

APPENDIX A

Route Comparison Report

APPENDIX A – Route Comparison Report¹

Introduction

During the initial planning phases of the project, PG&E considered various routes in addition to the Proposed Project. Four routes in addition to the Proposed Project were considered to be feasible and capable of meeting project objectives and therefore were carried forward for analysis in the Proponent’s Environmental Assessment (PEA). **Figure A-1 (Modified Figure 3-1 from PEA)** shows the Proposed Project and additional routes² evaluated by PG&E between the Lakeville and Sonoma substations. These routes are made up of various combinations of numbered segments as listed below.

Routes	Segments	Total Miles
PG&E		
Proposed Project	1-2-17	7.23
Route A	1-3-12-11-9-8-7-5-6	8.45
Route B	1-2-13-12-4-5-6	7.85
Route C	14-10-11-4-5-6	8.30
Route D	14-15-16-8-7-5-6	8.78

In response to concerns raised by the ~~City and County of Sonoma, Department of Public Works,~~ the CPUC considered an additional ~~two routes that include the following:~~ as listed below.

Routes	Segments	Total Miles
CPUC		
Route E	14-15-16-4-5-6 Plus new alignment (<i>See written description below</i>)	Unknown
Preferred Route	1-2-17 Underground part of Segment 17	7.23

For informational purposes, the following sections describe the Proposed Project and various routes comparison ~~evaluated by PG&E and the preferred route evaluated by the CPUC.~~ Each of these routes has been evaluated under the following criteria based on their environmental effects:

- Impacts to environmental resources.
- Unnecessary creation of new utility corridors and number of roadway and utility crossings.
- Minimization of issues related to land use impacts and disturbances.

Proposed Project

The Lakeville–Sonoma 115 kV Transmission Line Project proposes to add a second 115 kV transmission circuit to an existing transmission line corridor between the Lakeville Substation and the Sonoma Substation. Co-locating the two circuits on a single set of double-circuit tubular steel poles (TSPs) and wood poles would minimize project impacts, and modifying these two substations would be

¹ Although an analysis of alternatives under CEQA (CEQA Guidelines Section 15126.6 (a)) is not required for a MND, PG&E evaluated several route alternatives to the proposed Lakeville-Sonoma 115kV Transmission Line Project in accordance with Section IX.B.1.c of CPUC General Order 131-D.

² The word “route” is referred to the word “alternative” in the PEA.

necessary to accommodate the new circuit. For the portion of the Proposed Project located in Segment 1 on the Moon Ranch property, the transmission line would be installed within the existing right of way (ROW) pole for pole. (See Pacific Gas And Electric Company's Application to Construct Lakeville-Sonoma 115 kV Transmission Line Project CPUC A.04-11-011, Draft Mitigated Negative Declaration Figure 1-3).

The double-circuit transmission line would begin at the Lakeville Substation, parallel Adobe Road northeast, and then pass north and east through vineyards and ranch lands (Segment 1). The line would then roughly parallel Felder Road near the junction of Felder Road and Felder Creek to the junction of Felder Road and Leveroni Road (Segment 2). From there it would follow Leveroni Road (Segment 17) and would include an underground section from approximately Fifth Street West to the Sonoma Substation (Segment 17).

The Proposed Project would also include modifying and adding equipment at the Lakeville and Sonoma substations. At the Lakeville substation, an existing chain link fence would be moved slightly closer to Frates Road to accommodate additional equipment; whereas, at the Sonoma substation, all new equipment would be installed within the existing fence line.

~~The Proposed Project was not selected as the preferred project due to the concerns raised by the City of Sonoma regarding the visual and land use designation impacts associated with the Proposed Project on the Sonoma Creek and Four Corners "gateways" area. For a more detailed evaluation of the Proposed Project please see the MND/IS.~~

