

ATTACHMENT BB-1
PLAN FOR AN ALTERNATE PRACTICE

PLAN FOR AN ALTERNATE PRACTICE

Boardman to Hemingway Transmission Line Project



*1221 West Idaho Street
Boise, Idaho 83702*

Application for Site Certificate

September 2018

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ACRONYMS AND ABBREVIATIONS

FPA	Forest Practices Act
kV	kilovolt
IPC	Idaho Power Company
NERC	North American Electric Reliability Corporation
OAR	Oregon Administrative Rule
Project	Boardman to Hemingway Transmission Line Project
RMA	Riparian Management Area
ROW	right-of-way

1.0 INTRODUCTION

Idaho Power Company (IPC) is proposing to construct, operate, and maintain the Boardman to Hemingway Transmission Line Project (Project), a high-voltage electric transmission line between Boardman, Oregon, and the Hemingway Station in southwestern Idaho. The Project consists of approximately 296.6 miles of electric transmission line, with 272.8 miles located in Oregon and 23.8 miles in Idaho. The Project includes 270.8 miles of single-circuit 500-kilovolt (kV) transmission line, removal of 12 miles of existing 69-kV transmission line, rebuilding of 0.9 mile of a 230-kV transmission line, and rebuilding of 1.1 miles of an existing 138-kV transmission line into a new right-of-way (ROW).

The Forest Practices Reforestation Rules (Oregon Administrative Rule (OAR) Chapter 629, Division 610) generally require a landowner to replant (or ensuring natural regeneration of) the forest after a timber harvest and maintain the seedlings to the point that they are "free to grow" at a stocking level that meets the Forest Practices Act's (FPA) minimum stocking standards (see OAR 629-610-0000). If forestlands will be converted to a use not compatible with maintaining forest tree cover, the landowner must obtain written approval of a Plan for an Alternate Practice from the State Forester providing an exemption from the FPA's reforestation requirements (see OAR 629-610-0090(1)).

Here, certain portions of the Project will impact forestland and require permanent removal of the forest tree cover in order to ensure the trees do not come into contact with the Project structures or conductors and interrupt the flow of electrical energy across the Project. Vegetation removal and management is dictated by the North American Electric Reliability Corporation's (NERC) mandatory reliability standards, particularly standard FAC-003-3, Transmission Vegetation Management Program (NERC 2016). Because the Project will require permanent clearing of forestland, IPC submits to the Oregon Department of Forestry this Plan for an Alternate Practice allowing for an exemption from the reforestation rules. IPC will finalize the Plan prior to construction in forested lands.

2.0 PLANNED OPERATION

The Project will require the permanent clearing of the transmission line ROW for approximately 36.7 miles on private forestland and 4.5 miles of land administered by the U.S. Department of Agriculture Forest Service. The transmission line equipment will be owned by IPC. IPC will hold access rights to the ROW through easements, leases, grants, or licenses. The clearing operations will produce a linear clearcut on the transmission line ROW, and clearing will also occur along the Project roads. Most of the clearing will be done with ground-based systems used on slopes less than 30 percent and high-lead cable systems for slopes greater than 30 percent or for harvest near streams and their riparian management areas. There may be some areas where a skyline cable system will need to be utilized. IPC does not anticipate the need for helicopter logging. A detailed description of IPC's plans for clearing the ROW is provided in Exhibit K, Attachment K-2, Right-of-Way Clearing Assessment. The affected lands will no longer be available for the maintenance of forest tree cover, requiring the State Forester's approval of a Plan for an Alternate Practice (see OAR 629-605-0100(d)).

3.0 DESCRIPTION OF THE AREA

The Project will cross portions of the Wallowa-Whitman National Forest, Bureau of Land Management-administered public lands, and private timber lands located primarily in the Blue Mountains between McKay Creek—which is located to the east of Pilot Rock—in Umatilla County and the town of North Powder in Union County, Oregon. The operational area of interest

for the acreage estimate is a 125-foot buffer on each side of the transmission line centerline (250-foot-wide corridor),¹ the construction footprint of all Project features outside of the centerline corridor, and a 15-foot buffer each side (30-foot width) of proposed new roads. IPC projects that approximately 776 acres of forested lands will be cleared or harvested in Umatilla and Union counties (Tables 3-1 and 3-2) along the Proposed Route. For the Morgan Lake Alternative Route in Union County, approximately 297 acres of forested lands will be cleared or harvested (Table 3-3). The balance of the 1,249-acre corridor is rangeland (473 acres). Maps showing the locations of the Project-related forest clearing activities are attached as Appendix A.

Table 3-1. Umatilla County – Projected Forest Clearing/Harvest

Landowner	Forest Habitat Type	Timber Classification	Size Class	Acres
Private	DF/Mx GF ¹	Small Sawtimber	9-20"	77.9
		Pole Size	5-8.9"	82.0
	Ponderosa Pine	Small Sawtimber	9-20"	24.5
		Pole Size	5-8.9"	30.0
	Forest-Other ²	Reproduction	0-5"	31.2
Total Umatilla County				245.6

¹ DF/Mx GF = Douglas-fir/Mixed stand with grand fir and associated species.

² Reproduction or recently disturbed forests.

Table 3-2. Union County – Projected Forest Clearing/Harvest

Landowner	Forest Habitat Type	Timber Classification	Size Class	Acres
BLM ²	DF/Mx GF ¹	Small Sawtimber	9-20"	5.4
Private	DF/Mx GF	Small Sawtimber	9-20"	135.6
		Pole Size	5-8.9"	39.9
	Ponderosa Pine	Small Sawtimber	9-20"	150.7
		Pole Size	5-8.9"	6.4
	Forest-Other	Reproduction	0-5"	13.9
USFS ³	DF/Mx GF	Small Sawtimber	9-20"	77.0
	Ponderosa Pine	Small Sawtimber	9-20"	101.2
Total Union County				530.1

¹ DF/Mx GF = Douglas-fir/Mixed stand with grand fir and associated species.

² BLM=Bureau of Land Management.

³ USFS – U.S. Department of Agriculture - Forest Service.

¹ While IPC may need to extend the ROW width up to 300 feet in certain forested areas to allow for maintenance of danger trees, those circumstances will be limited and the ROW will typically be 250 feet in most forested areas. Therefore, the 250-foot ROW width used by IPC to define the Forest Lands Analysis Area provides the best representation of the typical impact area.

Table 3-3. Union County – Morgan Lake Alternative Projected Forest Clearing/Harvest

Landowner	Forest Habitat Type	Timber Classification	Size Class	Acres
Private	DF/Mx GF ¹	Small Sawtimber	9-20"	135.3
		Pole Size	5-8.9"	12.9
	Ponderosa Pine	Small Sawtimber	9-20"	134.5
		Pole Size	5-8.9"	14.1
Total Morgan Lake Alternate in Union County				296.8

¹ DF/Mx GF = Douglas-fir/Mixed stand with grand fir and associated species.

The majority of the route is “small sawtimber” (74 percent) or “pole-sized” (20 percent) stands. About 6 percent of the forested lands were classified as “reproduction.” The rangelands are intermixed across all ownerships. No tilled lands occur on this corridor, but a small acreage of managed pastures occur versus unmanaged grasslands (range).

The majority of the Project is located in upland forest or rangeland areas with broad plateaus and rolling topography (with slopes up to 45 percent) broken by occasional perennial or seasonal streams. Where riparian areas occur in the forested portion of the Project, the riparian management area (RMA) vegetation varies, ranging from shrub dominated communities to conifer dominated stands at higher elevations. Common shrub species found in the RMAs include grey alder (*Alnus incana*), red oiser dogwood (*Cornus sericea*), chokecherry (*Prunus virginiana*), common snowberry (*Symphoricarpos albus*), and black hawthorn (*Crataegus douglasii*). Conifers commonly found in riparian communities include grand fir (*Abies grandis*), Engelmann spruce (*Picea engelmannii*), and Douglas-fir (*Pseudotsuga menziesii*). Quaking aspen (*Populus tremuloides*) is also found in RMAs within the ROW corridor.

4.0 REFORESTATION

IPC seeks an exemption under OAR 629-610-0090 from the reforestation requirements, because no reforestation with commercial tree species will be performed in the ROW. Tall-growing tree species are incompatible with NERC and IPC vegetation management programs designed to ensure reliable transmission of electricity and to avoid interference from trees that might come into contact with the transmission equipment.

IPC will convert the ROW to low-growing shrubs and grasses. By selectively managing the floor of the ROW to eliminate tall-growing tree species, the need to disturb the plant community over time will be greatly reduced and nearly eliminated. Long-term maintenance will then be limited to removal of hazard trees along the edges of the corridor that could reach the transmission line, along with treatment of pioneer tree species or noxious weeds that will occasionally invade the ROW.

Agricultural uses are acceptable and encouraged along the powerline ROW, provided they do not interfere with the Project. This can include, but is not limited to, pasture or rangeland, row crops, or other low-growing crops.

The intended land use change is under consideration by local, state, and federal agencies. All permits and approvals are currently being sought and will be in place prior to the harvest and clearing operations. The appropriate county assessors and local planning departments will be notified in writing of the proposed change in land use.

Transmission line construction will commence within 12 months of the completion of the harvest operations, and will be complete within 36 months of commencing. The transmission line

corridor will be maintained in a non-forested condition to provide for safe operation of the Project.

5.0 STREAMSIDE VEGETATION HARVEST

5.1 Protected Resources

There are a small number of streams that transect the Project route in the forested portion of the Project. The stream types include F, D, and N typed water. Most are seasonal streams that only flow during spring runoff or heavy rainfall. A small number of perennial streams do occur.

Type F: Has fish, may also be used for domestic water

Type D: Used for domestic water, does not have fish

Type N: All other streams

It is unlikely that clearances will be adequate to span any of the stream crossings without removal of tall growing tree species. In all cases, tall growing tree species will need to be removed from the riparian management zones of the streams and by prescription, replanted with low growing tree and shrub species that have a mature height of less than 10 feet.

5.2 List of Streams Affected

A list of streams including name, size, location, stream type, and RMA width will be provided in IPC's final Plan for an Alternate Practice prior to initiation of harvest activities. Prior to activity within 100 feet of type F or D streams, IPC will submit a written plan in accordance with OAR 629-605-0170.

5.3 Planned Resource Protection Measures

The National Electrical Safety Code requires a minimum clearance from various objects. The minimum clearance distances for vegetation management are identified in the Vegetation Management Plan (Exhibit P1, Attachment P1-4). As a result, some stream crossings will require that all tall growing trees and snags within the corridor be felled to avoid tree-wire conflicts and the outages and fires that could result.

No road construction will occur solely as part of the timber harvesting operations within the RMAs. However, road construction may occur in the RMA as part of the power line construction activity. These RMAs will be managed in accordance with the Vegetation Management Plan (Exhibit P1, Attachment P1-4).

Best Management Practices will be used to protect the RMAs and include, but are not limited to:

- Tree falling will be directional away from streams, unless requested otherwise by resource agencies.
- Any slash that enters a stream will be removed by hand for Type F and D streams and wetlands, or yarded if too large to handle by hand.
- Water quality protection will be provided to streams and wetlands. Operations near streams will be limited during periods of heavy rain to reduce potential impacts to the stream.
- Activities on slopes will include erosion and landslide control. Roads and skid trails will be located and managed to avoid erosion, and especially to avoid erosion that could reach a stream.

- Ground based systems will skid logs away from stream courses. Except at stream crossings, operators shall not locate skid trails within 35 feet of Type F or D streams.
- Project roads will be used for harvest access wherever possible.
- No skid roads will be located in the RMAs.
- Cable systems using full suspension will be used to yard across perennial streams when a ground-based system cannot be used to avoid the stream.
- Cable harvesting corridors will be limited to the extent necessary to remove cut trees.
- On deep canyon crossings where the wire is high above the ground, it may be possible to leave live conifers. In some cases, creation of short snags may be feasible.
- Desirable understory vegetation within the RMA will be retained to provide shade and soil erosion protection, and to provide biological weed control since they prevent pioneer tree and weed species from invading the site.
- Any down logs that are currently in the RMA will remain in place.
- When necessary, slash piles in the RMA could be burned but could have more value as wildlife habitat in some cases.

6.0 HARVEST UNIT SIZE

The Project ROW will be a continuous linear feature on the landscape, crossing numerous ownership boundaries. No one ownership is contiguous enough to exceed the 120-acre maximum harvest size. However, the entire length of the corridor on private land will exceed the 120-acre maximum. Logging slash will be managed to avoid creation of a fire hazard.

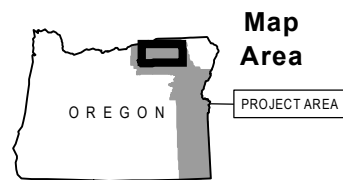
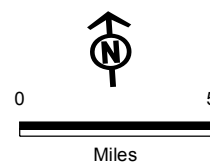
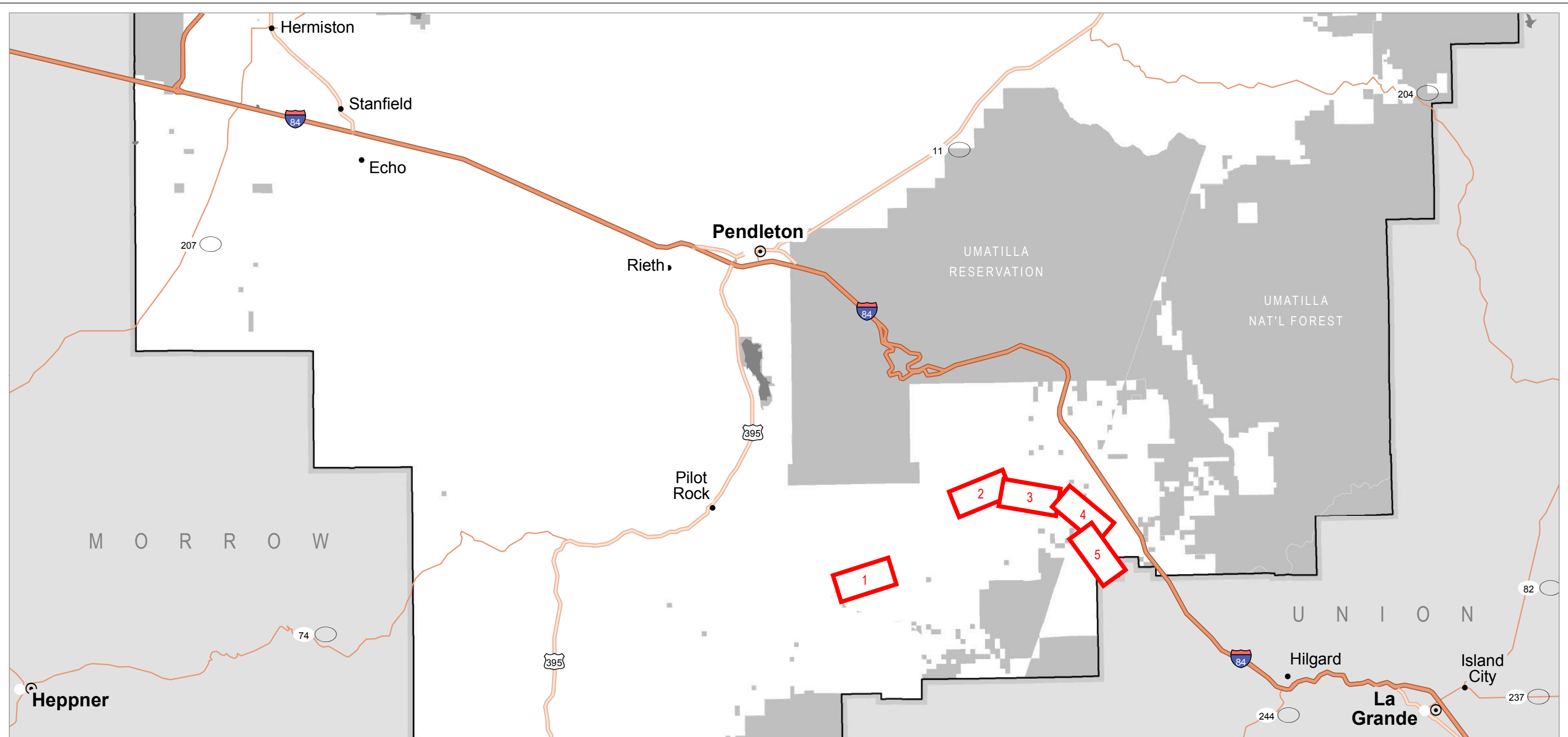
7.0 CONCLUSION

This Plan for an Alternate Practice provides sufficient evidence for the Energy Facility Siting Council to determine that the Project will comply with the provisions of the FPA relevant to converting the forestlands affected by the Project to a use not compatible with the maintenance of forest tree cover (see OAR 629-610-0090).

