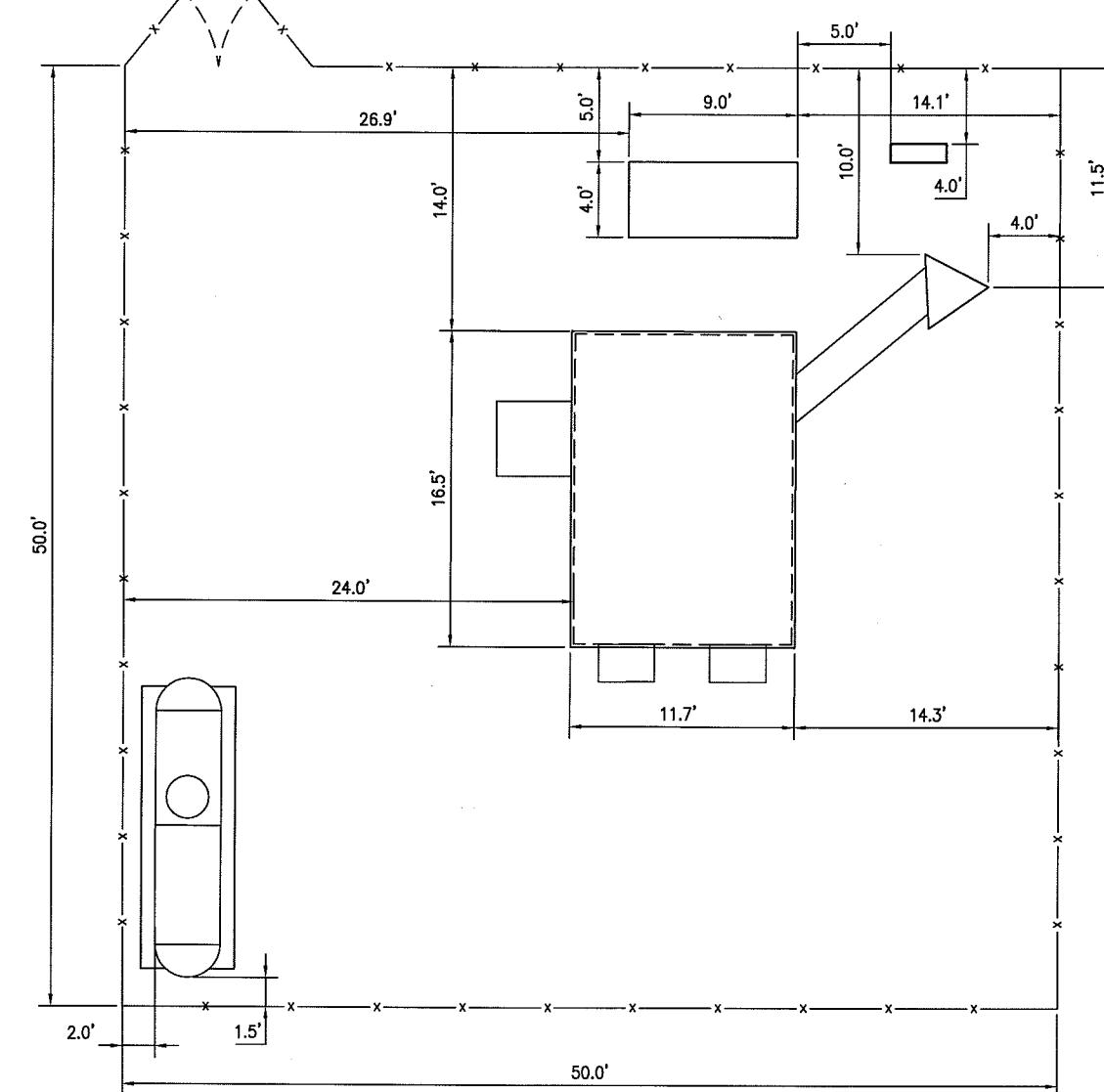
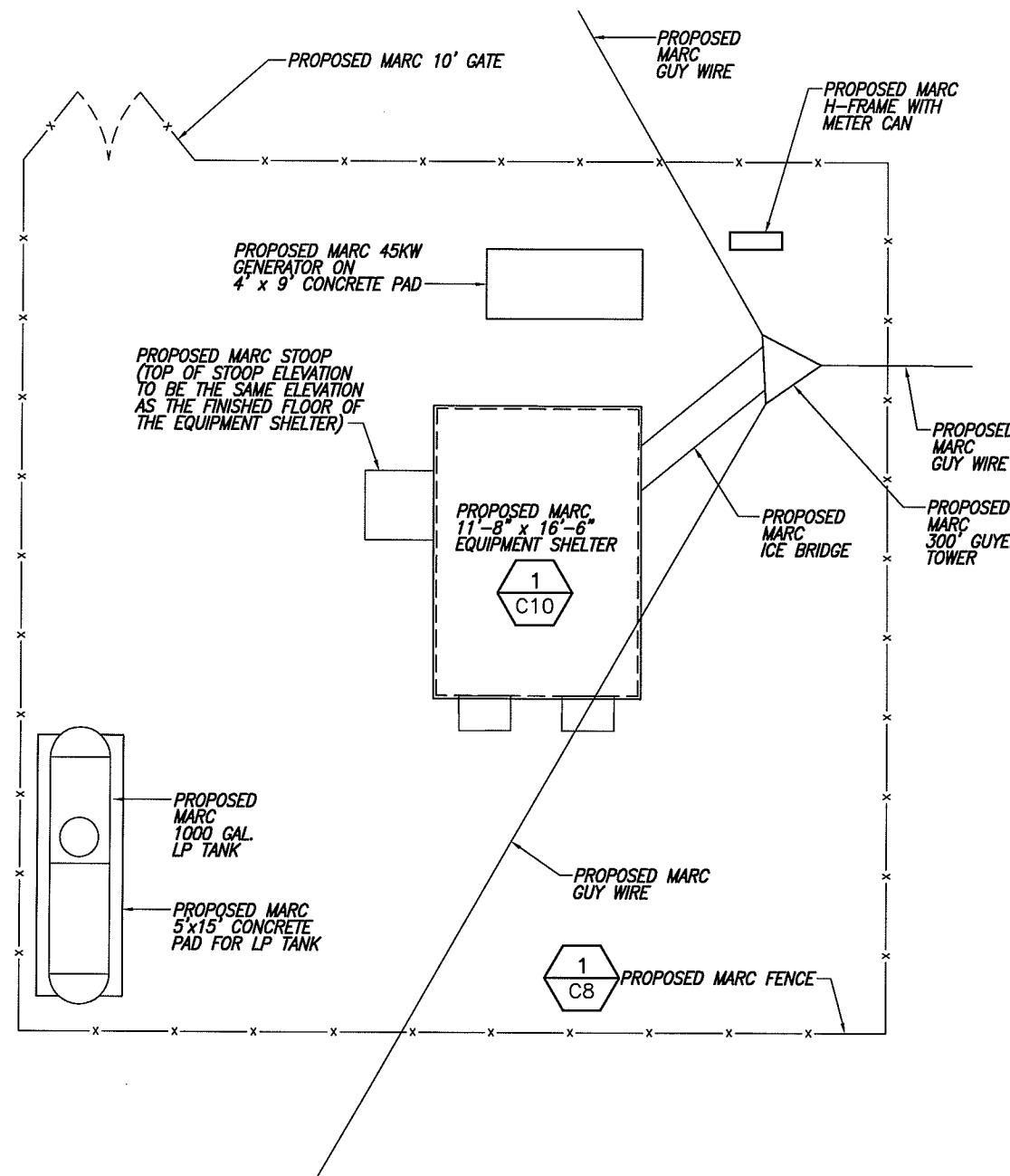
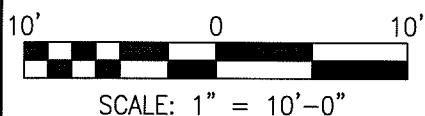
TRIMBLE  
MISSOURI STATE HIGHWAY PATROL  
3625 MALCOLM LAKE ROAD  
EDGERTON, MO

SITE PLAN  
EDGERTON, MO

C3  
REV 3



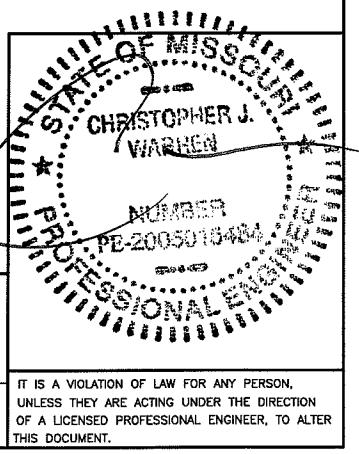
IT IS A VIOLATION OF LAW FOR ANY PERSON,  
UNLESS THEY ARE ACTING UNDER THE DIRECTION  
OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER  
THIS DOCUMENT.

