Comparison of Alternatives

6.0 COMPARISON OF ALTERNATIVES

6.1 ALTERNATIVES COMPARISON

As described in Section 4.0, Description of Alternatives, the applicant considered the following list of criteria in designing the project alternative:

- Does the alternative meet the project objectives to:
 - improve the quality of rural broadband in south-central Oregon, northeast California, and northwest Nevada.
 - make affordable broadband internet services available to currently underserved communities in these areas.
 - remain within the existing roadway right-of-way and be buried underground.
- Would the alternative reduce or avoid potential impacts to environmental resources?

Proposed alignments that did not meet the screening criteria were rejected as further described in Section 4.0, Description of Alternatives. The alternatives (including the proposed project) are compared in this section and in Table 6-1.

6.1.1 Prineville-to-Reno Fiber Optic Project (Proposed Project)

Under the proposed project, a fiber-optic running line would be installed between Prineville and Reno. The proposed project alternative running line would extend 194 miles across the northern edge of Modoc County (59.8 miles) and the City of Alturas (1.6 miles), through Lassen County (129.6 miles), and into the eastern edge of Sierra County (3.1 miles). The majority of the project would follow US 395, but a portion of the line between the communities of Standish and Buntingville in Lassen County, California, would follow Standish Buntingville Road (Lassen County Road A3) for 7.35 miles, and Cummings Road for 1.15 miles before returning to the US 395 right-of-way.

Project impacts under the proposed project would be primarily construction related, and the project has been planned and engineered to avoid or minimize the largely temporary environmental impacts to the extent feasible as described in Section 4.0, Description of Alternatives. APMs would be implemented to further avoid or minimize impacts on environmental resources and to mitigate any unavoidable impacts as feasible. These APMs are identified in the respective resource sections within Section 5.0 and are summarized in Table 3-8.

6.1.2 US-395-Only Alternative (within California)

Under the US-935-Only Alternative, the project would continue to connect between Prineville and Reno; however, the entirety of the running line would follow US 395. The project would be approximately 9 miles longer than the proposed project and would remain in Caltrans roadway right-of-way. The US-395-Only



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Alternative running line would extend 203 miles across the northern edge of Modoc County (60.4 miles) and the City of Alturas (0.5 mile), through Lassen County (139 miles), and into the eastern edge of Sierra County (3.1 miles). As a result, the US-395-Only Alternative would have a larger area of disturbance than the proposed project and a longer construction schedule by at least 30 working days¹. Ancillary features and work areas identified as part of the proposed project alternative within Standish and Alturas would be relocated as part of the US-395-Alternative. While the location of these facilities were not determined, they would be similar in size to the proposed project, adjacent to the running line, and located within previously disturbed areas.

6.1.2.1 US-395-Only Alternative and Proposed Project Comparison

Aesthetics

As with the proposed project, the majority of visual impacts would be temporary and mostly related to construction. However, due to the longer area of disturbance, the US-395-Only Alternative would result in greater impacts to the visual character of the project vicinity. While there are few sensitive receptors within the vicinity of the running line, routing the project along US_-395 would have more sensitive receptors located nearby as portion of US_-395 avoided in the proposed project traverses more populated downtown areas near Susanville.

Agricultural and Forestry Resources

The US-395-Only Alternative would result in similar impacts as the proposed project for agricultural and forestry resources because the running line would continue to be located within the existing roadway right-of-way and would not convert farmland to non-farmland land uses.

Air Quality

Like the proposed project, the US-395-Only Alternative would result in less than significant air quality impacts. However, given the greater distance of the running line, longer construction schedule of at least 30 working days, and the proximity to more sensitive receptors, the level of impacts would likely be greater than the proposed project. Approximately 9 additional miles would result in an increased area of construction, which would increase the amount of trenching, boring, and/or plowing that would occur to install the fiber optic line. Depending on which method of construction would be used and if three crews are assumed for this 9-mile segment, an additional cable plow, water truck, excavator, back hoe, dozer, etc. would be necessary for each crew which would result in additional mobile source and construction equipment emissions.

