

ATTACHMENT I
Botanical Resources Report - Prineville
to Oregon Border



**Umatilla to Prineville Fiber Optic
Project and Prineville to Reno
Fiber Optic Project**

Botanical Resources Report

August 15, 2019

Prepared for:

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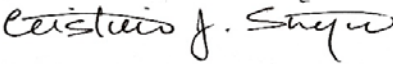
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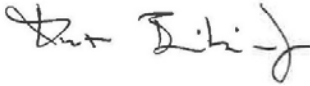
UMATILLA TO PRINEVILLE FIBER OPTIC PROJECT AND PRINEVILLE TO RENO FIBER OPTIC PROJECT

Botanical Resources Report


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Abbreviations

BLM	Bureau of Land Management
ODA	Oregon Department of Agriculture
ODOT	Oregon Department of Transportation
project	Umatilla to Prineville Fiber Optic Project and Prineville to Reno Fiber Optic Project
ROW	right-of-way
running line	fiber optic conduit and cable system
Stantec	Stantec Consulting Services Inc.
U.S.	United States
USFS	United States Forest Service
vaults	fiberglass handholes/vaults
Zayo	Zayo Group LLC



UMATILLA TO PRINEVILLE FIBER OPTIC PROJECT AND PRINEVILLE TO RENO FIBER OPTIC PROJECT

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1.0 INTRODUCTION

Zayo Group LLC (Zayo) proposes to continue constructing the Umatilla to Prineville Fiber Optic Project and construct the Oregon portion of the Prineville to Reno Fiber Optic Project (collectively referred to as the “project”). The project is a linear alignment that extends approximately 436 miles through central Oregon, generally following existing roadways. To assist Zayo with project compliance with the Oregon Department of Agriculture’s (ODA) Native Plant Conservation Program and Noxious Weed Program, and with Oregon Revised Statute, ORS 634.650-655, which requires the Oregon Department of Transportation (ODOT) to implement Integrated Pest Management, Stantec Consulting Services Inc. (Stantec) conducted a reconnaissance-level botanical survey of the project study area to assess potential habitat for botanical resources and non-native invasive plant species (i.e., noxious weeds).

This report summarizes the reconnaissance-level botanical survey and includes a project description, the survey methodology including background literature review and database queries, and the survey results. Additionally, an invasive plant species risk assessment is provided in this report, including recommendations to minimize the risk of introducing or spreading noxious weeds.

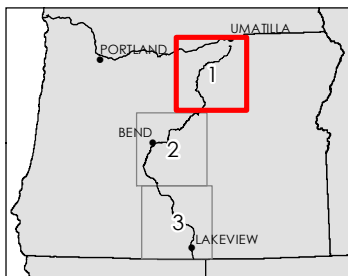
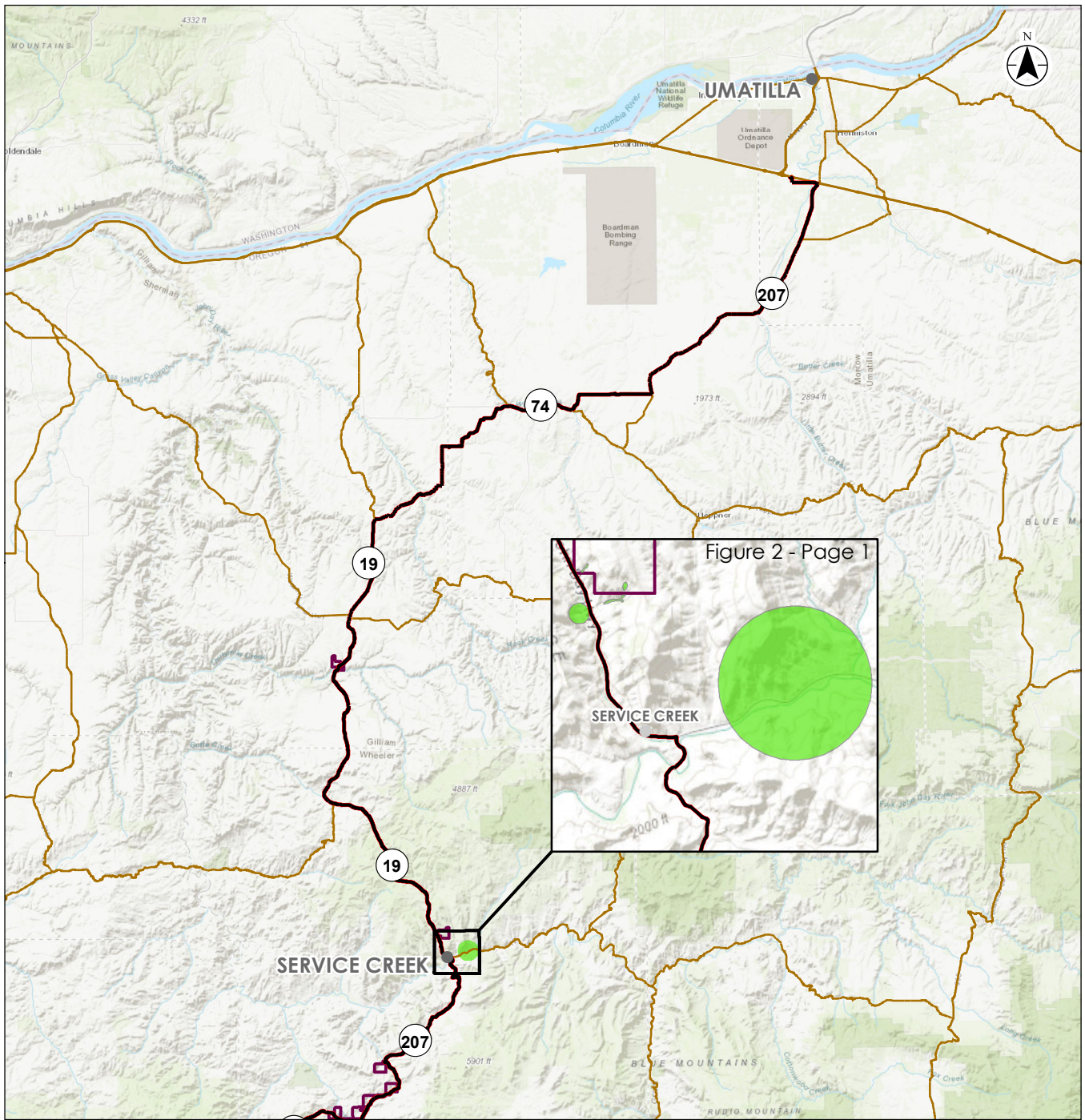
2.0 PROJECT LOCATION

Zayo proposes to construct, operate, and maintain approximately 436 miles of an underground fiber optic conduit and cable system (running line) from Umatilla, Umatilla County, Oregon, to the Oregon-California border in Lake County, Oregon. The running line would extend through seven counties including Umatilla, Morrow, Gilliam, Wheeler, Crook, Deschutes, and Lake. A description of the running line is provided below, and a map showing the running line and study area is provided as Figure 1.

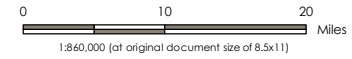
From the northern end of the study area approximately 10 miles south of Umatilla, the running line proceeds south alongside Oregon Route 207 for approximately 26 miles. It then continues west and south along Base Line Lane and Jordan Grade Road for approximately 14 miles to McNabb Lane. The running line then proceeds southwest for 18 miles along a series of county roads to Oregon Route 19. It follows Oregon Route 19 south for approximately 70 miles to its intersection with United States (U.S.) Route 26, where it continues southwest for 45 miles to Prineville, Crook County. The running line then follows a series of county roads south and southwest for approximately 42 miles to U.S. Route 97. It continues south along U.S. Route 97 for 26 miles to La Pine, Deschutes County, where it diverts onto Oregon Route 31, running southeast for 120 miles to its intersection with U.S. Route 395. From that point, the running line follows U.S. Route 395 and proceeds south for approximately 36 miles to the Oregon-California border.

The project occurs entirely within the Oregon Department of Transportation’s (ODOT) existing road rights-of-way (ROWs) on both private and federal lands, including United States Forest Service (USFS) and Bureau of Land Management (BLM) lands.





