

**APPLICATION FOR TRANSPORTATION AND  
UTILITY SYSTEMS AND FACILITIES  
ON FEDERAL LANDS**



FORM APPROVED  
OMB NO. 0596-0082  
Expiration Date: 10/31/2012

**FOR AGENCY USE ONLY**

**NOTE:** Before completing and filing the application, the applicant should completely review this package and schedule a pre-application meeting with representatives of the agency responsible for processing the application. Each agency may have specific and unique requirements to be met in preparing and processing the application. Many times, with the help of the agency representative, the application can be completed at the pre-application meeting.

Application Number N-91899  
Date Filed \_\_\_\_\_  
3. TELEPHONE (area code) \_\_\_\_\_  
Applicant **775-289-8981**  
Authorized Agent **SAME**

|  |   |   |
|--|---|---|
| 1. Name and address of applicant (include zip code)<br><br><b>MT. WHEELER POWER, INC.<br/>PO BOX 151000<br/>ELY NV 89315</b> | 2. Name, title, and address of authorized agent if different from item 1 (include zip code)<br><br><b>JESSE MURDOCK<br/>ENGINEERING MANAGER</b> | 3. TELEPHONE (area code)<br><br>Applicant <b>775-289-8981</b><br>Authorized Agent <b>SAME</b> |
|--|---|---|

|  |  |
|--|--|
| 4. As applicant are you? (check one)<br>a. <input type="checkbox"/> Individual<br>b. <input checked="" type="checkbox"/> Corporation*<br>c. <input type="checkbox"/> Partnership/Association*<br>d. <input type="checkbox"/> State Government/State Agency<br>e. <input type="checkbox"/> Local Government<br>f. <input type="checkbox"/> Federal Agency<br><br>* If checked, complete supplemental page | 5. Specify what application is for: (check one)<br>a. <input checked="" type="checkbox"/> New authorization<br>b. <input type="checkbox"/> Renewing existing authorization No.<br>c. <input type="checkbox"/> Amend existing authorization No.<br>d. <input type="checkbox"/> Assign existing authorization No.<br>e. <input type="checkbox"/> Existing use for which no authorization has been received *<br>f. <input type="checkbox"/> Other*<br><br>* If checked, provide details under item 7 |
|--|--|

6. If an individual, or partnership are you a citizen(s) of the United States?  yes  No

7. Project description (describe in detail): (a) Type of system or facility, (e.g., canal, pipeline, road); (b) related structures and facilities; (c) physical specifications (Length, width, grading, etc.); (d) term of years needed; (e) time of year of use or operation; (f) volume or amount of product to be transported; (g) duration and timing of construction; and (h) temporary work areas needed for construction (Attach additional sheets, if additional space is needed.)

**SEE ATTACHED PLAN OF DEVELOPMENT (HIGHWAY 50 TO PAN - 69KV TRANSMISSION LINE PROJECT).**

8. Attach a map covering area and show location of project proposal

9. State or Local government approval:  Attached  Applied for  Not Required

10. Nonreturnable application fee:  Attached  Not required

11. Does project cross international boundary or affect international waterways?  Yes  No (if "yes," indicate on map)

12. Give statement of your technical and financial capability to construct, operate, maintain, and terminate system for which authorization is being requested.

**MT. WHEELER POWER, INC. IS TECHNICALLY AND FINANCIALLY CAPABLE OF CONSTRUCTING, MAINTAINING AND OPERATING THE TRANSMISSION LINE FOR WHICH AUTHORIZATION IS BEING REQUESTED.**

13a. Describe other reasonable alternative routes and modes considered.

NONE.

b. Why were these alternatives not selected?

N/A – AFFECTED CRITICAL SAGE GROUSE HABITAT.

c. Give explanation as to why it is necessary to cross Federal Lands.

NO PRIVATE LANDS AVAILABLE IN THE PROJECT AREA WITHOUT GOING THROUGH SAGE GROUSE HABITAT.

14. List authorizations and pending applications filed for similar projects which may provide information to the authorizing agency. (Specify number, date, code, or name)

N-29660 @ 25 feet (Existing 69kV Transmission Line – Interconnection Point).  
N-5638 @ 12.5 feet (Adjacent to existing 25kV Distribution Line).

15. Provide statement of need for project, including the economic feasibility and items such as: (a) cost of proposal (construction, operation, and maintenance); (b) estimated cost of next best alternative; and (c) expected public benefits.

THIS PROJECT WILL PROVIDE POWER TO THE TRANSMISSION LINE AND SUBSTATION FOR MIDWAY MINES (E.G., PAN & GOLD ROCK). THE ESTIMATED COST OF THIS PROJECT IS \$500,000.00.

16. Describe probable effects on the population in the area, including the social and economic aspects, and the rural lifestyles.

THIS PROJECT WOULD POSSIBLY PROVIDE POWER FOR FUTURE CONSUMERS, BOTH RESIDENTIAL AND COMMERCIAL IN THE AREA AND BEYOND.

17. Describe likely environmental effects that the proposed project will have on: (a) air quality; (b) visual impact; (c) surface and ground water quality and quantity; (d) the control or structural change on any stream or other body of water; (e) existing noise levels; and (f) the surface of the land, including vegetation, permafrost, soil, and soil stability.

NONE, EXCEPT FOR A POSSIBLE VISUAL IMPACT.

18. Describe the probable effects that the proposed project will have on (a) populations of fish, plant life, wildlife, and marine life, including threatened and endangered species; and (b) marine mammals, including hunting, capturing, collecting, or killing these animals.

NONE.

19. State whether any hazardous material, as defined in this paragraph, will be used, produced, transported or stored on or within the right-of-way or any of the right-of-way facilities, or used in the construction, operation, maintenance or termination of the right-of-way or any of its facilities. "Hazardous material" means any substance, pollutant or contaminant that is listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. 9601 et seq., and its regulations. The definition of hazardous substances under CERCLA includes any "hazardous waste" as defined in the Resource Conservation and Recovery Act of 1976 (RCRA), as amended, 42 U.S.C. 6901 et seq., and its regulations. The term hazardous materials also includes any nuclear or byproduct material as defined by the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 et seq. The term does not include petroleum, including crude oil or any fraction thereof that is not otherwise specifically listed or designated as a hazardous substance under CERCLA Section 101(14), 42 U.S.C. 9601(14), nor does the term include natural gas.

NONE.

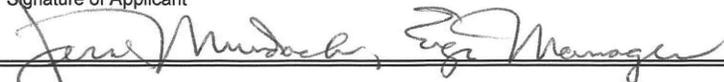
20. Name all the Department(s)/Agency(ies) where this application is being filed.

US DEPARTMENT OF THE INTERIOR – BUREAU OF LAND MANAGEMENT

I HEREBY CERTIFY, That I am of legal age and authorized to do business in the State and that I have personally examined the information contained in the application and believe that the information submitted is correct to the best of my knowledge.

Signature of Applicant

Date



10/10/2012

Title 18, U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

**SUPPLEMENTAL**

| NOTE: The responsible agency(ies) will provide instructions   | CHECK APPROPRIATE BLOCK  |                          |
|---|--------------------------|--------------------------|
| I - PRIVATE CORPORATIONS  | ATTACHED                 | FILED*                   |
| a. Articles of Incorporation  | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Corporation Bylaws   | <input type="checkbox"/> | <input type="checkbox"/> |
| c. A certification from the State showing the corporation is in good standing and is entitled to operate within the State   | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Copy of resolution authorizing filing  | <input type="checkbox"/> | <input type="checkbox"/> |
| e. The name and address of each shareholder owning 3 percent or more of the shares, together with the number and percentage of any class of voting shares of the entity which such shareholder is authorized to vote and the name and address of each affiliate of the entity together with, in the case of an affiliate controlled by the entity, the number of shares and the percentage of any class of voting stock of that affiliate owned, directly or indirectly, by that entity, and in the case of an affiliate which controls that entity, the number of shares and the percentage of any class of voting stock of that entity owned, directly or indirectly, by the affiliate. | <input type="checkbox"/> | <input type="checkbox"/> |
| f. If application is for an oil or gas pipeline, describe any related right-of-way or temporary use permit applications, and identify previous applications.  | <input type="checkbox"/> | <input type="checkbox"/> |
| g. If application is for an oil and gas pipeline, identify all Federal lands by agency impacted by proposal.  | <input type="checkbox"/> | <input type="checkbox"/> |
| II - PUBLIC CORPORATIONS  |                          |                          |
| a. Copy of law forming corporation  | <input type="checkbox"/> | <b>X</b>                 |
| b. Proof of organization  | <input type="checkbox"/> | <b>X</b>                 |
| c. Copy of Bylaws   | <input type="checkbox"/> | <b>X</b>                 |
| d. Copy of resolution authorizing filing  | <input type="checkbox"/> | <b>X</b>                 |
| e. If application is for an oil or gas pipeline, provide information required by item "I-f" and "I-g" above.  | <input type="checkbox"/> | <input type="checkbox"/> |
| III - PARTNERSHIP OR OTHER UNINCORPORATED ENTITY  |                          |                          |
| a. Articles of association, if any  | <input type="checkbox"/> | <input type="checkbox"/> |
| b. If one partner is authorized to sign, resolution authorizing action is   | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Name and address of each participant, partner, association, or other   | <input type="checkbox"/> | <input type="checkbox"/> |
| d. If application is for an oil or gas pipeline, provide information required by item "I-f" and "I-g" above.  | <input type="checkbox"/> | <input type="checkbox"/> |

\* If the required information is already filed with the agency processing this application and is current, check block entitled "Filed." Provide the file identification information (e.g., number, date, code, name). If not on file or current, attach the requested information.

APPLICATION FOR TRANSPORTATION AND UTILITY SYSTEMS  
AND FACILITIES ON FEDERAL LANDS

GENERAL INFORMATION  
ALASKA NATIONAL INTEREST LANDS

This application will be used when applying for a right-of-way, permit, license, lease, or certificate for the use of Federal lands which lie within conservation system units and National Recreation or Conservation Areas as defined in the Alaska National Interest Lands Conservation Act. Conservation system units include the National Park System, National Wildlife Refuge System, National Wild and Scenic Rivers System, National Trails System, National Wilderness Preservation System, and National Forest Monuments.

Transportation and utility systems and facility uses for which the application may be used are:

1. Canals, ditches, flumes, laterals, pipes, pipelines, tunnels, and other systems for the transportation of water.
2. Pipelines and other systems for the transportation of liquids other than water, including oil, natural gas, synthetic liquid and gaseous fuels, and any refined product produced therefrom.
3. Pipelines, slurry and emulsion systems, and conveyor belts for transportation of solid materials.
4. Systems for the transmission and distribution of electric energy.
5. Systems for transmission or reception of radio, television, telephone, telegraph, and other electronic signals, and other means of communications.
6. Improved right-of-way for snow machines, air cushion vehicles, and all-terrain vehicles.
7. Roads, highways, railroads, tunnels, tramways, airports, landing strips, docks, and other systems of general transportation.

This application **must** be filed simultaneously with each Federal department or agency requiring authorization to establish and operate your proposal.