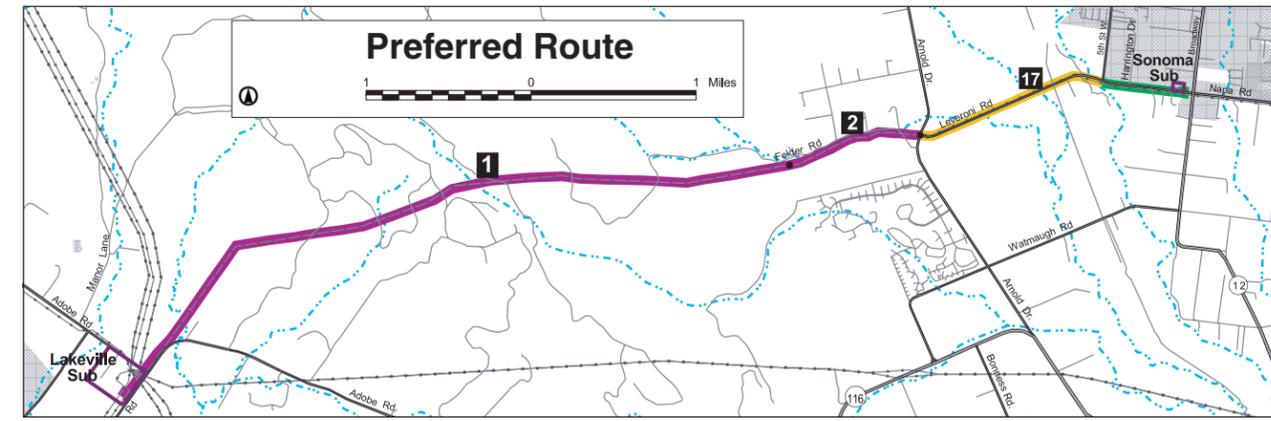
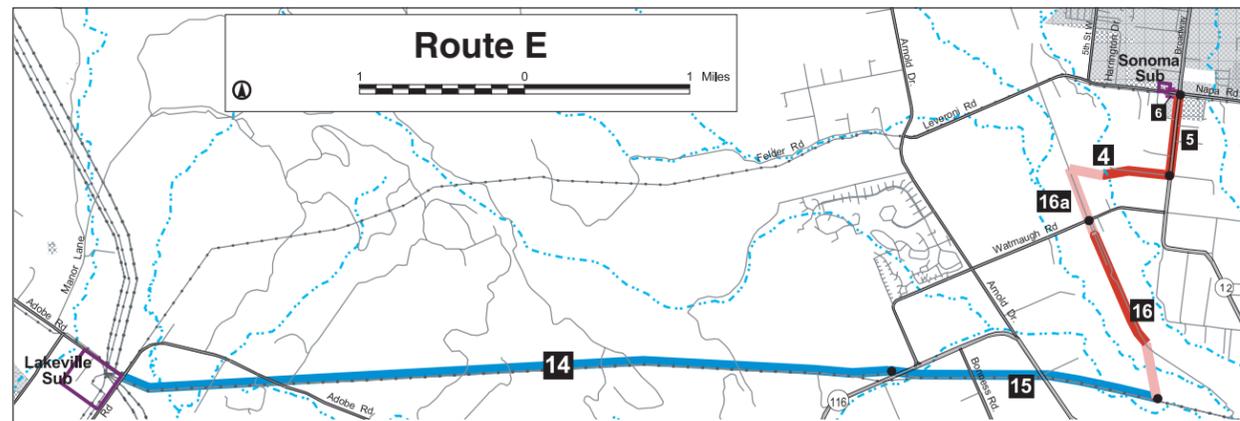
