

ENVIRONMENTAL ASSESSMENT

**KINGDOM CITY - AUXVASSE 69KV TRANSMISSION LINE
AUXVASSE – SALT RIVER 69KV TRANSMISSION LINE
SALT RIVER - MEXICO 69KV TRANSMISSION LINE
MEXICO – SANTA FE 69KV TRANSMISSION LINE**

**CALLAWAY, AUDRAIN AND MONROE COUNTIES, MISSOURI
CENTRAL ELECTRIC POWER COOPERATIVE
MISSOURI 71, MONITEAU
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LIST OF ABBREVIATIONS

Abbreviation	Term/Phrase/Name
AGL	above ground level
APE	Area of Potential Effect
CEQ	Council on Environmental Quality
EA	Environmental Assessment
EMF	electric and magnetic fields
EMR	electric and magnetic radiation
EPRI	Electric Power Research Institute
FIRM	Flood Insurance Rate Maps
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
IEEE	Institute of Electrical and Electronics Engineers
IPAC	Information for Planning and Consultation
MW	megawatts
NEPA	National Environmental Policy Act
NESC	National Electrical Safety Code
NHPA	National Historic Preservation Act
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetland Inventory
ROW	right-of-way
RUS	Rural Utilities Service
THPOs	Tribal Historic Preservation Officers
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

1. **Introduction**

Central Electric Power Cooperative (Central) is a not-for-profit cooperative that is owned by and provides power to eight-member electric distribution cooperatives. These eight distribution cooperatives are located in the Central Missouri region and they deliver power to a 22,000 square mile area in 26 counties. Power is delivered to the eight cooperatives by a transmission system consisting of 1620 miles of high voltage transmission lines and 129 power substations. The electric power delivered to the power substations is delivered by the eight electric distribution cooperatives to more than 180,000 distribution cooperative members.

Central has requested long-term financing from the Rural Utilities Service (RUS), an agency within the U.S. Department of Agriculture (USDA), for construction of the proposed Kingdom City – Santa Fe Rebuild Project. RUS is considering financing the proposed Project through an RUS-guaranteed Federal Financing Bank (FFB) loan, thereby making the proposed Project a Federal action subject to the National Environmental Policy Act (NEPA), the Council on Environmental Quality's NEPA implementing regulations (40 CFR Parts 1500-1508), and the RUS's NEPA implementing regulations, Environmental Policies and Procedures (7 CFR Part 1970).

Based on the length of the rebuild project, RUS has determined that it is appropriate to prepare an Environmental Assessment, EA, for the proposed Project in accordance with the requirements of 7 CFR § 1970.

The proposed Project has been designed to avoid resources such as wetlands, surface waters, sensitive habitats, protected species and historic or cultural areas, to the extent possible. As part of its environmental review process, RUS must also consider the effect of the proposed Project on historic properties in accordance with Section 106 of the National Historic Preservation Act (Section 106). Pursuant to 36 CFR § 800.2(d)(3), the agency is using its procedures for public involvement under NEPA to meet its responsibilities to solicit and consider the views of the public during Section 106 review. Accordingly, comments submitted in response to the EA will be considered by agency decision makers for both Section 106 and NEPA.

2. **Purpose and Need for the Project**

2.1 **Project Description**

Central Electric Power Cooperative (Central) proposes to rebuild the 69KV transmission lines between the Kingdom City, Auxvasse, Salt River, Mexico and Santa Fe Substations. The subject 69KV lines were built in the early 1950's and have sustained woodpecker damage, split pole tops, wood crossarm degradation and corrosion of the metal components. This cumulative damage has, over 60 years, reduced the structural strength of the transmission lines (See Appendix C photos). Central's transmission system has

provided reliable electrical service. One reason for this is Central's commitment to repair or replace any system component that could negatively impact reliability. In particular, poles have been repaired in an effort to maximize the life span on the original transmission line structure. Even though pole repair has been successful in extending structure life, it does not change the fact that wood poles or any line component has a finite life. The new transmission structures will not be replaced in place; their location will be selected dependent on engineering and environmental factors including soil conditions, slope, maximum span length between transmission structures, and terrain. Central is proposing to replace the existing single-pole wood structures with new H-frame wood structures that would be approximately 52 to 88 feet tall with a span between structures of approximately 700 to 800 feet. Angle structures and some tangent structures (non-angle structures) will have down guys and anchors.

The transmission lines will be rebuilt on the existing right-of-way (ROW) located in Callaway, Audrain and Monroe Counties in Missouri. A location map, aerial photos and transmission line maps can be found in Appendix A. The length of the transmission lines are as follows:

- A. Kingdom City - Auxvasse transmission line, 6.69 miles
 - B. Auxvasse – Salt River transmission line, 9.78 miles
 - C. Salt River - Mexico transmission line, 3.07 miles
 - D. Mexico – Santa Fe transmission line, 14.01 miles
- Total Estimated Project Cost: \$10,285,531

A. Preliminary Construction Work and ROW Preparation

Initially, Central's field crew will traverse the transmission line right-of-way (ROW) to collect and verify obstacle data pertaining to access, roads, gates, other electric lines, waterways, etc. Central's ROW is 100' in width. Before the contractor begins work on the ROW, Central's field crew will then traverse the ROW a second time for the purpose of staking the location of the new transmission line structures. The structures in the rebuilt transmission line are constructed of wood poles, crossarms and braces.

The existing ROW will be maintained along with clearing of any underbrush to facilitate construction activities.

B. Show-Up Construction Area

A construction show-up area will be identified and leased near the line rebuild project ROW. The show-up will be used for pole storage, pole framing and various construction tasks throughout the Project. The show-up will be the location for the contractor to conduct meetings, to park vehicles and equipment.

C. Construction Process

During the line rebuild project, the line contractor material crew will haul the wood poles, crossarms, braces and other structure components to each staked structure location. After or during material delivery, the drilling crew will set up an auger rig at each structure location and auger the required up to 42" diameter holes. Holes that are not immediately set with a pole are covered with a barrier to protect people and animals from fall hazards. The setting crew will follow the drilling crew and set the wood poles in the augured holes. After the poles are set in the augured holes, rock backfill is placed and tamped between the side of the augured hole and pole. Generally, the structures are a two pole H-frame configuration with the poles being spaced 15.5' apart. See Appendix B for a drawing of a typical H-Frame. The H-Frame structures will vary in height from 52' to 88' above the surrounding ground level. Five to seven H-Frames per mile will be constructed for the proposed projects. The framing crew follows the setting crew and will attach the crossarms, braces and other structure components to the wood poles. The framing crew also transfers the existing conductor to the new structures. As the framing crew performs their tasks another crew will dismantle the existing transmission structures, fill holes and haul the retired structure components off the ROW. When the new structures are built and the existing conductor has been transferred then the new conductor is installed. This stringing operation is accomplished by using the existing conductor to pull in the new conductor. With the new conductor installed and sagged, then the new conductor is attached or clipped-in to the insulators on the transmission structures. Once the stringing, sagging and clipping tasks are complete then the contractor crews clean up the ROW and review the engineer's final inspection list for any required final tasks. The Cooperative then takes control of the transmission line.

D. Access Roads and Crew Movement on ROW

The Contractor will limit the movement of its crews and equipment so as to minimize the damage to crops and property along the ROW. The Contractor will be responsible for all damages off and on the ROW. Central will monitor and inspect all damage repair to ensure that fences, driveways, fields and the ROW are left in pre-construction condition. Restoration procedures will be used on the ROW to prevent erosion and to re-establish ground cover. The procedures include cultivating, seeding, mulching and/or fertilizing the disturbed areas as needed to stimulate rapid growth. During construction the vehicle traffic is generally limited to a 15' wide path on the 100' wide ROW and an area of 50' radius at each structure. Central utilizes private easements that allow for ingress and egress across the property that the easement encumbers, so that existing roads, field roads, crossings and bridges may be used. Existing creek crossings will be used as they are found, but if none are available, alternative methods will be utilized, usually simply approaching the crossing from access on the opposite side, as the construction process does not require linear movement down the ROW. If no other method is possible and a creek crossing has to be made and/or upgraded, an NWP57 Corps of Engineers permit would be requested.

E. Post-Construction

After the new transmission line has been constructed and put into service, Central's contractor will completely remove the existing transmission line poles and conductor that are no longer required, and recontour and revegetate the disturbed areas to pre-existing conditions. Existing transmission poles located within wetlands (if any) will be cut off at the base so as not to impact surrounding soil or vegetation.

2.2 Purpose and Need

USDA, Rural Development is a mission area that includes three federal agencies – Rural Business-Cooperative Service, Rural Housing Service, and Rural Utilities Service. The agencies have in excess of 50 programs that provide financial assistance and a variety of technical and educational assistance to eligible rural and tribal populations, eligible communities, individuals, cooperatives, and other entities with a goal of improving the quality of life, sustainability, infrastructure, economic opportunity, development, and security in rural America. Financial assistance can include direct loans, guaranteed loans, and grants in order to accomplish program objectives. This project would utilize direct and/or guaranteed loans through the Rural Utilities Service to rebuild these lines in Callaway and Consolidated Electric Cooperatives' service territories in Callaway, Audrain and Monroe Counties in Missouri.

The majority of Callaway and Consolidated Electric Cooperative's members receive power from the substations which are located on the transmission lines that are proposed for rebuilding. Callaway and Consolidated Electric Cooperatives are members of Central Electric Power Cooperative.

The subject 69KV lines have sustained woodpecker damage, split pole tops, wood crossarm degradation and corrosion of the metal components. This cumulative damage has, over 60 years, reduced the structural strength of the transmission lines (See Appendix C photos). Central's transmission system has provided reliable electrical service. One reason for this is Central's commitment to repair or replace any system component that could negatively impact reliability. In particular, poles have been repaired in an effort to maximize the life span on the original transmission line structure. Even though pole repair has been successful in extending structure life, it does not change the fact that wood poles or any line component has a finite life.

3. Alternatives Evaluated Including the Proposed Action and No Action

3.1 Proposed Action

Under the Proposed Action Alternative, RUS would consider providing financial assistance to Central Electric to construct the proposed Project as described in this document.

3.2 Other Alternatives Evaluated

An alternative to the complete redesign, retirement and rebuilding of this transmission line is the piece by piece change out of all the line material that has been identified as rejects. Central has done an extensive study of the maintenance work on line sections across the system. The findings suggest the majority (60-80%) of the poles and crossarms would need to be replaced over the next 10 years. A cost analysis was completed to check the viability of piece by piece maintenance versus reconstruction and it was determined that for a slight premium, Central could utilize contract crews to begin replacing transmission lines with a more reliable construction. In addition to more reliable structures, a larger conductor is installed thus affording increased power delivery and reduced voltage drop. This study was submitted to RUS in previous BER submittals and the approved 2012-2016 Construction Work Plan.

A. Information Considered for the Alternative

CEPC has a transmission line inspection and maintenance program which consists of the following processes:

- i. CEPC's line crews perform a walking inspection of each transmission line every one to two years.
- ii. A contract aviation company performs a flying inspection of the majority of CEPC's transmission lines three to four times per year.
- iii. A contract company inspects, tests, and treats each of CEPC's wood pole structures once every ten years. The inspection, testing, and treating procedure focuses on the pole from 1.5' below ground line to approximately 8' above ground line. The procedure used by the contractor follows RUS Bulletin 1730B-121 on pole inspection and maintenance.
- iv. A contract company recently flew many of CEPC's 69 kV transmission lines with a helicopter to document the condition of the crossarms of TS-1 structures. The helicopter flight photographic data for the Chamois-Crook 69 kV transmission line revealed severe crossarm degradation as detailed in Item vii of the "Supporting Field Data for Rebuilding the Transmission Lines."
- v. CEPC recently carried out a land based photographic survey of several lines. This photographic survey documents the physical degradation of the lines.

During the sixty-year life of these transmission lines, any pole, pole hardware, or crossarm identified as being unreliable has been changed out or repaired. The repair of a pole generally focused on filling woodpecker holes. More recently, a woven wire mesh has also been applied around the pole in an effort to reduce woodpecker activity.

B. Supporting Field Data for Rebuilding the Transmission Lines

An analysis of the data from CEPC's inspection processes has been an aid in documenting the degraded physical condition of the transmission lines. Please reference the photos in Appendix C. These photos are of Central structures of the same vintage and design, but are not necessarily of these particular lines. The specific problems identified are as follows:

- i. A large number of woodpecker holes that were repaired many years ago have been enlarged by continued woodpecker activity.
- ii. The original woodpecker repair technique of adding solid materials and tar to the woodpecker hole did not impart any material strength to the wood pole.
- iii. A check in a wood pole is the lengthwise separation of the wood that extends across the rings of annual growth due to the drying process. A check can be an avenue for decay spores and woodpeckers to enter the pole. Poles with detrimental checks were found.
- iv. Knots, knot clusters and other pole defects that passed inspection sixty years ago have become a point of ingress for biological and weather forces which have caused a reduction in pole strength.
- v. The pole tops of these lines were not protected with pole caps. The majority of the pole tops in these lines have been severely degraded through woodpecker damage and the weathering action caused by ultraviolet rays, rain and freeze/thaw cycles.
- vi. The 3/8" High Strength Steel, HSS, which was employed as guy wire and overhead ground wire, has lost all of the galvanizing on the outer surface of the wire. The outer surface is heavily corroded with evidence of surface pitting and loss of steel.
- vi. TS-1 69 kV crossarm failures have become a serious problem as the age of any line exceeds fifty years. The problem crossarms have failed due to rot, splits, and elongation of the insulator support bolt hole. On certain crossarms the insulator support bolt eventually passes through the enlarged hole, dropping the conductor. Throughout the lifetime of the lines when icing occurred, conductor galloping was initiated by the prevailing west and northwest winds, causing the north-south lines to experience the most severe galloping problems. The conductor galloping appears to have caused the insulator support bolt hole elongation problem. Crossarm fires have also been caused by electrical tracking on the surface of the deteriorated arm from the insulator support bolt to the pole ground.

C. Analysis of Structures with a Damaged Pole

An analysis to ascertain the amount of strength reduction caused by a woodpecker hole to a wood pole was carried out. The analysis tools used were the software packages PLS-POLE and PLS-CADD LITE from Power Line Systems, Inc.

A structural model of a TS-1 was created in PLS-POLE and then the TS-1 model was placed in a PLS-CADD LITE model. In PLS-CADD LITE the appropriate weather and conductor loading criteria were applied to the TS-1 for the purpose of running structural analysis. The TS-1 model was analyzed in three different scenarios where the woodpecker hole was located near the top crossarm, the lower crossarm and 15' above the ground line. The results of the analysis show the pole failing due to the woodpecker hole. Appendix B contains PLS-POLE drawings and tabulated data of the analysis results.

D. RUS Guidelines for Rejecting and Replacing Poles

RUS Bulletin 1730B-121 provides “RUS borrowers with the information and guidance for establishing or sustaining a continuing program of pole maintenance”. The guidance given in this bulletin is helpful in evaluating pole conditions. As stated in section 6.1.2. of this bulletin any pole that has decay, insect or mechanical damage, or severe woodpecker hole damage that “has weakened the pole such that it is considered below NESC requirements” should be classified as a reject. Any pole where “hazardous conditions exist above ground, such as a split top” should be classified as a reject. Rejected poles that are not candidates for rehabilitation should be replaced per section 6.1.3.b. The rejected poles in the lines that were analyzed are severely damaged because of multiple woodpecker holes, split tops, and severe weathering due to age; therefore these rejects are not candidates for rehabilitation.

E. Pole and Crossarm Quantities to be Replaced

Utilizing the data collected during the line inspection process, the PLS structure analysis results and the guidance provided by RUS Bulletin 1730B-121 the percentage of pole rejections, crossarms rejections and replacements ranges between 60% to 80% for Central’s transmission lines that were built in the 1950s and 1960s.

F. Conductor

Even though the 4/0 Penguin ACSR conductor superficially appears to be serviceable, the typical asset life for this transmission line component has been exceeded by 15+ years. See Appendix B.

CEPC conducted a study of conductor sag on similar 69 kV transmission lines. The lines were modeled in PLS-CADD using data from a total station field survey, digitized plan-profiles, exact time of the day line currents and ambient weather conditions. The study showed that in some spans the 60+ year old ACSR had more sag than anticipated. Any location where the conductor clearance is discovered to be not sufficient is addressed by increasing structure heights or changing structure location.

One distinct possibility for the conductor sag being greater than expected is excessive creep due to the conductor having exceeded typical asset life but not yet reaching the life to failure condition.

A reference has been included in Table One, Appendix B, for “Main Causes of Line Component Deterioration and Typical Estimates of Service Life” from the article “Corrosion Evaluation Methods For Power Transmission Lines” by Peter Mayer, P.E. of Ontario Hydro Technologies.

G. Overhead Ground Wire and Guy Wires

As stated in the Field Data section, the outer surface of the 3/8” HSS wire is heavily corroded. Two results of the corrosion process are a loss of wire strength and a loss of ductility. CEPC has noticed that when 3/8” HSS wire of this age is moved through a roller during maintenance activities, strands of the 3/8” HSS break. Samples of the 3/8” HSS have been field tested by CEPC’s line crews. Even though CEPC’s field test did not follow ASTM test methods, it was obvious the 3/8” HSS is near or at the end of life because the strands easily break when flexed by hand several times.

H. Complete Transmission Line Rebuild Compared to Pole and Crossarm Change Out

Completely rebuilding the transmission lines was compared to the alternative of a piece by piece change out of the rejected line materials.

One facet of the comparison was a labor cost analysis of changing out the rejected crossarms and poles versus installing all new H-frame structures. The labor cost analysis shows that installing all new H-frames is similar in cost to changing out only the rejected crossarms and poles.

A second facet of the comparison brings to light the following fact. If only the rejected crossarms and poles are changed out then CEPC will be in possession of a line that still contains 60 plus year old conductor, 60 plus year old corroded overhead ground wires, guys, anchors, and metal components with a large percentage of the remaining crossarms and poles having exceeded typical asset life spans.

A third facet of the comparison is that of time. Due to the schedule of CEPC’s other maintenance and construction activities, the time required to change out the crossarms and poles by CEPC’s crews would be unacceptable. The increase in the project time line would also increase the cost of the project due to rising labor and material costs.

The alternative of rebuilding the transmission line piece by piece is not acceptable and is therefore eliminated from further consideration.

3.3 No Action

Under the No Action Alternative, the Kingdom City – Santa Fe transmission line would not be rebuilt; the existing transmission line would remain in service, and its 1950s-era

transmission structures would continue to deteriorate. Failure to rebuild this transmission line would result in continued growing strain on the transmission system, which in turn could result in possible system overloads and increased system outages in both frequency and duration. CEPC would therefore fail to meet its responsibilities to ensure reliable service.

The No Action Alternative would have impacts on environmental and human resources similar to the proposed Kingdom City – Santa Fe Project because maintenance and outage restoration activities would continue to occur along the existing ROW, including removing vegetation and allowing necessary construction equipment access for repairs. The activities would generate, in particular, temporary effects to vegetation, potential short-term displacement of wildlife, and construction noise. The No Action Alternative, however, would potentially avoid use of temporary access and new construction-related activities at every structure along the ROW, including removal and replacement of new transmission structures in or near wetlands. Depending on the location of transmission structure failure on the existing transmission line, however, these effects may not be avoided in the future.

4. Affected Environment and Environmental Consequences

4.1 Impact Summary - Affected Environment

The following presents an overview of potential effects that the proposed Project may have on the human environment. The evaluation considers resources or values that require protection under laws, regulations, executive orders, or agency policies. This section analyzes both beneficial and adverse impacts that would result from implementing the proposed Project. NEPA requires agencies to assess the direct, indirect, and cumulative impacts of a proposed action. Direct impacts are those that are caused by the proposed action and happen at the same location and time. Indirect impacts are those impacts that happen later in time and/or farther removed from the proposed action, but are still reasonably foreseeable. An effect or impact is defined as the “changes to the human environment from the proposed action or alternatives that are reasonably foreseeable and have a reasonably close causal relationship to the proposed action or alternatives, including those effects that occur at the same time and place as the proposed action or alternatives and may include effects that are later in time or farther removed in distance from the proposed action or alternatives.” (40 CFR § 1508.1)¹.

4.2 Land Use, Important Farmland and Formally Classified Lands

4.2.1 Land Use – Affected Environment

Decisions concerning land use arise from various societal or governmental needs or goals, including statutory or regulatory objectives. These may include, among others:

- Pursuit of economic growth and development;
- Accommodating increased population growth;

- Assurance of adequate provision of public utility services – potable water, wastewater treatment, electrical power, and telecommunications;
- Providing or improving community services and facilities;
- Discouraging unplanned, uncontrolled, and costly urban/suburban sprawl;
- Discouraging the conversion of agricultural or forest lands from existing uses;
- Objective to minimize wetland losses or encroachment upon or development in floodplains;
- Assurance of appropriate environmental quality; and
- Providing for proper solid waste disposal in rural areas

4.2.2 **Environmental Consequences**

The proposed transmission line rebuild project will be located on Central's existing 100' wide transmission line right-of-way. A physical review of the existing and proposed rebuilt transmission lines show that it cross over lands that are primarily agricultural (48%), pasture/hay (28%) and forest (24%) areas along with some rural residential areas. The original right-of-way was acquired, cleared and the transmission lines were built in the 1951 to 1953 timeframe. The impact to the existing right-of-way from the transmission line rebuild project will be minimal.

4.2.3 **Mitigation**

Central contacted the County Commission of Callaway, Audrain and Monroe Counties. Callaway County did not respond to Central's contact letter. Audrain and Monroe County contacted Central and had no objections to the project.

Central contacted the Mid-Missouri and Mark Twain Regional Planning Commissions concerning the proposed transmission line rebuild projects in Callaway, Audrain and Monroe County. Mid-Missouri and Mark Twain Regional Planning Commissions did not respond to Central's contact or follow-up letter.

Impacts to land use include short-term impacts associated with construction. Construction impacts would be minimized with Best Management Practices (BMP)s to control and minimize erosion. After construction is complete, disturbed areas would be stabilized as appropriate and pasture/hay and forest areas revegetated. Overall, the land use following construction would be consistent with the current land use in the area and the impact will be minimal.

4.2.4 Important Farmland Soils– Affected Environment, Environmental Consequences and Mitigation

The Farmland Protection Policy Act (FPPA) and the USDA Departmental Regulation No. 9500-3², Land Use Policy, require agencies within the USDA to assess how their actions may affect important farmland, prime forestland, and prime rangeland.

The USDA-NRCS Soils Scientist from the Palmyra, MO office reviewed Central’s Form AD-1006, project area maps and contact letter. Based on the information supplied to NRCS it was the opinion of the NRCS that FPPA did not apply because the site did not contain Prime, Unique, Statewide or Local Important Farmland and the transmission line rebuilding projects had little or no impact on farmland since they will be built on existing ROW. The project would also qualify for exemption from FPPA since the original easements were obtained in the early 1950’s before August 4, 1984 as defined by NRCS.

4.2.5 Formally Classified Lands– Affected Environment, Environmental Consequences and Mitigation

Formally classified lands are federal, state, and local lands that have been set aside for specific purposes, including but not limited to: national, state, county, and municipal parks; monuments; battlefields; historic sites; wilderness areas; wildlife refuges; national seashores and lake shores; forests; and grasslands. The proposed transmission line rebuild project does not traverse any known Classified Lands.

4.3 Floodplains and Waters of the U.S.

4.3.1 Affected Environment

Continued encroachments on floodplains decrease the natural flood control capacity of these land areas and creates short or long-term threats to lives and property perpetuating the need for costly structural flood control measures and disaster relief and rehabilitation activities. Compliance with E.O. 11988³, Floodplain Management, and E.O. 13690⁴, Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input, require Federal agencies to avoid actions, to the extent practicable, which will result in the location of facilities in floodplains and/or affect floodplain values. Facilities located in a floodplain may be damaged or destroyed by a flood or may change the flood-handling capability of the natural floodplain or the pattern or magnitude of flood flows. In addition, USDA Departmental Regulation 9500-3, Land Use Policy, discourages the unwarranted alteration of floodplains by requiring agencies within the Department to not assist in actions unless:

1. There is a demonstrated, significant need for the proposal; and
2. There are no practicable alternative actions or sites that would avoid the direct or indirect encroachment on floodplains or, if conversion is unavoidable, reduce the number of acres to be converted or encroached upon.

Executive Order 11988, Floodplain Management, requires federal agencies to avoid actions, to the extent practicable, that will result in the location of facilities in floodplains and/or would affect floodplain values. The Flood Insurance Rate Maps (FIRM)⁵ panels 29027C0200E, 29027C0075E, 29007C0450C, 29007C0300C, 29007C0100C, 29137C0510B and 29137C0370B encompass the Project Study Area. Closeup views of each map with the transmission line centerline marked are provided. There is a cumulative 2.3 miles (approximately 27.5 acres) of total floodplain spread across the entire project area. The Federal Emergency Management Agency (FEMA) data indicates potential flood hazards within the area. The flood zones are considered Zone A. The Zone A flood zone are areas subject to inundation by the 1-percent-annual-chance flood, for which no base flood elevations have been determined. The remainder of the Project is within Areas of Minimal Flood Hazard, Zone X. (The original and marked up FIRM maps are located in Appendix A-3.)

4.3.2 **Environmental Consequences**

The Corp of Engineers and Central collaborated in the review of the proposed transmission line rebuild projects. Based upon the USACE NWP 57, which regulates Electric Utility Line and Telecommunications Activities, Central plans to span over all floodplains and wetlands with the new transmission line and to the extent possible no structures will be placed in these areas. The Corp of Engineers determined that if the proposed activity does not require the discharge of dredged material or fill in the waters of the U.S then a Department of the Army permit would not be required. If when the final design is made and it is determined that Corp consultation is necessary or a creek crossing has to be made and/or upgraded, an appropriate Corps of Engineers NWP57⁶ permit would be requested.

4.3.3 **Mitigation**

Mitigation measures will be implemented during Project construction and operation to aid in minimizing potential environmental impacts. Potential mitigation measures include:

- Engineering will design placement of new poles outside of the floodplain when possible to maintain flood storage and flow. Should any structure be required in floodplain areas, they will be designed to avoid accumulation of debris that could impede flood flow or lessen water storage. Any direct impacts will be mitigated through the appropriate NWP 57 USACE permits.
- Any material excavated within floodplain areas will be removed to areas outside the floodplain.
- No equipment or material will be stored in floodplains and equipment refueling will occur in the uplands.

4.4 Wetlands

4.4.1 Affected Environment

The purpose of Executive Order 11990⁷, Protection of Wetlands, is to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands. The USDA Departmental Regulation 9500-3, “Land Use Policy,” states that when land use regulations or decisions are inconsistent with USDA policies and procedures for the protection of wetlands, USDA agencies shall not assist in actions that would convert wetlands to other uses or encroach upon them, unless (1) there is a demonstrated, significant need for the project, program, or facility, and (2) there are not practicable alternative actions or sites that would avoid the conversion of these lands or, if conversion is unavoidable, reduce the number of acres to be converted to encroached upon directly and indirectly.

Wetlands maps from the U.S. Fish and Wildlife Service’s (USFWS) National Wetland Inventory (NWI)⁸ utilizing the USFWS Wetlands Mapper tool and maps were examined to determine if the proposed Project has the potential to affect wetlands. The review of the Wetlands Mapper maps shows there are 15 creek, branch and fork crossings (listed below with the Section, Township and Range of the crossing). The Wetlands Mapper tool maps are enclosed (Appendix A-4), but the results show that the only region depicting wetlands on the project ROW footprint were at the Auxvasse Creek Crossing (shown below). The Auxvasse Creek Crossing has an extremely steep cliff on one side and is impassable. There will be no crossing of the creek or the associated wetland area due to this cliff and the Project will be worked from each side independently. Central will design the Project to span the Auxvasse Creek and wetland area without having any poles inside this area Any material excavated within floodplain areas will be removed to areas outside the floodplain. No equipment or material will be stored in floodplains or wetlands and equipment refueling will occur in the uplands.

Name of Water Crossing	Location (Township-Range-Section)
McKinney Creek	T48N-R9W-S16
Maddox Branch	T48N-R9W-S9
Auxvasse Creek	T48N-R9W-S33
Bynum Creek	T49N-R9W-S22
Jesse Creek	T49N-R9W-S10
Smith Branch	T49N-R9W-S4
Beaverdam Creek	T50N-R9W-S28
Scattering Fork	T50N-R9W-S9
Davis Creek	T51N-R9W-S29
Brushy Branch	T51N-R9W-S17

Skull Lick Creek	T51N-R9W-S9
Fish Branch	T52N-R9W-S27
Five Mile Creek	T52N-R9W-S10 & S15
Youngs Creek	T53N-R9W-S33/34
Long Branch	T53N-R9W-S27/28



4.4.2 Environmental Consequences

The Corp of Engineers and Central collaborated in the review of the proposed transmission line rebuild projects. Based upon the USACE NWP 57, which regulates Electric Utility Line and Telecommunications Activities, Central plans to span over all floodplains and wetlands with the new transmission line and to the extent possible no structures will be placed in these areas. The Corp of Engineers determined that the if the proposed activity does not require the discharge of dredged material or fill in the waters of the U.S then a Department of the Army permit would not be required. If when the final design is made and it is determined that Corp consultation is necessary or a creek crossing has to be made and/or upgraded, an appropriate Corps of Engineers permit would be requested.

4.4.3 Mitigation

Mitigation measures will be implemented during Project construction and operation to aid in minimizing potential environmental impacts. Potential mitigation measures include:

- Engineering will design placement of new poles outside of the floodplain when possible to maintain flood storage and flow. Should any structure be required in floodplain areas, they will be designed to avoid accumulation of debris that could impede flood flow or lessen water storage. Any direct impacts will be mitigated through the appropriate NWP 57 USACE permits.

- Any material excavated within wetland and/or floodplain areas will be removed to areas outside the floodplain.
- No equipment or material will be stored in floodplains and equipment refueling will occur in the uplands.

4.5 **Water Resources**

4.5.1 **Affected Environment**

This section addresses water quantity and quality issues related to: discharges to or appropriations from surface or ground water; ground water protection programs (e.g., sole source aquifers and recharge areas); and water quality degradation from temporary construction activities. Water quantity and quality changes can impact other (and sometimes quite distant) environmental resources such as: groundwater and drinking water supplies; threatened or endangered species; other fish and wildlife species; and wetlands, among others. Permitting requirements (with mostly state agencies) are the applicant's responsibility and the EA needs to address any permit requirements including the description of any mitigation or other compliance measures that may be necessary as a condition of any permits. Applicants are urged to consult with the Agency's engineers and environmental staff, particularly those at the Agency's State Offices as these individuals have knowledge of water quality issues and permitting considerations in their respective states.

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo)⁹, and the Federal Water Pollution Control Act (Public Law 92-500)¹⁰ as amended, Central would obtain a Construction Land Disturbance Missouri State Operating Permit (MO-RA0000)¹¹ and develop the necessary SWPPP that goes with it.

4.5.2 **Environmental Consequences**

When it rains (including other forms of precipitation), stormwater washes over the loose soil on a construction site, along with various materials and products being stored outside. As stormwater flows over the site, it can pick up pollutants like sediment, debris and chemicals from that loose soil and transport them to nearby storm sewer systems or directly into rivers, lakes or coastal waters. Central would ensure construction site operators have the proper stormwater controls in place so construction can proceed in a way that protects the Project community's clean water and the surrounding environment.

4.5.3 **Mitigation**

Central's scheduled re-clearance of all transmission line ROW includes mechanically re-clearing with tractor mounted brush hogs. At waterway crossings, the riparian zone is re-cleared so as to promote the growth of native warm weather grasses and low growing shrubs and bushes. The riparian zone thus reduces the potential for erosion and stream

sedimentation. The proposed Project crosses multiple forms of waterways in which no fill or no dredge material will be placed thus eliminating the potential for stream sedimentation from fill or dredge materials. Therefore, Central’s re-clearing methods and non-placement of fill or dredge material in waterways will have no significant adverse effects to local water quality.

General construction and access along the existing ROW during the Project could cause land disturbance activities including clearing, grubbing, excavating, grading, filling and other activities that result in the destruction of the root zone and/or land disturbance activity that is reasonably certain to cause pollution to waters of the state. Land disturbance permits from MODNR are required for construction disturbance activities of one or more acres.

The primary requirement of a land disturbance permit is the development of a stormwater pollution prevention plan (SWPPP) that incorporates site-specific best management practices (BMPs) to minimize soil exposure, soil erosion and the discharge of pollutants. The SWPPP ensures the design, implementation, management and maintenance of BMPs in order to prevent sediment and other pollutants from leaving the site.

Once Central obtains the necessary MODNR land disturbance permit and has it’s SWPPP in place, we would ensure construction site operators have the proper stormwater controls in place so construction can proceed in a way that protects the Project community’s clean water and the surrounding environment.

4.6 **Biological Resources**

4.6.1 **Threatened and Endangered Species– Affected Environment**

The Endangered Species Act of 1973 (ESA)¹², as amended, provides federal protection to listed threatened and endangered species. Section 7 of the ESA requires all Federal agencies to consult with the USFWS when a federal action authorized, funded, or carried out by the agency that may affect a listed species or its designated critical habitat or is likely to jeopardize a proposed listed species or adversely modify proposed critical habitat.

The birds, fish, flowering plants and mammals on the Fish and Wildlife Service’s list for the proposed Project are shown below. U.S. Fish and Wildlife determined these activities “may affect, but not likely to adversely affect” listed species and stated that the listed species are not likely to be impacted by the proposed Project action due to the facts that the Project ROW is cleared and waterways will be avoided. The entire USFWS IPAC is listed along with the USFWS correspondence in Appendix E.

FLOWERING PLANTS

Running Buffalo Clover

STATUS

Endangered

MAMMALS

STATUS

Gray Bat	Endangered
Indiana Bat	Endangered
Northern Long-Eared Bat	Endangered

Appendix A contains maps for the Project location.

4.6.2 Fish and Wildlife Resources– Affected Environment

Central takes into consideration fish and wildlife resources on and along the proposed Project ROW. A significant tool used by Central is watching over Contractor operations on all public and private lands where fish and wildlife resources could be negatively impacted by imprudent machinery operation or construction activities. Special attention is given to waterway corridors, riparian areas and foraging habitat areas which support fish and wildlife resources.

The phase to phase and phase to ground spacing of the proposed transmission line structures were reviewed due to the concern of raptor electrocution. Raptors include eagles, falcons, owls, kites, ospreys, and buzzards. Per the Avian Protection Plan (APP)¹³ Guidelines “Avian-safe construction, designed to prevent electrocutions, must provide conductor separation of 60 inches between energized and grounded hardware, or must cover energized parts and hardware if such spacing is not possible”. The H-Frames that will be constructed for the proposed Project meet APP guidelines.

4.6.3 Migratory Bird Treaty Act– Affected Environment

The Migratory Bird Treaty Act (MBTA)¹⁴ implements four separate treaties (or conventions), between the United States and Great Britain (on behalf of Canada - 1916), Mexico (1936) and Japan (1972), and the former Soviet Union (1978). The Act, and the treaties it implements, focused on regulating the “taking” of migratory birds, and introduced the concept of “take” to federal law. Take (defined at 50 CFR 10.12 as “to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt” any of the foregoing) can be intentional or unintentional, and occur through several means.

The MBTA applies to individuals as well as agencies and is a strict liability law, thus forbidding the taking of even one migratory bird. E.O. 13186, Responsibilities of Federal Agencies to Protect Migratory Birds (January 10, 2001), directs executive departments and Federal agencies “to take certain actions to further implement the Act.” These actions are fostered through the development of Memoranda of Understanding (MOU) with the USFWS. The MOUs are to include a number of protocols and planning/management actions to pursue the goals of the MBTA. The USFWS environmental review process included impacts to migratory birds, and didn’t find any specific risks. As described above, our electric transmission line project will utilize APP Guidelines.

4.6.4 Bald Eagle and Golden Eagle Protection Act– Affected Environment

The Bald and Golden Eagle Protection Act of 1940¹⁵, as amended, prohibits anyone without a permit issued by the USFWS from “taking” bald or golden eagles, including their parts, nests, or eggs. The Act provides criminal penalties for persons who “take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof.” The Act defines ‘take’ as “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb.”

Since the ROW is already cleared, it was determined that a bald and/or golden eagle would not be affected by the proposal. USFWS and the Missouri Department of Conservation were consulted and no proposed activities were deemed to cause disturbance since the project is occurring on existing ROW and the APP Guidelines are being followed.

4.6.5 Invasive Species–Affected Environment

E.O. 13112, Invasive Species (February 3, 1999)¹⁶, requires federal agencies to prevent the introduction of invasive species, provide for their control, and to minimize the economic, ecological, and human health impacts that invasive species cause. In addition, each Federal agency to the extent practicable and permitted by law are required to identify their actions that may affect the status of invasive species, use relevant programs and authorities subject to the availability of appropriations, and within Administration budgetary limits and with regard to the Agency to:

- Prevent the introduction of invasive species;
- Detect and respond rapidly to and control populations of such species in a cost-effective and environmentally sound manner;
- Monitor invasive species populations accurately and reliably; and
- Provide for restoration of native species and habitat conditions in ecosystems that have been invaded.

In addition, federal agencies were directed to not authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species, unless the agency has determined and made public its determination that the benefits of such actions clearly outweigh the potential harm caused by invasive species and that all feasible and prudent measures to minimize the risk of harm will be taken in conjunction with its actions.

Central has examined its planned construction activities and determined that these activities should not potentially introduce invasive species to the Project environment. Central’s contractor will take all necessary prevention precautions to prevent invasive species during construction and shall restore the ROW back to native species and habitat when construction is completed.

4.6.6 Environmental Consequences

The Project Area primarily crosses cultivated crop fields and existing maintained right-of-way. The rebuild Project will not affect potential bat habitat as no additional tree clearing would be required. Since the Project will be built on existing ROW and no additional clearing that may affect potential bat habitat would be necessary, the USFWS concurred with Central's "no effect" determination for the Project.

Temporary impacts for general wildlife species as a result of the Project could occur as a result of the increased construction activity and traffic along the ROW. Temporary displacement of species might occur due to vehicle traffic and construction activities. The majority of species affected will be able to safely move away from any impacts and any disruption would be only for a short duration.

4.6.7 Mitigation

USFWS was initially consulted through IPAC and given all the rebuild Project information and later followed up with Project specifics. USFWS concurred with Central's "no effect" determination for the Project since the Project will be built on existing ROW and no additional clearing that may affect potential bat habitat would be necessary

In general, temporary impacts for wildlife species as a result of the Project could occur as a result of the increased construction activity and traffic along the ROW. Temporary displacement might occur due to vehicle traffic and construction activities, but the majority of species affected will be able to safely move away from any impacts and any disruption would be only for a short duration. No long-lasting effects should be encountered and no mitigation is expected.

4.7 Cultural Resources and Historic Properties

4.7.1 Affected Environment

Under state and federal legislation and policies outlined by the Antiquities Act of 1906¹⁷, the Historic Sites Act of 1935¹⁸, the National Historic Preservation Act (NHPA)¹⁹ of 1966 as amended, the National Environmental Policy Act of 1970²⁰, the 2004 amendment of the Protection of Historic Properties (36 CFR PART 800)²¹ and other regulations regarding specific activities such as transmission line construction, it is necessary to inventory archaeological and historical resources located within proposed project areas which may be threatened by federally regulated or funded actions and evaluate any disruptive effects these actions might have on resources that are present. Briefly, the National Historic Preservation Act requires that an area threatened by a federally funded and/or regulated project consider cultural resources which might be impacted by project related actions; the State Historic Preservation Officer (SHPO) and/or federal or Tribal agency involved may request that a cultural resource survey be conducted prior to granting permission to proceed with the

proposed project actions. If any cultural resources are identified, they are evaluated in terms of National Register of Historic Places (NRHP) eligibility criteria. Where NRHP eligible sites are found to occupy compliance project areas, consultation is initiated which may include the Advisory Council on Historic Preservation (Council), the SHPO, and the governmental agency involved in the project. If an eligible site cannot be avoided, a Memorandum of Agreement may be prepared which would stipulate specific compliance actions to be initiated prior to Project actions. The Project initiator, if not a federal agency, may be requested to concur. The present Project is partially funded or regulated by a federal agency. As a result, cultural resource compliance has been implemented by a federal agency and Missouri SHPO and the present survey has been carried out in order to meet NHPA requirements.

A Phase I Cultural Resource Survey was carried out for approximately 33 miles of transmission line corridor in Callaway, Audrain and Monroe Counties, Missouri. The corridor is the location of a proposed electric transmission line rebuild project. The Phase I Survey and associated Shovel Test Logs were supplied to SHPO and RUS for review.

4.7.2 Environmental Consequences

The records and literature review determined that there are no currently listed National Register of Historic Places (NRHP) properties located within the project boundaries but there are 11 previously recorded archaeology sites within a one-mile radius of the Project. The initial review by Missouri SHPO confirmed the absence of sites eligible for NRHP and a determination of “No Historic Properties Affected” was given.

As shown below, during consultation with the Osage Nation, a Phase I survey was requested. The field investigation identified the presence of 6 previously unrecorded prehistoric archaeology sites within or immediately adjacent to the project corridor. Missouri SHPO was consulted following the Phase I survey and they reviewed the Phase I survey and the recommendations of avoidance are listed in the documentation.

The findings regarding site significance apply only to the portions of the sites that are within the Project corridor. Areas of the site outside of the Project corridor have not been evaluated in terms of NRHP eligibility. The above listed historic properties are present, but the proposal will have no known effect on them since all of the sites can be avoided by the proposed Project actions shown in the Phase I Survey. The remainder of the sites are not considered significant and/or located outside of the Project corridor.

4.7.3 Tribal Consultation

The NHPA and Section 106 regulations establish that Indian tribes and Native Hawaiian organizations are one of the parties that have a consultative role in the Section 106 process for all Agency proposals/undertakings (whether on or off tribal lands). The regulations also specifically address the importance of “properties of traditional religious and cultural

importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria”, and the requirement of federal agencies to consult with tribes when such properties may be affected by the proposal. These provisions are reinforced and complemented by related federal statutes and regulations and Executive Orders (refer to Subpart 1970-H). Fundamental to tribal consultation is the fact that tribes are sovereign Nations and thus consultation is on a government-to-government basis. Another important consideration in tribal consultation is that Agencies (and applicants) make “reasonable and good faith efforts” (see 36 CFR §800.2(c)(2)(ii)(A)) to identify all tribes that may have an interest in the proposal’s APE, even though they may not currently inhabit the area, and may in fact be located quite distant from the area affected by the proposal. Early identification of any and all areas of tribal interest is crucial.

Central utilized the Tribal Directory Assessment Information Tool (TDAT)²² to provide a list of Tribes with interest in Audrain, Callaway and Monroe Counties. The TDAT reported that 8 Tribes had potential interest and should be contacted. Central sent letters and Project details to the Apache Tribe of Oklahoma, Delaware Nation of Oklahoma, Miami Tribe of Oklahoma, Osage Nation, Sac & Fox Nation of Missouri in Kansas and Nebraska, Sac & Fox Nation of Oklahoma, Sac & Fox Tribe of the Mississippi in Iowa and the Seneca-Cayuga Nation. All of the Tribes contacted either did not respond or responded that they had no interest in the Project, except the Osage Nation. At the Osage Nation’s request Central retained ERC to perform an archaeological survey on the right-of-way corridor. Central will design and build the proposed transmission line to preserve all potential cultural resources.

4.7.4 Mitigation

Consultation with RUS and the Missouri Dept of Natural Resources SHPO was initiated and it was established that there are no current National Register of Historic Places (NRHP) properties located within or near the Project boundaries. A Phase I cultural resource survey was carried out and identified the presence of 6 previously unrecorded prehistoric archaeology sites. These possible historic properties are present, but all of the sites can be avoided by the proposed Project actions listed in the Phase I survey. A copy of the Phase I survey was provided to RUS and SHPO and they concurred with the site avoidance actions.

Central utilized the Tribal Directory Assessment Information Tool (TDAT) to provide a list of Tribes with interest in the Project area. The TDAT reported that 8 Tribes had potential interest and should be contacted (listed in Section 4.7.2). All of the Tribes contacted either did not respond or responded that they had no interest in the Project, except the Osage Nation. At the Osage Nation’s request Central retained ERC to perform a Phase I archaeological survey on the right-of-way corridor. A copy of the full archaeological report was supplied to the Osage Nation for review. Central will design and build the proposed transmission line to preserve all potential cultural

resources. If any sites are identified during the construction phase, construction will be halted immediately and RUS, SHPO, any interested tribe and any other necessary consulting parties will be notified in order to initiate the procedures outlined in 36 CRF Part 800.

4.8 **Aesthetics**

4.8.1 **Affected Environment**

As development in rural areas increases in scope and complexity, aesthetic or visual impacts may be a concern for the public. In many instances, landscapes that have remained undisturbed are now being considered for development. Rapid suburban or “ex-urban” residential development also can place homes and properties and proposed utility or community facility projects in close proximity to each other.

4.8.2 **Environmental Consequences**

Additional consideration should be given to proposals near visually sensitive areas or areas of high scenic value (e.g. designated wilderness areas, parks, recreation areas, historic sites, wild/scenic rivers, etc.; see also Section 4.2, Land Use). If visual impacts are identified and avoidance of the impacted area is not feasible, efforts should be made to design, construct, and operate the proposal in such a way that aesthetic impacts are minimized.

The aesthetics of the area would largely remain the same since the work at these facilities would not significantly alter the visual landscape. The proposed transmission line rebuild Project will be located on Central’s existing 100’ wide transmission line right-of-way. The existing and proposed rebuilt transmission lines cross over lands that are primarily agricultural (48%), pasture/hay (28%) and forest (24%) areas along with some rural residential. The original right-of-way was cleared and the transmission lines were built in the 1951 to 1953 timeframe. The existing line was a single-pole construction, but the new Project lines will be H-frame design with longer spans and fewer structures, which will create a similar visual appearance with less structures per mile. The aesthetic impact to the existing right-of-way from the transmission line rebuild Project will be minimal.

4.8.3 **Mitigation**

While construction will have temporary visual impacts, no long-term aesthetic changes will occur as a result of operations. Mitigation will include revegetating disturbed areas following construction as well as maintaining an organized construction site with implementation of a waste management plan to keep the Project clean and organized.

4.9 **Air Quality**

4.9.1 **Affected Environment**

Potential air quality effects can be short-term (construction-related) or long-term (facility emissions, increased traffic). Under the Clean Air Act, USEPA was required to set National

Ambient Air Quality Standards (NAAQS)²³ for “criteria” pollutants (ozone, particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide, and lead).

The Project area is outside of any designated Air Quality Standard and Pollution Control Regulation Metropolitan Area for Missouri (Kansas City, Saint Louis and/or Springfield-Greene County)²⁴. The only Air Quality Standard designated by the EPA and/or Missouri Department of Natural Resources Division 10 – Air Conservation Commission was based upon Incinerators, which our Project will not utilize.

4.9.2 **Environmental Consequences**

During the 12-18-month construction period for the proposed rebuild of 33 miles of transmission line, there will be emissions from cooperative vehicles, contractor vehicles and equipment on the ROW. Generally, air emissions from construction are low and temporary in nature, fall off rapidly with distance from the construction site, and would not result in long-term impacts. The proposed Project is not expected to be a significant increase of emissions compared to the agricultural use in the area.

There is a potential that the proposed Project could produce fugitive dust during the construction phase. The amount of fugitive dust produced by Project activity is similar to or less than dust produced by surrounding agricultural activity. If needed, dust control measures will be implemented during the construction phase. By implementing any needed dust control measures, the proposed Project would not be a significant source of dust emissions.

4.9.3 **Mitigation**

Air emissions from Project construction activities are expected to be the main effects to air quality. Most of these effects will be within the Project construction areas and be minimal outside of the existing ROW. Air emissions from construction activities will be temporary in nature. Emissions will be from fugitive dust, fuel combustion from construction equipment and increased vehicular traffic. Construction equipment emissions will be controlled by use of properly maintained equipment and minimizing time spent idling. Vehicular emissions will be controlled by minimizing unnecessary trips. Fugitive dust control mitigation measures could include, but are not limited to, the following:

- Application of water as necessary to minimize dust
- Reduction in speed on unpaved roadways
- Removal of construction debris at points of public street access
- Seeding and mulching and use of barrier fencing as necessary

4.10 **Socioeconomics and Environmental Justice**

The proposed Project ROW traverses Callaway, Audrain and Monroe Counties, which are primarily rural with most employment in the agricultural, education, healthcare, manufacturing, retail and construction industries.

4.10.1 Callaway County- Socioeconomic Affected Environment

During the 2013-2018 timeframe the U.S. Census Bureau²⁵ statistics state that 11.6% of Callaway County residents were living in poverty as compared to 14.2% for all of Missouri. Minority groups made up approximately 9.9% of the population in 2018 as compared to 20.7% for the State of Missouri.

Executive Order 12898²⁷ requires federal agencies “make achieving justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human or environmental effects” to minority or low-income populations. Callaway County has a lower percentage of minority population as compared to all of Missouri and a slightly lower percentage; 2.6%, of low-income population as compared to all of Missouri. Therefore, the proposed Project will not have a disproportionate effect on minority or low-income populations in Callaway County.

4.10.2 Audrain County- Socioeconomic Affected Environment

During the 2013-2018 timeframe the U.S. Census Bureau statistics state that 15.3% of Audrain County residents were living in poverty as compared to 14.2% for all of Missouri. Minority groups made up approximately 13.1% of the population in 2018 as compared to 20.7% for the State of Missouri.

Audrain County has a lower percentage of minority population as compared to all of Missouri and a slightly higher percentage; 1.1%, of low-income population as compared to all of Missouri. Therefore, the proposed Project will not have a disproportionate effect on minority or low-income populations in Audrain County.

4.10.3 Monroe County- Socioeconomic Affected Environment

During the 2013-2018 timeframe the U.S. Census Bureau statistics state that 14.1% of Monroe County residents were living in poverty as compared to 14.2% for all of Missouri. Minority groups made up approximately 6.9% of the population in 2018 as compared to 20.7% for the State of Missouri.

Monroe County has a lower percentage of minority population as compared to all of Missouri and a slightly lower percentage; 0.1%, of low-income population as compared to all of Missouri. Therefore, the proposed Project will not have a disproportionate effect on minority or low-income populations in Monroe County.

4.10.4 Environmental Justice

According to the Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations Executive Order 12898²⁶, federal agencies must take appropriate and necessary steps to identify and address disproportionately high and

adverse effects of federal projects on the health or environment of minority and low-income populations. For the purpose of this analysis, minority is defined as individuals who identify as a race other than white alone (single race) and/or identify their ethnicity as Hispanic or Latino. Low-income is defined as a household income less than or equal to twice the federal poverty level. Environmental justice issues are identified by first determining whether minority or low-income populations are present. If so, then disproportionate effects on these populations would be considered.

According to guidance from the Council on Environmental Quality, minority populations should be identified when the percentage of minority residents in the affected area exceeds 50 percent or is meaningfully greater than the percentage of minority residents in the general population (CEQ 1997)²⁷. If the percentage of minority residents of the population in the county exceeds the state level by more than 10 percent, it is considered to be “meaningfully greater” for the purposes of this analysis. The low-income populations should be identified based on poverty thresholds as reported by the U.S. Census Bureau. If the poverty rate for the population of the area county exceeds the state poverty rate by more than 10 percent, it is considered an area of environmental justice concern for the purposes of this analysis. Based on this methodology, the proposed Central Project would not be considered to be an area of environmental justice concern. As identified in Socioeconomic Affected Environment of Callaway, Audrain and Monroe counties in the Project area above, the percentage of minority residents and families in poverty within the Project area will not have a disproportionate effect on minority or low-income populations for Missouri.

4.10.5 Environmental Consequences

The Project could produce additional local business and jobs during construction. Labor for construction would typically be provided by contractors outside the immediate area, but local businesses near the Project, such as gas stations, convenience stores, and restaurants, may experience increases in business during construction due to construction workers being in the local community for an extended period of time.

4.10.6 Mitigation

All impacts are expected to be minimal and no mitigation measures are required for socioeconomic and environmental justice impacts.

4.11 Noise

4.11.1 Affected Environment

The proximity of the proposal’s construction activities and operations to other land uses can produce sounds that could create significant noise impacts for proximal sensitive sound receptors, such as schools, hospitals, or residences, etc. Noise is defined as any loud, discordant or disagreeable sound or sounds. More commonly, in an environmental context,

noise is defined simply as unwanted sound. Certain activities inherently produce sound levels or sound characteristics that have the potential to create noise. The sound generated by proposed or existing facilities may become noise due to land use surrounding the facility. When lands adjoining a proposed or existing facility contain residential, commercial, institutional, or recreational uses that are proximal to the facility, noise is likely to be a matter of concern to residents or users of adjacent lands or facilities.

4.11.2 Environmental Consequences

The proposed transmission line rebuild Project will be located on Central's existing 100' wide transmission line right-of-way. Noise from construction is expected to be localized and temporary. The existing and proposed rebuilt transmission lines cross over lands that are primarily agricultural and forest areas along with some rural residential areas (See Land Use 4.2). During the construction of the proposed Project a limited amount of noise will emanate from construction activities on the ROW. The noise will be localized and temporary thus no long-term adverse effects will be created.

4.11.3 Mitigation

No numerical noise limits were identified during the regulatory review of federal, state and county ordinances; therefore, no operational mitigation options are proposed for the Project. In order to reduce the impact of construction noise on nearby residences, the majority of construction activities will occur during the day, when people are less sensitive to noise. Also, the proposed Project line construction units will include proper bonding and grounding techniques. The proper grounding and bonding of the transmission line eliminates the creation of unintended electrical spark gaps, therefore the potential to emit radio and television interference (noise) will be eliminated.

4.12 Transportation

4.12.1 Affected Environment

Transportation impacts include those from transport to a site, on-site, and from a site, when such activities are reasonably construed as part of the proposal or any alternative. The Project area contains an existing network of paved and gravel roads in rural Callaway, Audrain and Monroe counties in Missouri. Other impacts to consider are the transportation of materials (hazardous materials) to or from a proposal's site either during construction or operation of a facility. Also evaluate any possible changes in transportation patterns or intensity, and how they may contribute to noise patterns or present new or additional risks of accidents.

The nearest known airport to any part of the Project is the Mexico Liberty Airport, located approximately 6 miles east of the Project area. The Federal Aviation Administration (FAA) Part 77 - SAFE, EFFICIENT USE, AND PRESERVATION OF THE NAVIGABLE

AIRSPACE²⁸ conducts obstacle evaluation for proposed and existing structures for potential impacts to the navigable airspace of public use airports. The FAA evaluates impacts to airports airspace. Structures greater than 200 feet AGL and that are within 3 nautical miles of an airport are considered an obstruction. The FAA will request that marking and lighting be added to any structure greater than 200 feet AGL to prevent it from being a hazard to flight.

4.12.2 Environmental Consequences

Central contacted the Missouri Department of Transportation (MoDOT) Northeast District and Central District concerning these proposed transmission line rebuild Projects. Both MoDOT Districts felt that Central's proposed transmission line rebuild project would not adversely affect the current State Highway System. Central will apply and follow any necessary Right-of-Way Permits necessary at the time of construction. The proposed Project is located in the Central Missouri area and crosses Missouri State Highways 54, 22, 15 and I-70. The proposed Project will not cross or impact any major navigable waterways.

The rebuilt line for this Project will utilize an H-frame construction on wood poles with a typical height around 70ft AGL and a maximum height of approximately 110ft AGL for a double circuit transmission crossing. Since the planned structures are less than 200 feet, the structures themselves will not require FAA filing. The ROW is not located within 3 miles of an airport, but once final design is completed, it will be confirmed that the poles do not exceed the designated 200ft height requirement. Once final pole design, pole locations and construction details are determined, FAA notification will be submitted as needed and any required follow up information required will be provided.

4.12.3 Mitigation

As construction and operation of the proposed Project will have only temporary impacts on transportation, no mitigation measures are planned. Central will apply and follow any highway ROW disturbance and construction signage permits from MoDOT necessary at the time of construction. Any damage to existing roads or road ROW due to construction traffic will be repaired once construction is complete. Notice to the FAA will be provided for all structures (including permanent structures and temporary construction equipment) associated with the Project that exceed the FAA criteria for notification. Based on the distance between the Project and the nearest airports and the existing obstacles present, it is unlikely that the FAA will request a height restriction on any proposed structures. The proposed Project ROW is not located near any airports therefore there will be no impact to aviation traffic.

Central contacted the County Commission of Callaway, Audrain and Monroe Counties. Callaway County did not respond to Central's contact letter. Audrain and Monroe County contacted Central and had no objections to the Project.

Central contacted the Mid-Missouri and Mark Twain Regional Planning Commissions concerning the proposed transmission line rebuild projects in Callaway, Audrain and Monroe County. Mid-Missouri and Mark Twain Regional Planning Commissions did not respond to Central's contact or follow-up letter.

4.13 **Human Health and Safety**

4.13.1 **Affected Environment**

It is important to evaluate whether the proposal might result in an adverse effect on public health and safety (this is an indicator of significance per 40 CFR Part 1508.27). This section addresses potential impacts from other media or resources not previously described or disclosed elsewhere in the EA. This Project is located within Callaway, Audrain and Monroe Counties in Missouri. The nearest medical facility is Noble Health Audrain Community Hospital. It is more centrally located in Mexico, Missouri, but Callaway County Community Hospital is on the south end of the Project. Callaway County Community Hospital in Fulton, Missouri is approximately 7 miles south of the beginning of the Project and Noble Health Audrain Community Hospital is only approximately 4 miles east. Depending on the portion of the Project, there are several rural fire districts and municipal fire departments within 5 miles of the ROW.

4.13.2 **Electromagnetic Fields and Interference**

While electromagnetic fields (EMF) are associated with any electric device, e.g., power lines, electric wiring, electric equipment, or cell and microwave towers, the focus of this section is for power-frequencies EMF, i.e., EMF associated with the generation, transmission, and use of electric power. For proposed overhead high-voltage electric transmission lines and substations, the EA should address potential effects or interference due to the EMFs created by charged conductors or transmitters in communication systems. These effects may include interference to radio and television reception, as well as direct effects to humans that may be in the immediate vicinity of a power line. Linkages between EMFs and human health are generally considered weak, but the current state of the science on potential effects should be summarized (consult the Agency for assistance) in an effort to acknowledge the issue, and to describe the specific ameliorating factors (e.g., topography, proximity to potential receptors, or design characteristics) associated with a given proposal.

The following overview of electric and magnetic fields (EMF) has been obtained from the National Institute of Environmental Health Sciences (NIEHS)²⁹ manual *Electric and Magnetic Fields Associated with the Use of Electric Power* (2002).

EMF is a type of energy associated with electric power that includes two fields: the electric field and the magnetic field. The electric field is produced by the voltage of the power source and increases as voltage increases. Magnetic fields are produced from the current

flowing through the conductor and increase as the current increases. Both electric and magnetic fields decrease as distance from the source increases (NIEHS 2002). EMF, as it pertains to power lines is considered extremely low frequency electric and magnetic fields. Power frequency is in the range of 50-60 hertz (Hz) for transmission line facilities.

EMF associated with transmission lines is emitted from a variety of equipment including the transmission lines coming into the substation, transformers, reactors, and capacitor banks. As such, EMF is strongest around substation facilities and decreases rapidly with distance from the source (NIEHS 2002).

The primary concern related to transmission lines and other electrical equipment is the potential negative health effects from exposure to EMF, in particular an increase in cancer, leukemia, and other diseases. Over the last several decades, several epidemiological studies have been conducted to assess potential impacts of EMF as it relates to cancer and other diseases. In 1998, Congress asked NIEHS to complete a study of the possible health effects associated with EMF. The following is an excerpt from that report:

The NIEHS believes that the probability that EMF exposure is truly a health hazard is currently small. The weak epidemiological associations and lack of any laboratory support for these associations provide only marginal, scientific support that exposure to this agent is causing any degree of harm. The scientific evidence suggesting that extremely low frequency EMF exposures pose any health risk is weak. The strongest evidence for health effects comes from associations observed in human populations with two forms of cancer: childhood leukemia and chronic lymphocytic leukemia in occupationally exposed adults. While the support from individual studies is weak, the epidemiological studies demonstrate, for some methods of measuring exposure, a fairly consistent pattern of a small, increased risk with increasing exposure that is somewhat weaker for chronic lymphocytic leukemia than for childhood leukemia. In contrast, the mechanistic studies and the animal toxicology literature fail to demonstrate any consistent pattern across studies, although sporadic findings of biological effects (including increased cancers in animals) have been reported. No indication of increased leukemia in experimental animals has been observed (NIEHS 1999).

Additional organizations have also completed their own analysis. The findings from some of these studies are captured below.

USEPA:

Many people are concerned about potential adverse health effects. Much of the research about power lines and potential health effects is inconclusive. Despite more than two decades of research to determine whether elevated EMF exposure, principally to magnetic fields, is related to an increased risk of childhood leukemia, there is still no definitive answer. The general scientific consensus is that, thus far, the evidence available is weak and is not sufficient to establish a *definitive* cause-effect relationship (USEPA 2006c)³⁰.

National Research Council:

An earlier National Research Council assessment of the available body of information on biologic effects of power-frequency magnetic fields (National Research Council 1997)³¹ led to the conclusion:

...that the current body of evidence does not show that exposure to these fields presents a human health hazard. Specifically, no conclusive and consistent evidence shows that exposures to residential electric and magnetic fields produce cancer, adverse neurobehavioral effects, or reproductive and developmental effects. The new, largely unpublished contributions of the EMF-RAPID program are consistent with that conclusion. We conclude that no finding from the EMF-RAPID program alters the conclusions of the previous NRC review on the Possible Effects of Electromagnetic Fields on Biologic Systems.

In 1999, the National Research Council followed up by stating:

In view of the negative outcomes of EMF-RAPID replication studies, it now appears even less likely that EMFs in the normal domestic or occupational environment produce important health effects, including cancer (Possible Health Effects of Exposure to Residential Electric and Magnetic Fields - National Research Council 1997).