In Alaska, the following agencies will help the applicant file an application and identify the other agencies the applicant should contact and possibly file with:

Department of Agriculture  
Regional Forester, Forest Service (USFS)  
Federal Office Building,  
P.O. Box 21628  
Juneau, Alaska 99802-1628  
Telephone: (907) 586-7847 (or a local Forest Service Office)

Department of the Interior  
Bureau of Indian Affairs (BIA)  
Juneau Area Office  
Federal Building Annex  
9109 Mendenhall Mall Road, Suite 5  
Juneau, Alaska 99802  
Telephone: (907) 586-7177

Department of the Interior  
Bureau of Land Management  
222 West 7th Avenue  
P.O. Box 13  
Anchorage, Alaska 99513-7599  
Telephone: (907) 271-5477 (or a local BLM Office)

National Park Service (NPS)  
Alaska Regional Office  
2525 Gambell Street, Room 107  
Anchorage, Alaska 99503-2892  
Telephone: (907) 257-2585

U.S. Fish & Wildlife Service (FWS)  
Office of the Regional Director  
1011 East Tudor Road  
Anchorage, Alaska 99503  
Telephone: (907) 786-3440

Note-Filings with any Interior agency may be filed with any office noted above or with the: Office of the Secretary of the Interior, Regional Environmental Officer, Box 120, 1675 C Street, Anchorage, Alaska 99513

Department of Transportation  
Federal Aviation Administration  
Alaska Region AAL-4, 222 West 7th Ave., Box 14  
Anchorage, Alaska 99513-7587  
Telephone: (907) 271-5285

NOTE - The Department of Transportation has established the above central filing point for agencies within that Department. Affected agencies are: Federal Aviation Administration (FAA), Coast Guard (USCG), Federal Highway Administration (FHWA), Federal Railroad Administration (FRA).

OTHER THAN ALASKA NATIONAL INTEREST LANDS

Use of this form is not limited to National Interest Conservation Lands of Alaska.

Individual department/agencies may authorize the use of this form by applicants for transportation and utility systems and facilities on other Federal lands outside those areas described above.

For proposals located outside of Alaska, applications will be filed at the local agency office or at a location specified by the responsible Federal agency.

SPECIFIC INSTRUCTIONS  
(Items not listed are self-explanatory)

Item

- 7 Attach preliminary site and facility construction plans. The responsible agency will provide instructions whenever specific plans are required.
- 8 Generally, the map **must** show the section(s), township(s), and range(s) within which the project is to be located. Show the proposed location of the project on the map as accurately as possible. Some agencies require detailed survey maps. The responsible agency will provide additional instructions.
- 9, 10, and 12 - The responsible agency will provide additional instructions.
- 13 Providing information on alternate routes and modes in as much detail as possible, discussing why certain routes or modes were rejected and why it is necessary to cross Federal lands will assist the agency(ies) in processing your application and reaching a final decision. Include only reasonable alternate routes and modes as related to current technology and economics.
- 14 The responsible agency will provide instructions.
- 15 Generally, a simple statement of the purpose of the proposal will be sufficient. However, major proposals located in critical or sensitive areas may require a full analysis with additional specific information. The responsible agency will provide additional instructions.
- 16 Through 19 - Providing this information in as much detail as possible will assist the Federal agency(ies) in processing the application and reaching a decision. When completing these items, you should use a sound judgment in furnishing relevant information. For example, if the project is not near a stream or other body of water, **do not** address this subject. The responsible agency will provide additional instructions.

Application **must** be signed by the applicant or applicant's authorized representative.

If additional space is needed to complete any item, please put the information on a separate sheet of paper and identify it as "Continuation of Item".

## NOTICES

Note: This applies to the Department of Agriculture/Forest Service (FS)

This information is needed by the Forest Service to evaluate the requests to use National Forest System lands and manage those lands to protect natural resources, administer the use, and ensure public health and safety. This information is required to obtain or retain a benefit. The authority for that requirement is provided by the Organic Act of 1897 and the Federal Land Policy and Management Act of 1976, which authorize the secretary of Agriculture to promulgate rules and regulations for authorizing and managing National Forest System lands. These statutes, along with the Term Permit Act, National Forest Ski Area Permit Act, Granger-Thye Act, Mineral Leasing Act, Alaska Term Permit Act, Act of September 3, 1954, Wilderness Act, National Forest Roads and Trails Act, Act of November 16, 1973, Archeological Resources Protection Act, and Alaska National Interest Lands Conservation Act, authorize the Secretary of Agriculture to issue authorizations or the use and occupancy of National Forest System lands. The Secretary of Agriculture's regulations at 36 CFR Part 251, Subpart B, establish procedures for issuing those authorizations.

### BURDEN AND NONDISCRIMINATION STATEMENTS

*According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0596-0082. The time required to complete this information collection is estimated to average 8 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.*

*The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).*

*To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, 1400 Independence Avenue, SW, Washington, DC 20250-9410 or call toll free (866) 632-9992 (voice). TDD users can contact USDA through local relay or the Federal relay at (800) 877-8339 (TDD) or (866) 377-8642 (relay voice). USDA is an equal opportunity provider and employer.*

The Privacy Act of 1974 (5 U.S.C. 552a) and the Freedom of Information Act (5 U.S.C. 552) govern the confidentiality to be provided for information received by the Forest Service.

**MT. WHEELER POWER, INC.  
HIGHWAY 50 TO PAN 69KV TRANSMISSION LINE PROJECT  
WHITE PINE COUNTY, NEVADA**

**PLAN OF DEVELOPMENT**

**OCTOBER 2012**

*Submitted to:*

**Bureau of Land Management  
Ely District Office  
702 N. Industrial Way  
Ely, Nevada 89301**

*Submitted by:*

**Mt. Wheeler Power, Inc.  
P. O. Box 151000  
1600 Great Basin Boulevard  
Ely, Nevada 89315**



**MT. WHEELER POWER**  
*Powering Your Future*

**HIGHWAY 50 TO PAN 69KV TRANSMISSION LINE PROJECT  
 WHITE PINE COUNTY, NEVADA  
 PLAN OF DEVELOPMENT**

**TABLE OF CONTENTS**

|          |  |           |
|----------|--|-----------|
| <b>1</b> | <b>INTRODUCTION.....</b>                             | <b>1</b>  |
| 1.1      | Requested of BLM.....                                | 1         |
| 1.2      | Purpose and Need for the Facility .....              | 3         |
| 1.3      | Authorizations, Permits, Reviews, and Approvals..... | 3         |
| <b>2</b> | <b>RIGHT-OF-WAY LOCATION .....</b>                   | <b>4</b>  |
| 2.1      | Legal Description.....                               | 4         |
| 2.2      | Existing Land Use.....                               | 4         |
| 2.3      | Description of Proposed Right-of-Way .....           | 6         |
| <b>3</b> | <b>FACILITY DESIGN FACTORS.....</b>                  | <b>6</b>  |
| 3.1      | Structure Design.....                                | 8         |
| 3.1.1    | Conductor .....                                      | 8         |
| 3.1.2    | Shield Wire .....                                    | 8         |
| 3.2      | Equipment.....                                       | 8         |
| 3.3      | Ancillary Facilities.....                            | 8         |
| <b>4</b> | <b>RIGHT-OF-WAY ACQUISITION.....</b>                 | <b>9</b>  |
| 4.1      | Surveying Activities.....                            | 9         |
| <b>5</b> | <b>CONSTRUCTION ACTIVITIES .....</b>                 | <b>9</b>  |
| 5.1      | General Construction.....                            | 10        |
| 5.2      | Work Force .....                                     | 11        |
| 5.3      | Project Compliance Plan .....                        | 11        |
| 5.3.1    | Deviations During Construction.....                  | 12        |
| 5.3.2    | Solid and Hazardous Waste .....                      | 12        |
| 5.3.3    | Dust Control .....                                   | 13        |
| 5.4      | Access Road Construction.....                        | 13        |
| 5.5      | Typical Structure Site and Laydown Area .....        | 13        |
| 5.6      | Staging Areas.....                                   | 13        |
| 5.7      | Structure Installation.....                          | 14        |
| 5.8      | Conductor Installation.....                          | 14        |
| 5.9      | Ground Rod Installation.....                         | 15        |
| 5.10     | Equipment Refueling .....                            | 15        |
| 5.11     | Post-Construction Cleanup .....                      | 15        |
| <b>6</b> | <b>RIGHT-OF-WAY OPERATION AND MAINTENANCE.....</b>   | <b>16</b> |
| 6.1      | Dust Control.....                                    | 17        |
| <b>7</b> | <b>ABANDONMENT .....</b>                             | <b>17</b> |
| <b>8</b> | <b>ENVIRONMENTAL PROTECTION MEASURES .....</b>       | <b>17</b> |
| 8.1      | Air Quality .....                                    | 18        |
| 8.2      | Hazardous or Solid Wastes.....                       | 19        |
| 8.3      | Cultural Resources.....                              | 19        |

**8.4 Soil and Water Resources..... 20**  
**8.5 Biological Resources..... 20**  
    **8.5.1 Noxious Weeds ..... 20**  
    **8.5.2 Vegetation ..... 21**  
    **8.5.3 BLM Sensitive Species..... 21**  
    **8.5.4 Migratory Birds and Raptors ..... 22**  
    **8.5.5 Wildlife..... 23**  
**8.6 Fire Protection ..... 23**  
**9 REFERENCES..... 24**

**LIST OF TABLES**

**Table 1: Authorizations, Permits, Reviews, and Approvals ..... 3**  
**Table 2: Legal Description of Distribution Line ..... 4**  
**Table 3: Existing Land Use Authorizations..... 6**  
**Table 4: Typical Design Characteristics ..... 6**  
**Table 5: Acres of Rights-of-Way ..... 9**  
**Table 6: Proposed Surface Disturbance ..... 10**  
**Table 7: Major Equipment Used During Construction ..... 10**  
**Table 8: Staging Area Locations ..... 14**

**LIST OF FIGURES**

**Figure 1: Project Location and Land Status..... 2**  
**Figure 2: Existing and Proposed Rights-of-Way and Project Access Roads ..... 5**  
**Figure 3: Proposed Right of Way Configuration ..... 7**

**ATTACHMENT**

**Attachment 1: Diagrams of Typical Single Pole Structures**

**HIGHWAY 50 TO PAN 69KV TRANSMISSION LINE PROJECT  
WHITE PINE COUNTY, NEVADA  
PLAN OF DEVELOPMENT**

## **1 INTRODUCTION**

This Plan of Development (POD) is submitted to the Bureau of Land Management Egan Field Office (BLM) on behalf of Mt. Wheeler Power, Inc. (MWP) for the Highway 50 to Pan 69-kilovolt (kV) Transmission Line (Project) located in White Pine County, Nevada. MWP is proposing to construct and operate approximately 8.5 miles of 69-kV transmission line and maintenance corridor (see Figure 1).

MWP proposes to construct and operate a new 69-kV overhead transmission line originating from the initiation point south of Highway 50, east of the intersection at Strawberry Road. The Project also includes a proposed pole-mounted switch at the intersection of the Strawberry 69kV Transmission Line Project and Highway 50 in the NW1/4 Section 6, Township 17 North, Range 55 East (T17N, R55N). The line will terminate at the Pan Project in Section 25, T17N, R55E (Figure 1). MWP will also install a proposed pole-mounted switch prior to the Pan Project Substation (e.g., owned by the Consumer). Metering for MWP will be on the 24920GdY/14400 distribution line within the Pan Project 69kV – 25kV Substation.

The estimated length of the route is approximately 8.5 miles, all of which is located on BLM land. The proposed route generally follows Highway 50 until turning south and following an approved constructed road to the Pan Project. The permanent ROW request for the project is 60 feet. If required, temporary use areas will be specifically designated on a map prior to issuance of a temporary use permit. A survey map will be provided showing the location of each structure and any temporary use areas.