- Study Area
 - Running Line
 - Road/Highway
 - BLM
 - USFS
- Special-Status Plant Occurrence**
- Thelypodium eucosmum



Project Location
Oregon

Client/Project
Zayo Group LLC
Umatilla to Prineville and Prineville to Reno Fiber Optic Project

Figure No.
1

Title
Project Overview

Notes
1. Coordinate System: WGS 1984 Web Mercator or Auxiliary Sphere
2. Service Credit Layer: ESRI Online Services, July 2019

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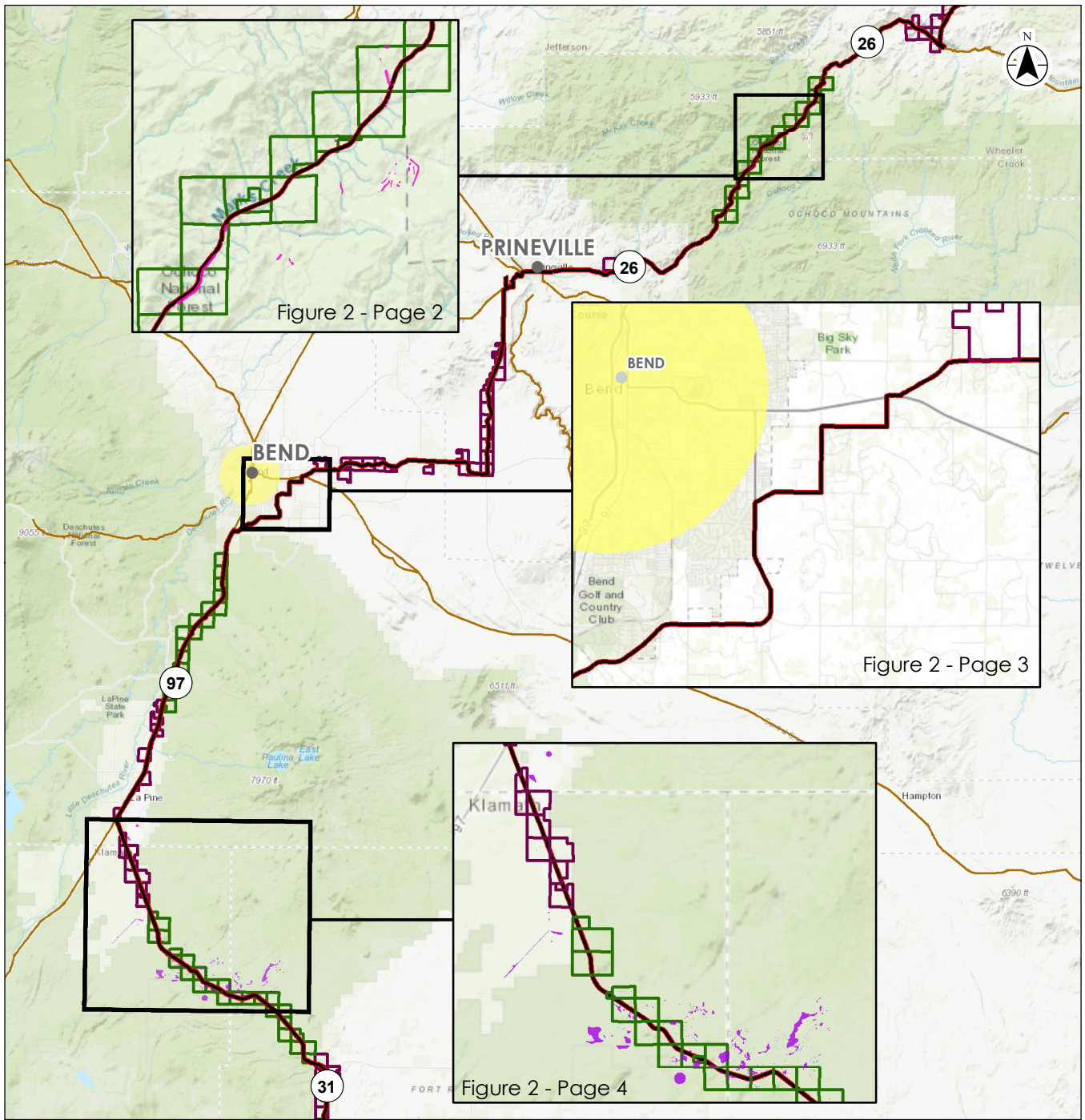
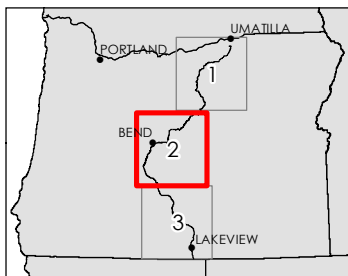


Figure 2 - Page 2

Figure 2 - Page 3

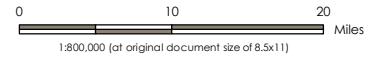
Figure 2 - Page 4



- Study Area
- Running Line
- Road/Highway
- BLM
- USFS

Special-Status Plant Occurrence

- Botrychium pumicola*
- Calochortus longebarbatus* var. *peckii*
- Thelypodium howellii* ssp. *howellii*



Project Location

Oregon

Prepared by WDC on 2019-07-16
Technical Review by ST on 2019-07-17

Client/Project
Zayo Group LLC
Umatilla to Prineville and Prineville to Reno Fiber Optic Project

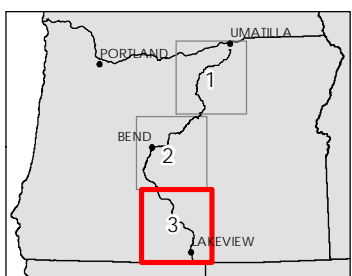
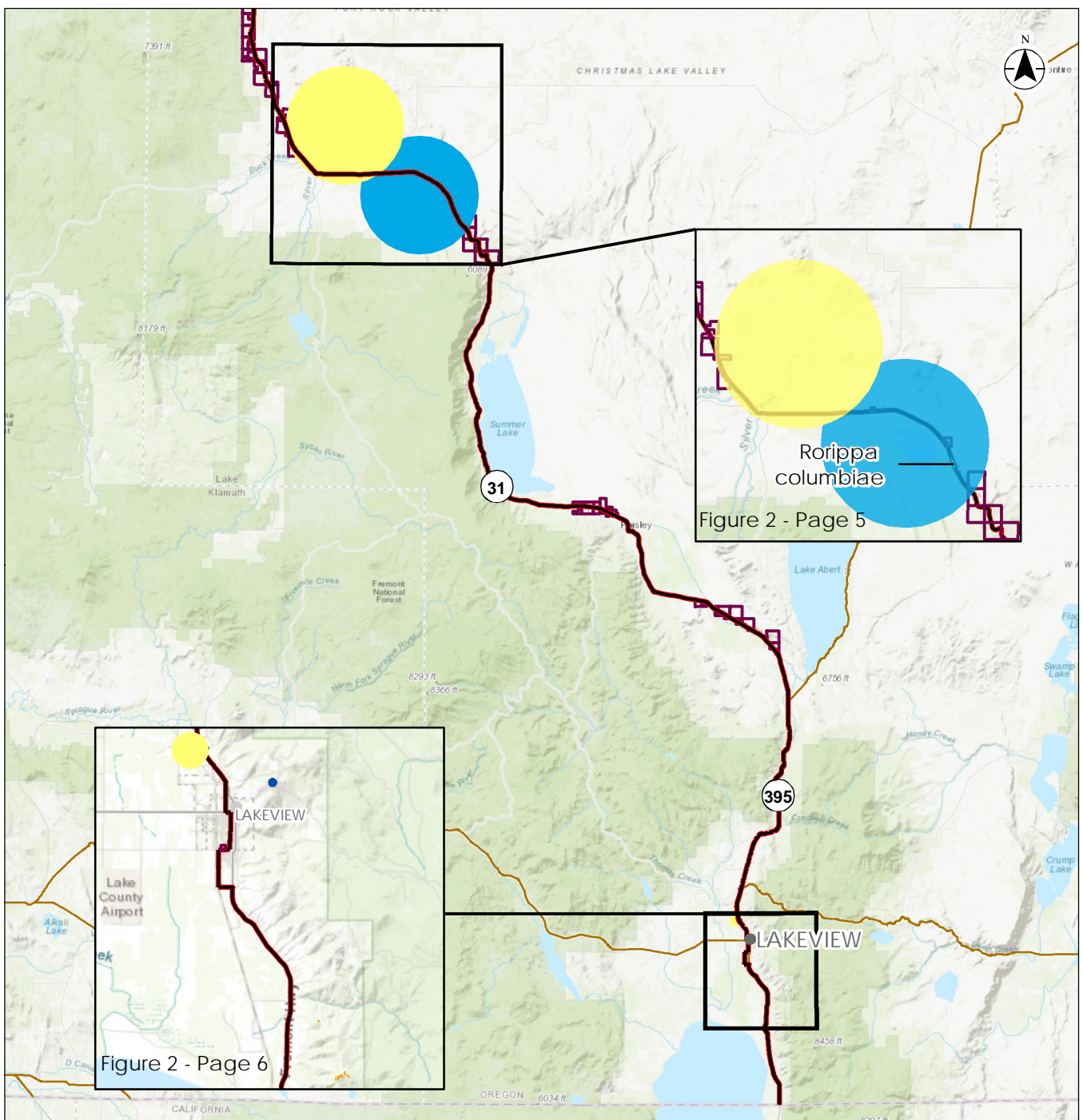
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Title

