

NEPA REVIEW SCREENING FORM (NRSF) 3A
Categorically Excluded Actions

Document ID #:
DOE/CX-00194

I. Project Title:

Activity-Specific Categorical Exclusion for Project L-898, "100 Area Mission Critical Electrical Distribution System Modifications"

II. Describe the proposed action, including location, time period over which proposed action will occur, project dimension (e.g., acres displaced/disturbed, excavation length/depth), and area/location/number of buildings. Attach narratives, maps and drawings of proposed action. Describe existing environmental conditions and potential for environmental impacts from the proposed action. If the proposed action is not a project, describe the action or plan.

The U.S. Department of Energy (DOE), Richland Operations Office (RL), Infrastructure and Services Division (ISD) proposes to remove and reroute portions of the 100 Area 13.8 kilovolt electrical distribution system (powerlines C9-L3, C9-L4, and a portion of C8-L14) to align with current and future power demands in the 100-B, 100-K, and 100-D Areas of the Hanford Site (Project L-898). The proposed project would improve the reliability of powerlines that deliver electricity to 100 Area facilities, which include groundwater remediation pump and treat facilities, Bonneville Power Administration Hanford Substation, 105-B Reactor National Historic Museum, 105-KW Sludge Removal Project, and export water system pumping stations at 181-B and 181-D.

Most of the 100 Area powerlines are over 40-years old and have a high risk of failure. The powerlines are not optimized for mission critical electricity distribution and are routed through culturally and ecologically sensitive areas near the Columbia River. The powerlines are only accessible by off-road travel making routine maintenance, repair, and monitoring of line fault indicators difficult, especially during periods of extreme wildfire hazards when off-road driving is restricted. The powerlines would be rerouted along existing paved roads to improve access for routine maintenance and repair, increase system operability and reliability, and avoid impacts to culturally and ecologically sensitive areas.

A switching station would be installed at the intersection of K Avenue and Route 1N to centralize switching of the C9-L3, C9-L4, and C8-L14 powerlines and provide redundancy, thus enabling transfer of the 100 Area power supply from the A9 substation to the A8 substation in the event of an electrical outage. Two capacitor banks servicing the C8-L14 powerline would be relocated from the A8 substation to the new switching station. The connection from electrical breakers C9-X3 and C9-X4 to the first new pole on the east end of the A9 substation would utilize existing underground raceways and new routings determined during the design process.

One hundred sixty five (165) power poles would be removed and 290 power poles would be installed. The total length of powerlines removed would be 2.5 miles and 12 miles would be rerouted. The new powerlines would be rerouted along K Avenue, Route 1N, N Avenue, and Route 4N. The work area would include a 200 feet wide corridor centered on the powerline to provide access for movement of workers and vehicles. Power poles would be removed using mechanical means and the holes would be backfilled with sand and gravel. Removed power poles, conductors, and associated hardware would be placed in designated staging areas for radiological survey and release prior to recycling, reuse, or disposal. New poles would be installed to a depth of 8 feet using an auger or other mechanical means. Alternative materials, such as fiberglass power poles and composite cross-arms, would be considered to minimize future maintenance requirements. Stranded and insulated conductors would be used to prevent powerline failures from wind or ice induced fatigue. A 24 filament (minimum) fiber optic cable would be installed along with rerouted powerlines and terminate at the A9 substation. The attached "Key Map" and Figures 1 through 5 depict the proposed electrical distribution system modifications.

All staging of construction materials and equipment would take place within previously disturbed and developed areas. Existing roads would be used for project site access. All excavation, backfilling, blading, grubbing, and other ground disturbing activities would occur within the "area of potential effects" (APE) established for the project. Sand and gravel materials required for backfilling and other construction activities would be obtained from existing onsite borrow pits in accordance with the "Final Environmental Assessment for Expansion of Borrow Areas on the Hanford Site" (DOE/EA-1934) and other applicable operation requirements, such as excavation permits.

Ecological Resources Review (ECR-2018-104). DOE-RL Ecological Monitoring and Environmental Surveillance (EM&ES) performed a field survey of the project area on April 25, 2019. The project area contains highly disturbed industrial areas, remediated waste sites, grasslands, native shrub steppe, and revegetated areas that are designated as "Biological Resource Management Plan" (BRMP,

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DOE/RL-96-32, Revision 2) Level 0 through Level 4 habitats.

BRMP Level 0 habitats contain highly disturbed non-vegetated portions of the industrial areas (i.e., facilities, buildings, support structures, roads, parking lots, staging areas, and waste sites), which provide little or no ecological value. BRMP Level 0 habitats have no compensatory mitigation requirements beyond regulatory compliance (e.g., Migratory Bird Treaty Act).

BRMP Level 1 habitats contain individual common native plants, upland stands of non-native plants, and abandoned agricultural fields. Wildlife observed included several bird and mammal species. Compensatory mitigation is not required for BRMP Level 1 habitats.

BRMP Level 2 habitats contain a successional shrub overstory with a non-native understory. Several species of birds were observed in areas close to the Columbia River. Compensatory mitigation is required for disturbances exceeding 1.2 acres at a habitat replacement ratio of 1:1.

BRMP Level 3 habitats contain a native climax shrub overstory with an understory of native and non-native grasses. Wildlife observed included several bird species and mule deer. Compensatory mitigation is required for disturbances exceeding 1.2 acres at a habitat replacement ratio of 3:1.