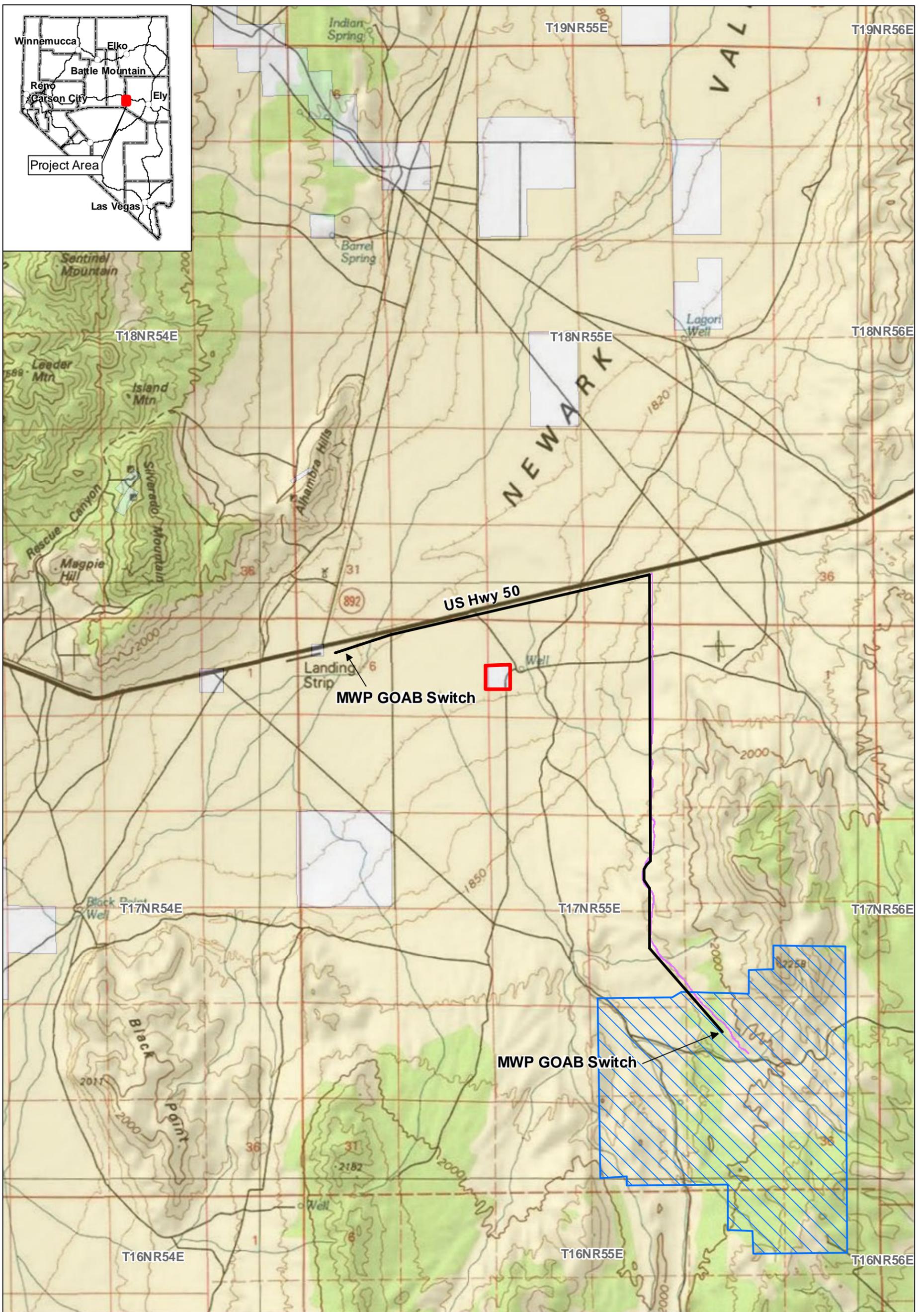
A final BLM ROW grant for facilities on BLM managed lands is anticipated in fall of 2012 with an in-service date planned for July 2014. The proposed Project and associated facilities will take approximately six to eight weeks to construct.

### **1.1 Requested of BLM**

MWP is requesting a BLM ROW grant for approximately 8.5 miles of a 60-foot wide 69-kV transmission line permanent ROW.

This ROW request requires the submittal of a ROW application (SF-299) and this POD. This POD describes the proposed Project and activities, and the purpose and need, as well as addresses how potential impacts to environmental resources will be determined in association with BLM-managed lands.

An Environmental Impact Statement (EIS) is being prepared for the Pan Project in response to the National Environmental Policy Act (NEPA), which includes all areas affected by the Project. MWP is in the process of completing the line survey and construction documents, and will continue revising and updating this POD to reflect final engineering design and environmental mitigation and protection plans as necessary.



**Explanation**

- Proposed 69 kV Transmission Line
- ▣ Proposed Storage Laydown
- ▣ Pan Project Area
- ▬ Pan Access Road

**Land Status**

- ▣ Bureau of Land Management
- Private

**MT. WHEELER POWER, INC.**

HIGHWAY 50 TO PAN 69 kV  
TRANSMISSION LINE PROJECT

Project Location and Land Status

Figure 1

|   |                   |
|---|-------------------|
| Date: 10/08/2012                                  | Drawn By: GSL     |
| Revised:  | Project No.: 2861 |
| Base Map: USGS 100K quad: MT. Hamilton            |                   |
| File Name: 2861X_MW_Figure1_ProjLocLandStatus.mxd |                   |

0 2,000 4,000 6,000 Feet

Projection: UTM Zone 11 North, NAD83

N

Enviroscientists, Inc.

**1.2 Purpose and Need for the Facility**

An access road into the Pan Project is pending approval as proposed in the Pan Project’s Exploration Plan of Operations and subsequent EIS. MWP proposes to build an overhead 69-kV transmission line to provide electricity to the Pan Project Mine Site (Mine Site) generally following adjacent to the Pan Project access road ROW. Exploration and mining projects based in rural Nevada require alternative energy management programs. Since most of these projects are off the transmission grid, alternative options need to be considered. This Project will allow for power to reach this rural Mine Site and allow for full operation and management for the predicted lifetime of the mine project. This Project is proposed to be conducted in an economically viable manner, to minimize transmission line energy losses and adverse environmental impacts. The transmission line will extend from a pole-mounted switch within the NW1/4, Section 6, T17N, R55E and terminate at the Mine Site in Section 25, T17N, R55E.

**1.3 Authorizations, Permits, Reviews, and Approvals**

The Project complies with the BLM Ely District’s Resource Management Plan and with relevant federal, state, and local statutes, regulations, and plans. Table 1 documents the federal, state, and local agencies’ approvals, reviews, and permitting requirements as anticipated for the proposed Project.

**Table 1: Authorizations, Permits, Reviews, and Approvals**

| Action Requiring Permit, Approval, Review  | Permit/Approval  | Accepting Authority/Approving Agency   | Statutory Reference  |
|--|--|--|--|
| <b>FEDERAL</b>   |  |  |  |
| Right-of-way over land under Federal Management  | Right-of-way Grant   | BLM  | FLPMA 1976 (PL94-579) USC 1761-1771 and 43 CFR 2800                    |
| National Environmental Policy Act (NEPA) Compliance to Grant ROW   | Pan Project Environmental Impact Statement (EIS)   | BLM  | NEPA, 40 CFR Part 1500-et.seg.   |
| Grant of ROW by BLM  | National Historic Preservation Act Compliance with Section 106   | BLM and State Historic Preservation Office   | National Historic Preservation Act of 1966, 36 CFR part 800, 16 USC 47 |
| <b>STATE OF NEVADA</b>   |  |  |  |
| Construction of Utility Facilities   | Nevada Department of Conservation and Natural Resources, Division of Environmental Protection, Bureau of Water Pollution Control | Notice of Intent to Comply with the General Stormwater Discharge Permit for Construction Activity (NOI)                                    | Nevada Administrative Code 445a  |
| Required for any land disturbance that will equal or exceed five acres of total disturbance. All activities which have the potential to adversely affect the local air quality | Dust Control Permit  | Nevada Department of Conservation and Natural Resources, Division of Environmental Protection, Bureau of Air Pollution Control (NDEP-BAPC) | Nevada Administrative Code 445b.22037                                  |

| Action Requiring Permit, Approval, Review                                | Permit/Approval     | Accepting Authority/Approving Agency | Statutory Reference |
|--|---------------------|--------------------------------------|---------------------|
| must implement all appropriate measures to limit controllable emissions. |                     |                                      |                     |
| <b>LOCAL</b>   |                     |                                      |                     |
| Construction and Operation   | Special Use Permits | White Pine County                    | County Zoning Code  |

## 2 RIGHT-OF-WAY LOCATION

The Project is located on BLM lands managed by the Egan Field Office, Ely District. The proposed transmission line will require a 60-foot wide ROW, including a 12- to 15-foot maintenance corridor to span the entire length of the proposed ROW. All land within the ROW is public land managed by the BLM.

### 2.1 Legal Description

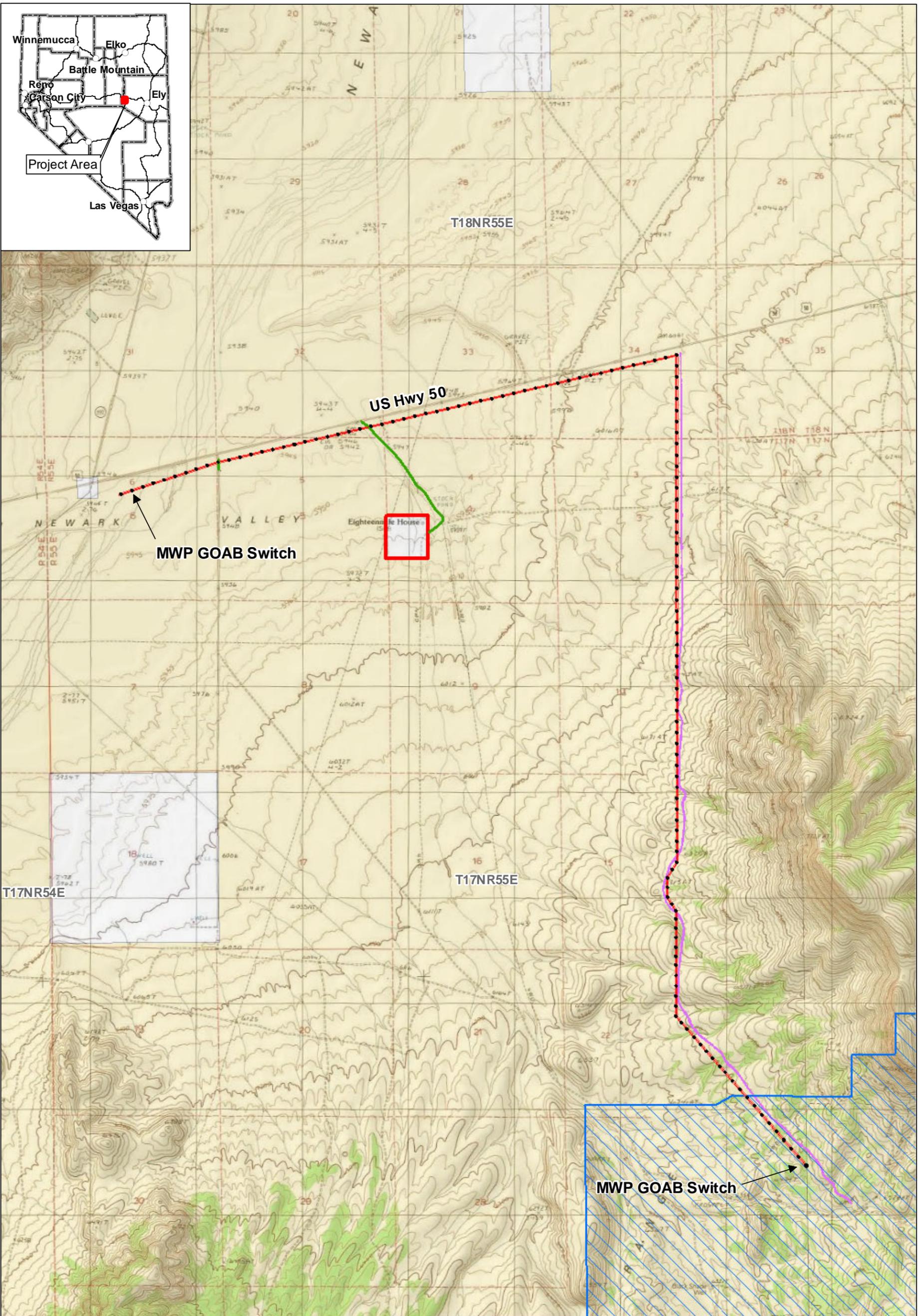
The ROW will originate at the proposed pole-mounted switch in the NW1/4, Section 6, T17N, R55E, and will terminate once it reaches the Mine Site (see Figure 2). Specific ROW location information can be found in Table 2 (Project Area).