GRAPHIC SCALE

**ENLARGED SITE PLAN**  
SCALE: 1" = 10'-0"  
NORTH



**STAKING PLAN**  
SCALE: 1" = 10'-0"  
NORTH



3	03/07/07	COUNTY COMMENTS	DAD	CJW	CJW
2	02/08/07	ISSUED FOR PERMIT	DAD	CJW	CJW
1	05/26/06	RE-ISSUED FOR REVIEW	PHR	CJW	CJW
0	05/01/06	ISSUED FOR REVIEW	PHR	CJW	CJW
		REVISIONS	BY	CHK	APP'D

**infining**  
engineering  
810 MARIETTA HIGHWAY  
ROSWELL, GA 30075  
OFFICE #: (770) 640-9969  
FAX #: (770) 640-7363  
127-101

**MARC**  
Mid-America Regional Council  
Kansas City Regional Area  
Multi-Band Integrated System  
(RAMBIS)

**Pyramid Network Services, LLC**

TRIMBLE  
MISSOURI STATE HIGHWAY PATROL  
3625 MALCOLM LAKE ROAD  
EDGERTON, MO

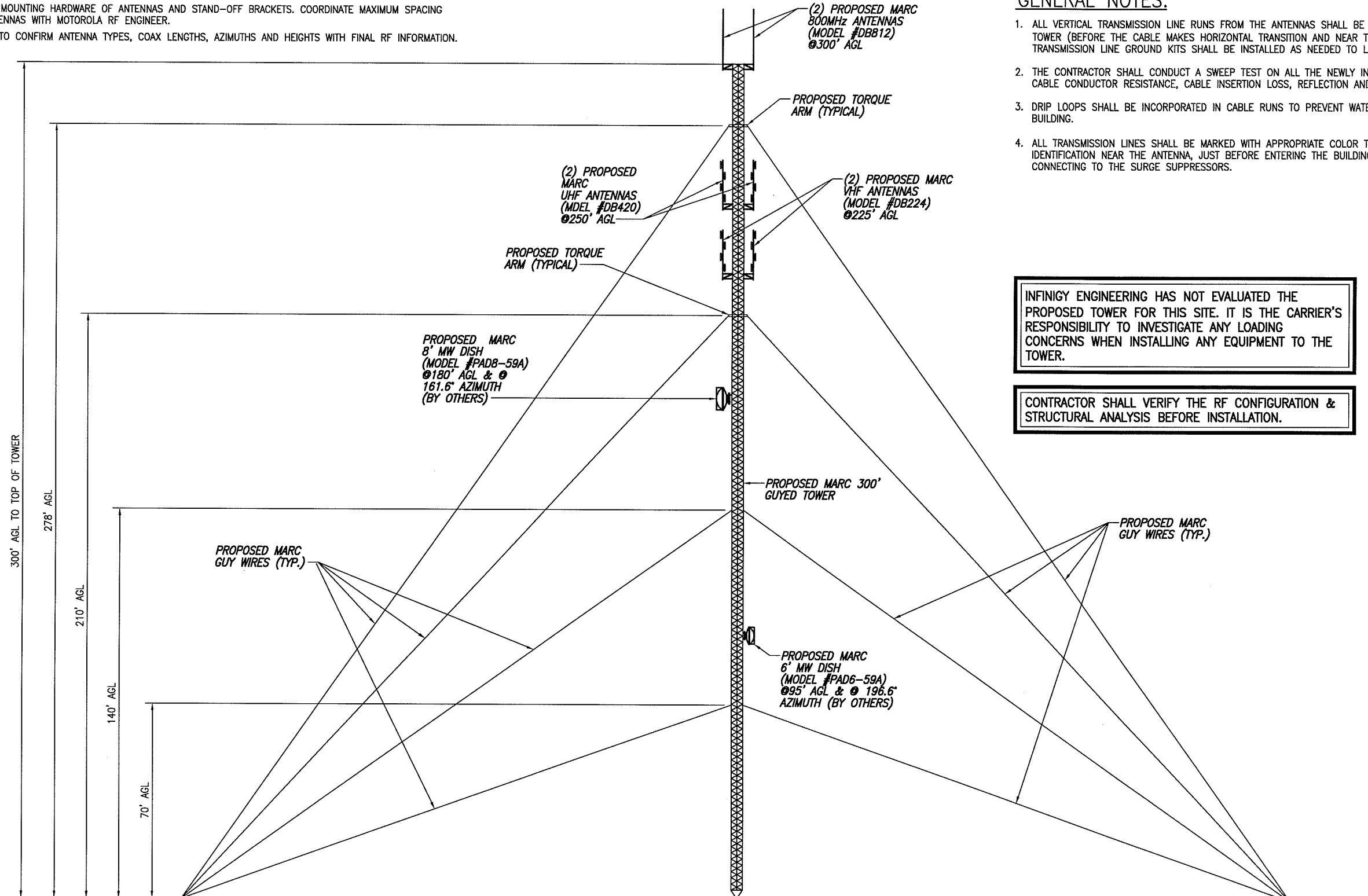
STAKING PLANS  
EDGERTON, MO

C3A  
REV 3

IT IS A VIOLATION OF LAW FOR ANY PERSON,  
UNLESS THEY ARE ACTING UNDER THE DIRECTION  
OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER  
THIS DOCUMENT.

## NOTES:

1. FIELD VERIFY MOUNTING HARDWARE OF ANTENNAS AND STAND-OFF BRACKETS. COORDINATE MAXIMUM SPACING BETWEEN ANTENNAS WITH MOTOROLA RF ENGINEER.
2. CONTRACTOR TO CONFIRM ANTENNA TYPES, COAX LENGTHS, AZIMUTHS AND HEIGHTS WITH FINAL RF INFORMATION.



## GENERAL NOTES:

1. ALL VERTICAL TRANSMISSION LINE RUNS FROM THE ANTENNAS SHALL BE GROUNDED NEAR THE TOP AND BOTTOM OF THE TOWER (BEFORE THE CABLE MAKES HORIZONTAL TRANSITION AND NEAR THE ENTRY PORT ON THE SHELTER). ADDITIONAL TRANSMISSION LINE GROUND KITS SHALL BE INSTALLED AS NEEDED TO LIMIT THE DISTANCE BETWEEN GROUND KITS TO 75 FEET.
2. THE CONTRACTOR SHALL CONDUCT A SWEEP TEST ON ALL THE NEWLY INSTALLED TRANSMISSION LINES TO DETERMINE THE CABLE CONDUCTOR RESISTANCE, CABLE INSERTION LOSS, REFLECTION AND STIMULUS RESPONSE MEASUREMENTS.
3. DRIP LOOPS SHALL BE INCORPORATED IN CABLE RUNS TO PREVENT WATER FROM TRICKLING DOWN THE LINES INTO THE BUILDING.
4. ALL TRANSMISSION LINES SHALL BE MARKED WITH APPROPRIATE COLOR TAPE BANDS (ONE INCH WIDE COLOR TAPE) FOR IDENTIFICATION NEAR THE ANTENNA, JUST BEFORE ENTERING THE BUILDING AS WELL AS INSIDE THE BUILDING, BEFORE CONNECTING TO THE SURGE SUPPRESSORS.

INFINIGY ENGINEERING HAS NOT EVALUATED THE PROPOSED TOWER FOR THIS SITE. IT IS THE CARRIER'S RESPONSIBILITY TO INVESTIGATE ANY LOADING CONCERN WHEN INSTALLING ANY EQUIPMENT TO THE TOWER.

CONTRACTOR SHALL VERIFY THE RF CONFIGURATION & STRUCTURAL ANALYSIS BEFORE INSTALLATION.

1 GUYED TOWER ELEVATION  
--- SCALE: 1" = 40'

3	03/07/07	COUNTY COMMENTS	DAD	CJW	CJW
2	02/08/07	ISSUED FOR PERMIT	DAD	CJW	CJW
1	05/26/06	RE-ISSUED FOR REVIEW	PHR	CJW	CJW
0	05/01/06	ISSUED FOR REVIEW	PHR	CJW	CJW
		REVISIONS	BY	CHK APP'D	

infiningy  
engineering

810 MARIETTA HIGHWAY  
ROSWELL, GA 30075  
OFFICE #: (770) 640-9869  
FAX #: (770) 640-7363

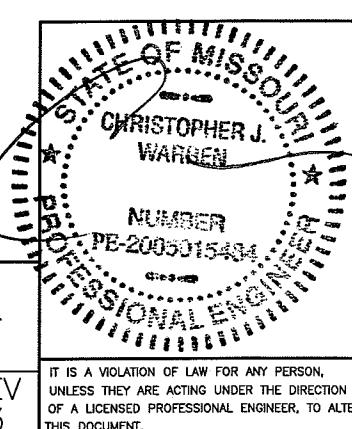
MARC  
Mid-America Regional Council  
Kansas City Regional Area  
Multi-Band Integrated System  
(RAMBIS)  
127-101