Biological Resources

Like the proposed project, the US-395-Only Alternative would result in less than significant biological resources impacts. However, given the greater area of disturbance for the longer running line, this

¹ Assumes 500 linear feet of construction per day for 3 crews working simultaneously.



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alternative would likely result in increased biological impacts as compared to the proposed project. In general, US_-395, between Standish and Susanville, traverses mostly undisturbed adjacent lands between Susanville and Buntingville. This alternative also passes closer to Leavitt Lake, a conservation easement established to protect sensitive wetland and grassland habitat, waterbird nesting habitat, and threatened and endangered species, including greater sandhill crane. This alternative also passes closer to critical habitat for Sierra Nevada yellow-legged frog on Thompson Peak southwest of Janesville. Accordingly, this alternative could result in greater impacts to high-quality sensitive habitats and special status species.

Cultural Resources

Like the proposed project, the US-395-Only Alternative would result in less than significant cultural impacts. However, given the greater area of disturbance for the longer running line, this alternative would likely result in increased cultural impacts as compared to the proposed project because the ADI and APE would cover a larger boundary. According to the Susanville General Plan, the mountains surrounding the area are steep and generally forested. In addition, the mountain streams run down to the plateau above Susanville to the north and to the Susan River to form the marshlands of the Honey Lake Valley. As a result, the combination of water sources, forests, marshlands, and open plains provided resources for Native American villages. Therefore, like the proposed project, the potential to encounter sensitive cultural resources continues to be high in the Susanville/Janesville area. At least 18 archaeological sites are known to occur within 13 miles of Susanville (City of Susanville 2000). –While the potential to uncover unknown cultural resources would not change from the proposed project, overall cultural sensitivity within the Susanville/Janesville area would be high.

Energy

Like the proposed project, the US-395-Only Alternative would result in less than significant energy impacts. However, given the greater distance of the running line and associated longer construction schedule of at least 30 days, this alternative would likely result in increased energy impacts as compared to the proposed project. Approximately 9 additional miles would result in an increased area of construction, which would increase the amount of trenching, boring, and/or plowing that would occur to install the fiber optic line. Depending on which method of construction would be used and if three crews are assumed for this 9-mile segment, an additional cable plow, water truck, excavator, back hoe, dozer, etc. would be necessary for each crew which would result in additional mobile source and construction equipment emissions. Such activities would result in increased fuel and energy usage.

Geology, Soils, and Paleontological Resources

The US-395-Only Alternative would result in similar impacts as the proposed project. The potential to uncover unknown paleontological resources would continue to occur. In addition, the geological setting would continue to be the same for the overall region and the 9-mile increase to the running line would not likely change the potential to experience ground shaking conditions or other geological hazards known to occur in the area.



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Greenhouse Gas Emissions

Like the proposed project, the US-395-Only Alternative would result in less than significant greenhouse gas emissions. However, given the greater distance of the running line, longer construction schedule of at least 30 days, and the proximity to more sensitive receptors, this alternative would likely result in an increase in greenhouse gas emissions as compared to the proposed project. Approximately 9 additional miles would result in an increased area of construction, which would increase the amount of trenching, boring, and/or plowing that would occur to install the fiber optic line. Depending on which method of construction would be used and if three crews are assumed for this 9-mile segment, an additional cable plow, water truck, excavator, back hoe, dozer, etc. would be necessary for each crew which would result in additional mobile source and construction equipment emissions.

Hazards, Hazardous Materials, and Public Safety

Like the proposed project, the US-395-Only Alternative would result in less than significant impacts related to hazards, hazardous materials and public safety. However, given the greater distance of the running line, this alternative may result in an increase of hazard impacts as compared to the proposed project. The US-395-Only Alternative would increase the distance that construction equipment would need to travel and the potential for accidental release during routine transport. In addition, the US-395-Only Alternative would travel in closer proximity to sensitive receptors as the-US_-395 approaches the downtown Susanville/Janesville area and would likely encounter more aerially deposited lead (ADL) along US-_395.