BRMP Level 4 habitats contain a native climax shrub overstory with an understory of native grasses and include revegetated areas. Project management personnel would contact EM&ES to plan access to the project area to avoid disturbance of BRMP Level 4 habitats. Compensatory mitigation is required for disturbances exceeding 1.2 acres at a habitat replacement ratio of 5:1.

EM&ES would determine actual compensatory mitigation requirements after project completion. If EM&ES determines that habitat alterations or disturbances that could affect the reproductive success of a species of concern has occurred, then EM&ES would identify specific land- or quality-based habitat replacement ratios according to the BRMP, which would be implemented by project management under EM&ES direction. For example, land-based habitat replacement ratios for BRMP Level 4 habitats would be 5 acres revegetated for every acre disturbed. Alternatively, quality-based habitat replacement ratios for BRMP Level 4 habitats would be to increase the plant density by a factor of five for each acre disturbed and revegetated. Compensatory mitigation would be conducted using quality-based onsite rectification of principal vegetation components (i.e., native grasses, forbs, and shrubs) based on BRMP standard replacement units. The standard replacement unit for late-successional sagebrush steppe would be 600 shrubs/acre, 600 forbs/acre, and a native perennial bunchgrass understory either already present or planted according to the "Hanford Site Revegetation Manual" (DOE/RL-2011-116, Revision 1). EM&ES would prepare a revegetation plan to address site rectification, including any deviations from the standard replacement unit.

A Bald Eagle nest was observed in 100-N Area. EM&ES would direct project management to avoid the 100-N Area ecological buffer zone while the nest is occupied. Birds can nest within the project area on the ground, buildings, or equipment and the nesting season is from mid-March to mid-July. EM&ES would instruct project management to watch for nesting birds. If nesting birds are encountered or suspected, or bird defensive behaviors are observed, then project management would contact EM&ES to evaluate the situation. EM&ES would perform a nesting bird survey if ground-clearing activities were conducted during the nesting season.

All land areas disturbed by the project that are not needed for continued project use, access, or safety considerations would be revegetated using locally derived native plant species. The "Hanford Site Revegetation Manual" (DOE/RL-2011-116, Revision 1) provides guidance regarding species mix, planting rates, and planting methods. EM&ES anticipates no adverse impacts to ecological resources from the proposed project.

Cultural Resources Review (HCRC-2018-100-003). The DOE-RL Cultural and Historic Resources Program (CHRP) conducted a Cultural Resources Review (CRR) of the proposed project. CHRP sent an "Area of Potential Effects" (APE) notification to the Washington State Historic Preservation Office (SHPO) and regional Tribes on May 31, 2018. A cultural resources field survey was performed on June 26-28, 2018 and July 2, 2018. One new historic site was recorded during the archaeological survey. CHRP transmitted the CRR with a "No Adverse Effects" finding to the SHPO and regional Tribes for a 30-day comment period on October 23, 2018. The SHPO concurred with the findings of the CRR on December 4, 2018. CHRP provided a notice of compliance with Section 106 of the "National Historic Preservation Act" (NHPA) on December 4, 2018.

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The SHPO and regional Tribal leadership identified work controls to avoid impacts to cultural resources. Full-time cultural resources monitoring would be conducted in areas shown in Figure 6. Project management would notify the CHRP at least 7 days prior to the start of field work. A CHRP archaeologist would supervise cultural resource monitoring. CHRP would provide cultural awareness training to all project personnel prior to the start of work and issue a monitoring report after completion of all project activities.

Workers would be directed to watch for cultural materials (i.e., bones, stone tools, mussel shell, cans, and bottles) during field activities. If any cultural materials were encountered, work near the discovery would stop until a CHRP archaeologist is notified to assess the significance of the find, appropriate Tribes are contacted, and arrangements are made for mitigation of the find, as needed. CHRP anticipates no adverse impacts to cultural resources from the proposed project.

Waste Management. The proposed project would generate waste materials associated with removal of portions of existing powerlines (wooden poles, cross-arms, conductors, insulators, transformers, guy wires, and other components). Some materials not reused or recycled would be classified as hazardous waste (e.g., lead-tipped bolts, low-pressure sodium/mercury vapor lights, glass/porcelain insulators, and electrical transformers) and would be handled in accordance with "Resource Conservation and Recovery Act" (RCRA) and other requirements, such as the "Toxic Substances Control Act" and "Waste Treatment Standards" found at 40 CFR 268, Subpart D. Most removed materials would be municipal solid waste, which would include inert construction or demolition debris. All removed materials would be evaluated and characterized in accordance with Hanford Site protocols before determining whether to reuse, recycle, or dispose of the material in onsite or offsite facilities, such as the Environmental Restoration Disposal Facility, Pit 9 Inert Waste Landfill, Basin Disposal Incorporated, or other waste management operations.

CONCLUSION. 10 CFR 1021, Subpart D, Appendix B, Categorical Exclusions B4.10, "Removal of Electric Transmission Facilities"; B4.12, "Construction of Power Lines"; and B4.13, "Upgrading and Rebuilding Existing Powerlines" provide NEPA coverage for the proposed project. Any changes to the proposed project would require approval by the DOE-RL NEPA Compliance Officer.

III. Existing Evaluations (Provide with NRSF to DOE NCO):

Ecological Review Report No. and Title:

MSA-1901798, "Ecological Clearance for the Transmission and Distribution System Maintenance and Repair and L-898 Mission Critical Distribution Feeders Replacement, 100 Areas, Hanford Site (ECR-2018-104)," dated May 7, 2019.