**Table 2: Legal Description of Transmission Line**

| Township/Range | Section Number | Aliquot Part                                    |
|----------------|----------------|---|
| T18N, R55E     | 32             | SE1/4   |
|                | 33             | SW1/4, SE1/4                                    |
|                | 34             | SE1/4, NW1/4; SW1/4, NE1/4; NW1/4, SW1/4; SE1/4 |
| T17N, R55E     | 3              | E1/2  |
|                | 5              | NW1/4   |
|                | 6              | NE1/4; NW1/4                                    |
|                | 10             | E1/2  |
|                | 15             | E1/2  |
|                | 22             | NE1/4; N1/2, SE1/4                              |
|                | 23             | SW1/4, SW1/4                                    |
| 26             | NW1/4          |   |

### 2.2 Existing Land Use

The Project Area is BLM-administered land and is used for recreation, wildlife habitat, Mine Site access, and other public land uses. Multiple dirt access roads transect the Project Area and will provide access for construction activities. The Project proposes to run relatively adjacent to the Mine Site's pending access road. The Mine Site's 12-foot access road ROW submittal has been received by the BLM and is pending approval (see Table 3; Figure 2).



**Explanation**

- Proposed 69 kV Transmission Line
- Proposed 69 kV ROW
- ▭ Proposed Storage Laydown
- Existing Access Roads
- ▭ Pan Project Area
- Pan Access Road
- Proposed Poles

**Land Status**

- ▭ Bureau of Land Management
- ▭ Private

0 2,000 4,000 Feet

Projection: UTM Zone 11 North, NAD83

**MT. WHEELER POWER, INC.**

**HIGHWAY 50 TO PAN 69 kV TRANSMISSION LINE PROJECT**

Existing and Proposed Rights-of-Way and Project Access Roads

Figure 2

|   |                   |
|---|-------------------|
| Date: 10/08/2012  | Drawn By: GSL     |
| Revised:  | Project No.: 2861 |
| Base Map: USGS 7.5' quads: Silverado Mtn. & Black Point |                   |
| File Name: 2861X_MW_Figure2_ExistingProposedROWs.mxd    |                   |

**Enviroscientists, Inc.**

**Table 3: Additional Proposed Land Use**

| Holder                | ROW/Activity        | Case File No. | Location      |
|-----------------------|---------------------|---------------|---------------|
| Midway Gold U.S. Inc. | 12-Foot Access Road | NVN 090642    | Newark Valley |

**2.3 Description of Proposed Right-of-Way**

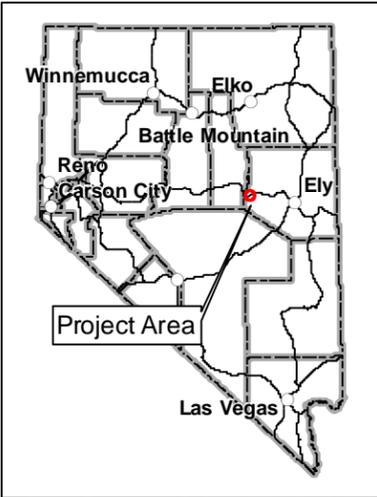
MWP is requesting a BLM ROW grant for approximately 8.5 miles of a 60-foot wide 69-kV transmission line ROW. The proposed 69-kV transmission line ROW includes a 12- to 15-foot maintenance road that will be built on the west side of the proposed ROW (Figure 3). This maintenance corridor will be utilized for the duration of the Project to inspect and maintain the transmission line as necessary. The Project Area measures approximately 62 acres in which all the Project surface disturbance will occur.

**3 FACILITY DESIGN FACTORS**

The design, construction, operation, and maintenance of the Project will meet or exceed the requirements of the following: the National Electrical Safety Code (NESC); the United States Department of Agriculture (USDA) - Rural Utilities Services (RUS); the U.S. Department of Labor Occupational Safety and Health Administration (OSHA) standards; and MWP’s requirements for safety and protection of landowners and their property. Based on Avian Power Line Interaction Committee (APLIC) recommendations (APLIC 1996), adequate raptor protection construction per NESC Rule 2345E, Table 2345-6 in conjunction with the APLIC Report CEC-500-2006-022 will be implemented. In addition, the neutral (multi-grounded wye system) wire will be grounded at regular intervals and insulated hardware and conductors will be used. The total proposed ROW length is approximately 44,876 feet long and 60 feet wide. The total area of the ROW is 62 acres. Proposed construction disturbance will be limited to areas around pole placement and the gravel maintenance road. Table 4 describes the typical design characteristics associated with power lines similar to the proposed Project. Further description of project specific design characteristics can be found in the following subsections.

**Table 4: Typical Design Characteristics**

| Design Part               | Description  |
|---------------------------|--|
| Line length               | Approximately 8.5 miles  |
| Type of structure         | Single wood mono-pole (see Figure 3)   |
| Structure height          | 50 to 55 feet  |
| Span length               | Approximately 450 feet   |
| Number of structures/mile | Approximately 12 to 18 per mile  |
| Structure base            | Direct embedded  |
| Conductor types           | 4/0 Aluminum Conductor Steel Reinforced “Penguin”  |
| Clearance of conductor    | 27 to 28 feet  |
| ROW width                 | 60-foot wide ROW   |
| Access roads              | Existing roads will be utilized whenever possible to access the ROW. In those areas where no reasonable access roads exist, MWP will utilize overland travel to access the ROW. MWP may need to add gravel to various “rutted road” areas. |
| Voltage                   | 69-kV Delta  |



**Explanation**

- Proposed Poles
- Proposed 69 kV Transmission Line
- Proposed 69 kV ROW
- Proposed Two-Track Maintenance Road
- Existing Access Roads

0      100      200  
 ─────────── Feet

Projection: UTM Zone 11 North, NAD83

**MT. WHEELER POWER, INC.**

HIGHWAY 50 TO PAN 69 kV  
 TRANSMISSION LINE PROJECT

Proposed Right-of-Way  
 Configuration

Figure 3

|                                  |   |
|----------------------------------|---|
| Date: 09/17/2012                 | Drawn By: GSL   |
| Revised:                         | Project No.: 2861                                       |
| Base Map: NAIP Nevada 2010 1m NC | File Name: 2861X_MW_Figure3_Schematics_Revise091012.mxd |

### **3.1 Structure Design**

MWP is proposing the use of direct burial self-supporting mono-pole wood structures approximately 50 to 55 feet in height. These types of structures will be installed including tangent, angle and dead-end poles. The base of the structure will range from one to two feet in diameter. Structure sites will include assembly and boom/line truck-landing areas resulting in temporary disturbance around each pole extending approximately four to six feet in all directions. Attachment 1 includes three diagrams of typical single-pole structures.

Tangent, angle and dead-end structures will be assembled and insulators will be attached to the pole. The poles will be erected with a boom/line truck to lift and set structure after it is assembled. The span length between the structures will be approximately 450 feet. Final design characteristics will be determined in the detailed design phase of this Project.

#### **3.1.1 Conductor**

Minimum conductor height above the ground for the 69-kV transmission line will be a minimum of 27 to 28 feet, at 120 degrees Fahrenheit (°F), based on the NESC minimum clearance provided per MWP standards. The exact height of each structure will be governed by topography and safety requirements for conductor clearance.

#### **3.1.2 Shield Wire**

The shield wire will be installed to protect the 69-kV transmission line and equipment from direct lightning strikes. Current from lightning strikes will be transferred through the static wire, on top of the pole, and structures into the ground.

### **3.2 Equipment**

During construction, the installation areas will be cleared of vegetation and access roads will be graded only where necessary. The 12- to 15-foot two-track maintenance road will be constructed as the power line structures are being constructed to allow access to the Project structures. Structural components will be transported to the site by truck and trailer. For ground construction, a boom/line truck will be used to erect the structure. Equipment could include the following: boom/line trucks; skid steers; trackhoe; augers; bulldozers; bucket trucks; backhoes; air compressors; electric generators; pickup trucks and other vehicles; machinery; and field equipment. Structure erection will be completed at each structure location. Construction materials and equipment will be stored at a staging area located on private land and placed in areas that will minimize disturbance to vegetation.

### **3.3 Ancillary Facilities**

The 8.5 miles of proposed 69-kV transmission line will necessitate the construction and/or improvement of the transmission system and associated facilities prior to energization. These associated facilities, located along this proposed 69-kV transmission line alignment, are outlined in the discussion below.

MWP will construct a new 69 kV overhead transmission line with a new Gang Operated Air Break (GOAB) Switch on the line east along Highway 50. A GOAB will also be used to isolate the substation near the Mine Project.

## 4 RIGHT-OF-WAY ACQUISITION

New permanent land rights are required for the proposed 69-kV transmission line facility. This includes the ROW for the transmission line including the maintenance corridor. The 69-kV transmission line ROW will be under MWP through the GOAB described in Section 3.3. Table 5 shows the total ROWs acreages requested to be granted by the BLM. No temporary land rights are required for the Project.

**Table 5: Acres of Rights-of-Way**

| Location   | Right-of-Way Length (miles) | Right-of-Way Width (feet) | Total Right-of-Way Acres |
|--|-----------------------------|---------------------------|--------------------------|
| BLM-Utility Corridor for 69 kV Transmission Line | 8.5                         | 60                        | 62                       |

### 4.1 Surveying Activities

Once the preferred route is selected a conventional centerline survey will be used to establish elevations along the centerline of the route. This survey will be used during the design process to establish potential structure locations, new access roads and other related facilities and activities. Another survey will be required, after design is complete, to make new structure relocations and other design revisions along the final route. Global Positioning System (GPS) equipment will be used to provide precise locations of the route.

Construction survey work will consist of the centerline location, tower or pole center hub, ROW boundaries, access and spur roads, and temporary work areas. The specified ROW boundaries will be marked at 100- to 200-foot intervals, and the temporary work areas will be marked at the four corners with painted laths or flags. Closer intervals may be flagged as needed. Flagging will be maintained until final cleanup and/or reclamation is completed, after which they will be removed. At a minimum, reference stakes for all angle stations or Points of Intersection (PI) along the route will be set on the ROW with stakes for each structure prior to construction.

## 5 CONSTRUCTION ACTIVITIES

Construction of the transmission line will generally follow a sequential set of activities performed by a number of small crews proceeding along the length of the line. Construction activities and considerations are discussed below.

**5.1 General Construction**

The entire route of the transmission system will be mono-pole with perch protection on the top of every pole. The mono-poles and associated perch protection will be transported to the staging areas via commercial trucks.

Generally, earthwork including grading access roads and pole sites will be completed with a Caterpillar dozer, backhoe, or equivalent equipment. MWP will take steps to prevent fires by ensuring that each field vehicle carries hand tools and a fire extinguisher.

Approximately five to six semi-truck and trailer loads will be required to bring the materials to the staging areas. Once at the staging areas, the poles will be transported to individual installation sites via flat bed trucks and trailers designed for overland travel. A standard truck-mounted auger and backhoe will be used to drill the holes for pole installation. The poles will be lifted by boom/line trucks and installed with the assistance of a backhoe/trackhoe. Temporary and permanent surface disturbance associated with pole installation can be found in Table 6. The staging area will be located on private land and will be used to temporarily store materials required for construction (Figure 2).