Hydrology and Water Quality

Like the proposed project, the US-395-Only Alternative would result in less than significant impacts to hydrology and water quality. However, given the greater distance of the running line and the increased area of disturbance, this alternative may traverse additional stream and water features along the alignment. According to the Lassen County General Plan, water resources within Lassen County have historically been dominated by agricultural irrigation, using surface and ground water sources. While this alternative is located within the same Honey Lake Watershed as the proposed project, this alternative passes closer to Leavitt Lake and the Leavitt Lake Canal, which is a surface water reservoir that was developed by Lassen Irrigation Company for agricultural use and is part of the Honey Lake Valley irrigation system. In addition, it likely that drainage ditches would continue to be located adjacent to the US-395 roadway right-of-way. Overall, this alternative would have similar impacts as the proposed project because impacts with wetlands and small streams would be avoided via bridge hanging or directional boring.

Land Use and Planning



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The US-395-Only Alternative would result in similar impacts as the proposed project for land use and planning because the running line would continue to be located within the existing roadway right-of-way and would not conflict with existing land uses.

Mineral Resources

The US-395-Only Alternative would result in similar impacts as the proposed project as no impacts to mineral resources would occur.

Noise

Like the proposed project, the US-395-Only Alternative would result in less than significant noise related impacts. However, given the greater distance of the running line, longer construction schedule, and the proximity to more sensitive receptors, this alternative may result in additional noise related impacts as compared to the proposed project. Approximately 9 additional miles would result in an increased area of construction, which would increase the amount of trenching, boring, and/or plowing that would occur to install the fiber optic line. In addition, the US-395-Only Alternative would travel in closer proximity to sensitive receptors as the US-395 approaches the downtown Susanville/Janesville area.

Population and Housing

The US-395-Only Alternative would result in similar impacts as the proposed project as no growthinducing effects would occur and no displacement of people or housing would be required.

Public Services

The US-395-Only Alternative would result in similar impacts as the proposed project as no growthinducing effects would occur that result in the construction of additional public service facilities.

Recreation

The US-395-Only Alternative would result in similar impacts as the proposed project as there would be no conflict with recreational resources.

Transportation

Like the proposed project, the US-395-Only Alternative would result in less than significant transportation impacts. However, given the greater distance of the running line, this alternative may result in increased impacts to traffic. The US-395-Only Alternative would increase the distance that construction equipment would need to travel within a major roadway corridor. Accordingly, traffic management control related to construction activities may result in more disruption along the Caltrans right-of-way. In addition, the US-395-Only Alternative would travel in closer proximity to sensitive receptors that may be affected as the US-395 approaches the downtown Susanville/Janesville area.

Tribal Cultural Resources



Comparison of Alternatives

TBD by CPUC (Based on AB 52).

Utilities and Service Systems

The US-395-Only Alternative would result in similar impacts to utilities and services systems compared to the proposed project. The US-395-Only Alternative would not require construction of utility infrastructure such as stormwater or wastewater facilities. The US-395-Only Alternative would continue to require water for dust suppression and boring fluid; however, sufficient water would be available for construction activities.

Wildfire

The US-395-Only Alternative would result in similar impacts as the proposed project as the wildfire severity setting would continue to be the same. Construction of US-395-Only Alternative would continue to require and incorporate wildfire risk suppression methods to reduce potential impacts.

6.1.3 No Project Alternative

Under the No Project Alternative, the project would not be constructed and operated and the expansion of fiber optic capacity and services would not occur. Rural broadband internet services would not change. While the No Project Alternative would have fewer impacts on resources than the proposed project, the No Project Alternative would also not meet the objective of improving fiber optic capacity within these rural communities. Therefore, the project objectives would not be realized.

6.1.3.1 No Project Alternative and Proposed Project Comparison

Aesthetics

The No Project Alternative would result in fewer impacts than the proposed project to the visual character of the project vicinity because the fiber optic infrastructure would not be constructed. Surrounding sensitive receptors would continue to experience visual conditions related to vehicle traffic along the existing transportation corridors.

Agricultural and Forestry Resources

The No Project Alternative would result in fewer impacts than the proposed project for agricultural and forestry resources because the fiber-optic line would not be constructed. Therefore, no changes to existing farmland would occur.