Cultural Review Report No. and Title:

MSA-1805116, "Cultural Resource Clearance for the Transmission and Distribution (T&D) System Maintenance and Repair and L-898 Mission Critical Distribution Feeders Replacement, 100 Areas, Hanford Site, Benton County, Washington (HCRC-2018-100-003)," dated December 4, 2018.

Maps:

Key Map for Project L-898 Electrical Power Distribution Line Reroute

Other Attachments:

- Figure 1 - 100-B/C Electrical Power Distribution Line Modifications
- Figure 2 - 100-K Electrical Power Distribution Line Modifications
- Figure 3 - 100-N Electrical Power Distribution Line Modifications
- Figure 4 - 100-D/DR Electrical Power Distribution Line Modifications
- Figure 5 - 100-K Area New Switch Station
- Figure 6 - Areas Requiring Cultural Resource Monitoring near 100-N and 100-D/DR

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IV. List applicable CX(s) from Appendix B to Subpart D of 10 CFR 1021:

10 CFR 1021, Subpart D, Appendix B, Categorical Exclusions B4.10, "Removal of Electric Transmission Facilities"; B4.12, "Construction of Power Lines"; and B4.13, "Upgrading and Rebuilding Existing Powerlines"

V. Integral Elements and Extraordinary Circumstances (See 10 CFR 1021, Subpart D, B. Conditions that are Integral Elements of the Class of Actions in Appendix B; and 10 CFR 1021.410(b)(2) under Application of Categorical Exclusions)

	Yes	No
Are there extraordinary circumstances that may affect the significance of the environmental effects of the proposed action? If yes, describe them.	<input type="radio"/>	<input checked="" type="radio"/>
Is the proposed action connected to other actions with potentially significant impacts, or that could result in cumulatively significant impacts? If yes, describe them.	<input type="radio"/>	<input checked="" type="radio"/>
Would the proposed action threaten a violation of applicable statutory, regulatory, or permit requirements related to the environment, safety, health, or similar requirements of DOE or Executive Orders?	<input type="radio"/>	<input checked="" type="radio"/>
Would the proposed action require siting, construction, or major expansion of waste storage, disposal, recovery, or treatment facilities?	<input type="radio"/>	<input checked="" type="radio"/>
Would the proposed action disturb hazardous substances, pollutants, contaminants, or natural gas products already in the environment such that there might be uncontrolled or unpermitted releases?	<input type="radio"/>	<input checked="" type="radio"/>
Would the proposed action have the potential to cause significant impacts on environmentally sensitive resources? See examples in Appendix B(4) to Subpart D of 10 CFR 1021.	<input type="radio"/>	<input checked="" type="radio"/>
Would the proposed action involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, such that the action is not contained or confined in a manner designed, operated, and conducted in accordance with applicable requirements to prevent unauthorized release into the environment?	<input type="radio"/>	<input checked="" type="radio"/>

If "No" to all questions above, complete Section VI, and provide NRSF and any attachments to DOE NCO for review.
 If "Yes" to any of the questions above, contact DOE NCO for additional NEPA review.

VI. Responsible Organization's Signatures:

Initiator:
 Jerry W. Cammann, MSA NEPA-SME Jerry W. Cammann 6/25/2019
Print First and Last Name Signature Date

Cognizant Program/Project Representative:
 Sean R. Madderom, DOE-RL ISD Sean R. Madderom 7/10/2019
Print First and Last Name Signature Date

VII. DOE NEPA Compliance Officer Approval/Determination:

Based on my review of information conveyed to me concerning the proposed action, the proposed action fits within the specified CX(s): Yes No

Diori L. Kreske Diori Kreske 7/10/19
Print First and Last Name Signature Date

NCO Comments:

Key Map for Project L-898 Electrical Power Distribution Line Reroute (see individual figures)