**Table 6: Proposed Surface Disturbance**

|                             | Construction Disturbance |                        |                           |
|-----------------------------|--------------------------|------------------------|---------------------------|
|                             | Number Needed            | Individual Disturbance | Total Disturbance (acres) |
| <b>Pole placement</b>       | 128                      | 113 ft <sup>2</sup>    | 0.33                      |
| <b>Maintenance corridor</b> | 1                        | 15.5 acres             | 15.5                      |

The typical equipment and vehicles needed for construction of this Project are listed in Table 7.

**Table 7: Major Equipment Used During Construction**

| Equipment                     | Use  |
|-------------------------------|--|
| Truck                         | Hole drilling and earth compaction                 |
| Skid steer                    | Backfill pole holes                                |
| Crawler tractor/Trackhoe      | Excavation   |
| Backhoe                       | Excavation   |
| Boom/Line Truck               | Load and unload material, erect poles              |
| Bucket truck                  | Access poles, string conductor and other uses      |
| Cable reel trailer            | Transport cable reels and feed cables into conduit |
| Truck with cinch              | Pull cable   |
| Auger                         | Drill holes  |
| Crane and forklift            | Material management                                |
| Bulldozer/Muskeg (track unit) | Grading, access roads, pole sites, reclamation     |
| Commercial motor vehicle      | Haul poles and equipment                           |

## **5.2 Work Force**

It is anticipated that six to ten linemen will be on site during the construction of the transmission line. The work force will decrease to what is required during the operation and maintenance period. It is anticipated that up to four personnel will be on site at any given time for operation and maintenance following the construction period.

## **5.3 Project Compliance Plan**

MWP will contact the BLM Authorized Officer (AO) or his designee at least ten days prior to commencing construction and/or any surface disturbing activities. A preconstruction conference will be scheduled with the BLM and MWP prior to commencing construction and/or surface disturbing activities on the ROW. MWP personnel and contractors' representatives involved with construction and/or any surface disturbing activities associated with this ROW will attend this conference to review the stipulations of the BLM ROW grant including stipulations of the POD and other documents as determined by the BLM.

MWP will not initiate any construction or other surface disturbing activities on the public land portion of the ROW until after the release of the BLM Notice to Proceed (Form 2800-15) is issued by the AO or his designee.

MWP will conduct all activities associated with the construction operation, and termination of the ROW within the authorized limits of the ROW. MWP will construct, operate and maintain the facilities, improvements and structures within this ROW in strict conformity with the POD as approved and made part of the grant. Any relocation, additional construction, or use that is not in accordance with the approved POD, will not be initiated without the prior written approval of the AO or his designee. A copy of the most up to date POD will be made available on the ROW area during construction.

If necessary and upon agreement between the BLM and MWP, a Compliance Inspection Contractor (CIC) will provide environmental oversight and compliance regulatory activities for the BLM. The CIC will be empowered to act as BLM's representative in accordance with the Memorandum of Understanding (MOU) between the BLM and MWP. The MOU between the BLM and MWP will be developed containing the Scope of Work to outline the authority and responsibilities of the CIC. The CIC will assist the construction contractor(s) (Contractor) and construction personnel with any environmental issues that arise during construction.

MWP and the Contractor shall maintain a safety program in connection with construction activities. The safety program shall include safety training, elimination of unsafe conditions, and daily tail gate safety meetings. Safety practices shall meet or exceed the safety practices outlined in the latest edition of the American Public Power Association "Safety Manual" as adopted by MWP.

Construction and work activities shall comply with all requirements of the OSHA, and the State of Nevada Division of Occupational Safety, including provisions of the Nevada Revised Statutes (NRS) 618.375 pertaining to Occupational Safety and Health. Work will also comply with all

legal requirements in NRS 455.200 through NRS 455.250 pertaining to activities to be performed near overhead electrical lines.

MWP and the Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the work, including giving notices, erecting and maintaining all safeguards and complying with all laws, ordinances, regulations, codes, and lawful orders of any public agency.

### **5.3.1 Deviations During Construction**

Minor changes in an approved project are sometimes necessary to accommodate or mitigate on-site circumstances. In the past, project construction has been stopped, pending further agency approval of the requested variance. These delays are extremely costly and could jeopardize the economic feasibility of the Project. When the variance requested is for an action that has been assessed in the NEPA document for the Project, and the resultant disturbance area is within the existing approved ROW, the CIC will have the authority to approve or deny the requested variance if the authority is delegated to the CIC by the BLM. The empowerment of the CIC to approve minor variances will expedite the Project while protecting resource values.

Minor changes that occur will not require amending the ROW or cause any reinitiation triggers for a biological opinion. Minor changes include movement within the existing approved ROW. Avoidance areas for sensitive plant species within the approved ROW (based on environmental surveys) will be identified in the EA. The CIC and biological monitors will review the identified sensitive areas as recorded in the EA and the area of the minor change to identify any additional avoidance concerns. Examples of changes that could be approved by the CIC include the following:

*Disturbance areas:* Modify disturbance areas within the authorized ROW and temporary use boundaries. Any special status species that could be impacted by modifications will be mitigated under the direction of the CIC prior to implementation.

*Power lines:* Move location of erosion control devices, location of temporary fences, tensioning locations, temporary work sites, access point to poles/structures, and cable spool storage locations within authorized areas.

*Roads:* Move culvert locations to better accommodate natural drainages, meander roads within the ROW to avoid impacts to plants and wildlife, and utilize existing previously disturbed roads.

### **5.3.2 Solid and Hazardous Waste**

Totally enclosed containment will be provided for any trash stored on site. Spill kits will be on site and absorbent diapers will be placed under leaking equipment immediately to prevent ground contamination. All construction waste, including trash and litter, garbage or solid waste, petroleum products and other materials will be removed to a disposal facility authorized to accept such materials.

All construction, operation and maintenance activities will comply with all applicable federal, state, and local laws and regulations regarding the use of hazardous substances. The construction or maintenance crew foreman will be responsible for maintaining compliance with all applicable laws and regulations. In addition, an on-site inspector will be present during construction to make sure all materials are used and stored properly.

### **5.3.3 Dust Control**

Water trucks will be the primary means of dust abatement during all phases of construction. MWP or a designated contractor will obtain dust permits as necessary prior to construction and comply with all conditions in the dust permit. Roads will be watered as needed. Water spray will be controlled so that pooling will be avoided to the extent possible. Speed limits of 20 to 25 miles per hour (mph) will be set and strictly enforced.

The Contractor or MWP will negotiate to obtain water for construction and dust control. All Project personnel will be educated on the Site Dust Management Plan. The CIC will monitor dust conditions on site during construction.

### **5.4 Access Road Construction**

Existing roads will be utilized to access the Project to the greatest extent possible. MWP does not anticipate the construction of additional access roads. The maintenance corridor will be constructed before the placement of poles to allow for access.

### **5.5 Typical Structure Site and Laydown Area**

At each structure site, work areas are required to facilitate the safe operation of equipment and construction operations. Construction laydown areas will be located in previously disturbed areas whenever possible (i.e. along access roads). At each location, a work area will be cleared and leveled only if necessary. In most relatively level terrain, this will not be needed. Structure pieces will be delivered to the laydown area where workers will assemble the pole and attach insulators and hardware. The pole will be erected using a boom/line truck from the staging area. After construction, the laydown area will be reclaimed and restored.

The work area will be cleared of vegetation only to the extent necessary. Access within the work area will be via the constructed maintenance road or overland travel. Structures will be assembled in relatively level areas without the need for blading. After line construction, all work areas identified as temporary disturbance will be restored.

### **5.6 Staging Areas**

A temporary material storage yard will be required for construction materials. This staging area will serve as the reporting location for workers, parking space for vehicles, and storage space for equipment and material. A staging area for the 69-kV transmission line will be on private property (see Table 8 and Figure 2).

**Table 8: Staging Area Locations**

| Staging Areas | Township/<br>Range | Legal Description (Section Number<br>& Aliquot Part) |
|---------------|--------------------|--|
| Private Land  | T17N, R55E         | NW1/4, SW1/4 Section 4                               |

The yard will be located in an area requiring minimal clearing and grading, to the extent possible. Structural materials such as structure steel, hardware, foundation material, spools of conductor, and shield wire will be hauled by truck into the yard. A crane or forklift will be required to unload and transport the materials. Construction materials will be delivered by truck from the yard to lay down areas. From these areas, materials will be brought to structure sites as needed. Crews will load the material required for the workday thus limiting the weight hauled on the access roads. This will limit the impact and rutting on access roads caused by the use of heavy vehicles.

**5.7 Structure Installation**

For each structure location, temporary and permanent land disturbance will result (see Table 6). Excavation and setting of structures will be performed in a continuous operation, preventing the possibility of caving of holes or injury to animals or persons in the vicinity of the construction. No excavations will be left uncovered when the Contractor’s personnel are not on site.

Surveying and routing work for the transmission line will help in identifying areas of poor soil stability. If soil conditions prevent installation of structures at locations as staked by the Engineering Manager, the Contractor is required to notify the Engineering Manager of conditions existing at the structure location. If possible, the problem will be remedied by relocation of the structure upline or downline from the initial location. Similar protocols will be followed to avoid any identified sensitive environmental resources.

**5.8 Conductor Installation**

Conductor and shield wire will be delivered on reels by flatbed truck to the various conductor pulling sites along the ROW. Other equipment required to install the conductor will include reel stringing trailers, tensioning machines, pullers, a boom/line truck or muskeg, and several trucks including a bucket truck. One of two methods may be used for installing conductor and neutral wire.

The conventional method is to pull out a sock line or “pullrope” along the route of the line and manually lift the rope into stringing sheaves. The rope is brought to a puller at one end and a tensioner on the other end. The tensioner holds the wire reels and maintains enough tension to keep the wire off the ground and vegetation while the puller pulls the wire through the stringing sleeves. This method may require some overland travel between structures. When overland travel is required for this purpose, an ATV or similar type vehicle will be used.

Temporary guard structures will be installed to ensure that the conductors do not drop into the road or other locations that could result in a safety hazard. Splicing will occur between conductor spools. After the conductors are pulled in, conductor tension will be adjusted to properly sag the conductors. The conductors will then be clipped to the insulators and the stringing roller wheels removed.

Typically, conductor pulling sites for stringing the conductor will be spaced at 3,000- to 5,000-foot intervals. However, distances between each site will vary depending on the geography, topography and environmental sensitivity of the specific area, the length of the conductor pull, the conductor size and the accessibility of the equipment. Pulling sites will require a temporary working area. At each pulling site stringing equipment will be set up approximately 250 feet from the initial structure for leveraging the conductor pull safely. Angle structure pulling sites may be located outside the temporary construction ROW, but all conductor pulling operations will be contained within the environmental study corridor.

Sites for tensioning equipment and pulling equipment are typically areas approximately 60 feet by 200 feet in size. However, when construction occurs in the steep and rough terrain, these sites may require larger, less symmetrical pulling and tensioning sites. Pulling and tensioning sites needed for this transmission line will be identified on the EA.

## **5.9 Ground Rod Installation**

The transmission line is a multi-grounded wye system; therefore, all poles and structures will have a #4 stranded copper ground wire stapled to the pole and then attached to a 5/8-inch diameter, eight-foot long copper clad ground rod buried vertically with the top of the rod one foot below the ground surface.

## **5.10 Equipment Refueling**

MWP will implement standard refueling procedures for heavy equipment that is left on the ROW for long periods of time, such as blades, cats, muskeg, etc. This equipment will be refueled in place. No personal or light duty vehicles will be allowed to refuel on the ROW.

## **5.11 Post-Construction Cleanup**

The Contractor will be required to have a continuous cleanup program throughout construction. The Contractor will restore disturbed land to its pre-construction condition. Restoration will include the removal of deep ruts and the disposal of foreign objects such as slash, pile cut-off, construction materials, etc. Reclamation will include recontouring of impacted areas to match the surrounding terrain, and cleaning trash out of gullies.