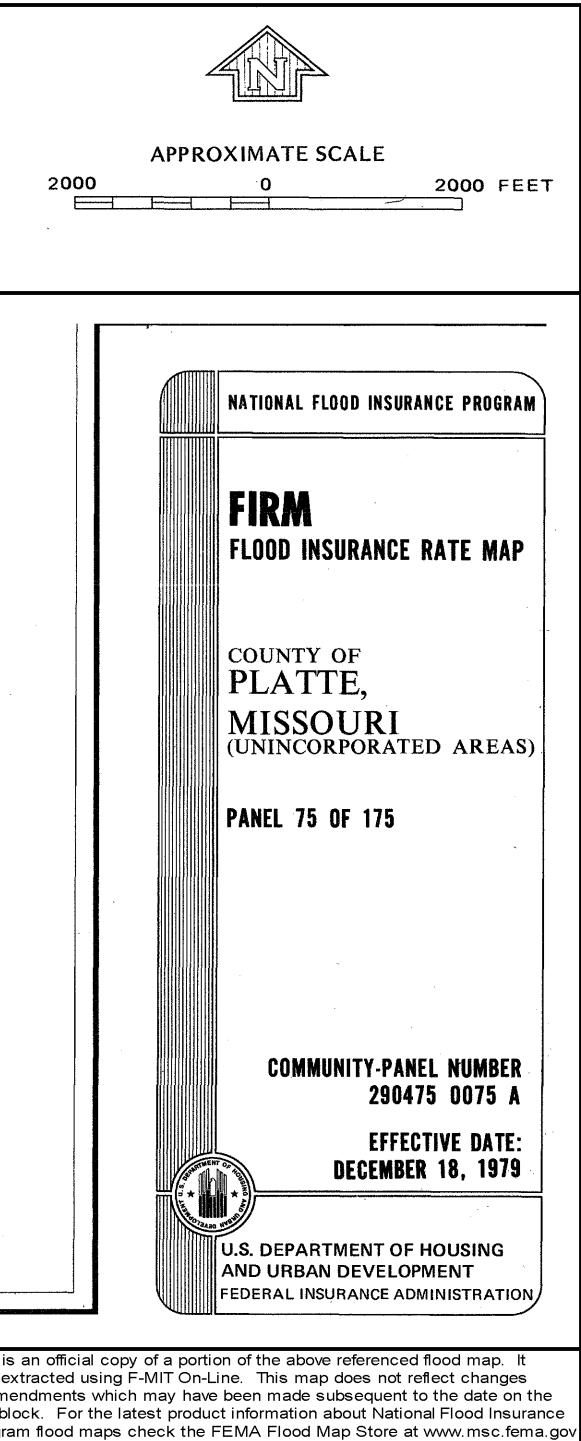
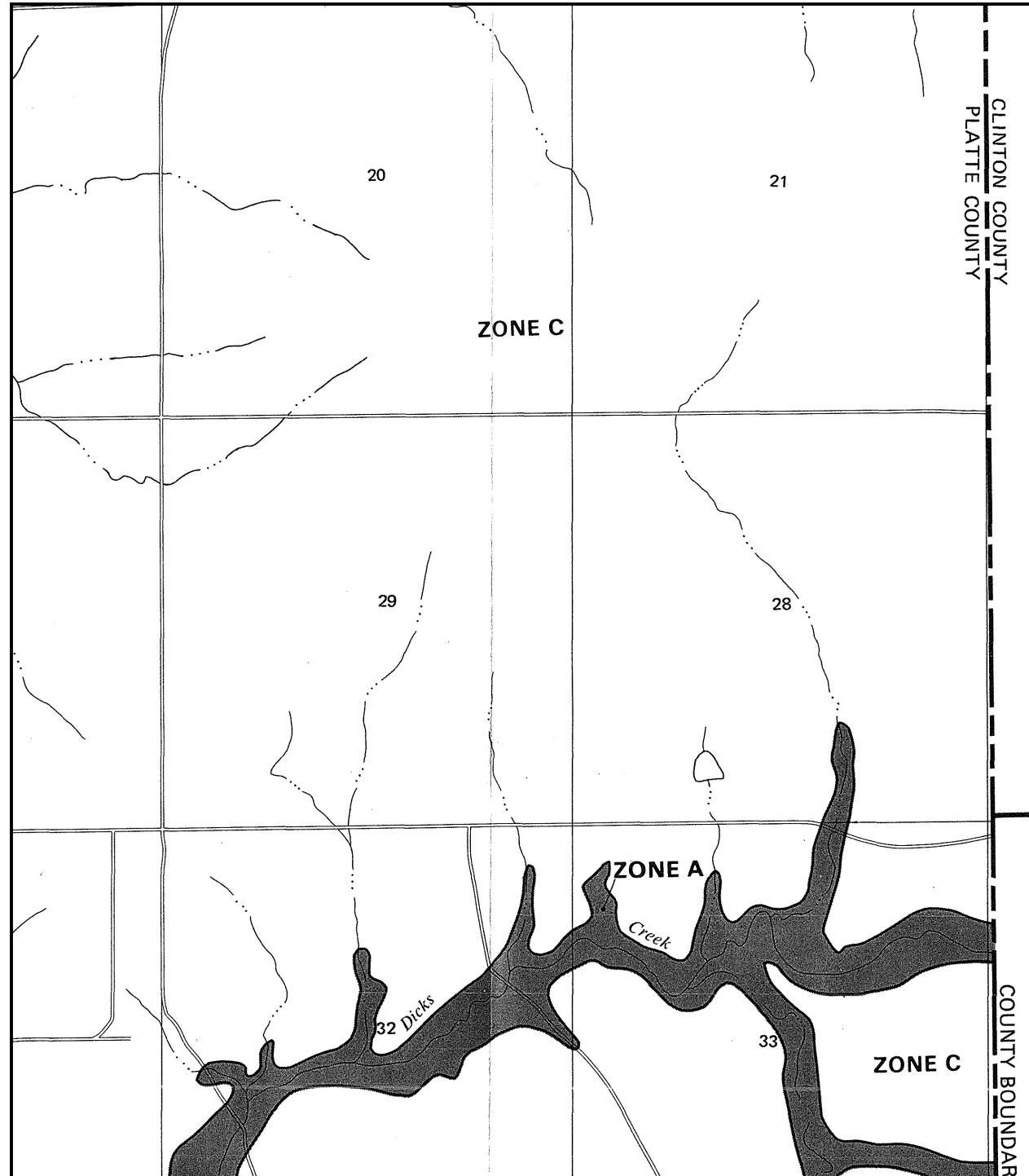


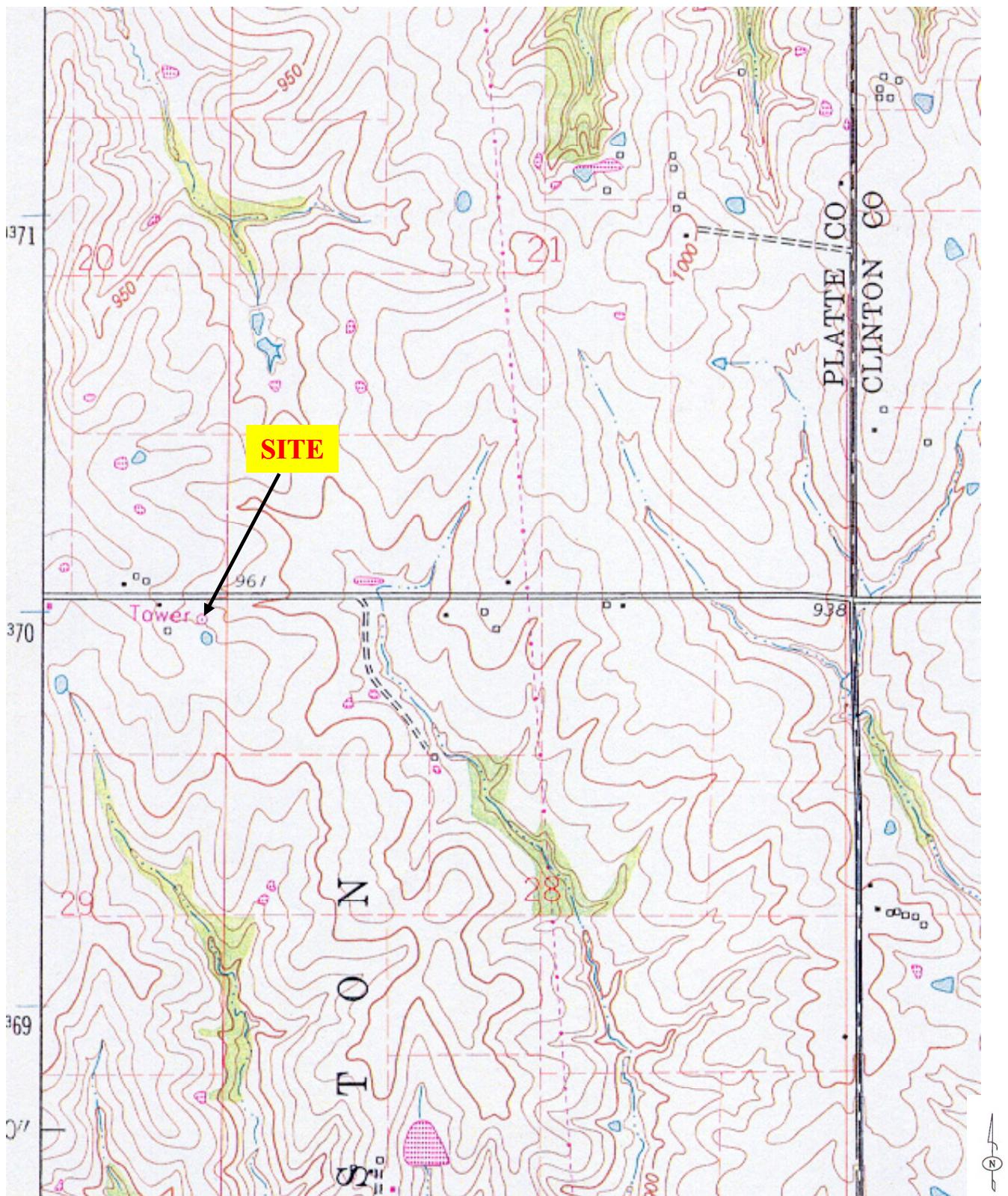
TRIMBLE  
MISSOURI STATE HIGHWAY PATROL  
3625 MALCOLM LAKE ROAD  
EDGERTON, MO

TOWER ELEVATION & DETAILS  
EDGERTON, MO

C4  
REV 3







SOURCE: USGS SMITHVILLE QUADRANGLE, MISSOURI (7.5 MINUTE SERIES) 1975 TOPOGRAPHIC MAP. OBTAINED FROM EDR.