The proposed Project line construction units will include proper bonding and grounding techniques. The proper grounding and bonding of the transmission line eliminates the creation of unintended electrical spark gaps, therefore the potential to emit radio and television interference (noise) will be eliminated.

4.12.3 Environmental Consequences

There are a number of risks to human health and safety possible for construction personnel on Project construction through the operation of heavy equipment, the use of tools during construction, and working in an active construction site. Additionally, hazardous substances or wastes may be released, generated, or required for construction and operation in the Project Area. These hazards will be mitigated by compliance with all applicable federal and state occupational safety and health standards, National Electric Safety Code (NESC)³² regulations, Occupational Health and Safety Administration (OSHA) guidelines, and utility design and safety standards. Local emergency and health services will be called upon to provide first aid and assistance in the event of an accident or emergency.

4.13.4 Mitigation

Mitigation measures include compliance with all applicable federal and state occupational safety and health standards, National Electric Safety Code (NESC) regulations (NESC 2017), Occupational Health and Safety Administration (OSHA) guidelines, and utility design and safety standards. Additionally, our construction contractors are required to

create and utilize a Health and Safety Plan to address public and worker safety during the construction and operation of the Project. All construction sites will be managed to reduce risks to the public and workers in the area. The general public will not be allowed in any active construction sites. Facilities will be designed and constructed to limit exposure of the public to EMF/EMR.

5. **Corridor Analysis**

Linear infrastructure such as electric transmission or distribution lines, telecommunication cables, or water or waste water pipelines present unique considerations for impact assessments and thus require more specialized assessment techniques. Issues may arise that are not typically encountered, including:

- The proposal's area of effect can be more extensive;
 - For overhead lines, visual impacts could become more important;
 - The availability of existing, acceptable utility corridors is decreasing while infrastructure needs are increasing;
 - There may be a greater need for land acquisition; and
 - The need to include a larger number of stakeholders in the siting and decision-making processes.
- If substantial changes are necessary to the Project or if new relevant environmental information is discovered after the issuance of an EA or FONSI, supplementing an EA may be necessary. Depending on the nature of the changes, the EA will be supplemented by revising the applicable section(s) or by appending the information to address potential impacts not previously considered. If an EA is supplemented, public notification will be required in accordance with § 1970.102(b)(7) and (8).

Fundamentally, routing of linear infrastructure is an optimization process; areas of opportunity (most desirable for routing) and constraint (least desirable) are identified and then typically a computer or GIS-based algorithm finds a route that maximizes the opportunities and minimizes the constraints. Several variables representing important environmental/social, engineering, cost or other criteria are used to define the areas of opportunity and constraint. The degree of complexity for evaluation techniques should correspond to the complexity or controversy of the proposal. A relatively simple proposal may require only a qualitative assessment and "expert judgment", using gross or high-level data particularly if, for example, water or waste water distribution or collection networks are designed to serve existing populations. As the proposal's scope or complexity increases: data needs increase; the evaluation criteria may require weighting and/or ranking to better represent stakeholder views; several increasingly detailed/smaller-scale levels of analysis may be required; and quantitative assessment is used to make the analysis more robust and defensible. The analysis should be kept as simple as is necessary and this will often suffice for EA-level proposals. In this situation, the route following the existing transmission line corridor provides the least impact based upon the current land use and visual aesthetics.

As development in rural areas increases in scope and complexity, aesthetic or visual impacts may be a concern for the public. In many instances, landscapes that have remained undisturbed are now being considered for development. Additional consideration should be given to proposals near visually sensitive areas or areas of high scenic value (e.g. designated wilderness areas, parks, recreation areas, historic sites, wild/scenic rivers, etc.; see also Section 4.2, Land Use). If visual impacts are identified and avoidance of the impacted area is not feasible, efforts should be made to design, construct, and operate the proposal in such a way that aesthetic impacts are minimized.

The proposed transmission line rebuild Project routing was examined and it was determined that it will be located on Central's existing 100' wide transmission line right-of-way to minimize landowner impact. The existing and proposed rebuilt transmission lines cross over lands that are primarily agricultural and forest areas along with some rural residential areas. The original right-of-way was cleared and the transmission lines were built in the 1952 to 1953 timeframe. The impact to the existing right-of-way from the transmission line rebuild Project will be minimal.

6. Cumulative Effects

6.1 Cumulative Impacts by Resource

This section examines the past, present, and reasonably foreseeable future actions in the Project Study Area that may affect the resources analyzed in this EA. An assessment of past, present, and reasonably foreseeable future actions and cumulative effects for each resource of the Project is provided. The Project will be constructed to operate at a higher voltage in the future. There are no further modifications or encroachments planned.

6.1.1 Land Use, Important Farmland and Formally Classified lands

The current land use of the Project Study Area is predominately pasture/hay, cultivated crops, and forest areas. Some additional rural residential areas are located in the general area of the Project. The NRCS concluded that the Project does cross prime, unique, or statewide important farmland and the transmission line rebuilding projects had little or no impact on farmland since they will be built on existing ROW. The proposed transmission line rebuild Project does not traverse any known Classified Lands.

Land use is anticipated to remain similar to current use along the existing transmission line ROW as lines would simply be rebuilt to more reliable RUS approved designs. These minor changes in overall land use will be insignificant within the study area.

After construction is complete, disturbed pasture/hay and forest areas will be revegetated as necessary. Short term construction impacts will be minimized with BMPs to control and minimize erosion. Therefore, there are minimal permanent or long-term cumulative impacts to land use expected.

6.1.2 Floodplains and Wetlands

The Corp of Engineers and Central collaborated in the review of the proposed transmission line rebuild projects. Based upon the USACE NWP 57, which regulates Electric Utility Line and Telecommunications Activities, Central plans to span over all floodplains and wetlands with the new transmission line and to the extent possible no structures will be placed in these areas. Engineering will design placement of new poles outside of the floodplain when possible to maintain flood storage and flow. Should any structure be required in floodplain or wetlands areas, they will be designed to avoid accumulation of debris that could impede flood flow or lessen water storage. Any direct impacts will be mitigated through the appropriate NWP 57 USACE permits. Any material excavated within floodplain areas will be removed to areas outside the floodplain. No equipment or material will be stored in floodplains and equipment refueling will occur in the uplands.

Since the Project will be designed to either avoid all direct impacts to floodplains within the ROW or designed and permitted to not impede flow or accumulate debris. Therefore, the limited placement of structures within the floodplain for this Project will not contribute adversely to flood storage or flow as part of other development in this area.

6.1.3 Water Resources

Soil erosion and potential runoff will be controlled through the use of BMPs in accordance with the SWPPP and Construction or Land Disturbance Missouri State Operating Permit (MO-RA0000). Avoiding all direct impacts to wetlands and waters and with the proper implementation of BMPs and erosion sediment controls, no permanent impacts to groundwater or surface water resources are expected and this Project will not significantly contribute to loss of water resources as part of other development in this area.

6.1.4 Biological Resources

The Project Area primarily crosses cultivated crop fields and existing maintained right-of-way. The rebuild Project will not affect potential bat habitat as no additional tree clearing will be required. Since the Project will be built on existing ROW and no additional clearing that may affect potential bat habitat will be necessary, the USFWS concurred with Central's "no effect" determination for the Project.

Temporary impacts for general wildlife species as a result of the Project could occur as a result of the increased construction activity and traffic along the ROW. Temporary displacement of species might occur due to vehicle traffic and construction activities. The majority of species affected will be able to safely move away from any impacts and any disruption will be only for a short duration. Once construction of the Project has been completed, it is anticipated that wildlife will return to normal with minimal to no permanent effects.

6.1.5 Cultural Resources and Historic Properties

Archaeological sites can be avoided through minor adjustments of transmission structure locations and development of access routes around sites as shown in the Phase I survey. If NRHP-eligible archaeological sites or other eligible cultural resources will be adversely affected by the Project, mitigation measures listed may be necessary. Mitigation plans will need to be developed in consultation with RUS, MO SHPO, any interested tribes, and other consulting parties. If any sites are identified during the construction phase, construction will be halted immediately and RUS, MO SHPO, any interested tribe and any other necessary consulting parties will be notified in order to initiate the procedures outlined in 36 CRF Part 800. At this time, no cumulative impacts are expected.

6.1.6 Aesthetics

The current land use of the Project Study Area is predominately pasture/hay, cultivated crops, and forest areas with some additional rural residential areas located in the general area. The aesthetics of the area will largely remain the same since the work at these facilities will not significantly alter the visual landscape. The proposed transmission line rebuild Project will be located on Central's existing 100' wide transmission line right-of-way. The original right-of-way was cleared and the transmission lines were built in the 1951 to 1953 timeframe. The aesthetic impact to the existing right-of-way from the transmission line rebuild Project will be minimal.

6.1.7 Air Quality

During the 12-18-month construction period for the proposed rebuild of 33 miles of transmission line, there will be emissions from cooperative vehicles, contractor vehicles and equipment on the ROW. Generally, air emissions from construction are low and temporary in nature, fall off rapidly with distance from the construction site, and will not result in long-term impacts. Once construction activities are complete, construction-related emissions will end. The proposed Project is not expected to be a significant increase of current emissions compared to the agricultural use in the area and there are minimal permanent or long-term cumulative impacts to air quality expected.

6.1.8 Socioeconomics and Environmental Justice

The proposed Project ROW traverses Callaway, Audrain and Monroe Counties, which are primarily rural with most employment in the agricultural, education, healthcare, manufacturing, retail and construction industries. The proposed Central Project would not be considered to be an area of environmental justice concern. As identified in Socioeconomic Affected Environment of Callaway, Audrain and Monroe counties in the Project area above, the percentage of minority residents and families in poverty within the Project area will not have a disproportionate effect on minority or low-income populations for Missouri.

The Project could produce additional local business and jobs during construction. Labor for construction would typically be provided by contractors outside the immediate area, but local businesses near the Project, such as gas stations, convenience stores, and restaurants, may experience increases in business during construction due to construction workers being in the local community for an extended period of time.

6.1.9 Noise

The proposed transmission line rebuild Project will be located on Central's existing 100' wide transmission line right-of-way. Noise from construction is expected to be localized and temporary. The existing and proposed rebuilt transmission lines cross over lands that are primarily agricultural and forest areas along with some rural residential areas (See Land Use 4.2). During the construction of the proposed Project a limited amount of noise will emanate from construction activities on the ROW. The noise will be localized and temporary thus no long-term adverse effects will be created. The proposed Project is not expected to be a significant increase of current noise levels compared to the agricultural use in the area and there are minimal permanent or long-term cumulative impacts to noise levels expected.

6.1.10 Transportation

The Project area contains an existing network of paved and gravel roads in rural Callaway, Audrain and Monroe counties in Missouri. Other impacts to consider are the transportation of materials (hazardous materials) to or from a proposal's site either during construction or operation of a facility. Also evaluate any possible changes in transportation patterns or intensity, and how they may contribute to noise patterns or present new or additional risks of accidents. Construction and operation of the Project will have a minimal and short-term effect on the local transportation network. During construction of the Project, traffic within the immediate vicinity will be impacted. However, there will not be any ongoing traffic related to Project operations except periodic inspections and maintenance.

The rebuilt line for this Project will utilize an H-frame construction on wood poles with a typical height around 70ft AGL and a maximum height of approximately 110ft AGL for a double circuit transmission crossing. Since the planned structures are less than 200 feet, the structures themselves would not require FAA filing. The ROW is not located within 3 miles of an airport, but once final design is completed, it will be confirmed that the poles do not exceed the designated 200ft height requirement. Once final pole design, pole locations and construction details are determined, FAA notification will be submitted as needed and any required follow up information required will be provided.

Construction of the Project will have temporary impacts on transportation, but implementation of the Project is not anticipated to contribute significantly to cumulative impacts to the region's transportation system.

6.1.11 Human Health and Safety

There are a number of risks to human health and safety possible for construction personnel on Project construction through the operation of heavy equipment, the use of tools during construction, and working in an active construction site. Additionally, hazardous substances or wastes may be released, generated, or required for construction and operation in the Project Area. These hazards will be mitigated by compliance with all applicable federal and state occupational safety and health standards, National Electric Safety Code (NESC) regulations, Occupational Health and Safety Administration (OSHA) guidelines, and utility design and safety standards. Local emergency and health services will be called upon to provide first aid and assistance in the event of an accident or emergency. Additionally, our construction contractors are required to create and utilize a Health and Safety Plan to address public and worker safety during the construction and operation of the Project. All construction sites will be managed to reduce risks to the public and workers in the area. The general public will not be allowed in any active construction sites. Facilities will be designed and constructed to limit exposure of the public to EMF/EMR.

7. Summary of Mitigation and Monitoring

Central Electric Power Cooperative has traditionally hired outside contractors to build transmission lines. A full-time inspector from CEPC will be on the Project site to inspect and monitor all aspects of the construction process. A Project manager is also assigned to the Project to monitor and coordinate all line construction activities.

Restoration procedures will be used on the right-of-way to prevent erosion and to reestablish ground cover. The procedures include cultivating, seeding, and fertilizing the disturbed areas to stimulate rapid growth.

Post construction maintenance on the transmission line right-of-way will be accomplished by selected hand cutting, rotary mowing and application of approved herbicides. All applications of herbicides are performed by licensed applicators.

Should cultural resources be encountered during conservation, all activity in the affected area will be halted and the State Historic Preservation officer and RUS immediately notified. Construction practices will conform to USDA guidelines. The measures recommended by the agencies contacted during the notification phase, to mitigate potential environmental threats, will be incorporated during the construction of the Project.

The following Table is a summary of mitigation proposed for the Project by resource.

Resource	Potential Environmental Consequences	Mitigation Measures Required	Residual Effects
Resource	Potential Environmental Consequences	Mitigation Measures Required	Residual Effects
Land Use	The proposed transmission line rebuild Project will be located on Central's existing 100' wide transmission line right-of-way. The existing and proposed rebuilt transmission lines cross over lands that are primarily agricultural (48%), pasture/hay (28%) and forest (24%) areas along with some rural residential areas	The impact to the existing right-of-way from the transmission line rebuild Project will be minimal	Minimal
Floodplain	There are approximately 27.5 acres of floodplains present within rebuild portions of the ROW.	The Project will be designed so that placement of the poles will be outside of the floodplain when possible. Any direct impacts will be mitigated through the appropriate permits. Any material excavated within floodplain areas will be removed to areas outside the floodplain. Additionally, equipment and material will be staged outside of the floodplain and equipment refueling will occur in the uplands	Minimal
Wetlands	There are 15 creek, branch and/or fork crossings and 1.37 acres of wetlands present within the Project footprint	Central plans to span over all floodplains and wetlands with the new transmission line and to the extent possible no structures will be placed in these areas. The Corp of Engineers determined that the if the proposed activity does not require the discharge of dredged material or fill in the waters of the U.S then a Department of the Army permit would not be required	Minimal

Resource	Potential Environmental Consequences	Mitigation Measures Required	Residual Effects
<p>Historic and Cultural Resources</p>	<p>The Project does not cross any known historic properties, or resources eligible for or listed on the NRHP</p>	<p>Consultation with the Missouri Dept of Natural Resources SHPO was initiated and it was established that that there are no National Register of Historic Places (NRHP) properties located within or near the Project boundaries. A Phase I cultural resource survey was carried out and identified the presence of 6 previously unrecorded prehistoric archaeology sites. These possible historic properties are present, but all of the sites can be avoided by the proposed Project actions. A copy of the Phase I survey was provided to SHPO and they concurred with the site avoidance actions.</p>	<p>None</p>
<p>Tribal Consultation</p>	<p>The NHPA and Section 106 regulations establish that Indian tribes and Native Hawaiian organizations are one of the parties that have a consultative role in the Section 106 process for all Agency proposals/undertakings</p>	<p>Central utilized the Tribal Directory Assessment Information Tool (TDAT) to provide a list of Tribes with interest in the Project area. The TDAT reported that 8 Tribes had potential interest and should be contacted (listed in Section 4.7.2). All of the Tribes contacted either did not respond or responded that they had no interest in the Project, except the Osage Nation. At the Osage Nation's request Central retained ERC to perform a Phase I archaeological survey on the right-of-way corridor. A copy of the full archaeological report can be found in Appendix D. Central will design and build the proposed transmission line so as to satisfy all Osage Nation recommendations concerning cultural resources.</p>	<p>None</p>

Resource	Potential Environmental Consequences	Mitigation Measures Required	Residual Effects
Aesthetics	While there may be slight visual changes from the new Project facilities, the overall nature of the proposed Project will remain consistent and compatible with the existing views in the area	The proposed transmission line rebuild Project will be located on Central's existing 100' wide transmission line right-of-way. The aesthetic impact to the existing right-of-way from the transmission line rebuild Project will be minimal	Minimal
Air Quality	Air emissions from construction are low and temporary in nature, fall off rapidly with distance from the construction site, and will not result in any long-term impacts	There is a potential that the proposed Project could produce fugitive dust during the construction phase. The amount of fugitive dust produced by Project activity is similar to or less than dust produced by surrounding agricultural activity. If needed, dust control measures will be implemented during the construction phase. By implementing any needed dust control measures, the proposed Project will not be a significant source of dust emissions.	Minimal
Socioeconomics and Environmental Justice	Project is not anticipated to negatively impact the economy of the local area or disproportionately affect the livelihood of low-income families and minorities.	No mitigation measures are anticipated	None
Noise	Noise will be produced from the construction equipment and activities. Actual noise levels generated by construction will vary depending on the activity that is occurring, and the types and number of pieces of equipment that are operating	Noise from construction is expected to be localized and temporary. Any excessive construction noise should be of short duration and have minimal adverse long-term effects on land uses or activities associated with the Project Study Area. Noise should be similar to the amount produced by Agricultural equipment that operates through the majority of this area.	Minimal

Resource	Potential Environmental Consequences	Mitigation Measures Required	Residual Effects
Transportation	Damage to existing roads during construction	Roadways will not be purposefully damaged. In the event this does occur, repairs for damage caused by construction activities will be made when appropriate	Minimal
Human Health and Safety	EMF associated with transmission lines is emitted from a variety of equipment including the transmission lines coming into the substation, transformers, reactors, and capacitor banks. As such, EMF is strongest around substation facilities and decreases rapidly with distance from the source	No mitigation necessary	None
Human Health and Safety	There are a number of risks to human health and safety possible for construction personnel on Project construction through the operation of heavy equipment, the use of tools during construction, and working in an active construction site. Additionally, hazardous substances or wastes may be released, generated, or required for construction and operation in the Project Area	Mitigation measures include compliance with all applicable federal and state occupational safety and health standards, National Electric Safety Code (NESC) regulations (NESC 2017), Occupational Health and Safety Administration (OSHA) guidelines, and utility design and safety standards. Additionally, our contractors utilize a Health and Safety Plan to address public and worker safety during the construction and operation of the Project. Local emergency and health services will be called upon to provide first aid and assistance in the event of an accident or emergency	Minimal

Resource	Potential Environmental Consequences	Mitigation Measures Required	Residual Effects
<p>Biological Resources</p>	<p>The Endangered Species Act of 1973 (ESA), as amended, provides federal protection to listed threatened and endangered species. USFWS's list for the proposed Project are Running Buffalo Clover, Gray Bat, Indiana Bat and the Northern Long-Eared Bat</p>	<p>U.S. Fish and Wildlife concurred that these activities had "No Effect" on listed species and agreed that the listed species are not likely to be impacted by the proposed Project action due to the facts that the Project ROW is cleared and waterways will be avoided. Temporary impacts for general wildlife species as a result of the Project could occur as a result of the increased construction activity and traffic along the ROW.</p>	<p>Minimal</p>
<p>Water Resources</p>	<p>Soil erosion and stormwater runoff into nearby streams and rivers may impact waterways during construction.</p>	<p>Before construction activities commence, Central will apply for the appropriate Missouri DNR land disturbance permit. Any construction work will be mitigated by Central's fulfillment of permit conditions and requirements that will describe the BMPs and SWPPP to be implemented during construction. Potential BMP measures may include, but are not limited to, the following:</p> <ul style="list-style-type: none"> • Removal of soil and sediment tracked off the Project site by vehicles and construction equipment • Silt fencing and catch basins to filter sediment • Use of check dams to slow the velocity of concentrated storm water flows and filter sediment in areas of erosion • Leave storm water control features in place after construction is complete until vegetation is established <ul style="list-style-type: none"> • Seeding and mulching • Periodic site visits to monitor revegetation and initiate additional restoration measures if necessary • Provide and maintain a 50-foot buffer surrounding all water resources 	<p>Minimal</p>

8. **Coordination, Consultation and Correspondence**

Coordination, consultation and correspondence with appropriate environmental regulatory or natural resource agencies (at the federal, state, and local levels) is necessary for information gathering, to support impact assessment conclusions, and in some cases to meet statutory requirements. While web-based resources are important in this regard, project-specific data or regulatory concurrence must be obtained and, in some cases, documented in writing. Agencies are typically given 30 days to respond to a written request for comments, with reasonable time extensions if necessary. If no written response is received within the requested time period, the applicant should re-contact the agency by phone/e-mail regarding its intention to comment. If time is of the essence, it may be prudent to confirm the agency's receipt of the initial request. If necessary, contact Agency environmental staff for assistance

Due to the fact that the transmission line will be rebuilt on an existing transmission line right-of-way, there will be no change in land use.

Appendix D contains correspondence with the agencies contacted during environmental review and notification process.

- i. The Missouri Department of Conservation (MDC) was contacted concerning the proposed Project. MDC responded to Central with detailed information and comments in a Natural Heritage Review Report. See Appendix E-6. The report identifies public lands and sensitive resources known to have been located close to and/or potentially affected by the proposed Project. Central will adhere to the recommendations in the Natural Heritage Review Report.
- ii. Central contacted and collaborated with the Department of Natural Resources (DNR), Historic Preservation Office to identify and protect cultural resources that might be identified on or near Central's proposed Project right-of-way. DNR determined "Adequate documentation has been provided as outlined in 36 CFR Section 800.11. After review of the initial submission, the Project area has a low potential for the occurrence of cultural resources. We concur with a determination of No Historic Properties Affected". After consultation with Osage Nation in the Tribal Consultation listed in vii below, a Phase I survey was conducted and SHPO was provided a copy in May 2021 and again in Oct 2021 for further review. Any further Project actions that may be necessary and any recommendations provided will be adhered to.
- iii. Central contacted the Missouri Department of Transportation (MoDOT) Northeast District and Central District concerning these proposed transmission line rebuild Project. Both MoDOT Districts felt that Central's proposed transmission line rebuild Project would not adversely affect the current State Highway System.

Central will apply and follow any Right-of-Way Permits necessary at the time of construction.

- iv. Central contacted the Palmyra, MO office of the Natural Resources Conservation Services (NRCS) concerning the proposed transmission line rebuild projects. The NRCS response is listed in Appendix E-7. The NRCS stated that since the proposed rebuild project will take place on existing right-of-way the FPPA does not apply.
- v. Central contacted the U.S. Fish and Wildlife Service concerning the proposed transmission line rebuild Project. U.S. Fish and Wildlife reviewed the information which Central provided and stated that they concurred with Central's determination of "No Effect" to federally listed species by the proposed Project action. The full comments from U.S. Fish and Wildlife are listed in Appendix D-2.
- vi. Central contacted and collaborated with the Department of the Army, Kansas City District, Corp of Engineers, concerning the proposed transmission line rebuild Project. The Corp reviewed all the submitted information and "Should any future construction plans associated with the Project require the discharge of dredged or fill material in any waters of the United States, including wetlands, a Department of the Army (DA) permit may be required." and that "if the proposed plans do not require the discharge of dredged or fill material in any waters of the United States, including wetlands, a DA permit will not be required.". Appendix D-8 contains the correspondence between Central and the Corp.
- vii. Central utilized the Tribal Directory Assessment Information Tool (TDAT) to provide a list of Tribes with interest in Audrain, Callaway and Monroe Counties. The TDAT reported that 8 Tribes had potential interest and should be contacted. Central sent letters and Project details to the Apache Tribe of Oklahoma, Delaware Nation of Oklahoma, Miami Tribe of Oklahoma, Osage Nation, Sac & Fox Nation of Missouri in Kansas and Nebraska, Sac & Fox Nation of Oklahoma, Sac & Fox Tribe of the Mississippi in Iowa and the Seneca-Cayuga Nation. All of the Tribes contacted either did not respond or responded that they had no interest in the Project, except the Osage nation. At the Osage Nation's request Central retained ERC to perform an archaeological survey on the right-of-way corridor. A copy of the full archaeological report was submitted for review. Central will design and build the proposed transmission line to preserve all potential cultural resources. The TDAT report is listed in Appendix D-1 and all Section 106 Communications are in Appendix D-11.
- viii. Central contacted the County Commission of Callaway, Audrain and Monroe Counties. Callaway County did not respond to Central's contact letter. Audrain and Monroe County contacted Central and had no objections to the Project.

- ix. Central contacted the Mid-Missouri and Mark Twain Regional Planning Commissions concerning the proposed transmission line rebuild projects in Callaway, Audrain and Monroe Counties. Mid-Missouri and Mark Twain Regional Planning Commissions did not respond to Central's contact or follow-up letter.

9. References

- 1 - Land Use - page 16 – Code of Federal Regulations (40 CFR § 1508.1);
<https://www.ecfr.gov/current/title-40/chapter-V/subchapter-A/part-1508>
- 2 - Important Farmland Soils - page 18 - USDA Departmental Regulation No. 9500-3, Land Use Policy;
<https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdafiles/Environ-Cultural/dr9500-003.pdf>
- 3 - Floodplain Management; Floodplains – page 18 – Federal Emergency Management Agency. Executive Order 11988;
<https://www.fema.gov/glossary/executive-order-11988-floodplain-management>
- 4 - Floodplains – page 18 - Federal Flood Risk Management Standard (FFRMS) E.O. 13690;
<https://sgp.fas.org/crs/misc/IN10434.pdf>
- 5 - Floodplains – page 19 - FEMA Flood Map Service Center - Flood Insurance Rate Maps;
<https://msc.fema.gov/portal/home>
- 6 - Floodplains – Page 19 - USACE NWP 57;
<https://usace.contentdm.oclc.org/utis/getfile/collection/p16021coll7/id/16848>
- 7 - Wetlands – Page 20 - Executive Order 11990, Protection of Wetlands – FEMA;
https://emilms.fema.gov/is_1016/groups/38.html
- 8 - Wetlands – Page 20 - U.S. Fish and Wildlife Service’s (USFWS) National Wetland Inventory (NWI) utilizing the USFWS Wetlands Mapper tool;
<https://www.fws.gov/wetlands/data/mapper.html>
- 9 - Water Resources – Page 22 - Missouri Clean Water Law, (Chapter 644 R.S. Mo);
<https://revisor.mo.gov/main/OneChapter.aspx?chapter=644>

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10 - Water Resources – Page 22 - Federal Water Pollution Control Act (Public Law 92-500);

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11 - Water Resources – Page 22 - Construction Land Disturbance Missouri State Operating Permit (MO-RA0000);

<https://dnr.mo.gov/water/business-industry-other-entities/permits-certification-engineering-fees/stormwater/construction-land-disturbance>

12 - Biological Resources – Page 23 - Endangered Species Act of 1973 (ESA);

<https://www.fws.gov/endangered/laws-policies/>

13 - Fish and Wildlife Resources – Page 24 - Avian Protection Plan (APP) Guidelines;

<https://www.fws.gov/birds/management/project-assessment-tools-and-guidance/guidance-documents/electric-utility-lines.php>

14 - Migratory Bird Treaty Act – Page 24 - Migratory Bird Treaty Act (MBTA);

<https://www.fws.gov/birds/policies-and-regulations/laws-legislations/migratory-bird-treaty-act.php>

15 - Bald and Golden Eagle Protection Act – Page 25 - Bald and Golden Eagle Protection Act of 1940;

<https://www.fws.gov/midwest/eagle/history/protectations.html>

16 - Invasive Species – Page 25 - E.O. 13112, Invasive Species;

<https://www.fws.gov/invasives/laws.html>

17 - Cultural Resources – Page 26 - Antiquities Act of 1906;

<https://www.nps.gov/archeology/sites/antiquities/about.htm>

References (Continued)

18 - Cultural Resources – Page 26 - Historic Sites Act of 1935;

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19 - Cultural Resources – Page 26 - National Historic Preservation Act (NHPA) of 1966;

<https://ncshpo.org/resources/national-historic-preservation-act-of-1966/>

20 - Cultural Resources – Page 26 - National Environmental Policy Act of 1970;

[https://www.epa.gov/nepa/what-national-environmental-policy-act#:~:text=The%20National%20Environmental%20Policy%20Act%20\(NEPA\)%20was%20signed%20into%20law,actions%20prior%20to%20making%20decisions.&text=making%20decisions%20on%20permit%20applications,federal%20land%20management%20actions%2C%20and](https://www.epa.gov/nepa/what-national-environmental-policy-act#:~:text=The%20National%20Environmental%20Policy%20Act%20(NEPA)%20was%20signed%20into%20law,actions%20prior%20to%20making%20decisions.&text=making%20decisions%20on%20permit%20applications,federal%20land%20management%20actions%2C%20and)

21 - Cultural Resources – Page 26 - 2004 amendment of the Protection of Historic Properties (36 CFR PART 800);

<https://www.achp.gov/sites/default/files/regulations/2017-02/regs-rev04.pdf>

22 - Tribal Consultation – Page 28 - Tribal Directory Assessment Information Tool (TDAT);

<https://egis.hud.gov/TDAT/>

23 - Air Quality – Page 30 – USEPA National Ambient Air Quality Standards;

<https://www.epa.gov/naaqs>

24 - Air Quality – Page 30 - Air Quality Standard and Pollution Control Regulation Metropolitan Area for Missouri (Kansas City, Saint Louis and/or Springfield-Greene County);

<https://www.epa.gov/sips-mo/missouri-sip-epa-approved-missouri-regulations>

25 - Socioeconomics and Environmental Justice – Page 31 - U.S. Census Bureau statistics by State and County;

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27 - Environmental Justice – Page 32 - Council on Environmental Quality (CEQ 1997);

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29 - Electromagnetic Fields and Interference – Page 35 - National Institute of Environmental Health Sciences (NIEHS) manual *Electric and Magnetic Fields Associated with the Use of Electric Power (June 2002)*;

https://www.niehs.nih.gov/health/materials/electric_and_magnetic_fields_associated_with_the_use_of_electric_power_questions_and_answers_english_508.pdf

30 - Electromagnetic Fields and Interference – Page 36 - About Electric and Magnetic Fields from Power Lines (USEPA 2006c);

<https://www.epa.gov/radtown/electric-and-magnetic-fields-power-lines>

31 - Electromagnetic Fields and Interference – Page 37 - Possible Health Effects of Exposure to Residential Electric and Magnetic Fields - National Research Council 1997;

<https://www.ncbi.nlm.nih.gov/books/NBK232736/>

32 - Human Health and Safety – Page 37 - National Electrical Safety Code 2017;

<https://standards.ieee.org/products-services/nesc/index.html>.

10. List of Preparers

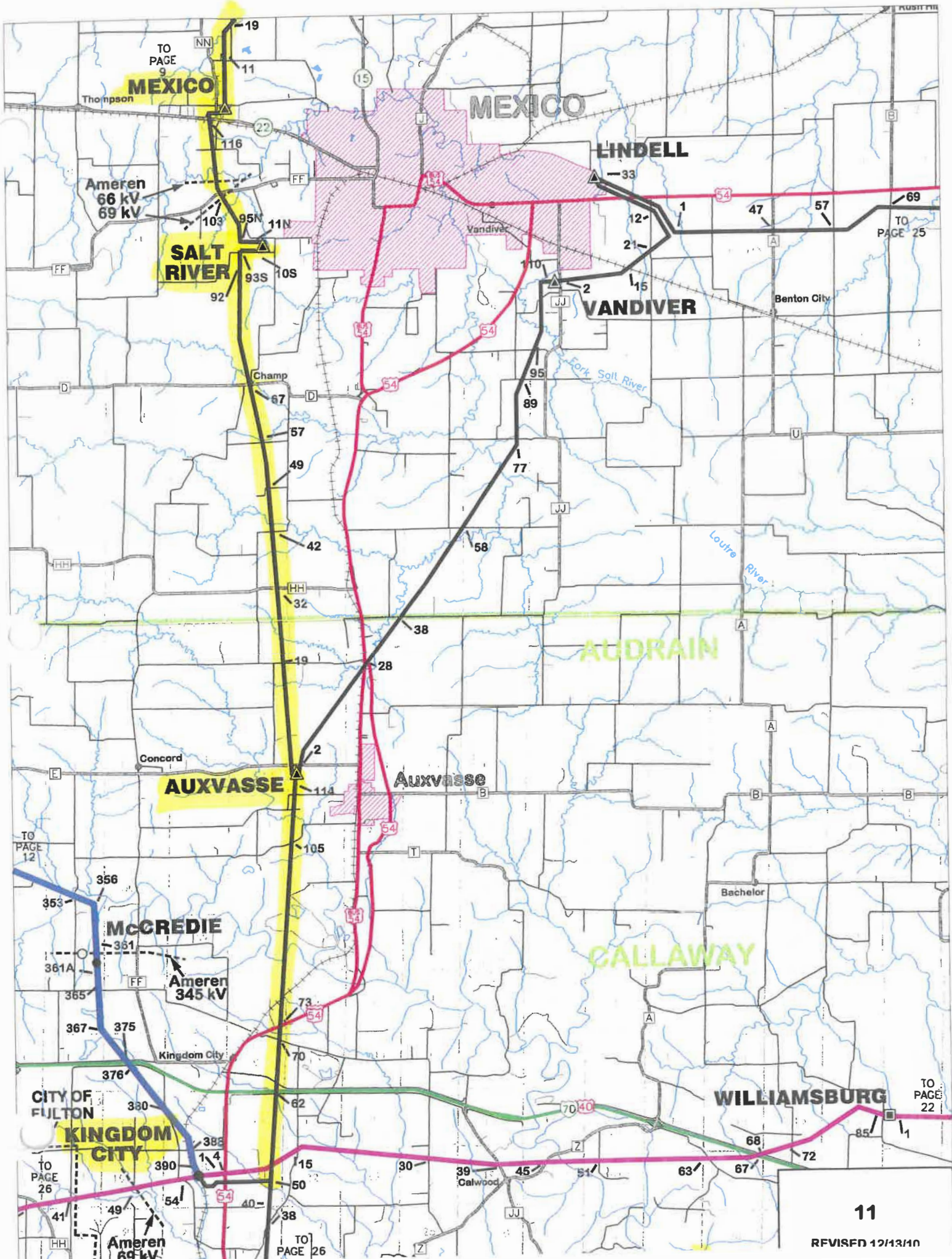
The EA for the Project was prepared by Central Electric Power Cooperative in coordination with United States Department of Agriculture-Rural Utility Service (RUS). The following is a list of preparers of this document.

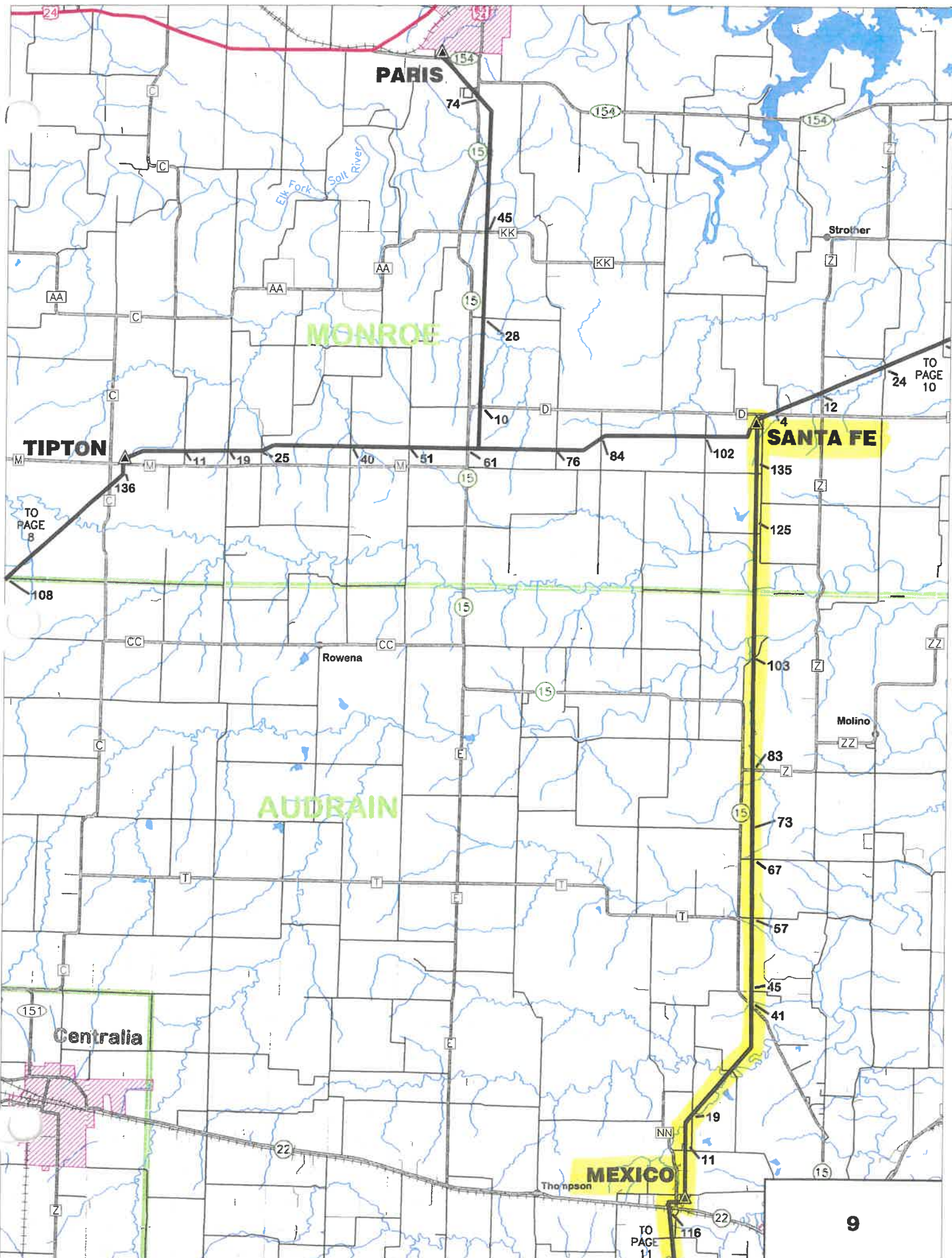
Central Electric Power Cooperative

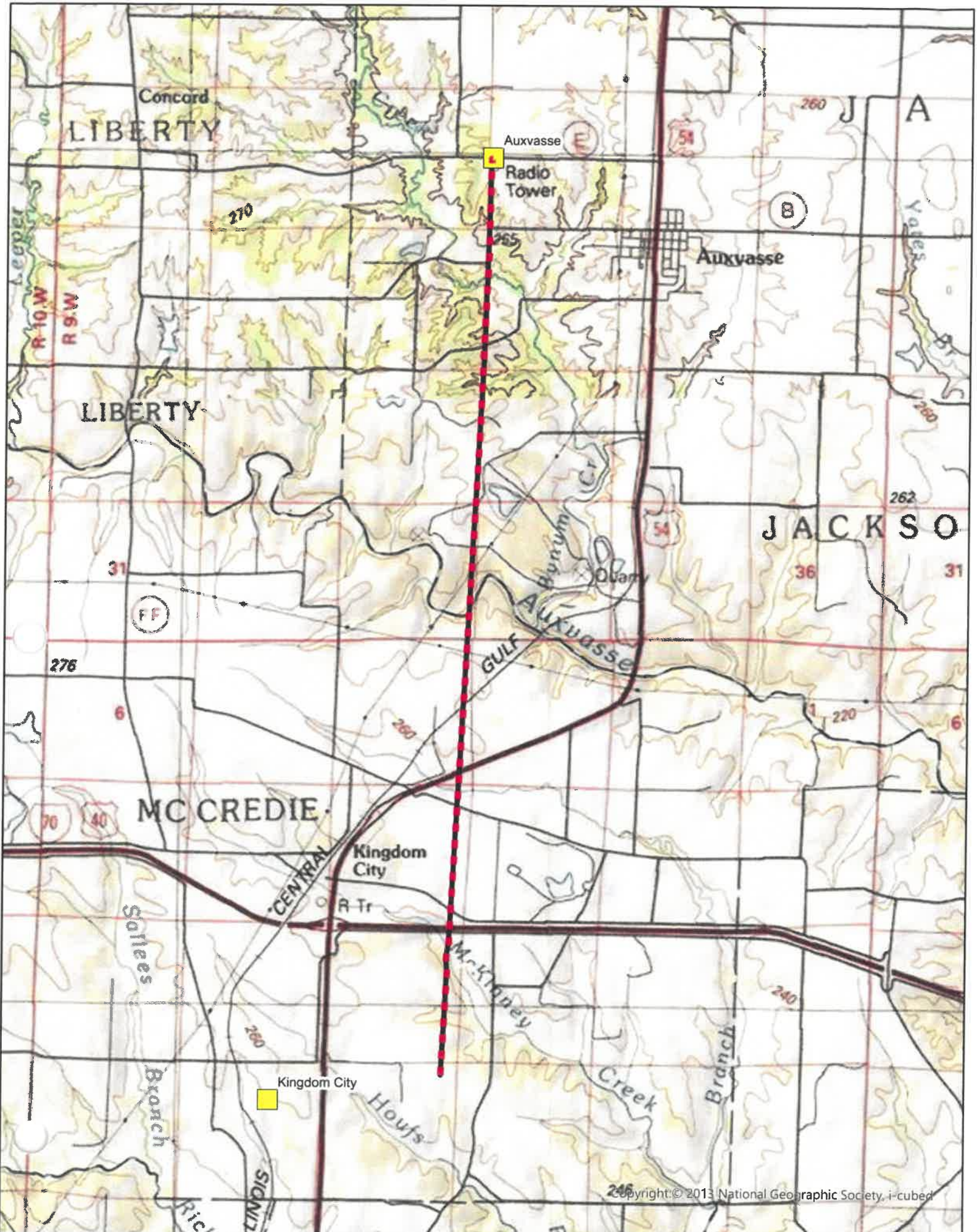
- Michael Bax, PE, VP - Engineering
- Spencer Hoskins, PE, Manager – Transmission Line Design

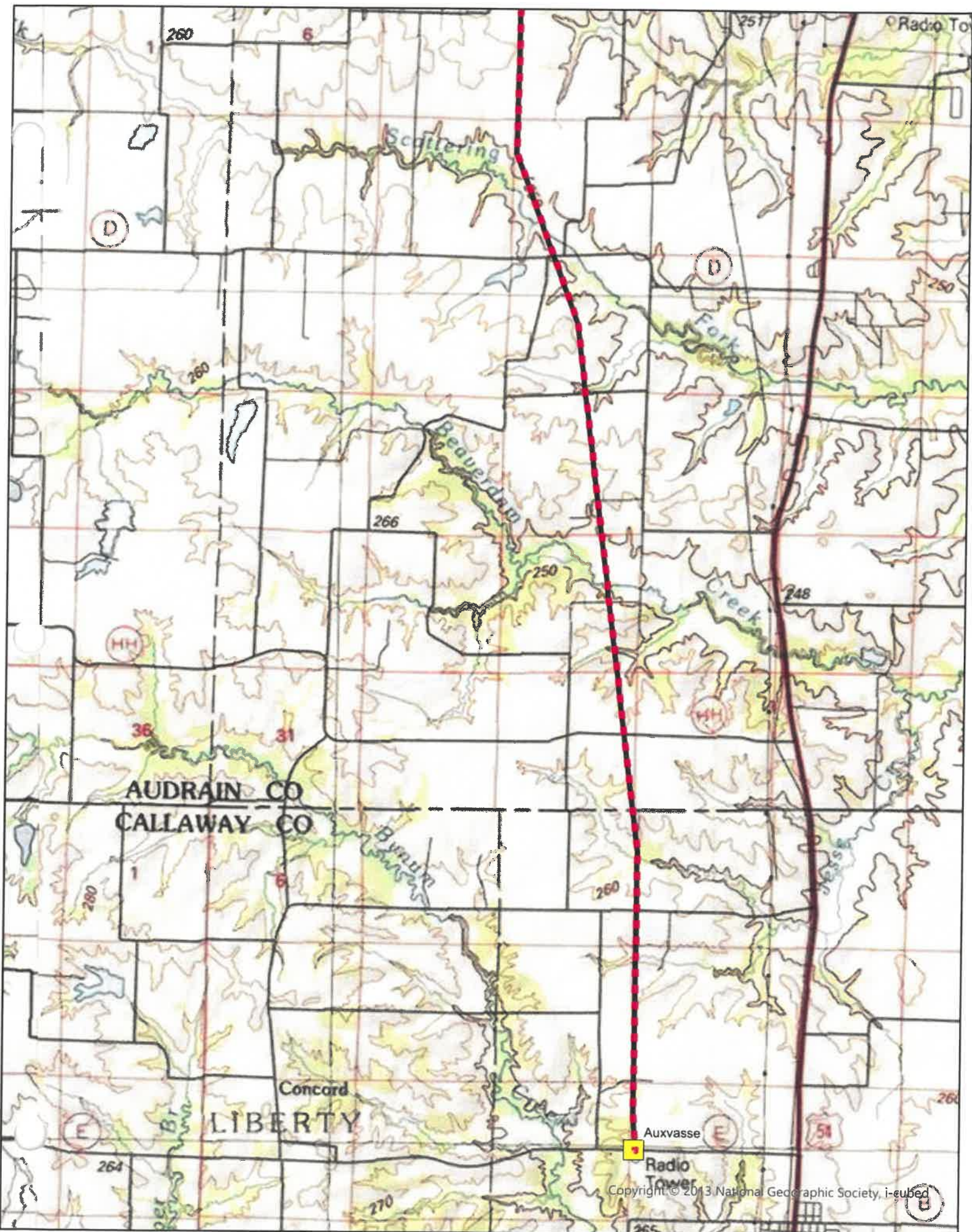
RUS

- Marcus Brundage, REM, Environmental Protection Specialist, Engineering and Environmental Staff, Water and Environmental Programs



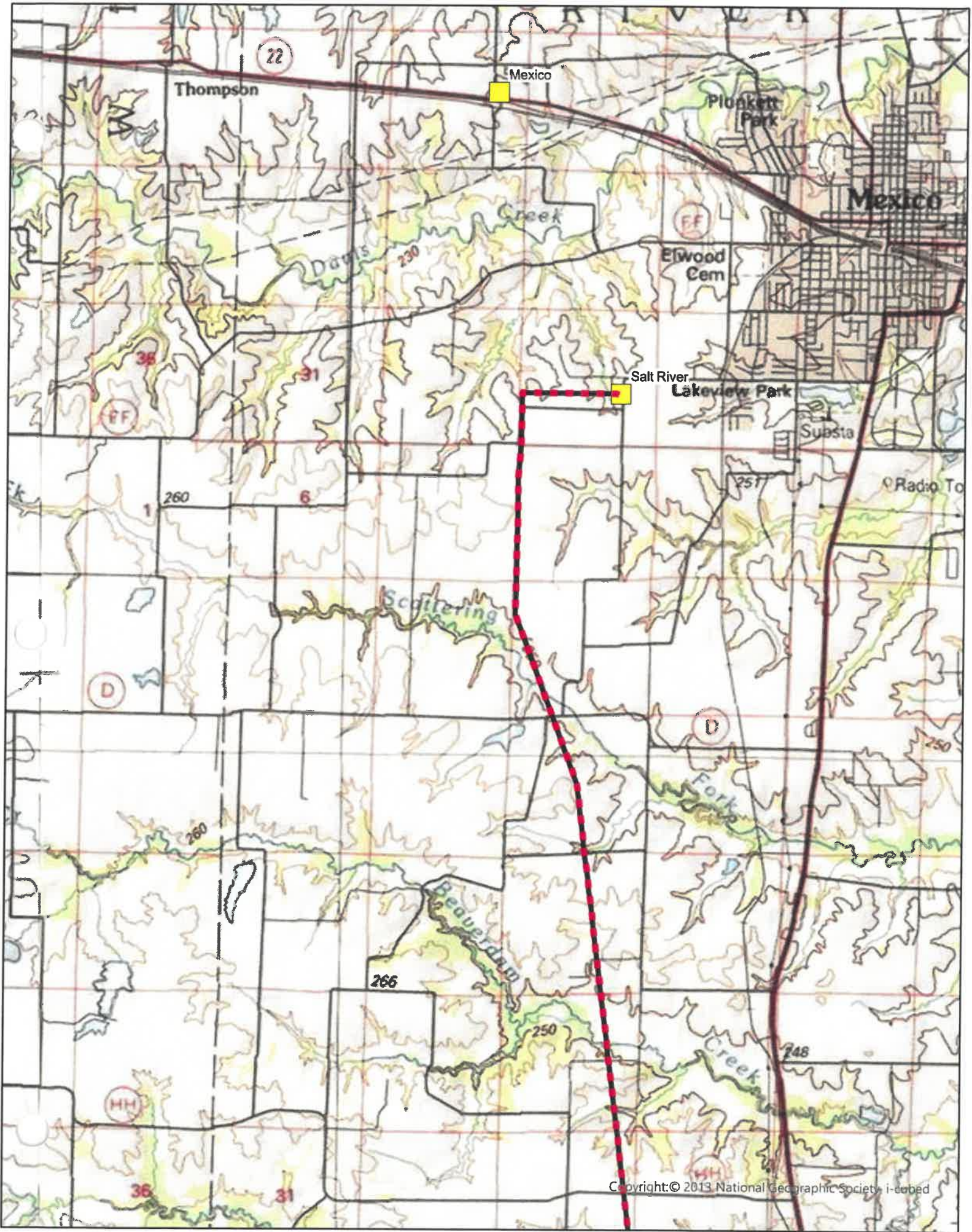




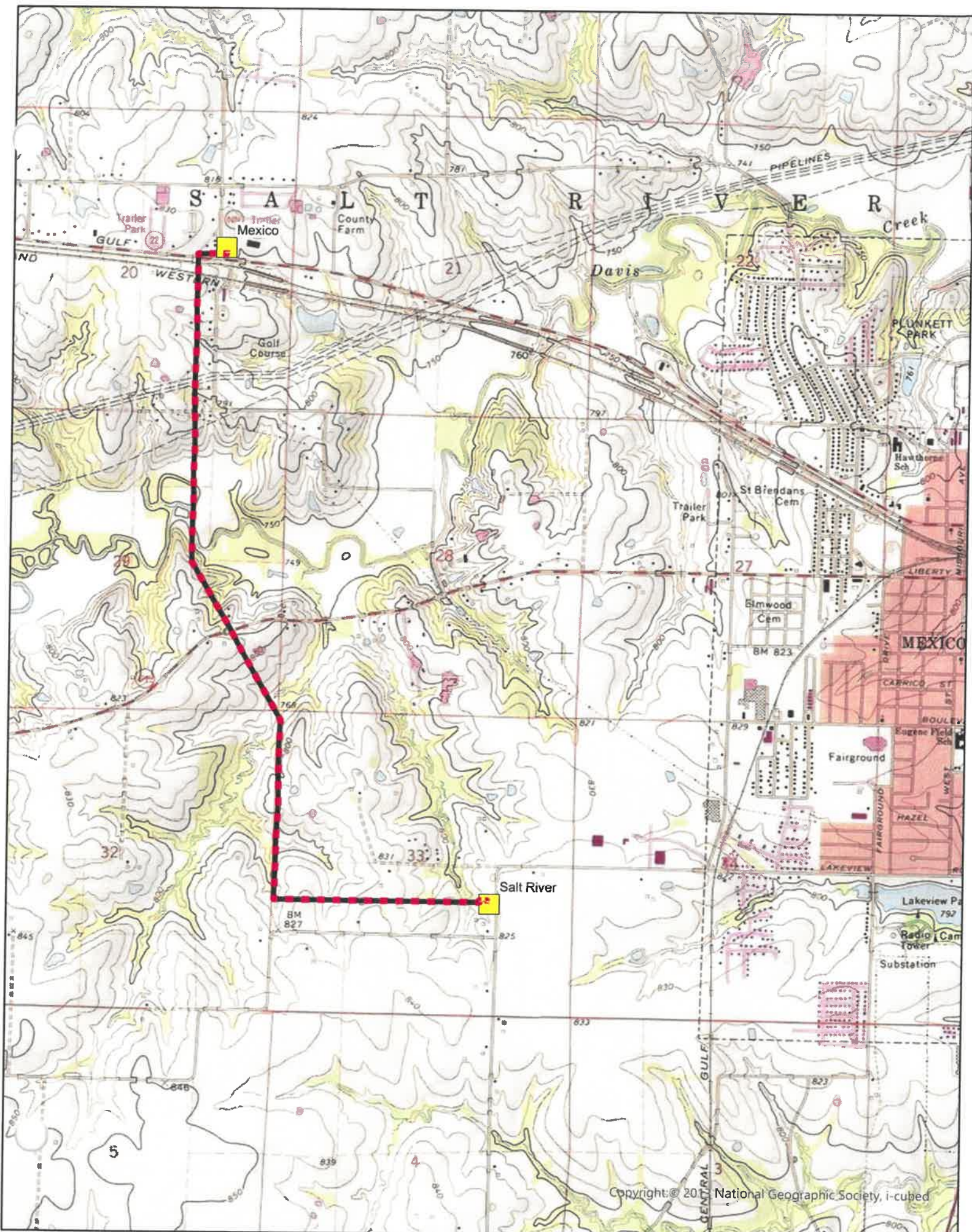


AUXVASSE, MO

CALLAWAY & AUDRAIN COUNTIES



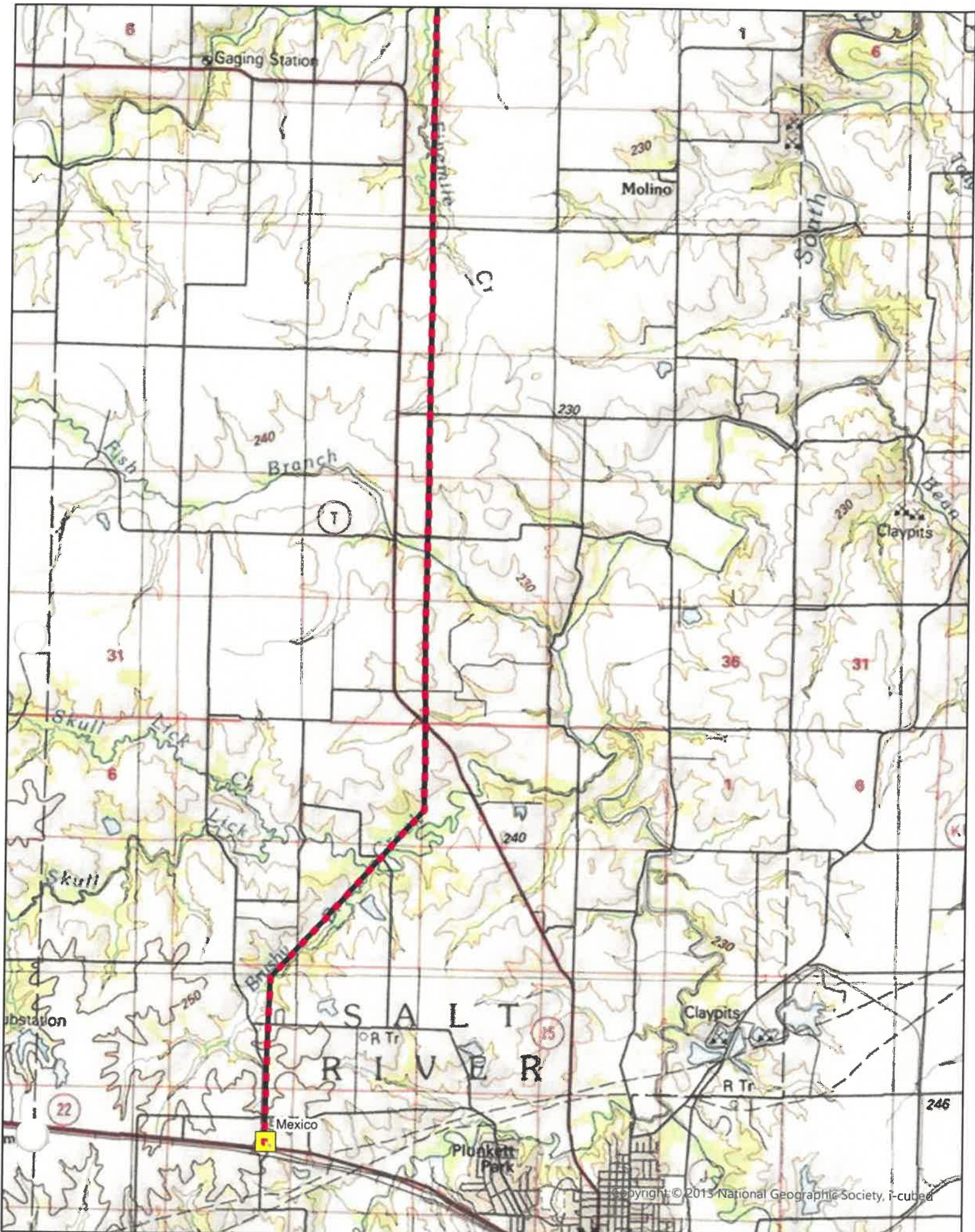
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MEXICO WEST, MO

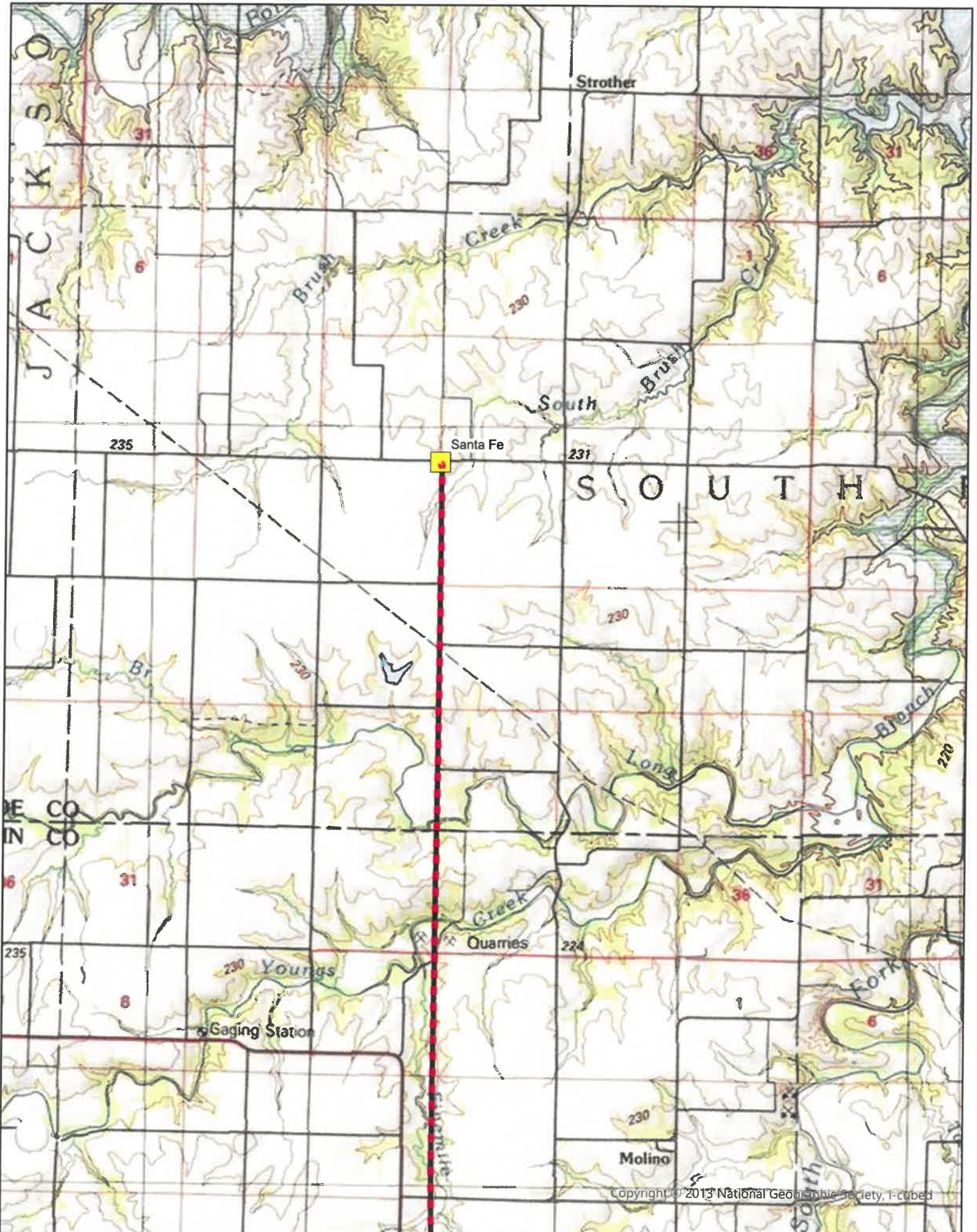
AUDRAIN COUNTY

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MEXICO WEST & MOLINO, MO

AUDRAIN COUNTY



MOLINO, MO

AUDRAIN & MONROE COUNTIES

NOTES TO USER

This map is for use in determining the flood hazard potential of a project. The community map resulting should be consulted for an update of accurate flood hazard information.

For more detailed information in areas where Flood Elevations are shown, consult the Flood Elevation Data and Flood Hazard Information (FEI) data sheets. These sheets are available for purchase from the FEMA Flood Elevation Data and Flood Hazard Information (FEI) data sheets. These sheets are available for purchase from the FEMA Flood Elevation Data and Flood Hazard Information (FEI) data sheets.