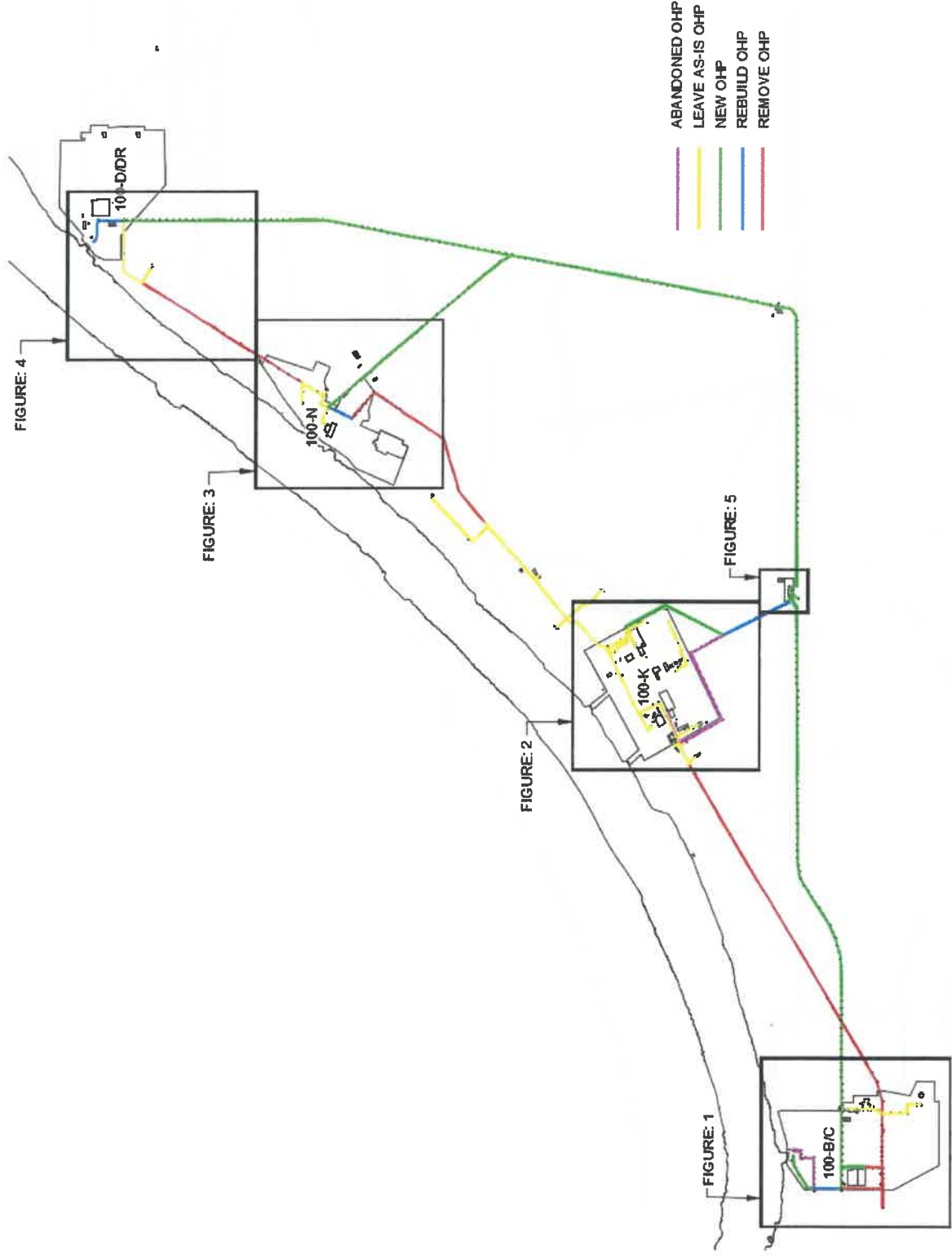
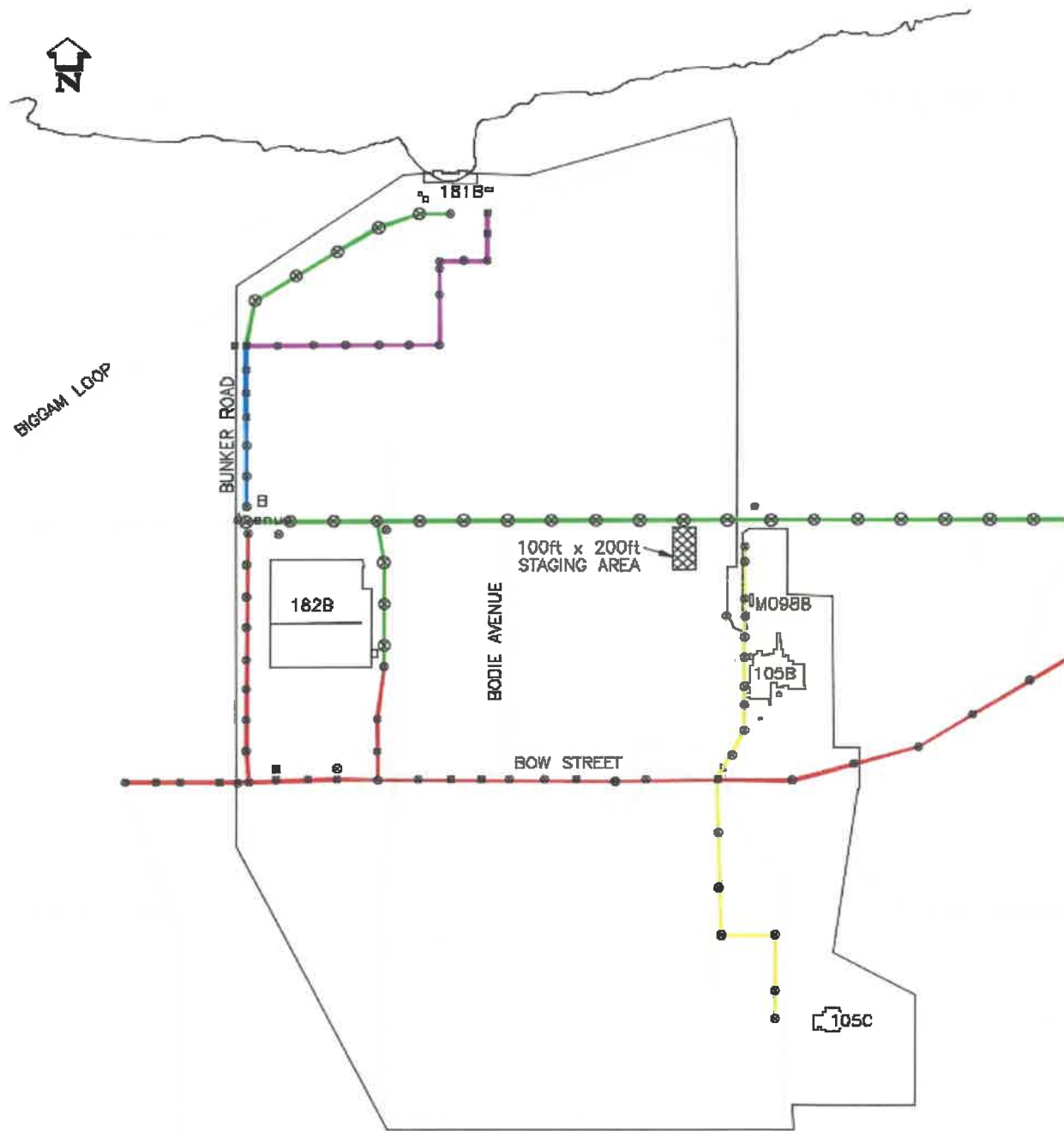