Air Quality

The No Project Alternative would result in fewer impacts from air quality emissions than the proposed project because the fiber optic infrastructure would not be constructed. Surrounding sensitive receptors

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would continue to experience emissions related to vehicle traffic along the existing transportation corridors.

Biological Resources

The No Project Alternative would result in fewer biological resources impacts than the proposed project because there would be less disruption of habitat or conflicts related to construction of the project.

Cultural Resources

The No Project Alternative would result in fewer cultural resources impacts than the proposed project because the fiber optic infrastructure would not be constructed. Therefore, the potential to encounter known or unknown cultural resources would be less.

Energy

The No Project Alternative would result in fewer energy impacts than the proposed project because the fiber optic infrastructure would not be constructed. Fuel and energy sources would continue to be used by vehicles that travel on existing roadway corridors.

Geology, Soils, and Paleontological Resources

The No Project Alternative would result in fewer impacts than the proposed project because the fiber optic infrastructure would not be constructed. Therefore, the potential to encounter known or unknown paleontological resources would be less. The geological setting would not change.

Greenhouse Gas Emissions

The No Project Alternative would result in fewer impacts to from greenhouse gas emissions than the proposed project because the fiber optic infrastructure would not be constructed. Surrounding sensitive receptors would continue to experience emissions related to vehicle traffic along the existing transportation corridors.

Hazards, Hazardous Materials, and Public Safety

The No Project Alternative would result in fewer hazards than the proposed project because the fiber optic infrastructure would not be constructed and there would be no potential to release hazardous materials as part of construction. However, US 395 would remain a major corridor for transport of goods; therefore, hazardous release events could still potentially happen from vehicular and/or freight traffic.

Hydrology and Water Quality



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The No Project Alternative would result in fewer impacts than the proposed project because the fiber optic infrastructure would not be constructed and there would be no disturbance to existing hydrology and water quality conditions.

Land Use and Planning

The No Project Alternative would result in fewer impacts as the proposed project for land use and planning because the fiber-optic line would not be constructed. Therefore, no changes to existing land uses would occur.

Mineral Resources

The No Project Alternative would result in similar impacts as the proposed project as no impacts to mineral resources would occur.

Noise

The No Project Alternative would result in fewer impacts from noise than the proposed project because the fiber optic infrastructure would not be constructed. Surrounding sensitive receptors would continue to experience noise related to vehicle traffic along the existing transportation corridors.

Population and Housing

The No Project Alternative would result in similar impacts as the proposed project as no growth-inducing effects would occur and no displacement of people or housing would be required.

Public Services

The No Project Alternative would result in similar impacts as the proposed project as no growth-inducing effects would occur that result in the construction of additional public service facilities.

Recreation

The No Project Alternative would result in similar impacts as the proposed project as there would be no conflict with recreational resources.

Transportation

The No Project Alternative would result in fewer impacts to transportation than the proposed project because the fiber optic infrastructure would not be constructed. Vehicle traffic along the existing transportation corridors would continue to occur.

Tribal Cultural Resources



Comparison of Alternatives

TBD by CPUC (Based on AB 52).

Utilities and Service Systems

The No Project Alternative would result in fewer impacts to utilities and service systems than the proposed project because the fiber optic infrastructure would not be constructed and no use of utilities would be required. However, the surrounding community would not experience improved reliability of current telecom services.

Wildfire

The No Project Alternative would result in fewer impacts related to wildfire risk than the proposed project because the fiber optic infrastructure would not be constructed. However, the wildfire severity setting would continue to be the same.

6.2 ALTERNATIVES RANKING

Table 6-1 includes a summary of potential environmental impacts for each alternative in comparison to the proposed project.