Information Services
 FEMA
 1215 Jefferson Davis Highway
 Alexandria, VA 22304
 (703) 295-4999
 www.fema.gov

LEGEND

1. Areas not shown on this map are subject to inundation by the 1% Annual Chance Flood (100-year flood), also known as the base flood. In the event of a flood, the community map resulting should be consulted for an update of accurate flood hazard information.

2. Areas shown on this map are subject to inundation by the 1% Annual Chance Flood (100-year flood), also known as the base flood. In the event of a flood, the community map resulting should be consulted for an update of accurate flood hazard information.

3. Areas shown on this map are subject to inundation by the 1% Annual Chance Flood (100-year flood), also known as the base flood. In the event of a flood, the community map resulting should be consulted for an update of accurate flood hazard information.

4. Areas shown on this map are subject to inundation by the 1% Annual Chance Flood (100-year flood), also known as the base flood. In the event of a flood, the community map resulting should be consulted for an update of accurate flood hazard information.

5. Areas shown on this map are subject to inundation by the 1% Annual Chance Flood (100-year flood), also known as the base flood. In the event of a flood, the community map resulting should be consulted for an update of accurate flood hazard information.



1% Annual Chance Flood Boundary
 Dashed line

2% Annual Chance Flood Boundary
 Dashed line

5% Annual Chance Flood Boundary
 Dashed line

10% Annual Chance Flood Boundary
 Dashed line

1% Annual Chance Flood Boundary
 Dashed line

2% Annual Chance Flood Boundary
 Dashed line

5% Annual Chance Flood Boundary
 Dashed line

10% Annual Chance Flood Boundary
 Dashed line

NATIONAL FLOOD INSURANCE PROGRAM

FIRM FLOOD INSURANCE RATE MAP

CALLAWAY COUNTY, MISSOURI AND INCORPORATED AREA

PANEL 75 OF 875 FOR FIRM PANEL 5000H OR MAP 1 FOR FIRM PANEL 5000H

COOPERATIVE FIRM

DATE: 09/05/2010

SCALE: 1" = 1000'

MAP SCALE: 1" = 800'

1000 2000 3000 4000 5000 FEET

0 1000 2000 3000 4000 METERS

PANEL 027E

MAP NUM 2002700

MAP REV 5

SEPTEMBER 5, 2010

Federal Emergency Management Agency

1% Annual Chance Flood Boundary
 Dashed line

2% Annual Chance Flood Boundary
 Dashed line

5% Annual Chance Flood Boundary
 Dashed line

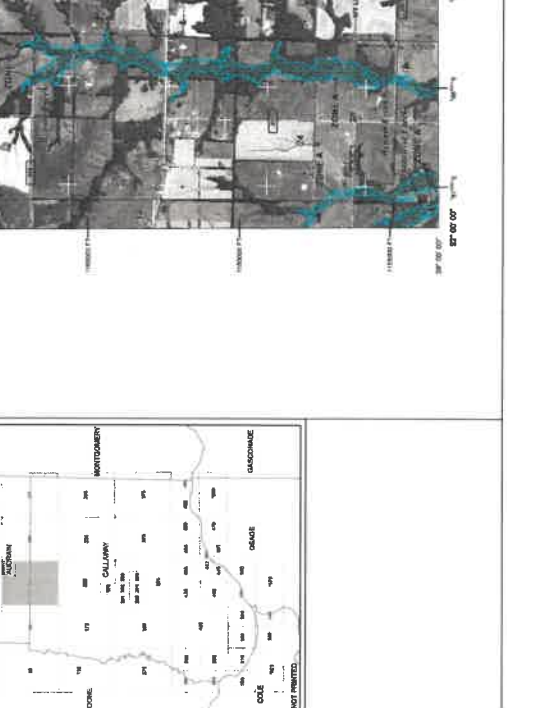
10% Annual Chance Flood Boundary
 Dashed line

1% Annual Chance Flood Boundary
 Dashed line

2% Annual Chance Flood Boundary
 Dashed line

5% Annual Chance Flood Boundary
 Dashed line

10% Annual Chance Flood Boundary
 Dashed line



1% Annual Chance Flood Boundary
 Dashed line

2% Annual Chance Flood Boundary
 Dashed line

5% Annual Chance Flood Boundary
 Dashed line

10% Annual Chance Flood Boundary
 Dashed line

1% Annual Chance Flood Boundary
 Dashed line

2% Annual Chance Flood Boundary
 Dashed line

5% Annual Chance Flood Boundary
 Dashed line

10% Annual Chance Flood Boundary
 Dashed line

NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 48 NORTH, RANGE 9 WEST AND TOWNSHIP 49 NORTH, RANGE 10 WEST

FLOOD HAZARD INFORMATION IS NOT SHOWN ON THIS MAP IN AREAS OUTSIDE OF CALLAWAY COUNTY

1% Annual Chance Flood Boundary
 Dashed line

2% Annual Chance Flood Boundary
 Dashed line

5% Annual Chance Flood Boundary
 Dashed line

10% Annual Chance Flood Boundary
 Dashed line

1% Annual Chance Flood Boundary
 Dashed line

2% Annual Chance Flood Boundary
 Dashed line

5% Annual Chance Flood Boundary
 Dashed line

10% Annual Chance Flood Boundary
 Dashed line

NOTES TO US

This map was prepared under contract for the National Flood Insurance Administration (NFIA) under the Flood Insurance Modernization Act of 2012. The contractor's responsibility is limited to the preparation of the map in accordance with the contract. The NFIA is the final authority on the use of this map. The contractor's responsibility is limited to the preparation of the map in accordance with the contract. The NFIA is the final authority on the use of this map.

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LEGEND

1% ANNUAL FLOOD FLOODPLAIN (Zone A)
The 1% annual chance flood (100-year flood), also known as the base flood, is the minimum flood depth to which structures are required to be elevated. The base flood elevation is the elevation of the water surface in the 1% annual chance flood.

2% ANNUAL FLOOD FLOODPLAIN (Zone B)
The 2% annual chance flood (50-year flood) is the minimum flood depth to which structures are required to be elevated. The base flood elevation is the elevation of the water surface in the 2% annual chance flood.

1% ANNUAL FLOOD FLOODPLAIN WITH ANTI-CYCLONE SURGE (Zone C)
This zone includes areas that are subject to the 1% annual chance flood with an anti-cyclone surge. The base flood elevation is the elevation of the water surface in the 1% annual chance flood with an anti-cyclone surge.

OTHER FLOOD AREAS
Zone D: Areas of flood insurance that are not subject to the 1% annual chance flood. Zone E: Areas of flood insurance that are not subject to the 2% annual chance flood. Zone F: Areas of flood insurance that are not subject to the 1% annual chance flood with an anti-cyclone surge.

OTHER AREAS
Zone G: Areas that are not subject to flood insurance. Zone H: Areas that are not subject to flood insurance. Zone I: Areas that are not subject to flood insurance.

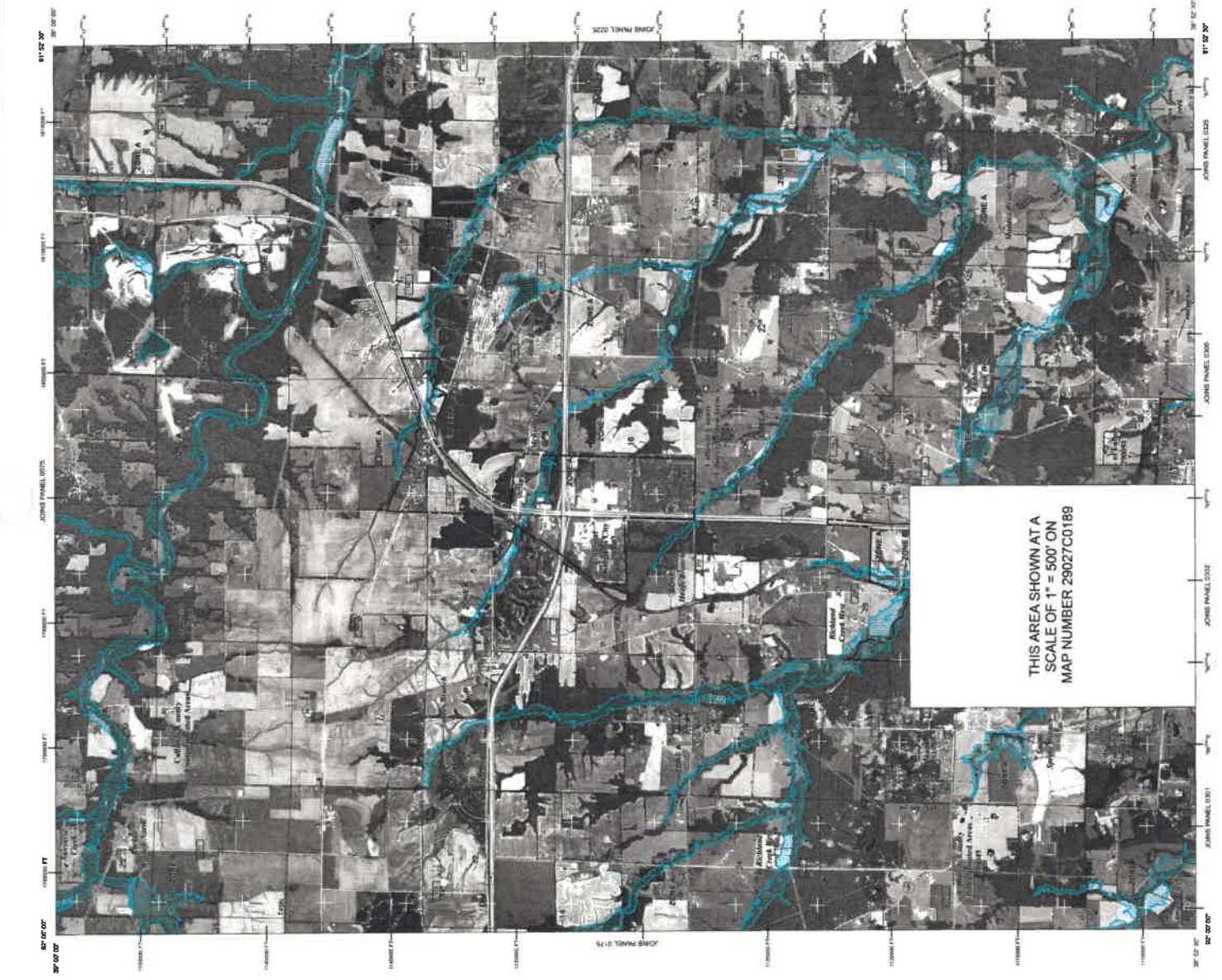
COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS
These areas are subject to special flood insurance. The base flood elevation is the elevation of the water surface in the 1% annual chance flood.

OTHER SERVICE PROTECTED AREAS (OSPA)
These areas are subject to special flood insurance. The base flood elevation is the elevation of the water surface in the 1% annual chance flood.

FLOODWAY AREAS IN ZONE A
These areas are subject to special flood insurance. The base flood elevation is the elevation of the water surface in the 1% annual chance flood.

Other symbols and scale
Includes symbols for roads, railroads, and other features. Also includes a graphic scale in feet and meters.

Map Information
Map title: FIRM FLOOD INSURANCE RATE MAP
Map number: 29027C0189
Date: September 5, 2023
Scale: 1" = 500'



THIS AREA SHOWN AT A
SCALE OF 1" = 500' ON
MAP NUMBER 29027C0189

Notes to US
This map was prepared under contract for the National Flood Insurance Administration (NFIA) under the Flood Insurance Modernization Act of 2012. The contractor's responsibility is limited to the preparation of the map in accordance with the contract.

The NFIA is the final authority on the use of this map. The contractor's responsibility is limited to the preparation of the map in accordance with the contract. The NFIA is the final authority on the use of this map. The contractor's responsibility is limited to the preparation of the map in accordance with the contract.

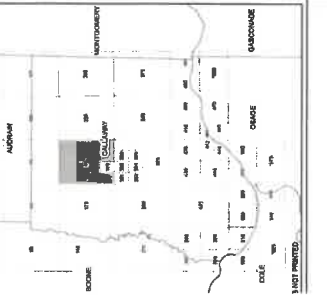
The NFIA is the final authority on the use of this map. The contractor's responsibility is limited to the preparation of the map in accordance with the contract. The NFIA is the final authority on the use of this map. The contractor's responsibility is limited to the preparation of the map in accordance with the contract.

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Map Information
Map title: FIRM FLOOD INSURANCE RATE MAP
Map number: 29027C0189
Date: September 5, 2023
Scale: 1" = 500'

NOTES TO US

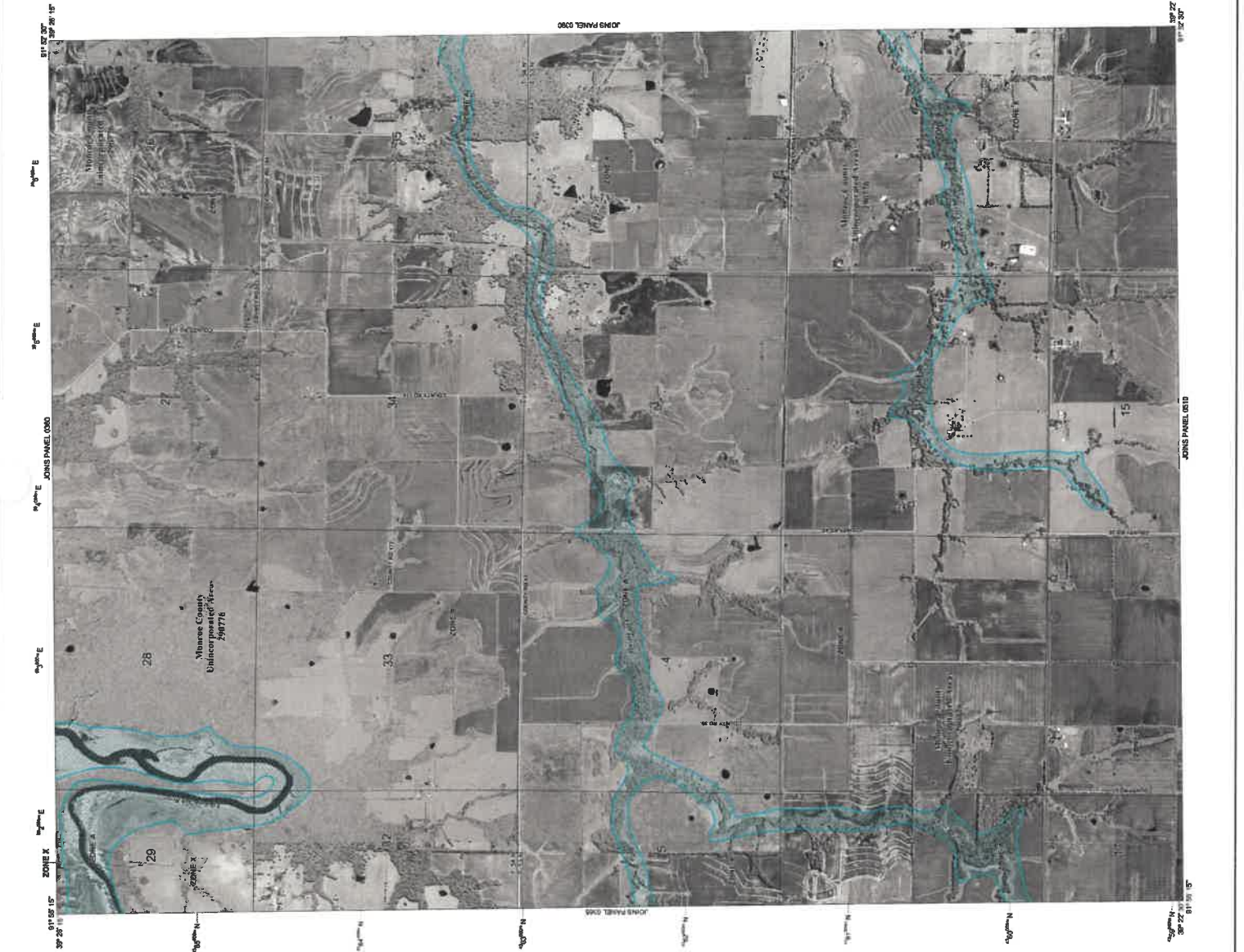
This map is for use in administering the National Flood Insurance Program (NFIP). It does not constitute a warranty, representation, or contract. The information is provided for informational purposes only and should not be used as a basis for any legal action. The information is provided for informational purposes only and should not be used as a basis for any legal action.

obtain more detailed information in areas where Flood Hazard (FHA) or Flood Hazard (FHA) boundaries have been determined, users are encouraged to contact the Flood Hazard (FHA) office for more information. The information is provided for informational purposes only and should not be used as a basis for any legal action.

of operations on this map are referenced to the North American Vertical Datum of 1988. The information is provided for informational purposes only and should not be used as a basis for any legal action.

any other information or data that may be necessary to determine the accuracy of the information on this map. The information is provided for informational purposes only and should not be used as a basis for any legal action.

any other information or data that may be necessary to determine the accuracy of the information on this map. The information is provided for informational purposes only and should not be used as a basis for any legal action.



LEGEND

- Zone X** - Flood Hazard Areas (FHA) Subject to Inundation by the 1% Annual Chance Flood
- Zone A** - Flood Hazard Areas (FHA) Subject to Inundation by the 1% Annual Chance Flood
- Zone B** - Flood Hazard Areas (FHA) Subject to Inundation by the 1% Annual Chance Flood
- Zone C** - Flood Hazard Areas (FHA) Subject to Inundation by the 1% Annual Chance Flood
- Zone D** - Flood Hazard Areas (FHA) Subject to Inundation by the 1% Annual Chance Flood
- Zone E** - Flood Hazard Areas (FHA) Subject to Inundation by the 1% Annual Chance Flood
- Zone F** - Flood Hazard Areas (FHA) Subject to Inundation by the 1% Annual Chance Flood
- Zone G** - Flood Hazard Areas (FHA) Subject to Inundation by the 1% Annual Chance Flood
- Zone H** - Flood Hazard Areas (FHA) Subject to Inundation by the 1% Annual Chance Flood
- Zone I** - Flood Hazard Areas (FHA) Subject to Inundation by the 1% Annual Chance Flood
- Zone J** - Flood Hazard Areas (FHA) Subject to Inundation by the 1% Annual Chance Flood
- Zone K** - Flood Hazard Areas (FHA) Subject to Inundation by the 1% Annual Chance Flood
- Zone L** - Flood Hazard Areas (FHA) Subject to Inundation by the 1% Annual Chance Flood
- Zone M** - Flood Hazard Areas (FHA) Subject to Inundation by the 1% Annual Chance Flood
- Zone N** - Flood Hazard Areas (FHA) Subject to Inundation by the 1% Annual Chance Flood
- Zone O** - Flood Hazard Areas (FHA) Subject to Inundation by the 1% Annual Chance Flood
- Zone P** - Flood Hazard Areas (FHA) Subject to Inundation by the 1% Annual Chance Flood
- Zone Q** - Flood Hazard Areas (FHA) Subject to Inundation by the 1% Annual Chance Flood
- Zone R** - Flood Hazard Areas (FHA) Subject to Inundation by the 1% Annual Chance Flood
- Zone S** - Flood Hazard Areas (FHA) Subject to Inundation by the 1% Annual Chance Flood
- Zone T** - Flood Hazard Areas (FHA) Subject to Inundation by the 1% Annual Chance Flood
- Zone U** - Flood Hazard Areas (FHA) Subject to Inundation by the 1% Annual Chance Flood
- Zone V** - Flood Hazard Areas (FHA) Subject to Inundation by the 1% Annual Chance Flood
- Zone W** - Flood Hazard Areas (FHA) Subject to Inundation by the 1% Annual Chance Flood
- Zone X** - Flood Hazard Areas (FHA) Subject to Inundation by the 1% Annual Chance Flood
- Zone Y** - Flood Hazard Areas (FHA) Subject to Inundation by the 1% Annual Chance Flood
- Zone Z** - Flood Hazard Areas (FHA) Subject to Inundation by the 1% Annual Chance Flood

OTHER AREAS
Areas determined to be outside the 1% Annual Chance Flood Hazard Areas (FHA) are shown in white on this map. These areas are not subject to inundation by the 1% Annual Chance Flood.

OTHER AREAS
Areas determined to be outside the 1% Annual Chance Flood Hazard Areas (FHA) are shown in white on this map. These areas are not subject to inundation by the 1% Annual Chance Flood.

OTHER AREAS
Areas determined to be outside the 1% Annual Chance Flood Hazard Areas (FHA) are shown in white on this map. These areas are not subject to inundation by the 1% Annual Chance Flood.

NFIP FIRM
FLOOD INSURANCE RATE MAP
MONROE COUNTY,
MISSOURI
AND INCORPORATED AREAS
PANEL 370 OF 955
(SEE MAP INDEX FOR PANEL LAYOUT)
COUNTY: MONROE
STATE: MISSOURI
EFFECTIVE DATE: OCTOBER 11, 2008
EFFECTIVE DATE: (IF CHANGED) TO THIS PANEL

MAP SCALE 1" = 1000'
0 100 200 300 400 500 FEET
0 100 200 300 400 METERS

NATIONAL FLOOD INSURANCE PROGRAM
MAP NUMBER: 29137003
EFFECTIVE DATE: OCTOBER 17, 2008
Federal Emergency Management Agency

NOTES TO US

1 map is to be used in determining the National Flood Insurance Program (NFIP) flood hazard areas. The information on this map is intended for informational purposes only. It is not to be used for any other purpose.

Adverse areas outlined in red on this map are Flood Hazard Areas (FHAs) which are subject to the National Flood Insurance Program. These areas are subject to the Flood Insurance Rate Map (FIRM) which is used to determine the flood insurance premium rates for areas within the Flood Hazard Areas. The information on this map is intended for informational purposes only. It is not to be used for any other purpose.

Adverse areas outlined in yellow on this map are Flood Hazard Areas (FHAs) which are subject to the National Flood Insurance Program. These areas are subject to the Flood Insurance Rate Map (FIRM) which is used to determine the flood insurance premium rates for areas within the Flood Hazard Areas. The information on this map is intended for informational purposes only. It is not to be used for any other purpose.

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Adverse areas outlined in purple on this map are Flood Hazard Areas (FHAs) which are subject to the National Flood Insurance Program. These areas are subject to the Flood Insurance Rate Map (FIRM) which is used to determine the flood insurance premium rates for areas within the Flood Hazard Areas. The information on this map is intended for informational purposes only. It is not to be used for any other purpose.

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LEGEND
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ADVERSE AREAS
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ADVERSE AREAS
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ADVERSE AREAS
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ADVERSE AREAS
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ADVERSE AREAS
Areas outlined in pink are Flood Hazard Areas (FHAs) which are subject to the National Flood Insurance Program. These areas are subject to the Flood Insurance Rate Map (FIRM) which is used to determine the flood insurance premium rates for areas within the Flood Hazard Areas. The information on this map is intended for informational purposes only. It is not to be used for any other purpose.

ADVERSE AREAS
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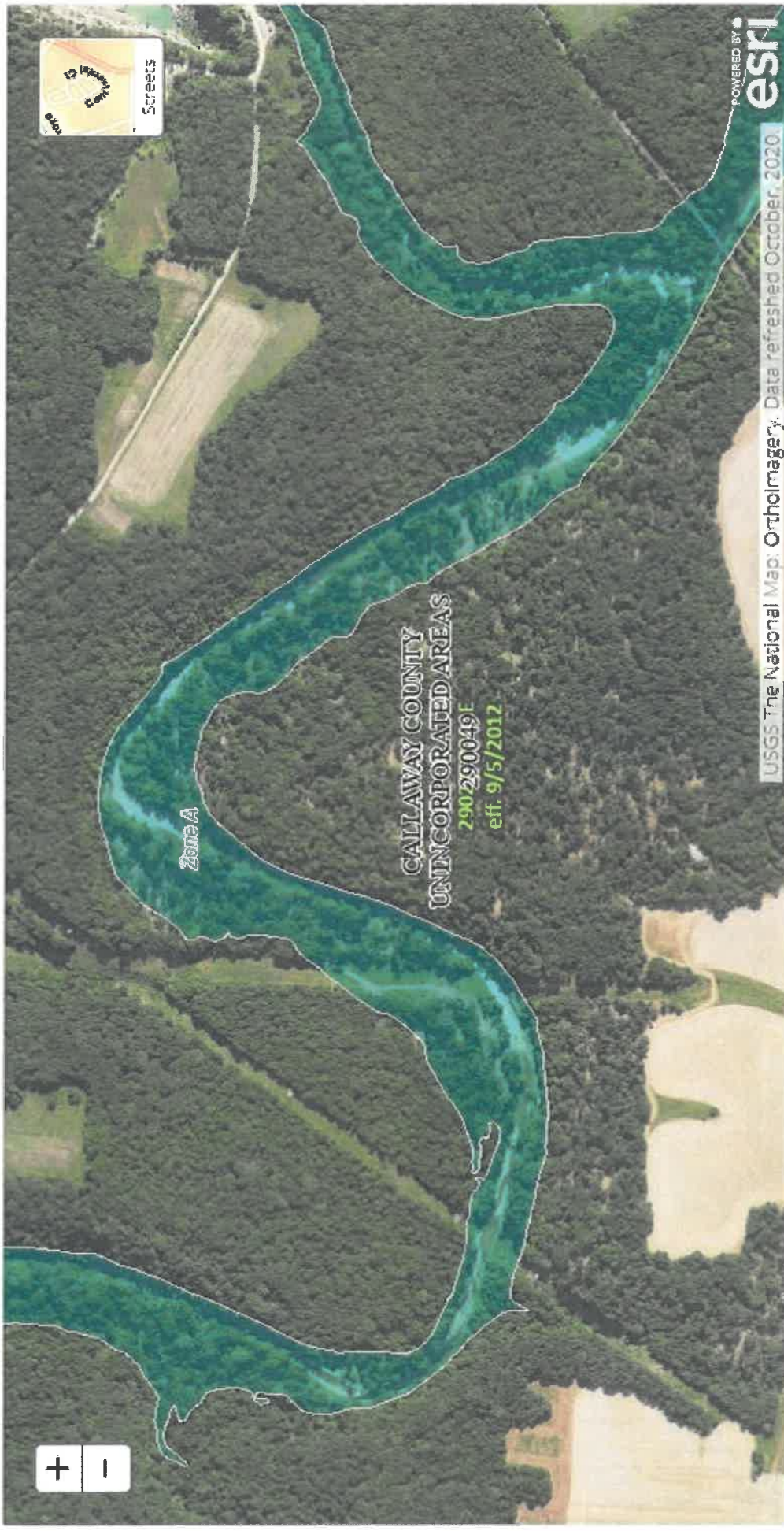
ADVERSE AREAS
Areas outlined in light blue are Flood Hazard Areas (FHAs) which are subject to the National Flood Insurance Program. These areas are subject to the Flood Insurance Rate Map (FIRM) which is used to determine the flood insurance premium rates for areas within the Flood Hazard Areas. The information on this map is intended for informational purposes only. It is not to be used for any other purpose.



MAP 05108
FIRM
FLOOD INSURANCE RATE MAP
MONROE COUNTY, MISSOURI
AND INCORPORATED AREAS
PANEL 500 OF 555
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)
COMMISSIONER
COMMUNITY NUMBER PANEL 21
CORPORATE COUNTY 20075 610

NATIONAL FLOOD INSURANCE PROGRAM
Map No. 2015015
EFFECTIVE DATE: OCTOBER 17, 2015
Federal Emergency Management Agency

new location in the search field above. It may take a minute or more during peak hours to generate a dynamic FIRMapette. If you are a person with a disability, are blind, or have low vision, and need assistance, please contact a map specialist.



POWERED BY **esri**

USGS The National Map: Orthoimagery. Data refreshed October, 2020.

20.2
17.4

Cross Sections with 1% Annual Chance Water Surface Elevation

Coastal Transsect

Base Flood Elevation Line (BFE)

Limit of Study

Jurisdiction Boundary

Coastal Transsect Baseline

Profile Baseline

Hydrographic Feature

Channel, Culvert, or Storm Sewer

Levee, Dike, or Floodwall

SPECIAL FLOOD HAZARD AREAS

Without Base Flood Elevation (BFE) Zone A, C, A99

With BFE or Depth

Regulatory Floodway Zone AE, AO, AH, VE, AR

0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X

Future Conditions- 1% Annual Chance Flood Hazard Zone X

Area with Reduced Flood Risk due to Levee. See Notes, Zone X

Area with Flood Risk due to Levee Zone D

OTHER AREAS OF FLOOD HAZARD

Approximate location based on user input and does not represent an authoritative property location

Selected Floodtrap Boundary

Digital Data Available

No Digital Data Available

Unmapped

Area of Minimal Flood Hazard zone X

Effective LOMRS

Area of Undetermined Flood Hazard zone D

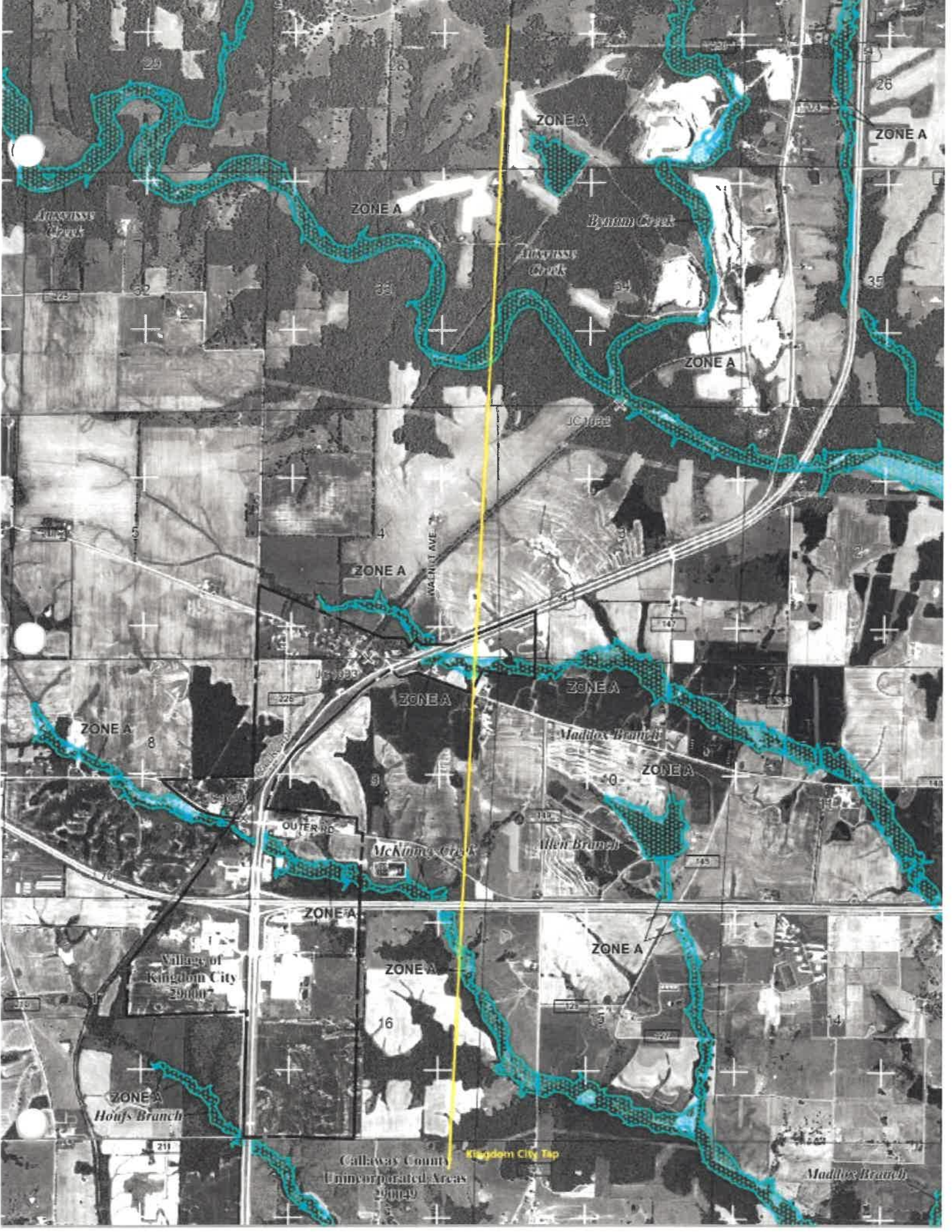
Otherwise Protected Area

MAP PANELS

NO SCREEN

OTHER FEATURES

GENERAL STRUCTURES





Byrum Creek

ZONE A

WOODLAND WAY

Callaway County
Incorporated Areas
290049

15

CAPRINE RD

AMARSSG

HARRISON ST

SCOTLAND LN

TATE DR

JOHNSON ST

ZONE A

RAIN ROAD

OLD US HIGHWAY 54

ZONE A

ELM ST

MAIN ST

ANN ST

2904761

CITY OF AMARSSG
290569

14

28

21

267

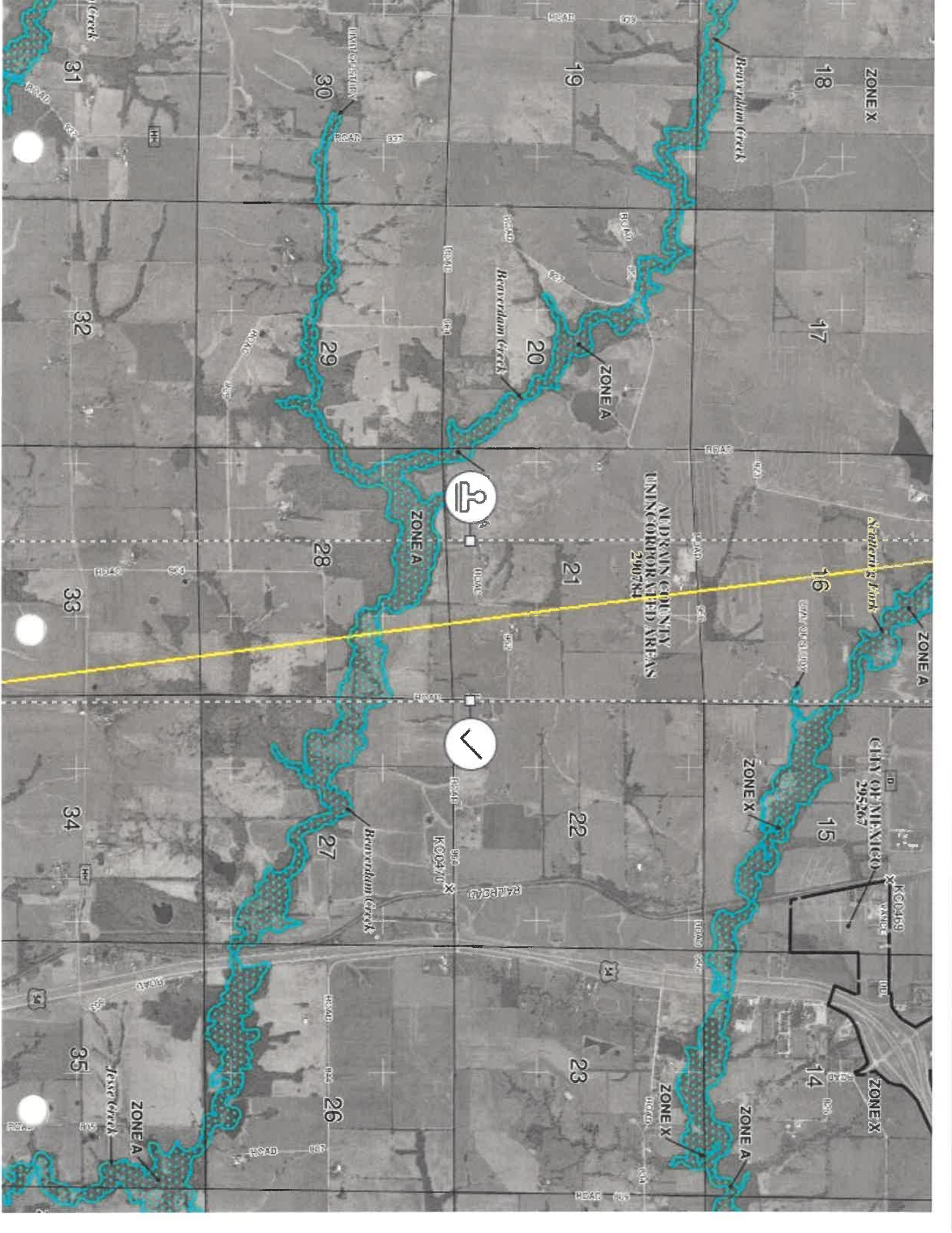
Byrum Creek

27

22

26

1



ADRAIN COUNTY
UNINCORPORATED AREAS
290784

CITY OF MEXIGO
295267

Beaverdam Creek

Beaverdam Creek

Beaverdam Creek

Zone A

Zone X

Zone X

Zone A

Zone A

Zone X

Zone X

Zone A

Zone A

Zone A

Zone X

Zone A



18

17

16

15

14

19

20

21

22

23

30

29

28

27

26

31

32

33

34

35

ADRAIN COUNTY
UNINCORPORATED AREAS
290784

CITY OF MEXIGO
295267

Beaverdam Creek

Beaverdam Creek

Beaverdam Creek

Zone A

Zone X

Zone X

Zone A

Zone A

Zone X

Zone X

Zone A

Zone A

Zone A

Zone X

Zone A



18

17

16

15

14

19

20

21

22

23

30

29

28

27

26

31

32

33

34

35

19 KC0478 X

Mexico

21

20

Creek 740

RAILROAD

RAILROAD

ZONE X

ZONE A

FLOODING EFFECTS FROM NORTH FORK LAKEVIEW PARK CREEK

30

29

28

Davis Creek

ROAD 9901

INDUSTRIAL DR

PROFILE BASE LINE

CITY OF MEXICO
295267

LIMIT OF DETAILED STUDY

ZONE A

31

32

33

34

FLOODING EFFECTS FROM NORTH FORK LAKEVIEW PARK CREEK

Salt River

LIMIT OF DETAILED STUDY
PROFILE BASE LINE

ZONE X

ROAD 9900

LIMIT OF STUDY

6

5

4

ZONE A

ROAD 9903

ROAD 9905

ROAD 9906

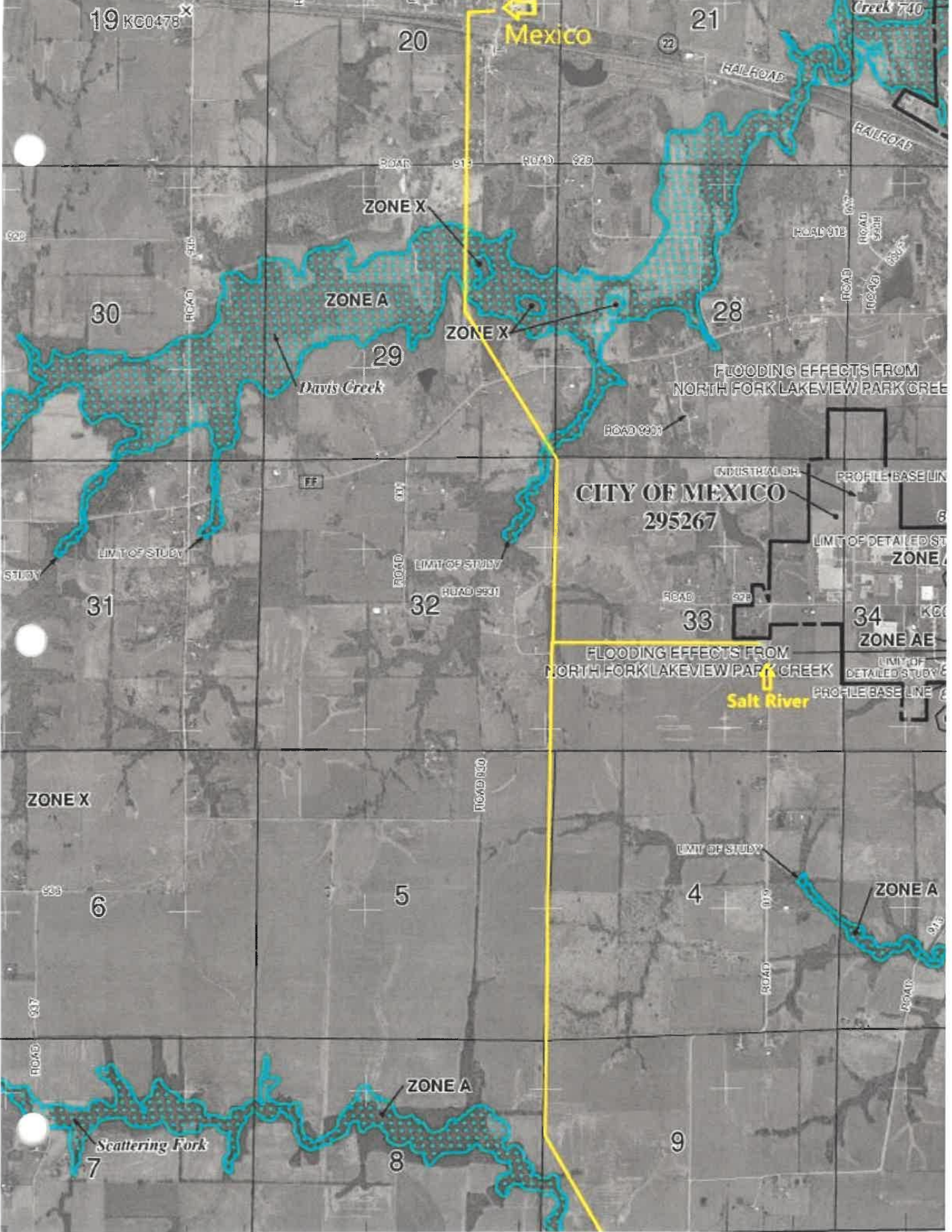
ZONE A

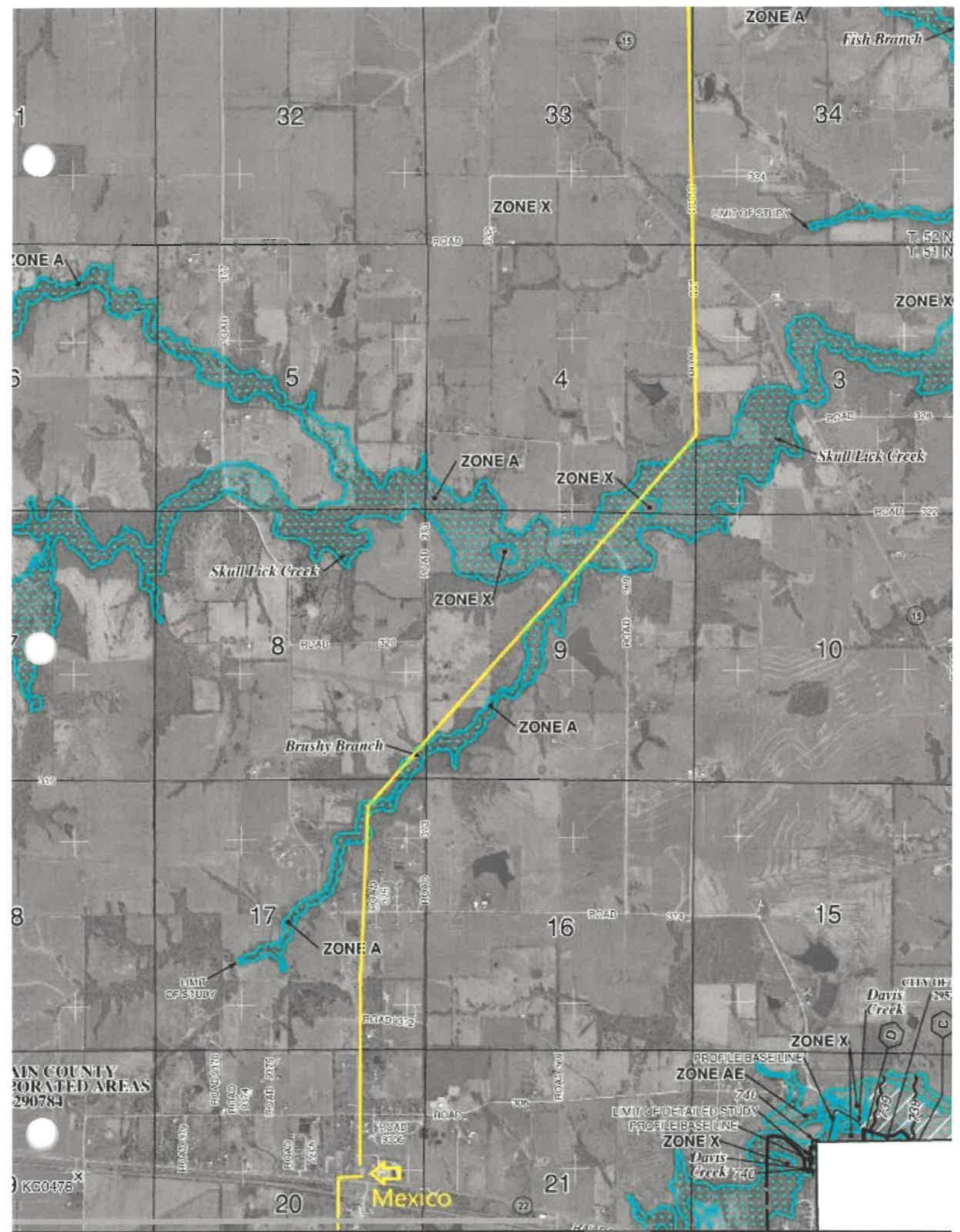
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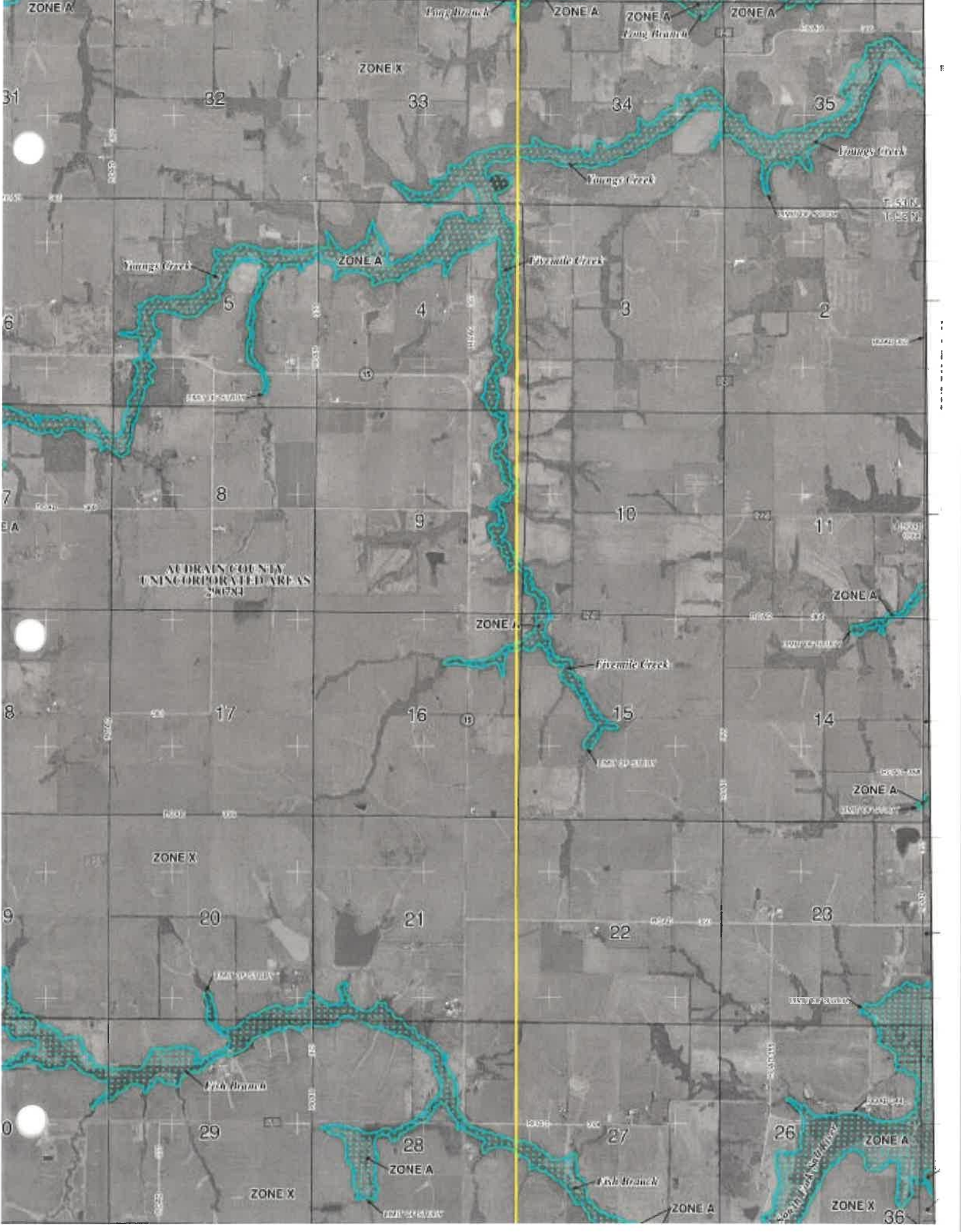
Scattering Fork

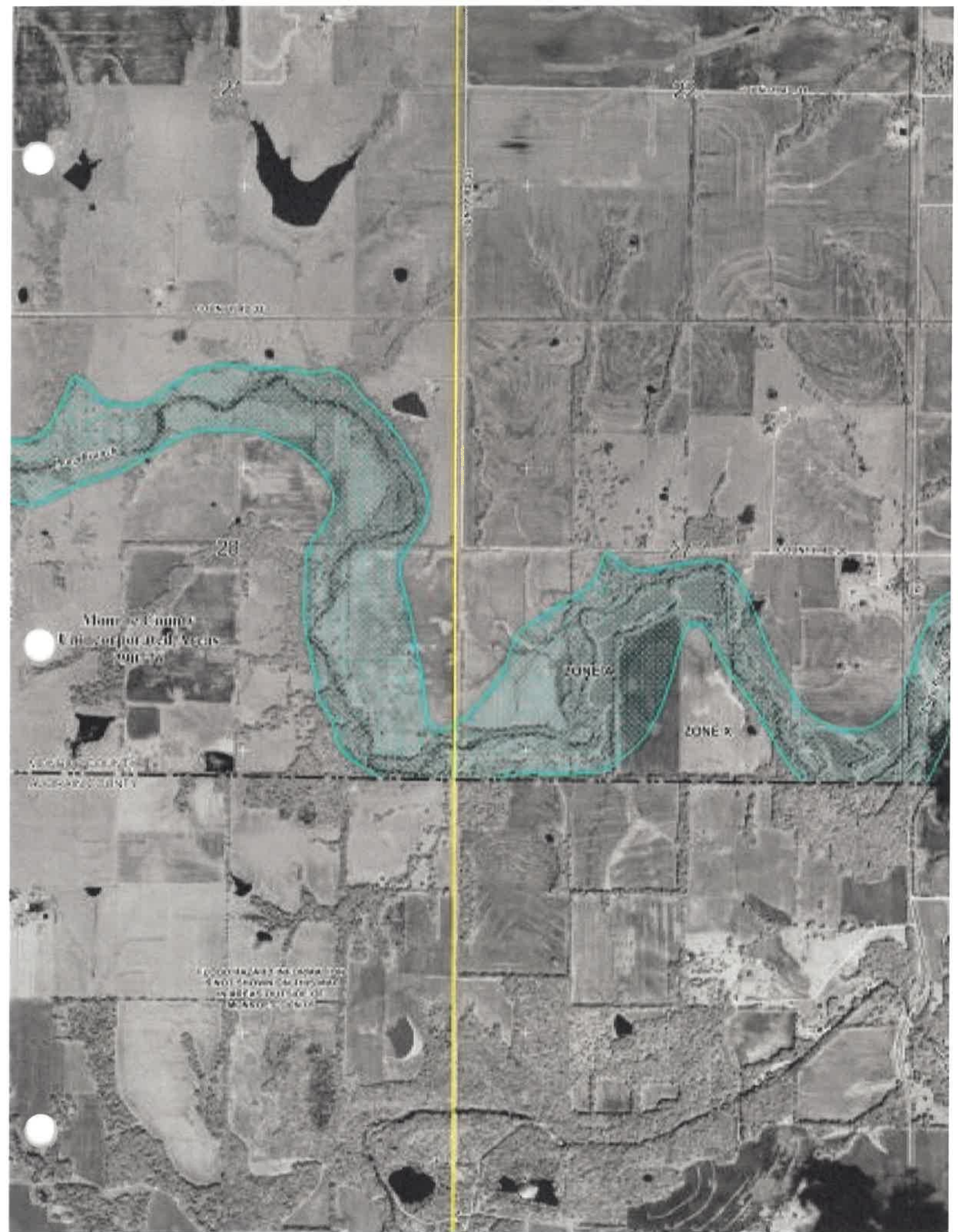
7

8









24

26

28

28

30

Municipal Unit Vicinity

ZONE W

ZONE X

WATERWAY DISTRICT

This map is for informational purposes only and does not constitute an offer of insurance or any other financial product. Please contact your agent for more information.