Construction sites, material storage yards, and access roads will be kept in an orderly condition and free of trash throughout the construction period. Waste materials and debris from construction areas will be collected, hauled away, or disposed of at approved landfill sites. Refuse and trash will be collected at the temporary material staging construction yards (pulling and tensioning sites) in a closed container until removed from the sites and disposed of in an

approved manner. Oils and fuels will not be dumped on the ROW. Waste oils or chemicals will be hauled to an approved site for disposal by MWP.

The Contractor will be required to keep a clear work area and will have a covered portable dumpster on site to contain any trash that can be blown away. After completion of the Project, the Operations Manager will complete a final walk through. The Operations Manager will note any waste material left on site and any ruts or terrain damage or vegetation disturbance that has not been repaired. The Contractor will be given this list and final payment will not be received until all items are completed.

Procedures for restoration and ROW maintenance will be coordinated with the BLM Ely District Egan Field Office, White Pine County, and will be implemented as standard construction and reclamation measures for the 69-kV transmission line. The temporary areas will be recontoured to match the surrounding terrain. Revegetation of temporary disturbance associated with Project construction will be seeded. Seeding will be limited to areas where disturbance occurred and will be completed with a BLM approved weed free seed mix and application rate.

Timing of revegetation activities is critically important to the overall success of the program. Seeding activities would be timed to take advantage of optimal climatic windows and would be coordinated with other reclamation activities. In general, earthwork and drainage control would be completed in the summer or early fall and seedbed preparation would be completed in the fall, either concurrently with or immediately prior to seeding. Seeds would be sown in late fall to take advantage of winter and spring precipitation and optimum spring germination. Early spring seeding may be utilized for areas not seeded in the fall. Seeding would not be conducted when the ground is frozen or snow covered.

## **6 RIGHT-OF-WAY OPERATION AND MAINTENANCE**

Safety is a primary concern in the design, construction and operation of the Project. The transmission line will be protected with circuit breakers, reclosers or fuses, and related line relay protection equipment. If conductor failure occurs, power will be automatically removed from the line. Lightning protection is provided by neutral wires along the line.

Maintenance will include transmission line and pole repair and/or replacement. No routine maintenance will be performed on the transmission line. However, MWP will annually inspect the transmission line from a light, off-road vehicle. MWP will make repairs and/or perform facility replacement as necessary. MWP will not routinely travel within the ROW and maintenance will not include the construction of new access roads. Equipment damaged by vandals will be replaced as deemed necessary.

The electrical equipment and monopoles are anticipated to have a lifetime of approximately 50 to 60 years or more depending upon maintenance operations and climatic conditions. Structures, conductors, neutral wire, insulators, and hardware will be left in place, dismantled, and replaced or removed from the ROW during the life of the Project.

Emergency maintenance, such as repairing downed wires during storms and correcting unexpected outages, will be performed by MWP. MWP will respond to emergency conditions

along the proposed route within a few hours after being made aware of an incident. The length of time needed to make the repairs will depend on the nature of the outage. MWP manuals include emergency response procedures, as well as operations and maintenance activities for metering sites and transmission lines, which will be implemented for this Project as necessary.

MWP will maintain the proposed transmission system by monitoring, testing, and repairing equipment.

## **6.1 Dust Control**

Dust control during maintenance of the transmission line will be managed the same as during construction. Monitoring and maintenance will be done from all approved or existing access roads. When access into the pole locations needs improvement, a dozer or motor-grader may be used. Application of gravel in tire track ruts will be used for dust suppression as needed. Gravel will be used from a BLM-approved source.

## **7 ABANDONMENT**

If the transmission line is no longer needed, poles, conductors, and hardware associated with the 69-kV transmission line will be totally removed. The remaining holes will be filled with soil gathered from the immediate vicinity. The areas where the poles were removed will be raked to match the surrounding topography. Bladed areas will be recontoured and seeded with the appropriate seed mix.

## **8 ENVIRONMENTAL PROTECTION MEASURES**

MWP anticipates no conflicts with resources or public health and safety during and after completion of this Project. MWP proposes the following specific environmental protection measures:

- Public safety will be maintained throughout the life of the Project. All equipment and other facilities will be maintained in a safe and orderly manner;
- Prior to construction, Project personnel will be instructed on the protection of cultural and ecological resources;
- A speed limit of 15 mph will be used by Project-related equipment on roads within the Project Area to reduce the potential for collisions with recreationists and grazing animals;
- Any survey monuments, witness corners, or reference monuments will be protected;
- In the event that any existing roads are severely damaged as a result of Project activities, MWP will return the roads to their original condition;
- The transmission line will be regularly patrolled and properly maintained in compliance with applicable safety codes;

- Fences and gates will be repaired or replaced to their original condition if they are damaged by construction activities; and
- Non-specular conductors will be used to reduce visual impacts.

Additional resource specific protection measures are included below.

## **8.1 Air Quality**

Emissions produced during grading and construction of the proposed Project is of short-term duration and will cease upon completion of construction. Dust will be minimized by application of water to disturbed areas. A dust control permit (as identified in Table 1) issued by the appropriate regulating agency will be obtained prior to start of construction. Construction will comply with all the requirements of that dust control permit. Initially proposed mitigation measures designed to minimize impacts to air quality will include:

- Water will be applied to the ground during the construction and utilization of the access roads and other disturbed areas as necessary to control dust;
- During excavation, backfilling, contouring, and rehabilitation, the disturbed soil should be wetted, chemically treated, or treated by other means satisfactory to the AO, sufficiently in order to effectively reduce airborne dust and reduce soil erosion. A regular maintenance program shall include, but is not limited to, soil stabilization and reapplication of dust abatement methods as necessary;
- New roads will be built at right angles to washes to the extent practicable. Construction and maintenance activities will be conducted to minimize disturbance to vegetation and drainage channels. Existing roads will be left in or restored to a condition equal to or better than their condition prior to construction;
- All new access roads not required for maintenance will be permanently closed using methods approved by the landowner/manager (e.g., stockpiling and replacing topsoil or rock replacement);
- All construction vehicle movement outside the ROW will be restricted to designated access or public roads;
- All requirements of those entities having jurisdiction over air quality matters will be adhered to and any permits needed for construction activities will be obtained. Open burning of construction trash is not allowed;
- All pads and structure pads will be watered prior to and during all construction activities. All Project personnel will be educated on the site dust control plan; and
- Access to work areas will be by overland travel whenever possible to minimize grading access roads.

## **8.2 Hazardous or Solid Wastes**

The contractor will comply with applicable laws pertaining to proper usage and disposal of potentially hazardous materials. No hazardous materials will be used on the ROW. Trash and solid waste generated from construction activities will be stored in closed containers at the construction yards and staging sites and will be disposed of in accordance with regulatory requirements. Any spills will be immediately reported to the CIC and MWP construction inspectors so that cleanup can be implemented immediately. MWP will notify the appropriate authorities if a spill occurs. All spill materials will be labeled and stored at an MWP-designated facility off the ROW for accumulation and disposal.

Initially proposed mitigation measures to ensure compliance with applicable hazardous materials regulations could include:

- No paint or permanent discoloring agents will be applied to rocks or vegetation to indicate limits of survey or construction activity;
- Equipment will be properly maintained to reduce the possibility of leaks and hose ruptures. In the event of a discharge or spill, cleanup procedures will be implemented immediately to ensure that no materials will be available for transport by storm water run-off;
- Portable chemical toilets will be utilized and all human waste will be hauled off site;
- Regulated wastes will be removed from the Project Area and disposed in a state, federal, or local designated area;
- Hazardous materials will not be drained onto the ground or into streams or drainage areas. Totally enclosed containment will be provided for all trash. All construction waste including trash, litter, garbage, other solid waste, petroleum products, and other potentially hazardous materials will be removed to a disposal facility authorized to accept such materials. No debris of any kind will be deposited in or on the ROW; and
- No biodegradable debris will be left in the ROW.

## **8.3 Cultural Resources**

Cultural resources are defined as buildings, sites, structures, or objects, each of which has historical, architectural, archeological, cultural, and/or scientific importance. Numerous laws, regulations, and statutes, on both the federal and state levels, seek to protect and target the management of cultural resources. Archeological Class III inventories have been conducted in the Project Area.

Construction activities in areas where National Register of Historic Places (NRHP) eligible and unevaluated cultural resource sites/localities have been identified will be avoided. In addition, areas that demonstrate high potential for buried paleontological resources will be monitored during construction. Native American interests will be addressed as appropriate.

Proposed protection measures for cultural resource during Project construction include the following:

- Any areas containing cultural resources of significance will be avoided, or the potential for impacts mitigated in a manner acceptable to the BLM. MWP employees, contractors, and suppliers will be reminded that all cultural resources are protected and if uncovered shall be left in place and reported to the MWP representative and/or their supervisor;
- A buffer of approximately 100 to 150 feet will be established around eligible and unevaluated cultural sites that lie very close to Project activities. When initial construction is close to the buffered areas, an archaeological monitor will be present to insure that eligible and unevaluated cultural sites are not disturbed; and
- Cultural resources will continue to be considered during post-environmental assessment phases of plan implementation. Any cultural or paleontological resources (historic or prehistoric site or object) discovered by the Contractor, or any person working on his behalf on public lands, shall be immediately reported to the AO. The Contractor shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the AO. An evaluation of the discovery will be made by the AO to determine appropriate actions to prevent the loss of significant cultural or scientific values. MWP or the Contractor will be responsible for the cost of evaluation. The AO will make any decision regarding suitable mitigation measures after consulting with MWP or the Contractor. MWP or the Contractor shall be responsible for the resultant mitigation costs.

#### **8.4 Soil and Water Resources**

The following Project protection measures will be applied that relate to soil and water resources:

- Cut and fill activities have been minimized through the selection of the transmission line routes. To minimize erosion from storm water runoff, access roads will be maintained consistent with the best management practices (BMPs) applicable to development roads. BLM BMPs for storm water will be followed, as applicable, on public lands.

#### **8.5 Biological Resources**

##### **8.5.1 Noxious Weeds**

No listed noxious weeds were detected during the botanical survey for the Project; however, invasive and nonnative species Russian thistle, halogeton, and cheatgrass were observed. These species were primarily observed in previously disturbed areas intermixed with native species and no large populations or monocultures of Russian thistle, halogeton, or cheatgrass were noted. The following protection measures will be applied to reduce the potential for the introduction noxious weeds, prevent the spread of invasive species and eradication of noxious weeds if found during the Project:

- Noxious weeds will be controlled through implementation of preventive BMPs as outlined in the table below, which will include, but not be limited to the following: (a) any heavy equipment moving in to the Project Area from another project site will have wheel wells, wheels and tires, bumpers, undercarriage, etc., cleaned with high pressure water or air to remove any weed seeds prior to moving onto the site; (b) only certified weed-free seed will be used for reclamation seeding; and (c) all reclamation will be monitored for infestations of noxious weeds; and

| BMP   | Purpose   |
|---|---|
| Equipment washing prior to moving onto Project Area | Reduces spread of invasive species into Project Area.   |
| Use certified weed-free seed for reclamation        | Reduces introduction of invasive species into Project Area.                                   |
| Avoiding disturbance to known populations           | Reduces spread of species into Project Area.  |
| Removal of populations in reclaimed areas           | Manage spread of invasive species in disturbed areas to allow native vegetation to establish. |
| Concurrent reclamation                              | Reduces the establishment of invasive species in disturbed areas.                             |
| Monitoring of reclaimed areas                       | Identifies populations of invasive species in early stages.                                   |

- Eradication measures will be implemented in coordination with the BLM if noxious weeds were found.