Environmental Resource	No Project Alternative	US-395-Only Alternative	Prineville-to-Reno Fiber Optic Project (Proposed Project)
Aesthetics	Fewer impacts than proposed project because fiber optic infrastructure would not be constructed and there would be no change to the visual quality.	LTS; however, alternative has potential to increase impacts in comparison to the proposed project because the running line would be approximately 9 miles longer.	LTS; project construction would be temporary and majority of components would be underground. Few sensitive receptors.
Agricultural and Forestry Resources	Fewer impacts than proposed project because there would be no disruption of agricultural land.	LTS; similar impacts as the proposed project because project located within roadway right-of-way and would not convert farmland to non-farmland land uses.	LTS; project located within roadway right-of-way and would not convert farmland to non-farmland land uses.
Air Quality	Fewer impacts than proposed project because no construction emissions would occur.	LTS; however, alternative has potential to increase impacts in comparison to the proposed project because the running line would be approximately 9 miles longer and result in more days of construction and associated emissions.	LTS; project construction emissions would not exceed thresholds and would be temporary.
Biological Resources	Fewer impacts than proposed project because	LTS; however, alternative has potential to increase	LTS; project construction could temporarily impact

Table 6-1: Comparison of Alternatives



Comparison of Alternatives

Environmental Resource	No Project Alternative	US-395-Only Alternative	Prineville-to-Reno Fiber Optic Project (Proposed Project)
	there would be no disruption or conflict with biological resources.	impacts in comparison to the proposed project because the running line would be approximately 9 miles longer and result in a larger area of disturbance traversing a conservation easement and critical habitat.	species habitat and site restoration would occur.
Cultural Resources	Fewer impacts than the proposed project because cultural resources would not be encountered.	LTS; however, alternative has potential to increase impacts in comparison to the proposed project because the running line would be approximately 9 miles longer and result in a larger area of disturbance, ADI, and APE. In addition, sensitive cultural resources are known to occur within the Susanville/Janesville area.	LTS; potential to encounter undiscovered cultural resources.
Energy	Fewer impacts than proposed project because fuel and energy would not be consumed during construction.	LTS; however, alternative has potential to increase impacts in comparison to the proposed project because the running line would be approximately 9 miles longer and result in more days of construction and associated fuel and energy consumption.	LTS; temporary fuel usage would be required during construction but would not exceed thresholds.
Geology, Soils, and Paleontological Resources	Fewer impacts than the proposed project because paleontological resources would not be encountered. However, the geological setting would continue to be the same.	LTS; Similar impacts as the proposed project because the paleontological resource may still be encountered and the geological setting would continue to be the same.	LTS; state and local regulations for soil/structural stability would occur; moderate potential for presence of paleontological resources.
Greenhouse Gas Emissions	Fewer impacts than proposed project because no construction emissions would occur.	LTS; however, alternative has potential to increase impacts in comparison to the proposed project because the running line would be approximately 9 miles longer and result in more days of construction and associated emissions.	LTS; project construction emissions would not exceed thresholds and would be temporary.

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Environmental Resource	No Project Alternative	US-395-Only Alternative	Prineville-to-Reno Fiber Optic Project (Proposed Project)
Hazards, Hazardous Materials, and Public Safety	Fewer impacts than the proposed project because there would be no potential release of hazardous materials during construction of fiber optic infrastructure. However, US 395 would remain a major corridor for transport of goods.	LTS; however, alternative has potential to increase impacts in comparison to the proposed project because the running line would be approximately 9 miles longer and result in more potential for a release during transport and possibly encounter more ADL.	LTS; project construction would have potential to release hazardous materials through use/transport but would be temporary and would incorporate standard safety measures.
Hydrology and Water Quality	Fewer impacts than the proposed project because fiber optic infrastructure would not be constructed.	LTS; alternative has potential to increase impacts in comparison to the proposed project because this alternative may traverse additional stream and water features. However, wetlands and small streams would continue to be avoided via bridge hanging or directional boring or directional boring	LTS; project construction would be temporary and majority of project components would be underground. Would not impact drainage patterns.
Land Use and Planning	Fewer impacts than proposed project because there would be no disruption of existing land uses.	LTS; similar impacts as the proposed project because project located within roadway right-of-way and would not conflict with existing land uses.	LTS; project located within roadway right-of-way and would not conflict with existing land uses.
Mineral Resources	Similar impacts as the proposed project no impact would occur to mineral resources.	NI; similar impacts as the proposed project no impact would occur to mineral resources.	NI; project would not impact mineral resources.
Noise	Fewer impacts than proposed project because no construction noise would occur.	LTS; however, alternative has potential to increase impacts in comparison to the because the running line would be approximately 9 miles longer and result in construction noise across a greater distance.	LTS; project construction noise would be temporary and few adjacent sensitive receptors.
Population and Housing	Similar impacts as the proposed project because no impact would occur to population and housing.	NI; similar impacts as the proposed project because no impact would occur to population and housing.	NI; project would not induce growth or displace population.
Public Services	Fewer impacts than the proposed project because fiber optic infrastructure would not be constructed	LTS; similar impacts as the proposed project because growth inducing effects would not occur requiring	LTS; project would not induce growth requiring construction of public service facilities.