Monroe County
Incorporated Areas
290776

D

16

NEX

Santa Fe

COUNTY RD 32

15

JOINS PANEL 0510



Measure

LEGEND

Wetlands

- Estuarine and Marine
- Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

Other

- Forested/Shrub
- Herbaceous
- Other
- Ramsar site

US Managed Lands

- Historic Wetland Data
- Historic Wetlands
- Historic Wetland Mapping Areas

KINGDOM CITY TAP - AUXVASSE TRANSMISSION LINE

PEOIA

RUSA

PUBGH

PEOIA

ABOUT

Measure

LEGEND

Wetlands

- Estuarine and Marine
- Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

Riparian

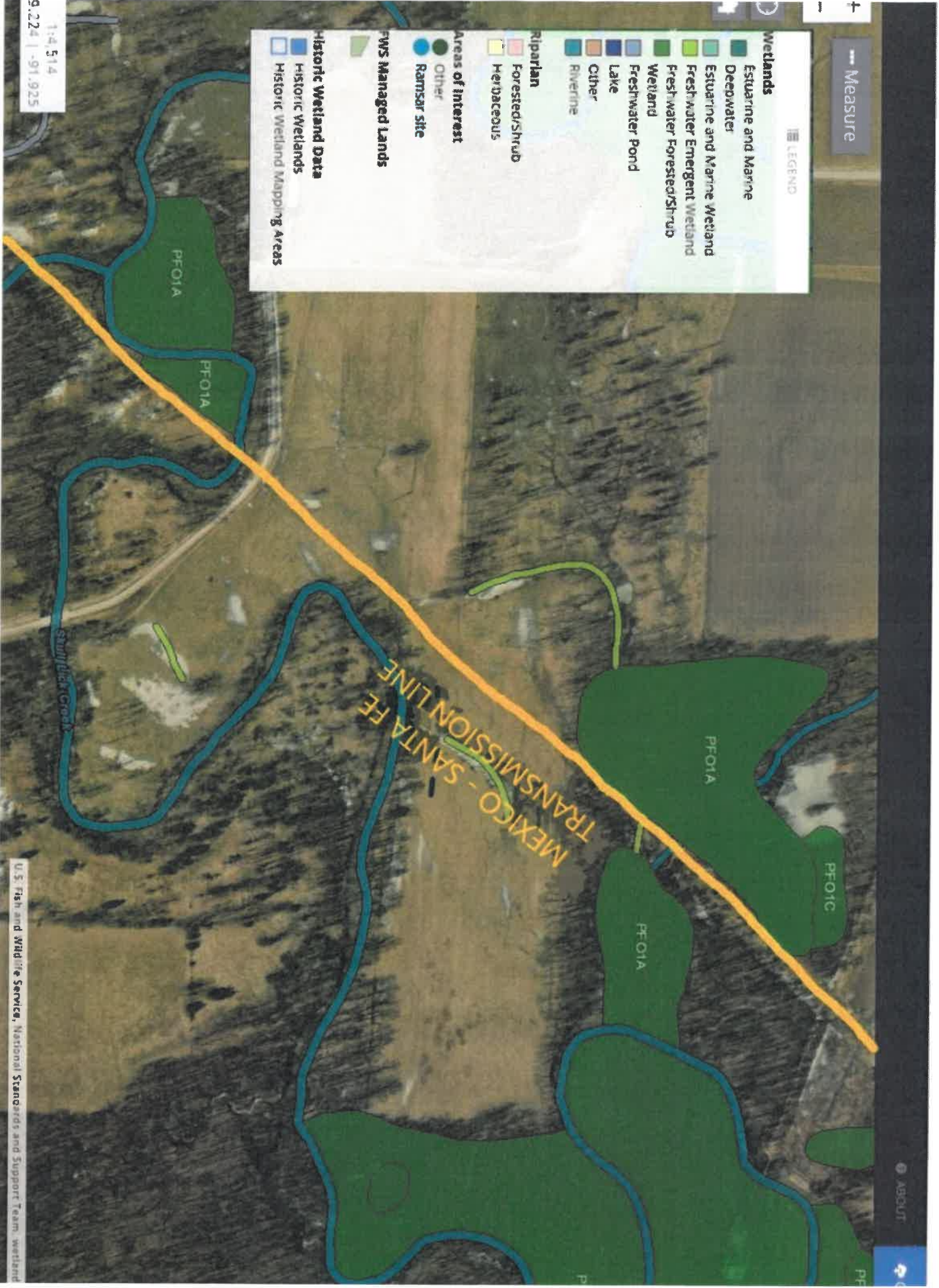
- Forested/Shrub
- Herbaceous

Areas of Interest

- Other
- Ramsar site

FWS Managed Lands

- Historic Wetland Data
- Historic Wetlands
- Historic Wetland Mapping Areas



1:4,514
9.224 | -91.925

Measure

ABOUT

KINGDOM CITY TAP - AUXVASSE TRANSMISSION LINE

Kingdom City Tap

Kingdom City

PUBHH

1:18,056
38.932 | .91 951

U.S. Fish and Wildlife Service, National Standards and Support Team, wetlands



Measure

KINGDOM CITY TAP - AUXVASSE TRANSMISSION LINE

Kingdom City

Kingdom City

Kingdom City

Madison Church

1:18,056
8,964 | 91,951

U.S. Fish and Wildlife Service, National Standards and Support Team, wetland

ABOUT



Measure

Purgin

KINGDOM CITY TAP - AUXVASSE TRANSMISSION LINE

P. Estuary
Wetland

San Marcos
River

ABOUT

1:18,056

8.977 | -91.948

Measure

PF01A

PUBGH

KINGDOM CITY TAP - AUXVASSE TRANSMISSION LINE

ABOUT

1:18,056
8.999 | -91.946



Measure

AUXVASSE - SALT RIVER
TRANSMISSION LINE

PFOIA

PFOIA

Auxvasse

1:18,056
9,048 | .91,937

Measure

Ortiz

AUXVASSE - SALT RIVER TRANSMISSION LINE

1:18,056
9.050 | -91.948

U.S. Fish and Wildlife Service, National Standards and Support Team, wetland

ABOUT



Measure

ABOUT

AUXVASSE - SALT RIVER
TRANSMISSION LINE

PFOIA

PUBGH

1: 8 056
39.086 | -91.952

U.S. Fish and Wildlife Service, National Standards and Support Team, wetland

PFOIA

Measure

ABOUT

AUXVASSE - SALT RIVER
TRANSMISSION LINE

LTUBHh

PUBGH

1:18,056
9 112 | .91.960

U.S. Fish and Wildlife Service National Standards and Support Team wetland

Measure

AUXVASSE - SALT RIVER
TRANSMISSION LINE

ABOUT

1:18,056
9.119 | -91.968

U.S. Fish and Wildlife Service, National Standards and Support Team, wetlan



Measure

PEOIA

SALT RIVER - MEXICO
TRANSMISSION LINE

AUXVASSE - SALT RIVER
TRANSMISSION LINE

Salt River

ABOUT

1:18,056

39.155 | -91.966

Measure

SALT RIVER - MEXICO TRANSMISSION LINE

PFO1A

PFO1A

Golf Course

ABOUT

1:18,056

19.167 | -91.955

Measure

ABOUT

MEXICO - SANTA FE
TRANSMISSION LINE

MEXICO
SALT RIVER - MEXICO
TRANSMISSION LINE

Arthur
Hills Golf
Course

Arthur Hills
Golf Course

PF01A

1:18,056
39.195 | -91.957

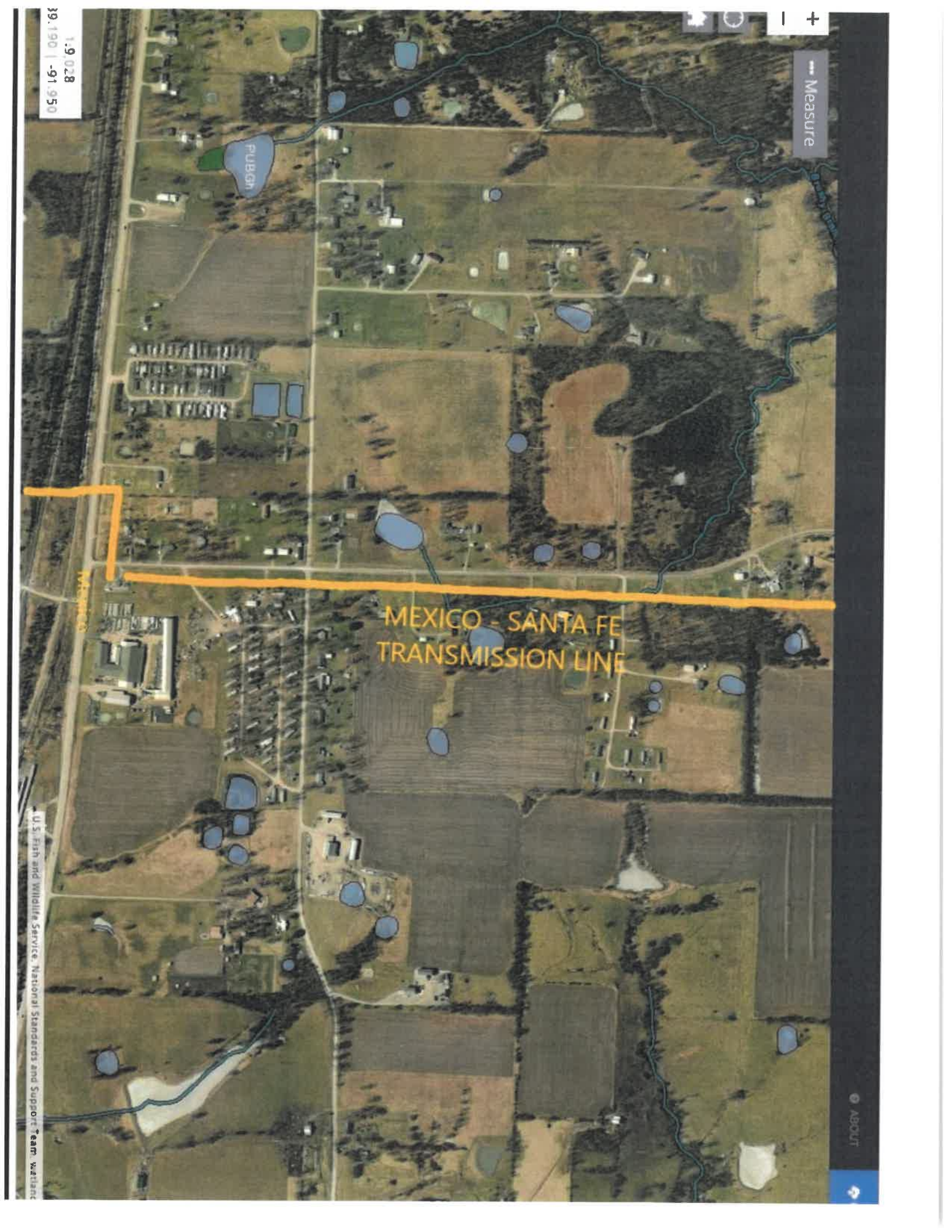
Measure

MEXICO - SANTA FE
TRANSMISSION LINE

ABOUT

1.9,028
39.190 | -91.950

U.S. Fish and Wildlife Service, National Standards and Support Team, wetland





Measure

MEXICO - SANTA FE
TRANSMISSION LINE

PUBGH

PUBGH

1:9,028
39.196 | 91.946

U.S. Fish and Wildlife Service, National Standards and Support Team, wetland

ABOUT

Measure

MEXICO - SANTA FE
TRANSMISSION LINE

PF01A
Mud Creek

PUBGH

PF01A

PF01A

PUBGH

1:19,028
9.220 | -91.941

Measure

MEXICO - SANTA FE
TRANSMISSION LINE

PUBGH

PFOIA

PFOIA

PFOIA

PFOIA

PFOIA

PFOIA

PFOIA

PFOIA

PFOIA

PFOIA

PFOIA

Santa Fe Creek

19 028
-91.926

U.S. Fish and Wildlife Service, National Standards and Support Team, Wetland

ABOUT

Measure

MEXICO - SANTA FE
TRANSMISSION LINE

PUBGH

ABOUT

1:9,028
9.233 | -91.926

U.S. Fish and Wildlife Service National Standards and Support Team, Wetland

Measure

MEXICO - SANTA FE
TRANSMISSION LINE

PEORIA

ABOUT

1:9,028

19.257 | -91.923

Measure

MEXICO - SANTA FE
TRANSMISSION LINE

ABOUT

1:9,028
19,256 | 91,925

U.S. Fish and Wildlife Service, National Standards and Support Team, Wetland

Measure

MEXICO SANTA FE
TRANSMISSION LINE

ABOUT

1:9,028
19,273 | -91,926

U.S. Fish and Wildlife Service, National Standards and Support Team, wetlands



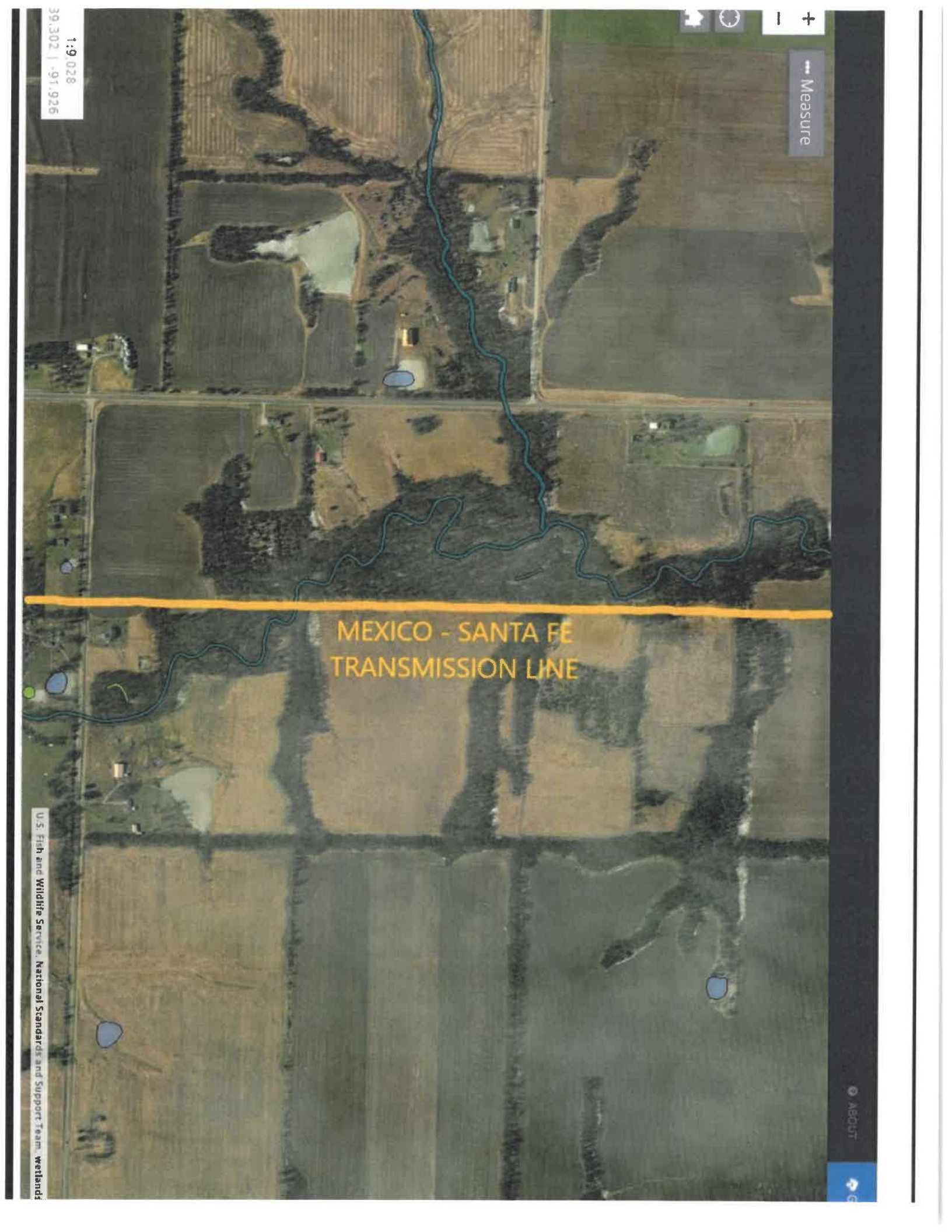
Measure

MEXICO - SANTA FE
TRANSMISSION LINE

ABOUT

1:9,028
9,281 | -91,925

U.S. Fish and Wildlife Service, National Standards and Support Team, wetland



Measure

ABOUT

MEXICO - SANTA FE
TRANSMISSION LINE

1:9,028

39.302 | -91.926

U.S. Fish and Wildlife Service, National Standards and Support Team, wetlands

Measure

MEXICO - SANTA FE TRANSMISSION LINE

ABOUT

1:9,028
9,319 | 91,924

Measure

MEXICO - SANTA FE TRANSMISSION LINE

PUBGX

PUBGX

Youngs Creek

ABOUT

1:9,028

43.327 | -91.925

Measure

MEXICO - SANTA FE
TRANSMISSION LINE

Puegn

1-9-028
9-3A1 | -91.926

U.S. Fish and Wildlife Service, National Standards and Support Team, wetland

ABOUT

Measure



East
Kendall
Flats n

PFOIA

MEXICO - SANTA FE
TRANSMISSION LINE

ABOUT



1:9,028
19,346 | -91,926

U.S. Fish and Wildlife Service, National Standards and Support Team, wetland



Measure

MEXICO - SANTA FE TRANSMISSION LINE

1:9,028
9,366 | .91,925

U.S. Fish and Wildlife Service, Natural Standards and Support Team, wetland

ABOUT

Measure

Santa Fe

MEXICO - SANTA FE
TRANSMISSION LINE

ABOLIT

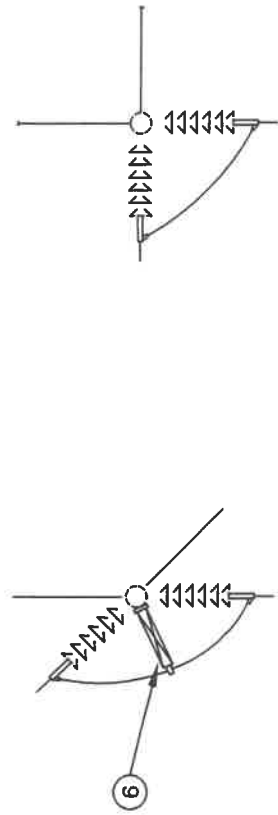
1:9 028

19.374 | -91.927

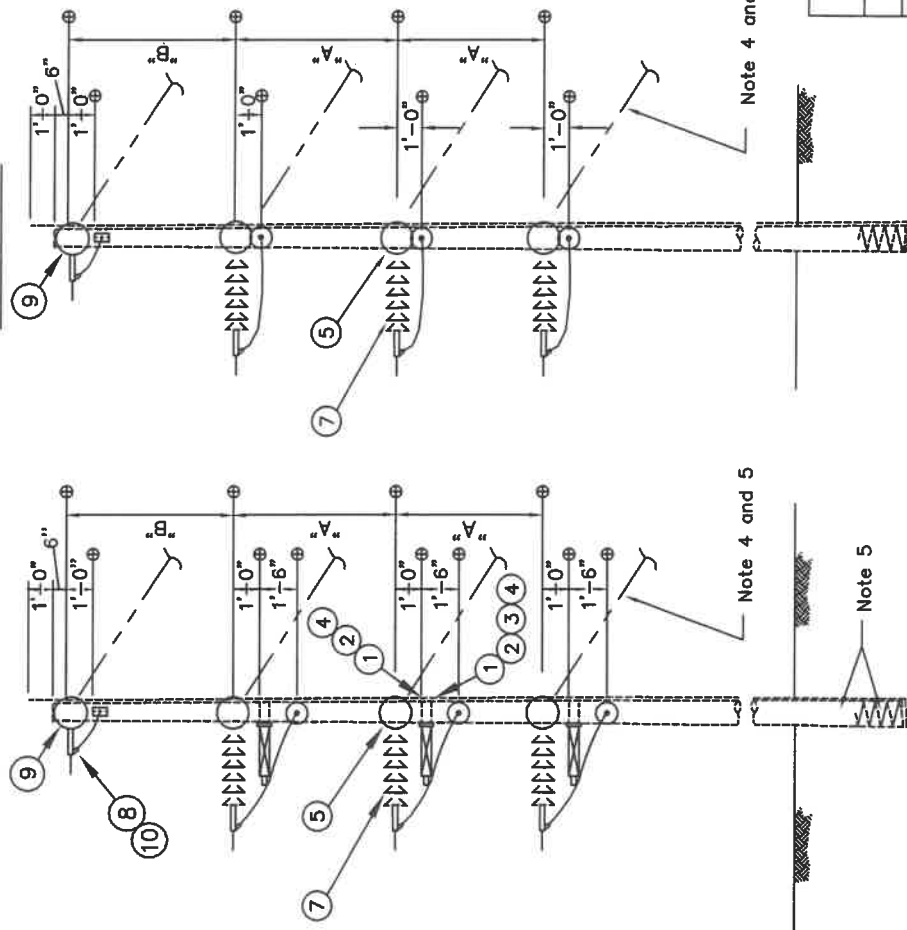
Name of Water Crossing	Location (Township-Range-Section)
McKinney Creek	T48N-R9W-S16
Maddox Branch	T48N-R9W-S9
Auxvasse Creek	T48N-R9W-S33
Bynum Creek	T49N-R9W-S22
Jesse Creek	T49N-R9W-S10
Smith Branch	T49N-R9W-S4
Beaverdam Creek	T50N-R9W-S28
Scattering Fork	T50N-R9W-S9
Davis Creek	T51N-R9W-S29
Brushy Branch	T51N-R9W-S17
Skull Lick Creek	T51N-R9W-S9
Fish Branch	T52N-R9W-S27
Five Mile Creek	T52N-R9W-S10 & S15
Youngs Creek	T53N-R9W-S33/34
Long Branch	T53N-R9W-S27/28

INDEX OF DRAWINGS

		PAGE #
TS-5G,5GA	VERTICAL DOUBLE DEADEND	1
TH-1G SERIES	TANGENT H-FRAME	2
TH-1CG SERIES	SMALL ANGLE H-FRAME	3
TH-10 SERIES (FOR 69KV)	TANGENT H-FRAME (FOR 69KV CONSTRUCTION)	4
TH-4G,4G-LG	LARGE ANGLE 3-POLE	5
TH-5G	LARGE ANGLE DOUBLE DEADEND	6
TH-5G-SP3	LRG ANG DBL DE, SPEC STR FOR SALT RIVER-MEXICO	7
TH-5GD	TANGENT DOUBLE DEADEND	8
TP-69C	SINGLE POLE TANGENT HORIZ. LINE POST	8.1
TH-10 SERIES	TANGENT H-FRAME	9
TH-11 SERIES	SMALL ANGLE H-FRAME	10
TH-17 SERIES	TANGENT H-FRAME	11
TH-13A	MEDIUM ANGLE 3-POLE	12
TH-14,14-LG	LARGE ANGLE 3-POLE	13
TH-15-SP3	LRG ANG DBL DE, SPEC STR FOR AUXVASSE-SALT RIVER	14



PLAN VIEW



TS-5GA

TS-5G

LIST OF MATERIALS					
DWG. REF.	TS-5a	DESCRIPTION	ITEM	DET.	CODE No.
1	6	7/8" Bolt, Machine, by req'd length	c		
2	6	Washer, Curved, 4" sq x 1/4", 15/16" hole	d		
3	3	Washer, Spring, 15/16" hole	aw		
4	6	7/8" Locknut, MF Type	ek		
5	6	GUY ATTACHMENT, MEDIUM DUTY	-		TG-25D
6	3	INSULATOR, HORIZONTAL POST, W/CLAMP	-		TM-3B
7	6	INSULATOR ASSEMBLY, DEADEND	-		TM-2D
8	2	OHGW ASSEMBLY, DEADEND	-		TM-4G
9	2	EYE BOLT GUY ATTACH, MED DUTY	-		TG-25C-3/4E
10	2	OPGW ASSEMBLY, DEADEND	-		TM-4G-QP

NOTES:

1. Metal shims should be used to adjust post insulators when brackets are located on uneven pole surfaces.
2. Minimum line angle for TS-5GA is 50 degrees. Maximum line angle for TS-5G is 90 degrees.
3. Drawing TE-1 gives guidance to subassembly alternatives.
4. For guying arrangements, see drawing TMG-2G.
5. The following materials are to be specified on plan and profile drawings and staking sheets: POLES, POLE GROUNDING ASSEMBLY, GUYING ASSEMBLIES, ANCHORS, AND ANY ADDITIONAL GROUNDING OR POLE FOUNDATION UNITS.

DIMENSIONS A & B	
VOLTAGE	A B
34kv & 46kv	6'-0" 6'-0"
69 kv	7'-0" 7'-0"

NO.	REVISION	DATE
1	REVISED	10/4/13

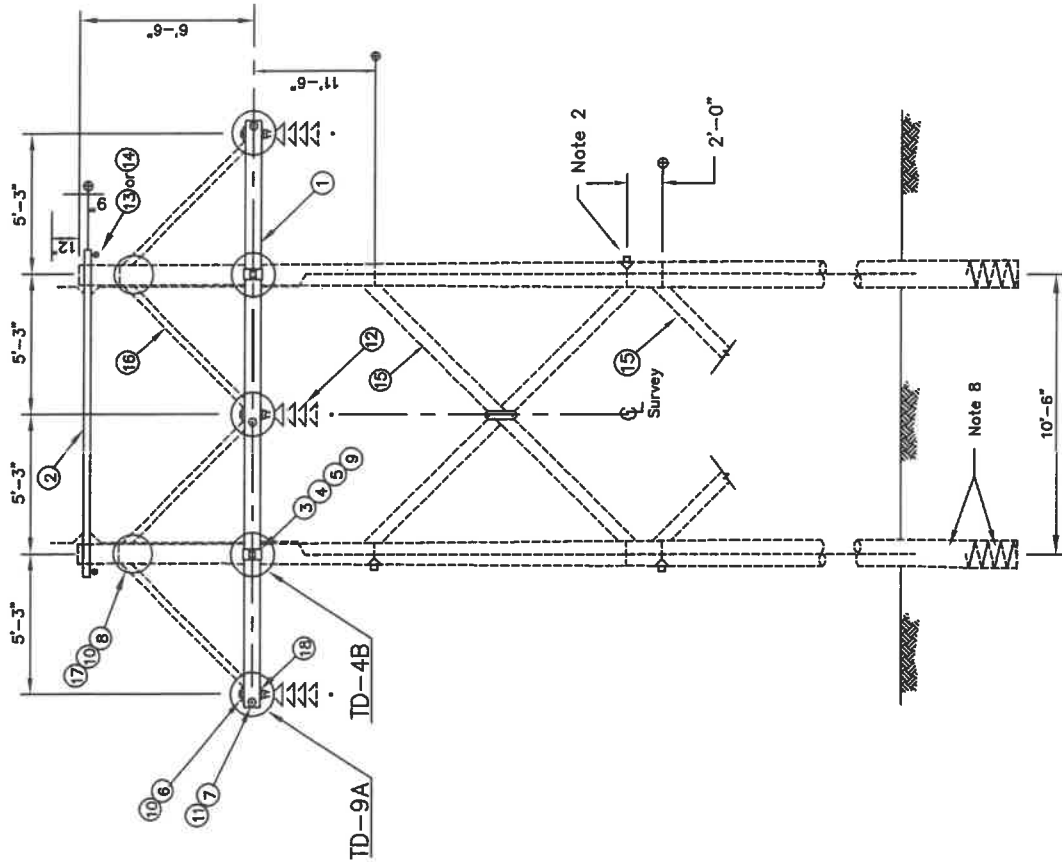
TRANSMISSION LINE STRUCTURE	
VERTICAL DOUBLE DEADEND (69kv MAXIMUM)	
Aug., 1986	TS-5G,5GA

LIST OF MATERIALS

DWG. REF.	TH-1G				X-BRACE		DESCRIPTION	ITEM	DET.	CODE No.
	V0	V1	V4	X	XX					
1		1					X-Arm, 5-5/8"x7-3/8"x22'-0", #41	TCD-20		
2		1					OHGW Support Assembly, double bolt	TM-7C		
3		2					Plate, X-Arm Reinforcing	eg		
4		2					7/8" Bolt, Machine, by req'd length	c		
5		2					Washer, Curved, 4" sq x 1/4", 15/16" hole	d		
6		3					3/4" Bolt, Shoulder Eye, by req'd l.	o		
7		3					1/2" Bolt, Washer Head, w/Washer Nut	c		
8		2					Washer, Curved, 4" sq x 1/4", 13/16" hole	d		
9		2					7/8" Locknut, MF Type	ek		
10		5					3/4" Locknut, MF Type	ek		
11		3					1/2" Locknut, MF Type	ek		
12		3					Insulator Assembly, Tangent	-	TM-2A	
13		1					OHGW Assembly, Tangent	-	TM-4A	
14		1					OPGW Assembly, Tangent	-	TM-4B-OP	
15			1				X-Brace Assembly	vx	TM-110A	
16		4					Brace, X-Arm, 3-3/8"x5-3/8"x req'd l.	c		
17		2					3/4" Bolt, Machine, by req'd length	c		
18		3					Washer, Sq 4"x3/16", 13/16" Hole	d		

NOTES:

- Description and materials for structures are as follows:
 TH-1G -- no braces
 TH-1GX-- same as TH-1G w/one X-Brace
 TH-1GV0 -- two outside X-Arm braces
 TH-1GVX-- same as TH-1GV0 w/one X-Brace
 TH-1GV4X-- same as TH-1GV4 w/one X-Brace
 TH-1GV4X-- same as TH-1GV4X-- same as TH-1GV4 w/one X-Brace (For two X-Braces, structure designation to use "XX" suffixes.)
- Field drilled holes shall be thoroughly treated.
- See the TPF-5 drawing for pole framing guide.
- Drawings TE-1 and TE-2 give guidance to subassembly alternatives.
- The following materials are to be specified on plan and profile drawings and staking sheets: POLES, POLE GROUNDING ASSEMBLIES, AND ADDITIONAL GROUNDING OR POLE FOUNDATION UNITS.



TH-1G

TRANSMISSION LINE STRUCTURE

TANGENT H-FRAME
(69 kv MAXIMUM)

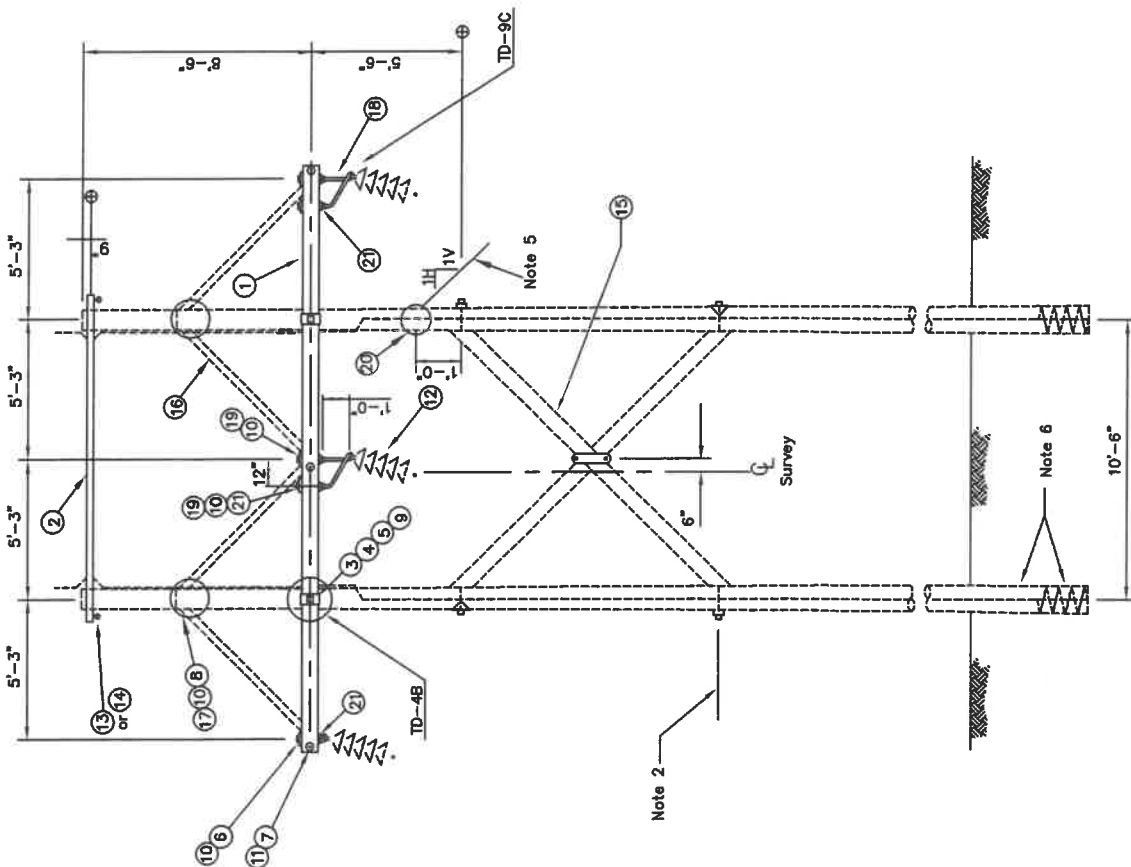
NO.	REVISION	DATE
	LB	3/18/21

LIST OF MATERIALS

DWG. REF.	TH-1G			X-BRACE		DESCRIPTION	ITEM	DET.	CODE No.
	V0	V1	V4	X	XX				
1			1	-	-	X-Arm, 5-5/8"x7-3/8"x22'-0", #41	TCD-20		
2			1	-	-	OHW Support Assembly, double bolt		TM-7C	
3			2	-	-	Plate, X-Arm Reinforcing	eg		
4			2	-	-	7/8" Bolt, Machine, by req'd length	c		
5			2	-	-	Washer, Curved, 4"sq x1/4", 15/16" hole	d		
6			1	-	-	3/4" Bolt, Shoulder Eye, by req'd l.	o		
7			3	-	-	1/2" Bolt, Washer Head, w/Washer Nut	c		
8			2	-	-	Washer, Curved, 4"sq x1/4", 13/16" hole	d		
9			2	-	-	7/8" Locknut, MF Type	ek		
10			7	-	-	3/4" Locknut, MF Type	ek		
11			3	-	-	1/2" Locknut, MF Type	ek		
12			3	-	-	Insulator Assembly, Tangent		TM-2A	
13			1	-	-	OHW Assembly, Tangent		TM-4A	
14			1	-	-	OHW Assembly, Tangent		TM-4B-QP	
15			-	1	2	X-Brace Assembly	vx	TM-110A	
16			4	-	-	Brace, X-Arm, 3-3/8"x5-3/8"x req'd l.	c		
17			2	-	-	3/4" Bolt, Machine, by req'd length	c		
18			2	-	-	Bracket, Swinging Angle, 3/4" bar	cr		
19			4	-	-	3/4" Bolt, Clevis, by req'd length	ef		
20			1	-	-	Guy Attachment, Med Duty		TG-25C	
21			7	-	-	Washer, Flat, 4"sq x 3/16", 13/16" hole	d		

NOTES:

- Description and materials for structures are as follows:
 TH-1CG -- no braces
 TH-1CGX -- same as TH-1CG w/one X-Brace
 TH-1CGV0 -- two outside X-Arm braces
 TH-1CGVOX -- same as TH-1CGV0 w/one X-Brace TH-1CGV4X -- same as TH-1CGV4 w/one X-Brace (For two X-Braces, structure designation to use "XX" surfaces.)
 TH-1CGM -- two inside X-Arm braces
 TH-1CGVX -- same as TH-1CGM w/one X-Brace
 TH-1CGV4 -- four X-Arm braces
 TH-1CGV4X -- same as TH-1CGV4 w/one X-Brace
- Field drilled holes shall be thoroughly treated.
- Drawings TE-1 and TE-2 give guidance to subassembly alternatives.
- The following materials are to be specified on plan and profile drawings and staking sheets: POLES, POLE GROUNDING ASSEMBLIES, AND ADDITIONAL GROUNDING OR POLE FOUNDATION UNITS.



TRANSMISSION LINE STRUCTURE

SMALL ANGLE H-FRAME
(69KV MAXIMUM)

NO.	REVISION	DATE

TH-1CG

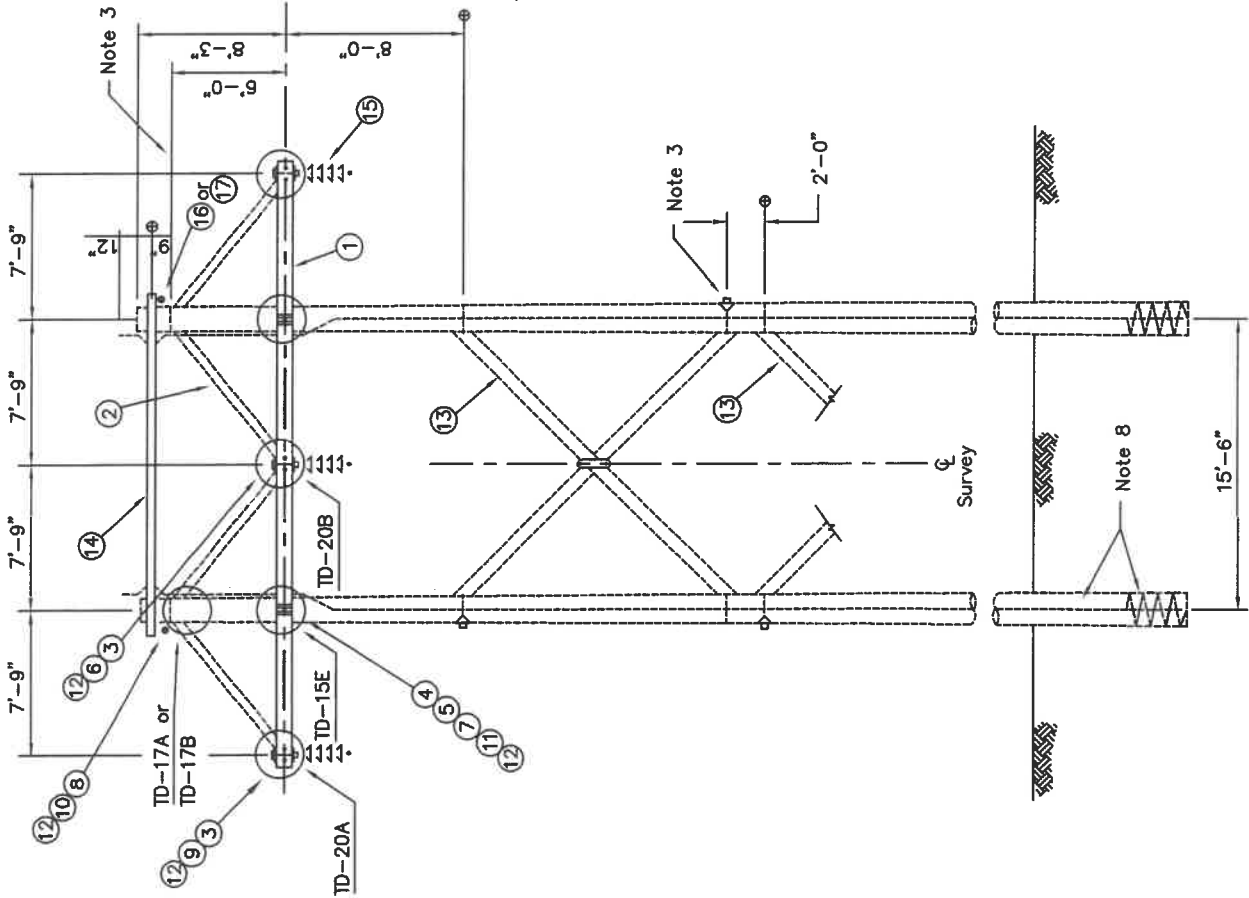
TH-1CG SERIES

LIST OF MATERIALS

DWG. REF.	TH-10				X-BRACE		DESCRIPTION	ITEM	DET.	CODE No.
	V0	V1	V4	X	XX					
1	2	2	2	-	-	X-Arm, 3-5/8"x9-3/8"x32'-0", #71	TCD-32			
2	2	2	4	-	-	Brace, X-Arm, 3-3/8"x5-3/8"x req'd				
3	3	3	3	-	-	Spacer Assembly, see construction spec				
4	4	4	4	-	-	Plate, Gln, 3"x9-1/2"x1/4"	TM-111B			
5	4	4	4	-	-	Plate, Ribbed Tie, 3"x9-1/2"x1/4"				
6	-	1	1	-	-	7/8" D.E Bolt, Bent w/2 recessed nuts	9Y			
7	2	2	2	-	-	7/8" Threaded Rod, w/2 nuts				
8	-	2	2	-	-	7/8" Bolt, Machine, by req'd length				
9	-	2	2	-	-	7/8" Bolt, Bent w/ recessed nut				
10	-	2	2	-	-	Washer Curved, 4" sq x1/4", 15/16" hole				
11	2	2	2	-	-	Washer, Spring, 15/16" hole				
12	4	8	8	10	-	7/8" Locknut, MF Type				
13	-	-	-	1	2	X-Brace Assembly	VK TM-110B			
14	1	1	1	1	-	OHGW SUPPORT ASSEMBLY	- TM-7C			
15	3	3	3	3	-	INSULATOR ASSEMBLY, TANGENT	- TM-2A			
16	1	1	1	1	-	OHGW ASSEMBLY, TANGENT	- TM-4A			
17	1	1	1	1	-	OPGW ASSEMBLY, TANGENT	- TM-4B-dP			

NOTES:

- Description and materials for structures are as follows:
 TH-10 - - - - no braces
 TH-10X - - - same as TH-10 w/one X-Brace
 TH-10V - - - two outside X-Arm braces
 TH-10VX - - - same as TH-10V w/one X-Brace
 TH-10V4 - - - same as TH-10V w/one X-Brace
 TH-10V4X - - - same as TH-10V4 w/one X-Brace
 TH-10V4X - - - same as TH-10V4 w/one X-Brace
 (For two X-Braces, structure designation to use "XX" suffixes.)
- Double X-Arms shall be shipped with factory assembled hardware.
- Field drilled holes shall be thoroughly treated.
- Reference the pole framing drawing for additional dimensions.
- For other requirements, refer to REA specification T-7.
- For strength limitations of OHGW support assembly, see TM-7B or TM-7C.
- Drawing TE-2 gives guidance to subassembly alternatives.
- The following materials are to be specified on plan and profile drawings and staking sheets: POLES, POLE FOUNDATION UNITS, AND ADDITIONAL GROUNDING OR POLE FOUNDATION UNITS.



FOR 69KV CONSTRUCTION
TRANSMISSION LINE STRUCTURE

TANGENT H-FRAME
(161kv MAXIMUM)

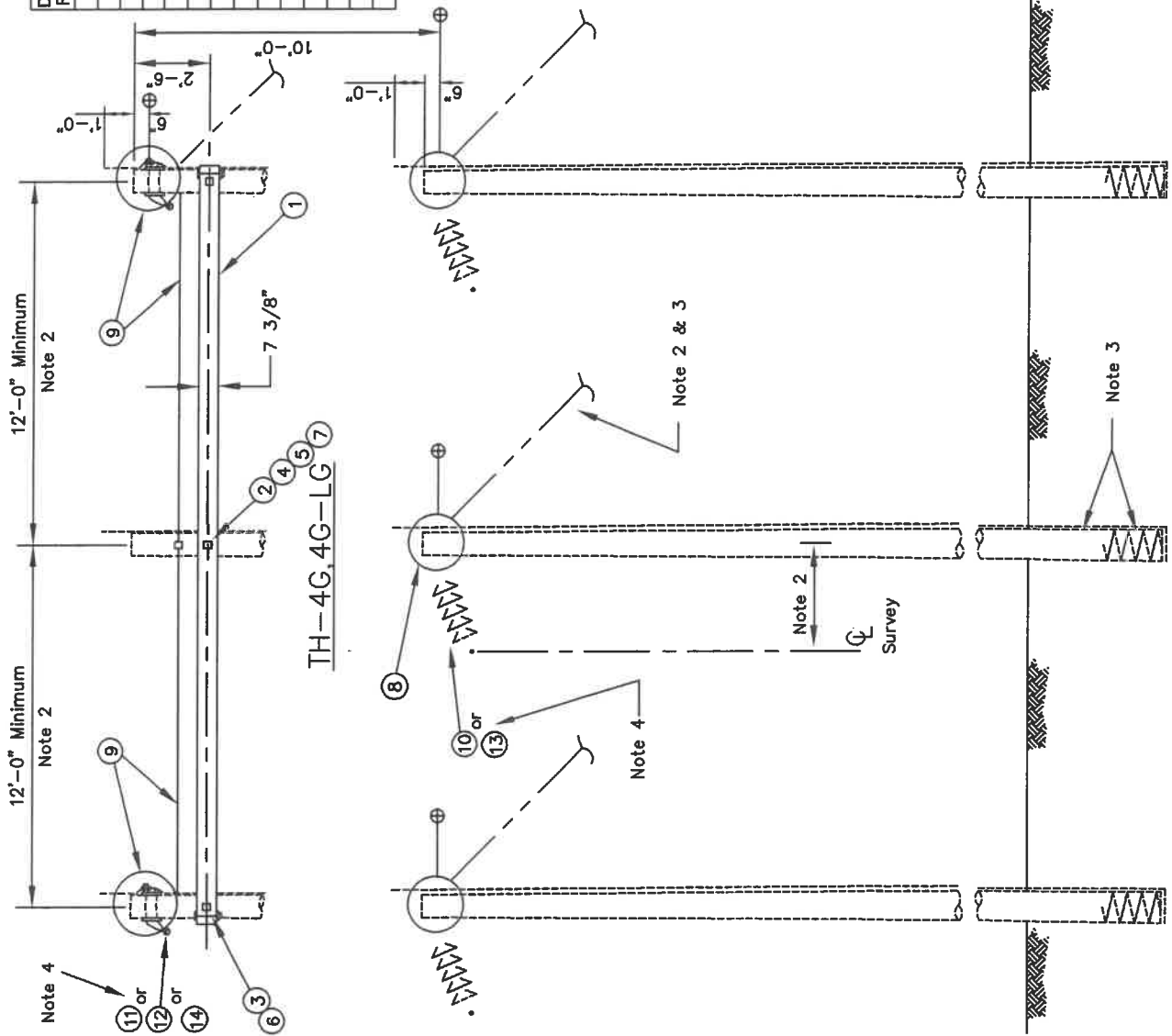
NO.	REVISION	DATE	L. BARTLETT
TH-10 SERIES			TH-10 SERIES

LIST OF MATERIALS

DWG. REF.	TH-	4G	DESCRIPTION	ITEM	DET.	CODE No.
1	-	1	X-Arm, 5-5/8"x7-3/8"x req'd l. #86		TC-91	
2	-	3	3/4" Bolt, Machine, by req'd length	c		
3	-	2	1/2" Bolt, Washer Head, w/Washer Nut	c		
4	-	3	Washer, Curved, 4" sq x 1/4", 13/16" hole	d		
5	-	3	Washer, Flat, 4" sq x 3/16", 13/16" hole	d		
6	-	3	3/4" Locknut, MF Type	ek		
7	-	2	1/2" Locknut, MF Type	ek		
8	3	3	GUY ATTACHMENT, MEDIUM DUTY		TC-25D	
9	-	1	POLE TIE, ANGLE MEDIUM DUTY		TC-54A	
10	3	3	INSULATOR ASSEMBLY, ANGLE		TM-2C	
11	-	1	OPGW ASSEMBLY, ANGLE		TM-4A	
12	-	1	OPGW ASSEMBLY, ANGLE		TM-4B-OP	
13	3	3	INSULATOR ASSEMBLY, LARGE ANGLE		TM-1C-356/70	
14	-	2	OPGW ASSEMBLY, DEADEND		TM-4G-OP	

NOTES:

- Drawing TE-1 gives guidance to subassembly alternatives.
- For guying arrangements and offset table, see drawing TMG-4 or TMG-4G. Pole spacing shall conform to minimum dimensions unless otherwise indicated. X-Arm drilling shall be coordinated with pole spacing.
- The following materials are to be specified on the plan and profile drawings and staking sheets: POLES, POLE GROUNDING ASSEMBLY, GUYING ASSEMBLIES, ANCHORS, AND ANY ADDITIONAL GROUNDING OR POLE FOUNDATION UNITS.
- For all structures with angles 30° or larger, structure will be a TH-4G-LG. Item 13, Insulator Assembly for Large Angles will be used in place of item 10. Also, item 14 will be used in place of item 12.



TRANSMISSION STRUCTURE

LARGE ANGLE
(69kv MAXIMUM)

L.BARTLETT	5/2/16

NO.	DATE

TH-4

Reissued 03/98

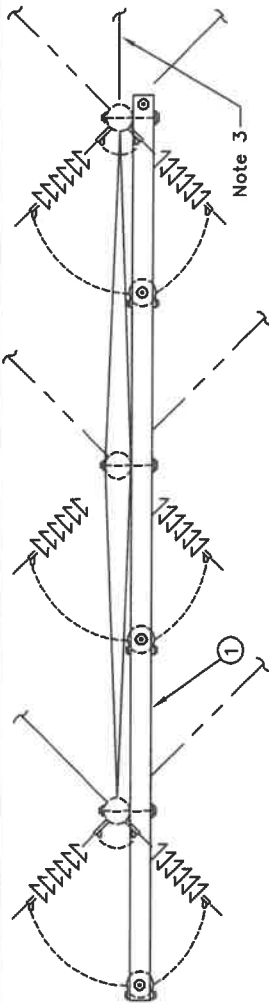
TH-4, 4G, 4G-LG

LIST OF MATERIALS

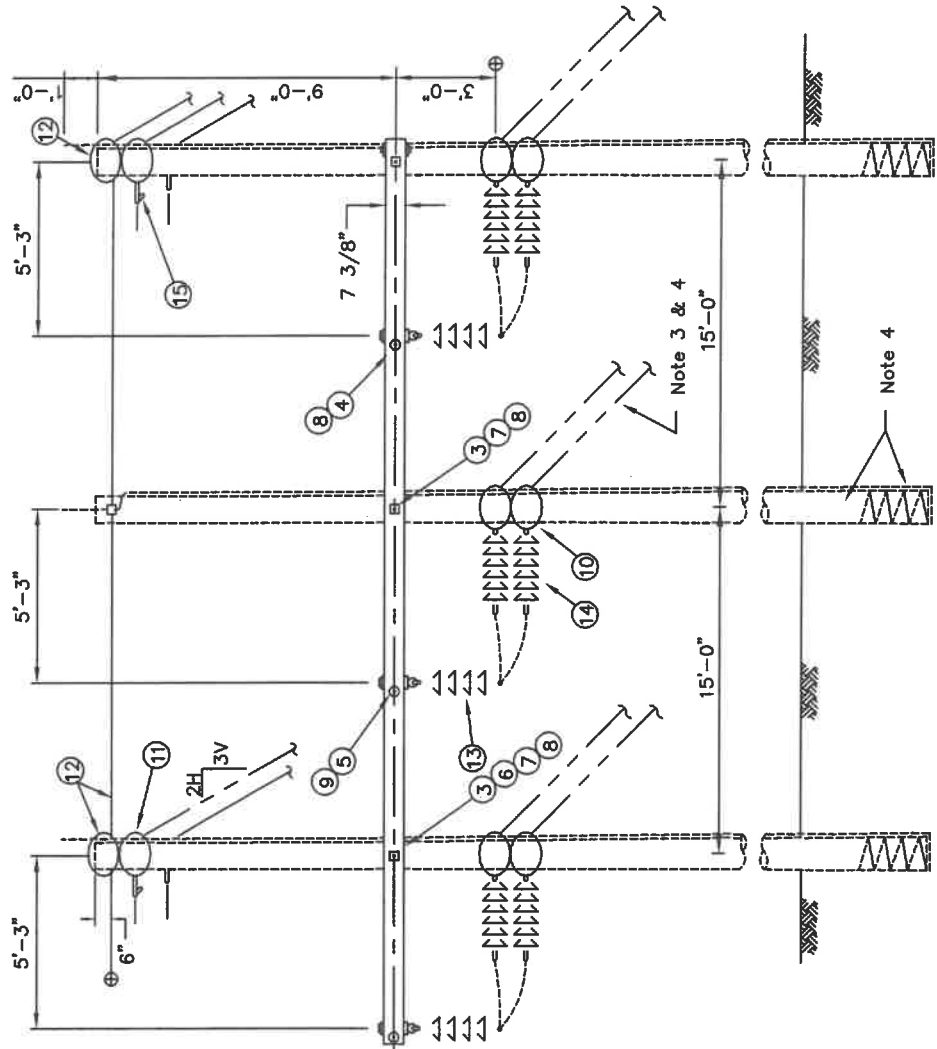
DWG. REF.	QTY.	DESCRIPTION	ITEM	DET.	CODE No.
1	1	X-Arm, 5-5/8"x7-3/8"x req'd l., #B7	g	TCD-91	
3	3	3/4" Bolt, Machine, by req'd length	c		
4	3	3/4" Bolt, Shoulder Eye w/Washer Nut	o		
5	4	1/2" Bolt, Washer Head, w/Washer Nut	c		
6	3	Washer, Curved, 4" sq x 1/4"x13/16" hole	d		
7	3	Washer, Flat, 4" sq x 3/16", 13/16" hole	d		
8	6	3/4" Locknut, MF Type	ek		
9	4	1/2" Locknut, MF Type	ek		
10	6	GUY ATTACHMENT, MED DUTY	-	TG-25D	
11	4	GUY ATTACHMENT, MED DUTY	-	TG-25D	
12	1	POLE TIE, GUYING, MED DUTY	-	TG-54B	
13	3	INSULATOR ASSEMBLY, TANGENT	-	TM-1A	
14	6	INSULATOR ASSEMBLY, DEADEND	-	TM-2D	
15	2	OHGW ASSEMBLY, DEADEND	-	TM-4G	
16	2	OPGW ASSEMBLY, DEADEND	-	TM-4G-QP	

NOTES:

2. Drawing TE-1 gives guidance to subassembly alternatives.
3. For guying arrangements, see drawing TMG-5G. A bisector guy is recommended for line angles less than 60 degrees.
4. The following materials are to be specified on the plan and profile drawings and staking sheets: POLES, POLE GROUNDING ASSEMBLY, GUYING ASSEMBLIES, ANCHORS, AND ANY ADDITIONAL GROUNDING OR POLE FOUNDATION UNITS.



PLAN VIEW



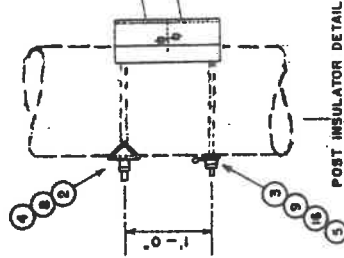
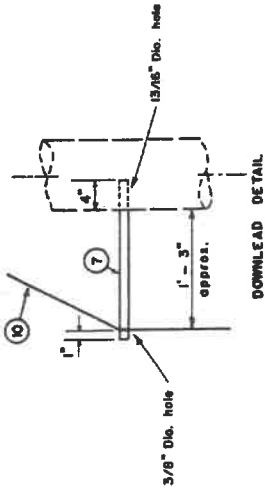
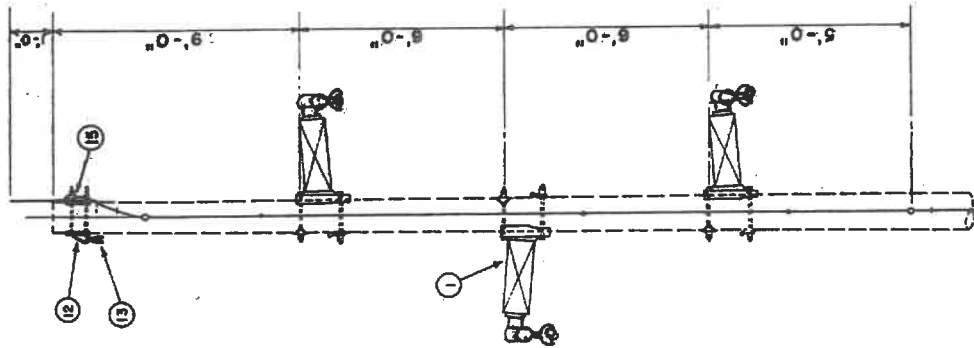
TRANSMISSION LINE STRUCTURE

LARGE ANGLE DOUBLE DEADEND
(69kv MAXIMUM)

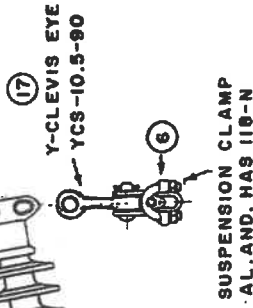
NO.	REVISION	DATE

L. BARTLETT
3/18/21

TH-5G



08522005-1002



SUSPENSION CLAMP
AL. AND. HAS 118-N

QTY	REQ.	DESCRIPTION	ITEM
1	3	Horizontal Post Insulator (08522005-1002)	ee
2	3	3/4" Machine Bolt a Required Length	c
3	3	3/8" Machine Bolt a Required Length	c
4	3	3/4" Locknut	ch
5	5	5/8" Locknut	ch
6	3	SURPRALON: CLAMP	...
7	3	Phosphate Bronze, Tapped For Downlead	...
8	3	Washer, Corrod, 4"x.4"x.1/4" with 13/16" Hole	e
9	3	Washer, Corrod, 2 1/4"x.2 1/4"x.3/16" W/W 3/8" Hole	e
10	2	Steel Wire, 3-Strand, 5/16" Dia., "C" Galv.	...
11	2	Ground Wire Holder, Distances 08522 or (cont)	...
12	1	Ground Wire Cable Support	...
13	1	Ground Wire Suspension Clamp	...
14	2	2" 1/2" Open Galvanized Staples	m
15	4	4" Ground Wire Clamp	dp
16	3	Spring, Weather, 11/16" Hole	...
17	3	Y-Clevis Eye	...

TRANSMISSION LINE TANGENT STRUCTURE
---KV HORIZONTAL LINE POST
(69 KV MAXIMUM)

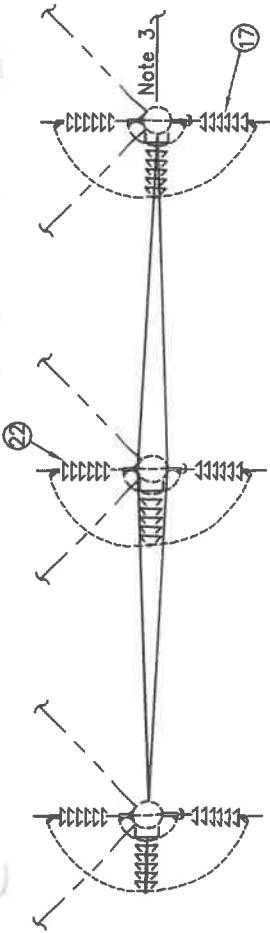
NOTE:
1. Staples on downlead shall be 2 feet apart except for a distance of 6 feet above ground, and 2 feet from top of pole where they shall be 6 inches apart.
2. Metal stims should be used to adjust insulators when brackets are located on uneven pole surfaces.

LIST OF MATERIALS

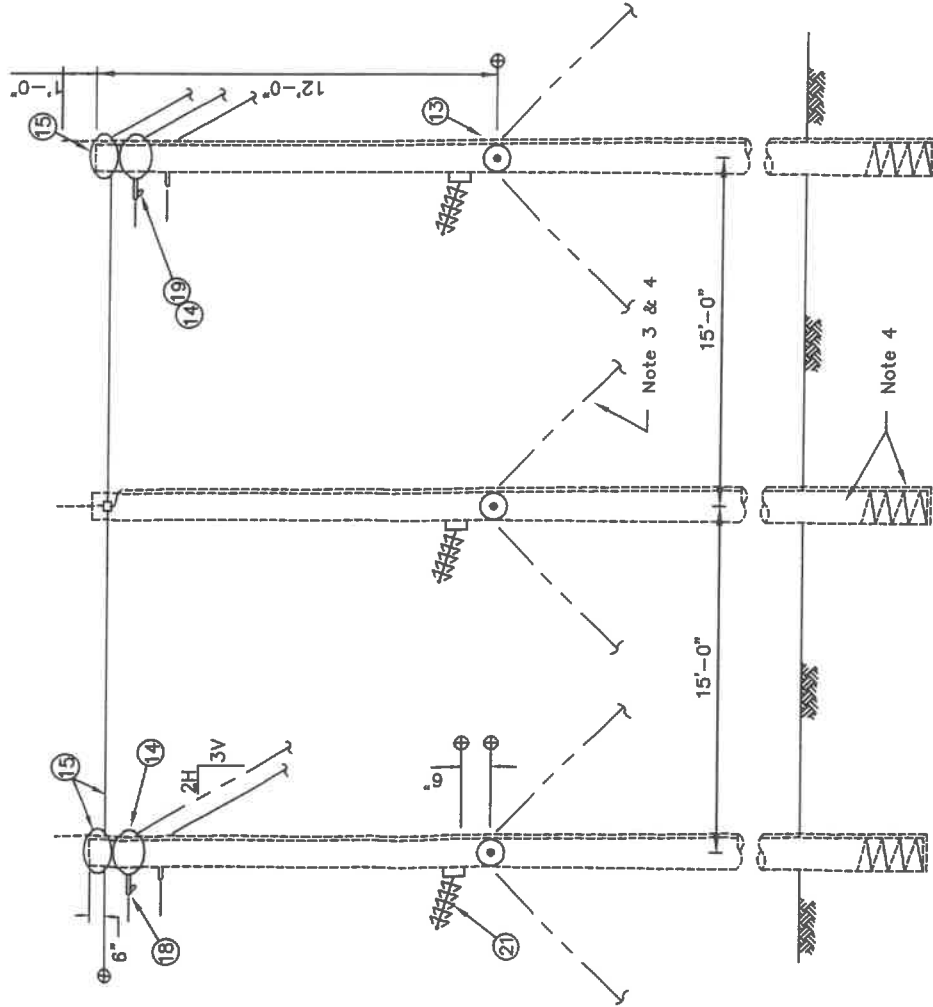
DWG REF.	QTY.	DESCRIPTION	ITEM	DET.	CODE No.
13	3	GUY ATTACHMENT, HEAVY DUTY	-	TG-25E	HEAVY
14	2	GUY ATTACHMENT, MEDIUM DUTY	-	TG-25E	
15	1	POLE TIE, GUYING, MEDIUM DUTY	-	TG-548-7/16	
17	3	INSULATOR ASSEMBLY, DEADEND	-	TM-1D-356	
18	2	OHGW ASSEMBLY, DEADEND	-	TM-4G	
19	2	OPGW ASSEMBLY, DEADEND	-	TM-4G-OP	
21	3	HORIZONTAL LINE POST ASSY.	-	TM-3B-336	
22	3	INSULATOR ASSY, DEADEND	-	TM-1D-4/O	

NOTES:

- Drawing TE-1 gives guidance to subassembly alternatives.
- For guying arrangements, see drawing TMG-5G. A bisector guy is recommended for line angles less than 60 degrees.
- The following materials are to be specified on the plan and profile drawings and staking sheets: POLES, POLE GROUNDING ASSEMBLY, GUYING ASSEMBLIES, ANCHORS, AND ANY ADDITIONAL GROUNDING OR POLE FOUNDATION UNITS.



PLAN VIEW



SALT RIVER - MEXICO	
TRANSMISSION LINE STRUCTURE	
LARGE ANGLE DOUBLE DEADEND SPECIAL STRUCTURE (69kv MAXIMUM)	
J.COLVIN	
3/18/21	
	TH-5G-SP3

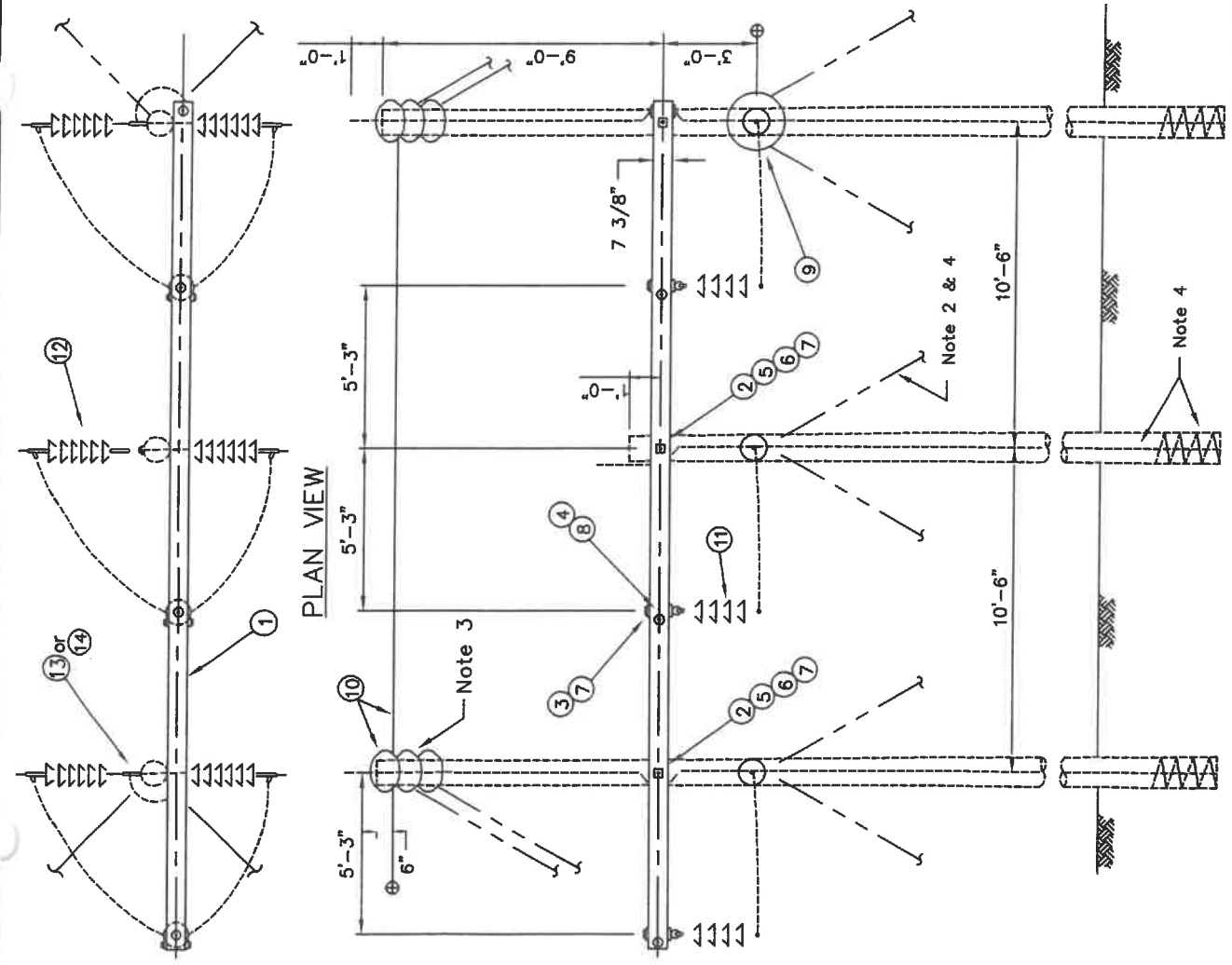
NO.	REVISION	DATE

LIST OF MATERIALS

DWG. REF.	QTY.	DESCRIPTION	ITEM	DET.	CODE No.
1	1	X-Arm, 5-5/8"x7-3/8"x req'd l., #60		TCD-26	
2	3	3/4" Bolt, Machine, by req'd length	c		
3	3	3/4" Bolt, Shoulder Eye w/Washer Nut	o		
4	4	1/2" Bolt, Washer Head, w/Washer Nut	c		
5	3	Washer, Curved, 4" sq x 1/4"x13/16" hole	d		
6	3	Washer, Flat, 4" sq x 3/16"x13/16" hole	d		
7	6	3/4" Locknut, MF Type	ek		
8	4	1/2" Locknut, MF Type	ek		
9	3	GUY ATTACHMENT, MED DUTY		TG-25E--HEAVY	
10	1	POLE TIE ASSY, DEADEND, MED DUTY		TG-54F	
11	3	INSULATOR ASSEMBLY, TANGENT	-	TM-1A	
12	6	INSULATOR ASSEMBLY, DEADEND	-	TM-1D	
13	2	OHGW ASSEMBLY, DEADEND	-	TM-4G	
14	2	OPGW ASSEMBLY, DEADEND	-	TM-4G-CP	

NOTES:

1. Drawing TE-1 gives guidance to subassembly alternatives.
2. For guying arrangements, see drawing TMG-5GD.
3. Angled guying attachments below th OHGW deadend may be needed. If necessary, the engineer should modify the material list by adding these guy attachments.
4. The following materials are to be specified on the plan and profile drawings and staking sheets: POLES, POLE GROUNDING ASSEMBLY, GUYING ASSEMBLIES, ANCHORS, AND ANY ADDITIONAL GROUNDING OR POLE FOUNDATION UNITS.