### 8.5.2 Vegetation

Primary habitats include: big sagebrush scrubland; salt desert scrub; and greasewood communities. Vegetation will be cleared immediately around the pole placement areas and within the 12- to 15-foot maintenance corridor. Any removed vegetation will be mulched on site. Areas of temporary disturbance will be restored to pre-construction condition in accordance with applicable mitigation measures. Permanent disturbance will be maintained for operation and maintenance of the transmission line. Initially proposed mitigation measures designed to protect vegetation during construction could include:

- In newly disturbed temporary work areas, the soil will be salvaged and will be distributed and contoured evenly over the surface of the disturbed area after construction completion. The soil surface will be left rough to help reduce potential wind erosion;
- Grading will be minimized by utilizing overland travel within work areas whenever possible; and
- Following Project construction, areas of disturbed land no longer required for operations will be reclaimed to promote the reestablishment of native plant and wildlife habitat.

### 8.5.3 BLM Sensitive Species

The following BLM sensitive species have been known to occur in the Project Area: greater sage-grouse; pygmy rabbit; and sand cholla. Sensitive bird species including several migratory birds and raptors are also known to occur in the Project Area. Brewer’s sparrow, ferruginous

hawk, sage sparrow, sage thrasher, and loggerhead shrike, all BLM sensitive species, were observed within the Project Area (Enviroscientists 2012; JBR 2012).

The following protection measures will be included in the Project to protect BLM Sensitive Species:

- A sage-grouse mitigation plan will be developed in coordination with the BLM to minimize and offset impacts to sage-grouse habitat;
- A MWP-hired biologist will conduct a pre-disturbance survey for pygmy rabbit in the occupied habitat within the Project Area two weeks prior to any surface disturbance. If occupied habitat is detected within the proposed are of disturbance, MWP will contact the BLM biologist to determine an appropriate avoidance measure or buffer zone;
- Sand cholla will be avoided or transplanted during construction activities; and
- A pre-construction nesting bird and raptor survey will be conducted prior to project construction activities within breeding and nesting season as described below in Section 8.5.4 that will protect the BLM sensitive avian species.

#### **8.5.4 Migratory Birds and Raptors**

Fifteen avian species detected during surveys are listed as migratory bird species by the Migratory Bird Treaty Act (MBTA). Six species of raptors were observed in the Raptor Survey Area: ferruginous hawk; red-tailed hawk; rough-legged hawk; prairie falcon; golden eagle; and turkey vulture. The following project design features and protection measures will be applied to protect avian resources:

- The proposed transmission line will provide raptor protection in compliance with the standards described in the “Suggested Practices for Raptor Protection on Power Lines, The State of the Art in 2006” (APLIC 2006);
- All power poles will utilize raptor anti-electrocution and perch protection construction standards or equipment. In addition, should construction be planned within the greater sage-grouse wintering season, prior to the commencement of construction, areas proposed for disturbance will be surveyed by a qualified biologist to determine if wintering sage-grouse concentrations exist. Any wintering concentrations of birds will be avoided by 0.6 mile;
- Prior to surface disturbance being conducted during the avian breeding season (March 15 through July 31), MWP will provide a wildlife biologist to conduct migratory bird nest surveys of active working areas within the Project Area to verify that no nesting birds will be affected. These migratory bird nest surveys would be coordinated via telephone with the Wildlife Biologist in the BLM Egan Field Office no more than one week in advance of the construction activities. During the period from March 15 through May 15, all ground disturbing activities would be completed within fourteen days of the date on which the bird nest survey was performed. If activities begin or last more than fourteen

days from the date of the most recent bird nest survey, another bird nest survey would be performed to ensure that no nests are disturbed and that no take of migratory birds occurs. A single migratory bird nest survey would be performed without the fourteen day time restriction for project activities occurring between May 15 and July 31 as most migratory bird species will have completed their nest building activities by then. If nests are located, or if other evidence of nesting (i.e., mated pairs, territorial defense, carrying nest material, transporting food) is observed, a protective buffer (the size depending on the habitat requirements of the species) will be delineated and the buffer area avoided to prevent destruction or disturbance to nests until they are no longer active.

### **8.5.5 Wildlife**

The following measure will help reduce impacts to wildlife using the Project Area:

- Following Project construction, areas of disturbed land no longer required for operations will be reclaimed to promote the reestablishment of native plant and wildlife habitat.

### **8.6 Fire Protection**

All federal, state, and county laws, ordinances, rules, and regulations, which pertain to prevention, pre-suppression, and suppression of fires, will be strictly followed. All personnel will be advised of their responsibilities under the applicable fire laws and regulations. It will be the responsibility of the construction contractor to notify the BLM, Central Nevada Interagency Dispatch Center (CNIDC) at (775) 623-3444 and the BLM Ely Fire Officer at (775) 635-4144, when a Project related fire occurs within or adjacent to the construction area.

MWP or its contractor will be responsible for any fire started in or out of the Project Area by its employees or operations during construction. MWP or its contractor will be responsible for fire suppression and rehabilitation. MWP or its contractor will take aggressive action to prevent and suppress fires on and adjacent to the Project Area, and will utilize its workers and equipment on the Project for fighting fires within the Project Area.

When fire suppression is the responsibility of the BLM, current BLM standard fire fighting rates for labor will be used. Equipment will be paid for at negotiated rates established in BLM rental agreement contracts for the particular working season. The BLM may call on the contractor's workers and equipment in emergencies for fires outside the Project Area. Payment will be made in a similar manner to that above.

Costs involved with MWP or Contractor-caused fires will be charged to MWP or the Contractor. There will be no extension of time for line construction for delays caused by Contractor-related fires. Specific construction-related activities and safety measures will be implemented during construction of the transmission line in order to prevent fires and to ensure quick responses and suppression in the event a fire occurs. These activities and requirements include:

- All construction and operating equipment will be equipped with applicable exhaust spark arresters;

- Personnel will be allowed to smoke only in designated areas, and they will be required to follow applicable BLM regulations regarding smoking;
- All vehicles must stay on designated roads or park in areas free of vegetation;
- Water that is used for construction and dust control will be available for fire fighting;
- MWP or the Contractor will provide and store in a place easily accessed at each construction site shovels and one five-pound ABC dry powder carbon dioxide fire extinguisher during all construction activities; and
- MWP or the Contractor will have the appropriate notification numbers including the BLM Fire Dispatch, the BLM Project Representative and MWP Construction Project Manager readily available on site for all employees in case of fire.

## 9 REFERENCES

Avian Power Line Interaction Committee (APLIC). 2006. *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006*. 227 pp.

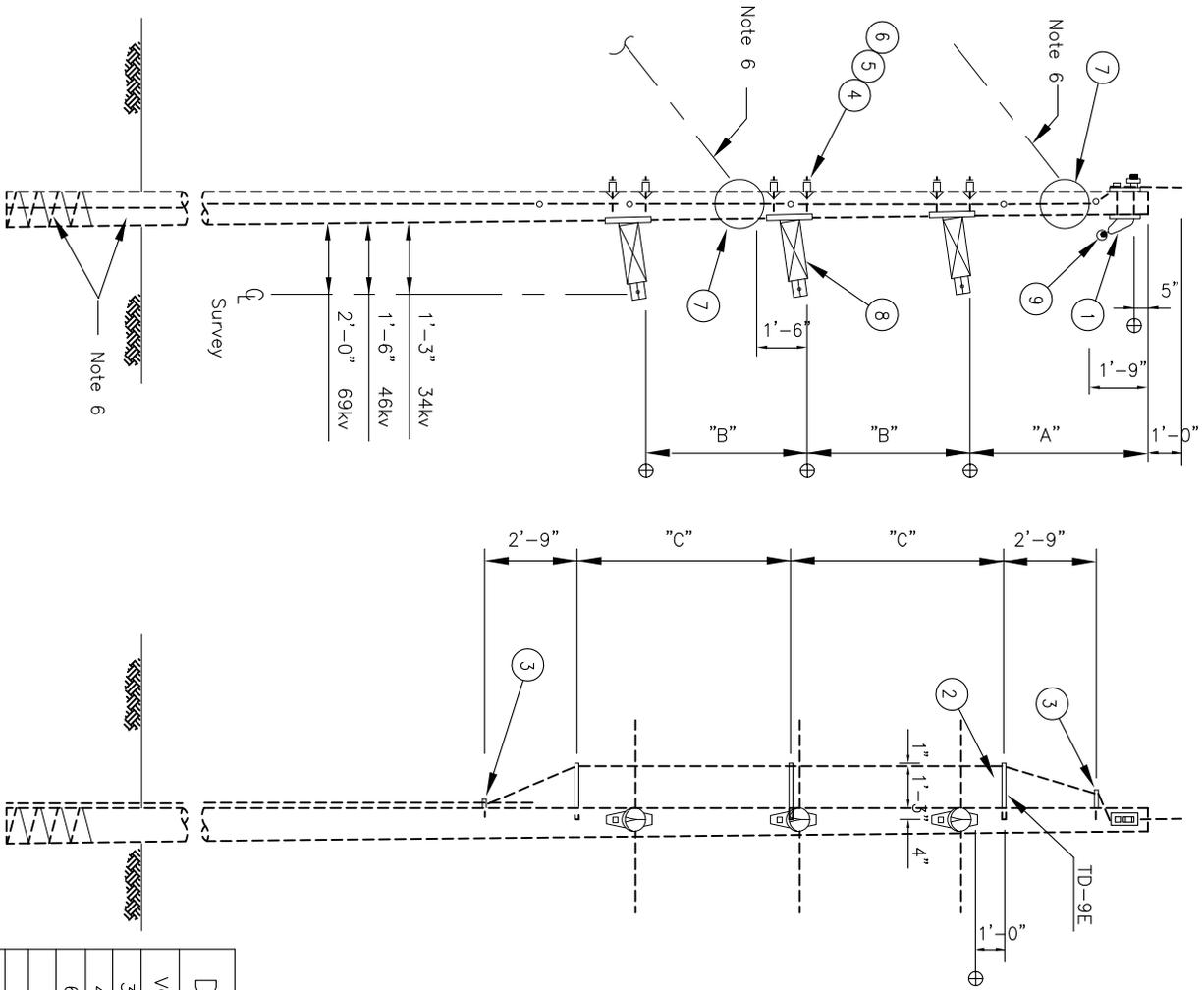
Enviroscientists, Inc. 2012. *Mt. Wheeler Power, Inc. Strawberry 69kV Transmission Line Project, Biological Survey Report*. September 2012.

JBR Environmental Consultants, Inc. 2012. *2011 Wildlife Baseline Survey Report: Pan Project*. April 2012.

## **ATTACHMENT 1**

### **Diagrams of Typical Single Pole Structures**

PLAN VIEW

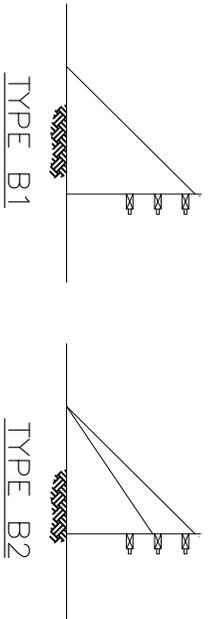


LIST OF MATERIALS

| DWG. REF. | B1 | B2 | DESCRIPTION                              | ITEM | DET.      | CODE No. |
|-----------|----|----|--|------|-----------|----------|
| 1         | 1  | 1  | OHGW Support Assembly, double bolt       | -    | TM-6B     |          |
| 2         | 3  | 3  | Rod, Fiberglass, 3/4" x 1'-8"            |      |           |          |
| 3         | 2  | 2  | Wireholder, w/#22 wood screw             | or   |           |          |
| 4         | 6  | 6  | 3/4" Bolt, Machine, by req'd length      | c    |           |          |
| 5         | 6  | 6  | Washer, Curved, 4"sq x 1/4", 13/16" hole | d    |           |          |
| 6         | 6  | 6  | 3/4" Locknut, MF Type                    | ek   |           |          |
| 7         | 1  | 2  | GUY ATTACHMENT, _____ DUTY               | -    | TG-____C  |          |
| 8         | 3  | 3  | INSULATOR, HORIZONTAL POST w/CLAMP       | -    | TM-3-____ |          |
| 9         | 1  | 1  | OGHW ASSEMBLY, TANGENT                   | -    | TM-4-____ |          |

NOTES:

1. Metal shims should be used to adjust post insulator when brackets are located on uneven pole surfaces.
2. This structure is to be used for line angles up to 15 degrees.
3. Strength limitations of horizontal post:
  - a. Maximum cantilever load 2,800 lbs.
  - b. Maximum tensile load 5,000 lbs. (Loads a plus b are simultaneous)
4. Strength limitations of overhead ground wire support assembly, see TM-6B.
5. See drawing TE-1 for guidance to subassembly alternatives.
6. The following materials are to be specified on the plan and profile drawings and staking sheets: POLE, POLE GROUNDING ASSEMBLY, GUYING ASSEMBLIES, ANCHORS, AND ANY ADDITIONAL GROUNDING OR FOUNDATION UNITS.