8246 Marshall Drive  
Lenexa, KS 66214  
(913) 438-2800

PROJECT NO.: 17.29788.0004

DESIGNED BY: ATC	SCALE:N/A	REVIEWED BY: LTA
DRAWN BY: ESC	DATE: 08/07	FILE: TOPOS.PPT

## TOPOGRAPHIC MAP

PYRAMID NETWORK SERVICES, LLC  
MOTOROLA – MARC RAMBIS PROJECT  
3625 MALCOLM LAKE ROAD  
TRIMBLE, MISSOURI 64492



SOURCE: 1996 AERIAL PHOTOGRAPH OBTAINED FROM <http://www.terraserver.microsoft.com>. SCALE: UNKNOWN.



8246 Marshall Drive  
Lenexa, KS 66214  
(913) 438-2800

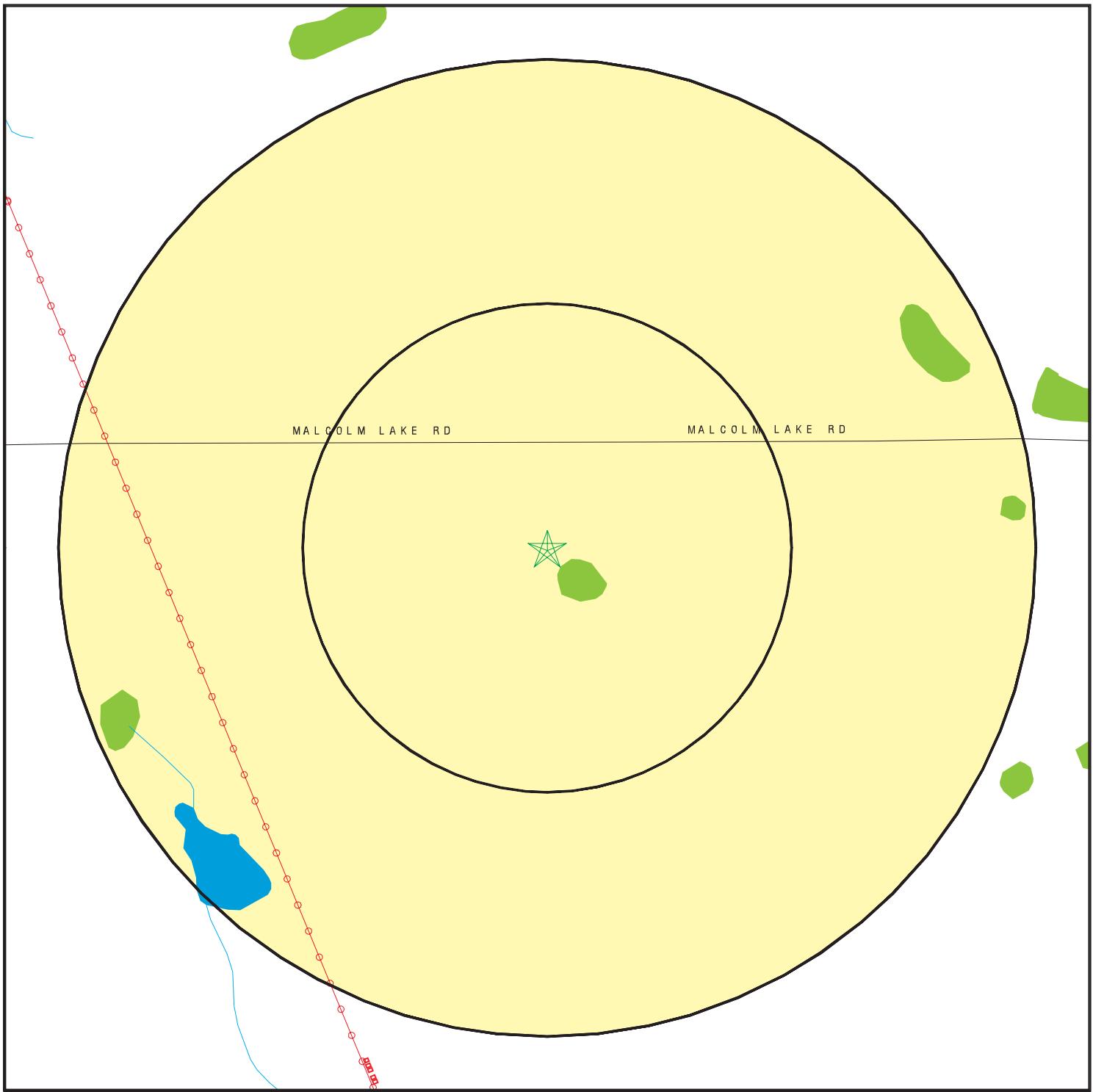
PROJECT NO: 17.29788.0001

DESIGNED BY: ATC	SCALE: UNK'	REVIEWED BY: ESC
DRAWN BY: NMC	DATE: 08/07	FILE: AERIALS.PPT

#### AERIAL PHOTOGRAPHS

PYRAMID NETWORK SERVICES, LLC  
MOTOROLA – MARC RAMBIS PROJECT  
3625 MALCOLM LAKE ROAD  
TRIMBLE, MISSOURI 64492

# DETAIL MAP - 1657387.16s



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites

- |  |                            |
|--|----------------------------|
|  | Indian Reservations BIA    |
|  | Power transmission lines   |
|  | Oil & Gas pipelines        |
|  | 100-year flood zone        |
|  | 500-year flood zone        |
|  | National Wetland Inventory |

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Trimble  
 ADDRESS: 3805 Malcom Lake Rd.  
 TRIMBLE MO 64492  
 LAT/LONG: 39.4697 / 94.6206

CLIENT: ATC  
 CONTACT: Ed Creaden  
 INQUIRY #: 1657387.16s  
 DATE: April 18, 2006

## **Appendix C**

### **Information Obtained from the State Wildlife Agency and the United States Fish and Wildlife Service, Including the United States Fish and Wildlife Service Tower Siting Guidelines**

# Heritage Review Report



Missouri Department of Conservation  
Policy Coordination Unit  
P. O. Box 180  
Jefferson City, MO 65102  
573-522-4115 X 3250 -- Shannon.Cave@mdc.mo.gov

Mr. Ed Creaden  
ATC Associates Inc.  
8246 Marshall Drive  
Lenexa, Kansas 66214

**Project type:** Telecommunication Tower Sites (4)  
**Location:** S33, T51N, R33W; S26, T52N, R34W; S7, T48N, R32W, S29, T54N, R33W  
**County:** Platte and Jackson  
**Described in query as:** Installation of new equipment on three sites and removal and replacement of new equipment at one site  
**Date query received:** May 23, 2006

**This is not a site clearance letter**, but a report of Missouri Department of Conservation records concerning public lands and sensitive resources known to be near and possibly affected by the proposed project.

## Records Found of Species/habitats with State concerns: None

Heritage records identify no designated wilderness areas, wildlife preserves, designated critical habitats, or endangered species in the vicinity of your project. The U.S. Fish and Wildlife Service (USFWS) has concerns regarding potential avian mortality that could occur with the installation and operation of communications towers, and has a questionnaire that should be completed and filed with them for any such project. Please contact U.S. Fish and Wildlife Service (Ecological Services, 101 Park Deville Drive Suite A, Columbia, Missouri 65203-0007; Phone 573-234-2132; Fax 573-234-2181) to complete a copy of that form.

**Records Found of Species/habitats with State concerns:** The following record is near the WOF site. Please be sure to manage construction and operations to minimize erosion and sedimentation/runoff to nearby streams and lakes.

Scientific Name	Common Name	Federal Status	State Status	State Rank	Last record	Sec	Twp/Rng
Kinosternon flavescens	Yellow Mud Turtle	none	E	S1	1993	33	T51N R32W

*FEDERAL STATUS is derived from the Endangered Species Act, administered by the U.S. Fish and Wildlife Service. STATE STATUS is either blank or E, for "endangered" as defined in the Wildlife Code of Missouri. STATE RANKS refer to species tracked but not listed. S1 = Critically imperiled, S2 = Imperiled, S3 = Rare and uncommon or SE = exotic/invasive species.*

**Concerns & management recommendations** based on site or project details, not related to specific heritage records:  
WOF, KCI and Trimble Sites: Indiana bats (*myotis sodalis*, Federally endangered, State endangered) roost and raise young under the bark of trees in riparian forests and upland forests near perennial streams north of the Missouri River. During project activities, avoid degrading stream quality and where possible leave snags standing and preserve mature forest canopy. Additional information to incorporate in planning documents is available at <http://www.mdc.mo.gov/documents/nathis/endangered/indianabat.pdf>.