Figure 1. 100-B/C Electrical Power Distribution Line Modifications



- | | | | |
|--|-----------------|--|---------------------|
| | ABANDONED OHP | | EXISTING POWER POLE |
| | LEAVE AS-IS OHP | | NEW POWER POLE |
| | NEW OHP | | |
| | REBUILD OHP | | |
| | REMOVE OHP | | |

NOTES:

1. REPLACE EXISTING POWER POLES WITH NEW POWER POLES TO REBUILD POWER LINES.
2. NEW POLE SPACING IS FOR PLANNING ONLY. FINAL SPACING TO BE DETERMINED DURING THE DESIGN PROCESS.

BIGGAM LOOP

Figure 2. 100-K Electrical Power Distribution Line Modifications

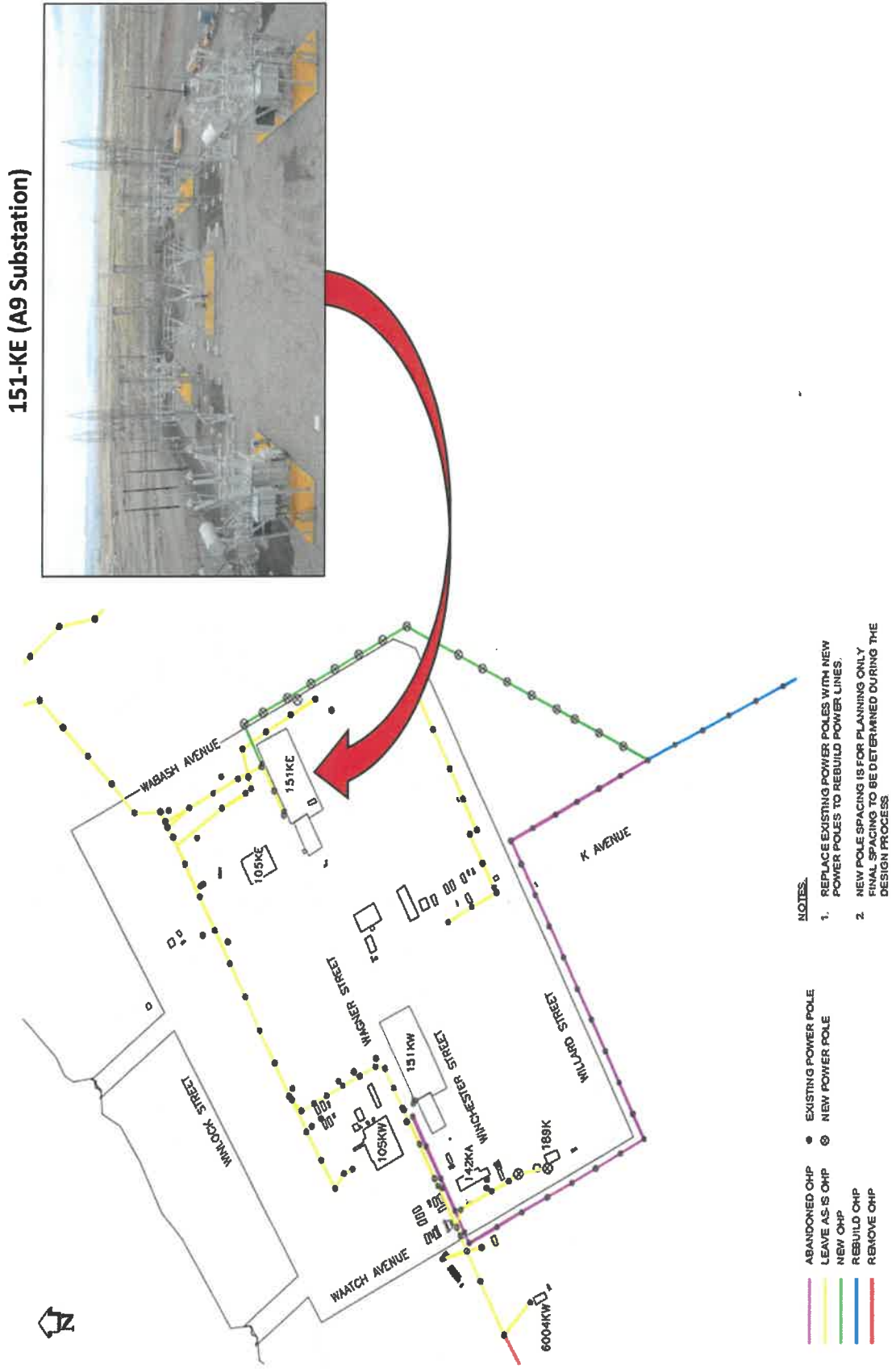