DIMENSION A, B & C

| VOLTAGE | A     | B     | C      |
|---------|-------|-------|--------|
| 34.5 kv | 6'-0" | 5'-0" | 6'-5"  |
| 46 kv   | 6'-6" | 5'-6" | 6'-11" |
| 69 kv   | 7'-0" | 6'-0" | 7'-6"  |

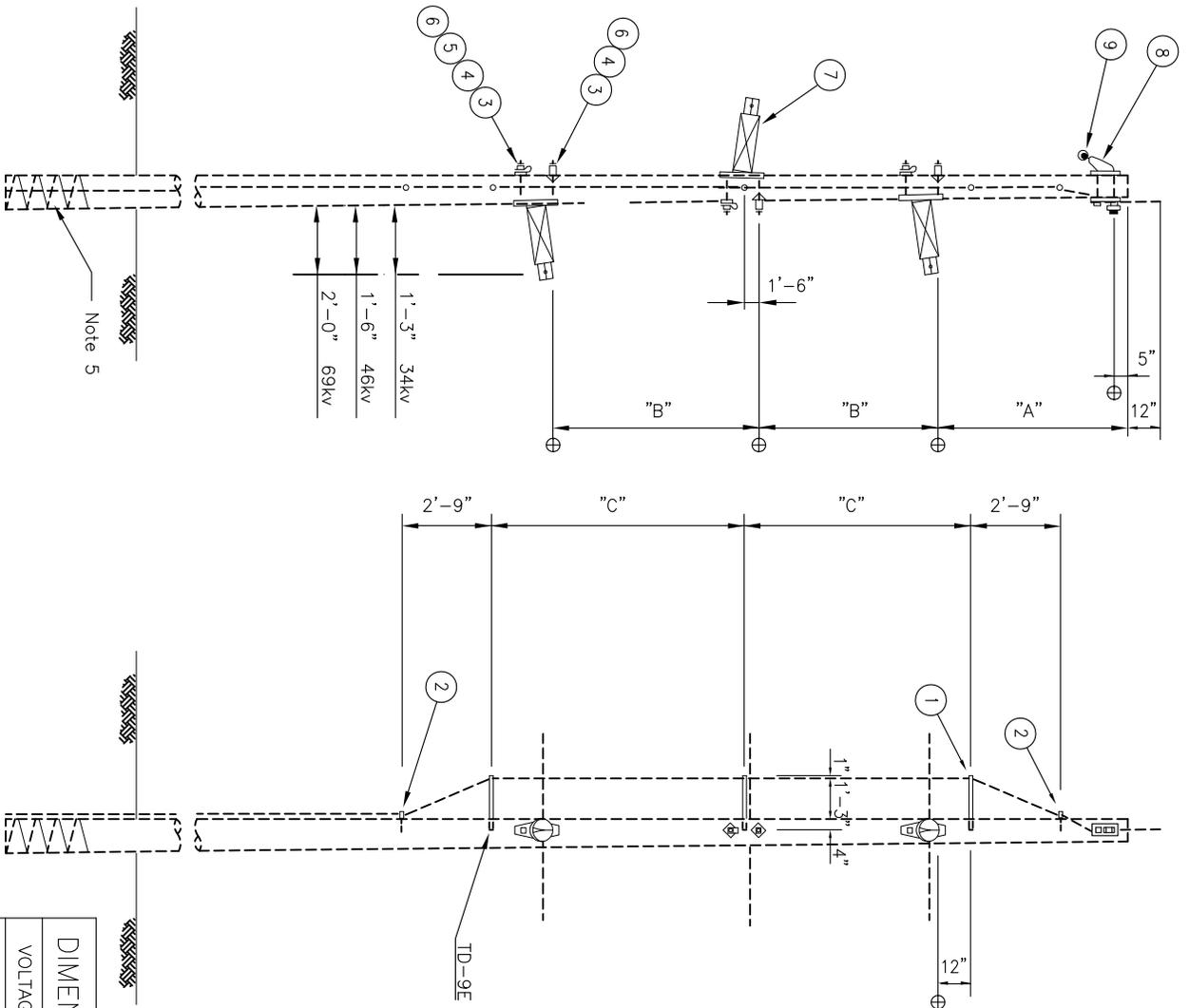
TRANSMISSION LINE STRUCTURE

SMALL ANGLE HORIZONTAL LINE POST  
(69kv MAXIMUM)

| NO. | REVISION | DATE                |
|-----|----------|---------------------|
|     |          | Aug., 1986          |
|     |          | TP-34GB, 46GB, 69GB |

LIST OF MATERIALS

| DWG. REF. | QTY. | DESCRIPTION                            | ITEM | DET. | CODE No. |
|-----------|------|--|------|------|----------|
| 1         | 3    | Rod, Fiberglass, 3/4"x1'-8"            |      |      |          |
| 2         | 2    | Wireholder, w/#22 wood screw           | gr   |      |          |
| 3         | 6    | 3/4" Bolt, Machine by req'd length     | c    |      |          |
| 4         | 6    | Washer, Curved, 4"sq x 1/4", 13/16hole | d    |      |          |
| 5         | 3    | Washer, Spring, 13/16" hole            | aw   |      |          |
| 6         | 6    | 3/4" Locknut, MF Type                  | ek   |      |          |
| 7         | 3    | INSULATOR, HORIZONTAL POST, W/CLAMP    |      |      | TM-3---  |
| 8         | 1    | OHGW SUPPORT ASSEMBLY                  |      |      | TM-6---  |
| 9         | 1    | OHGW ASSEMBLY, TANGENT                 |      |      | TM-4---  |



NOTES:

1. Metal shims should be used to adjust post insulator when brackets are located on uneven pole surfaces.
2. Strength limitations of horizontal post:
  - a. Maximum cantilever load 2,800 lbs.
  - b. Maximum tensile and compression 5,000 lbs. (Loads a and b are simultaneous)
3. For strength limitations of overhead ground wire support assembly, see TM-6.
4. Drawing TE-1 gives guidance to subassembly alternatives.
5. The following materials are to be specified on the plan and profile drawings and staking sheets: POLE, POLE GROUNDING ASSEMBLY, AND ANY ADDITIONAL GROUNDING OR FOUNDATION UNITS.

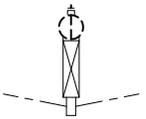
DIMENSIONS A, B & C

| VOLTAGE | A     | B     | C      |
|---------|-------|-------|--------|
| 34.5 kv | 5'-0" | 4'-0" | 5'-5"  |
| 46 kv   | 5'-6" | 4'-6" | 5'-11" |
| 69 kv   | 6'-0" | 5'-0" | 6'-6"  |

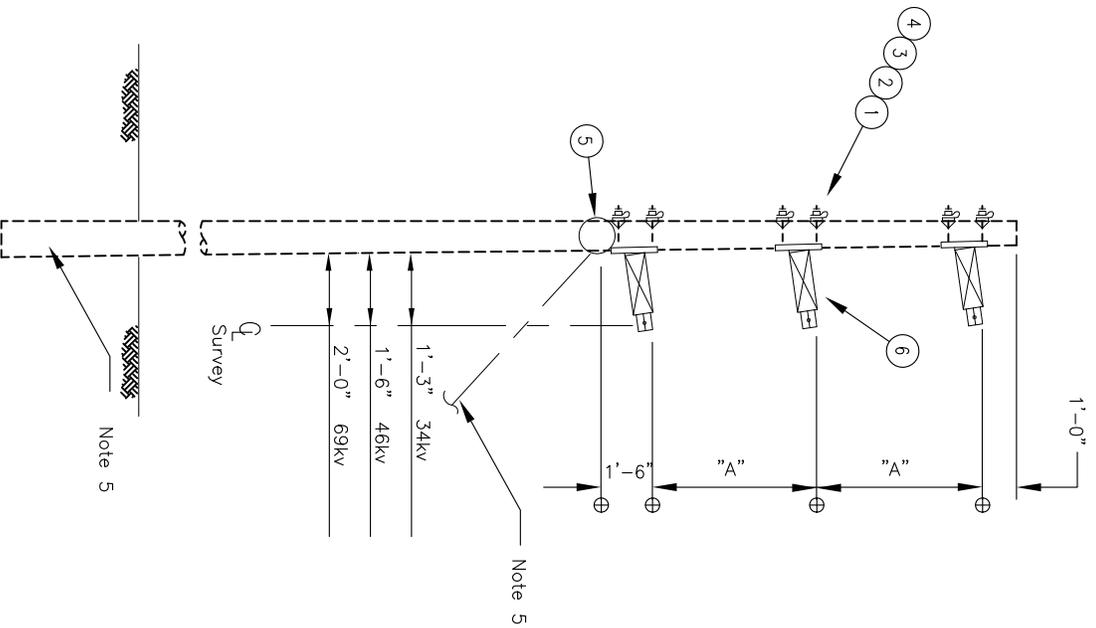
TRANSMISSION LINE STRUCTURE

TANGENT HORIZONTAL LINE POST  
(69kv MAXIMUM)

| NO. | REVISION | DATE       |
|-----|----------|------------|
|     |          | Aug., 1986 |



PLAN VIEW



| DWG. REF. | QTY. | DESCRIPTION                               | ITEM | DET.      | CODE No. |
|-----------|------|---|------|-----------|----------|
| 1         | 6    | 3/4" Bolt, Machine, by req'd length       | c    |           |          |
| 2         | 6    | Washer, Curved, 4" sq x 1/4", 13/16" hole | d    |           |          |
| 3         | 6    | Washer, Spring, 13/16" hole               | aw   |           |          |
| 4         | 6    | 3/4" Locknut, MF Type                     | ek   |           |          |
| 5         | 1    | GYU ATTACHMENT, _____ DUTY                | -    | TG-____C  |          |
| 6         | 3    | INSULATOR, HORIZONTAL POST, W/CLAMP       | -    | TM-3,____ |          |

LIST OF MATERIALS

NOTES:

1. Metal shims should be used to adjust post insulator when brackets are located on uneven pole surfaces.
2. This structure is to be used for line angles up to 15 degrees.
3. Strength limitations of horizontal post:
  - a. Maximum cantilever load 2,800 lbs.
  - b. Maximum compressive load 5,000 lbs. (Loads a plus b are simultaneous)
4. See drawing TE-1 for guidance to subassembly alternatives.
5. The following materials are to be specified on the plan and profile drawings and staking sheets: POLE, GUYING ASSEMBLY, ANCHOR, AND FOUNDATION UNITS.

| DIMENSION A |          | A     | TRANSMISSION LINE STRUCTURE                        |
|-------------|----------|-------|--|
| VOLTAGE     | 34.5 kv  | 5'-0" | SMALL ANGLE HORIZONTAL LINE POST<br>(69kv MAXIMUM) |
|             | 46 kv    | 5'-6" |  |
|             | 69 kv    | 6'-0" |  |
| NO.         | REVISION | DATE  | Aug., 1986   |
|             |          |       | TP-34C, 46C, 69C                                   |