Habitat loss can impact populations of grassland birds native to the area, including barn owls (state endangered), northern harriers (state endangered), Henslow's sparrow (imperiled in the state), and greater prairie-chickens (state endangered). Revegetation with native grasses and other flowering plants will minimize the impact of habitat disturbance. Best management practices may be found on-line at <http://www.mdc.mo.gov/nathis/endangered/bmp.htm>.

A HERITAGE REVIEW provides information about species and habitats of concern that could be affected by the project. Heritage records note things that were positively identified at some date and time, marked at a location that may be more or less precise. Animals move quickly but plant communities can move also. To say "there is a record" does not mean the species/habitat is still there. To say that "there is no record" does not mean the project may not encounter something. Because of this, reports include information about records near but not necessarily on the project site. Three different kinds of information are provided.

- FEDERAL Concerns are species/habitats protected under the Federal Endangered Species Act and that have been known near enough to the project site to warrant consideration. For these, project managers must contact the U.S. Fish and Wildlife Service Ecological Services (101 Park Deville Drive Suite A, Columbia, Missouri 65203-0007; Phone 573-234-2132; Fax 573-234-2181) for consultation.
- STATE Concerns are species/habitats known to exist near enough to the project site to warrant concern and protected under the Wildlife Code of Missouri (RSMo 3 CSR 10). "State Endangered Status" is determined by the Missouri Conservation Commission under constitutional authority, with requirements expressed in the Missouri Wildlife Code, rule 3CSR10-4.111. "State Rank" is numeric rank of relative rarity, protected under general provisions of the Wildlife Code but not endangered.
- "Concerns & management recommendations" are things for which one might prudently look. There is no specific heritage record, but our knowledge of the surrounding landscape suggests consideration. 93% of Missouri's land is in private ownership, so most sites have never been carefully inspected by conservation professionals.

This report is not a site clearance letter. Rather, it provides an indication of whether or not public lands and sensitive resources are known to be (or are likely to be) located close to the proposed project. Incorporating information from our Heritage Database into project plans is an important step that can help reduce unnecessary impacts to Missouri's sensitive natural resources. However, the Heritage Database is only one reference that should be used to evaluate potential adverse impacts. Other types of information, such as wetland and soils maps and on-site inspections or surveys, should be considered. Reviewing current landscape and habitat information and species biological characteristics would additionally ensure that species of conservation concern are appropriately identified and addressed.

Additional information on rare, endangered and watched species may be found at <http://www.mdc.mo.gov/nathis/endangered/>. If you would like printed copies of best management practices cited as internet URLs, please contact us.

United States Department of Interior  
Fish and Wildlife Service  
Washington, DC 20240

September 14, 2000

**To:** Regional Directors

**From:** Director /s/ Jamie Rappaport Clark

**Subject:** Service Guidance on the Siting, Construction, Operation and Decommissioning of Communications Towers

Construction of communications towers (including radio, television, cellular, and microwave) in the United States has been growing at an exponential rate, increasing at an estimated 6 percent to 8 percent annually. According to the Federal Communication Commission's *2000 Antenna Structure Registry*, the number of lighted towers greater than 199 feet above ground level (AGL) currently number over 45,000 and the total number of towers over 74,000. Non-compliance with the registry program is estimated at 24 percent to 38 percent, bringing the total to 92,000 to 102,000. By 2003, all television stations must be digital, adding potentially 1,000 new towers exceeding 1,000 feet AGL.

The construction of new towers creates a potentially significant impact on migratory birds, especially some 350 species of night-migrating birds. Communications towers are estimated to kill 4-5 million birds per year, which violates the spirit and the intent of the Migratory Bird Treaty Act and the Code of Federal Regulations at Part 50 designed to implement the MBTA. Some of the species affected are also protected under the Endangered Species Act and Bald and Golden Eagle Act.

Service personnel may become involved in the review of proposed tower sitings and/or in the evaluation of tower impacts on migratory birds through National Environmental Policy Act review; specifically, Sections 1501.6, opportunity to be a cooperating agency, and 1503.4, duty to comment on federally-licensed activities for agencies with jurisdiction by law, in this case the MBTA, or because of special expertise. Also, the National Wildlife Refuge System Improvement Act requires that any activity on Refuge lands be determined as compatible with the Refuge system mission and the Refuge purpose(s). In addition, the Service is required by the ESA to assist other Federal agencies in ensuring that any action they authorize, implement, or fund will not jeopardize the continued existence of any Federally endangered or threatened species.

A Communication Tower Working Group composed of government agencies, industry, academic researchers and NGO's has been formed to develop and implement a research protocol to determine the best ways to construct and operate towers to prevent bird strikes. Until the research study is completed, or until research efforts uncover significant new mitigation measures, all Service personnel involved in the review of proposed tower sitings and/or the evaluation of the impacts of towers on migratory birds should use the attached interim guidelines when making recommendations to all companies, license applicants, or licensees proposing new tower sitings. These guidelines were developed by

Service personnel from research conducted in several eastern, midwestern, and southern states, and have been refined through Regional review. They are based on the best information available at this time, and are the most prudent and effective measures for avoiding bird strikes at towers. We believe that they will provide significant protection for migratory birds pending completion of the Working Group's recommendations. As new information becomes available, the guidelines will be updated accordingly.

Implementation of these guidelines by the communications industry is voluntary, and our recommendations must be balanced with Federal Aviation Administration requirements and local community concerns where necessary. Field offices have discretion in the use of these guidelines on a case by case basis, and may also have additional recommendations to add which are specific to their geographic area.

Also attached is a [Tower Site Evaluation Form](#) which may prove useful in evaluating proposed towers and in streamlining the evaluation process. Copies may be provided to consultants or tower companies who regularly submit requests for consultation, as well as to those who submit individual requests that do not contain sufficient information to allow adequate evaluation. This form is for discretionary use, and may be modified as necessary.

The Migratory Bird Treaty Act (16 U.S.C. 703-712) prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Department of the Interior. While the Act has no provision for allowing unauthorized take, it must be recognized that some birds may be killed at structures such as communications towers even if all reasonable measures to avoid it are implemented. The Service's Division of Law Enforcement carries out its mission to protect migratory birds not only through investigations and enforcement, but also through fostering relationships with individuals and industries that proactively seek to eliminate their impacts on migratory birds. While it is not possible under the Act to absolve individuals or companies from liability if they follow these recommended guidelines, the Division of Law Enforcement and Department of Justice have used enforcement and prosecutorial discretion in the past regarding individuals or companies who have made good faith efforts to avoid the take of migratory birds.

Please ensure that all field personnel involved in review of FCC licensed communications tower proposals receive copies of this memorandum. Questions regarding this issue should be directed to Dr. Benjamin Tuggle, Chief, Division of Habitat Conservation, at (703)358-2161, or Jon Andrew, Chief, Division of Migratory Bird Management, at (703)358-1714. These guidelines will be incorporated in a Director's Order and placed in the Fish and Wildlife Service Manual at a future date.

**Service Interim Guidelines For Recommendations On**  
**Communications Tower Siting, Construction, Operation, and Decommissioning**

1. Any company/applicant/licensee proposing to construct a new communications tower should be strongly encouraged to collocate the communications equipment on an existing communication tower or other structure (*e.g.*, billboard, water tower, or building mount). Depending on tower load factors, from 6 to 10 providers may collocate on an existing tower.
2. If collocation is not feasible and a new tower or towers are to be constructed, communications service providers should be strongly encouraged to construct towers no more than 199 feet above ground level (AGL), using construction techniques which do not require guy wires (*e.g.*, use a lattice structure, monopole, etc.). Such towers should be unlighted if Federal Aviation Administration regulations permit.
3. If constructing multiple towers, providers should consider the cumulative impacts of all of those towers to migratory birds and threatened and endangered species as well as the impacts of each individual tower.
4. If at all possible, new towers should be sited within existing “antenna farms” (clusters of towers). Towers should not be sited in or near wetlands, other known bird concentration areas (*e.g.*, state or Federal refuges, staging areas, rookeries), in known migratory or daily movement flyways, or in habitat of threatened or endangered species. Towers should not be sited in areas with a high incidence of fog, mist, and low ceilings.
5. If taller (>199 feet AGL) towers requiring lights for aviation safety must be constructed, the minimum amount of pilot warning and obstruction avoidance lighting required by the FAA should be used. Unless otherwise required by the FAA, only white (preferable) or red strobe lights should be used at night, and these should be the minimum number, minimum intensity, and minimum number of flashes per minute (longest duration between flashes) allowable by the FAA. The use of solid red or pulsating red warning lights at night should be avoided. Current research indicates that solid or pulsating (beacon) red lights attract night-migrating birds at a much higher rate than white strobe lights. Red strobe lights have not yet been studied.
6. Tower designs using guy wires for support which are proposed to be located in known raptor or waterbird concentration areas or daily movement routes, or in major diurnal migratory bird movement routes or stopover sites, should have daytime visual markers on the wires to prevent collisions by these diurnally moving species. (For guidance on markers, see *Avian Power Line Interaction Committee (APLIC). 1994. Mitigating Bird Collisions with Power Lines: The State of the Art in 1994. Edison Electric Institute, Washington, D.C., 78 pp*, and *Avian Power Line Interaction Committee (APLIC). 1996. Suggested Practices for*

*Raptor Protection on Power Lines. Edison Electric Institute/Raptor Research Foundation, Washington, D.C., 128 pp.* Copies can be obtained via the Internet at <http://www.eei.org/resources/pubcat/enviro/>, or by calling 1-800/334-5453).