TRANSMISSION LINE STRUCTURE
TANGENT DOUBLE DEADEND
(69kv MAXIMUM)

L. BARTLETT	TH-5GD
1/21/16	
NO.	REVISION
	DATE

LIST OF MATERIALS

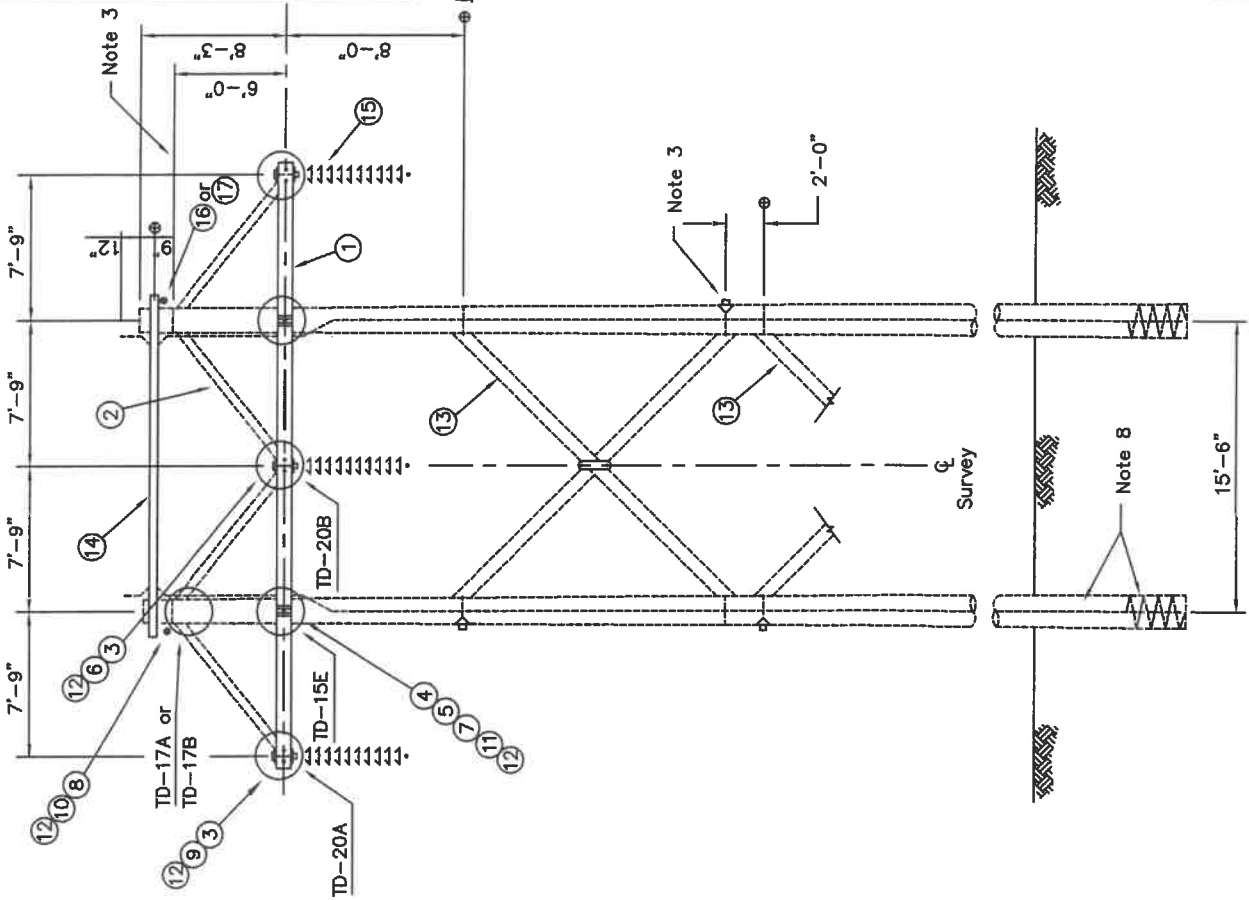
DWG. REF.	TH-10			X-BRACE		DESCRIPTION	ITEM	DET.	CODE No.
	V0	V1	V4	X	XX				
1	2	2	2	-	-	X-Arm, 3-5/8"x9-3/8"x32'-0", #71		TCD-32	
2	2	2	2	-	-	Brace, X-Arm, 3-3/8"x5-3/8"x req'd			
3	3	3	3	-	-	Spacer Assembly, see construction spec			
4	4	4	4	-	-	Plate, Gain, 3"x9-1/2"x1/4"		TM-111B	
5	4	4	4	-	-	Plate, Ribbed Tie, 3"x9-1/2"x1/4"			
6	-	1	1	-	-	7/8" D.E Bolt, Bent w/2 recessed nuts	9Y		
7	2	2	2	-	-	7/8" Threaded Rod, w/2 nuts			
8	-	2	2	-	-	7/8" Bolt, Machine, by req'd length			
9	-	2	2	-	-	7/8" Bolt, Bent w/ recessed nut			
10	-	2	2	-	-	Washer Curved, 4"sq x1/4", 15/16" hole			
11	2	2	2	-	-	Washer, Spring, 15/16" hole			
12	4	8	8	-	-	7/8" Locknut, MF Type			
13	-	-	-	1	2	X-Brace Assembly	vx	TM-110B	
14	1	1	1	-	-	OHGW SUPPORT ASSEMBLY		TM-7C	
15	3	3	3	-	-	INSULATOR ASSEMBLY, TANGENT		TM-2A	
16	1	1	1	-	-	OHGW ASSEMBLY, TANGENT		TM-4A	
17	1	1	1	-	-	OPGW ASSEMBLY, TANGENT		TM-4B-QP	

NOTES:

- Description and materials for structures are as follows:
 TH-10 - - - no braces
 TH-10X - - - same as TH-10 w/one X-Brace
 TH-10V - - - two outside X-Arm braces
 TH-10VX - - - same as TH-10V w/one X-Brace
 TH-10V4X - - - same as TH-10V4 w/one X-Brace
 TH-10V4X - - - same as TH-10V4X w/one X-Brace
 (For two X-Braces, structure designation to use "XX" suffices.)

The "-F" in the structure name designates that X-Braces shall be fiberglass not wood

- Double X-Arms shall be shipped with factory assembled hardware.
- Field drilled holes shall be thoroughly treated.
- Reference the pole framing drawing for additional dimensions.
- For other requirements, refer to REA specification T-7.
- For strength limitations of OHGW support assembly, see TM-7B or TM-7C.
- Drawing TE-2 gives guidance to subassembly alternatives.
- The following materials are to be specified on plan and profile drawings and staking sheets: POLES, POLE FOUNDING ASSEMBLIES, AND ADDITIONAL GROUNDING OR POLE FOUNDATION UNITS.



TRANSMISSION LINE STRUCTURE

TANGENT H-FRAME
(161kv MAXIMUM)

NO.	REVISION	DATE

L. BARTLETT

3/18/21

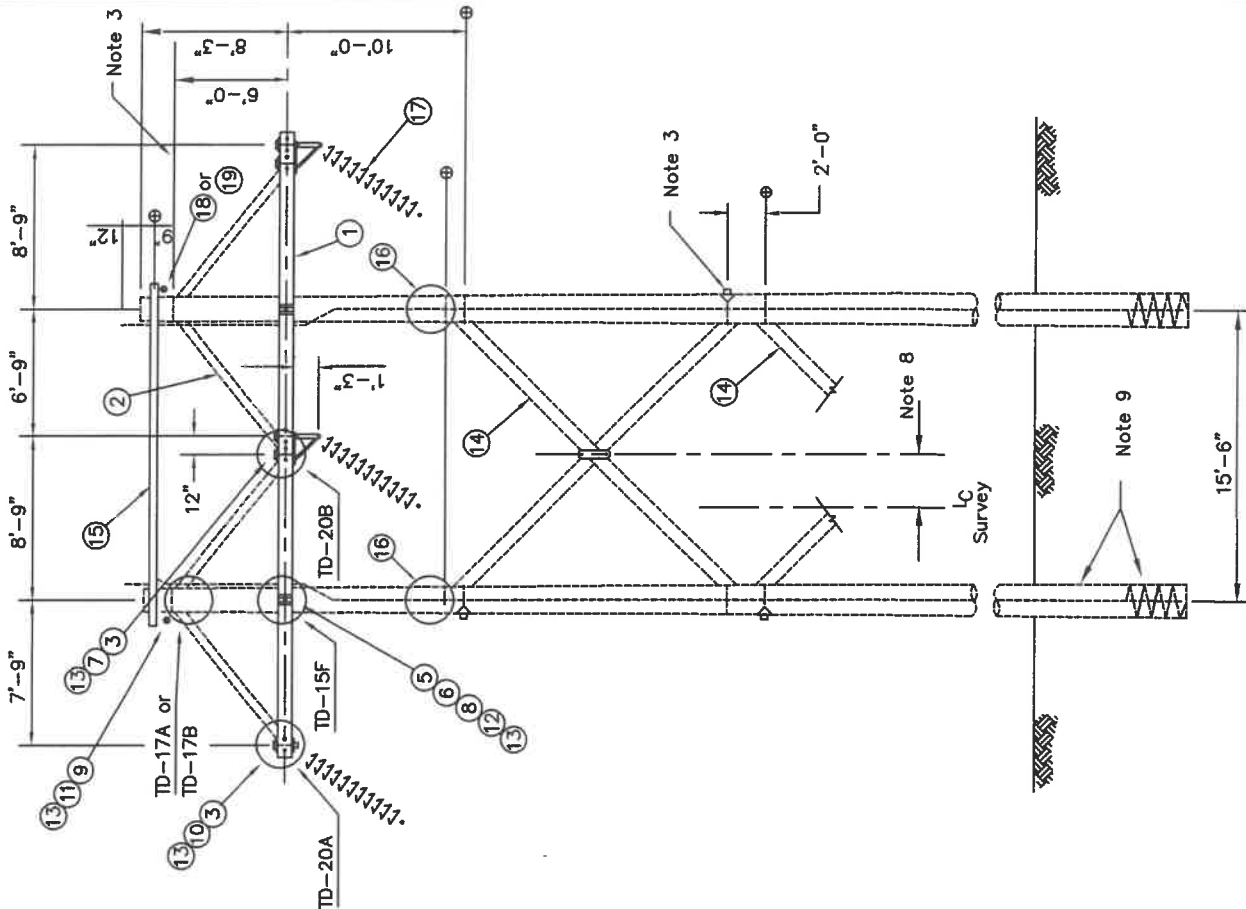
TH-10 SERIES

LIST OF MATERIALS

DWG. REF.	TH-11				X-BRACE		DESCRIPTION	ITEM	DET.	CODE No.
	V0	V1	V4	XX	X	XX				
1	2	2	2	-	-	-	X-Arm, 3-5/8"x9-3/8"x33'-0", #72	TCD-32		
2	-	2	2	4	-	-	Brace, X-Arm, 3-3/8"x5-3/8"x3/8"x req'd l.			
3	5	5	5	-	-	-	Spacer Assembly, see construction spec			
4	2	2	2	2	-	-	Bracket, Swinging Angle, Assembly	TM-111		
5	4	4	4	4	-	-	Grid Gain, 4-1/2"x9", 15/16" hole	TM-112B		
6	4	4	4	4	-	-	Plate, Ribbed Tie, 3"x9-1/2"x1/4"			
7	-	1	1	-	-	-	7/8" D.E Bolt, Bent w/2 recessed nuts, gw			
8	2	2	2	2	-	-	7/8" Threaded Rod, w/2 nuts			
9	-	2	2	2	-	-	7/8" Bolt, Machine, by req'd length			
10	-	2	2	2	-	-	7/8" Bolt, Bent w/ recessed nut			
11	-	2	2	2	-	-	Washer Curved, 4"sq x1/4", 15/16" hole			
12	2	2	2	2	-	-	Washer, Spring, 15/16" hole			
13	4	8	8	10	-	-	7/8" Locknut, MF Type			
14	-	-	-	1	2	-	X-Brace Assembly	vx TM-110B		
15	1	1	1	1	-	-	OHGW SUPPORT ASSEMBLY	TM-7C		
16	2	2	2	2	-	-	GUY ATTACHMENT, MEDIUM DUTY	TG-25C		
17	3	3	3	3	-	-	INSULATOR ASSEMBLY, ANGLE	TM-2C		
18	1	1	1	1	-	-	OHGW ASSEMBLY, TANGENT	TM-4A		
19	1	1	1	1	-	-	OPGW ASSEMBLY, TANGENT	TM-4B-QP		

NOTES:

1. Description and materials for structures are similar to TH-10 series.
2. Double X-Arms shall be shipped with factory assembled hardware.
3. Field drilled holes shall be thoroughly treated.
5. For other requirements, refer to REA specification T-7.
6. For strength limitations of OHGW support assembly, see TM-7B or TM-7C.
7. Drawing TE-2 gives guidance to subassembly alternatives.
8. For guying arrangements and offset table, see drawing TMG-11.
9. The following materials are to be specified on plan and profile drawings and staking sheets: POLES, POLE GROUNDING ASSEMBLY, GUYING ASSEMBLIES, ANCHOR, AND ANY ADDITIONAL GROUNDING OR POLE FOUNDATION UNITS.



TRANSMISSION LINE STRUCTURE

SMALL ANGLE H-FRAME
(161kv MAXIMUM)

		L.BARTLETT	DATE	
NO.	REVISION	5/17/19		TH-11 SERIES

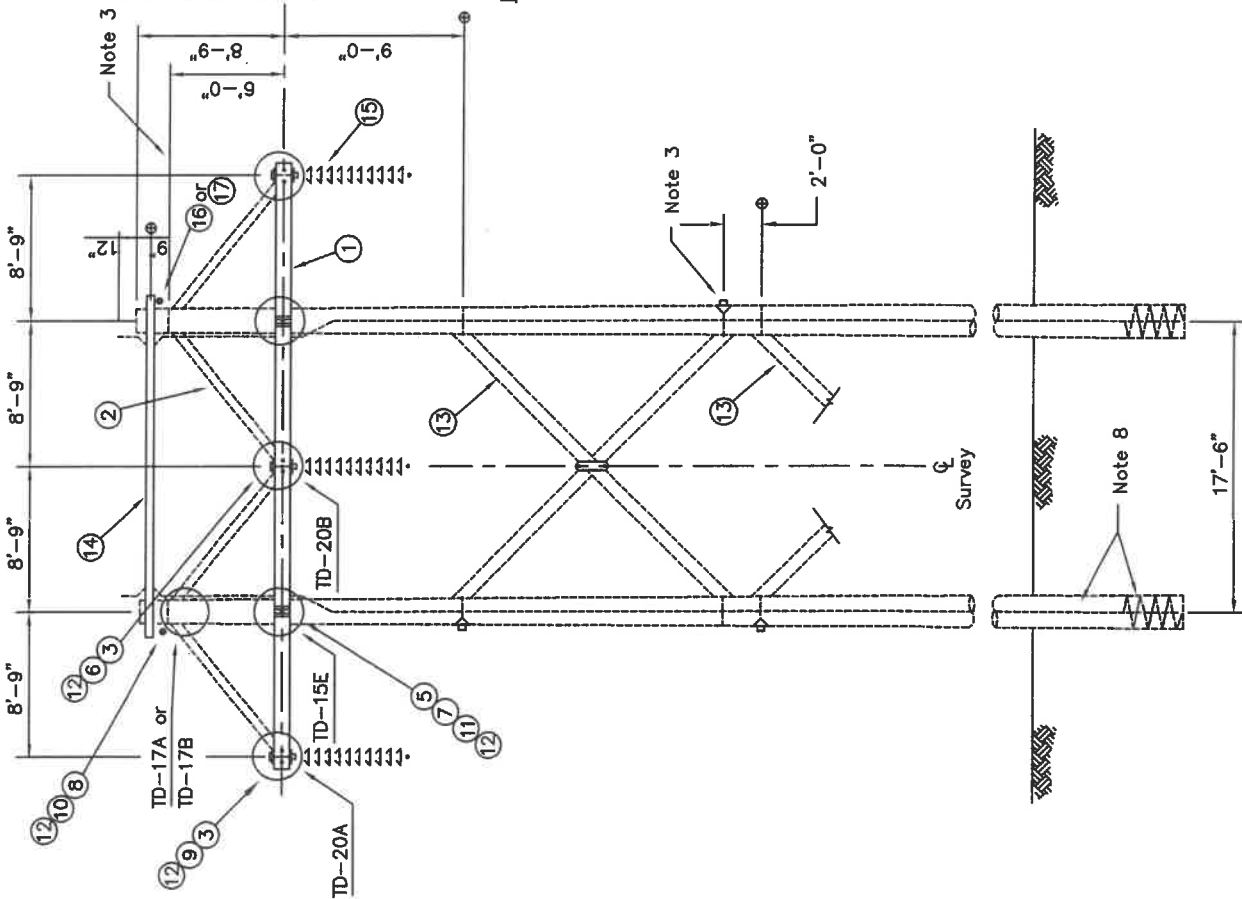
LIST OF MATERIALS

DWC. REF.	TH-17			X-BRACE		DESCRIPTION	ITEM	DET.	CODE No.
	V0	V1	V4	X	XX				
1	2	2	2	-	-	X-Arm, 3-5/8"x9-1/2"x36'-0"			
2	2	2	4	-	-	Brace, X-Arm, 3-1/2" x 4-1/2" x 10'			
3	3	3	3	-	-	Spacer Assembly, see construction spec			
5	4	4	4	-	-	Pole Gain Fitting		TM-111B	
6	-	1	1	-	-	7/8" D.E Bolt, Bent w/2 recessed nuts	gy		
7	2	2	2	-	-	7/8" Threaded Rod, w/2 nuts			
8	-	2	2	-	-	7/8" Bolt, Machine, by req'd length			
9	-	2	2	-	-	7/8" Bolt, Bent w/ recessed nut			
10	-	2	2	-	-	Washer Curved, 4" sq x 1/4", 15/16" hole			
11	2	2	2	-	-	Washer, Spring, 15/16" hole			
12	4	8	8	10	-	7/8" Locknut, MF Type			
13	-	-	-	1	2	X-Brace Assembly	vx	TM-110E	
14	1	1	1	-	-	OHGW SUPPORT ASSEMBLY		TM-7C	
15	3	3	3	-	-	INSULATOR ASSEMBLY, TANGENT		TM-2A	
16	1	1	1	-	-	OHGW ASSEMBLY, TANGENT		TM-4A	
17	1	1	1	-	-	OPGW ASSEMBLY, TANGENT		TM-4B-OP	

NOTES:

- Description and materials for structures are as follows:
 TH-17 - - - no braces
 TH-17X - - - same as TH-17 w/one X-Brace
 TH-17V0 - - - two outside X-Arm braces
 TH-17VOX - - - same as TH-17V0 w/one X-Brace
 (For two X-Braces, structure designation to use "XX" suffices.)
 TH-17M - - - two inside X-Arm braces
 TH-17MX - - - same as TH-17M w/one X-Brace
 TH-17V4 - - - four X-Arm braces
 TH-17V4X - - - same as TH-17V4 w/one X-Brace
- Double X-Arms shall be shipped with factory assembled hardware.
- Field drilled holes shall be thoroughly treated.
- Dimensions "A" shall be as shown on the pole framing drawing.
- For other requirements, refer to REA specification T-7.
- For strength limitations of OHGW support assembly, see TM-7B or TM-7C.
- Drawing TE-2 gives guidance to subassembly alternatives.

8. The following materials are to be specified on plan and profile drawings and staking sheets: POLES, POLE GROUNDING ASSEMBLIES, AND ADDITIONAL GROUNDING OR POLE FOUNDATION UNITS.



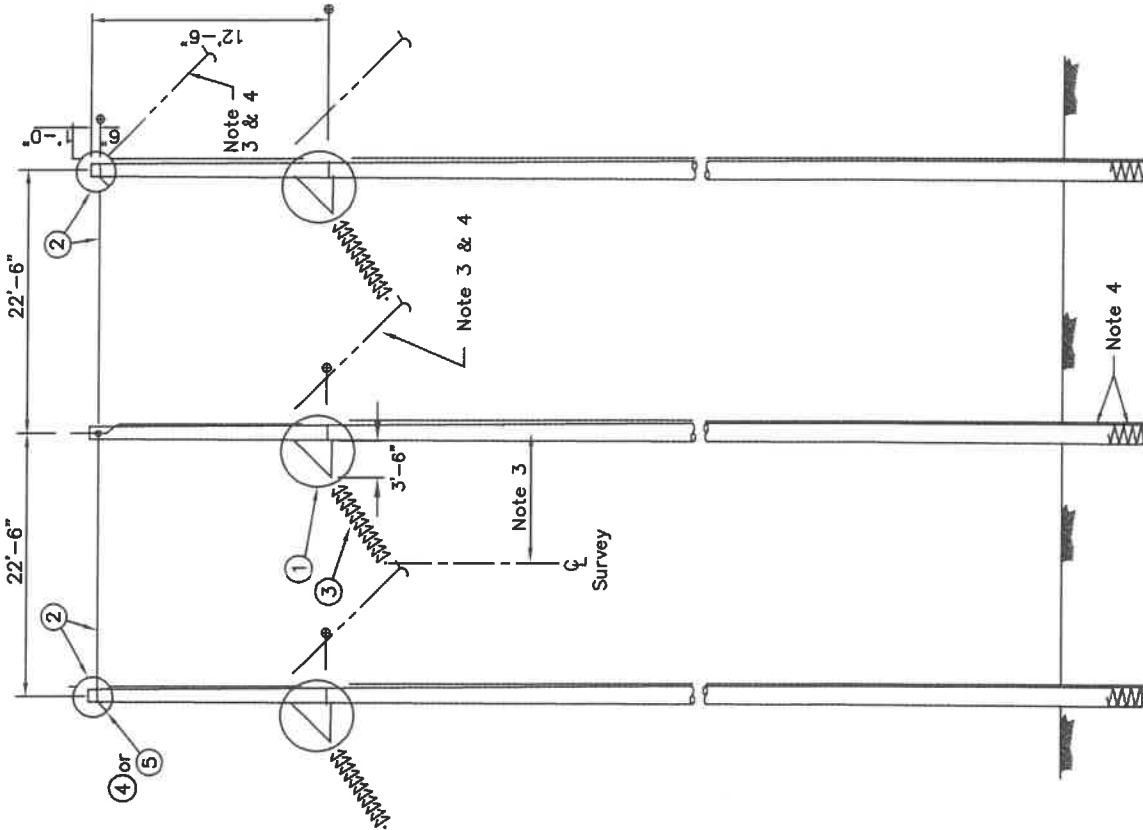
TRANSMISSION LINE STRUCTURE

TANGENT H-FRAME
(161kv MAXIMUM)

NO.	REV. ASSEMBLIES	DATE	NO.	REV. SPACING	DATE
2	REV. ASSEMBLIES	8/29/16	L. BARTLETT		
1	REV. SPACING	5/2/16			
	REVISION			3/19/14	

LIST OF MATERIALS

DWG. QTY. REF.	DESCRIPTION	ITEM	DET.	CODE No.
1 3	BRACKET & GUY ATTACH., MEDIUM DUTY	-	TG-29D	
2 1	POLE TIE, LARGE ANGLE, MEDIUM DUTY	-	TG-54A-7/16	
3 3	INSULATOR ASSEMBLY, ANGLE	-	TM-2C	
4 1	OHGW ASSEMBLY, ANGLE	-	TM-4A	
5 1	OPGW ASSEMBLY	-	TM-4B-QP	



NOTES:

- Drawing TE-2 gives guidance to subassembly alternatives.
- For guying arrangements and offset table, see drawing TMG-13. Pole spacing shall conform to minimum dimensions unless otherwise indicated.
- The following materials are to be specified on plan and profile drawings and staking sheets: POLES, POLE GROUNDING ASSEMBLY, GUYING ASSEMBLIES, ANCHORS, AND ANY ADDITIONAL GROUNDING OR POLE FOUNDATION UNITS.

TRANSMISSION LINE STRUCTURE
MEDIUM ANGLE

NO.	REVISION	DATE
		6-25-09

TH-13A

LIST OF MATERIALS

DWG. REF.	QTY.	DESCRIPTION	ITEM	DET.	CODE No.
1	3	GUY ATTACHMENT, MEDIUM DUTY	-	TG-25D	
2	1	POLE TIE, LARGE ANGLE, MEDIUM DUTY	-	TG-54A-7/16	
3	3	INSULATOR ASSEMBLY, ANGLE	-	TM-2C	
4	1	OHGW ASSEMBLY, ANGLE	-	TM-4A	
5	1	OPGW ASSEMBLY, TANGENT	-	TM-4B-CP	
6	3	INSULATOR ASSEMBLY, LARGE ANGLE	-	TM-1C-7B5/70	
7	2	OPGW ASSEMBLY, DEADEND	-	TM-4G-CP	

NOTES:

1. For 1V:1H guy slopes, the minimum pole spacing, dimension "A" are:

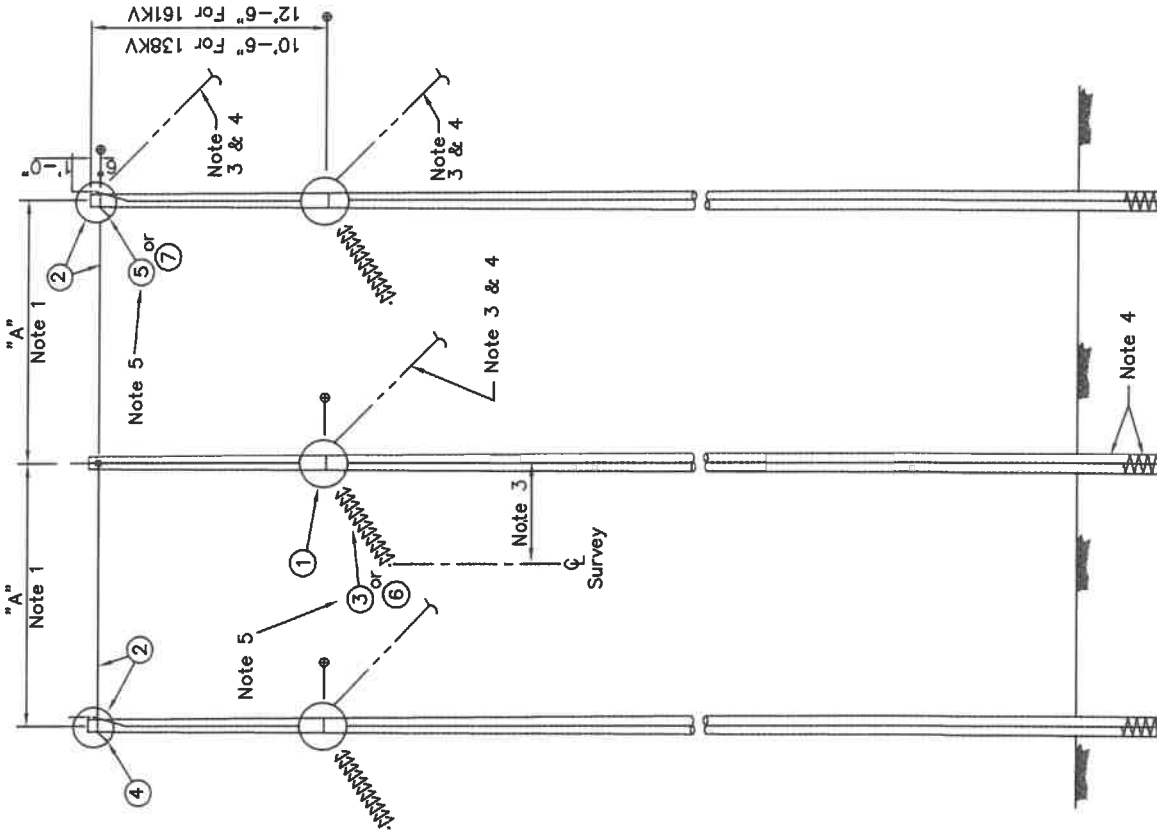
Structure	138 kv	161 kv
TH-14	17'-6"	20'-0"

2. Drawing TE-2 gives guidance to subassembly alternatives.

3. For guying arrangements and offset table, see drawing TMG-13. Pole spacing shall conform to minimum dimensions unless otherwise indicated.

4. The following materials are to be specified on plan and profile drawings and staking sheets: POLES, POLE GROUNDING ASSEMBLY, GUYING ASSEMBLIES, ANCHORS, AND ANY ADDITIONAL GROUNDING OR POLE FOUNDATION UNITS.

5. For all structures with angles 30' or larger, structure will be a TH-14-LG. Item 6, Insulator Assembly for Large Angles will be used in place of Item 3. Also, Item 7 will be used in place of Item 5.



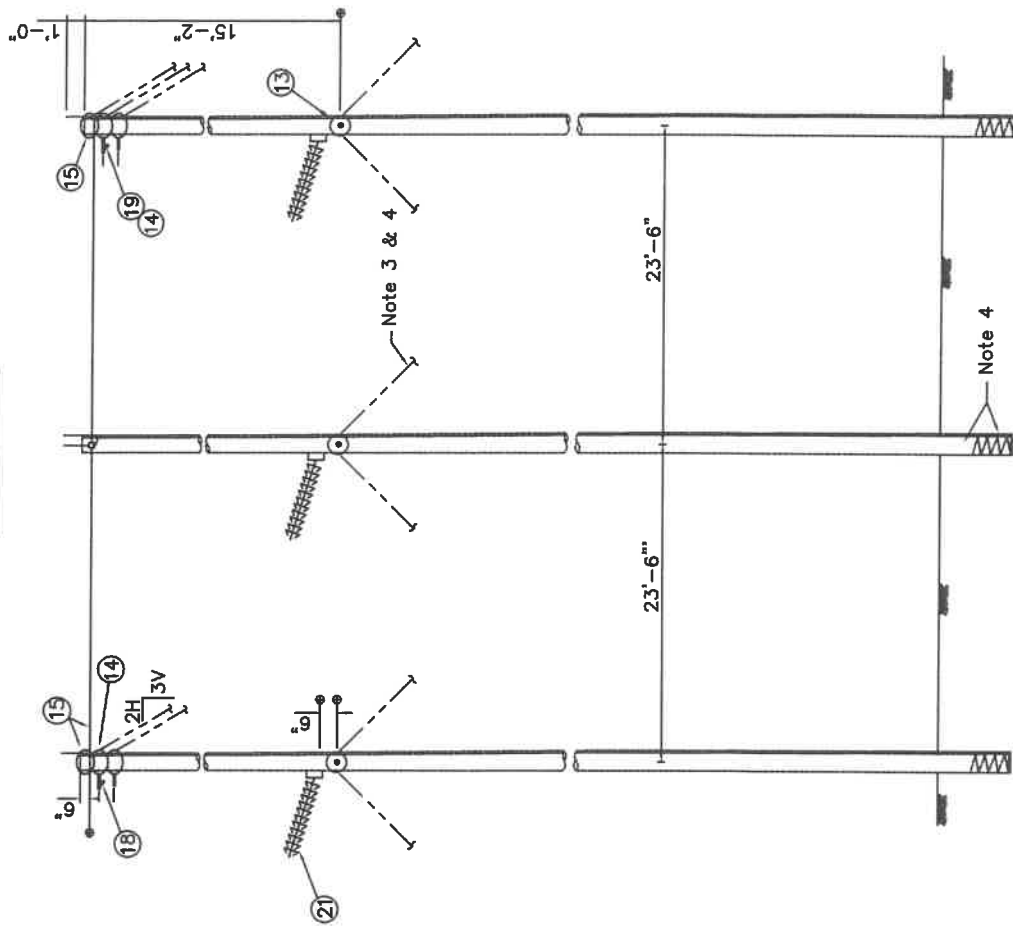
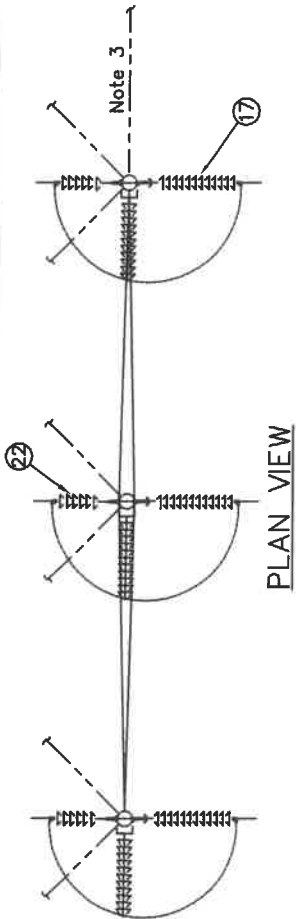
TRANSMISSION LINE STRUCTURE

LARGE ANGLE
(161kv MAXIMUM)

L. BARTLETT	TH-14,14-LG
6/21/16	
DATE	
REVISION	
NO.	

LIST OF MATERIALS

DWG. REF.	QTY.	DESCRIPTION	ITEM	DET.	CODE No.
13	3	GUY ATTACHMENT, HEAVY DUTY	-	TG-25E--HEAVY	
14	2	GUY ATTACHMENT, MEDIUM DUTY	-	TG-25E	
15	1	POLE TIE, GUYING, MEDIUM DUTY	-	TG-54B-7/16	
17	3	INSULATOR ASSEMBLY, DEADEND	-	TM-1D-7B5	
18	2	OHGW ASSEMBLY, DEADEND	-	TM-4G	
19	2	OPGW ASSEMBLY, DEADEND	-	TM-4G-OP	
21	3	HORIZONTAL LINE POST ASSY.	-	TM-3B-795--TRUN	
22	3	INSULATOR ASSY, DEADEND	-	TM-1D-4/0	



NOTES:

- Drawing TE-2 gives guidance to subassembly alternatives.
- For guying arrangements, see drawing TMG-15. A bisector guy is recommended for angles less than 60 degrees.
- The following materials are to be specified on the plan and profile drawings and staking sheets: POLES, POLE GROUNDING ASSEMBLY, GUYING ASSEMBLIES, ANCHORS, AND ANY ADDITIONAL GROUNDING OR POLE FOUNDATION UNITS.

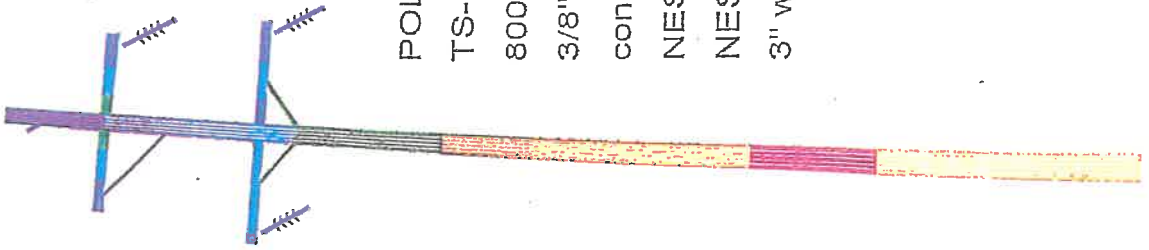
AUXVASSE - SALT RIVER

TRANSMISSION LINE STRUCTURE

LARGE ANGLE DOUBLE DEADEND SPECIAL STRUCTURE (161kv MAXIMUM)

NO.	REVISION	DATE

J.C. 3/17/21



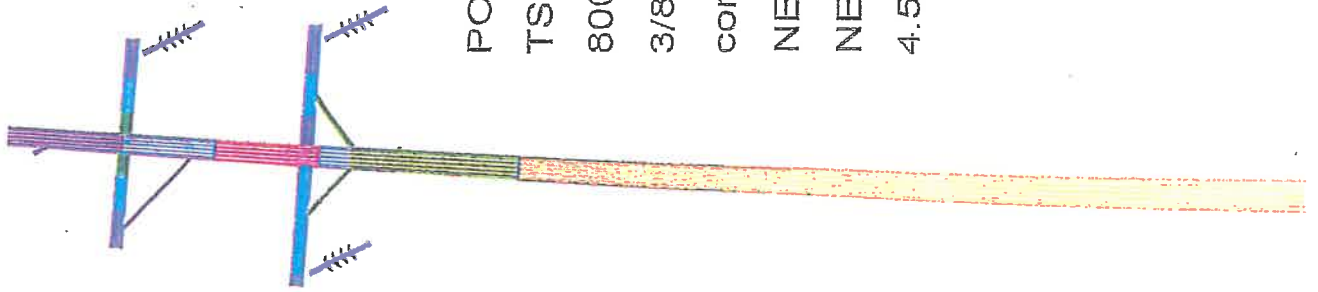
POLE FAILURE location shown in red
TS-1, 60' class 1 pole
800' RS, forward and back span = 500'
3/8" HSSS OHGW and 4/0 ACSR conductor
conductor design tension = 50% ultimate
NESC Heavy Loading District
NESC/RUS load and strength factors applied
3" woodpecker hole 15' above groundline

% Usage Legend	
0	<= % < 25
25	<= % < 50
50	<= % < 75
75	<= % < 100

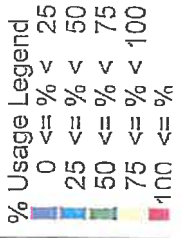
Missouri - 71 - Moniteau, Central Electric Power Cooperative

wood pole usage with woodpecker damage

Load Case	Maximum Usage %	Element Label	Element Type
RUS OCF 4 Wood NA+,I NA+	149.11	pole	Wood Pole
RUS OCF 4 Wood NA-,I NA-	133.83	pole	Wood Pole
RUS 250B NA+,I NA+	138.97	pole	Wood Pole
RUS 250B NA-,I NA-	130.64	pole	Wood Pole
RULE 250B Uplift NA+,I NA+	137.21	pole	Wood Pole
RULE 250B Uplift NA-,I NA-	131.65	pole	Wood Pole
RUS 250C NA+,I NA+	84.48	pole	Wood Pole
RUS 250C NA-,I NA-	82.52	pole	Wood Pole
RULE 250D NA+,I NA+	83.13	pole	Wood Pole
RULE 250D NA-,I NA-	72.62	pole	Wood Pole
RULE 277 Insulators NA+,I NA+	0	pole	Wood Pole
RULE 277 Insulators NA-,I NA-	0	pole	Wood Pole
Extreme Ice NA+,I NA+	35.14	txm	X-Arm
Extreme Ice NA-,I NA-	35.14	txm	X-Arm
Uplift,I NA+	6.55	txm	X-Arm
Notes			
TS-1, 60', class 1 pole			
800' Ruling Span, forward and back span = 500'			
3/8" HSS OHGW and 4/0 ASR conductor			
conductor design tension = 50% ultimate			
NESC Heavy Load District			
3" woodpecker hole 15' above groundline			
usage data from PLS-POLE analysis			



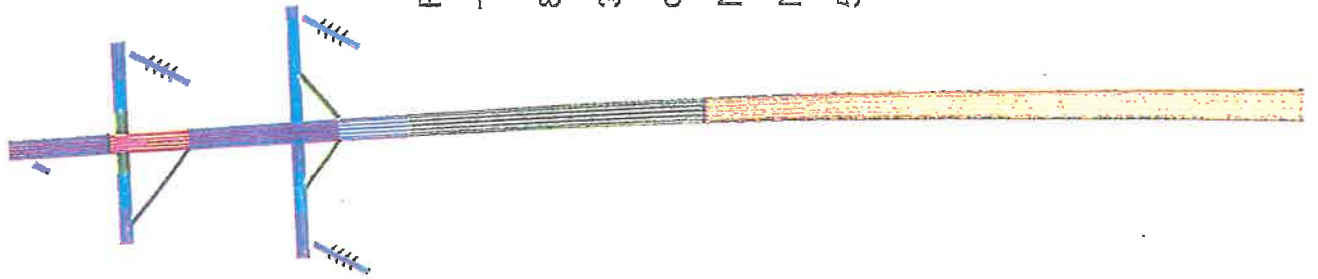
POLE FAILURE location shown in red
TS-1, 60` class 1 pole
800` RS, forward and back span = 500`
3/8" HSSS OHGW and 4/0 ACSR conductor
conductor design tension = 50% ultimate
NESC Heavy Loading District
NESC/RUS load and strength factors applied
4.5" woodpecker hole near lower cross arm



Missouri - 71 - Moniteau, Central Electric Power Cooperative

wood pole usage with woodpecker damage

Load Case	Maximum Usage %	Element Label	Element Type
RUS OCF 4 Wood NA+,J NA+	155.51	pole	Wood Pole
RUS OCF 4 Wood NA-,J NA-	88.03	pole	Wood Pole
RUS 250B NA+,J NA+	130.45	pole	Wood Pole
RUS 250B NA-,J NA-	85.06	pole	Wood Pole
RULE 250B Uplift NA+,J NA+	122.19	pole	Wood Pole
RULE 250B Uplift NA-,J NA-	90.62	pole	Wood Pole
RUS 250C NA+,J NA+	64.42	pole	Wood Pole
RUS 250C NA-,J NA-	56.57	pole	Wood Pole
RULE 250D NA+,J NA+	93.44	pole	Wood Pole
RULE 250D NA-,J NA-	49.22	txm	X-Arm
RULE 277 Insulators NA+,J NA+	0	pole	Wood Pole
RULE 277 Insulators NA-,J NA-	0	pole	Wood Pole
Extreme Ice NA+,J NA+	35.14	txm	X-Arm
Extreme Ice NA-,J NA-	35.14	txm	X-Arm
Uplift,J NA+	6.55	txm	X-Arm
Notes			
TS-1 , 60', class 1 pole			
800' Ruling Span, forward and back span = 500'			
3/8" HSS OHGW and 4/0 ASR conductor			
conductor design tension = 50% ultimate			
NESC Heavy Load District			
4.5 " woodpecker hole near lower cross arm			
usage data from PLS-POLE analysis			



POLE FAILURE location shown in red

TS-1, 60' class 1 pole

800' RS, forward and back span = 500'

3/8" HSS OHGW and 4/0 ACSR conductor

conductor design tension = 50% ultimate

NESC Heavy Loading District

NESC/RUS load and strength factors applied

5.1" woodpecker hole near upper cross arm



Missouri - 71 - Moniteau, Central Electric Power Cooperative

wood pole usage with woodpecker damage

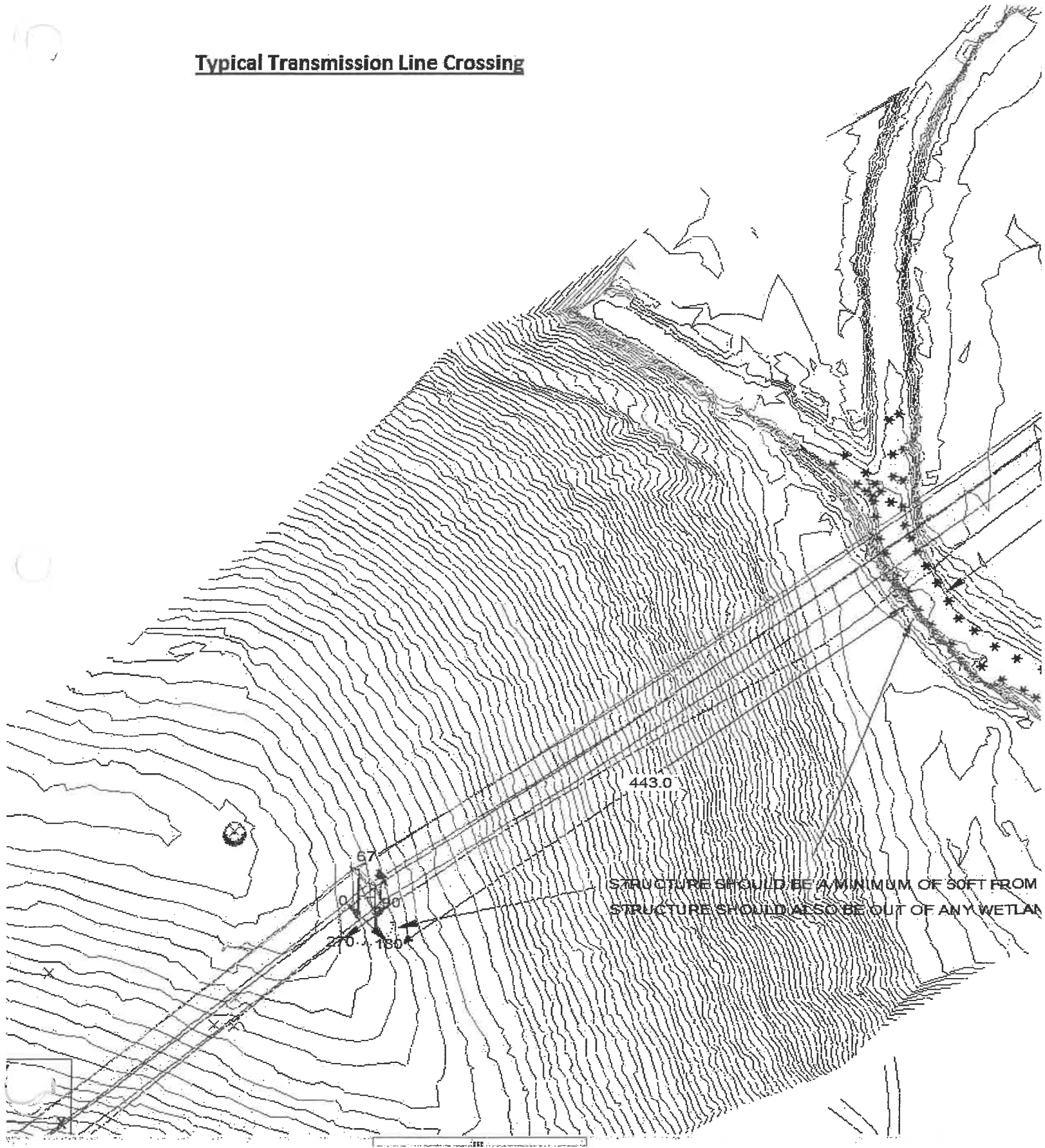
Load Case	Maximum Usage %	Element Label	Element Type
RUS OCF 4 Wood NA+,J NA+	94.39	pole	Wood Pole
RUS OCF 4 Wood NA-,J NA-	164.25	pole	Wood Pole
RUS 250B NA+,J NA+	98.23	pole	Wood Pole
RUS 250B NA-,J NA-	141.27	pole	Wood Pole
RULE 250B Uplift NA+,J NA+	104.52	pole	Wood Pole
RULE 250B Uplift NA-,J NA-	133.27	pole	Wood Pole
RUS 250C NA+,J NA+	57.35	pole	Wood Pole
RUS 250C NA-,J NA-	61.61	pole	Wood Pole
RULE 250D NA+,J NA+	51.94	pole	Wood Pole
RULE 250D NA-,J NA-	104.16	pole	Wood Pole
RULE 277 Insulators NA+,J NA+	0	pole	Wood Pole
RULE 277 Insulators NA-,J NA-	0	pole	Wood Pole
Extreme Ice NA+,J NA+	35.14	txm	X-Arm
Extreme Ice NA-,J NA-	35.14	txm	X-Arm
Uplift,J NA+	6.55	txm	X-Arm
Notes			
TS-1, 60', class 1 pole			
800' Ruling Span, forward and back span = 500'			
3/8" HSS OHGW and 4/0 ASR conductor			
conductor design tension = 50% ultimate			
NESC Heavy Load District			
5.1" woodpecker hole near top cross arm			
usage data from PLS-POLE analysis			

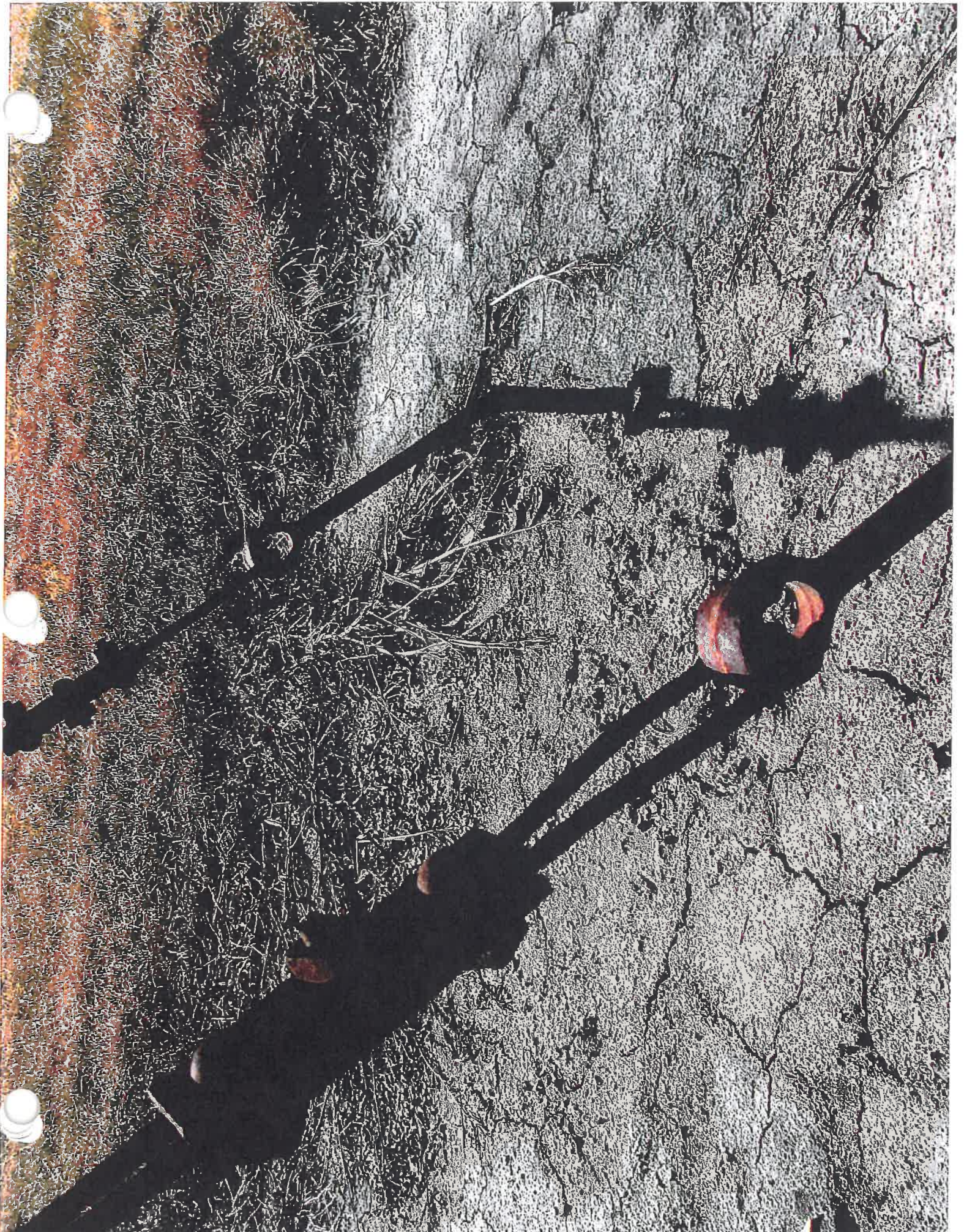
Table One
Main Causes of Line Deterioration and Typical Estimates of Service Life

Component	Cause of Deterioration	Life to Failure (yrs)	Typical Asset Life (yrs)
Conductor (ACSR)	Corrosion, Creek Mechanical Fatigue	60-80	50
Overhead Ground Wire -Galvanized Steel	Corrosion Mechanical Fatigue	30-40	45
Structures -Steel -Wood Pole	Corrosion, Rot, Woodpeckers, Ants	100+ 30-40	55
Foundations -Grillage -Concrete -Insulators	Corrosion Spalling Cracking Cement Growth Lightning Vandalism Corrosion	100+ 100+ 40-80	55 55
Hardware	Corrosion Mechanical Fatigue	40-80	40

The above data was taken from the article "Corrosion Evaluation Methods For Power Transmission Lines" by Peter Mayer, P.E., of Hydro Ontario Technologies.

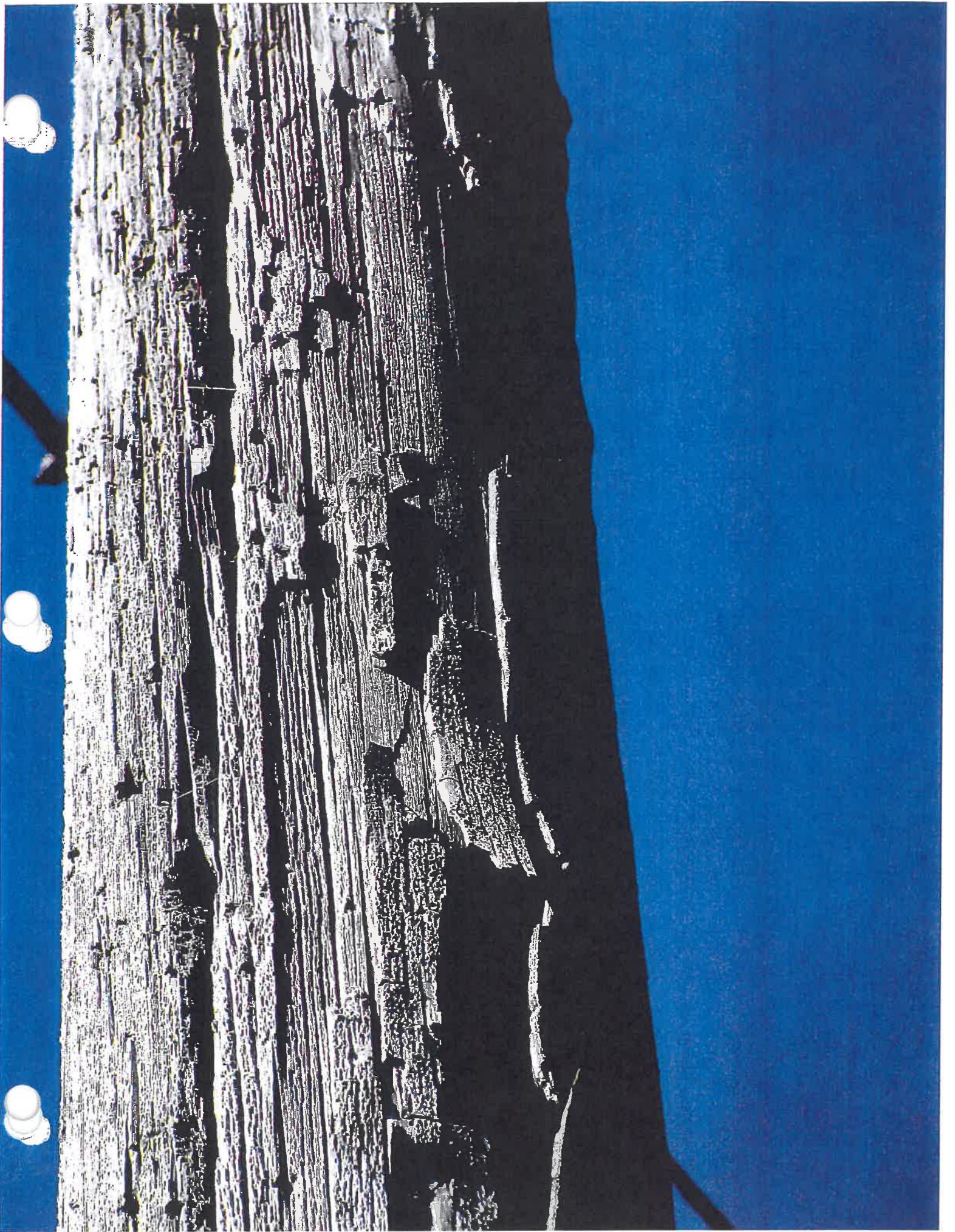
Typical Transmission Line Crossing

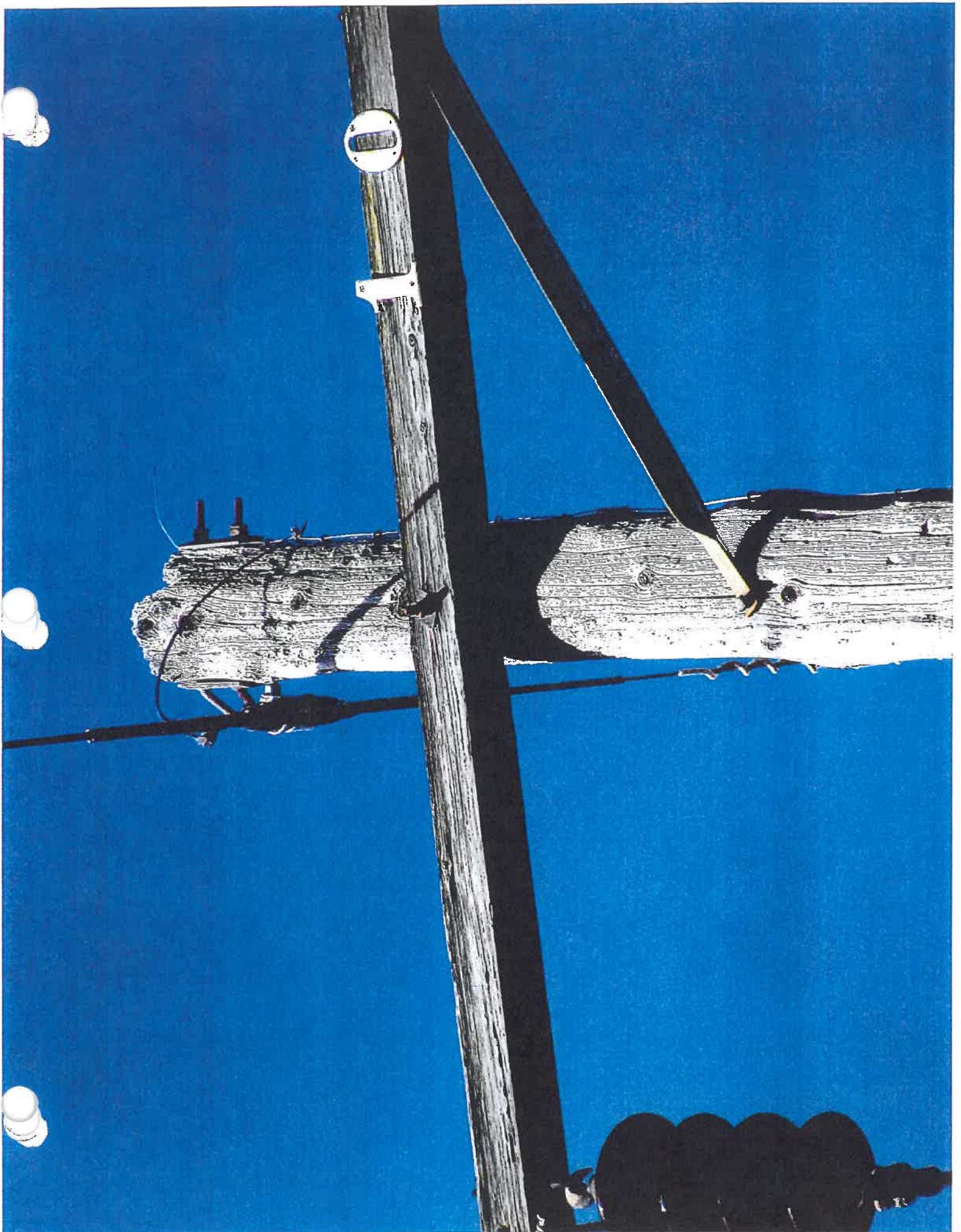




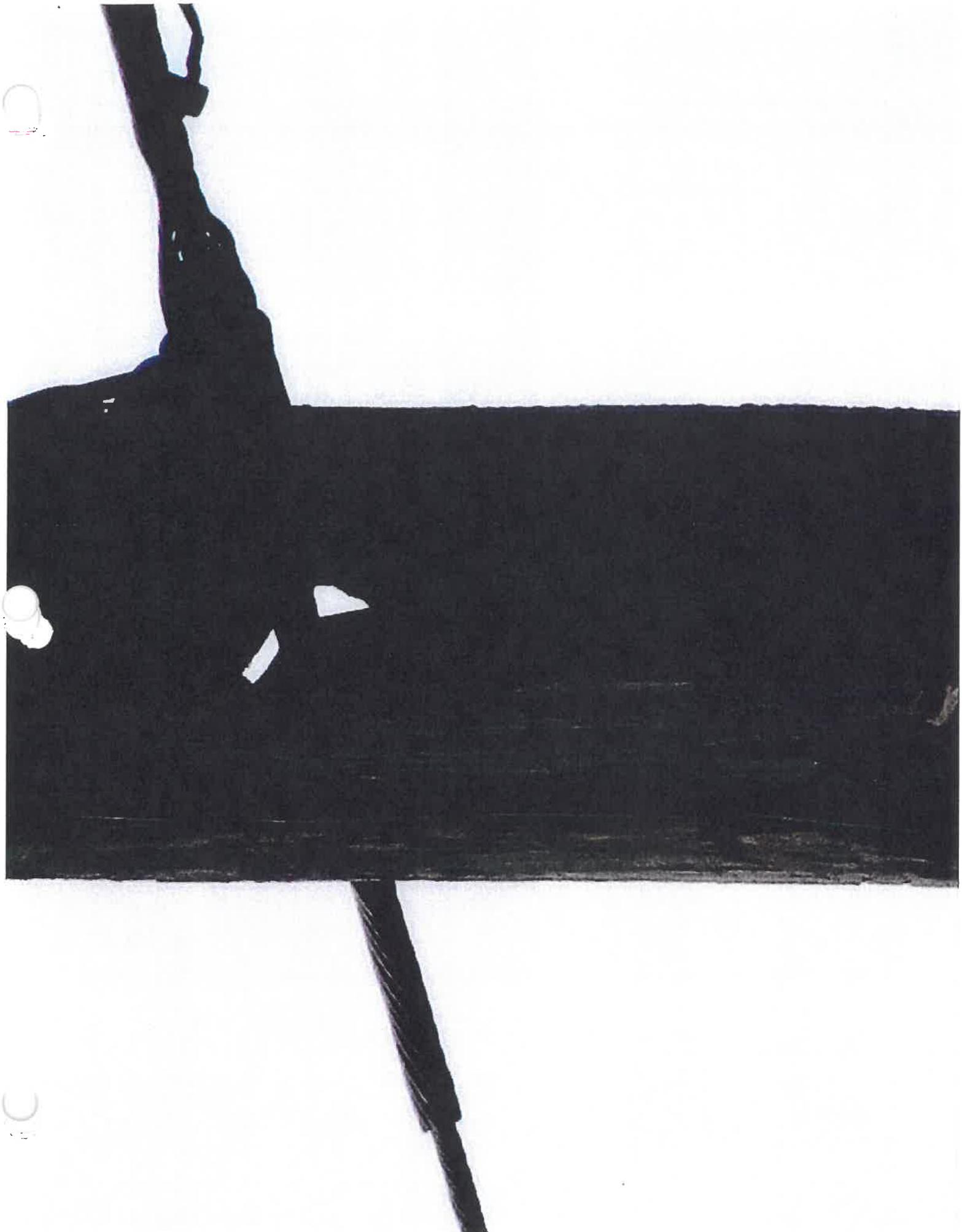












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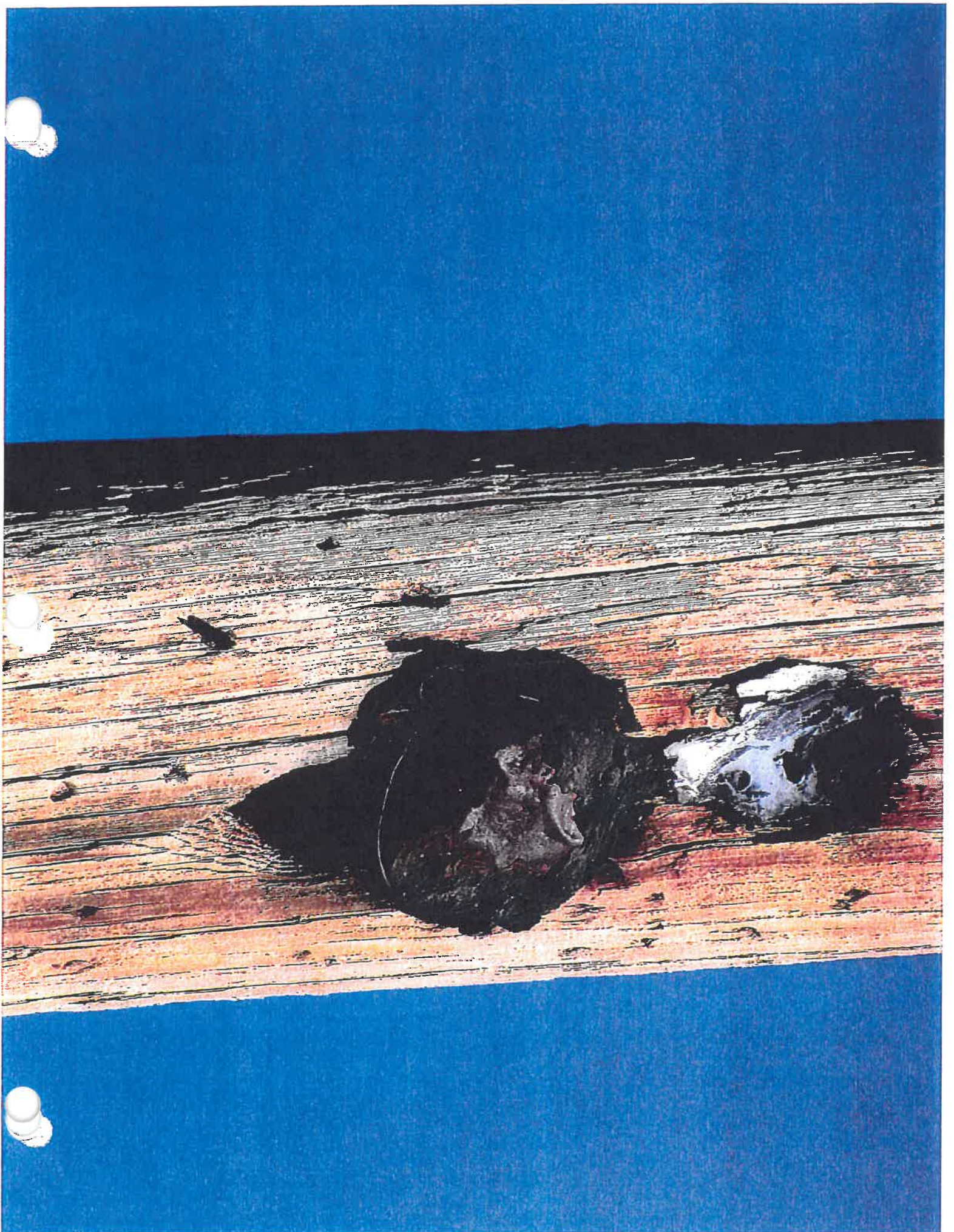
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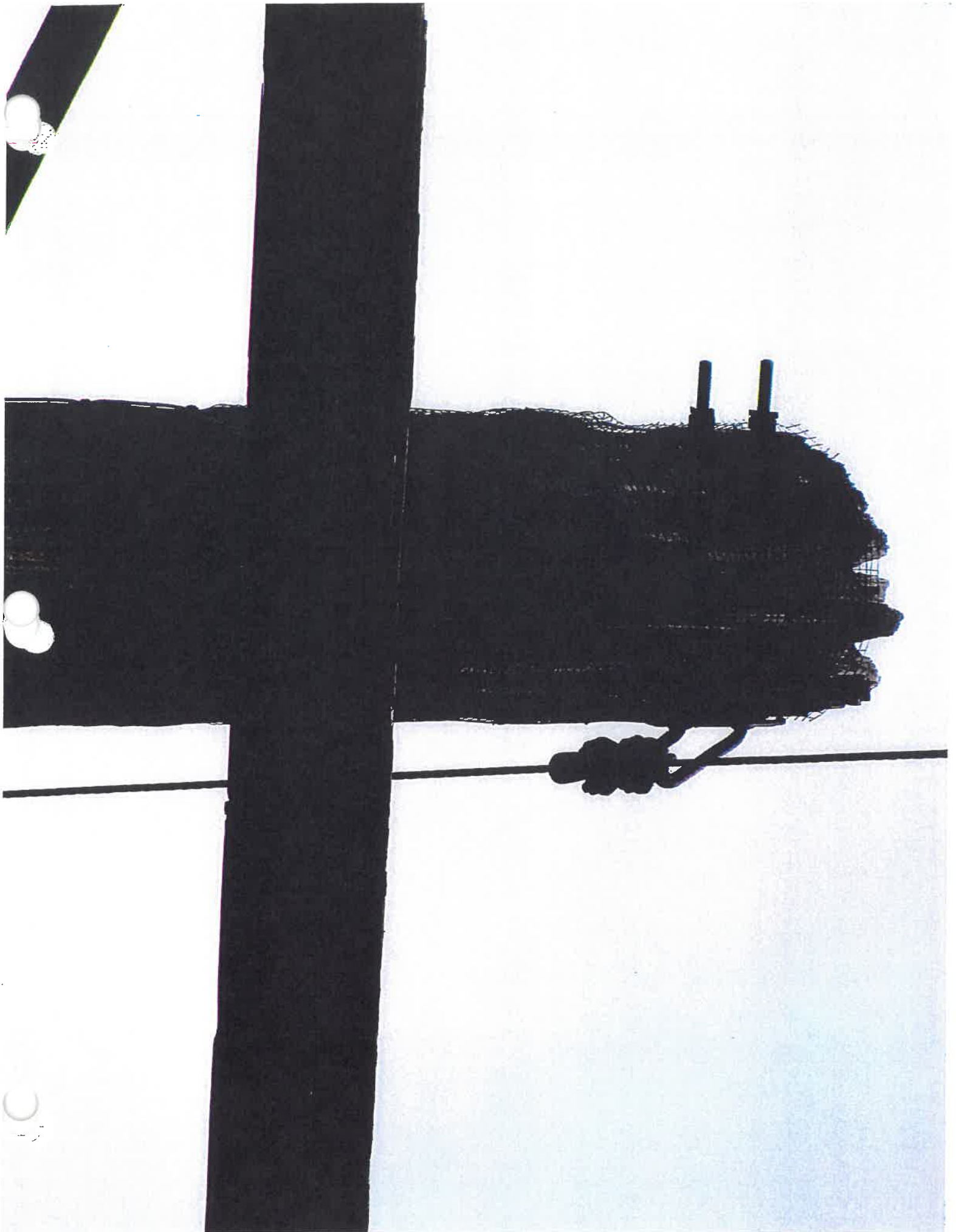