Figure 3. 100-N Electrical Power Distribution Line Modifications

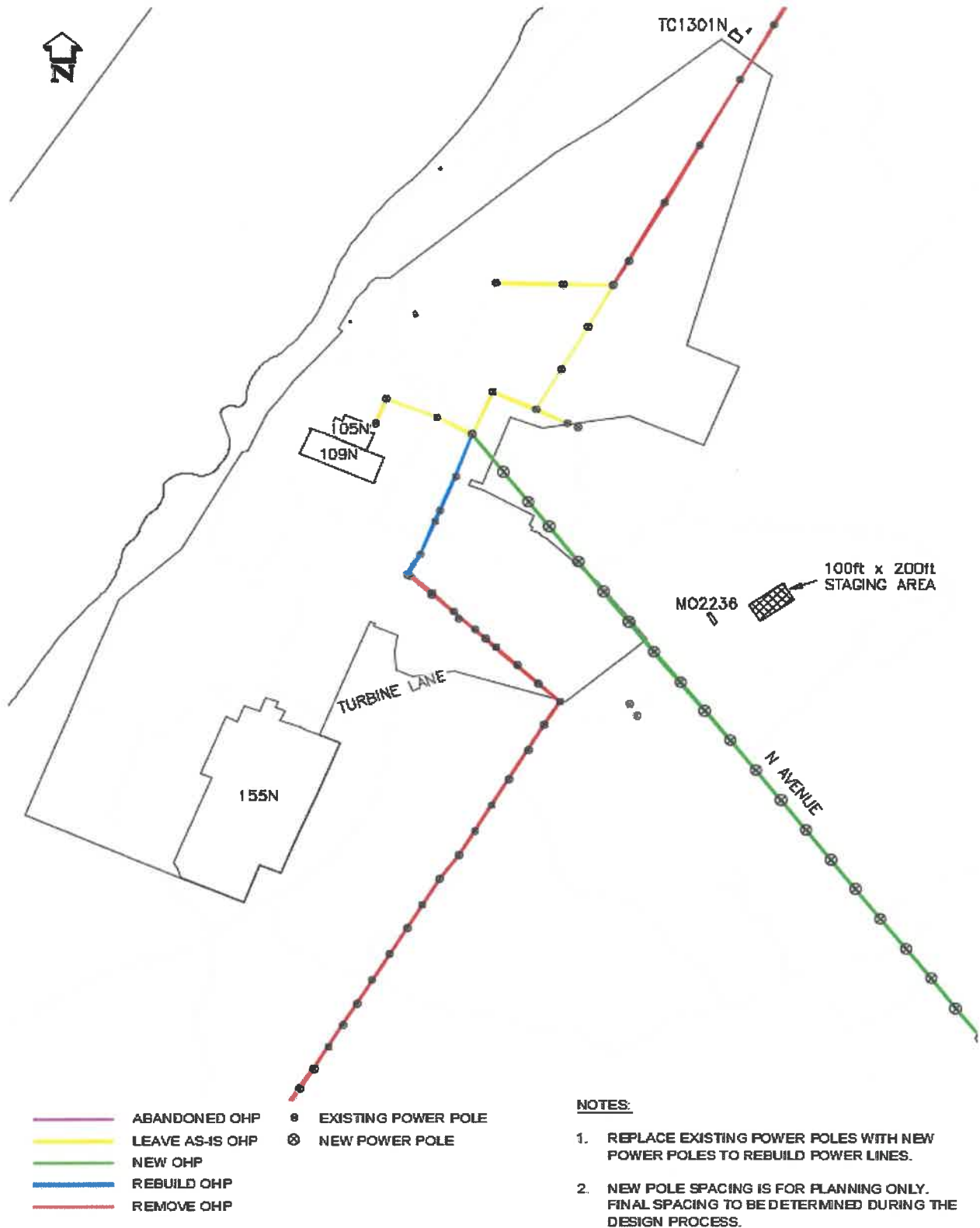


Figure 4. 100-D/DR Electrical Power Distribution Line Modifications

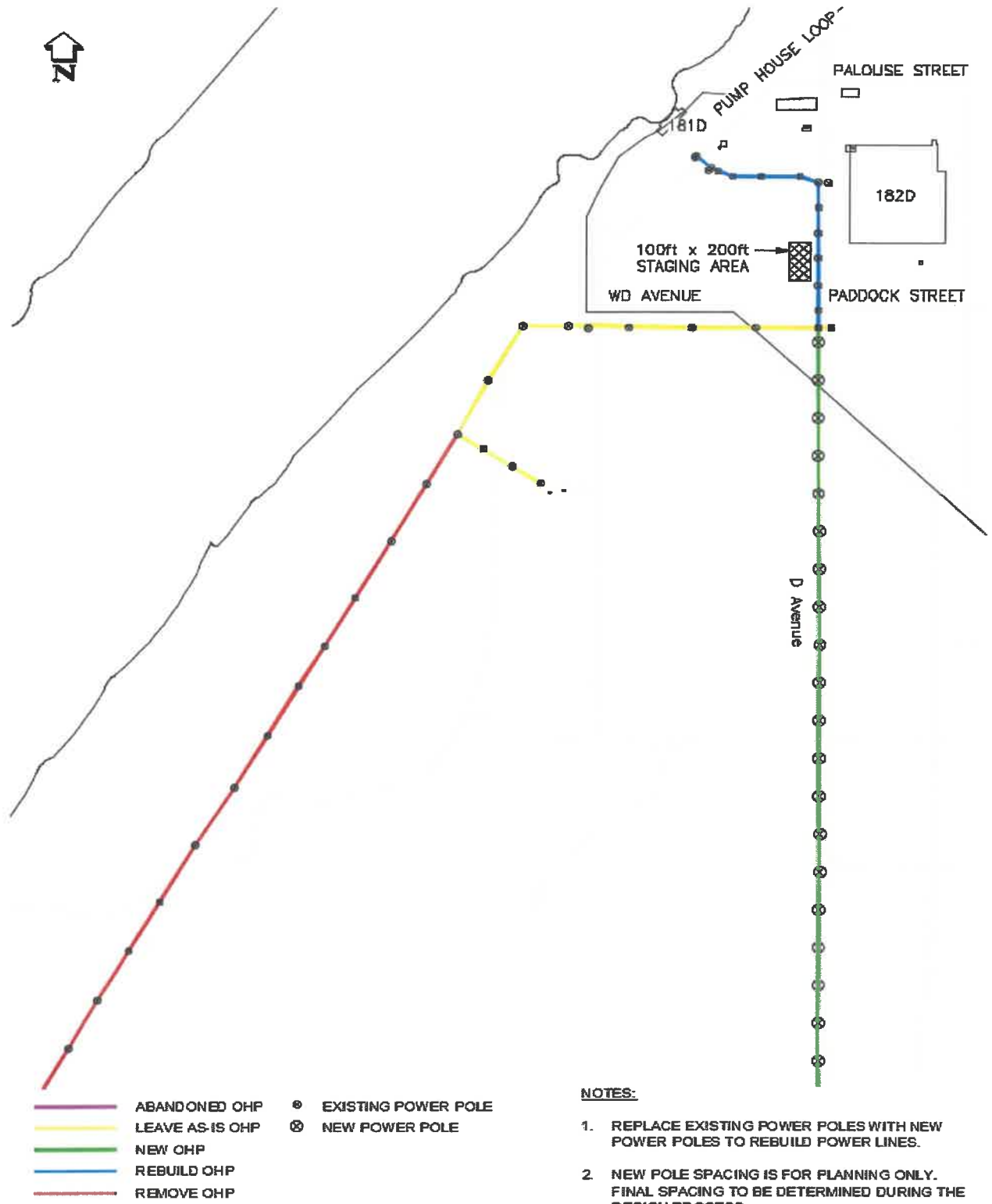
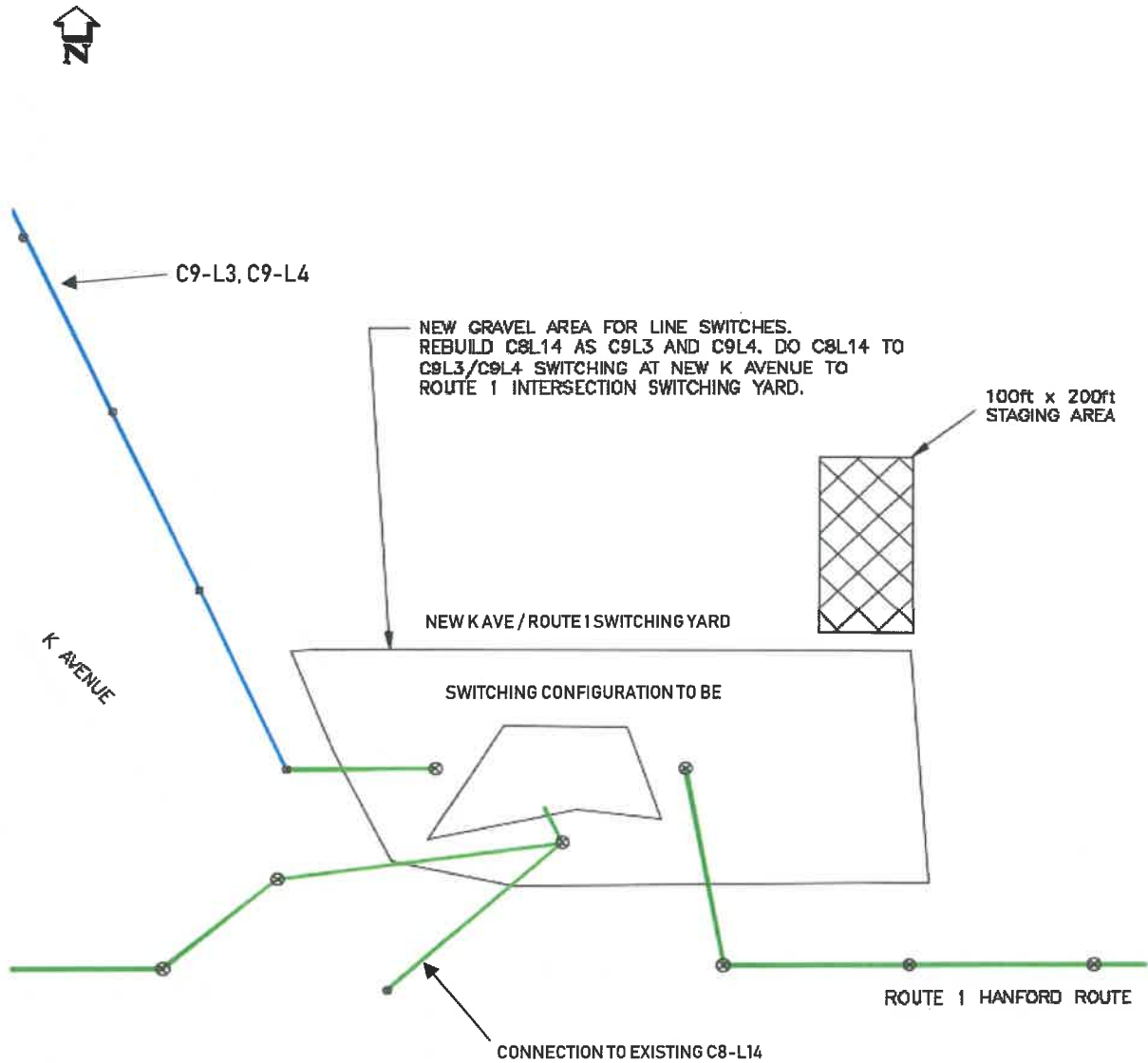