7. Towers and appendant facilities should be sited, designed and constructed so as to avoid or minimize habitat loss within and adjacent to the tower “footprint”. However, a larger tower footprint is preferable to the use of guy wires in construction. Road access and fencing should be minimized to reduce or prevent habitat fragmentation and disturbance, and to reduce above ground obstacles to birds in flight.
8. If significant numbers of breeding, feeding, or roosting birds are known to habitually use the proposed tower construction area, relocation to an alternate site should be recommended. If this is not an option, seasonal restrictions on construction may be advisable in order to avoid disturbance during periods of high bird activity.
9. In order to reduce the number of towers needed in the future, providers should be encouraged to design new towers structurally and electrically to accommodate the applicant/licensee’s antennas and comparable antennas for at least two additional users (minimum of three users for each tower structure), unless this design would require the addition of lights or guy wires to an otherwise unlighted and/or unguyed tower.
10. Security lighting for on-ground facilities and equipment should be down-shielded to keep light within the boundaries of the site.
11. If a tower is constructed or proposed for construction, Service personnel or researchers from the Communication Tower Working Group should be allowed access to the site to evaluate bird use, conduct dead-bird searches, to place net catchments below the towers but above the ground, and to place radar, Global Positioning System, infrared, thermal imagery, and acoustical monitoring equipment as necessary to assess and verify bird movements and to gain information on the impacts of various tower sizes, configurations, and lighting systems.
12. Towers no longer in use or determined to be obsolete should be removed within 12 months of cessation of use.

In order to obtain information on the extent to which these guidelines are being implemented, and to identify any recurring problems with their implementation which may necessitate modifications, letters provided in response to requests for evaluation of proposed towers should contain the following request:

“In order to obtain information on the usefulness of these guidelines in preventing bird strikes, and to identify any recurring problems with their implementation which may necessitate modifications, please advise us of the final location and specifications of the

proposed tower, and which of the measures recommended for the protection of migratory birds were implemented. If any of the recommended measures can not be implemented, please explain why they were not feasible."



RECEIVED JUN 11 2006



## Design Specifications Questionnaire for Proposed Communications Towers in Missouri

The U.S. Fish and Wildlife Service (Service) has concerns regarding potential avian mortality that could occur with the installation and operation of communications towers. Despite the well-developed visual acuity of most bird species, collisions with above-ground structures frequently occur. The problem is especially acute at tall, lighted, guyed towers, particularly at night during inclement weather, and during spring and fall songbird migrations.

The Service encourages the implementation of recommendations that minimize potential impacts to fish and wildlife resources. Towers should not be sited in or near wetlands, other known bird concentration areas (e.g., state or federal refuges, staging areas, rookeries), in known migratory or daily movement flyways, or in habitat of threatened or endangered species. Towers should not be sited in areas with a high incidence of fog, mist, and low cloud ceilings.

**Please use one form for each proposed communications tower.**

### TOWER SITING LOCATION INFORMATION (ATTACH PERTINENT MAPS AND PHOTOGRAPHS):

County Platte USGS Quad Name Smithville MO  
TSR<sup>1</sup> T54N, R33W, Sec. 29, NE1/4 Lat./Long. 39-11-0.6 / 94-29-53.5  
Tower Footprint Including Access Roads (Sq. Ft.) 9,100 Nearest City Kansas City, Missouri  
Circle One: Urban or Rural Site Developed? YES or NO Tree Removal? YES or NO  
Habitat Description \_\_\_\_\_

### PLEASE CHECK ALL THAT APPLY:

- 1. Communications equipment will be co-located on an existing FCC licensed communication tower or other existing structure (e.g. billboard, water tower, or building mount). **If yes, describe type of structure (no further information is required):** 150' lattice tower; self-supporting.
- 2. Tower height less than 200 feet above ground level (AGL) and will NOT require supporting guy wires. **If yes, complete only items 10 through 15.**
- 3. Tower height less than 200 feet AGL and will NOT require supporting guy wires or lighting per Federal Aviation Administration (FAA) regulations. **If yes, complete only items 10 through 15.**
- 4. Tower design will require guy wires for support.  
**Proposed number of guy wires :** 3
- 5. Guyed tower will be equipped with daytime visual markers on the wires to prevent collisions by raptors, waterfowl, and other diurnally moving bird species.<sup>2</sup>
- 6. Tower design will exceed a height of 200 feet AGL and will require lights for aviation safety. **If no, complete only items 10 through 15.**

#### Proposed tower height:

- 7. Tower will be equipped with the **minimum amount** of pilot warning and obstruction avoidance lighting required by the FAA.
- 8. Tower will be equipped with only white strobe lights at night, and these will be the minimum number, minimum intensity, and minimum number of flashes per minute, (longest duration between flashes) allowable by the FAA. No. It will be a dual medium intensity lighting system - white during the day; red at night.
- 9. Tower will NOT be equipped with solid red or pulsating (beacon) red warning lights at night. (Current research indicates that solid or pulsating (beacon) red lights attract night-migrating bird at a much higher rate than white strobe lights. Red strobe lights have not yet been studied.)  
No. It will be a dual medium intensity lighting system - white during the day; red at night. This is generally in conformance with local zoning. The neighbors don't want white strobe

flashing at night and the red is most commonly accepted in zoning.

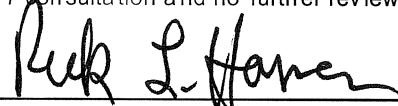
<sup>2</sup> For guidance on markers, see Avian Power Line Interaction Committee (APLIC), 1994. Mitigating Bird Collisions with Power Lines: The State of the Art in 1994. Edison Electric Institute, Washington, D.C., 78 pp, and Avian Power Line Interaction Committee (APLIC), 1996. Suggested Practices for Raptor Protection on Power Lines. Edison Electric Institute/Raptor Research Foundation, Washington, D.C., 128 pp. Copies can be obtained via the Internet at <http://www.eei.org/resources/public/enviro/>, or by calling 1-800/334-5453.

- 10. Tower will be sited within an existing "antenna farm" (towers in clusters). Please note that the proposed tower is a like-for like replacement to be installed within 50' of the existing tower to be replaced
- 11. Tower and appendant facilities will be sited, designed, and constructed to avoid or minimize habitat loss within and adjacent to the tower "footprint." (However, a larger tower footprint is preferable to the use of supporting guy wires in construction.)
- 12. Road access and fencing will be minimized to reduce or prevent habitat fragmentation and disturbance, and to reduce above ground obstacles to birds in flight.
- 13. Tower is designed structurally and electrically to accommodate the applicant/licensee's antennas and comparable antennas for at least two additional users (**minimum of three users for each tower structure**), unless this design would require the addition of lights or guy wires to an otherwise unlighted and/or unguyed tower.
- 14. Security lighting for on-ground facilities and equipment will be down-shielded to keep light within the site boundaries.
- 15. Tower will be removed within 12 months of cessation of use or if determined to be obsolete.

**For U.S. Fish and Wildlife Service Personnel Use Only (DO NOT WRITE IN THIS BOX )**

This response is provided by the U.S. Fish and Wildlife Service under the authority of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.), the National Environmental Policy Act of 1969 (42 U.S.C. 4321-4327), the Migratory Bird Treaty Act (16 U.S.C. 703-712)<sup>3</sup>, and the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543).

- Tower design will adequately minimize bird strikes.
- Significant numbers of breeding, feeding, or roosting birds are known to habitually use the proposed tower construction area, relocation to an alternate site is recommended. If this is not an option, please contact this office at the number listed below.
- Tower location proposed in or near stream or wetland, relocation to an alternate site is recommended. If this is not an option, please contact this office at the number listed below.
- Trees must be removed between October 1<sup>st</sup> and March 30<sup>th</sup> to avoid potential injury or death to roosting Indiana bats. If this is not an option, please contact this office at the number listed below.
- The U.S. Fish and Wildlife Service has determined that no federally listed species or designated critical habitat occurs within the project area; consequently, this concludes Section 7 consultation and no further review of this project is necessary.



Charles M. Scott, Field Supervisor



Date

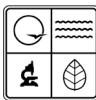
**RETURN THIS FORM TO:**

**U.S. Fish and Wildlife Service  
Ecological Services  
608 East Cherry St., Room 200  
Columbia, Missouri 65201  
phone 573-876-1911; fax 573-876-1914**

<sup>3</sup>The Migratory Bird Treaty Act (16 U.S.C. 703-712) prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Department of the Interior. While the Act has no provision for allowing unauthorized take, it must be recognized that some birds may be killed at structures such as communications towers even if all reasonable measures to avoid it are implemented. The Service's Division of Law Enforcement carries out its mission to protect migratory birds not only through investigations and enforcement, but also through fostering relationships with individuals and industries that proactively seek to eliminate their impacts on migratory birds.

## **Appendix D**

### **Section 106 State Historical Preservation Office (SHPO) Review Documentation**



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
STATE HISTORIC PRESERVATION OFFICE  
**SECTION 106 PROJECT INFORMATION FORM**

Submission of a completed Project Information Form with adequate information and attachments constitutes a request for review pursuant to Section 106 of the National Historic Preservation Act of 1966 (as amended). We reserve the right to request more information. **Please refer to the CHECKLIST on Page 2 to ensure that all basic information relevant to the project has been included.** For further information, refer to our Web site at: <http://www.dnr.state.mo.us/shpo> and follow the links to Section 106 Review.