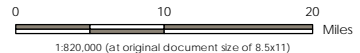
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- Study Area
- Running Line
- Road/Highway
- BLM
- USFS

- Special-Status Plant Occurrence**
- *Eriogonum prociduum*
 - *Eriogonum umbellatum* var. *glaberrimum*
 - *Phacelia inundata*
 - *Rorippa columbiae*
 - *Thelypodium howellii* ssp. *howellii*



Project Location
Oregon

Prepared by WDC on 2019-07-16
Technical Review by SI on 2019-07-17

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Figure No.
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Project Overview

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3.0 PROJECT DESCRIPTION

The running line will consist of three 1.25-inch-diameter high-density polyethylene subterranean conduits that will house fiber optic cables and will be installed within existing paved roads or along road shoulders (Appendix A, Photographs 1-3). The running line would be constructed in one of three ways:

- **Plowing In.** This method includes use of a conduit plow that simultaneously excavates and places the conduit in a single motion. This method causes the least amount of ground disturbance; however, it requires ground conditions to be relatively free of rocks or other obstructions.
- **Trenching.** This method consists of digging an 18-inch-wide by 36-inch-deep trench to place the conduit, then backfilling the trench with native material. Equipment used for this method includes excavators with rock break hammers or rock saws and is used in areas where ground conditions are not conducive to the plowing method.
- **Directional Boring.** Directional boring consists of specialized directional boring drill equipment that places conduit by an underground drill and push method, which allows placement of conduit with minimal ground disturbance. This method is used when crossing sensitive landscape features such as streams or wetlands. The directional boring method requires some minor excavation and use of drilling mud at the entry and exit points of the bore.

Fiberglass handholes/vaults (vaults) used for conduit access will be spaced approximately 2,500 feet apart along the running line. The vaults will be buried approximately 3 feet below ground and will be placed approximately 5–10 feet from the edge of the existing pavement within previously disturbed areas in the ROW (i.e., road base, road shoulders, or existing pullouts) (Appendix A, Photograph 4). At bridge crossings, the running line will be attached to the underside of the bridge. Except in areas where installation will occur in the existing road or attached to bridges, the running line will be installed by trenching or plowing 3–10 feet from the edge of the pavement. An excavator will be used to excavate the vaults, which will be used for storage and splicing sections of fiber optic cable. Each vault excavation will be about 3 feet deep by 2 feet wide by 3 feet long, and the total disturbance area will be as much as 5 feet wide by 6 feet long. Vaults are considered as a long-term disturbance as they will be in place for the duration of the authorization. All vaults will be installed in previously disturbed areas and will be placed approximately every 2,500 feet along the running line.

No long-term project staging or laydown areas are proposed. However, temporary equipment staging on existing pullouts throughout the project may be needed. No clearing, flattening, grading, or stripping of topsoil will occur in any temporary staging areas. In addition, a traffic control plan will be developed in cooperation with ODOT to accommodate traffic during project construction, as needed (Appendix A, Photograph 3). Minor temporary ground disturbance may occur during equipment operation and staging but will be confined to previously disturbed areas. If vegetation re-growth has occurred along previously cleared road shoulders, some minor clearing of vegetation may be required.



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The overall running line will undergo varying types of construction activities within the study area, depending on local conditions. The following is a summary of proposed project activities within each of the three areas.

- **Umatilla to Service Creek.** This region has already been constructed. The running line was installed within the gravel road base adjacent to the edge of pavement. Most vaults were placed either in the road shoulder or road base, or just outside of it.
- **Service Creek to Prineville.** The first approximately eight miles of this region has already been installed in the paved roadbed. In the remaining portion, the running line will be constructed within the paved roadbed or along the edge of pavement within the gravel roadbed or road shoulder. The vault locations will be located near or at the grade of the existing roadbed. Wide, level road shoulders and pullouts will be prioritized as potential vault locations whenever feasible. The vault locations will be located within 15 feet of the edge of pavement, most likely between 5–10 feet.
- **Prineville to Oregon-California Border.** This area has not been constructed. The running line will be located along the edge of pavement within the gravel roadbed or road shoulder. The vault locations will be located within 15 feet of the edge of pavement and are commonly within 5–10 feet.

4.0 METHODS

4.1 REVIEW OF EXISTING RESOURCES

Prior to conducting a reconnaissance-level survey, Stantec botanists reviewed numerous botanical resources and databases in order to compile accurate lists of special-status plant species and invasive plant species with the potential to occur within the study area. A list of all technical resources reviewed and a detailed description of the abiotic and biotic factors considered during the pre-survey analysis are provided below.

Abiotic and biotic factors that support special-status and non-native invasive plant species were evaluated and compared to current environmental conditions within the study area in order to determine the likelihood of their presence/absence. Abiotic factors considered include but are not limited to general climate, micro-climate, natural fire regime, edaphic conditions (inherent soil composition), elevation, land use, land management, and water availability. Biotic factors considered include, but are not limited to, vegetation communities or habitat types, known occurrences of special-status plants within the study area or within 2 miles of the study area, vegetation structure and age, canopy cover, disease, the presence or absence of non-native plant species, and land management practices including road or ROW maintenance, roadside revegetation efforts, and removal of vegetation via mechanical or chemical processes.

For the purposes of this evaluation, special-status plant species include species that are; 1) listed as threatened or endangered under the federal Endangered Species Act; 2) listed as threatened or endangered plant species by the Oregon Department of Agriculture (ODA); or 3) identified as a state or federal candidate or proposed species for listing as threatened or endangered.



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Technical resources consulted prior to conducting surveys included the following:

- *Flora of the Pacific Northwest* (Hitchcock and Cronquist 2018);
- Current and historic aerial imagery of the study area and vicinity (Google Earth 2019);
- Oregon Biodiversity Information Center, Query Detail, Institute for Natural Resources, Portland State University (Oregon Biodiversity Information Center 2010);
- *Oregon Flora Project* (Oregon State University 2019);
- University of Washington herbarium records (University of Washington 2019);
- *Environmental Conservation Online System, Information for Planning and Consultation* (United States Fish and Wildlife Service 2019);
- *Wildlife-Habitat Relationships in Oregon and Washington* (Johnson and O'Neil 2001); and
- *The Oregon Conservation Strategy* (Oregon Department of Fish and Wildlife 2016).

4.2 COMMUNICATION WITH RESOURCE AGENCIES

Prior to conducting the survey, BLM and USFS personnel were contacted in order to ensure guidelines and protocols for surveying on federal lands were applied. Stantec botanist Sarah Tona consulted with BLM and USFS agency botanists who are familiar with specific segments of the study area (public lands they help manage) as well as the special-status plant species and associated habitats that occur in these segments. As a result of these discussions and in conjunction with the technical resources review, a reconnaissance-level survey was conducted to assess the presence of potential suitable habitat for special-status plant species within the study area.

Communication between agency personnel and Sarah Tona during this effort include, but are not limited to:

- Communication via e-mail with Elysia Retzlaff, National Environmental Policy Act Planner, USFS, Ochoco National Forest, dated May 16, 2019;
- Communication via email with Matt Lewis, Botanist, BLM, Lakeview Resource Area, dated May 15, 2019; and
- Communication via e-mail with Sara A. Canham, Botanist/ESR Coordinator, BLM, Prineville, dated May 15, 2019.

4.3 FIELD SURVEY METHODS

Sarah Tona conducted a reconnaissance-level survey for special-status plant species within the study area on June 20 and 21, 2019. No portions of the study area were excluded from the reconnaissance-level survey. Ms. Tona performed the field survey by visually evaluating roadside habitats within the study area in order to determine the presence/absence of suitable habitat for special-status plant species. Additionally, she visited and evaluated known reference sites of special-status plant species and compared habitat types within the reference sites to habitats within the study area. Furthermore, Ms. Tona evaluated non-native invasive plant species occurrences located within the study area and immediate vicinity.



UMATILLA TO PRINEVILLE FIBER OPTIC PROJECT AND PRINEVILLE TO RENO FIBER OPTIC PROJECT

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5.0 SURVEY RESULTS

This section describes the environmental setting and provides the results of the reconnaissance-level botanical survey.