8.0 REFERENCES

NERC (North American Electric Reliability Corporation). 2016. Transmission Vegetation Management NERC Standard FAC-003-4. Available online at:
http://www.nerc.com/_layouts/PrintStandard.aspx?standardnumber=FAC-003-4&title=Transmission%20Vegetation%20Management&jurisdiction=United%20States

APPENDIX A
ESTIMATED FOREST CLEARANCE MAP BOOK




Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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June 2017

Map Index

 Location Map (Map #)

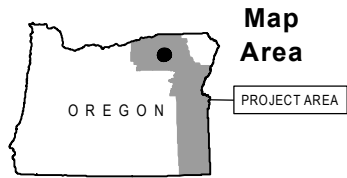
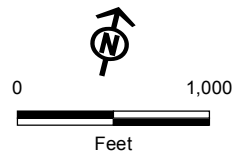
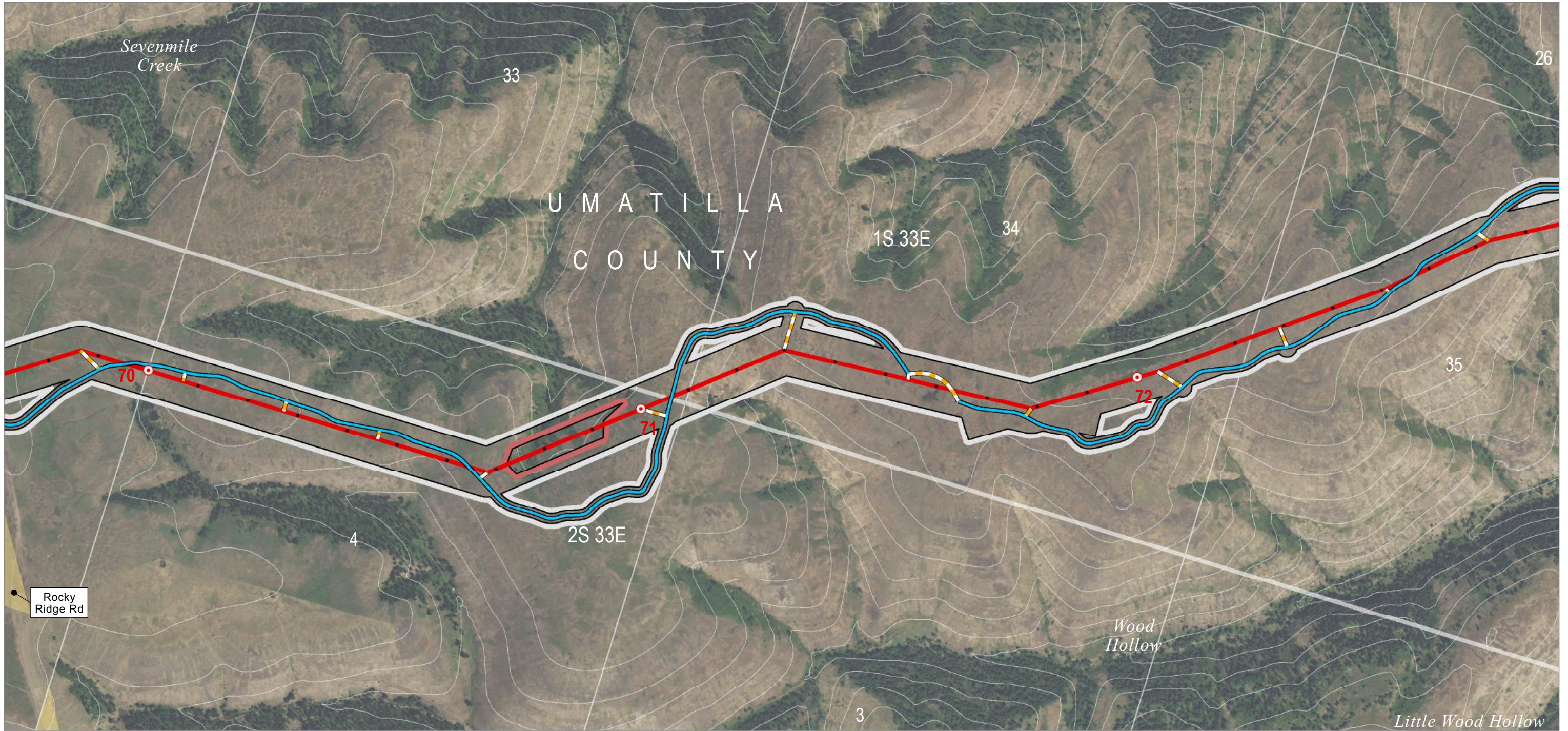


Boardman to Hemingway
Transmission Line Project

**Attachment BB-1
Estimated Forest Disturbance**

Umatilla County

Map Index



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Project Features

- Site Boundary
- Proposed Route
- Route Centerline
- Proposed Route
- Mileposts
 - Mile
 - Tenth-mile

Access

- Existing Road, Substantial Modification, 71-100% Improvements
- New Road, Primitive

Estimated Forest Disturbance

- Right of Way Clearance

Land Status

- Bureau of Land Management

- Private

Important Siting Constraints and Other Features

- 100-foot Contours

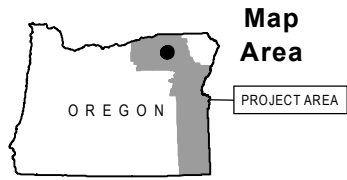
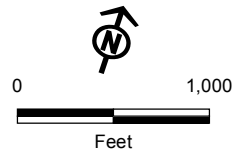
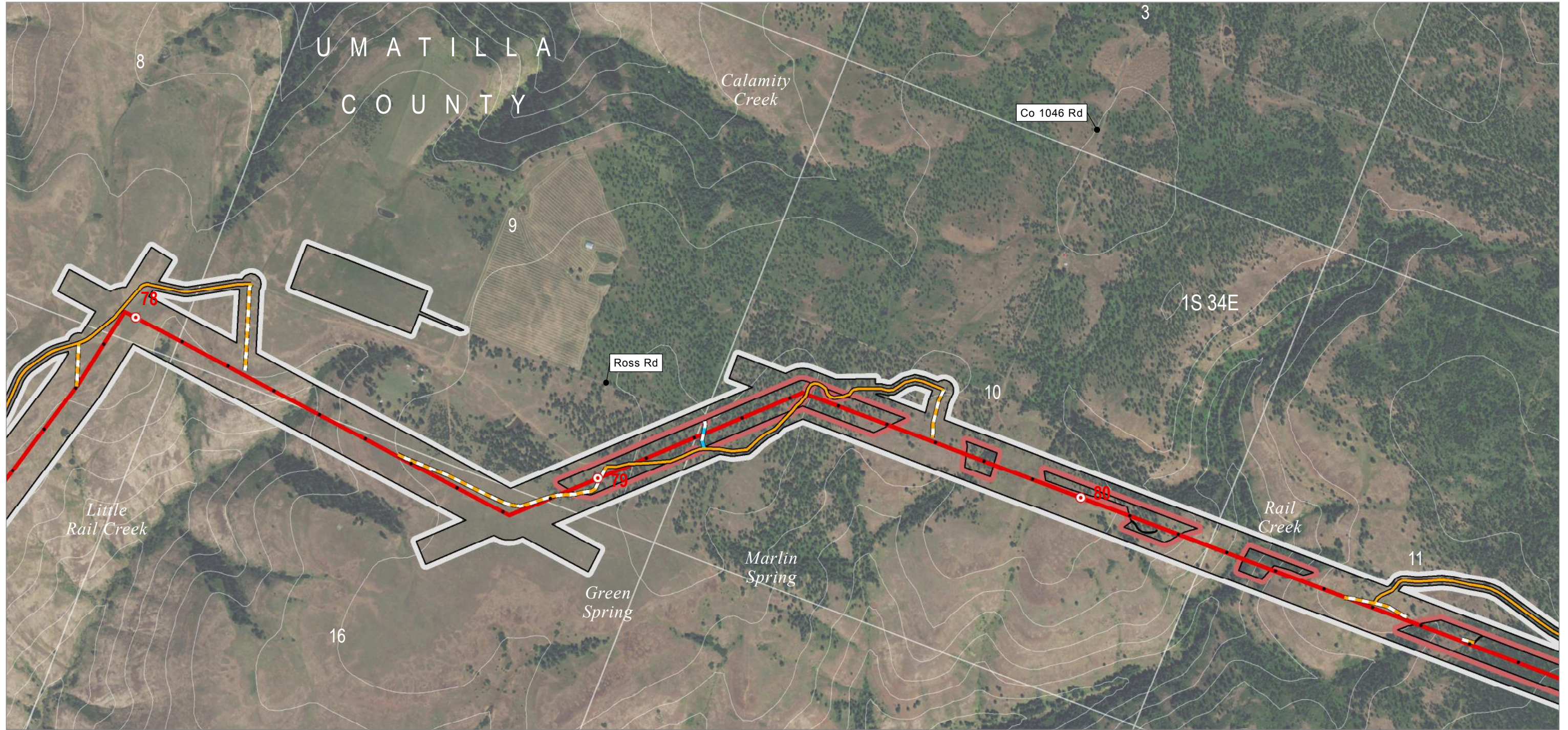


Boardman to Hemingway
Transmission Line Project

Attachment BB-1 Estimated Forest Disturbance

Proposed Route
Umatilla County

Map 1



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Project Features

- Site Boundary
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Access

- Existing Road, Substantial Modification, 21-70% Improvements
- New Road, Bladed
- New Road, Primitive

Estimated Forest Disturbance

- Right of Way Clearance

Land Status

- Private

Important Siting Constraints and Other Features

- 100-foot Contours

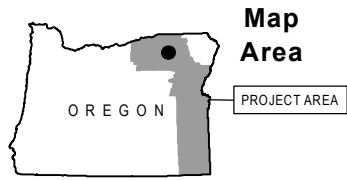
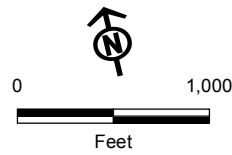
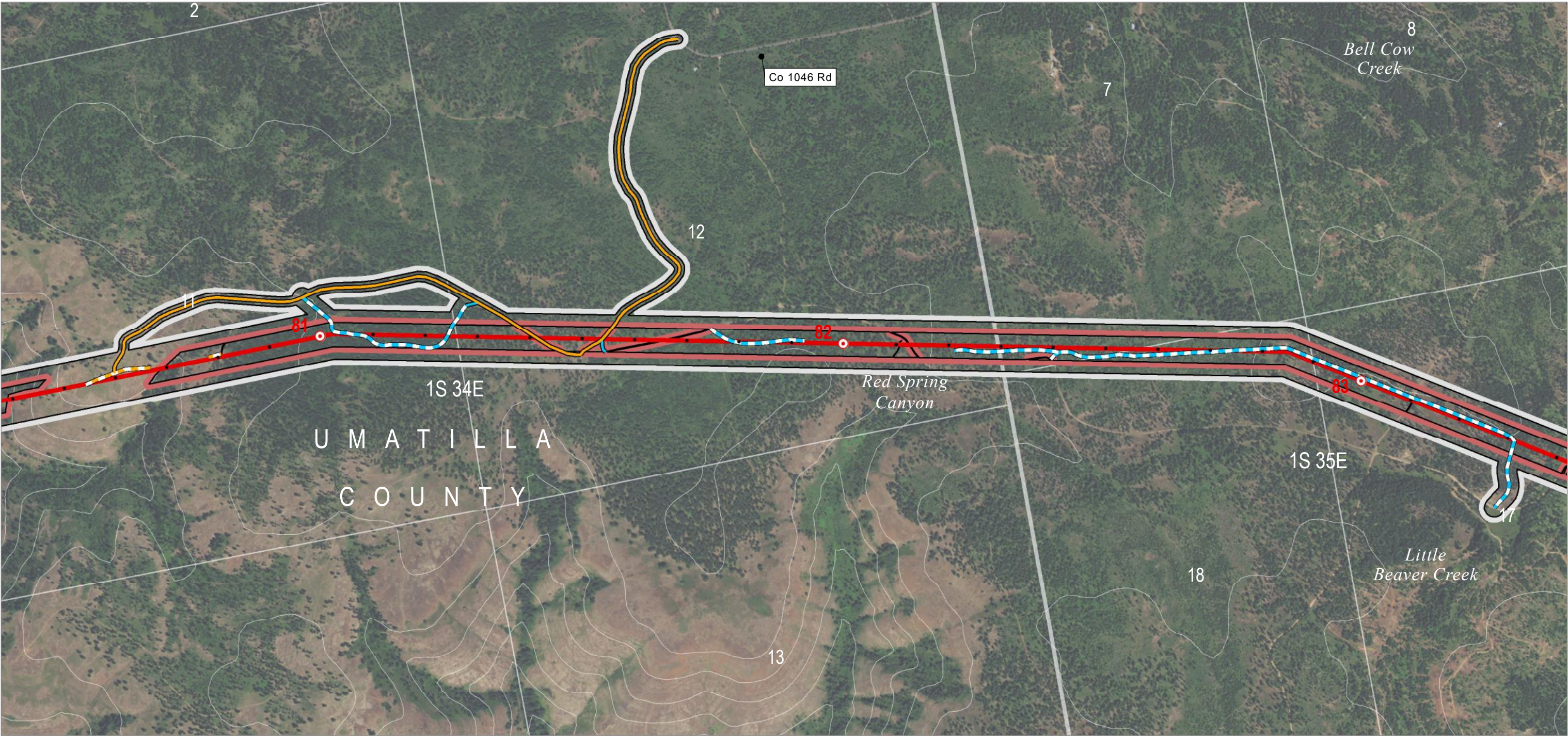


Boardman to Hemingway
Transmission Line Project

**Attachment BB-1
Estimated Forest Disturbance**

Proposed Route
Umatilla County

Map 2



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Project Features

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Access

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- New Road, Bladed
- New Road, Primitive

Estimated Forest Disturbance

- Right of Way Clearance

Land Status

- Private

Important Siting Constraints and Other Features

- 100-foot Contours

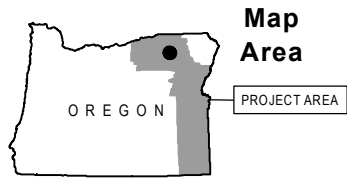
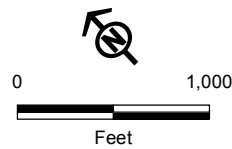
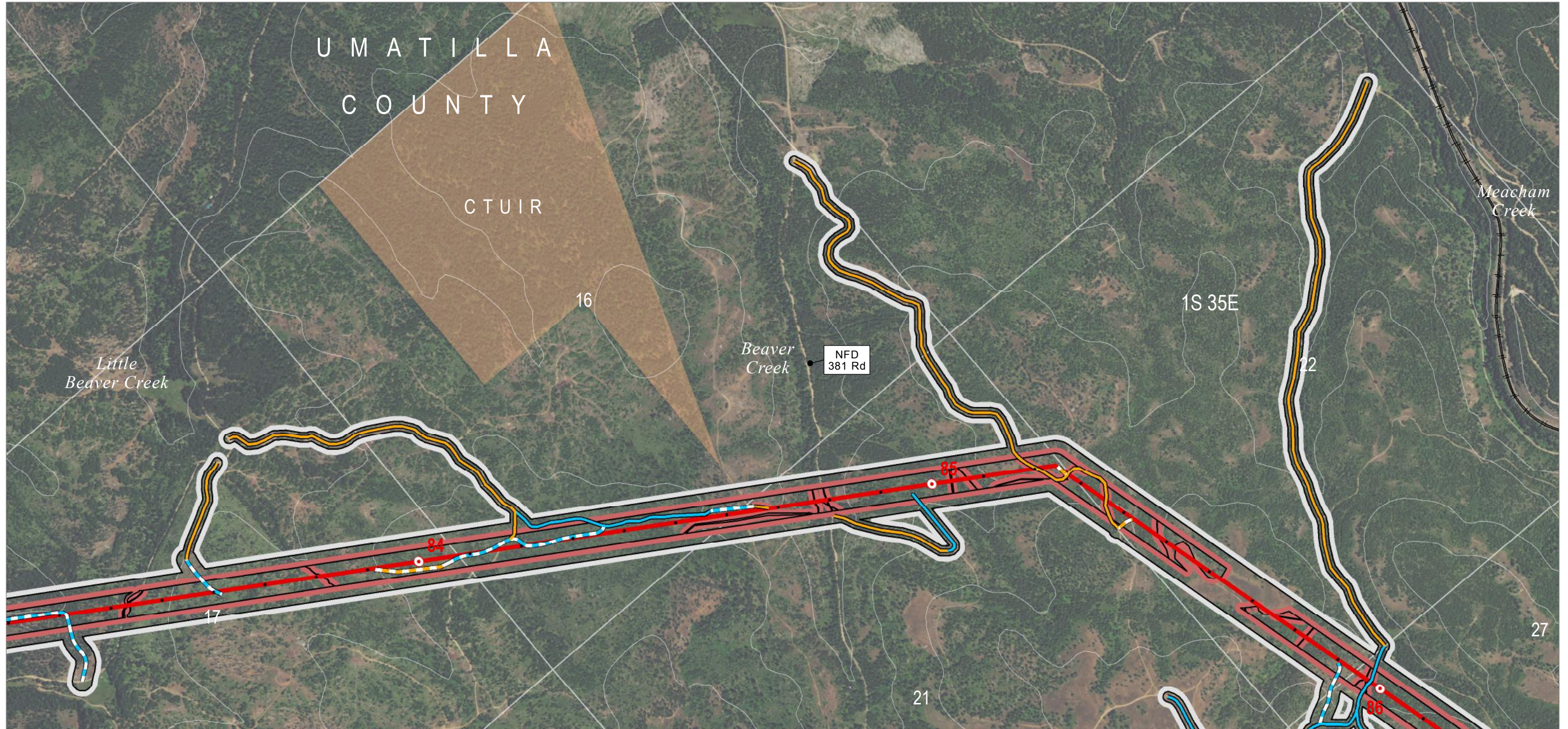