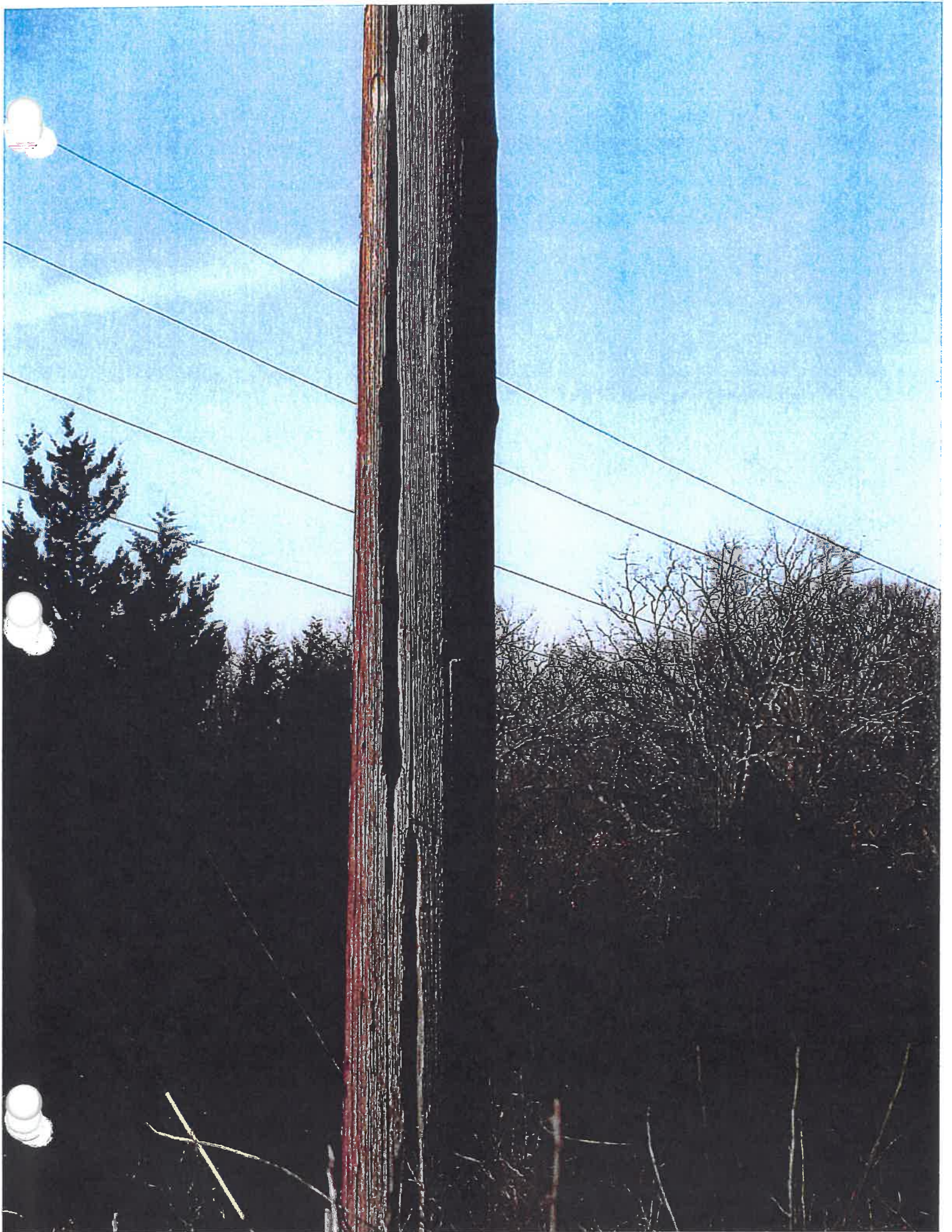


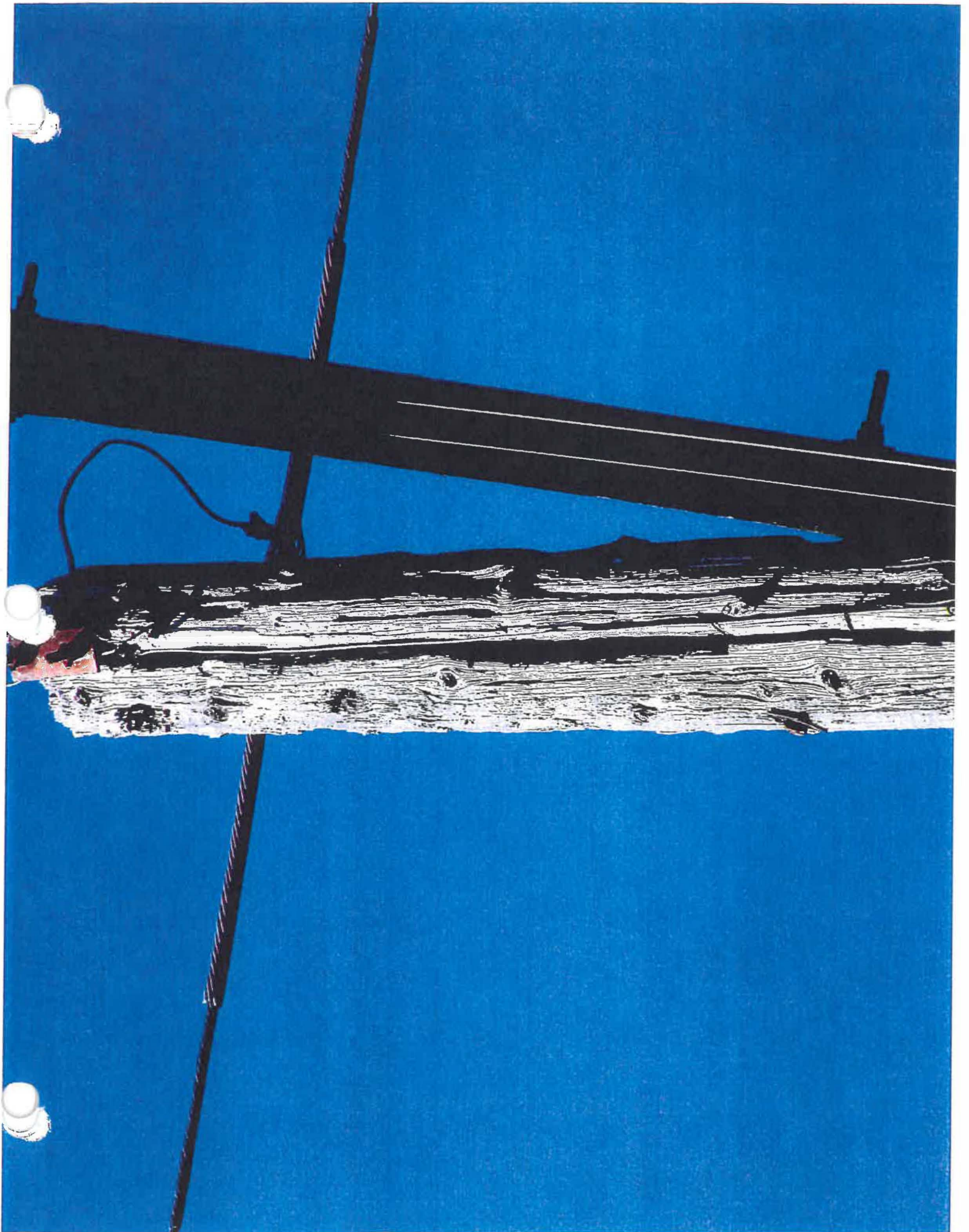






100





Correspondence Contact List

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Ms. Machel Watkins, District Engineer
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1511 Missouri Blvd.
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Ms. Paula Gough, District Engineer
Missouri Department of Transportation
Northeast District
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Hannibal, MO 63401

Ms. Toni Prawl
Missouri Department of Natural Resources
State Historic Preservation Office
Attn: Section 106 Review
P.O. Box 176
Jefferson City, MO 65102-0176

Mr. Scott Larsen
Area Resource Soil Scientist
USDA-NRCS
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Palmyra, MO 63461

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Missouri Department of Conservation
Resource Science Division
P.O. Box 180
Jefferson City, MO 65102

Department of the Army
Corps of Engineers
Kansas City District
MO State Regulatory Office
515 E. High Street, Suite 102
Jefferson City, MO 65101-3261

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Callaway County Commission
10 E 5th Street
Fulton, MO 65251

Mr. Steve Hobbs, Presiding Commissioner
Audrain County Commission
101 N Jefferson Street
Mexico, MO 65265

Mr. Mike Minor, Presiding Commissioner
Monroe County Commission
300 N Main Street
Paris, MO 65275

Mr. David Bock
Mid-Missouri Regional Planning Commission
206 E. Broadway, P.O. Box 140
Ashland, MO 65010

Mr. Cindy Hultz
Mark Twain Regional Council of Governments
42494 Delaware Ln
Perry, MO 63462

Mr. Bobby Komardley, Chairman
Apache Tribe of Oklahoma
PO Box 1330
Anadarko, OK 73005

Ms. Nekole Alligood, Director of Cultural Resources
Delaware Nation of Oklahoma
PO Box 825
Anadarko, OK 73005

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Miami, OK 74355

Ms. Andrea A. Hunter, Director and THPO
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627 Grandview Ave
Pawhuska, OK 74056

Mr. Edmore Green, Chairman
Sac & Fox Nation of Missouri in Kansas and Nebraska
305 N. Main St
Reserve, KS 66434

Ms. Sandra Massey, THPO
Sac & Fox Nation of Oklahoma
920883 South Highway 99 Building A
Stroud, OK 74079

Ms. Judith Bender, Chairwoman
Sac & Fox Tribe of the Mississippi in Iowa
349 Meskwaki Rd
Tama, IA 52339

Mr. William Tarrant, THPO
Seneca-Cayuga Nation
PO Box 453220
Grove, OK 74345



Tribal Directory Assessment Information



Contact Information for Tribes with Interests in Audrain, Callaway, Monroe counties, Missouri

Tribal Name	County Name
+ Apache Tribe of Oklahoma	
+ Apache Tribe of Oklahoma	
+ Apache Tribe of Oklahoma	
+ Delaware Nation, Oklahoma	
+ Miami Tribe of Oklahoma	
+ Osage Nation	
+ Osage Nation	
+ Osage Nation	
+ Sac & Fox Nation of Missouri in Kansas and Nebraska	
+ Sac & Fox Nation of Missouri in Kansas and Nebraska	
+ Sac & Fox Nation of Missouri in Kansas and Nebraska	
- Sac & Fox Nation, Oklahoma	
+ Sac & Fox Nation, Oklahoma	
+ Sac & Fox Nation, Oklahoma	
+ Sac & Fox Tribe of the Mississippi in Iowa	
+ Sac & Fox Tribe of the Mississippi in Iowa	
+ Sac & Fox Tribe of the Mississippi in Iowa	
+ Seneca-Cayuga Nation	

1 - 18 of 18 results

« < 1 > » 25 ▾



**Central Electric
Power Cooperative**

2106 Jefferson Street, PO Box 269
Jefferson City, Missouri 65102
Telephone: (573) 634-2454
Fax: (573) 634-3892

November 18, 2020

Ms. Karen Herrington, Field Supervisor
Fish and Wildlife Service
101 Park DeVillie Drive, Suite A
Columbia, MO 65203-0057

Subject: Kingdom City –Santa Fe 69kV Transmission Line
IPAC Consultation Code: 03E14000-2021-SLI-0278

Dear Ms. Herrington:

Central Electric Power Cooperative (CEPC) is proposing to redesign, retire, and rebuild the Kingdom City – Santa Fe 69kV line located in Callaway, Audrain and Monroe County, Missouri. The rebuild will be constructed on existing transmission line right-of-way.

In compliance with RUS environmental guidelines, CEPC is corresponding with the following agencies:

Missouri Department of Conservation
Missouri Department of Natural Resources
Missouri Department of Transportation – Central District
Natural Resources Conservation Service
Regional Planning Agencies
Missouri Department of Transportation – Northeast District

Dept. of the Army, Corps of Engineers – Kansas City District
United States Fish and Wildlife Service
Callaway County Commissioner
Monroe County Commissioner
Audrain County Commissioner

A topographic and location map for the proposed site is enclosed. Please review and comment regarding the construction of the facility as it relates to your organization. We would appreciate a response within 30 days. If you need any further information or wish to discuss the project, please contact me at 573-761-2857.

Respectfully,

CENTRAL ELECTRIC POWER COOPERATIVE

A handwritten signature in blue ink that reads "Spencer K. Hoskins".

Spencer K. Hoskins, P.E.
Manager - Transmission Line Design
Enclosures



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Missouri Ecological Services Field Office
101 Park Deville Drive
Suite A
Columbia, MO 65203-0057
Phone: (573) 234-2132 Fax: (573) 234-2181

In Reply Refer To:

November 12, 2020

Consultation Code: 03E14000-2021-SLI-0278

Event Code: 03E14000-2021-E-00800

Project Name: Kingdom City Tap-Auxvasse-Salt River-Mexico-Santa Fe

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

This response has been generated by the Information, Planning, and Conservation (IPaC) system to provide information on natural resources that could be affected by your project. The U.S. Fish and Wildlife Service (Service) provides this response under the authority of the Endangered Species Act of 1973 (16 U.S.C. 1531-1543), the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d), the Migratory Bird Treaty Act (16 U.S.C. 703-712), and the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.).

Threatened and Endangered Species

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and may be affected by your proposed project. The species list fulfills the requirement for obtaining a Technical Assistance Letter from the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. **Note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days.** The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

Consultation Technical Assistance

Refer to the Midwest Region [S7 Technical Assistance](#) website for step-by-step instructions for making species determinations and for specific guidance on the following types of projects: projects in developed areas, HUD, pipelines, buried utilities, telecommunications, and requests for a Conditional Letter of Map Revision (CLOMR) from FEMA.

Federally Listed Bat Species

Indiana bats, gray bats, and northern long-eared bats occur throughout Missouri and the information below may help in determining if your project may affect these species.

Gray bats - Gray bats roost in caves or mines year-round and use water features and forested riparian corridors for foraging and travel. If your project will impact caves, mines, associated riparian areas, or will involve tree removal around these features particularly within stream corridors, riparian areas, or associated upland woodlots gray bats could be affected.

Indiana and northern long-eared bats - These species hibernate in caves or mines only during the winter. In Missouri the hibernation season is considered to be November 1 to March 31. During the active season in Missouri (April 1 to October 31) they roost in forest and woodland habitats. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags 5 inches diameter at breast height (dbh) for Indiana bat, and 3 inches dbh for northern long-eared bat, that have exfoliating bark, cracks, crevices, and/or hollows), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Tree species often include, but are not limited to, shellbark or shagbark hickory, white oak, cottonwood, and maple. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of other forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat and evaluated for use by bats. If your project will impact caves or mines or will involve clearing forest or woodland habitat containing suitable roosting habitat, Indiana bats or northern long-eared bats could be affected.

Examples of unsuitable habitat include:

- Individual trees that are greater than 1,000 feet from forested or wooded areas;
- Trees found in highly-developed urban areas (e.g., street trees, downtown areas);
- A pure stand of less than 3-inch dbh trees that are not mixed with larger trees; and
- A stand of eastern red cedar shrubby vegetation with no potential roost trees.

Using the IPaC Official Species List to Make No Effect and May Affect Determinations for Listed Species

1. If IPaC returns a result of “There are no listed species found within the vicinity of the project,” then project proponents can conclude the proposed activities will have **no effect** on any federally listed species under Service jurisdiction. Concurrence from the Service is not required for **No Effect** determinations. No further consultation or coordination is required. Attach this letter to the dated IPaC species list report for your records. An example ["No Effect" document](#) also can be found on the S7 Technical Assistance website.

2. If IPaC returns one or more federally listed, proposed, or candidate species as potentially present in the action area of the proposed project other than bats (see #3 below) then project proponents can conclude the proposed activities **may affect** those species. For assistance in determining if suitable habitat for listed, candidate, or proposed species occurs within your project area or if species may be affected by project activities, you can obtain [Life History Information for Listed and Candidate Species](#) through the S7 Technical Assistance website.

3. If IPaC returns a result that one or more federally listed bat species (Indiana bat, northern long-eared bat, or gray bat) are potentially present in the action area of the proposed project, project proponents can conclude the proposed activities **may affect** these bat species **IF** one or more of the following activities are proposed:

- a. Clearing or disturbing suitable roosting habitat, as defined above, at any time of year;
- b. Any activity in or near the entrance to a cave or mine;
- c. Mining, deep excavation, or underground work within 0.25 miles of a cave or mine;
- d. Construction of one or more wind turbines; or
- e. Demolition or reconstruction of human-made structures that are known to be used by bats based on observations of roosting bats, bats emerging at dusk, or guano deposits or stains.

If none of the above activities are proposed, project proponents can conclude the proposed activities will have **no effect** on listed bat species. Concurrence from the Service is not required for **No Effect** determinations. No further consultation or coordination is required. Attach this letter to the dated IPaC species list report for your records. An example ["No Effect" document](#) also can be found on the S7 Technical Assistance website.

If any of the above activities are proposed in areas where one or more bat species may be present, project proponents can conclude the proposed activities **may affect** one or more bat species. We recommend coordinating with the Service as early as possible during project planning. If your project will involve removal of over 5 acres of [suitable](#) forest or woodland habitat, we recommend you complete a Summer Habitat Assessment prior to contacting our office to expedite the consultation process. The Summer Habitat Assessment Form is available in Appendix A of the most recent version of the [Range-wide Indiana Bat Summer Survey Guidelines](#).

Other Trust Resources and Activities

Bald and Golden Eagles - Although the bald eagle has been removed from the endangered species list, this species and the golden eagle are protected by the Bald and Golden Eagle Act and the Migratory Bird Treaty Act. Should bald or golden eagles occur within or near the project area please contact our office for further coordination. For communication and wind energy projects, please refer to additional guidelines below.

Migratory Birds - The Migratory Bird Treaty Act (MBTA) prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Service. The Service has the responsibility under the MBTA to proactively prevent the mortality of migratory birds whenever possible and we encourage implementation of recommendations that minimize potential impacts to migratory birds. Such measures include clearing forested habitat outside the nesting season (generally March 1 to August 31) or conducting nest surveys prior to clearing to avoid injury to eggs or nestlings.

Communication Towers - Construction of new communications towers (including radio, television, cellular, and microwave) creates a potentially significant impact on migratory birds, especially some 350 species of night-migrating birds. However, the Service has developed [voluntary guidelines for minimizing impacts](#).

Transmission Lines - Migratory birds, especially large species with long wingspans, heavy bodies, and poor maneuverability can also collide with power lines. In addition, mortality can occur when birds, particularly hawks, eagles, kites, falcons, and owls, attempt to perch on uninsulated or unguarded power poles. To minimize these risks, please refer to [guidelines](#) developed by the Avian Power Line Interaction Committee and the Service. Implementation of these measures is especially important along sections of lines adjacent to wetlands or other areas that support large numbers of raptors and migratory birds.

Wind Energy - To minimize impacts to migratory birds and bats, wind energy projects should follow the Service's [Wind Energy Guidelines](#). In addition, please refer to the Service's [Eagle Conservation Plan Guidance](#), which provides guidance for conserving bald and golden eagles in the course of siting, constructing, and operating wind energy facilities.

Next Steps

Should you determine that project activities **may affect** any federally listed species or trust resources described herein, please contact our office for further coordination. Letters with requests for consultation or correspondence about your project should include the Consultation Tracking Number in the header. Electronic submission is preferred.

If you have not already done so, please contact the Missouri Department of Conservation (Policy Coordination, P. O. Box 180, Jefferson City, MO 65102) for information concerning Missouri Natural Communities and Species of Conservation Concern.

We appreciate your concern for threatened and endangered species. Please feel free to contact our office with questions or for additional information.

Karen Herrington

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Wetlands

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Missouri Ecological Services Field Office

101 Park Deville Drive

Suite A

Columbia, MO 65203-0057

(573) 234-2132

Project Summary

Consultation Code: 03E14000-2021-SLI-0278

Event Code: 03E14000-2021-E-00800

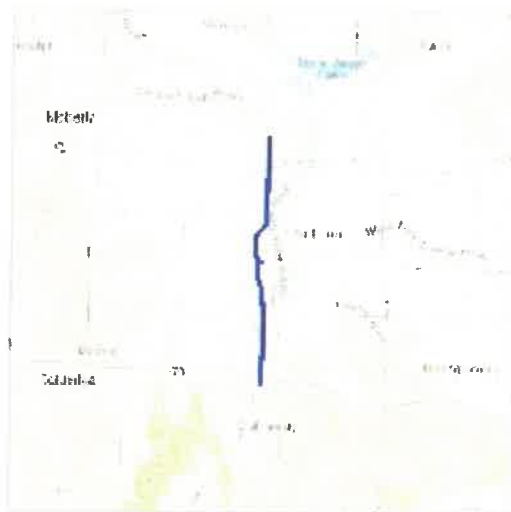
Project Name: Kingdom City Tap-Auxvasse-Salt River-Mexico-Santa Fe

Project Type: TRANSMISSION LINE

Project Description: 32.2 mile 69kV and 161kV transmission line rebuild on existing right-of-way in Callaway, Audrain, and Monroe counties

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/39.155167954500754N91.93472434453355W>



Counties: Audrain, MO | Callaway, MO | Monroe, MO

Endangered Species Act Species

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Gray Bat <i>Myotis grisescens</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6329	Endangered
Indiana Bat <i>Myotis sodalis</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Flowering Plants

NAME	STATUS
Running Buffalo Clover <i>Trifolium stoloniferum</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2529	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER EMERGENT WETLAND

- [PEM1A](#)
- [PEM1C](#)

FRESHWATER FORESTED/SHRUB WETLAND

- [PFO1A](#)
- [PFO1C](#)

FRESHWATER POND

- [PUBF](#)
- [PUBFh](#)
- [PUBGh](#)

RIVERINE

- [R2UBG](#)
- [R2USA](#)
- [R4SBC](#)
- [R5UBH](#)

Hoskins, Spencer

From: Weber, John S <John_S_Weber@fws.gov>
Sent: Thursday, March 25, 2021 12:04 PM
To: Hoskins, Spencer
Cc: Riedel, Ashley D; Hill, Laurel A
Subject: IPAC 03E14000-2021-SLI-0278 and 03E14000-2021-SLI-0277

****EXTERNAL E-MAIL****

Hello Mr. Hoskins,

Thank you for the additional information on the phone today regarding your electrical infrastructure project. I see no need for further consultation on this project, and our concurrence follows.

The U.S. Fish and Wildlife Service has reviewed your November 18, 2020 email and enclosures, requesting consultation on the proposed Maries to Chamois 161kV Transmission Line project as well as your Kingdom City to Santa Fe 69kV Transmission Line project in Missouri, and submits these comments pursuant to the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1544).

Based on the information you submitted, the Service concurs with your determination that your project should have "No Effect" on federally listed species.

Should the scope, timing, or manner of activity change, please contact this office.

Please let me know if you have any concerns or questions. I'm always happy to help.

Best,

John Weber
Deputy Field Supervisor
Missouri Field Office
U.S. Fish & Wildlife Service
Office: 573-234-5040; Cell: 573-825-6048

From: Hoskins, Spencer <SHoskins@cepc.net>
Sent: Monday, March 22, 2021 10:29 AM
To: Riedel, Ashley D <ashley_riedel@fws.gov>; Hill, Laurel A <laurel_hill@fws.gov>
Cc: Backus, Timothy L <timothy_backus@fws.gov>
Subject: RE: [EXTERNAL] IPAC 03E14000-2021-SLI-0278 and 03E14000-2021-SLI-0277

Good morning Ashley and Laurel,

Just curious if we have had a chance to review these two projects?

Thanks,

Spencer

Spencer K. Hoskins, P.E.

Manager - Transmission Line Design

Central Electric Power Cooperative

office: (573) 761-2857

cell: (573) 680-9568

shoskins@cepc.net



Hoskins, Spencer

From: Weber, John S <John_S_Weber@fws.gov>
Sent: Thursday, March 25, 2021 11:47 AM
To: Hoskins, Spencer
Subject: Fw: [EXTERNAL] IPAC 03E14000-2021-SLI-0278 and 03E14000-2021-SLI-0277

****EXTERNAL E-MAIL****

Hello Spencer,

I can help you with your consultation needs immediately. I apologize sincerely for the delay. Please call my cell phone at your convenience.

Best regards,

*John Weber
Deputy Field Supervisor
Missouri Field Office
U.S. Fish & Wildlife Service
Office: 573-234-5040; Cell: 573-825-6048*

From: Hoskins, Spencer <SHoskins@cepc.net>
Sent: Monday, March 22, 2021 10:29 AM
To: Riedel, Ashley D <ashley_riedel@fws.gov>; Hill, Laurel A <laurel_hill@fws.gov>
Cc: Backus, Timothy L <timothy_backus@fws.gov>
Subject: RE: [EXTERNAL] IPAC 03E14000-2021-SLI-0278 and 03E14000-2021-SLI-0277

Good morning Ashley and Laurel,

Just curious if we have had a chance to review these two projects?

Thanks,
Spencer

Spencer K. Hoskins, P.E.
Manager - Transmission Line Design
Central Electric Power Cooperative
office: (573) 761-2857
cell: (573) 680-9568
shoskins@cepc.net



From: Riedel, Ashley D <ashley_riedel@fws.gov>
Sent: Friday, March 5, 2021 10:53 AM
To: Hoskins, Spencer <SHoskins@cepc.net>
Cc: Backus, Timothy L <timothy_backus@fws.gov>; Hill, Laurel A <laurel_hill@fws.gov>
Subject: Re: [EXTERNAL] IPAC 03E14000-2021-SLI-0278 and 03E14000-2021-SLI-0277

****EXTERNAL E-MAIL****

No worries at all. With the staff turnover we've had, a lot of responsibilities have been shifted; so I'm sure it just got lost in the shuffle. But Laurel is wonderful to work with and she'll take great care of you!

Very Respectfully,
Ashley D. Riedel
Biological Science Technician, USFWS
Missouri Ecological Services Field Office
101 Park Deville Drive, Suite A
Columbia, MO 65203
Tel. (660) 672-2816 ext. 107*
*Teleworking - please email to schedule a call.

From: Hoskins, Spencer <SHoskins@cepc.net>
Sent: Friday, March 5, 2021 10:48 AM
To: Riedel, Ashley D <ashley_riedel@fws.gov>
Cc: Backus, Timothy L <timothy_backus@fws.gov>; Hill, Laurel A <laurel_hill@fws.gov>
Subject: RE: [EXTERNAL] IPAC 03E14000-2021-SLI-0278 and 03E14000-2021-SLI-0277

Thanks Ashley, I didn't write down the name since they appeared to have my contact info and had planned to email me a confirmation letter for each project that no further consultation was required, but the letters never came.

Spencer K. Hoskins, P.E.
Manager - Transmission Line Design
Central Electric Power Cooperative
office: (573) 761-2857
cell: (573) 680-9568
shoskins@cepc.net



From: Riedel, Ashley D <ashley_riedel@fws.gov>
Sent: Friday, March 5, 2021 10:38 AM
To: Hoskins, Spencer <SHoskins@cepc.net>
Cc: Backus, Timothy L <timothy_backus@fws.gov>; Hill, Laurel A <laurel_hill@fws.gov>
Subject: Re: [EXTERNAL] IPAC 03E14000-2021-SLI-0278 and 03E14000-2021-SLI-0277

****EXTERNAL E-MAIL****

Hi Spencer,

I apologize for the delay. We've had some staff turnover recently and I am wondering if perhaps you'd discussed the project with one of the individuals who has since left, as I have no records of either consultation. I generally work on FCC, HUD and FEMA consultations. I've reached out to our new RUS lead (CC'd above) to see if she recognizes the projects and/or can provide a quick comment. Otherwise, I would be happy to review them for you.

Very Respectfully,
Ashley D. Riedel
Biological Science Technician, USFWS
Missouri Ecological Services Field Office
101 Park Deville Drive, Suite A
Columbia, MO 65203
Tel. (660) 672-2816 ext. 107*
*Teleworking - please email to schedule a call.

From: Hoskins, Spencer <SHoskins@cepc.net>
Sent: Friday, March 5, 2021 10:20 AM
To: Backus, Timothy L <timothy_backus@fws.gov>; Riedel, Ashley D <ashley_riedel@fws.gov>
Subject: RE: [EXTERNAL] IPAC 03E14000-2021-SLI-0278 and 03E14000-2021-SLI-0277

Tim/Ashley,

Any word on this set of projects?

Spencer K. Hoskins, P.E.
Manager - Transmission Line Design
Central Electric Power Cooperative
office: (573) 761-2857
cell: (573) 680-9568
shoskins@cepc.net



From: Backus, Timothy L <timothy_backus@fws.gov>
Sent: Wednesday, February 17, 2021 4:10 PM
To: Hoskins, Spencer <SHoskins@cepc.net>
Subject: Fw: [EXTERNAL] IPAC 03E14000-2021-SLI-0278 and 03E14000-2021-SLI-0277

****EXTERNAL E-MAIL****

Spencer,

Here's a update from Ashley, she will be in touch tomorrow or Friday with ya, just letting ya know.

Tim

From: Riedel, Ashley D <ashley_riedel@fws.gov>
Sent: Wednesday, February 17, 2021 3:05 PM
To: Backus, Timothy L <timothy_backus@fws.gov>
Subject: Re: [EXTERNAL] IPAC 03E14000-2021-SLI-0278 and 03E14000-2021-SLI-0277

Hi Tim,

I do have a HUD consultation in Chamois, but I don't recognize this man's name. I'll look into the consultation codes to double check, and get back with him. My ArcGIS is down today though, so he likely won't get a response until COB tomorrow or the day after -- just as an FYI.

Very Respectfully,
Ashley D. Riedel
Biological Science Technician, USFWS
Big Muddy National Fish and Wildlife Refuge
& Missouri Ecological Services Field Office
101 Park Deville Drive, Suite A
Columbia, MO 65203
Tel. (660) 672-2816 ext. 107

From: Backus, Timothy L <timothy_backus@fws.gov>
Sent: Wednesday, February 17, 2021 2:39 PM
To: Riedel, Ashley D <ashley_riedel@fws.gov>
Subject: Fw: [EXTERNAL] IPAC 03E14000-2021-SLI-0278 and 03E14000-2021-SLI-0277

Ashley,

I spoke to him via phone, I ask him if it was Vona who helped him and he said it wasn't, only other person I could think that may have helped him was you. If it wasn't will you shoot the email to Vona and she can figure out who it was.

Thanks,

Tim

From: Hoskins, Spencer <SHoskins@cepc.net>
Sent: Wednesday, February 17, 2021 2:26 PM
To: Riedel, Ashley D <ashley_riedel@fws.gov>
Cc: Backus, Timothy L <timothy_backus@fws.gov>
Subject: [EXTERNAL] IPAC 03E14000-2021-SLI-0278 and 03E14000-2021-SLI-0277

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Good Afternoon Ashley,

Just sending an email to follow up on our conversation on two projects that we discussed over the phone with the IPAC numbers listed above (Kingdom City – Santa Fe and Chamois – Maries). Both projects were rebuilds on existing R/W and you were going to send me confirmation emails for my records that these would not cause any impacts to the appropriate species and that they would be a determination of “No Effect”. If you have any questions or need further information, please feel free to email me or use either of the contact numbers below.

Thanks,
Spencer

Spencer K. Hoskins, P.E.

Manager - Transmission Line Design

Central Electric Power Cooperative

office: (573) 761-2857

cell: (573) 680-9568

shoskins@cepc.net





**Central Electric
Power Cooperative**

2106 Jefferson Street, PO Box 269
Jefferson City, Missouri 65102
Telephone: (573) 634-2454
Fax: (573) 634-3892

November 18, 2020

Ms. Mabelle Watkins, District Engineer
Missouri Department of Transportation
Central District
1511 Missouri Blvd.
Jefferson City, MO 65109

Subject: Kingdom City –Santa Fe 69kV Transmission Line

Dear Ms. Watkins:

Central Electric Power Cooperative (CEPC) is proposing to redesign, retire, and rebuild the Kingdom City – Santa Fe 69kV line located in Callaway, Audrain and Monroe County, Missouri. The rebuild will be constructed on existing transmission line right-of-way.

In compliance with RUS environmental guidelines, CEPC is corresponding with the following agencies:

Missouri Department of Conservation
Missouri Department of Natural Resources
Missouri Department of Transportation – Central District
Natural Resources Conservation Service
Regional Planning Agencies
Missouri Department of Transportation – Northeast District

Dept. of the Army, Corps of Engineers – Kansas City District
United States Fish and Wildlife Service
Callaway County Commissioner
Monroe County Commissioner
Audrain County Commissioner

A topographic and location map for the proposed site is enclosed. Please review and comment regarding the construction of the facility as it relates to your organization. We would appreciate a response within 30 days. If you need any further information or wish to discuss the project, please contact me at 573-761-2857.

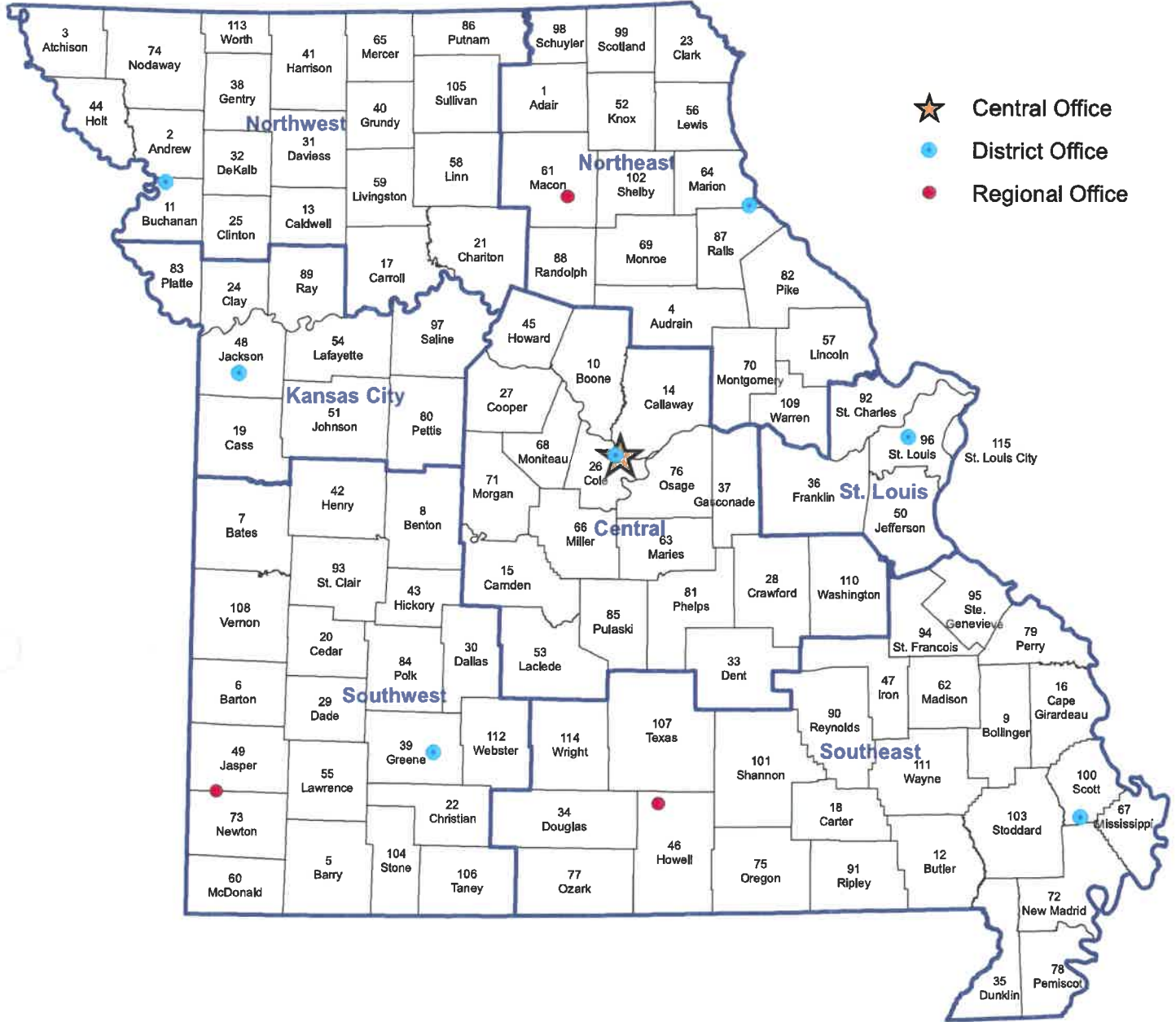
Respectfully,

CENTRAL ELECTRIC POWER COOPERATIVE

A handwritten signature in blue ink that reads "Spencer K. Hoskins".

Spencer K. Hoskins, P.E.
Manager - Transmission Line Design
Enclosures

Missouri Department of Transportation District Map



- ★ Central Office
- District Office
- Regional Office

County	No.	Dist.	County	No.	Dist.	County	No.	Dist.	County	No.	Dist.	County	No.	Dist.			
Adair	1	NE	Chariton	21	NW	Harrison	41	NW	Macon	61	NE	Phelps	81	C	Shannon	101	SE
Andrew	2	NW	Christian	22	SW	Henry	42	SW	Madison	62	SE	Pike	82	NE	Shelby	102	NE
Atchison	3	NW	Clark	23	NE	Hickory	43	SW	Marion	64	NE	Platte	83	KC	Stoddard	103	SE
Audrain	4	NE	Clay	24	KC	Holt	44	NW	Marion	64	NE	Polk	84	SW	Stone	104	SW
Barry	5	SW	Clinton	25	NW	Howard	45	C	Mercer	65	NW	Pulaski	85	C	Sullivan	105	NW
Barton	6	SW	Cole	26	C	Howell	46	SE	Miller	66	C	Putnam	86	NW	Taney	106	SW
Bates	7	SW	Cooper	27	C	Iron	47	SE	Missouri	67	SE	Ralls	87	NE	Texas	107	SE
Benton	8	SW	Crawford	28	C	Jackson	48	KC	Moniteau	68	C	Randolph	88	NE	Vernon	108	SW
Bollinger	9	SE	Dade	29	SW	Jasper	49	SW	Monroe	69	NE	Ray	89	KC	Warren	109	NE
Boone	10	C	Dallas	30	SW	Jefferson	50	SL	Montgomery	70	NE	Reynolds	90	SE	Washington	110	C
Buchanan	11	NW	Daviess	31	NW	Johnson	51	KC	Morgan	71	C	Ripley	91	SE	Wayne	111	SE
Butler	12	SE	DeKalb	32	NW	Knox	52	NE	New Madrid	72	SE	St. Charles	92	SL	Webster	112	SW
Caldwell	13	NW	Dent	33	C	Laclede	53	C	Newton	73	SW	St. Clair	93	SW	Worth	113	NW
Callaway	14	C	Douglas	34	SE	Lafayette	54	KC	Nodaway	74	NW	St. Francois	94	SE	Wright	114	SE
Camden	15	C	Dunklin	35	SE	Lawrence	55	SW	Oregon	75	SE	Ste. Genevieve	95	SE	St. Louis City	115	SL
Cape Girardeau	16	SE	Franklin	36	SL	Lewis	56	NE	Osage	76	C	St. Louis	96	SL			
Carroll	17	NW	Gasconade	37	C	Lincoln	57	NE	Ozark	77	SE	Saline	97	KC			
Carter	18	SE	Gentry	38	NW	Linn	58	NW	Pemiscot	78	SE	Schuyler	98	NE			
Cass	19	KC	Greene	39	SW	Livingston	59	NW	Perry	79	SE	Scotland	99	NE			
Cedar	20	SW	Grundy	40	NW	McDonald	60	SW	Pettis	80	KC	Scott	100	SE			



6/27/2011

Hoskins, Spencer

From: John Schaefer Jr. <John.Schaefer@modot.mo.gov>
Sent: Tuesday, December 8, 2020 3:37 PM
To: Hoskins, Spencer
Subject: RE: Central Electric - Kingdom City - Santa Fe Transmission Line

****EXTERNAL E-MAIL****

Spencer,

I believe I just reviewed and approved our Traffic Specialist to move forward with this line.

I also received the letter for the Maries -Chamois 161kV line yesterday. I'll review that one and get back with you. I don't foresee any issues; maybe some coordination.

Thank you,

John Schaefer Jr., P.E.
MoDOT – Central District
District Utilities Engineer
573-751-7380

From: Hoskins, Spencer <SHoskins@cepc.net>
Sent: Tuesday, December 8, 2020 3:26 PM
To: John Schaefer Jr. <John.Schaefer@modot.mo.gov>
Cc: Zachary S. Walker <Zachary.Walker@modot.mo.gov>
Subject: RE: Central Electric - Kingdom City - Santa Fe Transmission Line

Hello John,

We will be rebuilding the line you mentioned below, but I don't expect we will have any conflicts with your scheduled Hwy 54 work. We will be in contact with both districts getting the required permitting across MoDOT R/W and facilities and we can review project specs and timelines at that time if this is acceptable to you.

Thanks,
Spencer

Spencer K. Hoskins, P.E.

Manager - Transmission Line Design
Central Electric Power Cooperative
office: (573) 761-2857
cell: (573) 680-9568
shoskins@cepc.net



From: John Schaefer Jr. <John.Schaefer@modot.mo.gov>
Sent: Monday, December 7, 2020 9:28 AM
To: Hoskins, Spencer <SHoskins@cepc.net>
Cc: Zachary S. Walker <Zachary.Walker@modot.mo.gov>
Subject: Central Electric - Kingdom City - Santa Fe Transmission Line

****EXTERNAL E-MAIL****

Spencer,

I wanted to let you know that MoDOT's Central District received your letter dated November 18th regarding the Kingdom City-Santa Fe Transmission Line. I have prepared a response and included it as an attachment. I also noticed that you submitted a letter to our Northeast District. I expect you will soon be receiving a response from Zachary Walker as well.

I reviewed your submittal and didn't see any concerns regarding the facility. It looks as though you already have a facility along this path. I did want to note that MoDOT is working on a project along US 54 just north/east of the transmission line. It's possible our traffic control plan may extend beyond your facility. It's possible if we are working at the same time to have overlapping traffic control. We will need to coordinate such a scenario but I do not expect it to be an issue.

If you have any questions, please let us know.

Thank you,

John Schaefer Jr., P.E.
MoDOT – Central District
District Utilities Engineer
573-751-7380

Missouri Department of Transportation

1511 Missouri Blvd.
P.O. Box 718
Jefferson City, Missouri 65102
573.751.3322
Fax: 573.522.1059
1.888.ASK MODOT (275.6636)

December 7, 2020

Mr. Spencer Hoskins
Central Electric Power Cooperative
2106 Jefferson Street
P.O. Box 269
Jefferson City, MO 65102

Dear Mr. Hoskins;

I have reviewed your proposed project for Central Electric Power Cooperative in your letter dated November 18, 2020 sent to Ms. Machelle Watkins.

Specifically, project:
Kingdom City – Santa Fe 69kV Transmission Line

I reviewed the project for Callaway County only. The proposed project will not adversely affect the current State Highway System in Callaway County. The remaining portion of the project is in our Northeast District. Zachary Walker will be contacting you regarding their portion of the project; zachary.walker@modot.mo.gov and 573-501-1785.

We ask that prior to your final design/construction that Central Electric provide MoDOT with the opportunity to review the project's specifics in regard to the State's right of way. In particular, we will review the project for clearance heights when crossing MoDOT roadways as well as any poles being placed on MoDOT Right of Way. I will also review the plans for roadway traffic control. Any project that would involve MHTC right of way would need an approved permit prior to construction.

If you need any additional information or have any questions, please call me at 573-751-7380 or by email, john.schaefer@modot.mo.gov.

Respectfully,



John Schaefer, P.E.
District Utilities Engineer





**Central Electric
Power Cooperative**

2106 Jefferson Street, PO Box 269
Jefferson City, Missouri 65102
Telephone: (573) 634-2454
Fax: (573) 634-3892

November 18, 2020

Ms. Paula Gough, District Engineer
Missouri Department of Transportation
Northeast District
1711 S. Highway 61
Hannibal, MO 63401

Subject: Kingdom City –Santa Fe 69kV Transmission Line

Dear Ms. Gough:

Central Electric Power Cooperative (CEPC) is proposing to redesign, retire, and rebuild the Kingdom City – Santa Fe 69kV line located in Callaway, Audrain and Monroe County, Missouri. The rebuild will be constructed on existing transmission line right-of-way.

In compliance with RUS environmental guidelines, CEPC is corresponding with the following agencies:

- | | | |
|----------|--|---|
| District | Missouri Department of Conservation | Dept. of the Army, Corps of Engineers – Kansas City |
| | Missouri Department of Natural Resources | United States Fish and Wildlife Service |
| | Missouri Department of Transportation – Central District | Callaway County Commissioner |
| | Natural Resources Conservation Service | Monroe County Commissioner |
| | Regional Planning Agencies | Audrain County Commissioner |
| | Missouri Department of Transportation – Northeast District | |

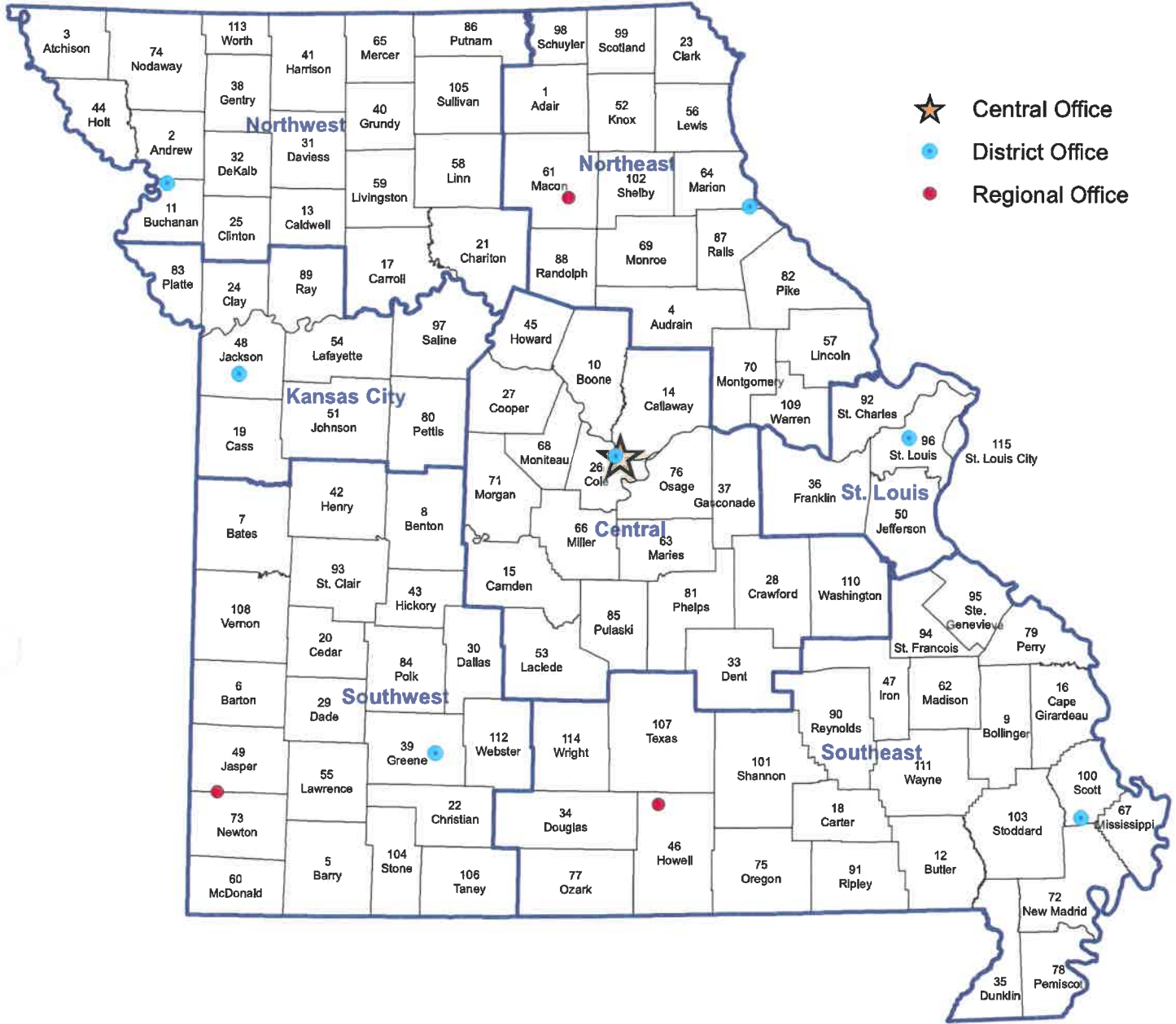
A topographic and location map for the proposed site is enclosed. Please review and comment regarding the construction of the facility as it relates to your organization. We would appreciate a response within 30 days. If you need any further information or wish to discuss the project, please contact me at 573-761-2857.

Respectfully,

CENTRAL ELECTRIC POWER COOPERATIVE

Spencer K. Hoskins, P.E.
Manager - Transmission Line Design
Enclosures

Missouri Department of Transportation District Map



County	No. Dist.	County	No. Dist.	County	No. Dist.	County	No. Dist.	County	No. Dist.	County	No. Dist.						
Adair	1	NE	Chariton	21	NW	Harrison	41	NW	Macon	61	NE	Phelps	81	NE			
Andrew	2	NW	Christian	22	SW	Henry	42	SW	Madison	62	SE	Pike	82	NE	Shannon	101	SE
Atchison	3	NW	Clark	23	NE	Hickory	43	SW	Maries	63	C	Platte	83	KC	Shelby	102	NE
Audrain	4	NE	Clay	24	KC	Holt	44	NW	Marion	64	NE	Polk	84	SW	Stoddard	103	SE
Barry	5	SW	Clinton	25	NW	Howard	45	C	Mercer	65	NW	Putnam	86	NW	Stone	104	SW
Barton	6	SW	Cole	26	C	Howell	46	SE	Miller	66	C	Randolph	88	NE	Taney	106	SW
Bates	7	SW	Cooper	27	C	Iron	47	SE	Moniteau	68	C	Rays	89	KC	Texas	107	SE
Benton	8	SW	Crawford	28	C	Jackson	48	KC	Monroe	69	NE	Reynolds	90	SE	Vernon	108	SW
Bollinger	9	SE	Dade	29	SW	Jasper	49	SW	Montgomery	70	NE	Ripley	91	SE	Warren	109	NE
Boone	10	C	Dallas	30	SW	Jefferson	50	SL	Morgan	71	C	St. Charles	92	SL	Washington	110	C
Buchanan	11	NW	Daviess	31	NW	Johnson	51	KC	Morgan	71	C	St. Clair	93	SW	Wayne	111	SE
Butler	12	SE	Dekalb	32	NW	Knox	52	NE	New Madrid	72	SE	St. Francois	94	SE	Webster	112	SW
Caldwell	13	NW	Douglas	34	SE	Laclede	53	C	Newton	73	SW	St. Genevieve	95	SE	Worth	113	NW
Callaway	14	C	Dunklin	35	SE	Lafayette	54	KC	Nodaway	74	NW	St. Louis	96	SL	Wright	114	SE
Camden	15	C	Dunklin	35	SE	Lawrence	55	SW	Oregon	75	SE	St. Louis City	115	SL			
Cape Girardeau	16	SE	Franklin	36	SL	Lewis	56	NE	Osage	76	C						
Carroll	17	NW	Gasconade	37	C	Lincoln	57	NE	Ozark	77	SE						
Carter	18	SE	Gentry	38	NW	Linn	58	NW	Pemiscot	78	SE						
Cass	19	KC	Greene	39	SW	Livingston	59	NW	Perry	79	SE						
Cedar	20	SW	Grundy	40	NW	McDonald	60	SW	Pettis	80	KC						



Hoskins, Spencer

From: Hoskins, Spencer
Sent: Thursday, December 10, 2020 4:07 PM
To: 'Zachary S. Walker'
Cc: John Schaefer Jr.
Subject: RE: Central Electric - Kingdom City - Santa Fe Transmission Line

Hello Zachary,

Thanks for the response. We will be in contact about getting the required permitting across MoDOT R/W and facilities and we can review project specs and timelines at that time.

Thanks,
Spencer

Spencer K. Hoskins, P.E.

Manager - Transmission Line Design

Central Electric Power Cooperative

office: (573) 761-2857

cell: (573) 680-9568

shoskins@cepc.net



From: Zachary S. Walker <Zachary.Walker@modot.mo.gov>
Sent: Thursday, December 10, 2020 1:00 PM
To: Hoskins, Spencer <SHoskins@cepc.net>
Cc: John Schaefer Jr. <John.Schaefer@modot.mo.gov>; Zachary S. Walker <Zachary.Walker@modot.mo.gov>
Subject: RE: Central Electric - Kingdom City - Santa Fe Transmission Line

****EXTERNAL E-MAIL****

Hi Spencer,

MoDOT NE District has also received your letter on the proposed upgrading of the Kingdom City-Santa Fe Transmission Line, please see attached response letter. I did not see any concerns regarding the facility. I am not aware of any future roadway construction projects along your route. As always, we have maintenance operations throughout the year working on various routes as needed, so we ask that if there are any overlapping work areas that your crews coordinate with our staff in the area.

If you have any questions, please let me know.

Thanks,

Zachary Walker, P.E.

December 10, 2020

Mr. Spencer Hoskins
Central Electric Power Cooperative
2106 Jefferson Street
P.O. Box 269
Jefferson City, MO 65102

Dear Mr. Hoskins;

I have reviewed your proposed project for Central Electric Power Cooperative in your letter dated November 18, 2020 sent to Paula Gough, MoDOT NE District Engineer.

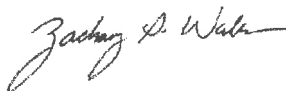
Specifically, project:
Kingdom City – Santa Fe 69kV Transmission Line

I reviewed the project for Audrain and Monroe counties only. The proposed project will not adversely affect the current State Highway System in Audrain and Monroe counties. From review, your route will cross the following MoDOT routes in Audrain County: Route Z, NN, 22, FF, D and HH. The remaining portion of the project is in our Central District. John Schaefer will be your contact regarding their portion of the project; john.schaefer@modot.mo.gov and 573-751-7380.

We ask that prior to your final design/construction that Central Electric provide MoDOT with the opportunity to review the project's specifics regarding MoDOT right of way. We will review the project for clearance heights when crossing MoDOT roadways as well as any poles being placed on MoDOT right of way. We will also review the plans for roadway traffic control. Any project that would involve MoDOT right of way would need an approved permit prior to construction.

If you need any additional information or have any questions, please call me at 573-501-1785 or by email, zachary.walker@modot.mo.gov.