5.1 ENVIRONMENTAL SETTING

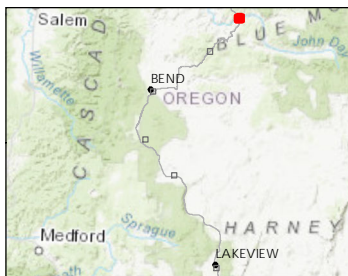
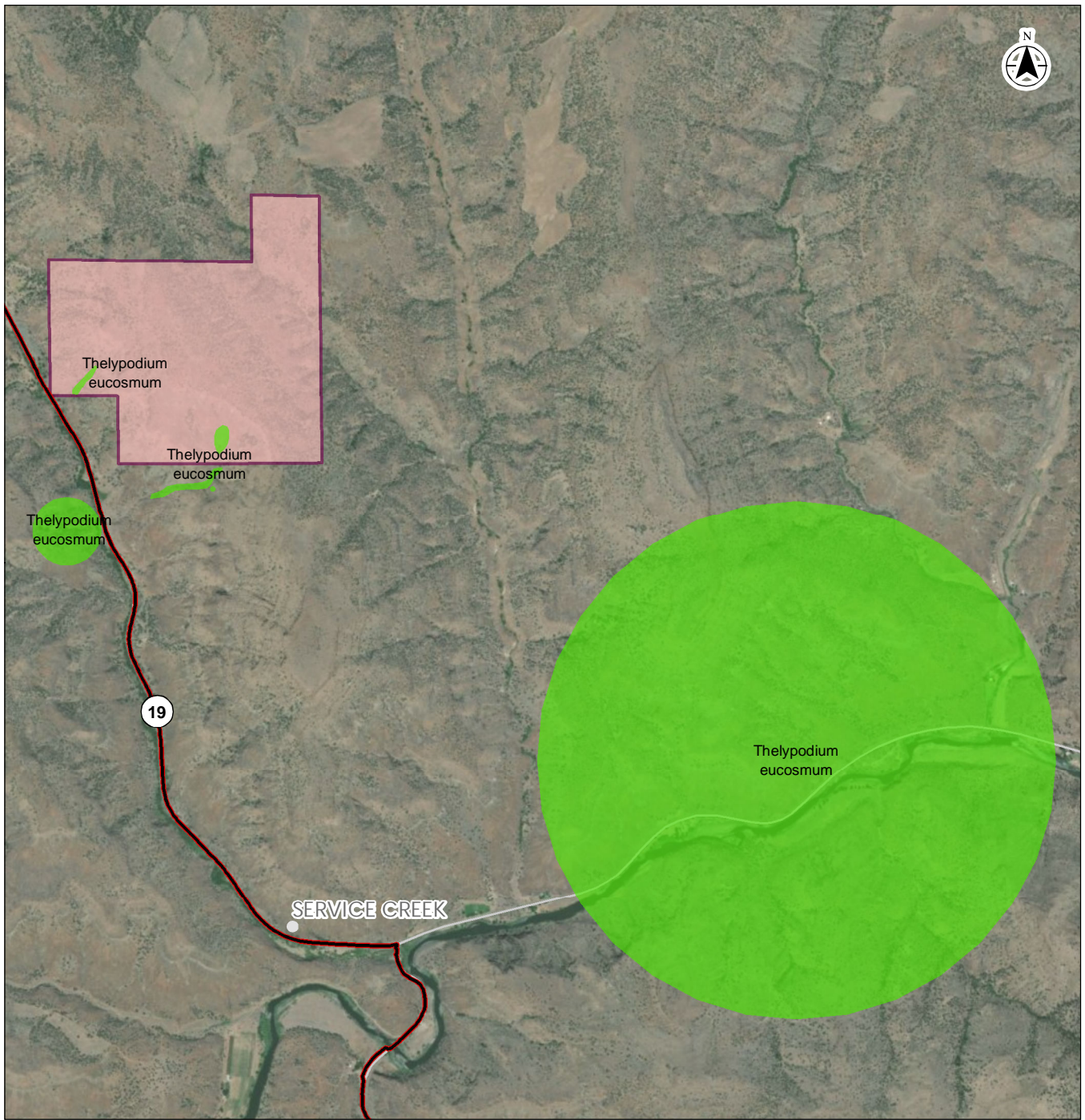
The study area occurs entirely within existing road ROWs, and vegetation within these ROWs is regularly maintained, with trees and shrubs typically cleared to 25 – 30 feet from the edge of the pavement. The vegetation communities within the study area are subjected to road construction and maintenance activities including regular vegetation management, which generally involves mechanical and/or chemical treatment.

Although the study area occurs along existing roads bordered largely by ruderal vegetation with occasional agricultural croplands, natural vegetation types also occur. Natural vegetation types present include ponderosa pine (*Pinus ponderosa*) forest with scattered Douglas-fir (*Pseudotsuga menziesii*); lodgepole pine (*Pinus contorta*) forest with scattered ponderosa pine and western juniper (*Juniperus occidentalis*); interior riparian woodland dominated by willows (*Salix* spp.), sedges (*Carex* spp.), and rushes (*Juncus* spp.); shrub-steppe, with big sagebrush (*Artemisia tridentata*) as the dominant perennial woody plant species; and western juniper and curl leaved mountain mahogany (*Cercocarpus ledifolius* var. *intermontanus*) woodlands, generally co-occurring with big sagebrush, sticky leaved rabbit brush (*Chrysothamnus viscidiflorus*), Antelope bitterbrush (*Purshia tridentata*) and a minor component of east side interior grasslands, dominated by cheatgrass (*Bromus tectorum*) and beardless wild rye (*Leymus triticoides*). Representative photographs of the study area are provided in Appendix A, and photographs 5 through 10 include examples of some of the ruderal and natural vegetation types within and/or adjacent to the study area.

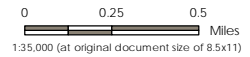
5.2 SPECIAL-STATUS PLANT SPECIES & EFFECTS DETERMINATION

During the field survey, Sarah Tona visited several special-status plant occurrences that have been previously documented adjacent to the study area, including arrow-leaf thelypody (*Thelypodium eucosmum*), Columbia cress (*Rorippa columbiae*), pumice grape-fern (*Botrychium pumicola*), playa phacelia (*Phacelia inundata*), Peck's mariposa-lily (*Calochortus longebarbatus* var. *peckii*), prostrate buckwheat (*Eriogonum prociduum*), and Howell's thelypody (*Thelypodium howellii* ssp. *howellii*). A map showing the locations of special-status plant occurrences in relation to the study area is provided as Figure 2.





- Study Area
 - Running Line
 - Road/Highway
 - BLM
 - USFS
- Special-Status Plant Occurrence
- Thelypodium eucosmum



Project Location

Oregon

Prepared by WDC on 2019-07-16
 Technical Review by SI on 2019-07-17

Client/Project

Zayo Group LLC
 Umatilla to Prineville and Prineville
 to Reno Fiber Optic Project

Figure No.

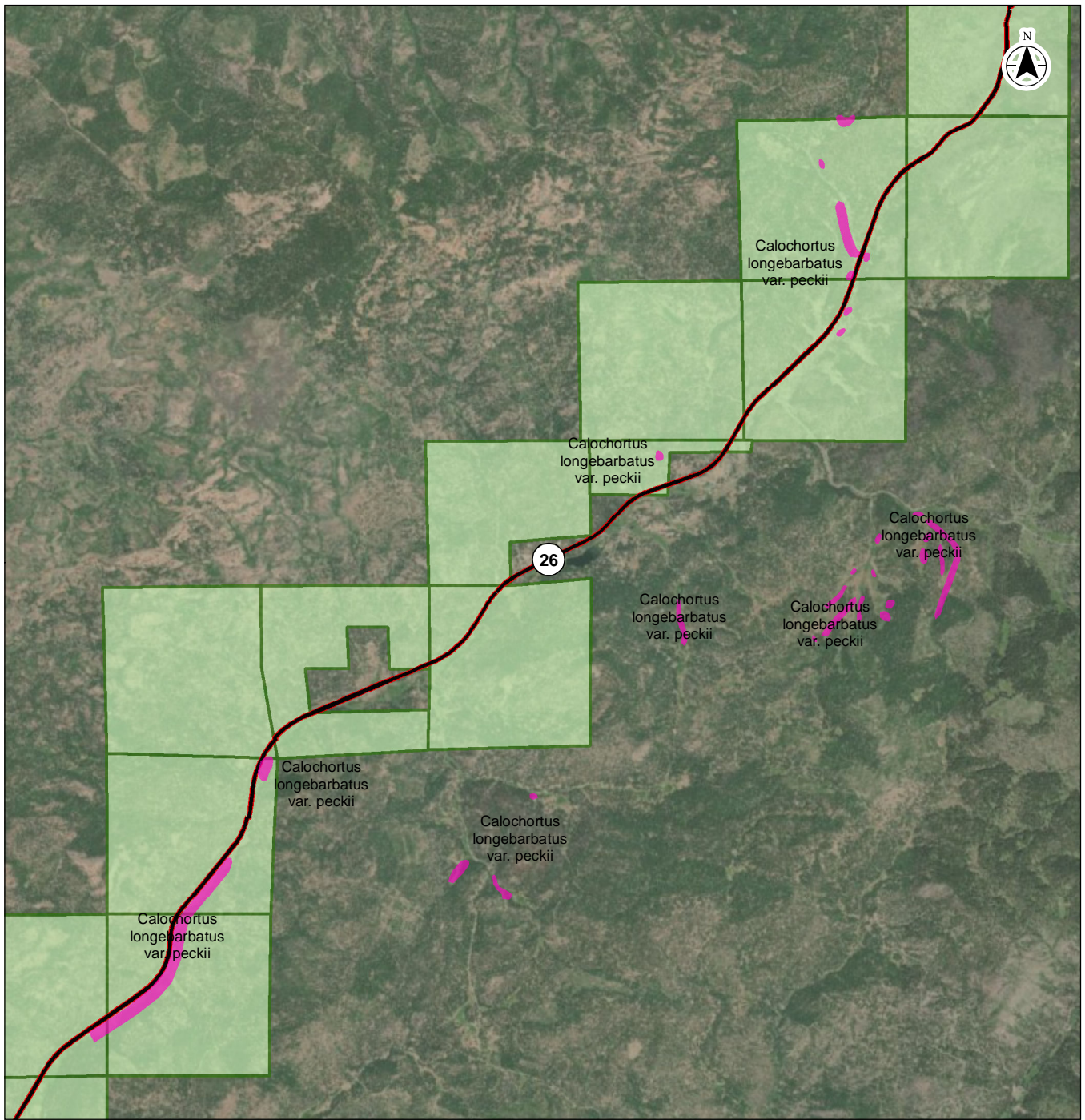
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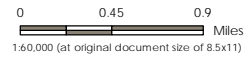
Special-Status
 Plant Occurrences