Boardman to Hemingway
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**Attachment BB-1
Estimated Forest Disturbance**

Proposed Route
Umatilla County

Map 3



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Estimated Forest Disturbance

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Land Status

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Important Siting Constraints and Other Features

- 100-foot Contours
- Railroads

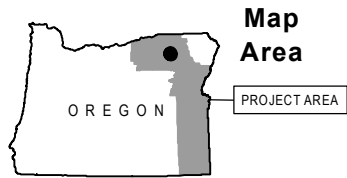
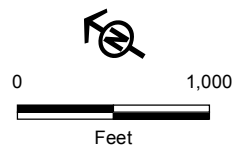
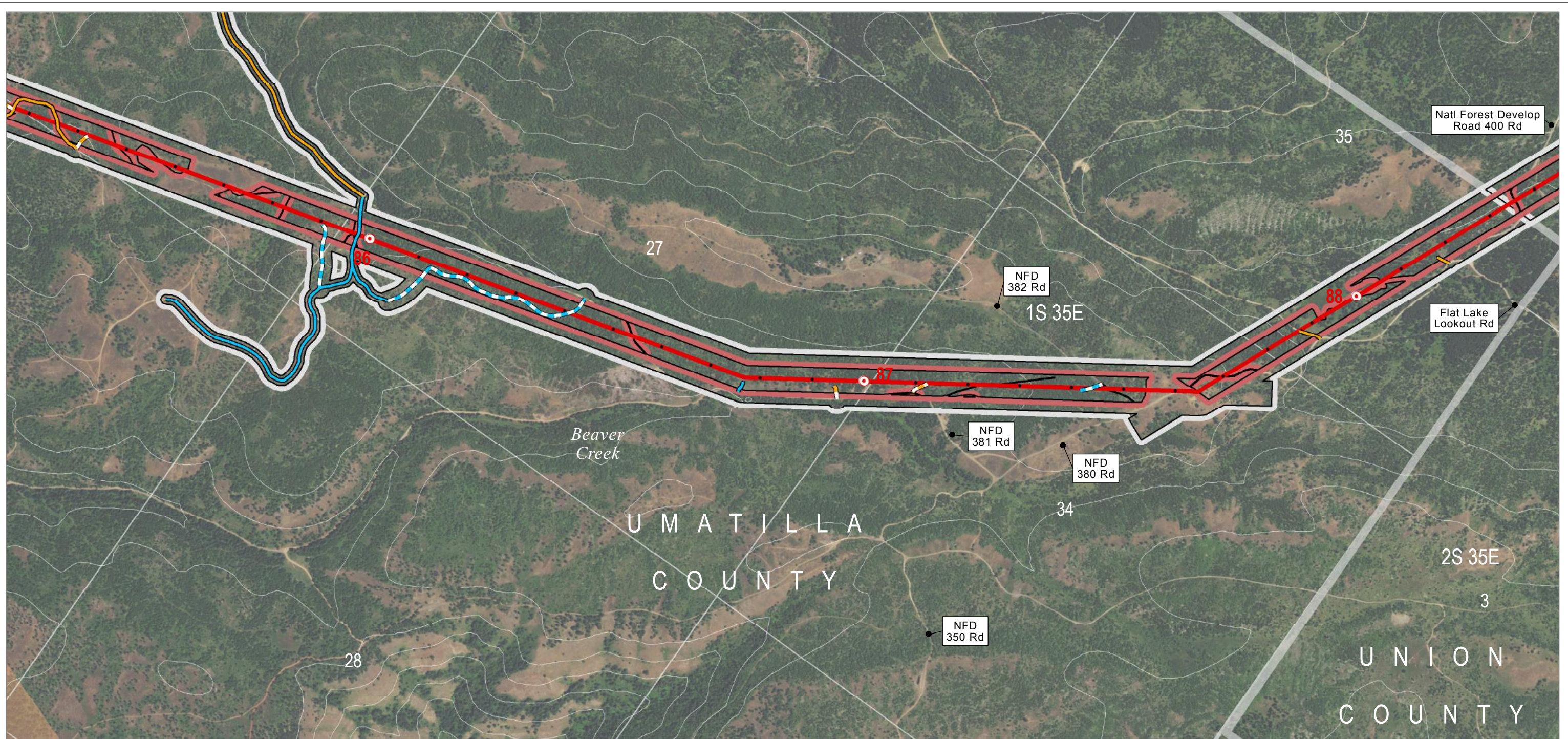


Boardman to Hemingway
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Attachment BB-1 Estimated Forest Disturbance

Proposed Route
Umatilla County

Map 4



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Important Siting Constraints and Other Features

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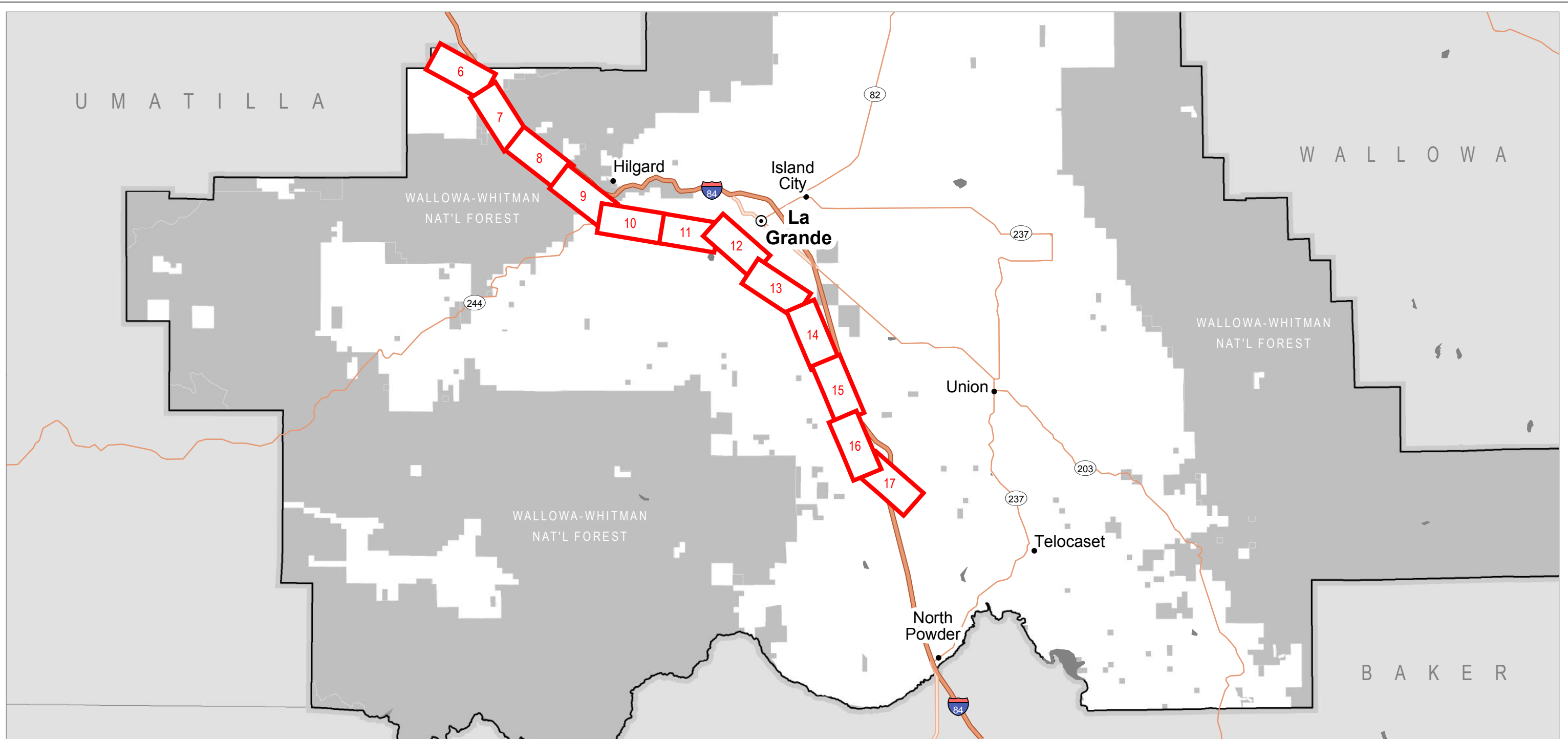


Boardman to Hemingway Transmission Line Project

Attachment BB-1 Estimated Forest Disturbance

Proposed Route
Umatilla County

Map 5



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

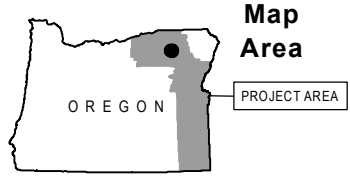
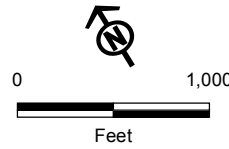
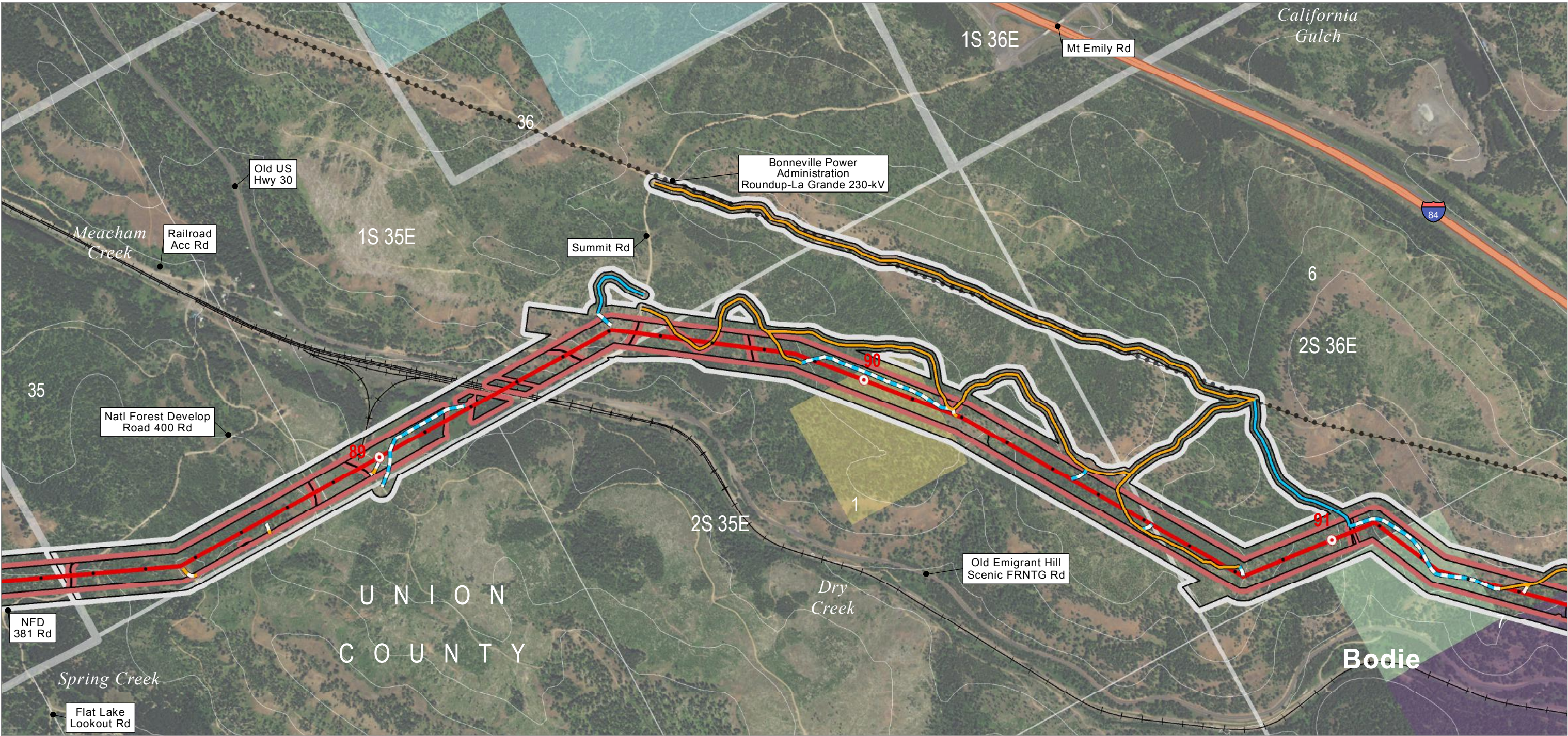
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June 2017

Map Index
Location Map (Map #)

IDAHO POWER
An IDACORP Company
Boardman to Hemingway
Transmission Line Project

Attachment BB-1
Estimated Forest Disturbance
Union County
Map Index



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Estimated Forest Disturbance

- Right of Way Clearance
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- Private
- State or Local
- US Forest Service

Important Siting Constraints and Other Features

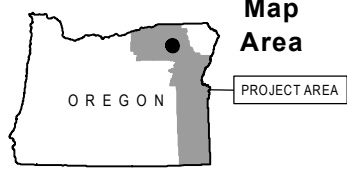
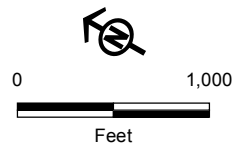
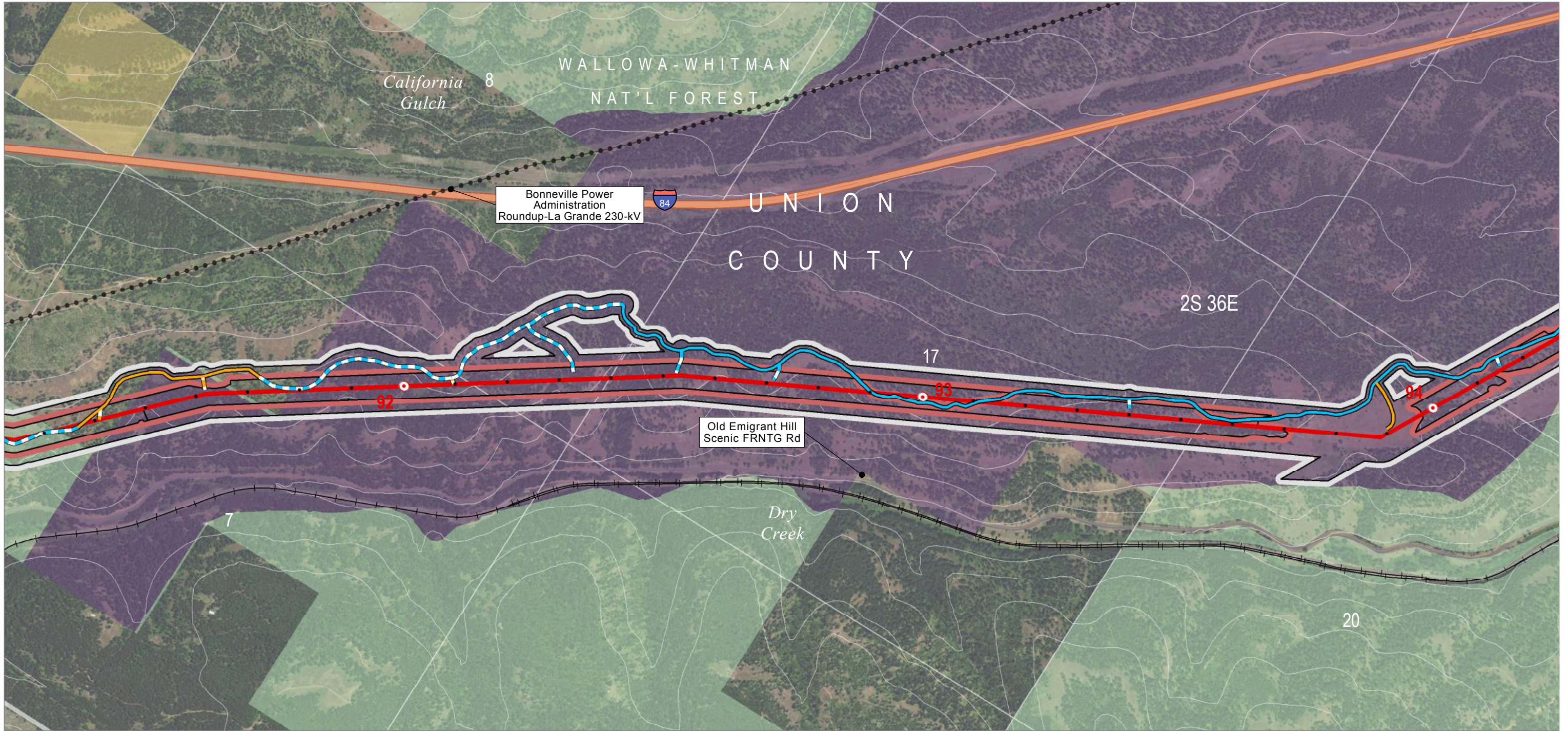
- 100-foot Contours
- Existing Transmission Lines
- Interstates or Highways
- Railroads
- Designated Utility Corridor (BLM, Forest Service, or West-wide Energy)