Figure 5. 100-K Area New Switch Station

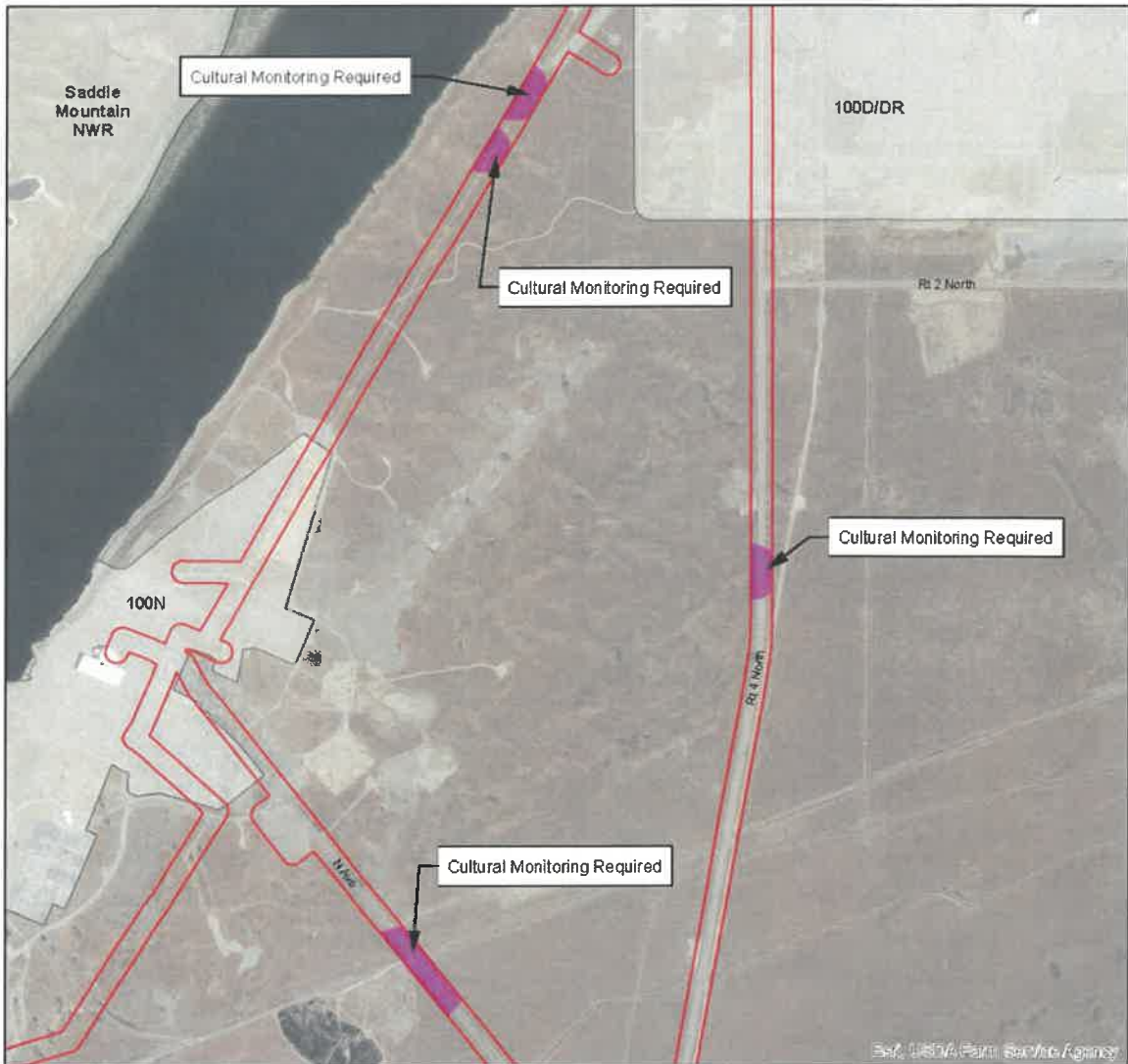


- | | | | |
|--|-----------------|--|---------------------|
| | ABANDONED OHP | | EXISTING POWER POLE |
| | LEAVE AS-IS OHP | | NEW POWER POLE |
| | NEW OHP | | |
| | REBUILD OHP | | |
| | REMOVE OHP | | |

NOTES:

1. REPLACE EXISTING POWER POLES WITH NEW POWER POLES TO REBUILD POWER LINES.
2. NEW POLE SPACING IS FOR PLANNING ONLY. FINAL SPACING TO BE DETERMINED DURING THE DESIGN PROCESS.

Figure 6. Areas Requiring Cultural Resource Monitoring Near 100-N and 100-D/DR Areas



LEGEND

- Required Cultural Monitoring Areas
- Area of Potential Effect (APE)
- Operational Areas

NOTES: Aerial Imagery, 2017, NAIP.



APE & Areas Requiring Monitoring
 HCRC#2018-100-003 | ECR-2018-212
 Hanford Site, Benton County, Washington