Notes
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- Study Area
- Running Line
- Road/Highway
- BLM
- USFS
- Special-Status Plant Occurrence
- Calochortus longebarbatus var. peckii



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Umatilla to Prineville and Prineville
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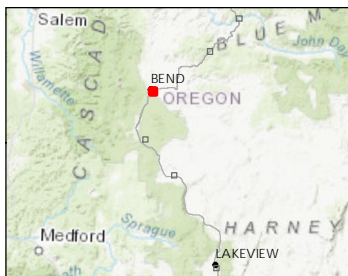
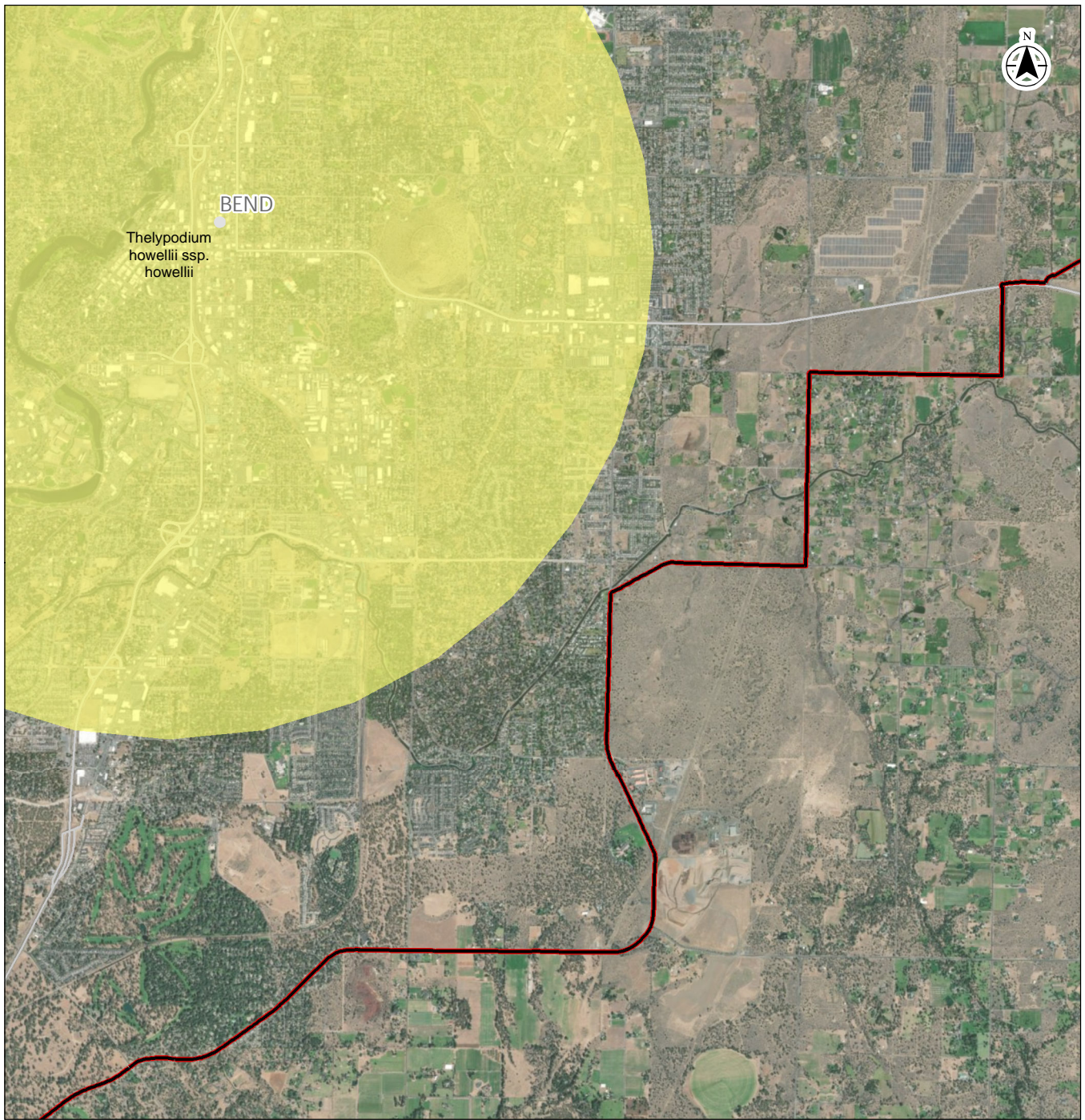
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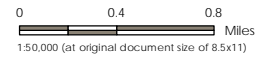
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Special-Status
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- Study Area
 - Running Line
 - Road/Highway
 - BLM
 - USFS
- Special-Status Plant Occurrence**
- Thelypodium howellii ssp. howellii



Project Location

Oregon

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Figure No.

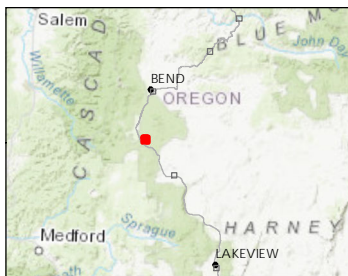
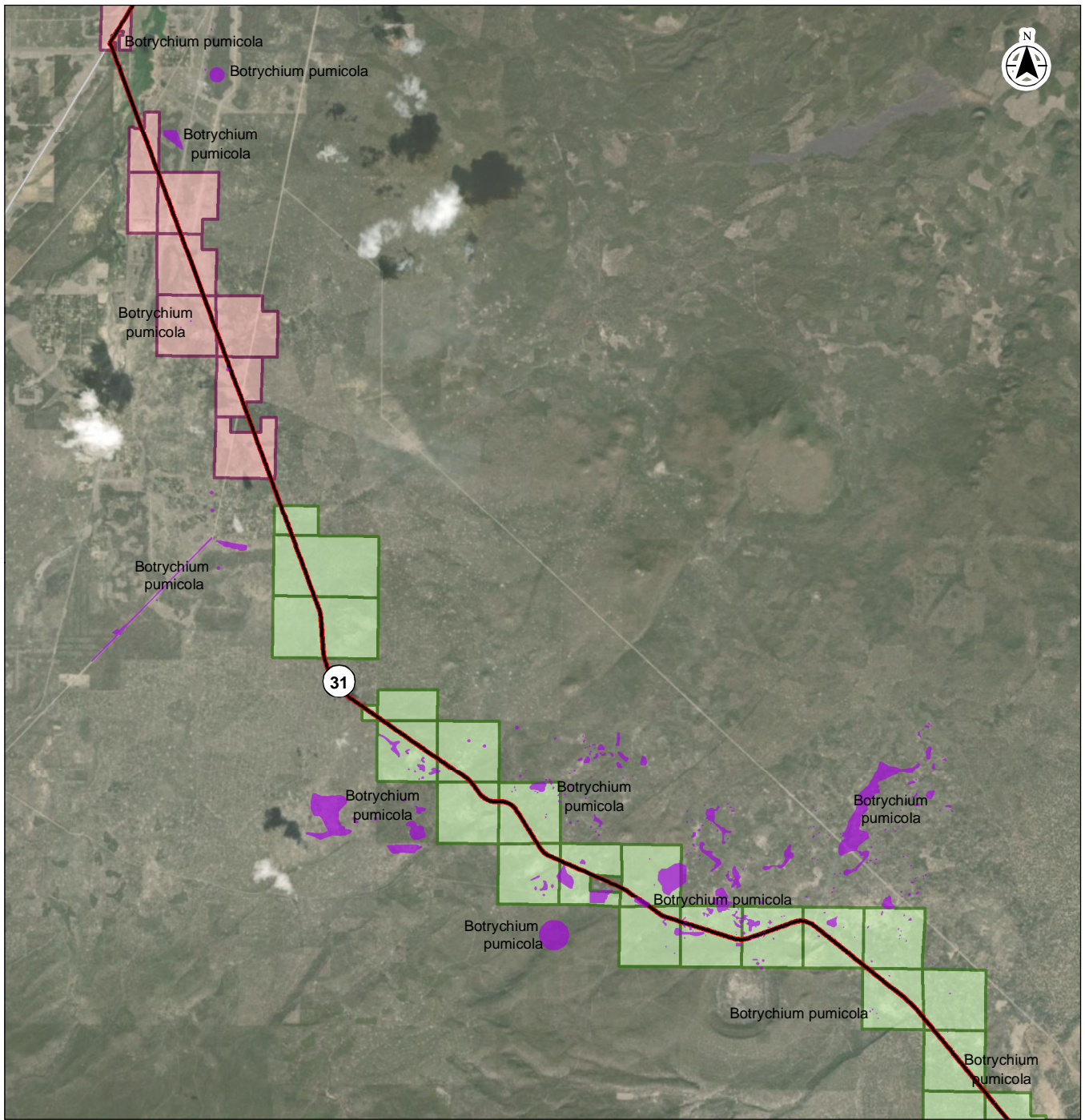
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Title