Boardman to Hemingway Transmission Line Project

**Attachment BB-1
Estimated Forest Disturbance**

Proposed Route
Union County



Project Features

- Site Boundary
- Proposed Route
- Route Centerline
- Proposed Route
- Mileposts
- Mile
- Tenth-mile

Access

- Existing Road, Substantial Modification, 21-70% Improvements
- Existing Road, Substantial Modification, 71-100% Improvements
- New Road, Bladed
- New Road, Primitive

Estimated Forest Disturbance

- Right of Way Clearance

Land Status

- Bureau of Land Management
- Private
- US Forest Service

Important Siting Constraints and Other Features

- 100-foot Contours

- Existing Transmission Lines
- Interstates or Highways
- Railroads
- Designated Utility Corridor (BLM, Forest Service, or West-wide Energy)



Boardman to Hemingway Transmission Line Project

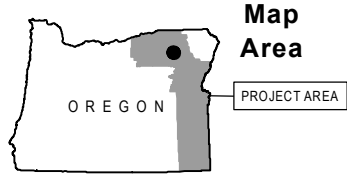
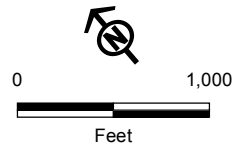
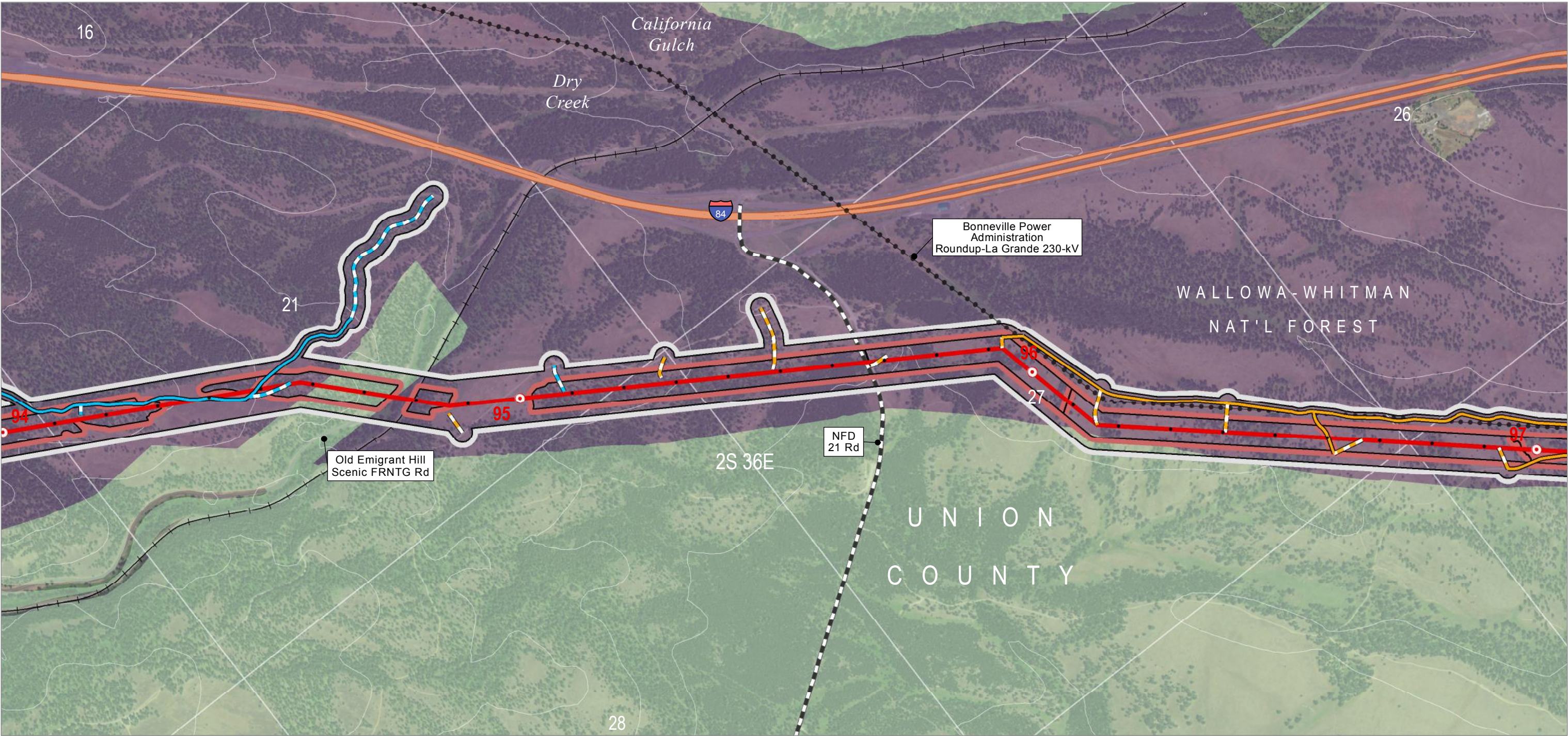
**Attachment BB-1
Estimated Forest Disturbance**

Proposed Route
Union County

Map 7

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Project Features

- Site Boundary
- Proposed Route
- Route Centerline
- Proposed Route
- Mileposts
- Mile
- Tenth-mile

Access

- Existing Road, Substantial Modification, 21-70% Improvements
- Existing Road, Substantial Modification, 71-100% Improvements
- New Road, Bladed
- New Road, Primitive

Estimated Forest Disturbance

- Right of Way Clearance

Land Status

- Private
- US Forest Service

Important Siting Constraints and Other Features

- 100-foot Contours
- Existing Transmission Lines

- Interstates or Highways
- Other Major Roads
- Railroads
- Designated Utility Corridor (BLM, Forest Service, or West-wide Energy)

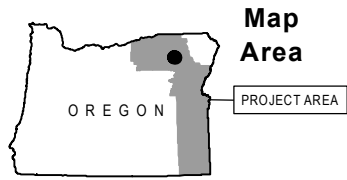
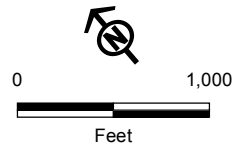
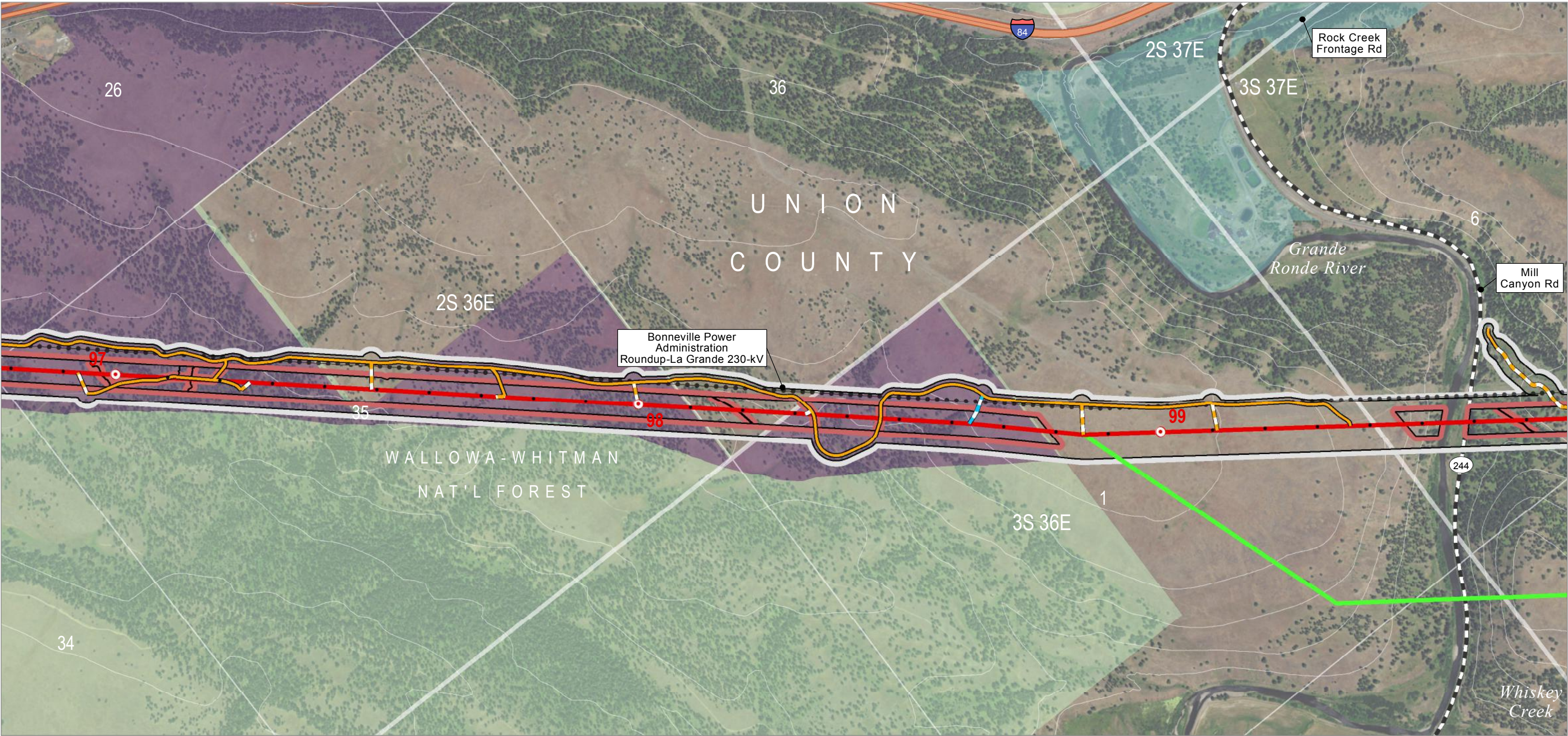


Boardman to Hemingway Transmission Line Project

**Attachment BB-1
Estimated Forest Disturbance**

Proposed Route
Union County

Map 8



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Project Features

- Site Boundary
- Proposed Route
- Route Centerline
- Proposed Route
- Alternative

Mileposts

- Mile
- Tenth-mile

Access

- Existing Road, Substantial Modification, 21-70% Improvements
- New Road, Bladed
- New Road, Primitive

Estimated Forest Disturbance

- Right of Way Clearance

Land Status

- Private

- State or Local Wildlife or Parks and Recreation Area
- US Forest Service

Important Siting Constraints and Other Features

- 100-foot Contours
- Existing Transmission Lines
- Interstates or Highways
- Other Major Roads

- Designated Utility Corridor (BLM, Forest Service, or West-wide Energy)

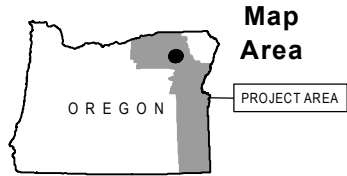
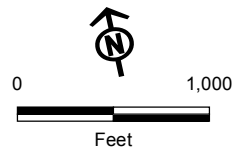
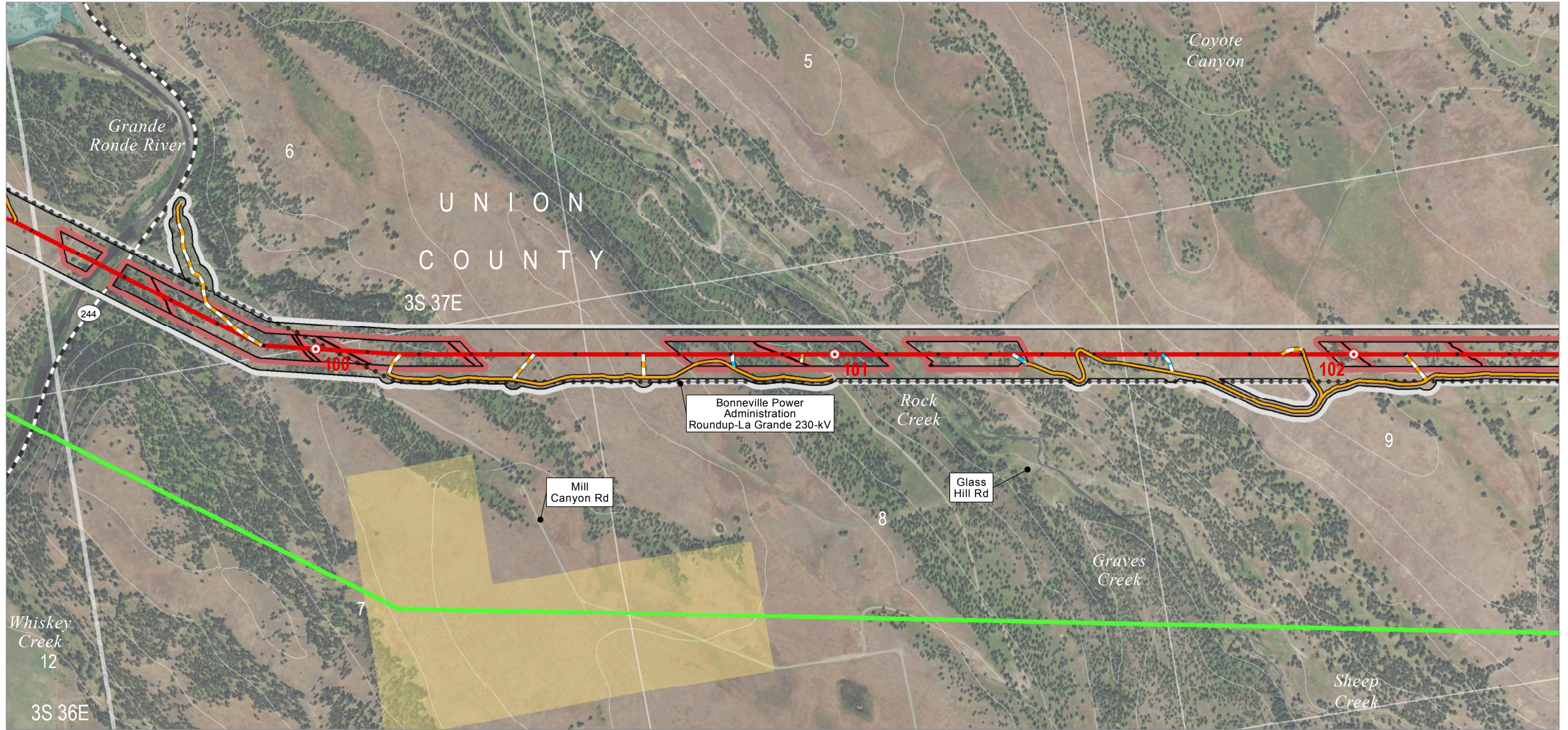


Boardman to Hemingway Transmission Line Project

Attachment BB-1 Estimated Forest Disturbance

Proposed Route
Union County

Map 9



Project Features

- Site Boundary
- Proposed Route
- Route Centerline
- Proposed Route
- Alternative

Mileposts

- Mile
- Tenth-mile

Access

- Existing Road, Substantial Modification, 21-70% Improvements
- New Road, Bladed
- New Road, Primitive

Estimated Forest Disturbance

- Right of Way Clearance

Land Status

- Bureau of Land Management
- Private
- State or Local Wildlife or Parks and Recreation Area