Respectfully,



Digitally signed by Zachary Walker
DN: C=US, E=zachary.walker@modot.mo.gov,
OU=7CCD, O=MoDOT, CN=Zachary Walker
Date: 2020.12.10 12:42:12-06'00'

Zachary Walker, P.E.
District Utilities Engineer





**Central Electric
Power Cooperative**

2106 Jefferson Street, PO Box 269
Jefferson City, Missouri 65102
Telephone: (573) 634-2454
Fax: (573) 634-3892

November 18, 2020

Ms. Toni Prawl
Missouri Department of Natural Resources
State Historic Preservation Office
Attn: Section 106 Review
P.O. Box 176
Jefferson City, MO 65102-0176

Subject: Kingdom City – Santa Fe 69kV Transmission Line

Dear Ms. Prawl:

Central Electric Power Cooperative (CEPC) is proposing to redesign, retire, and rebuild the Kingdom City – Santa Fe 69kV line located in Callaway, Audrain and Monroe County, Missouri. The rebuild will be constructed on existing transmission line right-of-way.

In compliance with RUS environmental guidelines, CEPC is corresponding with the following agencies:

Missouri Department of Conservation
Missouri Department of Natural Resources
Missouri Department of Transportation – Central District
Natural Resources Conservation Service
Regional Planning Agencies
Missouri Department of Transportation – Northeast District

Dept. of the Army, Corps of Engineers – Kansas City District
United States Fish and Wildlife Service
Callaway County Commissioner
Monroe County Commissioner
Audrain County Commissioner

A completed Section 106 Form, topographic and location map for the proposed site is enclosed. Please review and comment regarding the construction of the facility as it relates to your organization. We would appreciate a response within 30 days. If you need any further information or wish to discuss the project, please contact me at 573-761-2857.

Respectfully,

CENTRAL ELECTRIC POWER COOPERATIVE

A handwritten signature in blue ink that reads "Spencer K. Hoskins".

Spencer K. Hoskins, P.E.
Manager - Transmission Line Design
Enclosures



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 a 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 website at: <http://dnr.mo.gov/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

Kingdom City - Santa Fe 69kV Transmission Line Rebuild

FEDERAL AGENCY PROVIDING FUNDS, LICENSE, OR PERMIT

Rural Utilities Service

APPLICANT

Central Electric Power Cooperative

TELEPHONE

(573) 761-2857

CONTACT PERSON

Spencer K. Hoskins

TELEPHONE

(573) 761-2857

ADDRESS FOR RESPONSE

Central Electric Power Cooperative
 ATTN: Spencer K. Hoskins
 2106 Jefferson St
 PO Box 269
 Jefferson City, MO 65102-0269

LOCATION OF PROJECT

COUNTY

Callaway, Audrain, Monroe

STREET ADDRESS

N/A

CITY

N/A

LEGAL DESCRIPTION OF PROJECT AREA (TOWNSHIP, RANGE, SECTION, 1/4 SECTION)

USGS TOPOGRAPHIC MAP QUADRANGLE NAME (SEE MAP REQUIREMENTS ON PAGE 2)

Kingdom City, Auxvasse, Mexico West, Molino, Paris East

YEAR	TOWNSHIP	RANGE	SECTION
Varies/ESRI scan Topo Maps	T48N - T53N	R 9W	

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.

Central Electric Power Cooperative has traditionally hired outside contractors to build/rebuild transmission lines. A full-time inspector representing CEPC will be on the project site during all phases of construction. Restoration procedures will be used on the right-of-ways to prevent erosion and to reestablish ground cover. The procedures include cultivating, seeding, and fertilizing the disturbed areas to stimulate rapid growth. Should cultural resources be encountered during construction, all activity will be halted and the State Historic Preservation officer and RUS immediately notified. Construction practices will conform to USDA/USDI guidelines. The measures recommended by the agencies contacted during the notification phase, to mitigate potential environmental threats, will be incorporated during the construction of the project.

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:

No, existing line was originally built in the 1950's era.

WILL THE PROJECT REQUIRE FILL MATERIAL? YES NO

IF YES, 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 CONTRUCTION 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:

IF YES, PLEASE PROVIDE THE NAME OF THE SURVEY OR 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 (8 1/2 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. For a list of sites from which to order, download or print the required USGS 7.5 min. topographic maps at little or no cost, consult <http://dnr.mo.gov/shpo/sectionrev.htm> .

Photography Requirements: Clear black and white or color photographs (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?

- | | |
|---|--|
| <input checked="" type="checkbox"/> Topographic map 7.5 min. (per project, not structure) | <input type="checkbox"/> Other supporting documents (If necessary to explain the project) |
| <input checked="" type="checkbox"/> Thorough description (all projects) | <input type="checkbox"/> For new construction, rehabilitations, etc., attach work write-ups, plans, drawings, etc. |
| <input type="checkbox"/> Photographs (all structures) | <input checked="" type="checkbox"/> 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**

Hoskins, Spencer

From: Alvey, Jeffrey <Jeffrey.Alvey@dnr.mo.gov>
Sent: Thursday, December 10, 2020 10:04 AM
To: Hoskins, Spencer
Subject: SHPO Project No. 010-MLT-21 - Kingdom City – Santa Fe 69kV Transmission Line Rebuild
Attachments: 010MLT21 0586 nhpa.pdf

****EXTERNAL E-MAIL****

Dear Spencer Hoskins,

Thank you for submitting information on 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. Our formal letter of comment is attached. Please retain a copy of this letter for your records as no physical copies will be mailed.

If you have any questions, please respond to jeffrey.alvey@dnr.mo.gov .

Best,
Jeffrey Alvey

Jeffrey S. Alvey, PhD, RPA
Archaeologist
Missouri State Historic Preservation Office
Missouri Department of Natural Resources
P.O. Box 176
Jefferson City, MO 65102
(573)751-7862

**CULTURAL RESOURCE ASSESSMENT
Section 106 Review**

CONTACT PERSON/ADDRESS:

Spencer K. Hoskins
Central Electric Power Cooperative
2106 Jefferson St.
Jefferson City, MO 65102-0269

C:

PROJECT:

Kingdom City – Santa Fe 69kV Transmission Line Rebuild

FEDERAL AGENCY:

RUS

COUNTY:

Callaway, Audrain, Monroe

The State Historic Preservation Office has reviewed the information submitted on the above referenced project. Based on this review, we have made the following determination:

Adequate documentation has been provided as outlined in 36 CFR Section 800.11. After review of the initial submission, the project area has no known historic properties present and a low potential for the occurrence of cultural resources. We concur with a determination of **No Historic Properties Affected**.

An adequate cultural resource survey of the project area has been previously conducted; therefore, SHPO concurs with your determination of **No Historic Properties Affected**.

An adequate cultural resource survey has been conducted for this project titled, , by . Based on this survey and its negative findings, SHPO concurs with your determination of **No Historic Properties Affected**.

For the above checked reason, the State Historic Preservation Office has no objection to the initiation of project activities. PLEASE BE ADVISED THAT, IF THE CURRENT PROJECT AREA OR SCOPE OF WORK CHANGES, A BORROW AREA IS INCLUDED IN THE PROJECT, OR CULTURAL MATERIALS ARE ENCOUNTERED DURING CONSTRUCTION, APPROPRIATE INFORMATION MUST BE PROVIDED TO THIS OFFICE FOR FURTHER REVIEW AND COMMENT. Please retain this documentation as evidence of compliance with Section 106 of the National Historic Preservation Act, as amended.

By:

Toni M. Prawl

Toni M. Prawl, Ph.D., Deputy State Historic Preservation Officer

December 9, 2020

Date

MISSOURI DEPARTMENT OF NATURAL RESOURCES
STATE HISTORIC PRESERVATION OFFICE
P.O. Box 176, Jefferson City, Missouri 65102

For additional information, please contact Jeffrey Alvey, (573) 751-7862.

Please be sure to refer to the project number: 010-MLT-21

Hoskins, Spencer

From: Hoskins, Spencer
Sent: Thursday, November 4, 2021 10:17 AM
To: 'Alvey, Jeffrey'
Subject: RE: SHPO Project No. 010-MLT-21 - Cultural Resource Investigations of KC Tap to Santa Fe Transmission Line Rebuild, Audrain, Callaway & Monroe Counties, Missouri

Jeffery,

Thank you for reviewing the report. Here is the electronic copy. If you also need an electronic version of the shovel test log, I can send you one as well.

Regards,
Spencer

Spencer K. Hoskins, P.E.

Manager - Transmission Line Design

Central Electric Power Cooperative

office: (573) 761-2857

cell: (573) 680-9568

shoskins@cepc.net



From: Alvey, Jeffrey <Jeffrey.Alvey@dnr.mo.gov>
Sent: Thursday, November 4, 2021 10:14 AM
To: Hoskins, Spencer <SHoskins@cepc.net>
Subject: SHPO Project No. 010-MLT-21 - Cultural Resource Investigations of KC Tap to Santa Fe Transmission Line Rebuild, Audrain, Callaway & Monroe Counties, Missouri

****EXTERNAL E-MAIL****

Dear Spencer,

I am presently reviewing the report you submitted to our office in association with the above referenced project. We also require that a PDF copy of the report accompany the hard copy. If you could just email that to me I can finalize my review.

Best,
Jeffrey

Jeffrey S. Alvey, PhD, RPA

Archaeologist

Missouri State Historic Preservation Office

Missouri Department of Natural Resources

P.O. Box 176

Jefferson City, MO 65102
(573)751-7862
Mostateparks.com/SHPO

We'd like your feedback on the service you received from the Missouri Department of Natural Resources. Please consider taking a few minutes to complete the department's Customer Satisfaction Survey at <https://www.surveymonkey.com/r/MoDNRsurvey>. Thank you.

Hoskins, Spencer

From: Boesch, Tammy <Tammy.Boesch@dnr.mo.gov>
Sent: Friday, November 5, 2021 10:08 AM
To: Hoskins, Spencer
Subject: SHPO Project #010-MLT-21 Kingdom City - Santa Fe 69kV Transmission Line Rebuild
Attachments: 010MLT21 0143 nhpa.pdf

****EXTERNAL E-MAIL****

Dear Spencer Hoskins:

Thank you for submitting information on 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. Our formal letter of comment is attached. Please retain a copy of this letter for your records as no physical copies will be mailed.

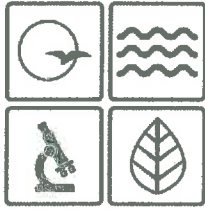
It was noted that this submission was on an older Section 106 Review form. For the latest form, please visit <https://mostateparks.com/page/84261/section-106-review>.

If you have any questions, please respond to Jeffrey Alvey at Jeffrey.alvey@dnr.mo.gov or call (573) 751-7862.

Best,

Tammy Boesch

Missouri SHPO
Review, Compliance, and Records
Missouri Dept of Natural Resources
P.O. Box 176
Jefferson City, MO 65102
Tammy.boesch@dnr.mo.gov
Main Line: 573-751-7858



Missouri Department of dnr.mo.gov

NATURAL RESOURCES

Michael L. Parson, Governor

Dru Buntin, Director

November 4, 2021

Spencer Hoskins, P.E.
Central Electric Power Cooperative
2106 Jefferson Street
Jefferson City, MO 65102

Re: **SHPO Project No. 010-MLT-21** – Phase I Cultural Resources Survey of the Proposed KC Tap to Santa Fe Transmission Line Rebuild, Audrain, Callaway & Monroe Counties, Missouri (USDA-RUS)

Dear Spencer Hoskins:

Thank you for submitting information on 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 requires identification and evaluation of cultural resources.

We have reviewed the cultural resource survey report entitled *Cultural Resource Investigations, Phase I Survey, KC Tap to Santa Fe Transmission Line Rebuild, Audrain, Callaway & Monroe Counties, Missouri* by Craig Sturdevant of Environmental Research Center of Missouri, Inc. Based on this review it is evident that an adequate cultural resources survey has been conducted of the project area. We concur that archaeological sites 23MN2309, 23AU1160, 23AU1161, 23CY1853, 23CY1854, and 23CY185 should be treated as unevaluated since the properties could not be fully tested and, therefore, potentially **eligible** for inclusion in the National Register of Historic Places. Because the project will be designed to avoid these archaeological sites, we concur that the proposed undertaking will result in **no historic properties affected** and have no objection to the initiation of project activities.

Please be advised that, should project plans change, information documenting the revisions should be submitted to this office for further review. In the event that cultural materials are encountered during project activities, all construction should be halted, and this office notified as soon as possible in order to determine the appropriate course of action.



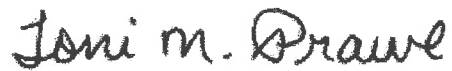
Spencer Hoskins

Page 2

If you have any questions, please write the State Historic Preservation Office, P.O. Box 176, Jefferson City, Missouri 65102 attention Review and Compliance, or call Jeffrey Alvey at (573) 751-7862. Please be sure to include the **SHPO Project Number (010-MLT-21)** on all future correspondence or inquiries relating to this project.

Sincerely,

STATE HISTORIC PRESERVATION OFFICE

A handwritten signature in cursive script that reads "Toni M. Prawl".

Toni M. Prawl, Ph.D.
Director and Deputy State
Historic Preservation Officer



**Central Electric
Power Cooperative**

2106 Jefferson Street, PO Box 269
Jefferson City, Missouri 65102
Telephone: (573) 634-2454
Fax: (573) 634-3892

November 18, 2020

Natural Heritage Review Coordinator
Missouri Department of Conservation
Resource Science Division
P.O. Box 180
Jefferson City, MO 65102

Subject: Kingdom City – Santa Fe 69kV Transmission Line

Dear Review Coordinator:

Central Electric Power Cooperative (CEPC) is proposing to redesign, retire, and rebuild the Kingdom City – Santa Fe 69kV line located in Callaway, Audrain and Monroe County, Missouri. The rebuild will be constructed on existing transmission line right-of-way.

In compliance with RUS environmental guidelines, CEPC is corresponding with the following agencies:

Missouri Department of Conservation
Missouri Department of Natural Resources
Missouri Department of Transportation – Central District
Natural Resources Conservation Service
Regional Planning Agencies
Missouri Department of Transportation – Northeast District

Dept. of the Army, Corps of Engineers – Kansas City District
United States Fish and Wildlife Service
Callaway County Commissioner
Monroe County Commissioner
Audrain County Commissioner

A topographic and location map for the proposed site is enclosed. Please review and comment regarding the construction of the facility as it relates to your organization. We would appreciate a response within 30 days. If you need any further information or wish to discuss the project, please contact me at 573-761-2857.

Respectfully,

CENTRAL ELECTRIC POWER COOPERATIVE

A handwritten signature in blue ink that reads "Spencer K. Hoskins".

Spencer K. Hoskins, P.E.
Manager - Transmission Line Design
Enclosures

Hoskins, Spencer

From: Hoskins, Spencer
Sent: Tuesday, December 8, 2020 3:16 PM
To: 'Natural Heritage Review'
Subject: RE: MO Natural Heritage Review Report for Kingdom City - Santa Fe Transmission Line

Hello Kate,

We will look forward to our Natural Heritage Review when it comes. Thanks for the update on the project and letting us know it was received.

Have a wonderful holiday season,
Spencer

Spencer K. Hoskins, P.E.

Manager - Transmission Line Design
Central Electric Power Cooperative
office: (573) 761-2857
cell: (573) 680-9568
shoskins@cepc.net



From: Natural Heritage Review <NaturalHeritageReview@mdc.mo.gov>
Sent: Monday, December 7, 2020 3:13 PM
To: Hoskins, Spencer <SHoskins@cepc.net>
Subject: RE: MO Natural Heritage Review Report for Kingdom City - Santa Fe Transmission Line

****EXTERNAL E-MAIL****

Hello,

I have received your request and added it to my work queue. Reports are processed as they are received and may take 4 to 5 weeks to complete. Response time can vary based on request traffic, the size of a project, the species nearby, and MDC's internal review processes.

If you have further questions, please reply to this email chain or call the phone number (573)-522-4115 ext 3182.

Thank you for using the Natural Heritage Review Program,

Kate Hodge
Missouri Dept. of Conservation
2901 W. Truman Blvd
PO Box 180
Jefferson City, MO, 65102

573-522-4115 ext 3182
FAX:573-526-5582

From: Hoskins, Spencer <SHoskins@cepc.net>
Sent: Thursday, December 3, 2020 11:46 AM
To: Natural Heritage Review <NaturalHeritageReview@mdc.mo.gov>
Cc: Janet Sternburg <Janet.Sternburg@mdc.mo.gov>
Subject: MO Natural Heritage Review Report for Kingdom City - Santa Fe Transmission Line

Dear Review Coordinator:

Central Electric Power Cooperative (CEPC) is proposing to redesign, retire, and rebuild the Kingdom City – Santa Fe 69kV line located in Osage and Maries County, Missouri. The rebuild will be constructed on existing transmission line right-of-way. Please review and comment regarding the construction of the facility as it relates to your organization. I have also sent a duplicate paper copy of this through the mail as a backup.

Thanks for your time and consideration,
Spencer

Spencer K. Hoskins, P.E.
Manager - Transmission Line Design
Central Electric Power Cooperative
office: (573) 761-2857
cell: (573) 680-9568
shoskins@cepc.net



From: Hoskins, Spencer
Sent: Wednesday, November 4, 2020 3:41 PM
To: 'Jordan Meyer' <Jordan.Meyer@mdc.mo.gov>; Janet Sternburg <Janet.Sternburg@mdc.mo.gov>
Cc: Natural Heritage Review <NaturalHeritageReview@mdc.mo.gov>
Subject: RE: MO Natural Heritage Review Report for California_Scruggs_Brazito Line

Thanks Jordan, I'll send the information to the Natural Heritage Review email address when it's ready.

Spencer K. Hoskins, P.E.
Manager - Transmission Line Design
Central Electric Power Cooperative
office: (573) 761-2857
cell: (573) 680-9568
shoskins@cepc.net



From: Jordan Meyer <Jordan.Meyer@mdc.mo.gov>
Sent: Wednesday, November 4, 2020 11:19 AM
To: Hoskins, Spencer <SHoskins@cepc.net>; Janet Sternburg <Janet.Sternburg@mdc.mo.gov>
Cc: Natural Heritage Review <NaturalHeritageReview@mdc.mo.gov>
Subject: RE: MO Natural Heritage Review Report for California_Scruggs_Brazito Line

****EXTERNAL E-MAIL****

Spencer,

Thank you for reaching out. A digital copy sent to NaturalHeritageReview@mdc.mo.gov would be the best option for us to receive and process your requests in a timely manner. I recently transferred out of the Environmental Review Coordinator position and we have multiple staff working to fill the job duties of that vacancy. Submissions to the NaturalHeritageReview@mdc.mo.gov email address are accessible by all those staff.

Let me know if you have any additional questions. Thank you for using the Natural Heritage Review Program,

Jordan James Meyer

Bat Ecologist
MO Dept. of Conservation
2901 W. Truman Blvd
PO Box 180
Jefferson City, MO, 65102
573-522-4115 ext 3182
FAX:573-526-5582

From: Hoskins, Spencer <SHoskins@cepc.net>
Sent: Wednesday, November 4, 2020 11:15 AM
To: Janet Sternburg <Janet.Sternburg@mdc.mo.gov>
Cc: Natural Heritage Review <NaturalHeritageReview@mdc.mo.gov>; Jordan Meyer <Jordan.Meyer@mdc.mo.gov>
Subject: RE: MO Natural Heritage Review Report for California_Scruggs_Brazito Line

Janet,

I will be sending out 2 more projects similar to the California-Brazito 69kV line rebuild from last year. Who would you like me to address it to? Would you prefer a physical mailed copy, an electron emailed copy or both?

Thanks,
Spencer

Spencer K. Hoskins, P.E.
Manager - Transmission Line Design
Central Electric Power Cooperative

office: (573) 761-2857
cell: (573) 680-9568
shoskins@cepc.net



From: Janet Sternburg <Janet.Sternburg@mdc.mo.gov>
Sent: Monday, November 18, 2019 11:46 AM
To: Hoskins, Spencer <SHoskins@cepc.net>
Cc: Natural Heritage Review <NaturalHeritageReview@mdc.mo.gov>; Janet Sternburg <Janet.Sternburg@mdc.mo.gov>; Jordan Meyer <Jordan.Meyer@mdc.mo.gov>
Subject: MO Natural Heritage Review Report for California_Scruggs_Brazito Line

****EXTERNAL E-MAIL****

Dear Mr. Hoskins,

Here is the above referenced report for your project. If you have any questions on the information, please let us know.

I apologize for the delay in our reply. Our new environmental review coordinator, Jordan James Meyer, starts today, so we should soon pick up the pace in providing the reports.

Thank you for your patience,

Janet

Janet Sternburg
Resource Science Supervisor
MO Dept. of Conservation
2901 W. Truman Blvd./Jefferson City, MO 65109 (street)
PO Box 180/Jefferson City, MO, 65102
573-522-4115 ext 3372
FAX:573-526-5582

JAN 15 2021

January 8, 2021

Hello

Attached are the Natural Heritage Review Reports for your two transmission line replacement projects. If you have questions regarding the reports please let me know.

Thank you for using the Natural Heritage Review Program.

Kelly Rezac

Wildlife Diversity Coordinator
Missouri Department of Conservation
(573) 522-4115 ext 3151



Missouri Department of Conservation
Natural Heritage Review Report

January 7, 2021 – Page 1 of 3

Science Branch
 P. O. Box 180
 Jefferson City, MO 65102
 Prepared by: Kate Hodge
 NaturalHeritageReview@mdc.mo.gov
 (573) 522 – 4115 ext. 3182

Spencer Hoskins
 Central Electric Power Cooperative
 2106 Jefferson Street, PO Box 269
 Jefferson City, MO 65102
 573-634-2454

Project type:	Utility Line
Location/Scope:	T53NR09WS16
County:	Monroe
Query reference:	Kingdom City – Santa Fe 69kV Transmission Line
Query received:	12/7/2020

This NATURAL HERITAGE REVIEW is not a site clearance letter. Rather, it identifies public lands and sensitive resources known to have been located close to and/or potentially affected by the proposed project. On-site verification is the responsibility of the project. Natural Heritage records were identified at some date and location. This report considers records near but not necessarily at the project site. Animals move and, over time, so do plant communities. 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 a protected species will not be encountered. These records only provide one reference and other information (e.g. wetland or soils maps, on-site inspections or surveys) should be considered. Look for additional information about the biological and habitat needs of records listed in order to avoid or minimize impacts. More information may be found at <http://mdc.mo.gov/discover-nature/places-go/natural-areas> and mdc4.mdc.mo.gov/applications/mofwis/mofwis_search1.aspx.

Level 3 issues: Records of federal-listed (these are also state-listed) species or critical habitats near the project site:

Natural Heritage records indicate *Haliaeetus leucocephalus* (Bald Eagle, federal-listed protected) occurs 3.97 mi and *Myotis grisescens* (Gray Myotis, federal-listed endangered, state-listed endangered) occurs 3.67 mi from project area.

- > **Bald Eagles:** Bald Eagles (*Haliaeetus leucocephalus*) nest near streams or water bodies in the project area. Nests are large and fairly easy to identify. While no longer listed as endangered, eagles continue to be protected by the federal government under the Bald and Golden Eagle Protection Act. Work managers should be alert for nesting areas within 1500 meters of project activities, and follow federal guidelines at: <https://www.fws.gov/midwest/eagle/permits/index.html> if eagle nests are seen.
- > **Gray Bats:** Gray Bats (*Myotis grisescens*, federal and state-listed endangered) occur in Monroe County and could occur in the project area, as they forage over streams, rivers, and reservoirs. Avoid entry or disturbance of any cave inhabited by gray bats and when possible retain forest vegetation along the stream and from the gray bat cave opening to the stream.

FEDERAL LIST species/habitats are protected under the Federal Endangered Species Act. Contact U.S. Fish and Wildlife Service, 101 Park Deville Drive Suite A, Columbia, Missouri 65203-0007; 573-234-2132 for Endangered Species Act coordination and concurrence information.

Level 2 issues: Records of state-listed (not federal-listed) endangered species AND / OR state-ranked (not state-listed endangered) species and natural communities of conservation concern. The Department tracks these species and natural communities due to population declines and/or apparent vulnerability.

Natural Heritage records identify no state-listed endangered species within the project area.

Natural Heritage records indicate the following species occur near the project area:

Scientific Name	Common Name	State Rank	Proximity (miles)
<i>Bromus latiglumis</i>	A Brome	S3	2.53
<i>Carex conoidea</i>	Field Sedge	S1	3.72
<i>Carex trichocarpa</i>	Hairy-fruited Sedge	S1	3.69
<i>Cyperus setigerus</i>	Bristled Cyperus	S1	3.72
<i>Ligumia recta</i>	Black Sandshell	S2	4.94
<i>Notropis buchanani</i>	Ghost Shiner	S2	3.75
<i>Notropis heterolepis</i>	Blacknose Shiner	S2	0.96
<i>Speyeria Idalia</i>	Regal Fritillary	S3	3.7
<i>Taxidea taxus</i>	American Badger	S3	0.9
<i>Tyto alba</i>	Barn Owl	S3	1.95

State Rank Definitions:

- S1: Critically imperiled in the state because of extreme rarity of or because of some factor(s) making it especially vulnerable to extirpation from the state. Typically, 5 or fewer occurrence or very few remaining individuals.
- S2: Imperiled in the state because of rarity or because of some factor(s) making it very vulnerable to extirpation from the state. (6 to 20 occurrences or few remaining individuals).
- S3: Vulnerable in the state means this species is rare and uncommon, or found only in a restricted range (even if abundant in some locations), or because of other factors making it vulnerable to extirpation. Typically, 21 to 100 occurrences or between 3,000 and 10,000 individuals.
- S4: Uncommon but not rare, and usually widespread in the nation or state. Possibly of long-term concern. Usually more than 100 occurrences and more than 10,000 individuals.
- SU: Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.

There are no regulatory requirements associated with this status, but we encourage voluntary stewardship for all these species to minimize the risk of further decline that could lead to listing.

See <http://mdc.mo.gov/145> for a complete list of species and communities of conservation concern.

STATE ENDANGERED species are listed in and protected under the *Wildlife Code of Missouri* (3CSR10-4.111).

General recommendations related to this project or site, or based on information about the historic range of species (unrelated to any specific heritage records):

- **Indiana Bats and Northern Long-eared Bats** could occur in the project area. Indiana Bats (*Myotis sodalis*, federal and state-listed endangered) and Northern Long-eared Bats (*Myotis septentrionalis*, federal-listed threatened) hibernate during winter months in caves and mines. During the summer months, they roost and raise young under the bark of trees in riparian forests and upland forests near perennial streams. During project activities, avoid degrading stream quality and where possible leave snags standing and preserve mature forest canopy. Do not enter caves known to harbor Indiana bats and/or Northern long-eared bats, especially from September to April. **If any trees need to be removed by your project, please contact the U.S. Fish and Wildlife Service (Ecological Services, 101 Park Deville Drive, Suite A, Columbia, Missouri 65203-0007; Phone 573-234-2132 Ext. 100 for Ecological Services) for further coordination under the Endangered Species Act.**
- **Karst:** Monroe County has known [karst geologic features](#) (e.g. caves, springs, and sinkholes, all characterized by subterranean water movement). Few karst features are recorded in Natural Heritage records, and ones not noted here may be encountered at the project site or affected by the project. Cave fauna (many of which are species of conservation concern) are influenced by changes to water quality, so check your project site for any karst features and make every effort to protect groundwater in the project area.
- **Utility Lines:** Cross-country lines affect both plants and wildlife, as do activities necessary to their construction, maintenance and repair. Stream and drainage crossings are primary concerns, and every effort should be made to avoid erosion, silt introduction, petroleum or chemical pollution, and disruption or realignment of stream banks and beds. See <https://mdc.mo.gov/sites/default/files/downloads/page/Streams.pdf> for best management recommendations for in-stream work. Revegetation is an important part of managing utility corridors, and it can have significant resource impacts – for better or worse. Revegetation of disturbed areas is recommended to minimize erosion, as is restoration with native plant species compatible with the local landscape and wildlife needs. Annuals like Rye Grass may be combined with native perennials for quicker green-up. Avoid aggressive exotic perennials such as Crown Vetch and *Sericea lespedeza*. Maintenance of ground cover in utility corridors can have significant implications for sensitive resources. Native plant species typically require low maintenance over the long term and provide more benefits to native wildlife. Utility corridors can provide wildlife travel corridors, food sources and types of low-growing plant diversity sometimes rare in adjoining land. Mowing and maintenance schedules should consider nesting seasons, and diversity in plant composition.
- Invasive exotic species are a significant issue for fish, wildlife and agriculture in Missouri. Seeds, eggs, and larvae may be moved to new sites on boats or construction equipment, so inspect and clean equipment thoroughly before moving between project sites.

 - ◆ Remove any mud, soil, trash, plants or animals from equipment before leaving any water body or work area.
 - ◆ Drain water from boats and machinery that has operated in water, checking motor cavities, live-well, bilge and transom wells, tracks, buckets, and any other water reservoirs.
 - ◆ When possible, wash and rinse equipment thoroughly with hard spray or HOT water ($\geq 140^{\circ}$ F, typically available at do-it-yourself carwash sites), and dry in the hot sun before using again.

These recommendations are ones project managers might prudently consider based on a general understanding of species needs and landscape conditions. Natural Heritage records largely reflect only sites visited by specialists in the last 30 years. This means that many privately owned tracts could host unknown remnants of species once but no longer common.

MISSOURI



**Central Electric
Power Cooperative**

2106 Jefferson Street, PO Box 269
Jefferson City, Missouri 65102
Telephone: (573) 634-2454
Fax: (573) 634-3892

November 18, 2020

Mr. Scott Larsen
Area Resource Soil Scientist
USDA-NRCS
6465 Highway 168, Suite C
Palmyra, MO 63461

Subject: Kingdom City –Santa Fe 69kV Transmission Line

Dear Mr. Larsen:

Central Electric Power Cooperative (CEPC) is proposing to redesign, retire, and rebuild the Kingdom City – Santa Fe 69kV line located in Callaway, Audrain and Monroe County, Missouri. The rebuild will be constructed on existing transmission line right-of-way.

In compliance with RUS environmental guidelines, CEPC is corresponding with the following agencies:

Missouri Department of Conservation
Missouri Department of Natural Resources
Missouri Department of Transportation – Central District
Natural Resources Conservation Service
Regional Planning Agencies
Missouri Department of Transportation – Northeast District

Dept. of the Army, Corps of Engineers – Kansas City District
United States Fish and Wildlife Service
Callaway County Commissioner
Monroe County Commissioner
Audrain County Commissioner

A completed Form AD1006, topographic map, and location map for the proposed site is enclosed. Please review and comment regarding the construction of the facility as it relates to your organization. We would appreciate a response within 30 days. If you need any further information or wish to discuss the project, please contact me at 573-761-2857.

Respectfully,

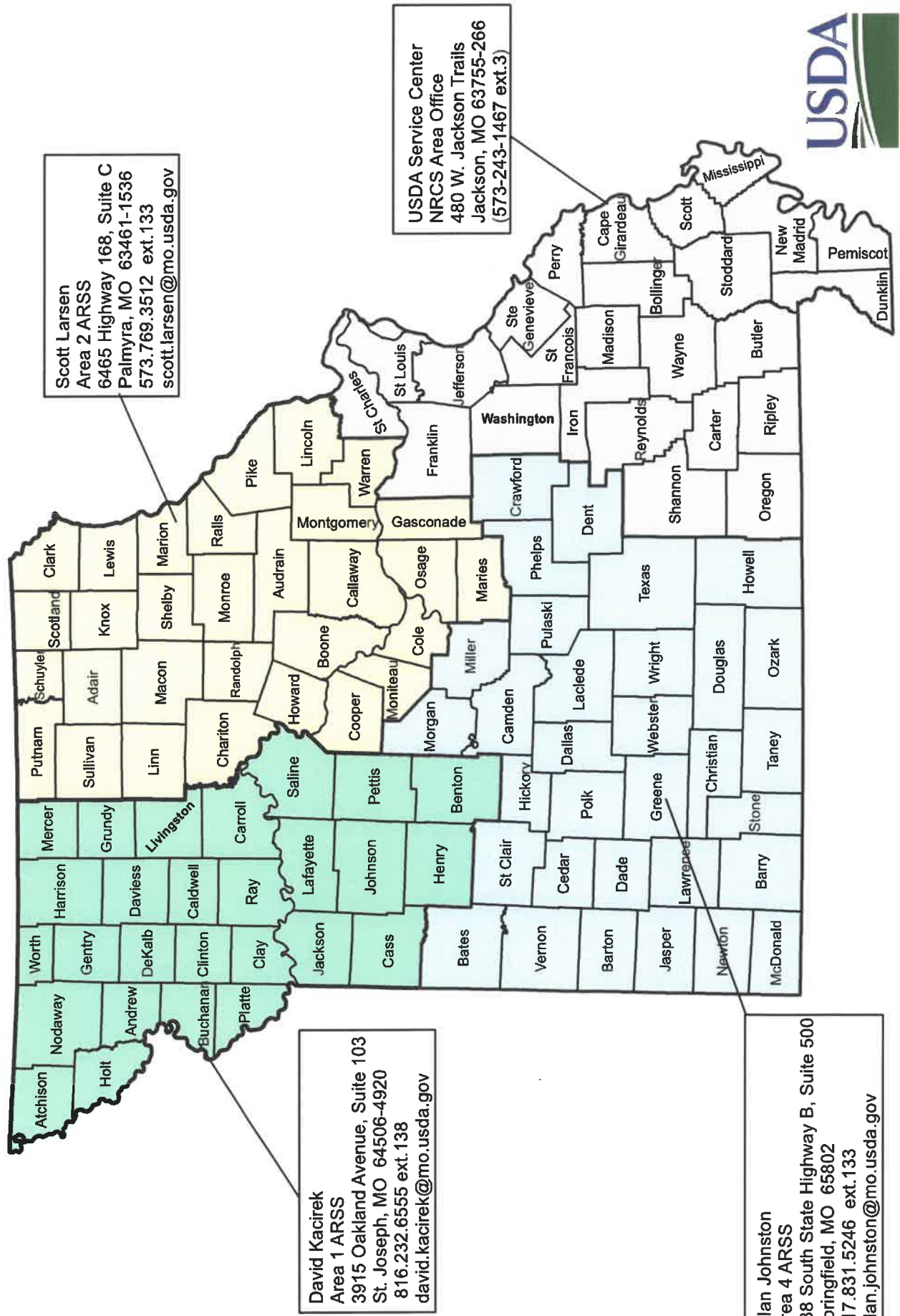
CENTRAL ELECTRIC POWER COOPERATIVE

A handwritten signature in blue ink that reads "Spencer K. Hoskins".

Spencer K. Hoskins, P.E.
Manager - Transmission Line Design
Enclosures

Area Resource Soil Scientists (ARSS)

Providing Technical Soil Services





December 22, 2020

Spencer K. Hoskins, P.E.
Manager – Transmission Line Design
Central Electric Power Cooperative
2106 Jefferson Street
P.O. Box 269
Jefferson City, MO 65102

Dear Mr. Hoskins

Attached is a Farmland Conversion Impact Rating (form AD-1006) for the proposed rebuild of the Kingdom City – Santa Fe 69kV line in Callaway, Audrain and Monroe Counties Missouri.

If you have any questions, please call me at (573) 769-2235 Ext. # 133.

Sincerely,

Scott Larsen
Area Resource Soil Scientist

Attachment

cc: Tony Hoover, DC, NRCS, Fulton, MO
Mitchell Krueger, DC, NRCS, Paris, MO

FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)		Date Of Land Evaluation Request November 16, 2020				
Name of Project Kingdom City - Santa Fe Trans Line		Federal Agency Involved RUS				
Proposed Land Use Rebuild 69kV line on existing R/W		County and State Callaway, Audrain and Monroe, MO				
PART II (To be completed by NRCS)		Date Request Received By NRCS 12/3/20		Person Completing Form: SL		
Does the site contain Prime, Unique, Statewide or Local Important Farmland? <i>(If no, the FPPA does not apply - do not complete additional parts of this form)</i>		YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	Acres Irrigated	Average Farm Size	
Major Crop(s)	Farmable Land In Govt. Jurisdiction Acres: %	Amount of Farmland As Defined in FPPA Acres: %				
Name of Land Evaluation System Used	Name of State or Local Site Assessment System	Date Land Evaluation Returned by NRCS 12/22/20				
PART III (To be completed by Federal Agency)		Alternative Site Rating				
		Site A	Site B	Site C	Site D	
A. Total Acres To Be Converted Directly		0				
B. Total Acres To Be Converted Indirectly		0				
C. Total Acres In Site		394				
PART IV (To be completed by NRCS) Land Evaluation Information						
A. Total Acres Prime And Unique Farmland						
B. Total Acres Statewide Important or Local Important Farmland						
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted						
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value						
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)						
PART VI (To be completed by Federal Agency) Site Assessment Criteria <i>Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)</i>		Maximum Points	Site A	Site B	Site C	Site D
1. Area In Non-urban Use		(15)				
2. Perimeter In Non-urban Use		(10)				
3. Percent Of Site Being Farmed		(20)				
4. Protection Provided By State and Local Government		(20)				
5. Distance From Urban Built-up Area		(15)				
6. Distance To Urban Support Services		(15)				
7. Size Of Present Farm Unit Compared To Average		(10)				
8. Creation Of Non-farmable Farmland		(10)				
9. Availability Of Farm Support Services		(5)				
10. On-Farm Investments		(20)				
11. Effects Of Conversion On Farm Support Services		(10)				
12. Compatibility With Existing Agricultural Use		(10)				
TOTAL SITE ASSESSMENT POINTS		160	0	0	0	0
PART VII (To be completed by Federal Agency)						
Relative Value Of Farmland (From Part V)		100	0	0	0	0
Total Site Assessment (From Part VI above or local site assessment)		160	0	0	0	0
TOTAL POINTS (Total of above 2 lines)		260	0	0	0	0
Site Selected:		Date Of Selection		Was A Local Site Assessment Used?		
				YES <input type="checkbox"/> NO <input type="checkbox"/>		
Reason For Selection:						
Name of Federal agency representative completing this form:					Date:	

STEPS IN THE PROCESSING THE FARMLAND AND CONVERSION IMPACT RATING FORM

- Step 1 - Federal agencies (or Federally funded projects) involved in proposed projects that may convert farmland, as defined in the Farmland Protection Policy Act (FPPA) to nonagricultural uses, will initially complete Parts I and III of the form. For Corridor type projects, the Federal agency shall use form NRCS-CPA-106 in place of form AD-1006. The Land Evaluation and Site Assessment (LESA) process may also be accessed by visiting the FPPA website, <http://fppa.nrcs.usda.gov/lesa/>.
- Step 2 - Originator (Federal Agency) will send one original copy of the form together with appropriate scaled maps indicating location(s) of project site(s), to the Natural Resources Conservation Service (NRCS) local Field Office or USDA Service Center and retain a copy for their files. (NRCS has offices in most counties in the U.S. The USDA Office Information Locator may be found at http://offices.usda.gov/scripts/ndISAPI.dll/oip_public/USA_map, or the offices can usually be found in the Phone Book under U.S. Government, Department of Agriculture. A list of field offices is available from the NRCS State Conservationist and State Office in each State.)
- Step 3 - NRCS will, within 10 working days after receipt of the completed form, make a determination as to whether the site(s) of the proposed project contains prime, unique, statewide or local important farmland. (When a site visit or land evaluation system design is needed, NRCS will respond within 30 working days.
- Step 4 - For sites where farmland covered by the FPPA will be converted by the proposed project, NRCS will complete Parts II, IV and V of the form.
- Step 5 - NRCS will return the original copy of the form to the Federal agency involved in the project, and retain a file copy for NRCS records.
- Step 6 - The Federal agency involved in the proposed project will complete Parts VI and VII of the form and return the form with the final selected site to the servicing NRCS office.
- Step 7 - The Federal agency providing financial or technical assistance to the proposed project will make a determination as to whether the proposed conversion is consistent with the FPPA.

INSTRUCTIONS FOR COMPLETING THE FARMLAND CONVERSION IMPACT RATING FORM (For Federal Agency)

Part I: When completing the "County and State" questions, list all the local governments that are responsible for local land use controls where site(s) are to be evaluated.

Part III: When completing item B (Total Acres To Be Converted Indirectly), include the following:

1. Acres not being directly converted but that would no longer be capable of being farmed after the conversion, because the conversion would restrict access to them or other major change in the ability to use the land for agriculture.
2. Acres planned to receive services from an infrastructure project as indicated in the project justification (e.g. highways, utilities planned build out capacity) that will cause a direct conversion.

Part VI: Do not complete Part VI using the standard format if a State or Local site assessment is used. With local and NRCS assistance, use the local Land Evaluation and Site Assessment (LESA).

1. Assign the maximum points for each site assessment criterion as shown in § 658.5(b) of CFR. In cases of corridor-type project such as transportation, power line and flood control, criteria #5 and #6 will not apply and will, be weighted zero, however, criterion #8 will be weighed a maximum of 25 points and criterion #11 a maximum of 25 points.
2. Federal agencies may assign relative weights among the 12 site assessment criteria other than those shown on the FPPA rule after submitting individual agency FPPA policy for review and comment to NRCS. In all cases where other weights are assigned, relative adjustments must be made to maintain the maximum total points at 160. For project sites where the total points equal or exceed 160, consider alternative actions, as appropriate, that could reduce adverse impacts (e.g. Alternative Sites, Modifications or Mitigation).

Part VII: In computing the "Total Site Assessment Points" where a State or local site assessment is used and the total maximum number of points is other than 160, convert the site assessment points to a base of 160.

Example: if the Site Assessment maximum is 200 points, and the alternative Site "A" is rated 180 points:

$$\frac{\text{Total points assigned Site A}}{\text{Maximum points possible}} = \frac{180}{200} \times 160 = 144 \text{ points for Site A}$$

For assistance in completing this form or FPPA process, contact the local NRCS Field Office or USDA Service Center.

NRCS employees, consult the FPPA Manual and/or policy for additional instructions to complete the AD-1006 form.



**Central Electric
Power Cooperative**

2106 Jefferson Street, PO Box 269
Jefferson City, Missouri 65102
Telephone: (573) 634-2454
Fax: (573) 634-3892

November 18, 2020

Department of the Army
Corps of Engineers
Kansas City District
MO State Regulatory Office
515 E. High Street, Suite 102
Jefferson City, MO 65101-3261

Subject: Kingdom City –Santa Fe 69kV Transmission Line

To Whom It May Concern:

Central Electric Power Cooperative (CEPC) is proposing to redesign, retire, and rebuild the Kingdom City – Santa Fe 69kV line located in Callaway, Audrain and Monroe County, Missouri. The rebuild will be constructed on existing transmission line right-of-way.

In compliance with RUS environmental guidelines, CEPC is corresponding with the following agencies:

Missouri Department of Conservation
Missouri Department of Natural Resources
Missouri Department of Transportation – Central District
Natural Resources Conservation Service
Regional Planning Agencies
Missouri Department of Transportation – Northeast District

Dept. of the Army, Corps of Engineers – Kansas City District
United States Fish and Wildlife Service
Callaway County Commissioner
Monroe County Commissioner
Audrain County Commissioner

A topographic and location map for the proposed site is enclosed. Please review and comment regarding the construction of the facility as it relates to your organization. We would appreciate a response within 30 days. If you need any further information or wish to discuss the project, please contact me at 573-761-2857.

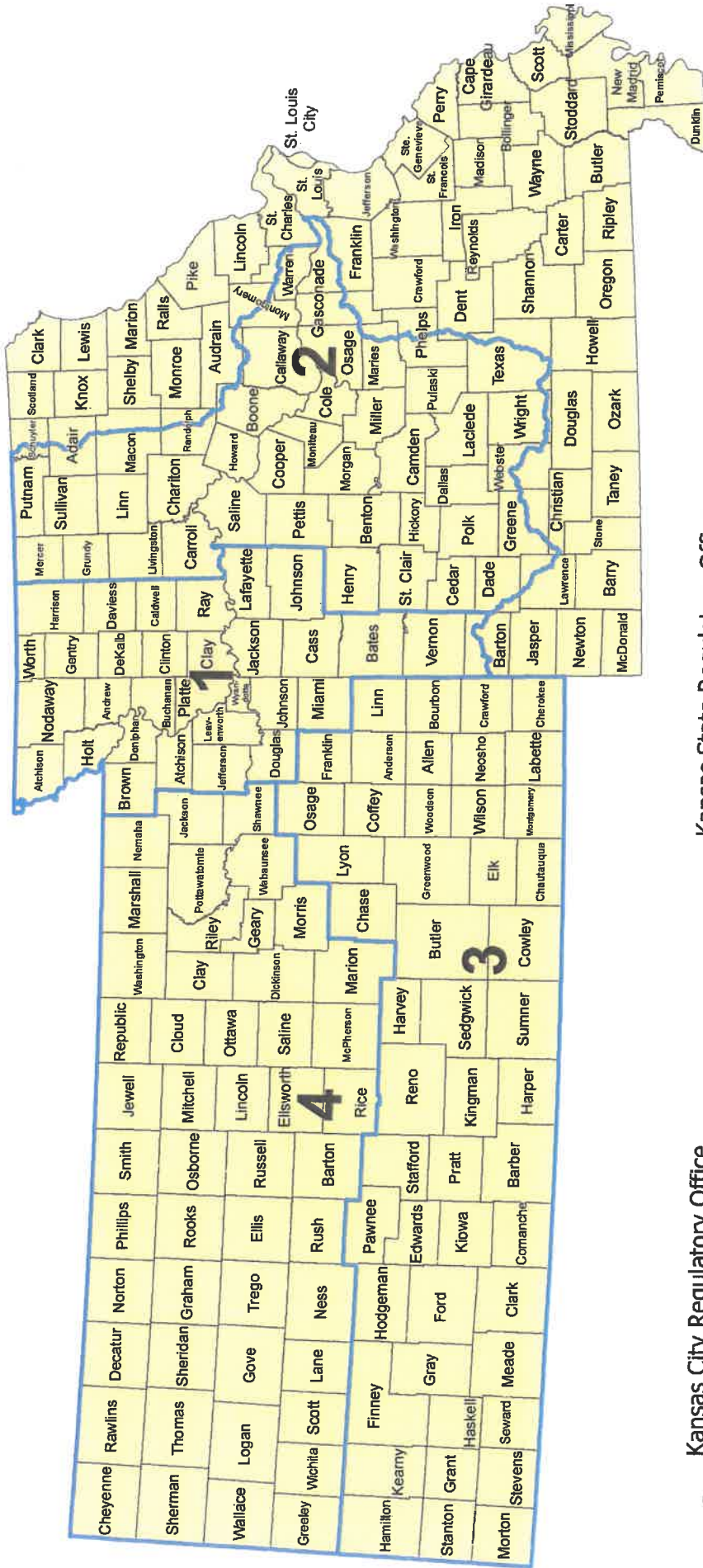
Respectfully,

CENTRAL ELECTRIC POWER COOPERATIVE

A handwritten signature in blue ink that reads "Spencer K. Hoskins".

Spencer K. Hoskins, P.E.
Manager - Transmission Line Design
Enclosures

Regulatory Office Boundary Map



1
Kansas City Regulatory Office
 601 East 12th Street
 Kansas City, MO 64106
 Tel: 816-389-3990
 FAX: 816-389-2032
 Regulatory.KansasCity@usace.army.mil

3
Kansas State Regulatory Office
 2710 NE Shady Creek Access Road
 El Dorado, KS 67042
 Tel: 316-322-8247
 Fax: 316-322-8259
 Regulatory.KansasState@usace.army.mil

4
Kanopolis Regulatory Satellite Office
 107 Riverside Drive
 Marquette, KS 67464
 Tel: 785-546-2130
 Fax: 785-546-2050
 Regulatory.Kanopolis@usace.army.mil



Hoskins, Spencer

From: Garner, Joshua G CIV USARMY CENWK (USA) <Joshua.G.Garner@usace.army.mil>
Sent: Tuesday, January 5, 2021 11:44 AM
To: Hoskins, Spencer
Subject: NWK-2020-01019 (Central Electric Power Coop - Kingdom City-Santa Fe 69kV line)
Attachments: 2020-01-04 - Gen Inquiry (NWK-2020-01019) - Kingdom City-Santa Fe 69kV Transmission Line.pdf

****EXTERNAL E-MAIL****

Spencer,

Regarding the subject-line project, attached is a copy of the USACE letter for your files.

Hard-copies will not be mailed out. Therefore, please confirm your receipt. Please let me know if you do not receive the file attached.

Best Regards,

Joshua Garner

U.S. Army Corps of Engineers
Missouri State Regulatory Office
Regulatory Specialist - Kansas City District
515 East High Street, Suite 202
Jefferson City, Missouri 65101
Phone: (816) 389-3834





DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, KANSAS CITY DISTRICT
MISSOURI STATE REGULATORY OFFICE
515 EAST HIGH STREET, #202
JEFFERSON CITY, MISSOURI 65101

January 4, 2021

Missouri State Regulatory Office
(NWK-2020-01019)
(Callaway, MO)

Mr. Spencer Hoskins
Central Electric Power Cooperative
2106 Jefferson Street
P.O. Box 269
Jefferson City, Missouri 65102

Dear Mr. Hoskins:

This is in reply to your letter to the U.S. Army Corps of Engineers (Corps) requesting input regarding the Kingdom City-Santa Fe 69 kV Transmission Line. It was received in this office November 08, 2020. The proposed project involves the redesign, retire, and rebuild of a 69kV transmission line within Callaway, Audrain, and Monroe County, Missouri.

The Corps has jurisdiction over all waters of the United States. Discharges of dredged or fill material in waters of the United States, including wetlands, require prior authorization from the Corps under Section 404 of the Clean Water Act (Title 33 United States Code Section 1344). The implementing regulation for this Act is found at Title 33 Code of Federal Regulations Parts 320-332.

Should any future construction plans associated with the project require the discharge of dredged or fill material in any waters of the United States, including wetlands, a Department of the Army (DA) permit may be required. However, if the proposed plans do not require the discharge of dredged or fill material in any waters of the United States, including wetlands, a DA permit will not be required. If you desire an official determination that any of the project is located within uplands and/or waters of the United States, and/or that a permit is or is not required, please contact this office.

We are interested in your thoughts and opinions concerning your experience with the Kansas City District, Corps of Engineers Regulatory Program. Please feel free to complete our Customer Service Survey form on our website at: http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey. You may also call and request a paper copy of the survey which you may complete and return to us by mail or fax.

If you have any questions concerning this matter, please feel free to contact Mr. Joshua Garner at 816-389-3834 or by email at joshua.g.garner@usace.army.mil. Your request has been assigned Regulatory File No. **NWK-2020-01019**. Please reference this file number on any correspondence to us or to other interested parties concerning this matter.



**Central Electric
Power Cooperative**

2106 Jefferson Street, PO Box 269
Jefferson City, Missouri 65102
Telephone: (573) 634-2454
Fax: (573) 634-3892

November 18, 2020

Mr. Gary Jungermann, Presiding Commissioner
Callaway County Commission
10 E 5th Street
Fulton, MO 65251
Subject: Kingdom City –Santa Fe 69kV Transmission Line

Dear Mr. Jundermann:

Central Electric Power Cooperative (CEPC) is proposing to redesign, retire, and rebuild the Kingdom City – Santa Fe 69kV line located in Callaway, Audrain and Monroe County, Missouri. The rebuild will be constructed on existing transmission line right-of-way.

In compliance with RUS environmental guidelines, CEPC is corresponding with the following agencies:

Missouri Department of Conservation
Missouri Department of Natural Resources
Missouri Department of Transportation – Central District
Natural Resources Conservation Service
Regional Planning Agencies
Missouri Department of Transportation – Northeast District

Dept. of the Army, Corps of Engineers – Kansas City District
United States Fish and Wildlife Service
Callaway County Commissioner
Monroe County Commissioner
Audrain County Commissioner

A topographic and location map for the proposed site is enclosed. Please review and comment regarding the construction of the facility as it relates to your organization. We would appreciate a response within 30 days. If you need any further information or wish to discuss the project, please contact me at 573-761-2857.

Respectfully,

CENTRAL ELECTRIC POWER COOPERATIVE

A handwritten signature in blue ink, appearing to read "Spencer K. Hoskins".

Spencer K. Hoskins, P.E.
Manager - Transmission Line Design
Enclosures

No Response Received



**Central Electric
Power Cooperative**

2106 Jefferson Street, PO Box 269
Jefferson City, Missouri 65102
Telephone: (573) 634-2454
Fax: (573) 634-3892

November 18, 2020

Mr. Steve Hobbs, Presiding Commissioner
Audrain County Commission
101 N Jefferson Street
Mexico, MO 65265

Subject: Kingdom City –Santa Fe 69kV Transmission Line

Dear Mr. Hobbs:

Central Electric Power Cooperative (CEPC) is proposing to redesign, retire, and rebuild the Kingdom City – Santa Fe 69kV line located in Callaway, Audrain and Monroe County, Missouri. The rebuild will be constructed on existing transmission line right-of-way.

In compliance with RUS environmental guidelines, CEPC is corresponding with the following agencies:

Missouri Department of Conservation
Missouri Department of Natural Resources
Missouri Department of Transportation – Central District
Natural Resources Conservation Service
Regional Planning Agencies
Missouri Department of Transportation – Northeast District

Dept. of the Army, Corps of Engineers – Kansas City District
United States Fish and Wildlife Service
Callaway County Commissioner
Monroe County Commissioner
Audrain County Commissioner

A topographic and location map for the proposed site is enclosed. Please review and comment regarding the construction of the facility as it relates to your organization. We would appreciate a response within 30 days. If you need any further information or wish to discuss the project, please contact me at 573-761-2857.

Respectfully,

CENTRAL ELECTRIC POWER COOPERATIVE

A handwritten signature in blue ink that reads "Spencer K. Hoskins".

Spencer K. Hoskins, P.E.
Manager - Transmission Line Design
Enclosures

Brian Haeffner (660-349-0892) called on 1/6/2021 and said that the Audrain County Commission had no concerns about this project.



**Central Electric
Power Cooperative**

2106 Jefferson Street, PO Box 269
Jefferson City, Missouri 65102
Telephone: (573) 634-2454
Fax: (573) 634-3892

November 18, 2020

Mr. Mike Minor, Presiding Commissioner
Monroe County Commission
300 N Main Street
Paris, MO 65275
Subject: Kingdom City –Santa Fe 69kV Transmission Line

Dear Mr. Minor:

Central Electric Power Cooperative (CEPC) is proposing to redesign, retire, and rebuild the Kingdom City – Santa Fe 69kV line located in Callaway, Audrain and Monroe County, Missouri. The rebuild will be constructed on existing transmission line right-of-way.

In compliance with RUS environmental guidelines, CEPC is corresponding with the following agencies:

Missouri Department of Conservation
Missouri Department of Natural Resources
Missouri Department of Transportation – Central District
Natural Resources Conservation Service
Regional Planning Agencies
Missouri Department of Transportation – Northeast District

Dept. of the Army, Corps of Engineers – Kansas City District
United States Fish and Wildlife Service
Callaway County Commissioner
Monroe County Commissioner
Audrain County Commissioner

A topographic and location map for the proposed site is enclosed. Please review and comment regarding the construction of the facility as it relates to your organization. We would appreciate a response within 30 days. If you need any further information or wish to discuss the project, please contact me at 573-761-2857.

Respectfully,

CENTRAL ELECTRIC POWER COOPERATIVE

A handwritten signature in blue ink that reads "Spencer K. Hoskins".

Spencer K. Hoskins, P.E.
Manager - Transmission Line Design
Enclosures

Mike Minor from the Monroe County Commission called on Friday January 8, 2021 to confirm they have no issue with this project.



**Central Electric
Power Cooperative**

2106 Jefferson Street, PO Box 269
Jefferson City, Missouri 65102
Telephone: (573) 634-2454
Fax: (573) 634-3892

November 18, 2020

Mr. David Bock
Mid-Missouri Regional Planning Commission
206 E. Broadway, P.O. Box 140
Ashland, MO 65010

Subject: Kingdom City –Santa Fe 69kV Transmission Line

Dear Mr. Bock:

Central Electric Power Cooperative (CEPC) is proposing to redesign, retire, and rebuild the Kingdom City – Santa Fe 69kV line located in Callaway, Audrain and Monroe County, Missouri. The rebuild will be constructed on existing transmission line right-of-way.

In compliance with RUS environmental guidelines, CEPC is corresponding with the following agencies:

Missouri Department of Conservation
Missouri Department of Natural Resources
Missouri Department of Transportation – Central District
Natural Resources Conservation Service
Regional Planning Agencies
Missouri Department of Transportation – Northeast District

Dept. of the Army, Corps of Engineers – Kansas City District
United States Fish and Wildlife Service
Callaway County Commissioner
Monroe County Commissioner
Audrain County Commissioner

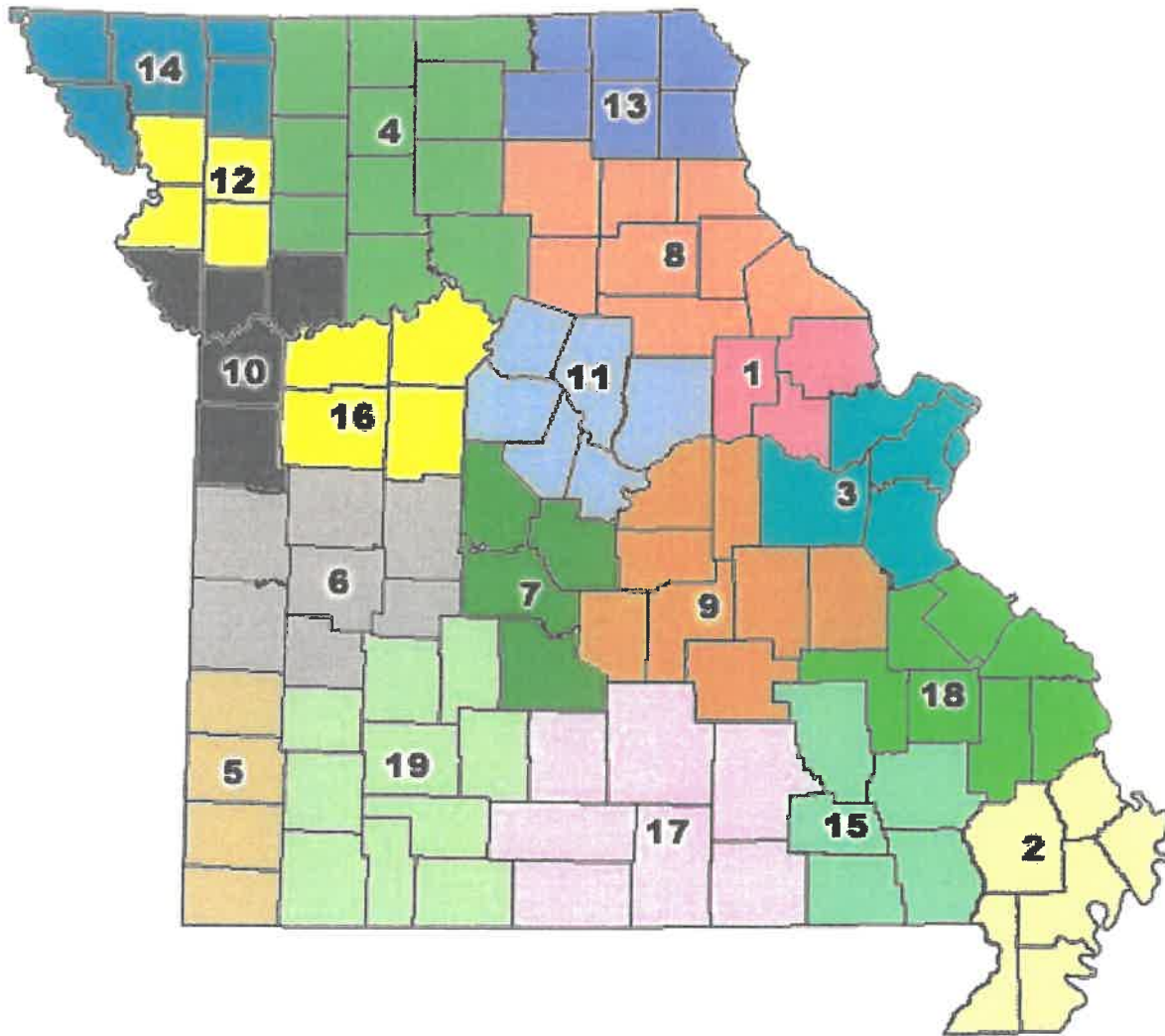
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Respectfully,

CENTRAL ELECTRIC POWER COOPERATIVE

A handwritten signature in blue ink that reads "Spencer K. Hoskins".

Spencer K. Hoskins, P.E.
Manager - Transmission Line Design
Enclosures



Missouri Association of Councils of Governments

213 East Capitol Avenue
P.O. Box 1865
Jefferson City, MO 65102

MACOG Home Office

573-634-5337
planning@macog.org



Missouri Regional Planning Commissions and Councils of Government

1. Boonslick Regional Planning Commission
2. Bootheel Regional Planning and Economic Development Commission
3. East-West Gateway Council of Governments
4. Green Hills Regional Planning Commission
5. Harry S Truman Coordinating Council
6. Kaysinger Basin Regional Planning Commission
7. Lake of the Ozarks Council of Local Governments
8. Mark Twain Regional Council of Governments
9. Meramec Regional Planning Commission
10. Mid-America Regional Council
11. Mid-Missouri Regional Planning Commission
12. Mo-Kan Regional Council
13. Northeast Missouri Regional Planning Commission
14. Northwest Missouri Regional Council of Governments:
15. Ozark Foothills Regional Planning Commission
16. Pioneer Trails Regional Planning Commission
17. South Central Ozark Council of Governments
18. Southeast Missouri Regional Planning and Economic Development Commission
19. Southwest Missouri Council of Governments

No Response Received



**Central Electric
Power Cooperative**

2106 Jefferson Street, PO Box 269
Jefferson City, Missouri 65102
Telephone: (573) 634-2454
Fax: (573) 634-3892

November 18, 2020

Ms. Cindy Hultz
Mark Twain Regional Council of Governments
42494 Delaware Ln
Perry, MO 63462

Subject: Kingdom City –Santa Fe 69kV Transmission Line

Dear Ms. Hultz:

Central Electric Power Cooperative (CEPC) is proposing to redesign, retire, and rebuild the Kingdom City – Santa Fe 69kV line located in Callaway, Audrain and Monroe County, Missouri. The rebuild will be constructed on existing transmission line right-of-way.