Special-Status
 Plant Occurrences

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- Study Area
 - Running Line
 - Road/Highway
 - BLM
 - USFS
- Special-Status Plant Occurrence**
- Botrychium pumicola

0 1 2 Miles
1:160,000 (at original document size of 8.5x11)



Project Location
Oregon

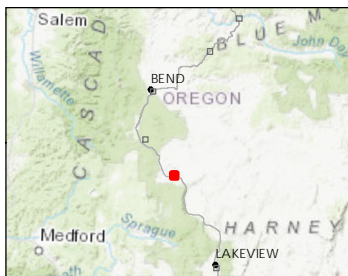
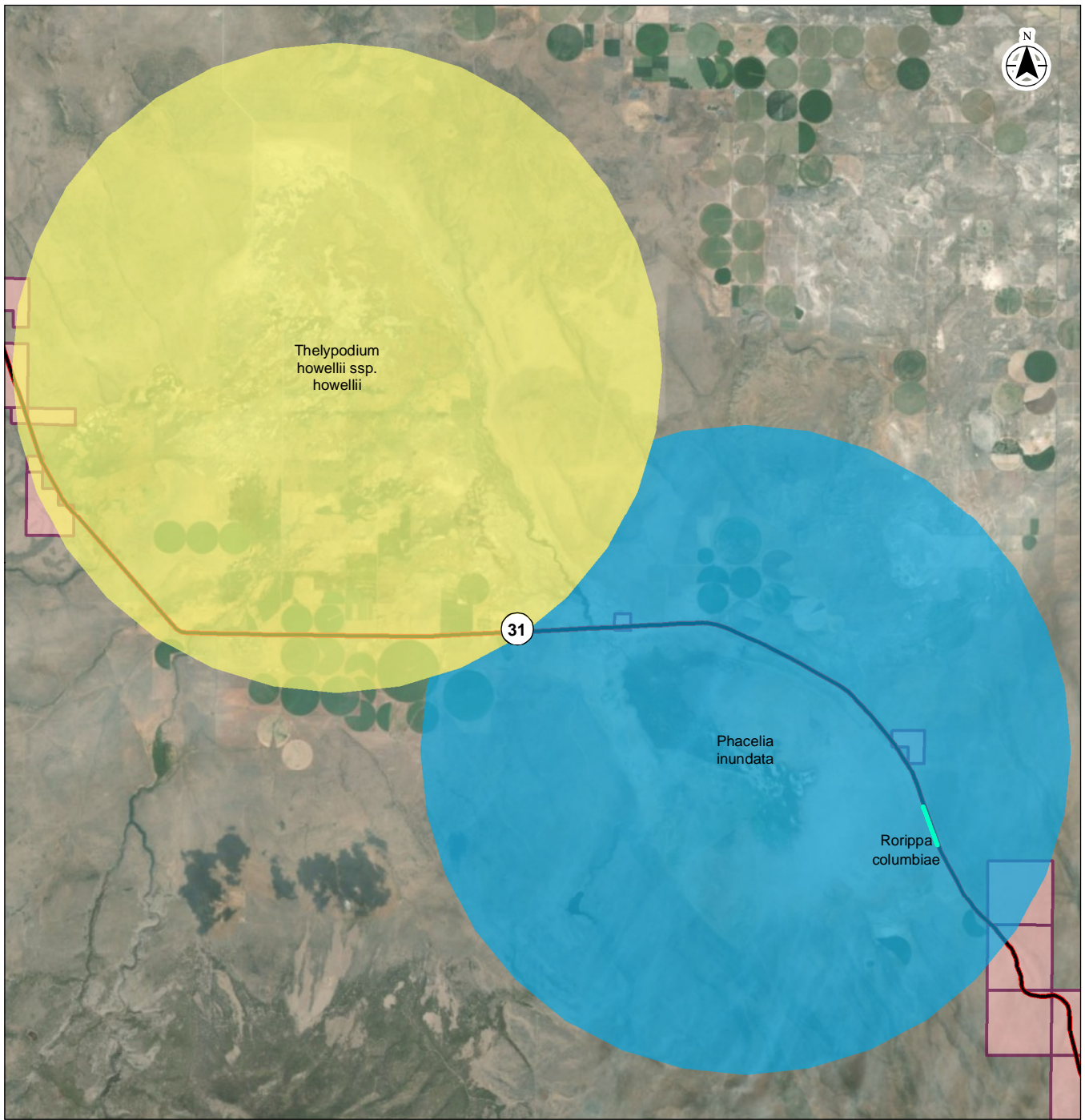
Client/Project
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Umatilla to Prineville and Prineville to Reno Fiber Optic Project

Figure No.
2

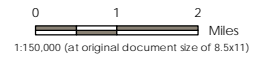
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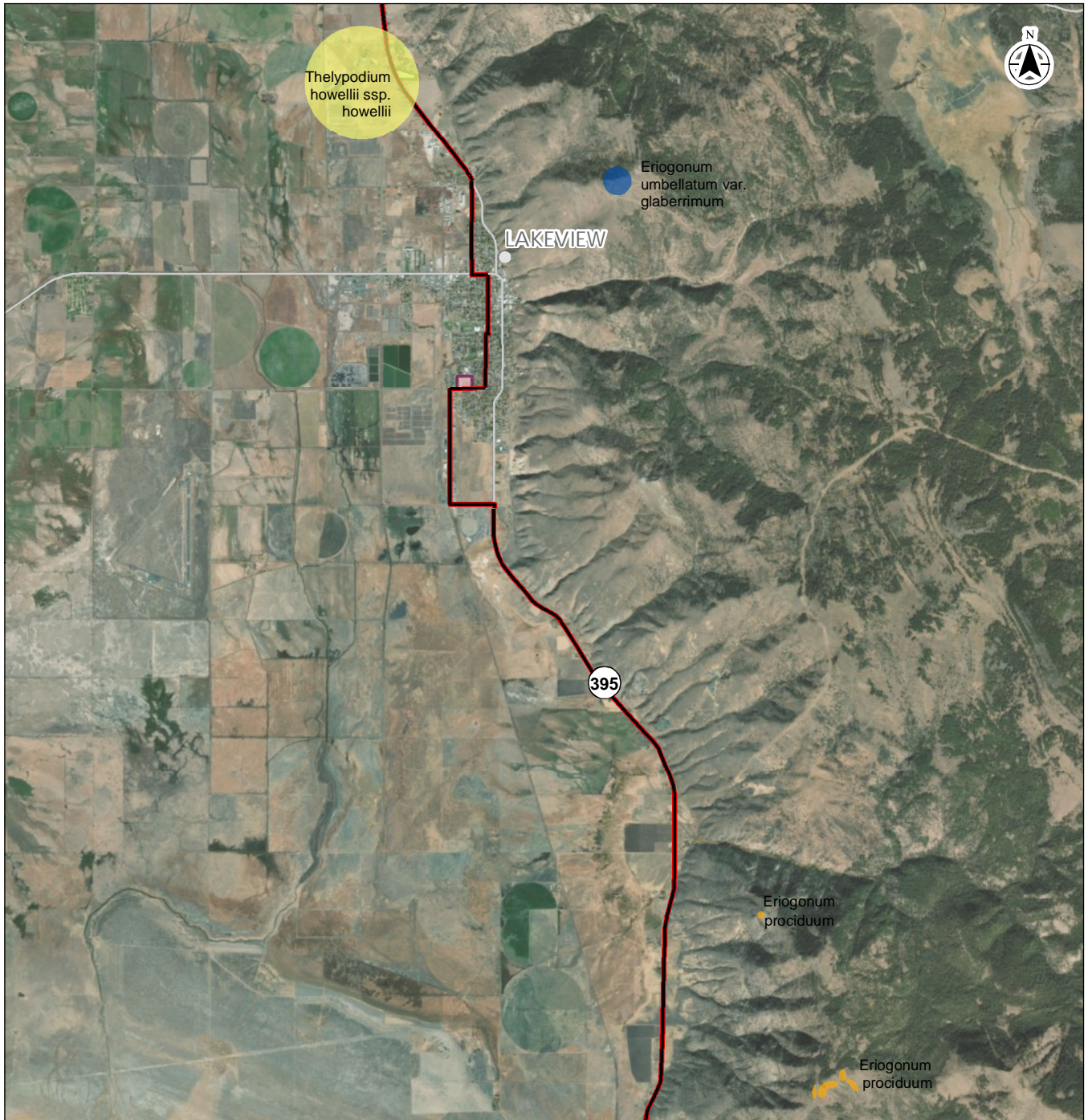
- Study Area
 - Running Line
 - Road/Highway
 - BLM
 - USFS
- Special-Status Plant Occurrence**
- Phacelia inundata
 - Rorippa columbiae
 - Thelypodium howellii ssp. howellii