Important Siting Constraints and Other Features

- 100-foot Contours
- Existing Transmission Lines

Other Major Roads



Boardman to Hemingway
Transmission Line Project

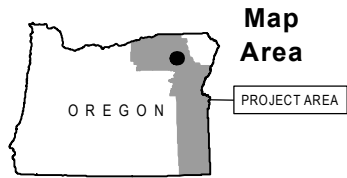
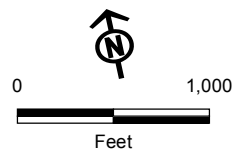
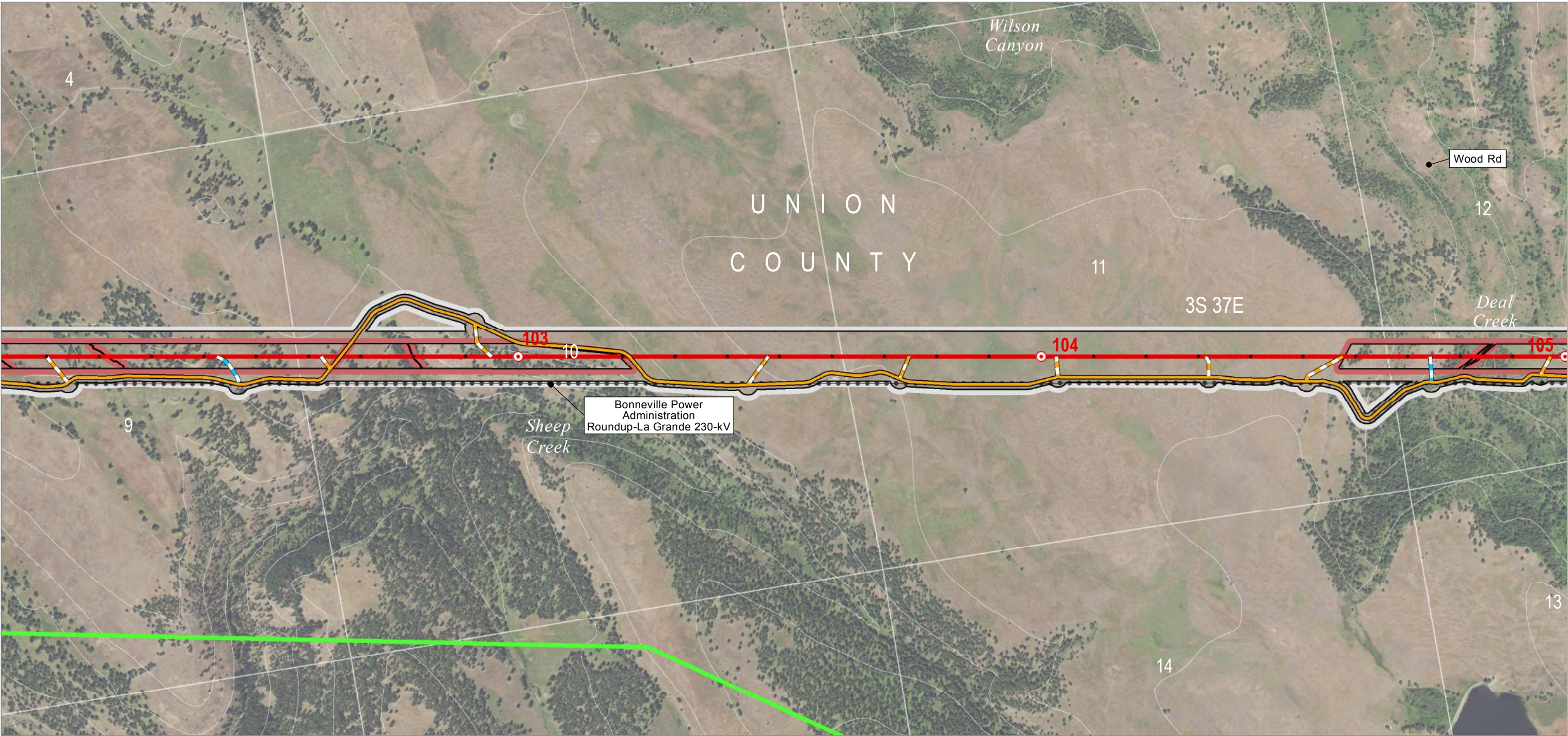
Attachment BB-1 Estimated Forest Disturbance

Proposed Route
Union County

Map 10

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Project Features

- Site Boundary
- Proposed Route
- Route Centerline
- Proposed Route
- Alternative
- Mileposts
 - Mile
 - Tenth-mile

Access

- Existing Road, Substantial Modification, 21-70% Improvements
- New Road, Bladed
- New Road, Primitive

Estimated Forest Disturbance

- Right of Way Clearance

Land Status

- Private

Important Siting Constraints and Other Features

- 100-foot Contours
- Existing Transmission Lines

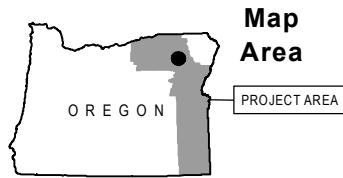
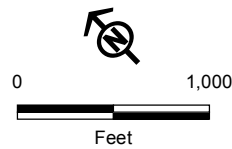
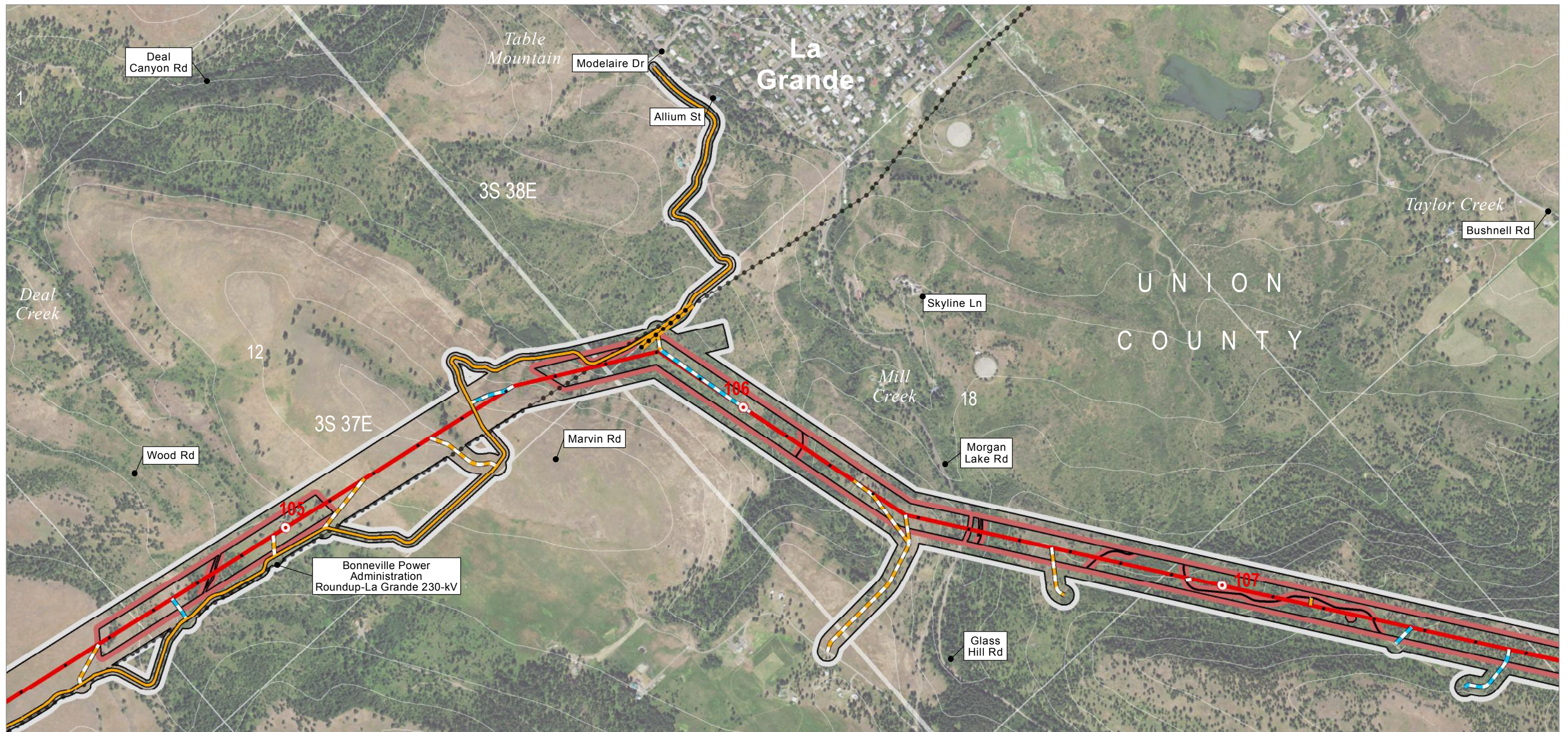


Boardman to Hemingway
Transmission Line Project

**Attachment BB-1
Estimated Forest Disturbance**

Proposed Route
Union County

Map 11



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Project Features

- Site Boundary
- Proposed Route
- Route Centerline
- Proposed Route
- Mileposts
- Mile
- Tenth-mile

Access

- Existing Road, Substantial Modification, 21-70% Improvements
- New Road, Bladed
- New Road, Primitive
- Distribution Line to Communication Station (IPC Service Territory Only)

Estimated Forest Disturbance

- Right of Way Clearance

Land Status

- Private

Important Siting Constraints and Other Features

- 100-foot Contours
- Existing Transmission Lines

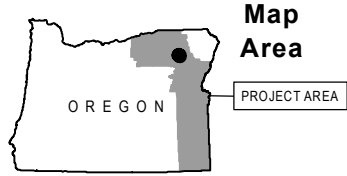
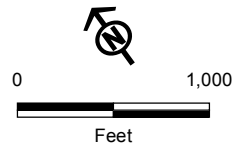
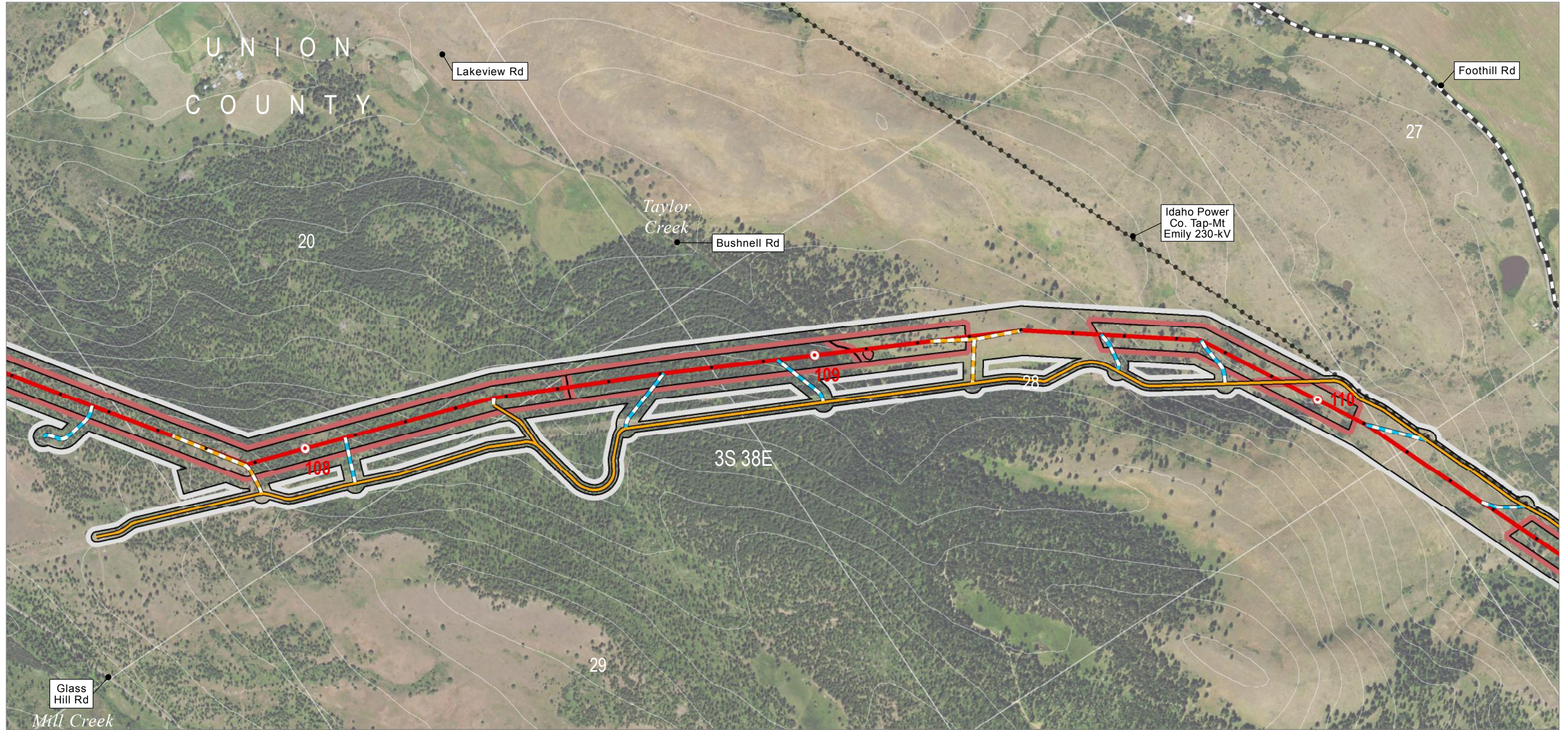


Boardman to Hemingway
Transmission Line Project

Attachment BB-1 Estimated Forest Disturbance

Proposed Route
Union County

Map 12



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Project Features

- Site Boundary
- Proposed Route
- Route Centerline
- Proposed Route
- Mileposts
 - Mile
 - Tenth-mile

Access

- Existing Road, Substantial Modification, 21-70% Improvements
- New Road, Bladed
- New Road, Primitive

Estimated Forest Disturbance

- Right of Way Clearance

Land Status

- Private

Important Siting Constraints and Other Features

- 100-foot Contours
- Existing Transmission Lines
- Other Major Roads

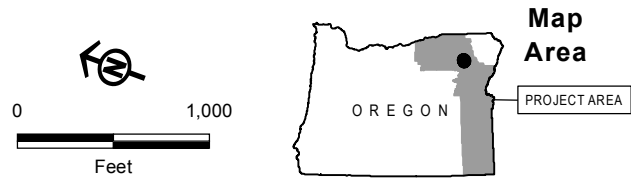
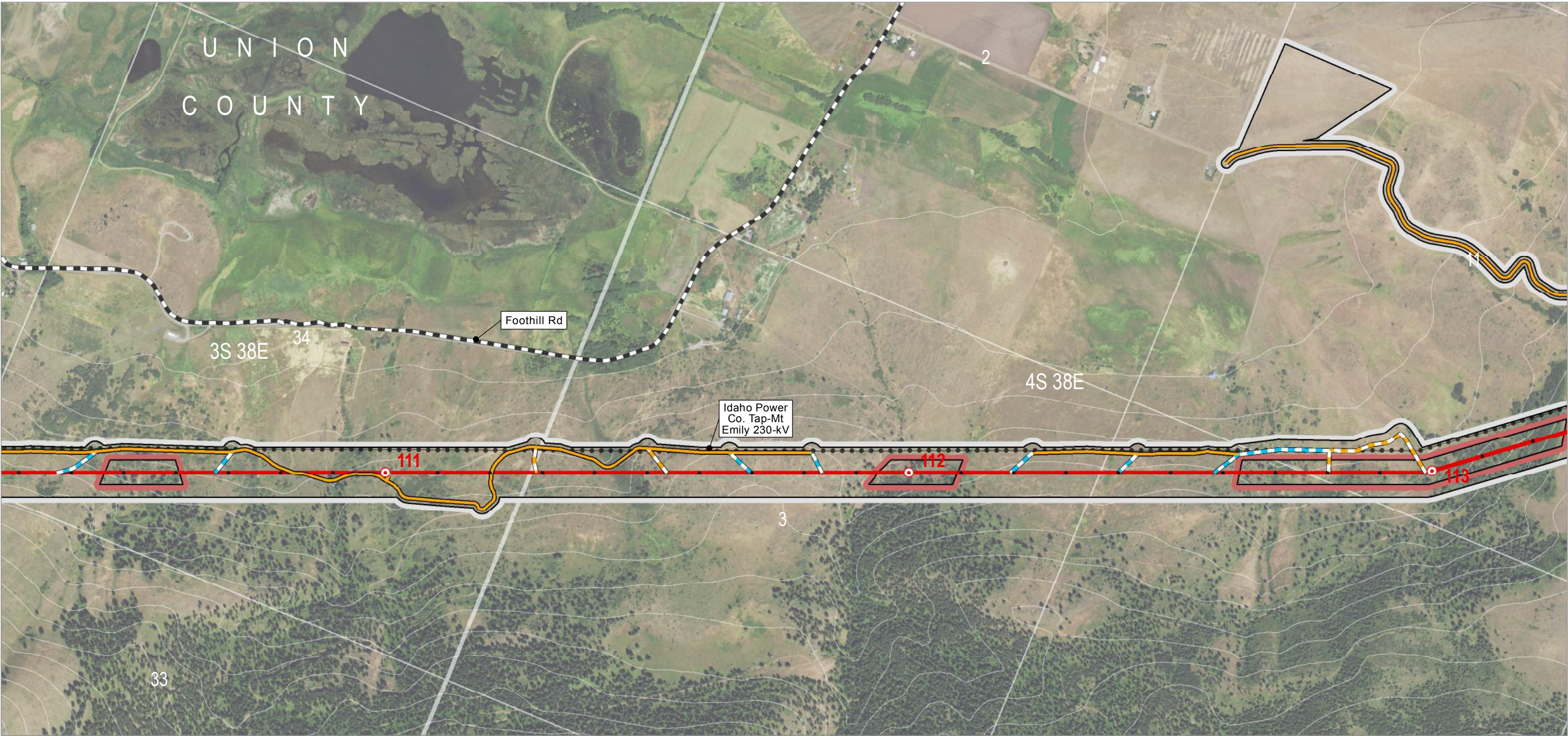