In compliance with RUS environmental guidelines, CEPC is corresponding with the following agencies:

District	Missouri Department of Conservation	Dept. of the Army, Corps of Engineers – Kansas City
	Missouri Department of Natural Resources	United States Fish and Wildlife Service
	Missouri Department of Transportation – Central District	Callaway County Commissioner
	Natural Resources Conservation Service	Monroe County Commissioner
	Regional Planning Agencies	Audrain County Commissioner
	Missouri Department of Transportation – Northeast District	

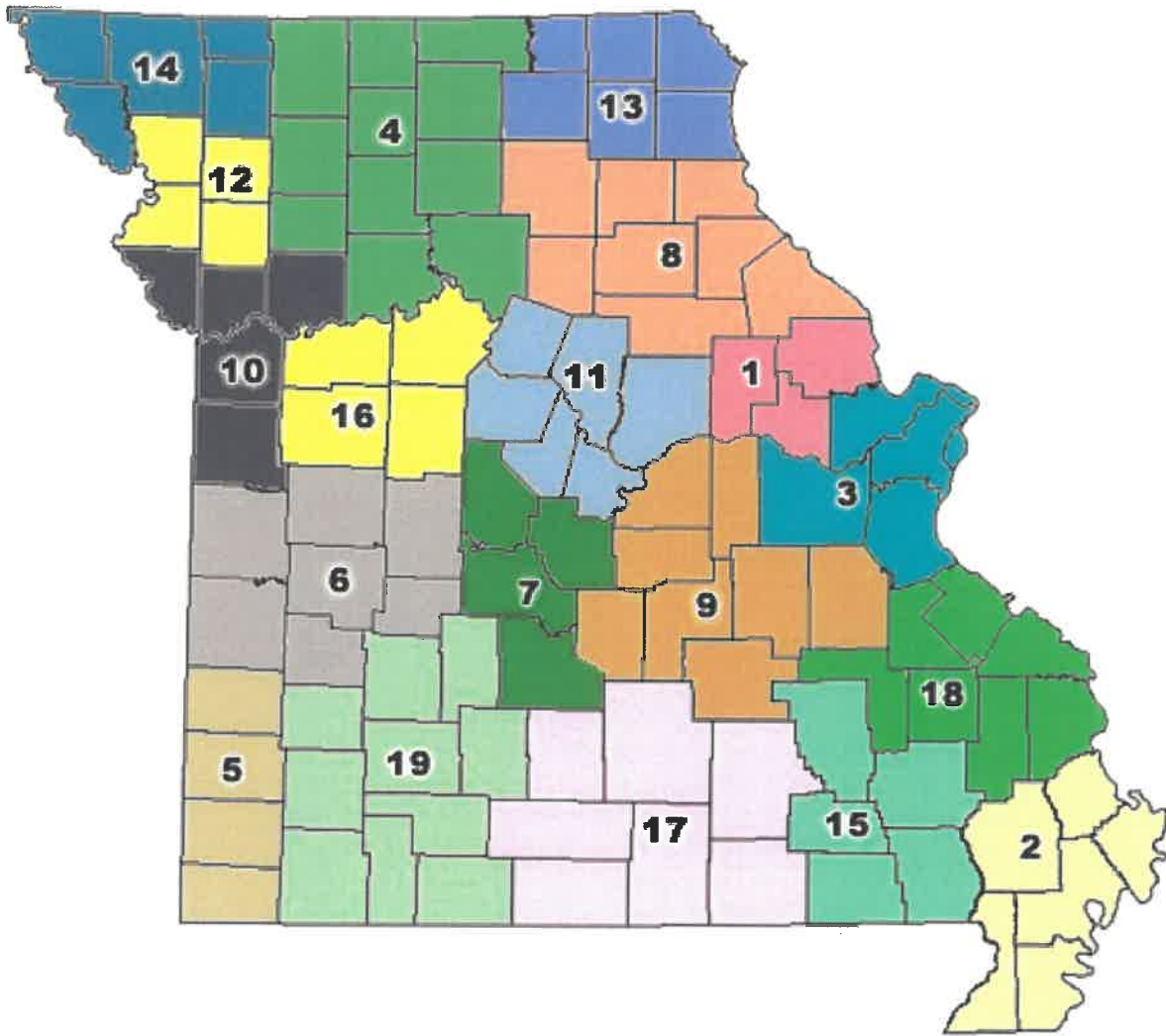
A topographic and location map for the proposed site is enclosed. Please review and comment regarding the construction of the facility as it relates to your organization. We would appreciate a response within 30 days. If you need any further information or wish to discuss the project, please contact me at 573-761-2857.

Respectfully,

CENTRAL ELECTRIC POWER COOPERATIVE

A handwritten signature in blue ink, reading "Spencer K. Hoskins".

Spencer K. Hoskins, P.E.
Manager - Transmission Line Design
Enclosures



Missouri Association of Councils of Governments

213 East Capitol Avenue
P.O. Box 1865
Jefferson City, MO 65102

MACOG Home Office

573-634-5337
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Missouri Regional Planning Commissions and Councils of Government

1. Boonslick Regional Planning Commission
2. Bootheel Regional Planning and Economic Development Commission
3. East-West Gateway Council of Governments
4. Green Hills Regional Planning Commission
5. Harry S Truman Coordinating Council
6. Kaysinger Basin Regional Planning Commission
7. Lake of the Ozarks Council of Local Governments
8. Mark Twain Regional Council of Governments
9. Meramec Regional Planning Commission
10. Mid-America Regional Council
11. Mid-Missouri Regional Planning Commission
12. Mo-Kan Regional Council
13. Northeast Missouri Regional Planning Commission
14. Northwest Missouri Regional Council of Governments:
15. Ozark Foothills Regional Planning Commission
16. Pioneer Trails Regional Planning Commission
17. South Central Ozark Council of Governments
18. Southeast Missouri Regional Planning and Economic Development Commission
19. Southwest Missouri Council of Governments

No Response Received



**Central Electric
Power Cooperative**

2106 Jefferson Street, PO Box 269
Jefferson City, Missouri 65102
Telephone: (573) 634-2454
Fax: (573) 634-3892

April 7, 2021

Mr. Bobby Komardley, Chairman
Apache Tribe of Oklahoma
PO Box 1330
Anadarko, OK 73005

Subject: United States Department of Agriculture (USDA) – Rural Development (RD) Rural Utilities
Service (RUS) Applicant THPO Section 106 Initiation

Kingdom City –Santa Fe 69kV Transmission Line
Callaway, Audrain and Monroe County, Missouri

Dear Mr. Komardley:

Central Electric Power Cooperative (CEPC) is seeking financial assistance from the USDA Rural Development (RD), Rural Utilities Service (RUS) under its Electric Program for the Kingdom City –Santa Fe 69kV Transmission Line (Project). CEPC is proposing to redesign, retire, and rebuild the approximate 33-mile Kingdom City – Santa Fe 69kV electric transmission line located in Callaway, Audrain and Monroe County, Missouri. The rebuild will be constructed on existing 100ft wide transmission line right-of-way.

If RUS elects to fund the Project, it will become an undertaking subject to review under Section 106 of the National Historic Preservation Act, 54 U.S.C. 306108, and its implementing regulations, 36 CFR Part 800.

RUS defines the area of potential effect (APE), as an area that includes all Project construction and excavation activity required to construct, modify, improve, or maintain any facilities; any right-of-way or easement areas necessary for the construction, operation, and maintenance of the Project; all areas used for excavation of borrow material and habitat creation; all construction staging areas, access routes, utilities, spoil areas, and stockpiling areas. Impacts that come from the undertaking at the same time and place with no intervening causes, are considered “direct” regardless of its specific type (e.g., whether it is visual, physical, auditory, etc.). “Indirect” effects to historic properties are those caused by the undertaking that are later in time or farther removed in distance but are still reasonably foreseeable.

Based on this definition, CEPC proposes that the APE for the referenced project consists of rebuilding the existing line that will be constructed on existing transmission line right-of-way. A topographic and location map for the proposed site is enclosed. The geographic scope of the

APE will not be final until a determination is made by RUS pursuant to 36 CFR § 800.4(a)(1). The APE does not include any tribal lands as defined pursuant 36 CFR § 800.16(x).

Pursuant to 36 CFR § 800.2(c)(4), and 7 CFR § 1970.5(b)(2) of the regulations, "Environmental Policies and Procedures" (7 CFR Part 1970), RUS has issued a blanket delegation for its applicants to initiate and proceed through Section 106 review if there is agreement.

In delegating this authority, RUS is advocating for the direct interaction between its Electric program applicants and Indian tribes. RUS believes this interaction, prior to direct agency involvement, will support and encourage the consideration of impacts to historic properties of importance to Indian tribes earlier in project planning.

CEPC is notifying you about the referenced project because of the possible interest of the Apache Tribe of Oklahoma in Callaway, Audrain and/or Monroe county, Missouri. Should the Apache Tribe of Oklahoma elect to participate in Section 106 review of the referenced project, please notify me in writing via letter or email as soon as possible at the following email address shoskins@cepc.net or at my office 2106 Jefferson St, PO Box 269 Jefferson City, MO 65102.

In compliance with RUS environmental guidelines, CEPC is corresponding with the following agencies:

Missouri Department of Conservation
Missouri Department of Natural Resources
Missouri Department of Transportation – Central District
Natural Resources Conservation Service
Regional Planning Agencies
Missouri Department of Transportation – Northeast District
Delaware Nation, Oklahoma
Osage Nation
Sac & Fox Nation of Oklahoma
Seneca-Cayuga Nation

Dept. of the Army, Corps of Engineers – Kansas City District
United States Fish and Wildlife Service
Callaway County Commissioner
Monroe County Commissioner
Audrain County Commissioner
Apache Tribe of Oklahoma
Miami Tribe of Oklahoma
Sac & Fox Nation of MO, KS & NE
Sac & Fox Tribe of the Mississippi in Iowa

Please include with your affirmative response, a description of any specific historic properties or important tribal resources in the APE and your recommendations about the level of effort needed to identify additional historic properties which might be affected by the referenced project. CEPC will respect the confidentiality of the information which you provide to the fullest extent possible.

If at any time you wish to share your interests, recommendations and concerns directly with RUS, as the agency responsible for conducting Section 106 review, or to request that RUS participate directly in Section 106 review, please notify me at once, preferably via email. However, you may contact RUS directly. If you wish to do so, please submit your request to Bryan Bacon at bryan.bacon@usda.gov.

Please submit your response **electronically** by May 15, 2021. RUS will proceed to the next step in Section 106 review if you fail to provide a timely response. Should you have any questions or require additional information you may contact me at the mailing address and/or email provided above or if you wish to discuss the project, please contact me at 573-761-2857.

Respectfully,

CENTRAL ELECTRIC POWER COOPERATIVE



Spencer K. Hoskins, P.E.
Manager - Transmission Line Design
Enclosures

Hoskins, Spencer

From: Hoskins, Spencer
Sent: Friday, April 9, 2021 2:54 PM
To: 'bkomardley@outlook.com'
Subject: THPO Section 106 Initiation - Kingdom City –Santa Fe 69kV Transmission Line in Callaway, Audrain and Monroe County, Missouri
Attachments: maps.pdf; Apache Letter.pdf

Hello Mr. Komardley,

Central Electric Power Cooperative is requesting a Tribal Historic Preservation Officers (THPO) Section 106 Initiation for our Kingdom City –Santa Fe 69kV Transmission Line Rebuild project in Callaway, Audrain and Monroe County, Missouri. The Rural Utilities Service has asked that we use the US Department of Housing and Rural Development's Tribal Directory Assessment Tool (HUD TDAT) to locate contact information and identify tribes that may have an interest in the location of our project. The HUD TDAT provided us with information showing your tribes possible interest in this project location and your contact information. If this has reached you in error, we apologize and ask that you confirm that your tribe has no historic interest in this area or if we need to contact a different person for the THPO review, please provide the proper contact person (if known) and we will contact them. We appreciate your time and interest in this project. If you have any questions or comments, please feel free to contact me via email or either of the numbers listed below.

Thanks,
Spencer

Spencer K. Hoskins, P.E.

Manager - Transmission Line Design
Central Electric Power Cooperative
office: (573) 761-2857
cell: (573) 680-9568
shoskins@cepc.net



Hoskins, Spencer

From: Hoskins, Spencer
Sent: Monday, May 17, 2021 2:29 PM
To: 'bkomardley@outlook.com'
Subject: RE: THPO Section 106 Initiation - Kingdom City –Santa Fe 69kV Transmission Line in Callaway, Audrain and Monroe County, Missouri

Hello,

Just wanted to follow up on my initial contact email below. I know with the COVID issues, everyone is behind on project review, but since I didn't receive a response, I just wanted to ensure that everyone had an opportunity to review and comment on our project. We appreciate your time and interest, if you have any questions or comments, please feel free to contact me via email or either of the numbers listed below.

Thanks,
Spencer

Spencer K. Hoskins, P.E.

Manager - Transmission Line Design

Central Electric Power Cooperative

office: (573) 761-2857

cell: (573) 680-9568

shoskins@cepc.net



From: Hoskins, Spencer
Sent: Friday, April 9, 2021 2:54 PM
To: 'bkomardley@outlook.com' <bkomardley@outlook.com>
Subject: THPO Section 106 Initiation - Kingdom City –Santa Fe 69kV Transmission Line in Callaway, Audrain and Monroe County, Missouri

Hello Mr. Komardley,

Central Electric Power Cooperative is requesting a Tribal Historic Preservation Officers (THPO) Section 106 Initiation for our Kingdom City –Santa Fe 69kV Transmission Line Rebuild project in Callaway, Audrain and Monroe County, Missouri. The Rural Utilities Service has asked that we use the US Department of Housing and Rural Development's Tribal Directory Assessment Tool (HUD TDAT) to locate contact information and identify tribes that may have an interest in the location of our project. The HUD TDAT provided us with information showing your tribes possible interest in this project location and your contact information. If this has reached you in error, we apologize and ask that you confirm that your tribe has no historic interest in this area or if we need to contact a different person for the THPO review, please provide the proper contact person (if known) and we will contact them. We appreciate your time and interest in this project. If you have any questions or comments, please feel free to contact me via email or either of the numbers listed below.

Thanks,

Spencer

Spencer K. Hoskins, P.E.

Manager - Transmission Line Design

Central Electric Power Cooperative

office: (573) 761-2857

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shoskins@cepc.net





**Central Electric
Power Cooperative**

2106 Jefferson Street, PO Box 269
Jefferson City, Missouri 65102
Telephone: (573) 634-2454
Fax: (573) 634-3892

April 7, 2021

Ms. Nekole Alligood, Director of Cultural Resources
Delaware Nation of Oklahoma
PO Box 825
Anadarko, OK 73005

Subject: United States Department of Agriculture (USDA) – Rural Development (RD) Rural Utilities
Service (RUS) Applicant THPO Section 106 Initiation

Kingdom City –Santa Fe 69kV Transmission Line
Callaway, Audrain and Monroe County, Missouri

Dear Ms. Alligood:

Central Electric Power Cooperative (CEPC) is seeking financial assistance from the USDA Rural Development (RD), Rural Utilities Service (RUS) under its Electric Program for the Kingdom City –Santa Fe 69kV Transmission Line (Project). CEPC is proposing to redesign, retire, and rebuild the approximate 33-mile Kingdom City – Santa Fe 69kV electric transmission line located in Callaway, Audrain and Monroe County, Missouri. The rebuild will be constructed on existing 100ft wide transmission line right-of-way.

If RUS elects to fund the Project, it will become an undertaking subject to review under Section 106 of the National Historic Preservation Act, 54 U.S.C. 306108, and its implementing regulations, 36 CFR Part 800.

RUS defines the area of potential effect (APE), as an area that includes all Project construction and excavation activity required to construct, modify, improve, or maintain any facilities; any right-of-way or easement areas necessary for the construction, operation, and maintenance of the Project; all areas used for excavation of borrow material and habitat creation; all construction staging areas, access routes, utilities, spoil areas, and stockpiling areas. Impacts that come from the undertaking at the same time and place with no intervening causes, are considered “direct” regardless of its specific type (e.g., whether it is visual, physical, auditory, etc.). “Indirect” effects to historic properties are those caused by the undertaking that are later in time or farther removed in distance but are still reasonably foreseeable.

Based on this definition, CEPC proposes that the APE for the referenced project consists of rebuilding the existing line that will be constructed on existing transmission line right-of-way. A topographic and location map for the proposed site is enclosed. The geographic scope of the

APE will not be final until a determination is made by RUS pursuant to 36 CFR § 800.4(a)(1). The APE does not include any tribal lands as defined pursuant 36 CFR § 800.16(x).

Pursuant to 36 CFR § 800.2(c)(4), and 7 CFR § 1970.5(b)(2) of the regulations, "Environmental Policies and Procedures" (7 CFR Part 1970), RUS has issued a blanket delegation for its applicants to initiate and proceed through Section 106 review if there is agreement.

In delegating this authority, RUS is advocating for the direct interaction between its Electric program applicants and Indian tribes. RUS believes this interaction, prior to direct agency involvement, will support and encourage the consideration of impacts to historic properties of importance to Indian tribes earlier in project planning.

CEPC is notifying you about the referenced project because of the possible interest of the Delaware Nation of Oklahoma in Callaway, Audrain and/or Monroe county, Missouri. Should the Delaware Nation of Oklahoma elect to participate in Section 106 review of the referenced project, please notify me in writing via letter or email as soon as possible at the following email address shoskins@cepc.net or at my office 2106 Jefferson St, PO Box 269 Jefferson City, MO 65102.

In compliance with RUS environmental guidelines, CEPC is corresponding with the following agencies:

Missouri Department of Conservation
Missouri Department of Natural Resources
Missouri Department of Transportation – Central District
Natural Resources Conservation Service
Regional Planning Agencies
Missouri Department of Transportation – Northeast District
Delaware Nation, Oklahoma
Osage Nation
Sac & Fox Nation of Oklahoma
Seneca-Cayuga Nation

Dept. of the Army, Corps of Engineers – Kansas City District
United States Fish and Wildlife Service
Callaway County Commissioner
Monroe County Commissioner
Audrain County Commissioner
Apache Tribe of Oklahoma
Miami Tribe of Oklahoma
Sac & Fox Nation of MO, KS & NE
Sac & Fox Tribe of the Mississippi in Iowa


Please include with your affirmative response, a description of any specific historic properties or important tribal resources in the APE and your recommendations about the level of effort needed to identify additional historic properties which might be affected by the referenced project. CEPC will respect the confidentiality of the information which you provide to the fullest extent possible.

If at any time you wish to share your interests, recommendations and concerns directly with RUS, as the agency responsible for conducting Section 106 review, or to request that RUS participate directly in Section 106 review, please notify me at once, preferably via email. However, you may contact RUS directly. If you wish to do so, please submit your request to Bryan Bacon at bryan.bacon@usda.gov .

Please submit your response **electronically** by May 15, 2021. RUS will proceed to the next step in Section 106 review if you fail to provide a timely response. Should you have any questions or require additional information you may contact me at the mailing address and/or email provided above or if you wish to discuss the project, please contact me at 573-761-2857.

Respectfully,

CENTRAL ELECTRIC POWER COOPERATIVE

A handwritten signature in blue ink that reads "Spencer K. Hoskins". The signature is written in a cursive style with a horizontal line at the end.

Spencer K. Hoskins, P.E.
Manager - Transmission Line Design
Enclosures

Hoskins, Spencer

From: Hoskins, Spencer
Sent: Friday, April 9, 2021 2:56 PM
To: 'Nalligood@delawarenation.com'
Subject: THPO Section 106 Initiation - Kingdom City –Santa Fe 69kV Transmission Line in Callaway, Audrain and Monroe County, Missouri
Attachments: Delaware Letter.pdf; maps.pdf

Hello Ms. Alligood,

Central Electric Power Cooperative is requesting a Tribal Historic Preservation Officers (THPO) Section 106 Initiation for our Kingdom City –Santa Fe 69kV Transmission Line Rebuild project in Callaway, Audrain and Monroe County, Missouri. The Rural Utilities Service has asked that we use the US Department of Housing and Rural Development's Tribal Directory Assessment Tool (HUD TDAT) to locate contact information and identify tribes that may have an interest in the location of our project. The HUD TDAT provided us with information showing your tribes possible interest in this project location and your contact information. If this has reached you in error, we apologize and ask that you confirm that your tribe has no historic interest in this area or if we need to contact a different person for the THPO review, please provide the proper contact person (if known) and we will contact them. We appreciate your time and interest in this project. If you have any questions or comments, please feel free to contact me via email or either of the numbers listed below.

Thanks,
Spencer

Spencer K. Hoskins, P.E.

Manager - Transmission Line Design

Central Electric Power Cooperative

office: (573) 761-2857

cell: (573) 680-9568

shoskins@cepc.net



Hoskins, Spencer

From: Hoskins, Spencer
Sent: Monday, May 17, 2021 2:29 PM
To: 'Nalligood@delawarenation.com'
Subject: RE: THPO Section 106 Initiation - Kingdom City –Santa Fe 69kV Transmission Line in Callaway, Audrain and Monroe County, Missouri

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Manager - Transmission Line Design

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office: (573) 761-2857

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shoskins@cepc.net





**Central Electric
Power Cooperative**

2106 Jefferson Street, PO Box 269
Jefferson City, Missouri 65102
Telephone: (573) 634-2454
Fax: (573) 634-3892

April 7, 2021

Ms. Diane Hunter, THPO
Miami Tribe of Oklahoma
PO Box 1326
Miami, OK 74355

Subject: United States Department of Agriculture (USDA) – Rural Development (RD) Rural Utilities
Service (RUS) Applicant THPO Section 106 Initiation

Kingdom City –Santa Fe 69kV Transmission Line
Callaway, Audrain and Monroe County, Missouri

Dear Ms. Hunter:

Central Electric Power Cooperative (CEPC) is seeking financial assistance from the USDA Rural Development (RD), Rural Utilities Service (RUS) under its Electric Program for the Kingdom City –Santa Fe 69kV Transmission Line (Project). CEPC is proposing to redesign, retire, and rebuild the approximate 33-mile Kingdom City – Santa Fe 69kV electric transmission line located in Callaway, Audrain and Monroe County, Missouri. The rebuild will be constructed on existing 100ft wide transmission line right-of-way.

If RUS elects to fund the Project, it will become an undertaking subject to review under Section 106 of the National Historic Preservation Act, 54 U.S.C. 306108, and its implementing regulations, 36 CFR Part 800.

RUS defines the area of potential effect (APE), as an area that includes all Project construction and excavation activity required to construct, modify, improve, or maintain any facilities; any right-of-way or easement areas necessary for the construction, operation, and maintenance of the Project; all areas used for excavation of borrow material and habitat creation; all construction staging areas, access routes, utilities, spoil areas, and stockpiling areas. Impacts that come from the undertaking at the same time and place with no intervening causes, are considered “direct” regardless of its specific type (e.g., whether it is visual, physical, auditory, etc.). “Indirect” effects to historic properties are those caused by the undertaking that are later in time or farther removed in distance but are still reasonably foreseeable.

Based on this definition, CEPC proposes that the APE for the referenced project consists of rebuilding the existing line that will be constructed on existing transmission line right-of-way. A topographic and location map for the proposed site is enclosed. The geographic scope of the

APE will not be final until a determination is made by RUS pursuant to 36 CFR § 800.4(a)(1). The APE does not include any tribal lands as defined pursuant 36 CFR § 800.16(x).

Pursuant to 36 CFR § 800.2(c)(4), and 7 CFR § 1970.5(b)(2) of the regulations, “Environmental Policies and Procedures” (7 CFR Part 1970), RUS has issued a blanket delegation for its applicants to initiate and proceed through Section 106 review if there is agreement.

In delegating this authority, RUS is advocating for the direct interaction between its Electric program applicants and Indian tribes. RUS believes this interaction, prior to direct agency involvement, will support and encourage the consideration of impacts to historic properties of importance to Indian tribes earlier in project planning.

CEPC is notifying you about the referenced project because of the possible interest of the Miami Tribe of Oklahoma in Callaway, Audrain and/or Monroe county, Missouri. Should the Miami Tribe of Oklahoma elect to participate in Section 106 review of the referenced project, please notify me in writing via letter or email as soon as possible at the following email address shoskins@cepc.net or at my office 2106 Jefferson St, PO Box 269 Jefferson City, MO 65102.

In compliance with RUS environmental guidelines, CEPC is corresponding with the following agencies:

Missouri Department of Conservation
Missouri Department of Natural Resources
Missouri Department of Transportation – Central District
Natural Resources Conservation Service
Regional Planning Agencies
Missouri Department of Transportation – Northeast District
Delaware Nation, Oklahoma
Osage Nation
Sac & Fox Nation of Oklahoma
Seneca-Cayuga Nation

Dept. of the Army, Corps of Engineers – Kansas City District
United States Fish and Wildlife Service
Callaway County Commissioner
Monroe County Commissioner
Audrain County Commissioner
Apache Tribe of Oklahoma
Miami Tribe of Oklahoma
Sac & Fox Nation of MO, KS & NE
Sac & Fox Tribe of the Mississippi in Iowa

Please include with your affirmative response, a description of any specific historic properties or important tribal resources in the APE and your recommendations about the level of effort needed to identify additional historic properties which might be affected by the referenced project. CEPC will respect the confidentiality of the information which you provide to the fullest extent possible.

If at any time you wish to share your interests, recommendations and concerns directly with RUS, as the agency responsible for conducting Section 106 review, or to request that RUS participate directly in Section 106 review, please notify me at once, preferably via email. However, you may contact RUS directly. If you wish to do so, please submit your request to Bryan Bacon at bryan.bacon@usda.gov.

Please submit your response **electronically** by May 15, 2021. RUS will proceed to the next step in Section 106 review if you fail to provide a timely response. Should you have any questions or require additional information you may contact me at the mailing address and/or email provided above or if you wish to discuss the project, please contact me at 573-761-2857.

Respectfully,

CENTRAL ELECTRIC POWER COOPERATIVE

A handwritten signature in blue ink, appearing to read "Spencer K. Hoskins".

Spencer K. Hoskins, P.E.
Manager - Transmission Line Design
Enclosures

Hoskins, Spencer

From: Hoskins, Spencer
Sent: Friday, April 9, 2021 2:57 PM
To: 'dhunter@miamination.com'
Subject: THPO Section 106 Initiation - Kingdom City –Santa Fe 69kV Transmission Line in Callaway, Audrain and Monroe County, Missouri
Attachments: Miami Letter.pdf; maps.pdf

Hello Ms. Hunter,

Central Electric Power Cooperative is requesting a Tribal Historic Preservation Officers (THPO) Section 106 Initiation for our Kingdom City –Santa Fe 69kV Transmission Line Rebuild project in Callaway, Audrain and Monroe County, Missouri. The Rural Utilities Service has asked that we use the US Department of Housing and Rural Development's Tribal Directory Assessment Tool (HUD TDAT) to locate contact information and identify tribes that may have an interest in the location of our project. The HUD TDAT provided us with information showing your tribes possible interest in this project location and your contact information. If this has reached you in error, we apologize and ask that you confirm that your tribe has no historic interest in this area or if we need to contact a different person for the THPO review, please provide the proper contact person (if known) and we will contact them. We appreciate your time and interest in this project. If you have any questions or comments, please feel free to contact me via email or either of the numbers listed below.

Thanks,
Spencer

Spencer K. Hoskins, P.E.

Manager - Transmission Line Design

Central Electric Power Cooperative

office: (573) 761-2857

cell: (573) 680-9568

shoskins@cepc.net



Hoskins, Spencer

From: Hoskins, Spencer
Sent: Monday, May 17, 2021 2:30 PM
To: 'dhunter@miamination.com'
Subject: RE: THPO Section 106 Initiation - Kingdom City –Santa Fe 69kV Transmission Line in Callaway, Audrain and Monroe County, Missouri

Hello,

Just wanted to follow up on my initial contact email below. I know with the COVID issues, everyone is behind on project review, but since I didn't receive a response, I just wanted to ensure that everyone had an opportunity to review and comment on our project. We appreciate your time and interest, if you have any questions or comments, please feel free to contact me via email or either of the numbers listed below.

Thanks,
Spencer

Spencer K. Hoskins, P.E.

Manager - Transmission Line Design

Central Electric Power Cooperative

office: (573) 761-2857

cell: (573) 680-9568

shoskins@cepc.net



From: Hoskins, Spencer
Sent: Friday, April 9, 2021 2:57 PM
To: 'dhunter@miamination.com' <dhunter@miamination.com>
Subject: THPO Section 106 Initiation - Kingdom City –Santa Fe 69kV Transmission Line in Callaway, Audrain and Monroe County, Missouri

Hello Ms. Hunter,

Central Electric Power Cooperative is requesting a Tribal Historic Preservation Officers (THPO) Section 106 Initiation for our Kingdom City –Santa Fe 69kV Transmission Line Rebuild project in Callaway, Audrain and Monroe County, Missouri. The Rural Utilities Service has asked that we use the US Department of Housing and Rural Development's Tribal Directory Assessment Tool (HUD TDAT) to locate contact information and identify tribes that may have an interest in the location of our project. The HUD TDAT provided us with information showing your tribes possible interest in this project location and your contact information. If this has reached you in error, we apologize and ask that you confirm that your tribe has no historic interest in this area or if we need to contact a different person for the THPO review, please provide the proper contact person (if known) and we will contact them. We appreciate your time and interest in this project. If you have any questions or comments, please feel free to contact me via email or either of the numbers listed below.

Thanks,
Spencer

Spencer K. Hoskins, P.E.

Manager - Transmission Line Design

Central Electric Power Cooperative

office: (573) 761-2857

cell: (573) 680-9568

shoskins@cepc.net





Miami Tribe of Oklahoma

3410 P St. NW, Miami, OK 74354 • P.O. Box 1326, Miami, OK 74355
Ph: (918) 541-1300 • Fax: (918) 542-7260
www.miamination.com



Via email: shoskins@cepc.net

May 17, 2021

Spencer K. Hoskins, P.E.
Manager - Transmission Line Design
Central Electric Power Cooperative
2106 Jefferson St.
P.O. Box 269
Jefferson City, MO 65102

Re: Kingdom City - Santa Fe 69kV Transmission Line, Audrain & Monroe Counties, Missouri –
Comments of the Miami Tribe of Oklahoma

Dear Mr. Hoskins,

Aya, kikwehsitoole – I show you respect. The Miami Tribe of Oklahoma, a federally recognized Indian tribe with a Constitution ratified in 1939 under the Oklahoma Indian Welfare Act of 1936, respectfully submits the following comments regarding Kingdom City - Santa Fe 69kV Transmission Line in Audrain & Monroe Counties, Missouri.

The Miami Tribe offers no objection to the above-referenced project at this time, as we are not currently aware of existing documentation directly linking a specific Miami cultural or historic site to the project site. However, given the Miami Tribe's deep and enduring relationship to its historic lands and cultural property within present-day Missouri, if any human remains or Native American cultural items falling under the Native American Graves Protection and Repatriation Act (NAGPRA) or archaeological evidence is discovered during any phase of this project, the Miami Tribe requests immediate consultation with the entity of jurisdiction for the location of discovery. In such a case, please contact me at 918-541-8966 or by email at dhunter@miamination.com to initiate consultation.

The Miami Tribe accepts the invitation to serve as a consulting party to the proposed project. In my capacity as Tribal Historic Preservation Officer I am the point of contact for consultation.

Respectfully,

Diane Hunter

Diane Hunter
Tribal Historic Preservation Officer

Hoskins, Spencer

From: Hoskins, Spencer
Sent: Monday, May 17, 2021 4:16 PM
To: 'THPO'
Subject: RE: Kingdom City - Santa Fe 69kV Transmission Line, Audrain & Monroe Counties, Missouri – Comments of the Miami Tribe of Oklahoma

Greetings Ms. Hunter,

I appreciate the response letter for our project and if we encounter any items of cultural significance, I will definitely contact you ASAP. We appreciate your consultation on this and future projects.

Respectfully,
Spencer

Spencer K. Hoskins, P.E.

Manager - Transmission Line Design
Central Electric Power Cooperative
office: (573) 761-2857
cell: (573) 680-9568
shoskins@cepc.net



From: THPO <thpo@miamination.com>
Sent: Monday, May 17, 2021 4:05 PM
To: Hoskins, Spencer <SHoskins@cepc.net>
Subject: Kingdom City - Santa Fe 69kV Transmission Line, Audrain & Monroe Counties, Missouri – Comments of the Miami Tribe of Oklahoma

****EXTERNAL E-MAIL****

Dear Mr. Hoskins:

Attached you will find the response of the Miami Tribe of Oklahoma to the above-referenced project.

Respectfully,

Diane Hunter
Tribal Historic Preservation Officer
Miami Tribe of Oklahoma
dhunter@miamination.com
18-541-8966



**Central Electric
Power Cooperative**

2106 Jefferson Street, PO Box 269
Jefferson City, Missouri 65102
Telephone: (573) 634-2454
Fax: (573) 634-3892

April 7, 2021

Ms. Andrea A. Hunter, Director and THPO
Osage Nation
627 Grandview Ave
Pawhuska, OK 74056

Subject: United States Department of Agriculture (USDA) – Rural Development (RD) Rural Utilities
Service (RUS) Applicant THPO Section 106 Initiation

Kingdom City –Santa Fe 69kV Transmission Line
Callaway, Audrain and Monroe County, Missouri

Dear Ms. Hunter:

Central Electric Power Cooperative (CEPC) is seeking financial assistance from the USDA Rural Development (RD), Rural Utilities Service (RUS) under its Electric Program for the Kingdom City –Santa Fe 69kV Transmission Line (Project). CEPC is proposing to redesign, retire, and rebuild the approximate 33-mile Kingdom City – Santa Fe 69kV electric transmission line located in Callaway, Audrain and Monroe County, Missouri. The rebuild will be constructed on existing 100ft wide transmission line right-of-way.

If RUS elects to fund the Project, it will become an undertaking subject to review under Section 106 of the National Historic Preservation Act, 54 U.S.C. 306108, and its implementing regulations, 36 CFR Part 800.

RUS defines the area of potential effect (APE), as an area that includes all Project construction and excavation activity required to construct, modify, improve, or maintain any facilities; any right-of-way or easement areas necessary for the construction, operation, and maintenance of the Project; all areas used for excavation of borrow material and habitat creation; all construction staging areas, access routes, utilities, spoil areas, and stockpiling areas. Impacts that come from the undertaking at the same time and place with no intervening causes, are considered “direct” regardless of its specific type (e.g., whether it is visual, physical, auditory, etc.). “Indirect” effects to historic properties are those caused by the undertaking that are later in time or farther removed in distance but are still reasonably foreseeable.

Based on this definition, CEPC proposes that the APE for the referenced project consists of rebuilding the existing line that will be constructed on existing transmission line right-of-way. A topographic and location map for the proposed site is enclosed. The geographic scope of the

APE will not be final until a determination is made by RUS pursuant to 36 CFR § 800.4(a)(1). The APE does not include any tribal lands as defined pursuant 36 CFR § 800.16(x).

Pursuant to 36 CFR § 800.2(c)(4), and 7 CFR § 1970.5(b)(2) of the regulations, "Environmental Policies and Procedures" (7 CFR Part 1970), RUS has issued a blanket delegation for its applicants to initiate and proceed through Section 106 review if there is agreement.

In delegating this authority, RUS is advocating for the direct interaction between its Electric program applicants and Indian tribes. RUS believes this interaction, prior to direct agency involvement, will support and encourage the consideration of impacts to historic properties of importance to Indian tribes earlier in project planning.

CEPC is notifying you about the referenced project because of the possible interest of the Osage Nation in Callaway, Audrain and/or Monroe county, Missouri. Should the Osage Nation elect to participate in Section 106 review of the referenced project, please notify me in writing via letter or email as soon as possible at the following email address shoskins@cepc.net or at my office 2106 Jefferson St, PO Box 269 Jefferson City, MO 65102.

In compliance with RUS environmental guidelines, CEPC is corresponding with the following agencies:

Missouri Department of Conservation
Missouri Department of Natural Resources
Missouri Department of Transportation – Central District
Natural Resources Conservation Service
Regional Planning Agencies
Missouri Department of Transportation – Northeast District
Delaware Nation, Oklahoma
Osage Nation
Sac & Fox Nation of Oklahoma
Seneca-Cayuga Nation

Dept. of the Army, Corps of Engineers – Kansas City District
United States Fish and Wildlife Service
Callaway County Commissioner
Monroe County Commissioner
Audrain County Commissioner
Apache Tribe of Oklahoma
Miami Tribe of Oklahoma
Sac & Fox Nation of MO, KS & NE
Sac & Fox Tribe of the Mississippi in Iowa

Please include with your affirmative response, a description of any specific historic properties or important tribal resources in the APE and your recommendations about the level of effort needed to identify additional historic properties which might be affected by the referenced project. CEPC will respect the confidentiality of the information which you provide to the fullest extent possible.

If at any time you wish to share your interests, recommendations and concerns directly with RUS, as the agency responsible for conducting Section 106 review, or to request that RUS participate directly in Section 106 review, please notify me at once, preferably via email. However, you may contact RUS directly. If you wish to do so, please submit your request to Bryan Bacon at bryan.bacon@usda.gov.

Please submit your response **electronically** by May 15, 2021. RUS will proceed to the next step in Section 106 review if you fail to provide a timely response. Should you have any questions or require additional information you may contact me at the mailing address and/or email provided above or if you wish to discuss the project, please contact me at 573-761-2857.

Respectfully,

CENTRAL ELECTRIC POWER COOPERATIVE

A handwritten signature in blue ink that reads "Spencer K. Hoskins". The signature is written in a cursive style with a large initial 'S'.

Spencer K. Hoskins, P.E.
Manager - Transmission Line Design
Enclosures

Hoskins, Spencer

From: Hoskins, Spencer
Sent: Friday, April 9, 2021 2:58 PM
To: 'ahunter@osagenation-nsn.gov'
Subject: THPO Section 106 Initiation - Kingdom City –Santa Fe 69kV Transmission Line in Callaway, Audrain and Monroe County, Missouri
Attachments: Osage Letter.pdf; maps.pdf

Hello Ms. Hunter,

Central Electric Power Cooperative is requesting a Tribal Historic Preservation Officers (THPO) Section 106 Initiation for our Kingdom City –Santa Fe 69kV Transmission Line Rebuild project in Callaway, Audrain and Monroe County, Missouri. The Rural Utilities Service has asked that we use the US Department of Housing and Rural Development's Tribal Directory Assessment Tool (HUD TDAT) to locate contact information and identify tribes that may have an interest in the location of our project. The HUD TDAT provided us with information showing your tribes possible interest in this project location and your contact information. If this has reached you in error, we apologize and ask that you confirm that your tribe has no historic interest in this area or if we need to contact a different person for the THPO review, please provide the proper contact person (if known) and we will contact them. We appreciate your time and interest in this project. If you have any questions or comments, please feel free to contact me via email or either of the numbers listed below.

Thanks,
Spencer

Spencer K. Hoskins, P.E.

Manager - Transmission Line Design

Central Electric Power Cooperative

office: (573) 761-2857

cell: (573) 680-9568

shoskins@cepc.net



Hoskins, Spencer

From: Courtney Neff <cneff@osagenation-nsn.gov>
Sent: Monday, April 12, 2021 9:16 AM
To: Hoskins, Spencer
Subject: RE: THPO Section 106 Initiation - Kingdom City –Santa Fe 69kV Transmission Line in Callaway, Audrain and Monroe County, Missouri

****EXTERNAL E-MAIL****

Sounds good.

Thank you so much!



Courtney Neff

Osage Nation Historic Preservation Office
627 Grandview Avenue, Pawhuska, OK 74056
Office: 918-287-9741 | Fax: 918-287-5376

[Email](#) | [Website](#)



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From: Hoskins, Spencer <SHoskins@cepc.net>
Sent: Monday, April 12, 2021 9:11 AM
To: Courtney Neff <cneff@osagenation-nsn.gov>
Subject: RE: THPO Section 106 Initiation - Kingdom City –Santa Fe 69kV Transmission Line in Callaway, Audrain and Monroe County, Missouri

Courtney,

I appreciate the assistance, we are rather new to this and having a clear path to the proper personnel can be difficult when dealing with multiple federal agencies. I have another project package that I will be sending out in a week or so and I will follow the notification instructions you provided for the future projects.

Again, thanks for all of your assistance,
Spencer

Spencer K. Hoskins, P.E.

Manager - Transmission Line Design
Central Electric Power Cooperative
office: (573) 761-2857
cell: (573) 680-9568
shoskins@cepc.net



From: Courtney Neff <cneff@osagenation-nsn.gov>
Sent: Monday, April 12, 2021 9:06 AM
To: Hoskins, Spencer <SHoskins@cepc.net>
Subject: RE: THPO Section 106 Initiation - Kingdom City –Santa Fe 69kV Transmission Line in Callaway, Audrain and Monroe County, Missouri

****EXTERNAL E-MAIL****

Good morning Mr. Hoskins,

The previous email will suffice for this notification. For future projects please email them to me CCing Mr. Hendrix or mail them to our office. This is just to streamline the process a bit.

Thank you!



Courtney Neff

Osage Nation Historic Preservation Office
 627 Grandview Avenue, Pawhuska, OK 74056
 Office: 918-287-9741 | Fax: 918-287-5376

[Email](#) | [Website](#)



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From: Hoskins, Spencer <SHoskins@cepc.net>
Sent: Monday, April 12, 2021 8:59 AM
To: Courtney Neff <cneff@osagenation-nsn.gov>
Cc: Jess Hendrix <Jess.Hendrix@osagenation-nsn.gov>
Subject: RE: THPO Section 106 Initiation - Kingdom City –Santa Fe 69kV Transmission Line in Callaway, Audrain and Monroe County, Missouri

Good Morning Ms. Neff,

Would you like me to resend the package I sent to Dr Hunter that you replied to, or is this for future projects? I just want to make sure I get the information to the right personnel. We appreciate your time and interest in this project. If you have any questions or comments, please feel free to contact me via email or either of the numbers listed below.

Thanks,
 Spencer

Spencer K. Hoskins, P.E.

Manager - Transmission Line Design
Central Electric Power Cooperative
office: (573) 761-2857
cell: (573) 680-9568
hoskins@cepc.net



From: Courtney Neff <cneff@osagenation-nsn.gov>
Sent: Monday, April 12, 2021 8:48 AM
To: Hoskins, Spencer <SHoskins@cepc.net>
Subject: RE: THPO Section 106 Initiation - Kingdom City –Santa Fe 69kV Transmission Line in Callaway, Audrain and Monroe County, Missouri

****EXTERNAL E-MAIL****

Good morning Mr. Hoskins,

The Osage Nation has experienced setbacks due to the pandemic and vacancies in several archaeology positions over the past 10 months and therefore Section 106 inquiries and the 30-day clocks are tolled until further notice. This is in line with the Advisory Council on Historic Preservation recommendations. The Osage Nation regrets any inconvenience and will do our best to address projects, particularly emergency situations.

During this time of Covid adjusted protocol, **Section 106 notifications are to be addressed to Dr. Hunter and sent by postal mail or emailed to Courtney Neff at cneff@osagenation-nsn.gov CCing Jess Hendrix, Osage Nation Deputy THPO at jess.hendrix@osagenation-nsn.gov. Dr. Hunter does not need to be CC'd.**

The 30-day toll means that we are working as fast as we can, and will provide a response as soon as we can, but it may not be within the 30-days. The ACHP has recommended that federal agencies be flexible on the 30 day response if a tribe is experiencing issues due to the pandemic. The Osage Nation is experiencing issues due to the pandemic in terms of filling archaeologist vacancies during covid, training new archaeologists during covid, archaeologists who review Section 106 projects testing positive, and having to work from home.

Thank you,



Courtney Neff

Osage Nation Historic Preservation Office
627 Grandview Avenue, Pawhuska, OK 74056
Office: 918-287-9741 | Fax: 918-287-5376

[Email](#) | [Website](#)



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not responsible for errors or omissions in this message and denies any responsibility for any damage arising from the use of email. Any opinion and other statement contained in this message and any attachment are solely those of the author and do not necessarily represent those of the Osage Nation.

From: Hoskins, Spencer <SHoskins@cepc.net>
Sent: Friday, April 9, 2021 2:58 PM
To: Andrea Hunter <ahunter@osagenation-nsn.gov>
Subject: THPO Section 106 Initiation - Kingdom City –Santa Fe 69kV Transmission Line in Callaway, Audrain and Monroe County, Missouri

Hello Ms. Hunter,

Central Electric Power Cooperative is requesting a Tribal Historic Preservation Officers (THPO) Section 106 Initiation for our Kingdom City –Santa Fe 69kV Transmission Line Rebuild project in Callaway, Audrain and Monroe County, Missouri. The Rural Utilities Service has asked that we use the US Department of Housing and Rural Development’s Tribal Directory Assessment Tool (HUD TDAT) to locate contact information and identify tribes that may have an interest in the location of our project. The HUD TDAT provided us with information showing your tribes possible interest in this project location and your contact information. If this has reached you in error, we apologize and ask that you confirm that your tribe has no historic interest in this area or if we need to contact a different person for the THPO review, please provide the proper contact person (if known) and we will contact them. We appreciate your time and interest in this project. If you have any questions or comments, please feel free to contact me via email or either of the numbers listed below.

Thanks,
Spencer

Spencer K. Hoskins, P.E.

Manager - Transmission Line Design
Central Electric Power Cooperative
office: (573) 761-2857
cell: (573) 680-9568
shoskins@cepc.net



Hoskins, Spencer

From: Hoskins, Spencer
Sent: Tuesday, June 1, 2021 9:34 AM
To: 'Zachary Stanyard'
Subject: RE: Kingdom City–Santa Fe 69kV Transmission Line
Attachments: Santa Fe Report.pdf

Hello Mr. Stanyard,

I have attached our Phase I survey as requested. I will also forward the shovel test documentation that goes with it. We appreciate your time and interest in this project. If you have any questions or comments, please feel free to contact me via email or either of the numbers listed below.

Thanks,
Spencer

Spencer K. Hoskins, P.E.

Manager - Transmission Line Design
Central Electric Power Cooperative
office: (573) 761-2857
cell: (573) 680-9568
shoskins@cepc.net



From: Hoskins, Spencer
Sent: Wednesday, April 14, 2021 2:09 PM
To: 'Zachary Stanyard' <zachary.stanyard@osagenation-nsn.gov>
Subject: RE: Kingdom City–Santa Fe 69kV Transmission Line

Good Afternoon Mr. Stanyard,

I have contacted our Archeologist and he will complete the cultural resource survey as requested. Once I have the report, I will forward it on to you. We appreciate your time and interest in this project. If you have any questions or comments, please feel free to contact me via email or either of the numbers listed below.

Thanks,
Spencer

Spencer K. Hoskins, P.E.

Manager - Transmission Line Design
Central Electric Power Cooperative
office: (573) 761-2857
cell: (573) 680-9568
shoskins@cepc.net



From: Zachary Stanyard <zachary.stanyard@osagenation-nsn.gov>
Sent: Monday, April 12, 2021 4:17 PM
To: Hoskins, Spencer <SHoskins@cepc.net>
Subject: Kingdom City–Santa Fe 69kV Transmission Line

****EXTERNAL E-MAIL****

Date: April 12, 2021 **File:** 2021-3828MO-4

RE: USDA, RD, CEPC, Kingdom City - Santa Fe 69kV Transmission Line, Callaway, Audrain, and Monroe Counties, Missouri

Central Electric Power Cooperative
Spencer Hoskins
2106 Jefferson Street, P.O. Box 269
Jefferson City, MO 65102-0176

Dear Mr. Hoskins,

The Osage Nation Historic Preservation Office has received notification and accompanying information for the proposed project listed as USDA, RD, CEPC, Kingdom City - Santa Fe 69kV Transmission Line, Callaway, Audrain, and Monroe Counties, Missouri. The proposed construction exists within a vital and sacred cultural landscape for the Osage Nation; as such, **the Osage Nation requests that a cultural resources survey be conducted for this project.** The Phase I cultural resources survey should encompass the entirety of the proposed APE; this includes: equipment staging areas, access roads, and any area considered to have the potential for ground disturbing activities. Additionally, please note that construction within existing right-of-ways does not preclude the risk for adverse effects to historic properties.

In accordance with the National Historic Preservation Act, (NHPA) [54 U.S.C. § 300101 et seq.] 1966, undertakings subject to the review process are referred to in 54 U.S.C. § 302706 (a), which clarifies that historic properties may have religious and cultural significance to Indian tribes. Additionally, Section 106 of NHPA requires Federal agencies to consider the effects of their actions on historic properties (36 CFR Part 800) as does the National Environmental Policy Act (43 U.S.C. 4321 and 4331-35 and 40 CFR 1501.7(a) of 1969).

The Osage Nation has a vital interest in protecting its historic and ancestral cultural resources. **The Osage Nation anticipates reviewing and commenting on the planned Phase I cultural resources survey report for the proposed USDA, RD, CEPC, Kingdom City - Santa Fe 69kV Transmission Line, Callaway, Audrain, and Monroe Counties, Missouri.**

For your convenience, the Osage Nation survey standards are provided as an attachment to this letter. Should you have any questions or need any additional information please feel free to contact me at the number listed below. Thank you for consulting with the Osage Nation on this matter.

Best,

Zach Stanyard

Archaeologist, MA

Osage Nation Historic Preservation Office
627 Grandview Avenue, Pawhuska, OK 74056
Office: 918-287-5494 | Cell: 404-626-7851
zachary.stanyard@osagenation-nsn.gov

Hoskins, Spencer

From: Hoskins, Spencer
Sent: Wednesday, April 14, 2021 2:09 PM
To: 'Zachary Stanyard'
Subject: RE: Kingdom City–Santa Fe 69kV Transmission Line

Good Afternoon Mr. Stanyard,

I have contacted our Archeologist and he will complete the cultural resource survey as requested. Once I have the report, I will forward it on to you. We appreciate your time and interest in this project. If you have any questions or comments, please feel free to contact me via email or either of the numbers listed below.

Thanks,
Spencer

Spencer K. Hoskins, P.E.
Manager - Transmission Line Design
Central Electric Power Cooperative
office: (573) 761-2857
cell: (573) 680-9568
shoskins@cepc.net



From: Zachary Stanyard <zachary.stanyard@osagenation-nsn.gov>
Sent: Monday, April 12, 2021 4:17 PM
To: Hoskins, Spencer <SHoskins@cepc.net>
Subject: Kingdom City–Santa Fe 69kV Transmission Line

****EXTERNAL E-MAIL****

Date: April 12, 2021 **File:** 2021-3828MO-4

RE: USDA, RD, CEPC, Kingdom City - Santa Fe 69kV Transmission Line, Callaway, Audrain, and Monroe Counties, Missouri

Central Electric Power Cooperative
Spencer Hoskins
2106 Jefferson Street, P.O. Box 269
Jefferson City, MO 65102-0176

Dear Mr. Hoskins,

The Osage Nation Historic Preservation Office has received notification and accompanying information for the proposed project listed as USDA, RD, CEPC, Kingdom City - Santa Fe 69kV Transmission Line, Callaway, Audrain, and Monroe

Counties, Missouri. The proposed construction exists within a vital and sacred cultural landscape for the Osage Nation; as such, **the Osage Nation requests that a cultural resources survey be conducted for this project.** The Phase I cultural resources survey should encompass the entirety of the proposed APE; this includes: equipment staging areas, access roads, and any area considered to have the potential for ground disturbing activities. Additionally, please note that construction within existing right-of-ways does not preclude the risk for adverse effects to historic properties.

In accordance with the National Historic Preservation Act, (NHPA) [54 U.S.C. § 300101 et seq.] 1966, undertakings subject to the review process are referred to in 54 U.S.C. § 302706 (a), which clarifies that historic properties may have religious and cultural significance to Indian tribes. Additionally, Section 106 of NHPA requires Federal agencies to consider the effects of their actions on historic properties (36 CFR Part 800) as does the National Environmental Policy Act (43 U.S.C. 4321 and 4331-35 and 40 CFR 1501.7(a) of 1969).

The Osage Nation has a vital interest in protecting its historic and ancestral cultural resources. **The Osage Nation anticipates reviewing and commenting on the planned Phase I cultural resources survey report for the proposed USDA, RD, CEPC, Kingdom City - Santa Fe 69kV Transmission Line, Callaway, Audrain, and Monroe Counties, Missouri.**

For your convenience, the Osage Nation survey standards are provided as an attachment to this letter. Should you have any questions or need any additional information please feel free to contact me at the number listed below. Thank you for consulting with the Osage Nation on this matter.

Best,

Zach Stanyard

Archaeologist, MA

Osage Nation Historic Preservation Office

627 Grandview Avenue, Pawhuska, OK 74056

Office: 918-287-5494 | Cell: 404-626-7851

Zachary.stanyard@osagenation-nsn.gov



**Central Electric
Power Cooperative**

2106 Jefferson Street, PO Box 269
Jefferson City, Missouri 65102
Telephone: (573) 634-2454
Fax: (573) 634-3892

April 7, 2021

Mr. Edmore Green, Chairman
Sac & Fox Nation of Missouri in Kansas and Nebraska
305 N. Main St
Reserve, KS 66434

Subject: United States Department of Agriculture (USDA) – Rural Development (RD) Rural Utilities
Service (RUS) Applicant THPO Section 106 Initiation

Kingdom City –Santa Fe 69kV Transmission Line
Callaway, Audrain and Monroe County, Missouri

Dear Mr. Green:

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If RUS elects to fund the Project, it will become an undertaking subject to review under Section 106 of the National Historic Preservation Act, 54 U.S.C. 306108, and its implementing regulations, 36 CFR Part 800.

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CEPC is notifying you about the referenced project because of the possible interest of the Sac & Fox Nation of Missouri in Callaway, Audrain and/or Monroe county, Missouri. Should the Sac & Fox Nation of Missouri elect to participate in Section 106 review of the referenced project, please notify me in writing via letter or email as soon as possible at the following email address shoskins@cepc.net or at my office 2106 Jefferson St, PO Box 269 Jefferson City, MO 65102.

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Missouri Department of Natural Resources
Missouri Department of Transportation – Central District
Natural Resources Conservation Service
Regional Planning Agencies
Missouri Department of Transportation – Northeast District
Delaware Nation, Oklahoma
Osage Nation
Sac & Fox Nation of Oklahoma
Seneca-Cayuga Nation

Dept. of the Army, Corps of Engineers – Kansas City District
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Callaway County Commissioner
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Please submit your response **electronically** by May 15, 2021. RUS will proceed to the next step in Section 106 review if you fail to provide a timely response. Should you have any questions or require additional information you may contact me at the mailing address and/or email provided above or if you wish to discuss the project, please contact me at 573-761-2857.

Respectfully,

CENTRAL ELECTRIC POWER COOPERATIVE



Spencer K. Hoskins, P.E.
Manager - Transmission Line Design
Enclosures

Hoskins, Spencer

From: Hoskins, Spencer
Sent: Friday, April 9, 2021 2:59 PM
To: 'egreen@sacandfoxcasino.com'
Subject: THPO Section 106 Initiation - Kingdom City –Santa Fe 69kV Transmission Line in Callaway, Audrain and Monroe County, Missouri
Attachments: SacFoxMO Letter.pdf; maps.pdf

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Thanks,
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Spencer K. Hoskins, P.E.

Manager - Transmission Line Design

Central Electric Power Cooperative

office: (573) 761-2857

cell: (573) 680-9568

shoskins@cepc.net



Hoskins, Spencer

From: Hoskins, Spencer
Sent: Monday, May 17, 2021 2:30 PM
To: 'egreen@sacandfoxcasino.com'
Subject: RE: THPO Section 106 Initiation - Kingdom City –Santa Fe 69kV Transmission Line in Callaway, Audrain and Monroe County, Missouri

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**Central Electric
Power Cooperative**

2106 Jefferson Street, PO Box 269
Jefferson City, Missouri 65102
Telephone: (573) 634-2454
Fax: (573) 634-3892

April 7, 2021

Ms. Sandra Massey, THPO
Sac & Fox Nation of Oklahoma
920883 South Highway 99 Building A
Stroud, OK 74079

Subject: United States Department of Agriculture (USDA) – Rural Development (RD) Rural Utilities
Service (RUS) Applicant THPO Section 106 Initiation

Kingdom City –Santa Fe 69kV Transmission Line
Callaway, Audrain and Monroe County, Missouri

Dear Ms. Massey:

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Missouri Department of Natural Resources
Missouri Department of Transportation – Central District
Natural Resources Conservation Service
Regional Planning Agencies
Missouri Department of Transportation – Northeast District
Delaware Nation, Oklahoma
Osage Nation
Sac & Fox Nation of Oklahoma
Seneca-Cayuga Nation

Dept. of the Army, Corps of Engineers – Kansas City District
United States Fish and Wildlife Service
Callaway County Commissioner
Monroe County Commissioner
Audrain County Commissioner
Apache Tribe of Oklahoma
Miami Tribe of Oklahoma
Sac & Fox Nation of MO, KS & NE
Sac & Fox Tribe of the Mississippi in Iowa

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CENTRAL ELECTRIC POWER COOPERATIVE

A handwritten signature in blue ink that reads "Spencer K Hoskins". The signature is written in a cursive style with a large initial 'S'.

Spencer K. Hoskins, P.E.
Manager - Transmission Line Design
Enclosures

Hoskins, Spencer

From: Hoskins, Spencer
Sent: Friday, April 9, 2021 3:00 PM
To: 'smassey@sacandfoxnation-nsn.gov'
Subject: THPO Section 106 Initiation - Kingdom City –Santa Fe 69kV Transmission Line in Callaway, Audrain and Monroe County, Missouri
Attachments: SacFoxOK Letter.pdf; maps.pdf

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Manager - Transmission Line Design

Central Electric Power Cooperative

office: (573) 761-2857

cell: (573) 680-9568

shoskins@cepc.net



Hoskins, Spencer

From: Hoskins, Spencer
Sent: Monday, May 17, 2021 2:30 PM
To: 'smassey@sacandfoxnation-nsn.gov'
Subject: RE: THPO Section 106 Initiation - Kingdom City –Santa Fe 69kV Transmission Line in Callaway, Audrain and Monroe County, Missouri

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2106 Jefferson Street, PO Box 269
Jefferson City, Missouri 65102
Telephone: (573) 634-2454
Fax: (573) 634-3892

April 7, 2021

Ms. Judith Bender, Chairwoman
Sac & Fox Tribe of the Mississippi in Iowa
349 Meskwaki Rd
Tama, IA 52339

Subject: United States Department of Agriculture (USDA) – Rural Development (RD) Rural Utilities
Service (RUS) Applicant THPO Section 106 Initiation

Kingdom City –Santa Fe 69kV Transmission Line
Callaway, Audrain and Monroe County, Missouri

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Spencer K. Hoskins, P.E.
Manager - Transmission Line Design
Enclosures

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From: Hoskins, Spencer
Sent: Friday, April 9, 2021 3:01 PM
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Subject: THPO Section 106 Initiation - Kingdom City –Santa Fe 69kV Transmission Line in Callaway, Audrain and Monroe County, Missouri
Attachments: SacFoxTribe Letter.pdf; maps.pdf

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**Central Electric
Power Cooperative**

2106 Jefferson Street, PO Box 269
Jefferson City, Missouri 65102
Telephone: (573) 634-2454
Fax: (573) 634-3892

April 7, 2021

Mr. William Tarrant, THPO
Seneca-Cayuga Nation
PO Box 453220
Grove, OK 74345

Subject: United States Department of Agriculture (USDA) – Rural Development (RD) Rural Utilities
Service (RUS) Applicant THPO Section 106 Initiation

Kingdom City –Santa Fe 69kV Transmission Line
Callaway, Audrain and Monroe County, Missouri

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CENTRAL ELECTRIC POWER COOPERATIVE



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Enclosures

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From: Hoskins, Spencer
Sent: Friday, April 9, 2021 3:02 PM
To: 'wtarrant@sctribes.com'
Subject: THPO Section 106 Initiation - Kingdom City –Santa Fe 69kV Transmission Line in Callaway, Audrain and Monroe County, Missouri
Attachments: SC Nation Letter.pdf; maps.pdf

Hello Mr. Tarrant,

Central Electric Power Cooperative is requesting a Tribal Historic Preservation Officers (THPO) Section 106 Initiation for our Kingdom City –Santa Fe 69kV Transmission Line Rebuild project in Callaway, Audrain and Monroe County, Missouri. The Rural Utilities Service has asked that we use the US Department of Housing and Rural Development's Tribal Directory Assessment Tool (HUD TDAT) to locate contact information and identify tribes that may have an interest in the location of our project. The HUD TDAT provided us with information showing your tribes possible interest in this project location and your contact information. If this has reached you in error, we apologize and ask that you confirm that your tribe has no historic interest in this area or if we need to contact a different person for the THPO review, please provide the proper contact person (if known) and we will contact them. We appreciate your time and interest in this project. If you have any questions or comments, please feel free to contact me via email or either of the numbers listed below.

Thanks,
Spencer

Spencer K. Hoskins, P.E.

Manager - Transmission Line Design

Central Electric Power Cooperative

office: (573) 761-2857

cell: (573) 680-9568

shoskins@cepc.net



Hoskins, Spencer

From: Hoskins, Spencer
Sent: Monday, May 17, 2021 2:30 PM
To: 'wtarrant@sctribe.com'
Subject: RE: THPO Section 106 Initiation - Kingdom City –Santa Fe 69kV Transmission Line in Callaway, Audrain and Monroe County, Missouri

Hello,

Just wanted to follow up on my initial contact email below. I know with the COVID issues, everyone is behind on project review, but since I didn't receive a response, I just wanted to ensure that everyone had an opportunity to review and comment on our project. We appreciate your time and interest, if you have any questions or comments, please feel free to contact me via email or either of the numbers listed below.

Thanks,
Spencer

Spencer K. Hoskins, P.E.

Manager - Transmission Line Design

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