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Environmental Resource	No Project Alternative	US-395-Only Alternative	Prineville-to-Reno Fiber Optic Project (Proposed Project)
	and there would be no change public facilities.	construction of public service facilities.	
Recreation	Fewer impacts than the proposed project because fiber optic infrastructure would not be constructed and there would be conflict with existing recreational resources.	LTS; similar impacts as the proposed project because no conflict with recreational facilities would occur.	LTS; project would not conflict with recreational facilities.
Transportation	Fewer impacts than the proposed project because fiber optic infrastructure would not be constructed and there would be no change to existing traffic and transportation circulation.	LTS; however, alternative has potential to increase impacts in comparison to the proposed project because the running line would be approximately 9 miles longer within a major roadway corridor. Increased traffic may occur related to traffic management control within Caltrans right-of-way.	LTS; construction traffic would be temporary.
Tribal Cultural Resources	TBD by CPUC (Based on AB 52).	TBD by CPUC (Based on AB 52).	TBD by CPUC (Based on AB 52).
Utilities and Service Systems	Fewer impacts than the proposed project because fiber optic infrastructure would not be constructed and there would be no use of utilities or service systems.	LTS; similar impacts as the proposed project because construction of stormwater or wastewater facilities would not occur; would have sufficient water for construction activities.	LTS; project would not require construction of stormwater or wastewater facilities; would have sufficient water for construction activities.
Wildfire	Fewer impacts than the proposed project because construction and operation would not occur. However, the wildfire severity setting would continue to be the same.	LTS; similar impacts as the proposed project as the wildfire severity setting would continue to be the same.	LTS; project located near very high fire severity zones and would incorporate wildfire suppression during construction.

Note<u>s</u>:

AB = Assembly bill

ADL = aerially deposited lead

CPUC = California Public Utilities Commission

NI = no impact;

LTS = less than significant

TBD = to be determined



Comparison of Alternatives

6.3 CONCLUSION

As shown in Table 6-1, the No Project Alternative would have fewer impacts on resources than the proposed project because the project would not be constructed and operated and the expansion of fiber optic capacity and services would not occur. However, the No Project Alternative would also not meet the objective of improving fiber optic capacity within these rural communities. Therefore, the project objectives would not be realized.

While the US-395-Only Alternative would avoid the need to impact local roadway rights-of-way by remaining on US_-395, this alternative would potentially result in increased environmental impacts. Furthermore, the US-395-Only Alternative would be less direct, and therefore less efficient, than the proposed project. Therefore, the US-395-Only Alternative would not meet all project objectives while reducing potentially significant impacts.

The project as proposed in Section 3.0, Proposed Project Description, was designed to better avoid sensitive environmental resources, particularly cultural and biological resources. In instances where the running line would potentially intersect with a sensitive resource, the applicant would implement design options to avoid and minimize impacts (e.g., to reroute to the other side of the right-of-way; choose an alternative construction method, such as boring underneath the resource; or place the running line in a less sensitive area closer to the edge of pavement).

While none of the alternatives would meet all of the project objectives or avoid all potential environmental impacts; the proposed project would be the preferred alternative because potential impacts would be primarily construction related and was planned and engineered to avoid or minimize the largely temporary environmental impacts.

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