Boardman to Hemingway
Transmission Line Project

Attachment BB-1 Estimated Forest Disturbance

Proposed Route
Union County

Map 13



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Project Features

- Site Boundary
- Proposed Route
- Route Centerline
- Proposed Route
- Mileposts
 - Mile
 - Tenth-mile

Access

- Existing Road, Substantial Modification, 21-70% Improvements
- New Road, Bladed
- New Road, Primitive

Estimated Forest Disturbance

- Right of Way Clearance
- Land Status
 - Private

Important Siting Constraints and Other Features

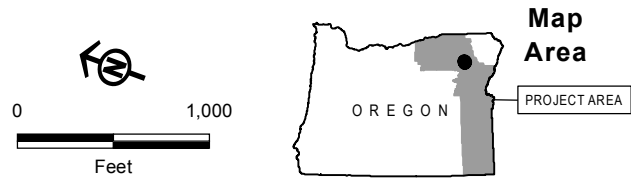
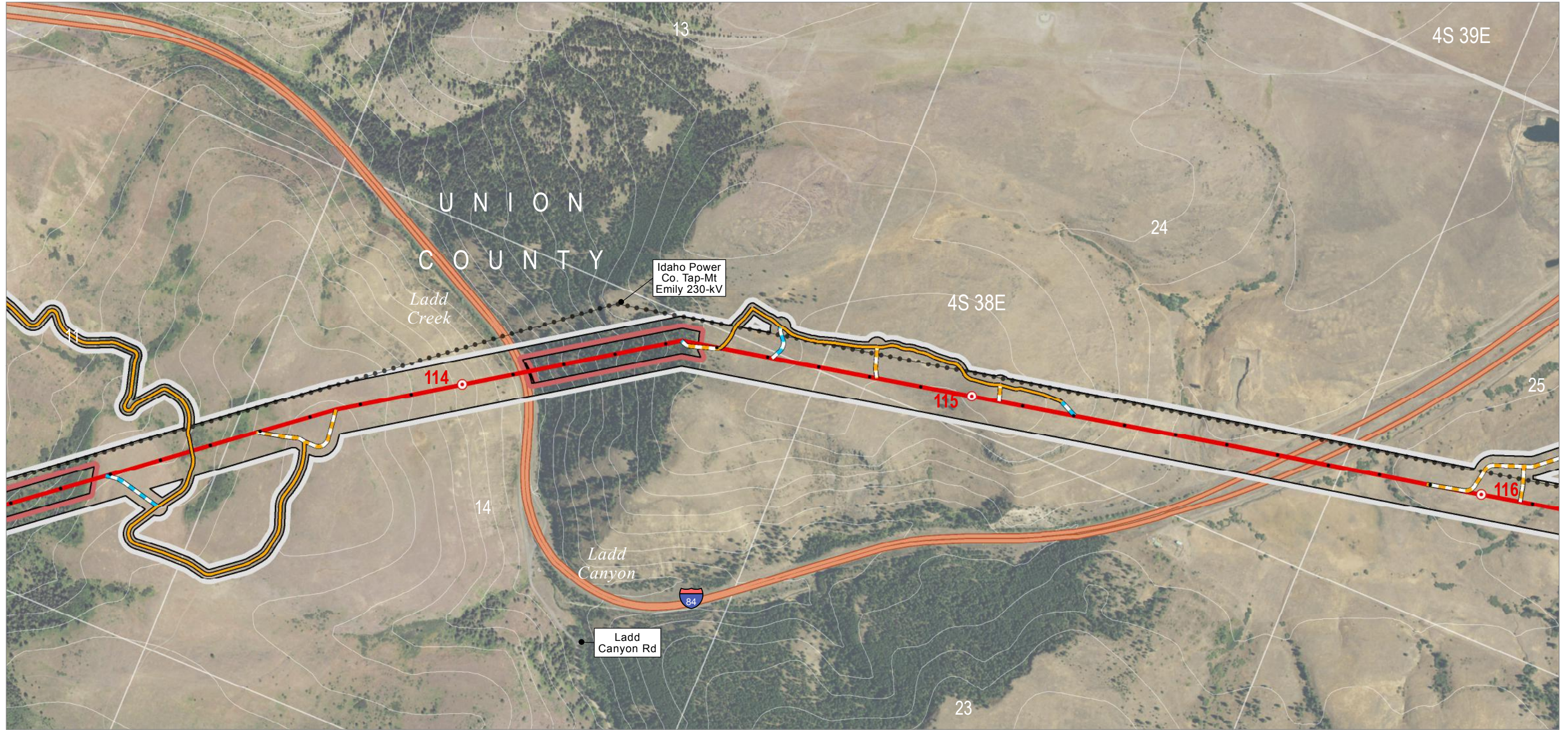
- 100-foot Contours
- Existing Transmission Lines
- Other Major Roads



Boardman to Hemingway
Transmission Line Project

**Attachment BB-1
Estimated Forest Disturbance**

Proposed Route
Union County



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Project Features

- Site Boundary
- Proposed Route
- Route Centerline
- Proposed Route
- Mileposts
- Mile
- Tenth-mile

Access

- Existing Road, Substantial Modification, 21-70% Improvements
- New Road, Bladed
- New Road, Primitive

Estimated Forest Disturbance

- Right of Way Clearance

Land Status

- Private

Important Siting Constraints and Other Features

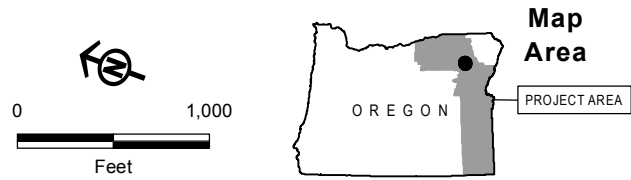
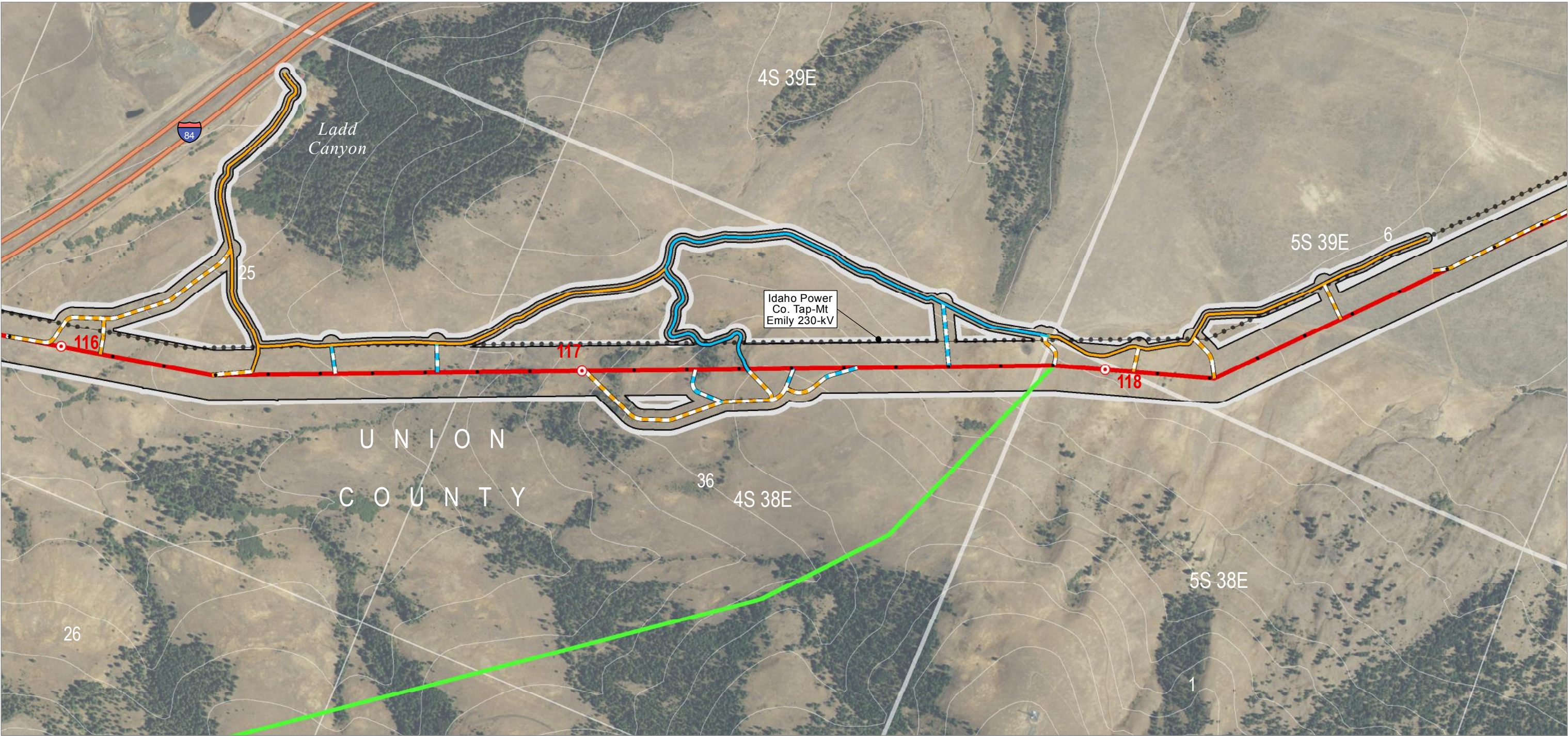
- 100-foot Contours
- Existing Transmission Lines
- Interstates or Highways



Boardman to Hemingway
 Transmission Line Project

**Attachment BB-1
 Estimated Forest Disturbance**

Proposed Route
 Union County



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Project Features

- Site Boundary
- Proposed Route
- Route Centerline
- Proposed Route
- Alternative
- Mileposts
 - Mile
 - Tenth-mile

Access

- Existing Road, Substantial Modification, 21-70% Improvements
- Existing Road, Substantial Modification, 71-100% Improvements
- New Road, Bladed
- New Road, Primitive

Land Status

- Private

Important Siting Constraints and Other Features

- 100-foot Contours
- Existing Transmission Lines
- Interstates or Highways

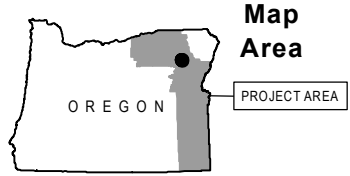
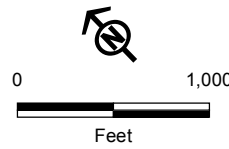
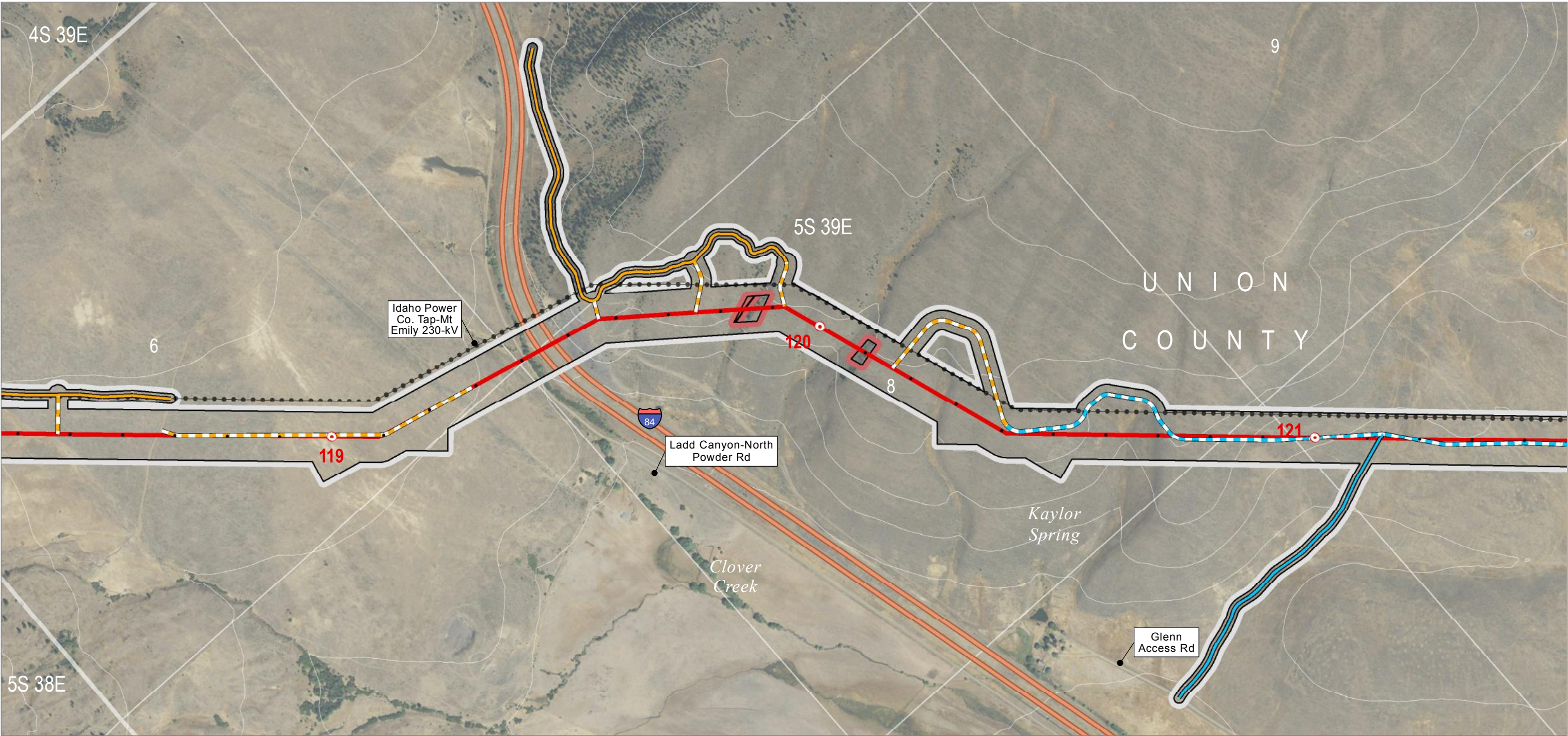


Boardman to Hemingway
Transmission Line Project

**Attachment BB-1
Estimated Forest Disturbance**

Proposed Route
Union County

Map 16



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Project Features

- Site Boundary
- Proposed Route
- Route Centerline
- Proposed Route
- Mileposts
 - Mile
 - Tenth-mile

Access

- Existing Road, Substantial Modification, 21-70% Improvements
- Existing Road, Substantial Modification, 71-100% Improvements
- New Road, Bladed
- New Road, Primitive