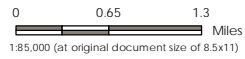
Project Location	Oregon
Client/Project	Zayo Group LLC Umatilla to Prineville and Prineville to Reno Fiber Optic Project
Figure No.	2
Title	

Notes
 1. Coordinate System: NAD 1983 StatePlane Oregon North
 FPS 3601 Feet
 2. Service Credit Layer: ESRI Online Services, July 2019

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- Study Area
 - Running Line
 - Road/Highway
 - BLM
 - USFS
-
- Special-Status Plant Occurrence**
- Eriogonum prociduum
 - Eriogonum umbellatum var. glaberrimum
 - Thelypodium howellii ssp. howellii



Project Location
Oregon

Prepared by WDC on 2019-07-16
Technical Review by SI on 2019-07-17

Client/Project
Zayo Group LLC
Umatilla to Prineville and Prineville to Reno Fiber Optic Project

Figure No.
2

Title

Notes
1. Coordinate System: NAD 1983 StatePlane Oregon North
FPS 3601 Feet
2. Service Credit Layer: ESRI Online Services, July 2019

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UMATILLA TO PRINEVILLE FIBER OPTIC PROJECT AND PRINEVILLE TO RENO FIBER OPTIC PROJECT

Botanical Resources Report

Appendix B is a list comprised by Stantec botanists of all special-status plant species with the potential to occur within the study area. Ms. Tona reviewed this list prior to conducting the survey and compared the habitats of known or potentially occurring special-status plant species with the habitat types occurring within the study area (Photographs 5–10, Appendix A). No special-status plant species were observed in the study area during the survey. Additionally, it was determined post survey that no suitable habitat for special-status plant species occurs in the study area. Therefore, no impacts on special-status plant species are expected to occur as a result of project-related activities. A list of plant species observed in the study area during the reconnaissance-level field effort is provided in Appendix C.

5.3 NON-NATIVE INVASIVE PLANT SPECIES

During the survey, Ms. Tona observed several non-native invasive plant species in the study area, including spotted knapweed (*Centaurea stoebe* ssp. *micranthos*), medusahead (*Taeniatherum caput-medusae*), and yellow star thistle (*Centaurea solstitialis*). While natural habitat types and native plant species composition varied within the study area, non-native invasive plant species were generally common throughout and were generally intermixed with other invasive non-native grasses and herbs, including cheat grass (*Bromus tectorum*), soft chess (*Bromus hordeaceus*), and woolly mullein (*Verbascum thapsus*).

Oregon Revised Statute, ORS 634.650-655 requires that the ODOT practice Integrated Pest Management when controlling pests such as non-native invasive plant species. The ODOT Integrated Vegetation Management Statewide Plan (ODOT 2017) outlines how ODOT meets integrated pest management and other natural resources laws associated with vegetation management. For the purposes of this project, invasive plant species include all plants considered in the Noxious Weed Policy and Classification System (Oregon Department of Agriculture 2019).

Prevention measures should be followed during project implementation to minimize the chance for non-native invasive plant species to establish and spread as a result of proposed project activities. Implementation of such measures would serve to comply with agency policy and direction, including the ODOT Integrated Vegetation Statewide Management Plan.

Project-specific preventive measures include but are not limited to the following:

- Removal of unwanted vegetation from stockpile sites and rock sources.
- All equipment, including heavy equipment and vehicles, will be inspected and found to be clean and free of all soil and plant parts.
- If revegetation is required, proper construction design will be implemented in order to ensure that appropriate vegetation is planted in the appropriate location.
- The extent of vegetation and soil disturbance will be confined to only that necessary to accomplish the project; project activities will seek to minimize disturbance of native vegetation and use areas already disturbed if possible.



UMATILLA TO PRINEVILLE FIBER OPTIC PROJECT AND PRINEVILLE TO RENO FIBER OPTIC PROJECT

Botanical Resources Report

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APPENDIX A

Representative Photographs

Umatilla to Prineville Fiber Optic Project and Prineville to Reno Fiber Optic Project Appendix A – Representative Photographs



Photograph 1. Example of the running line installed into existing pavement. Photograph taken in a newly constructed portion of the project.



Photograph 2. Example of a running line installation using the trenching method on the highway shoulder. Photograph taken on a different Zayo fiber optic project.



Umatilla to Prineville Fiber Optic Project and Prineville to Reno Fiber Optic Project Appendix A – Representative Photographs



Photograph 2. Example of a running line installation using the plowing in method on the highway shoulder. Photograph taken on a different Zayo fiber optic project.



Photograph 4. Example of a vault/handhold located adjacent to the road prism, as shown by the orange marker. Photograph taken in a newly constructed portion of the project.



**Umatilla to Prineville Fiber Optic Project and Prineville to Reno Fiber Optic Project
Appendix A – Representative Photographs**



Photograph 5. *Thelypodium eucosmum* habitat in western juniper and mountain mahogany habitat. Photograph taken at an occurrence documented 500 feet east of study area. Orientation: southwest.



Photograph 6. The study area adjacent to the *Thelypodium eucosmum* occurrence. Orientation: northwest.



Umatilla to Prineville Fiber Optic Project and Prineville to Reno Fiber Optic Project Appendix A – Representative Photographs



Photograph 7. A historical *Rorippa columbiae* occurrence in eastside grassland habitat, located approximately 60 feet west of the study area. The population is likely extirpated since it has not been relocated in recent years. Orientation: northwest.



Photograph 8. The study area adjacent to the *Rorippa columbiae* occurrence. Construction would occur in the sloped non-vegetated road base. Orientation: northwest.



Umatilla to Prineville Fiber Optic Project and Prineville to Reno Fiber Optic Project Appendix A – Representative Photographs



Photograph 9. A *Botrychium pumicola* occurrence in lodgepole pine forest and woodland habitat, mapped adjacent to the highway for several miles in the vicinity of La Pine, Oregon. The population is likely present since it was mapped in recent years, but the species could not be observed during the June visit. Orientation: south.



Photograph 10. The study area adjacent to the *Botrychium pumicola* occurrence. The study area does not contain the sandy volcanic soils that are found at *Botrychium pumicola* sites. Orientation: northwest.