**NOTE:** Section 106 regulations provide for a 30-day response time by the Missouri State Historic Preservation Office from the date of receipt.

PROJECT NAME

FEDERAL AGENCY PROVIDING FUNDS, LICENSE, OR PERMIT

APPLICANT

TELEPHONE

CONTACT PERSON

TELEPHONE

ADDRESS FOR RESPONSE

**LOCATION OF PROJECT**

COUNTY: \_\_\_\_\_

STREET ADDRESS: \_\_\_\_\_ CITY: \_\_\_\_\_

GIVE LEGAL DESCRIPTION OF PROJECT AREA (TOWNSHIP, RANGE, SECTION, ¼ SECTION, ETC.)

\*USGS TOPOGRAPHIC MAP QUADRANGLE NAME \_\_\_\_\_

YEAR: \_\_\_\_\_ TOWNSHIP: \_\_\_\_\_ RANGE: \_\_\_\_\_ SECTION: \_\_\_\_\_

\*SEE MAP REQUIREMENTS ON PAGE 2

**PROJECT DESCRIPTION**

- Describe the overall project in detail. If it involves excavation, indicate how wide, how deep, etc. If the project involves demolition of existing buildings, make that clear. If the project involves rehabilitation, describe the proposed work in detail. Use additional pages if necessary.

## ARCHAEOLOGY (Earthmoving Activities)

Has the ground involved been graded, built on, borrowed, or otherwise disturbed?

- Please describe in detail: (Use additional pages, if necessary.) Photographs are helpful.

Will the project require fill material?  Yes  No

- Indicate proposed borrow areas (source of fill material) on topographic map.

Are you aware of archaeological sites on or adjacent to project area?  Yes  No

- If yes, identify them on the topographic map.

## STRUCTURES (Rehabilitation, Demolition, Additions to, or Construction near existing structures)

To the best of your knowledge, is the structure located in any of the following?

An Area Previously Surveyed for Historic Properties  A National Register District  A Local Historic District

If yes, please provide the name of the survey or district:

- Please provide photographs of all structures, see photography requirements.
- **NOTE:** All photographs should be labeled and keyed to one map of the project area.
- Please provide a brief history of the building(s), including construction dates and building uses. (Use additional pages, if necessary.)

## ADDITIONAL REQUIREMENTS

**Map Requirements:** Attach a copy of the relevant portion (8½ x 11) of the current USGS 7.5 min. topographic map **and**, if necessary, a large scale project map. Please do not send an individual map with each structure or site. While an original map is preferable, a good copy is acceptable. USGS 7.5 min. topographic maps may be ordered from Geological Survey and Resource Assessment Division, Department of Natural Resources, 111 Fairground, Rolla, MO 65402, Telephone: (573) 368-2125, or printed from the website <http://www.topozone.com>.

**Photography Requirements:** Clear black & white or color photographs on photographic paper (minimum 3" x 5") are acceptable. Polaroids, photocopies, emailed, or faxed photographs are not acceptable. **Good quality photographs are important for expeditious project review.** Photographs of neighboring or nearby buildings are also helpful. All photographs should be labeled and keyed to one map of the project area.

## CHECKLIST: Did you provide the following information?

Topographic map 7.5 min. (per project, not structure)

Other supporting documents (If necessary to explain the project)

Thorough description (all projects)

For new construction, rehabilitations, etc., attach work write-ups, plans, drawings, etc.

Photographs (all structures)

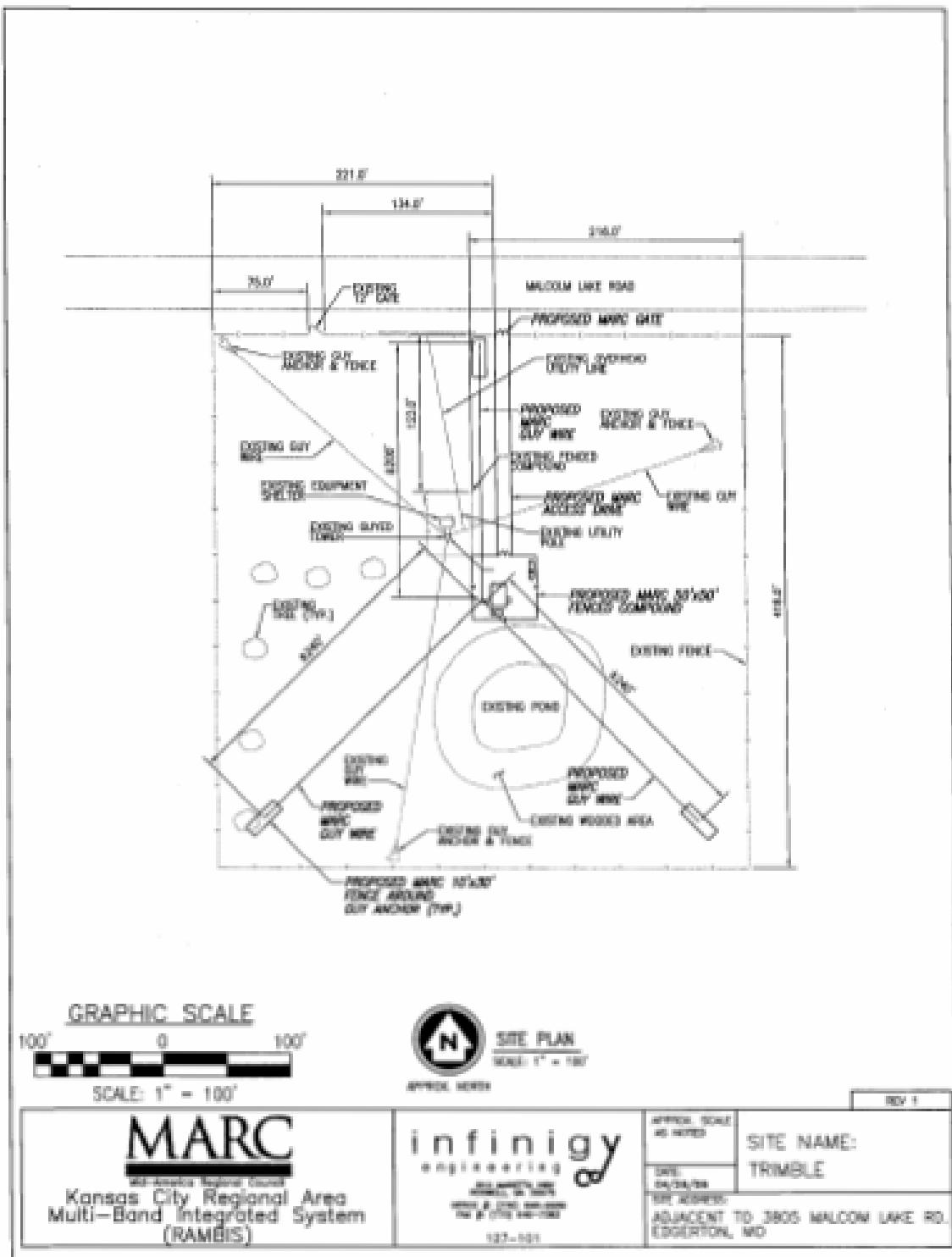
Is topographic map identified by quadrangle and year?

Return this Form and Attachments to:

MISSOURI DEPARTMENT OF NATURAL RESOURCES  
STATE HISTORIC PRESERVATION OFFICE  
Attn: Section 106 Review  
P.O. BOX 176  
JEFFERSON CITY, MISSOURI 65102-0176

RESIDENTIAL →

UNDEVELOPED →



UNDEVELOPED →

SOURCE: INFINIGY ENGINEERING LEASE EXHIBIT DATED 4/26/06; OBTAINED FROM PYRAMID NETWORK SERVICES, LLC.