Estimated Forest Disturbance

- Right of Way Clearance

Land Status

- Private

Important Siting Constraints and Other Features

- 100-foot Contours
- Existing Transmission Lines

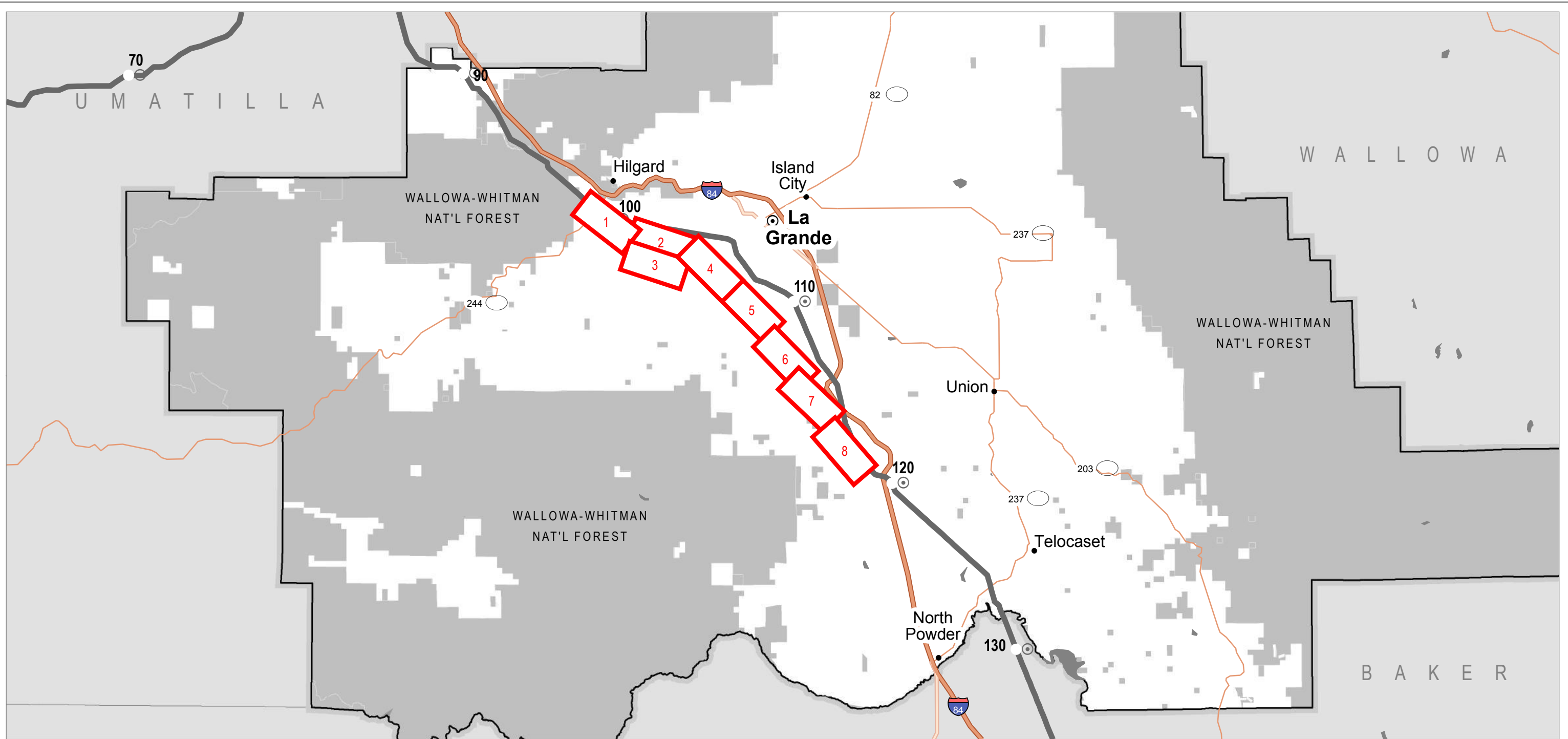
- Interstates or Highways



Boardman to Hemingway Transmission Line Project

**Attachment BB-1
Estimated Forest Disturbance**

Proposed Route
Union County



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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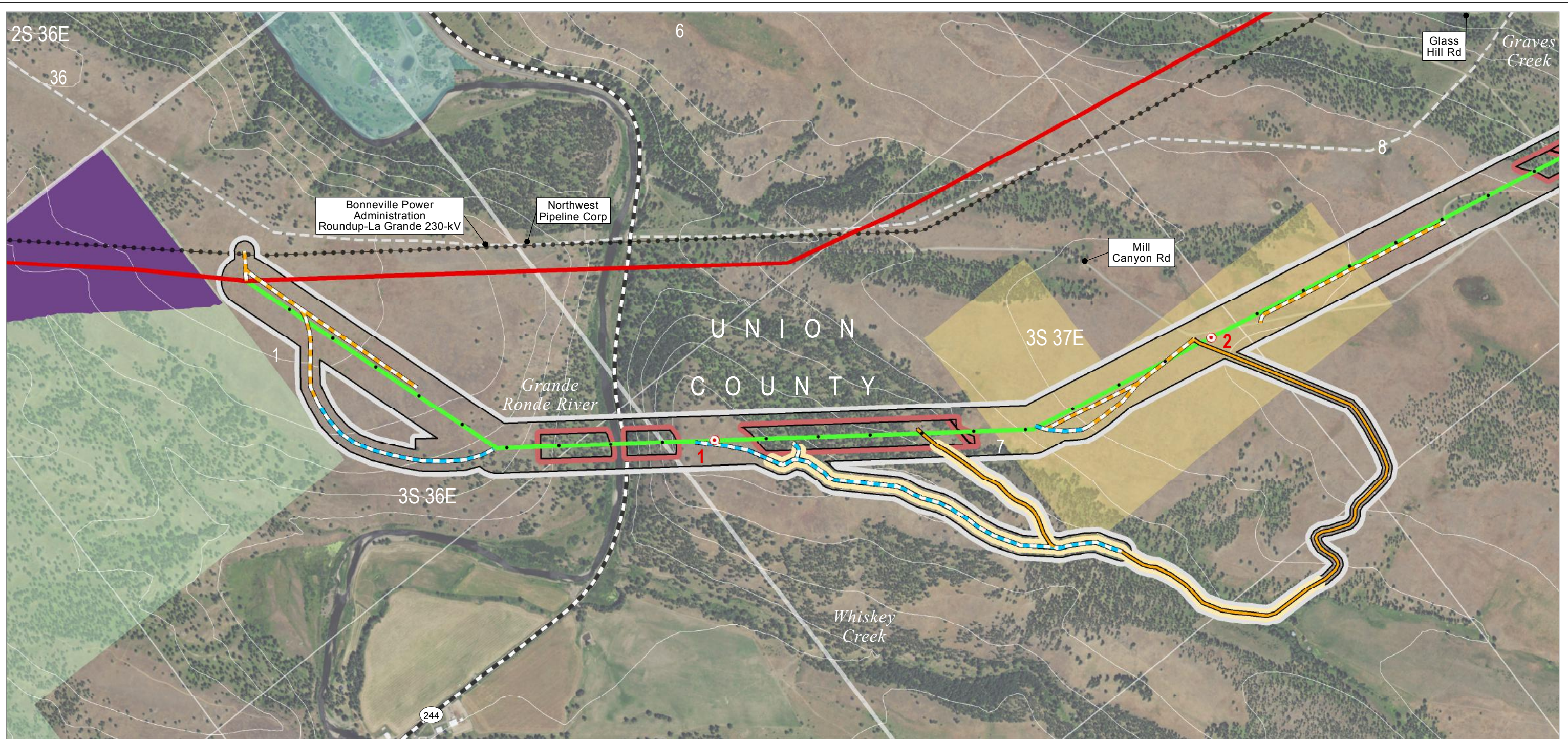
June 2017

- Map Index**
- Location Map (Map #)
- Project Features**
- Proposed Route
 - Ten-mile Marker

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project

Attachment BB-1
Estimated Forest Disturbance
Morgan Lake Alternative
Union County
Map Index



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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June 2017

Project Features

Site Boundary

Alternative

Route Centerline

Proposed Route

Alternative

Mileposts

Mile

Tenth-mile

Access

Existing Road, Substantial Modification, 21-70% Improvements

New Road, Bladed

New Road, Primitive

Estimated Forest Disturbance

Right of Way Clearance

Access Road Clearance

Land Status

Bureau of Land Management

Private

State or Local Wildlife or Parks and Recreation Area

US Forest Service

Important Siting Constraints and Other Features

100-foot Contours

Existing Transmission Lines

Other Major Roads

Designated Utility Corridor (BLM, Forest Service, or West-wide Energy)

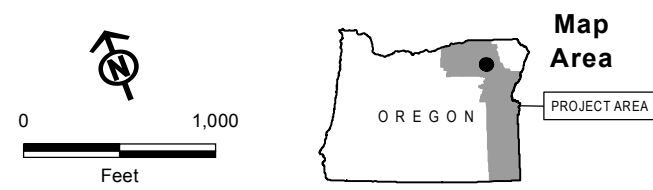
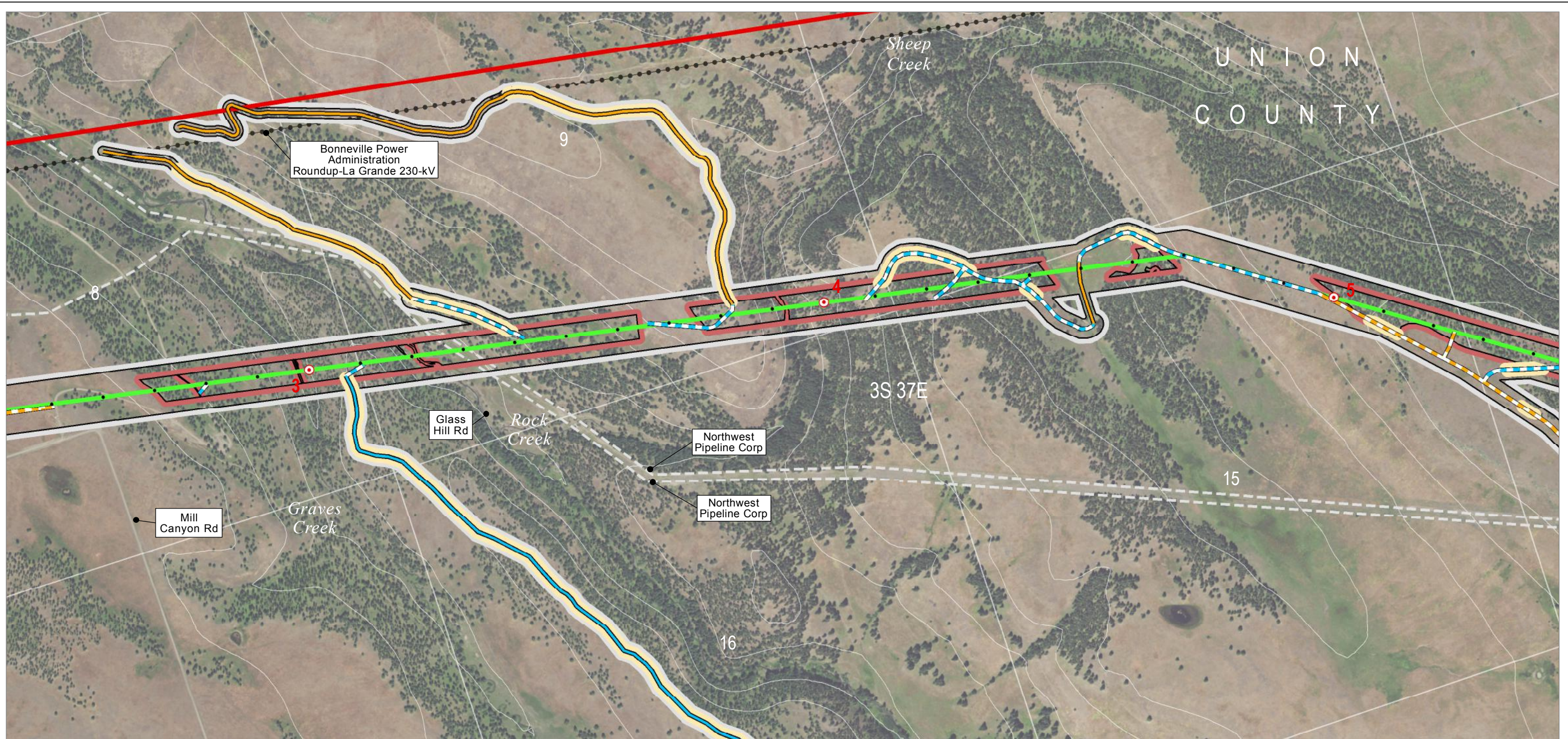


Boardman to Hemingway Transmission Line Project

Attachment BB-2 Estimated Forest Disturbance

Morgan Lake Alternative
Union County

Map 18



- Project Features**
- Site Boundary
 - Alternative
 - Route Centerline
 - Proposed Route
 - Alternative
 - Mileposts
 - Mile
 - Tenth-mile
- Access**
- Existing Road, Substantial Modification, 21-70% Improvements
 - Existing Road, Substantial Modification, 71-100% Improvements
 - New Road, Bladed
 - New Road, Primitive
- Estimated Forest Disturbance**
- Right of Way Clearance
 - Access Road Clearance
- Land Status**
- Private
- Important Siting Constraints and Other Features**
- Existing Transmission Lines
 - 100-foot Contours

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project

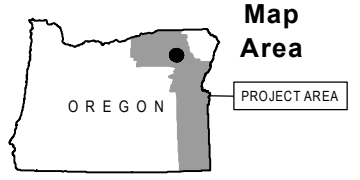
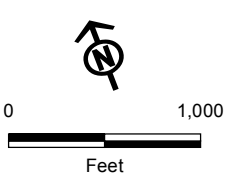
Attachment BB-2
Estimated Forest Disturbance
Morgan Lake Alternative
Union County

Map 19

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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June 2017



Project Features

- Site Boundary
- Alternative
- Access
- Existing Road, Substantial Modification, 71-100% Improvements

Estimated Forest Disturbance

- Access Road Clearance

Land Status

- Private

Important Siting Constraints and Other Features

- 100-foot Contours



Boardman to Hemingway
Transmission Line Project

**Attachment BB-2
Estimated Forest Disturbance**

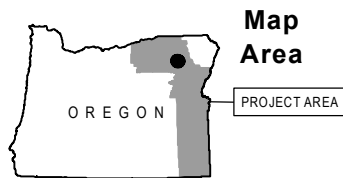
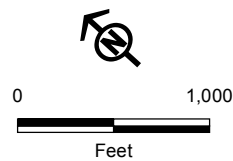
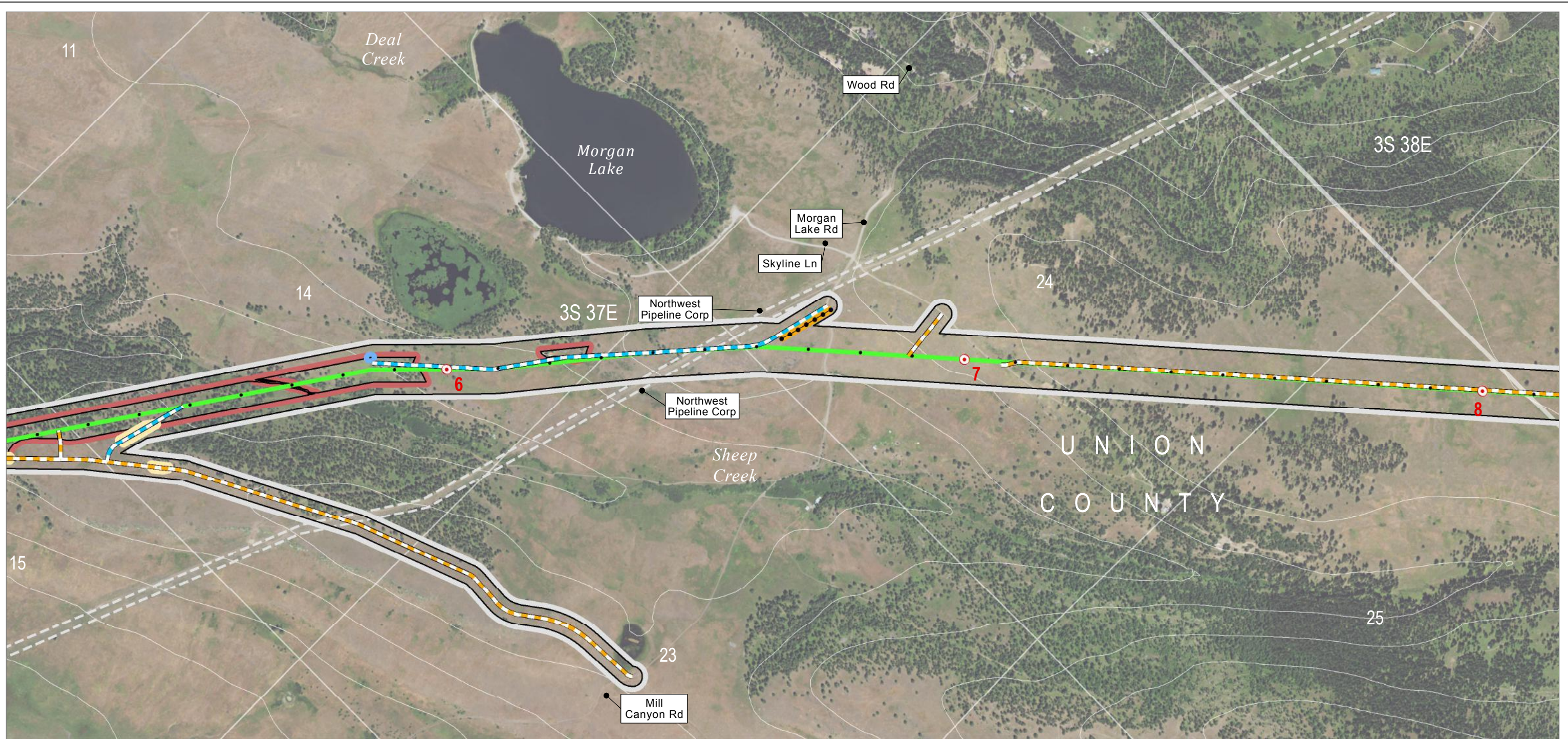
Morgan Lake Alternative
Union County