APPENDIX B

Potential Special-Status Plant Species

Appendix B – Potential Special-Status Plant Species Within the Umatilla to Prineville and Prineville to Reno (Oregon Portion) Fiber Optic Project Study Area

Scientific Name Common Name	Status¹ Federal/ODA	General Habitat	Blooming/ Identification Period
<i>Artemisia campestris</i> var. <i>wormskioldii</i> Northern wormwood	C/LE	Restricted to exposed basalt, cobbly-sandy terraces, and sandy habitats along the banks of the Columbia River at elevations ranging from approximately 160 to 500 feet.	(April) May to mid-June
<i>Astragalus applegatei</i> Applegate's milkvetch	LE/LE	Seasonally moist alkaline soils in meadows and along wayside ditches at an elevation of approximately 4,100 feet.	June-August
<i>Astragalus collinus</i> var. <i>laurentii</i> Lawrence's milkvetch	SOC/LT	Sandy or rocky soils overlying basalt on dry slopes, primarily at elevations ranging from approximately 2,000 to 3,400 feet, although it has been reported at elevations as low as 400 feet.	May-August.
<i>Astragalus peckii</i> Peck's milkvetch	--/LT	Generally in sandy soils with little organic matter content in open habitats or sagebrush-juniper woodlands, lodgepole pine, and ponderosa pine forests at elevations ranging from approximately 3,000 to 5,000 feet.	March-September
<i>Botrychium pumicola</i> Pumice grape-fern	--/LT	In the montane habitat within the study area region, this species prefers open, deep volcanic soil, often in <i>Pinus contorta</i> / <i>Achnatherum nelsonii</i> plant communities where tree cover is scattered (usually less than 30%) and there are large expanses of bare soil.	June-July
<i>Calochortus longebarbatus</i> var. <i>peckii</i> Peck's mariposa-lily	SOC/--	Seasonally moist habitat associated with bunchgrass-forb meadows or in non-forested habitats along intermittent streams.	June-August
<i>Eriogonum crosbyae</i> Crosby's buckwheat	SOC/LT	Light-colored (white and tan) tuffaceous sandstone, usually on rounded, gentle slopes on unfragmented substrate at elevations ranging from approximately 5,250 to 5,460 feet.	June-July



Appendix B – Potential Special-Status Plant Species Within the Umatilla to Prineville and Prineville to Reno (Oregon Portion) Fiber Optic Project Study Area

Scientific Name Common Name	Status¹ Federal/ODA	General Habitat	Blooming/ Identification Period
<i>Eriogonum prociduum</i> Prostrate buckwheat	SOC/C	Light-colored (white and tan) tuffaceous sandstone, usually on rounded, gentle slopes on unfragmented substrate at elevations ranging from approximately 5,250 to 5,460 feet.	June-July
<i>Eriogonum umbellatum</i> var. <i>glaberrimum</i> Green buckwheat	SOC/--	Sand, gravel, or rocky soils at elevations ranging from approximately 5,000 to 7,500 feet.	(June) July-August (September)
<i>Gratiola heterosepala</i> Bogg's Lake hedge hyssop	SOC/LT	Vernal pools, marshy regions on the margins of reservoirs and lakes, and human-made habitats including borrow pits and cattle ponds, most often in clay substrates, at an elevation of approximately 5,360 feet.	April-July
<i>Ivesia rhypara</i> var. <i>rhypara</i> Grimy ivesia	SOC/LE	Very dry, relatively barren sites with little to no canopy cover in either light-colored ash-tuff or on outcrops of volcanic ash deposited with riverbed gravels at elevations ranging from approximately 4,260 to 4,760 feet.	May-June
<i>Phacelia inundata</i> Playa phacelia	SOC/--	Alkaline flats and dry lake margins at elevations ranging from approximately 3,900 to 6,000 feet.	June-August
<i>Pleuropogon oregonus</i> Oregon semaphore grass	SOC/LT	Wet meadows and marshlands in areas of sluggish moving water at elevations ranging from approximately 3,300 to 5,600 feet.	June-July
<i>Rorippa columbiae</i> Columbia cress	--/C	Seasonally inundated shorelines such as found in playas, reservoirs, banks of rivers, streams and creeks, lakes, wet meadows, and ditches. Generally occurring at elevations ranging from approximately 3,000 to 6,000 feet.	June-August



Appendix B – Potential Special-Status Plant Species Within the Umatilla to Prineville and Prineville to Reno (Oregon Portion) Fiber Optic Project Study Area

Scientific Name Common Name	Status¹ Federal/ODA	General Habitat	Blooming/ Identification Period
<i>Thelypodium eucosmum</i> Arrow-leaf thelypody	SOC/LT	Shaded areas (under junipers) in juniper-sagebrush communities on dry slopes and in dry to moist areas in streambeds, and along seeps and streams at elevations ranging from approximately 1,640 to 5,500 feet.	June-July
<i>Thelypodium howellii</i> ssp. <i>howellii</i> Howell's thelypody	LT/LE	Moist meadows with fine, pluvial-deposited alkaline clay mixed with recent alluvial silts, as well as adjacent to streams that experience springtime flooding at elevations ranging from approximately 3,000 to 5,000 feet.	June-July

Status¹

LE - Listed as an Endangered Species

LT - Listed as a Threatened Species

C - Candidate for Listing as Threatened or Endangered

SOC - Species of Concern - Taxa for which additional information is needed to support a proposal for listing under the Endangered Species Act



APPENDIX C

Plant Species Observed

Appendix C – List of Plant Species Observed Within the Umatilla to Prineville and Prineville to Reno (Oregon Portion) Fiber Optic Project Study Area

Family	Scientific Name	Common Name	Native/ Non-native/ Invasive Rank
Poaceae	<i>Alopecurus aequalis</i>	Short awned foxtail	Native
Asteraceae	<i>Arnica fulgens</i>	Hillside arnica	Native
Asteraceae	<i>Artemisia tridentata</i>	Sagebrush	Native
Poaceae	<i>Bromus hordeaceus</i>	Soft brome	Non-native
Poaceae	<i>Bromus tectorum</i>	Cheatgrass	Non-native
Cyperaceae	<i>Carex</i> spp.	Sedge species	Native
Asteraceae	<i>Centaurea stoebe</i>	Spotted knapweed	Non-native
Rosaceae	<i>Cercocarpus lepidus</i> ssp. <i>intermontanus</i>	Curl leaved mountain mahogany	Native
Chenopodiaceae	<i>Chenopodium album</i>	Lamb's quarters	Non-native
Asteraceae	<i>Chrysothamnus viscidiflorus</i>	Stickyleaf rabbitbrush	Native
Convolvulaceae	<i>Convolvulus arvensis</i>	Field bindweed	List B
Brassicaceae	<i>Descurainia</i> sp.	Tansy mustard	Unknown
Poaceae	<i>Elymus ponticus</i>	Tall wheat grass	Non-native
Asteraceae	<i>Ericameria nauseosa</i>	Rubber rabbitbrush	Native
Polygonaceae	<i>Eriogonum</i> sp.	Buckwheat	Native
Asteraceae	<i>Hordeum murinum</i>	Foxtail barley	Non-native
Juncaceae	<i>Juncus</i> spp.	Rush species	Native
Cupressaceae	<i>Juniperus occidentalis</i>	Western juniper	Native
Poaceae	<i>Leymus triticoides</i>	Beardless wild rye	Native
Fabaceae	<i>Lupinus argenteus</i>	Silvery lupine	Native
Fabaceae	<i>Lupinus latifolius</i>	Broadleaf lupine	Native
Poaceae	<i>Phalaris arundinacea</i>	Reed canary grass	List B (T)
Pinaceae	<i>Pinus contorta</i>	Lodgepole pine	Native
Pinaceae	<i>Pinus ponderosa</i>	Ponderosa pine	Native
Poaceae	<i>Poa secunda</i>	Pine bluegrass	Native
Pinaceae	<i>Pseudotsuga menziesii</i>	Douglas-fir	Native
Rosaceae	<i>Purshia tridentata</i> var. <i>tridentata</i>	Antelope bitterbrush	Native
Rosaceae	<i>Rosa woodsii</i>	Woods' rose	Native
Salicaceae	<i>Salix</i> spp.	Willow species	Native
Adoxaceae	<i>Sambucus nigra</i> ssp. <i>caerulea</i>	Blue elderberry	Native
Poaceae	<i>Taeniatherum caput-medusae</i>	Medusa head	List B
Scrophulariaceae	<i>Verbascum thapsus</i>	Woolly mullein	Non-native

Noxious Weed Control Classification Definitions

List A: A weed of known economic importance which occurs in the state in small enough infestations to make eradication or containment possible; or is not known to occur, but its presence in neighboring states make future



Appendix C – List of Plant Species Observed Within the Umatilla to Prineville and Prineville to Reno (Oregon Portion) Fiber Optic Project Study Area

occurrence in Oregon seem imminent. Recommended action: Infestations are subject to eradication or intensive control when and where found.

List B: A weed of economic importance which is regionally abundant, but which may have limited distribution in some counties (Table II). Recommended action: Limited to intensive control at the state, county or regional level as determined on a site specific, case-by-case basis. Where implementation of a fully integrated statewide management plan is not feasible, biological control (when available) shall be the primary control method.

T-Designated Weed: A designated group of weed species that are selected and will be the focus for prevention and control by the Noxious Weed Control Program. Action against these weeds will receive priority. T-designated noxious weeds are determined by the Oregon State Weed Board and directs ODA to develop and implement a statewide management plan. T-designated noxious weeds are species selected from either the A or B list.