8246 Marshall Drive  
Lenexa, KS 66214  
(913) 438-2800

PROJECT NO: 17.29788.0001

DESIGNED BY: ATC

SCALE: NTS

REVIEWED BY: LTA

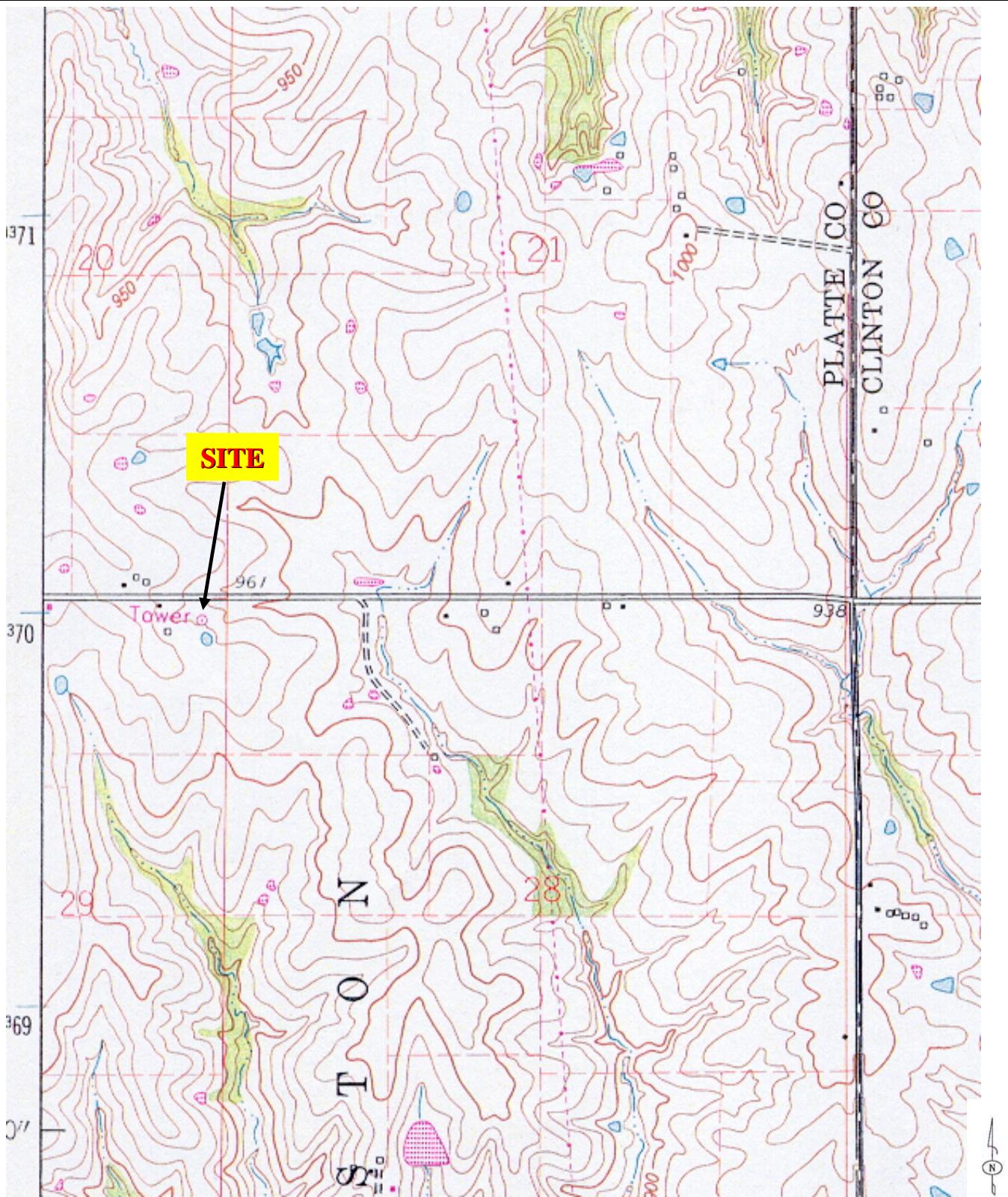
DRAWN BY: ESC

DATE: 04/06

FILE: FIG 2.PPT

## FIGURE 2 – SITE PLAN

PYRAMID NETWORK SERVICES, LLC  
MOTOROLA – MARC RAMBIS PROJECT  
3805 MALCOM LAKE ROAD  
TRIMBLE, MISSOURI 64492



SOURCE: USGS SMITHVILLE QUADRANGLE, MISSOURI (7.5 MINUTE SERIES) 1975 TOPOGRAPHIC MAP. OBTAINED FROM EDR.



8246 Marshall Drive  
Lenexa, KS 66214  
(913) 438-2800

PROJECT NO.: 17.29788.0001

DESIGNED BY: ATC	SCALE:N/A	REVIEWED BY: ESC
DRAWN BY: NMC	DATE: 05/06	FILE: FIG 1.PPT

### FIGURE 1 - SITE VICINITY MAP

PYRAMID NETWORK SERVICES, LLC  
MOTOROLA – MARC RAMBIS PROJECT  
3805 MALCOM LAKE ROAD  
TRIMBLE, MISSOURI 64492



SOURCE: 1996 AERIAL PHOTOGRAPH OBTAINED FROM <http://www.terraserver.microsoft.com>. SCALE: UNKNOWN.



8246 Marshall Drive  
Lenexa, KS 66214  
(913) 438-2800

PROJECT NO: 17.29788.0001

DESIGNED BY: ATC	SCALE: UNK'	REVIEWED BY: ESC
DRAWN BY: NMC	DATE: 04/06	FILE: AERIALS.PPT

#### AERIAL PHOTOGRAPHS

PYRAMID NETWORK SERVICES, LLC  
MOTOROLA – MARC RAMBIS PROJECT  
3805 MALCOM LAKE ROAD  
TRIMBLE, MISSOURI 64492



PHOTO 1: VIEW OF SITE, FACING NORTH.



PHOTO 2: VIEW OF SITE, FACING SOUTH.

 PROJECT NO: 17.29788.0001	8246 Marshall Drive Lenexa, KS 66214 (913) 438-2800	SITE PHOTOGRAPHS
DESIGNED BY: ATC	SCALE: NTS	REVIEWED BY: ESC
PHOTO BY: LTA	DATE: 04/06	FILE: PHOTOS.PPT

PYRAMID NETWORK SERVICES, LLC  
MOTOROLA – MARC RAMBIS PROJECT  
3805 MALCOM LAKE ROAD  
TRIMBLE, MISSOURI 64492



PHOTO 3: VIEW OF SITE FACING EAST.



PHOTO 4: VIEW OF SITE FACING WEST.

<b>WATC</b> ASSOCIATES INC.	8246 Marshall Drive Lenexa, KS 66214 (913) 438-2800	<b>SITE PHOTOGRAPHS</b>  PYRAMID NETWORK SERVICES, LLC MOTOROLA – MARC RAMBIS PROJECT 3805 MALCOM LAKE ROAD TRIMBLE, MISSOURI 64492
PROJECT NO: 17.29788.0001		
DESIGNED BY: ATC	SCALE: NTS	REVIEWED BY: ESC
PHOTO BY: LTA	DATE: 04/06	FILE: PHOTOS.PPT



PHOTO 5: ADJACENT PROPERTY TO THE NORTH, FACING NORTH FROM SITE.



PHOTO 6: ADJACENT PROPERTY TO THE SOUTH, FACING SOUTH FROM SITE.

 PROJECT NO: 17.29788.0001	8246 Marshall Drive Lenexa, KS 66214 (913) 438-2800	SITE PHOTOGRAPHS
DESIGNED BY: ATC	SCALE: NTS	REVIEWED BY: ESC
PHOTO BY: LTA	DATE: 04/06	FILE: PHOTOS.PPT

PYRAMID NETWORK SERVICES, LLC  
MOTOROLA – MARC RAMBIS PROJECT  
3805 MALCOM LAKE ROAD  
TRIMBLE, MISSOURI 64492



PHOTO 7: ADJACENT PROPERTY TO THE EAST, FACING EAST.



PHOTO 8: ADJACENT PROPERTY TO THE WEST FACING WEST.

 PROJECT NO: 17.29788.0001	8246 Marshall Drive Lenexa, KS 66214 (913) 438-2800	SITE PHOTOGRAPHS
DESIGNED BY: ATC	SCALE: NTS	REVIEWED BY: ESC
PHOTO BY: LTA	DATE: 04/06	FILE: PHOTOS.PPT

PYRAMID NETWORK SERVICES, LLC  
MOTOROLA – MARC RAMBIS PROJECT  
3805 MALCOM LAKE ROAD  
TRIMBLE, MISSOURI 64492

RECEIVED MAY 30 2006



Matt Blunt, Governor • Doyle Childers, Director

## DEPARTMENT OF NATURAL RESOURCES

[www.dnr.mo.gov](http://www.dnr.mo.gov)

May 18, 2006

Ed Creaden  
ATC Associates, Inc.  
8246 Marshall Drive  
Lenexa, Kansas 66214

Re: **SHPO Project Number: 017-PL-06** – Proposed Telecommunications Tower, 3805 Malcom Lake Road, Trimble, Platte County Missouri (FCC)

Dear Mr. Creaden:

Thank you for submitting information about the above-referenced project for our review pursuant to Section 106 of the National Historic Preservation Act (P.L. 89-665, as amended) and the Advisory Council on Historic Preservation's regulation 36 CFR Part 800, which require identification and evaluation of cultural resources.

Based on the information provided, we concur that there will be **no historic properties affected** by the project.

Please be advised that, if the project area is increased, cultural materials are encountered during construction or adjacent areas that may contain significant cultural resources may be adversely impacted, appropriate information must be provided to this office for further review and comment.

If you have any questions please write Missouri Department of Natural Resources, State Historic Preservation Office, Attn: Review and Compliance, P.O. Box 176, Jefferson City, Missouri 65102, or call Alison Dubbert at (573) 751-7958. Please be sure to include the **SHPO Project Number (017-PL-06)** on all future correspondence relating to this project. If the information is provided via telephone call, please follow up in writing for our files.

Sincerely,

STATE HISTORIC PRESERVATION OFFICE

A handwritten signature in black ink that reads "Mark A. Miles".

Mark A. Miles  
Director and Deputy  
State Historic Preservation Officer

MAM:ad

## **Appendix E**

**Native American Tribal Consultation Letters and TCNS Notification Completed by ATC  
Associates Inc.**

**THIS SECTION INTENTIONALLY LEFT BLANK**

**Appendix F**

**Response Received from Native American Tribal Groups**

**THIS SECTION INTENTIONALLY LEFT BLANK**