Map 20

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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June 2017



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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June 2017

Project Features

- Site Boundary
- Alternative Route Centerline
- Alternative Mileposts
- Mileposts
 - Mile
 - Tenth-mile
- Access
 - New Road, Bladed
 - New Road, Primitive

- Distribution Line to Communication Station (IPC Service Territory Only)

Estimated Forest Disturbance

- Right of Way Clearance
- Access Road Clearance
- Work Area Clearance

Land Status

- Private

Important Siting Constraints and Other Features

- 100-foot Contours

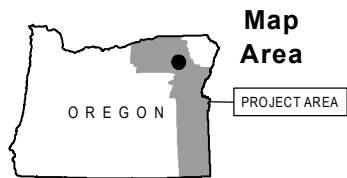
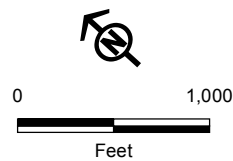


Boardman to Hemingway Transmission Line Project

Attachment BB-2 Estimated Forest Disturbance

Morgan Lake Alternative
Union County

Map 21



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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June 2017

Project Features

- Site Boundary
 - Alternative
- Route Centerline
 - Alternative
- Mileposts
 - Mile
 - Tenth-mile

Access

- Existing Road, Substantial Modification, 21-70% Improvements
- Existing Road, Substantial Modification, 71-100% Improvements
- New Road, Bladed
- New Road, Primitive

Estimated Forest Disturbance

- Right of Way Clearance
- Access Road Clearance
- Work Area Clearance

Land Status

- Private

Important Siting Constraints and Other Features

- 100-foot Contours

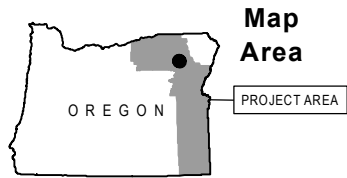
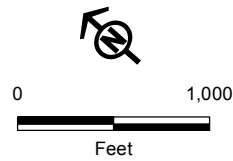
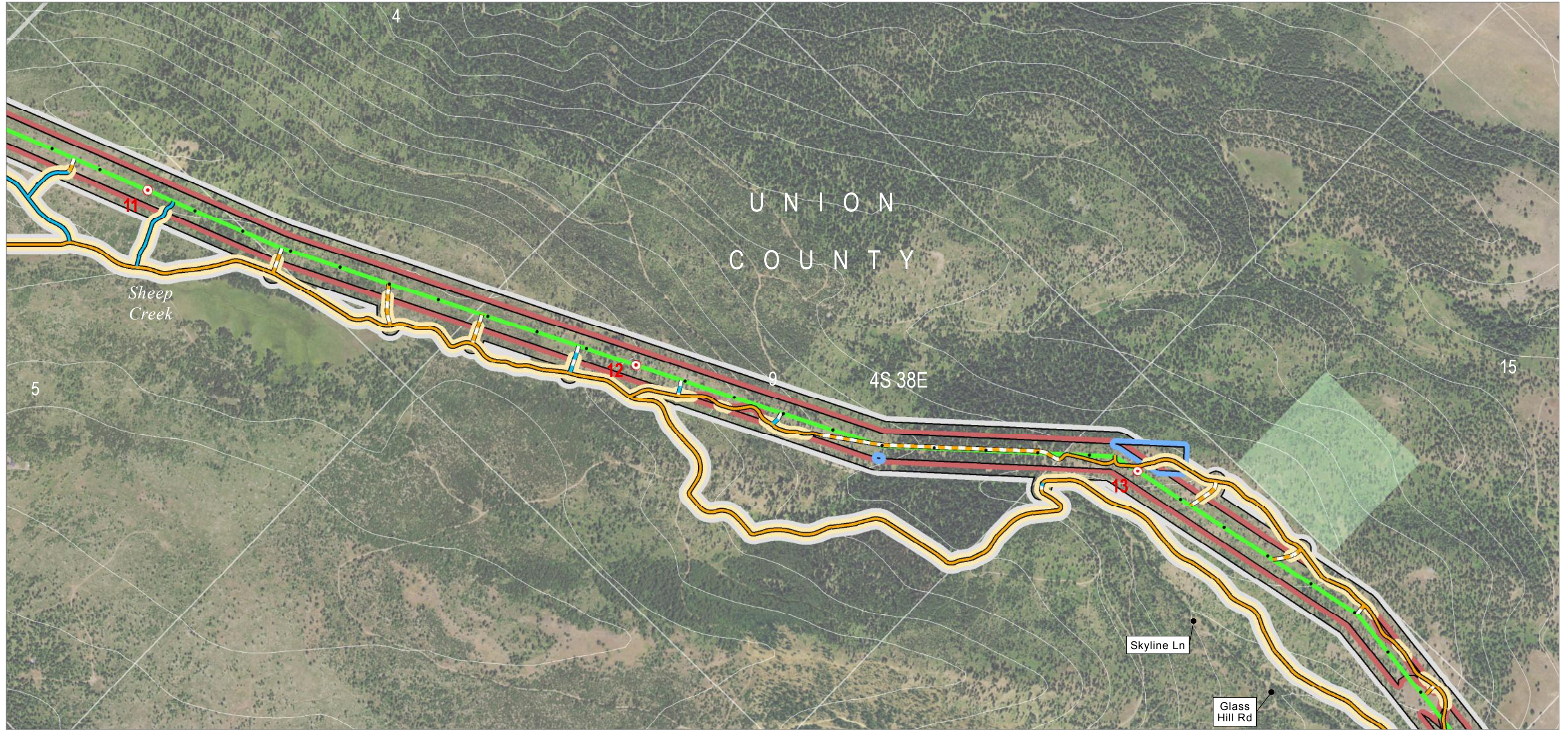


Boardman to Hemingway
Transmission Line Project

Attachment BB-2 Estimated Forest Disturbance

Morgan Lake Alternative
Union County

Map 22



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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June 2017

Project Features

Site Boundary

Alternative

Route Centerline

Alternative

Mileposts

Mile

Tenth-mile

Access

Existing Road, Substantial Modification, 21-70% Improvements

Existing Road, Substantial Modification, 71-100% Improvements

New Road, Bladed

New Road, Primitive

Estimated Forest Disturbance

Right of Way Clearance

Access Road Clearance

Work Area Clearance

Land Status

Private

US Forest Service

Important Siting Constraints and Other Features

100-foot Contours

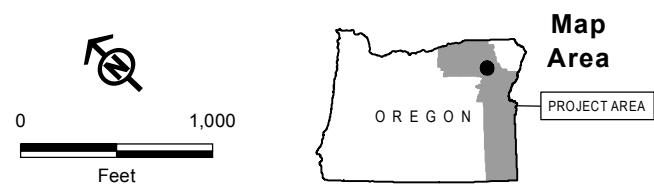
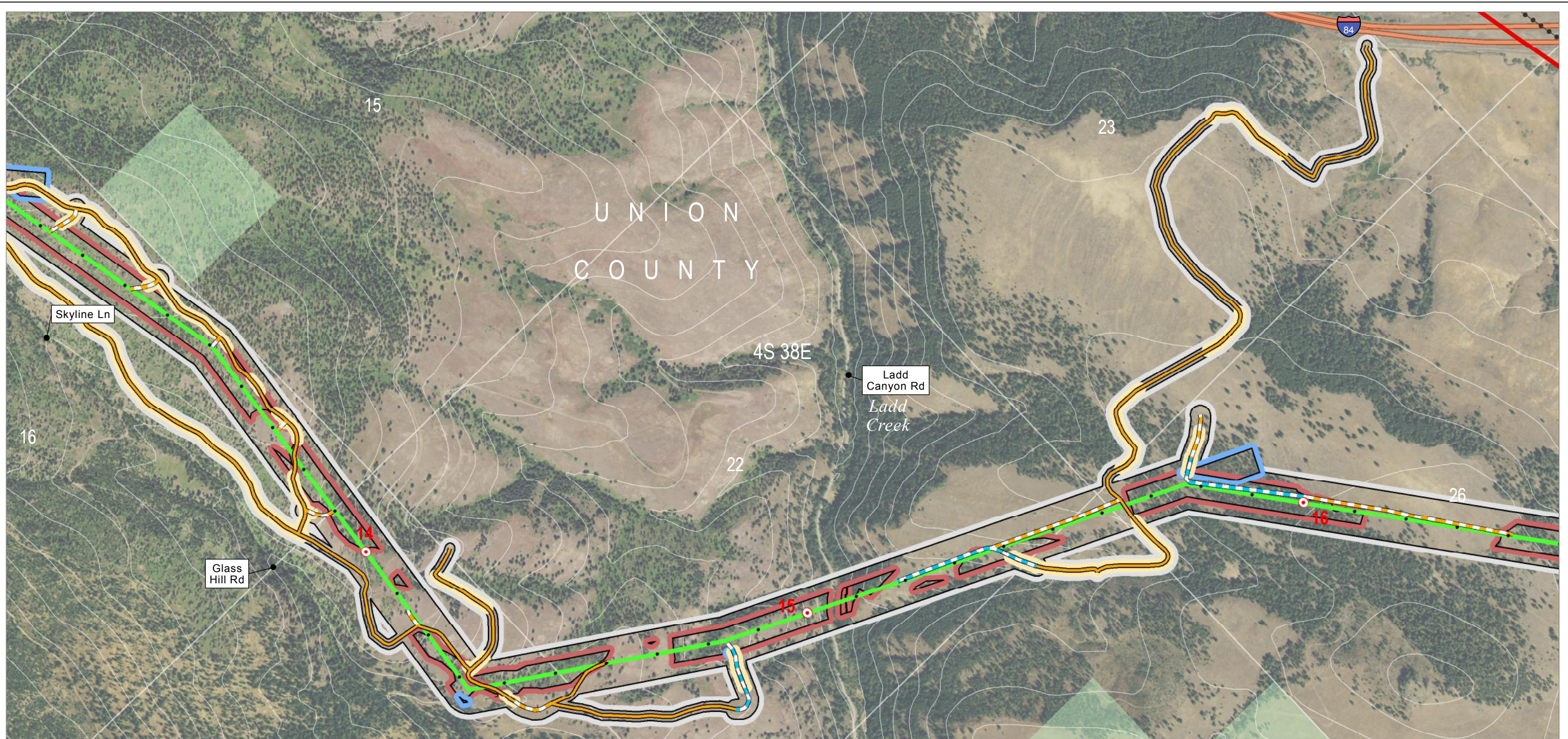


Boardman to Hemingway Transmission Line Project

Attachment BB-2 Estimated Forest Disturbance

Morgan Lake Alternative
Union County

Map 23



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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June 2017

Project Features

- Site Boundary
- Alternative Route Centerline
- Proposed Route
- Alternative

- Mileposts
- Mile
- Tenth-mile

Access

- Existing Road, Substantial Modification, 21-70% Improvements
- New Road, Bladed
- New Road, Primitive

Estimated Forest Disturbance

- Right of Way Clearance
- Access Road Clearance

- Work Area Clearance

Land Status

- Private
- US Forest Service

Important Siting Constraints and Other Features

- 100-foot Contours
- Existing Transmission Lines
- Interstates or Highways

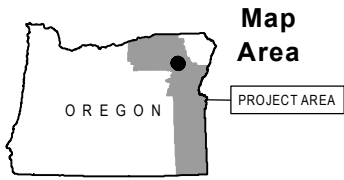
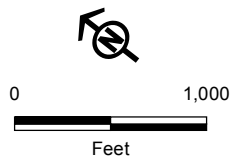
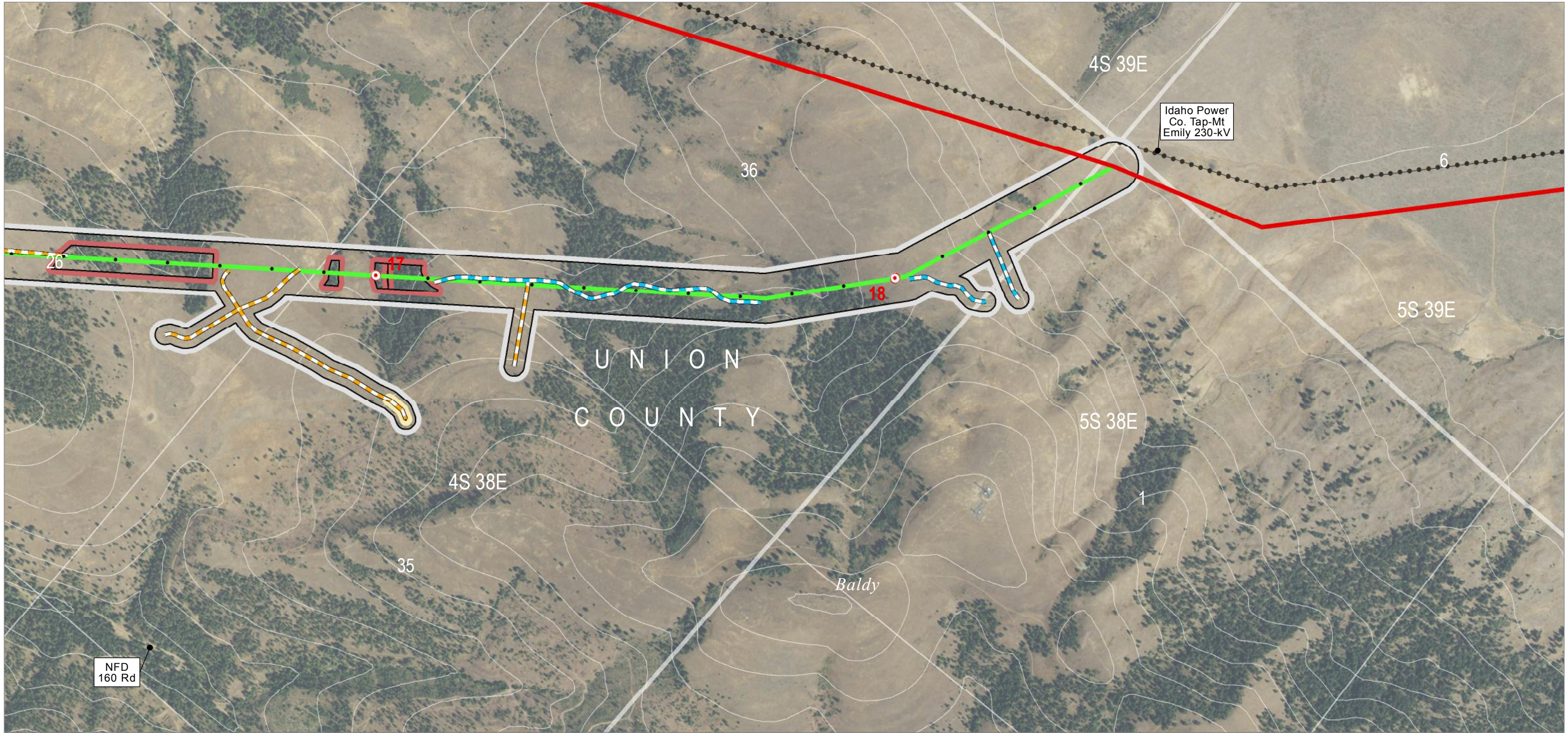


Boardman to Hemingway
Transmission Line Project

Attachment BB-2 Estimated Forest Disturbance

Morgan Lake Alternative
Union County

Map 24



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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June 2017

Project Features

- Site Boundary
- Route Centerline
- Proposed Route
- Alternative
- Mileposts
 - Mile
 - Tenth-mile
- Access
 - New Road, Bladed

New Road, Primitive

Estimated Forest Disturbance

- Right of Way Clearance
- Access Road Clearance

Land Status

- Private

Important Siting Constraints and Other Features

100-foot Contours

Existing Transmission Lines



Boardman to Hemingway
Transmission Line Project

Attachment BB-2 Estimated Forest Disturbance

Morgan Lake Alternative
Union County

Map 25