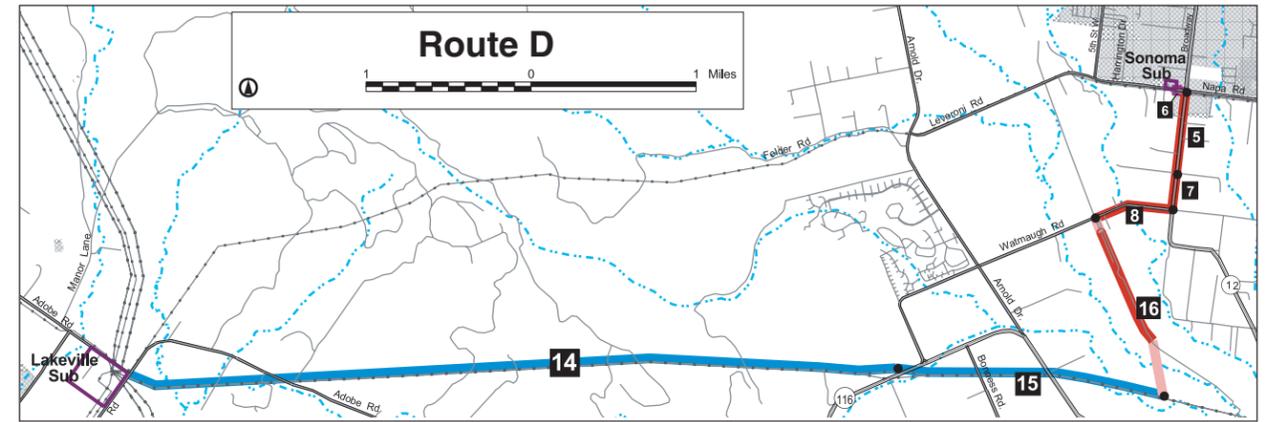
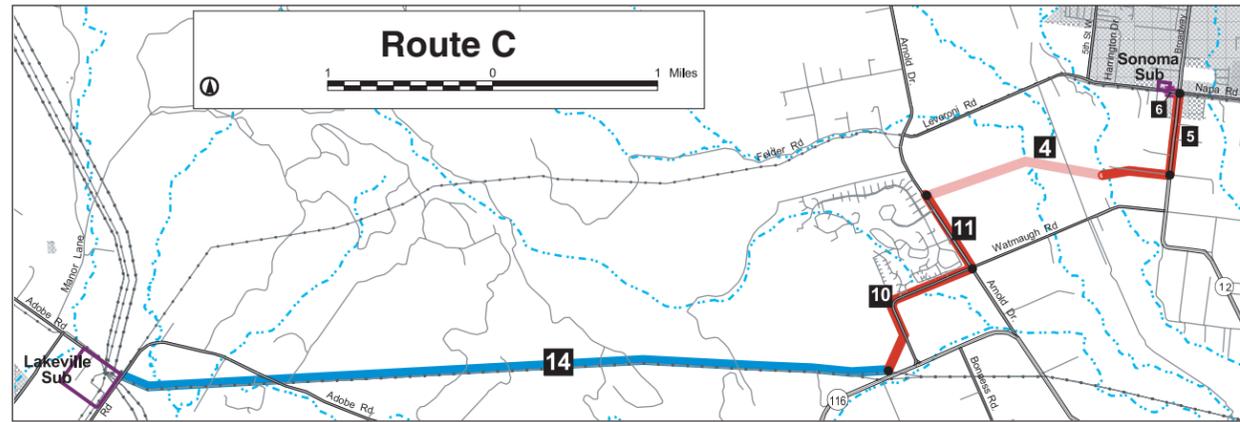
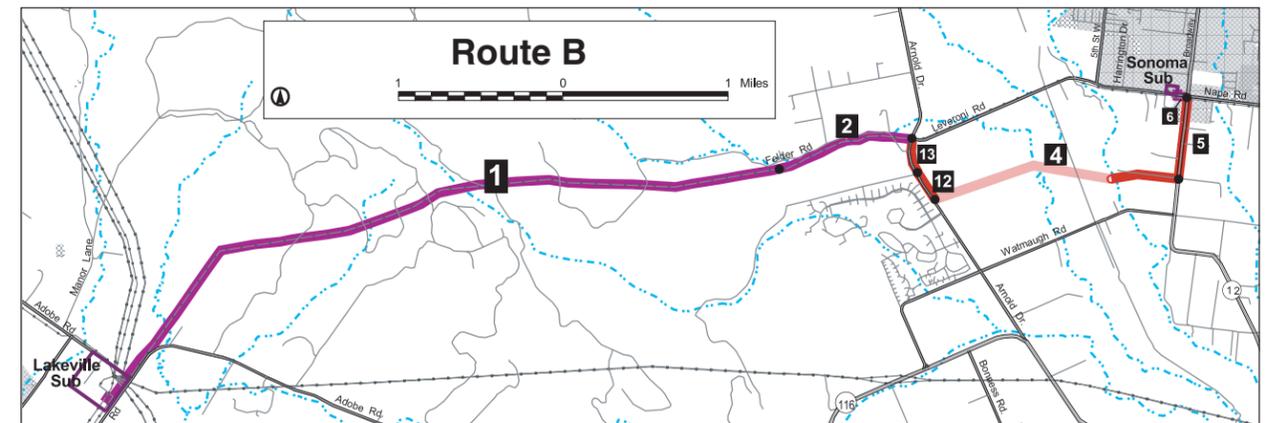
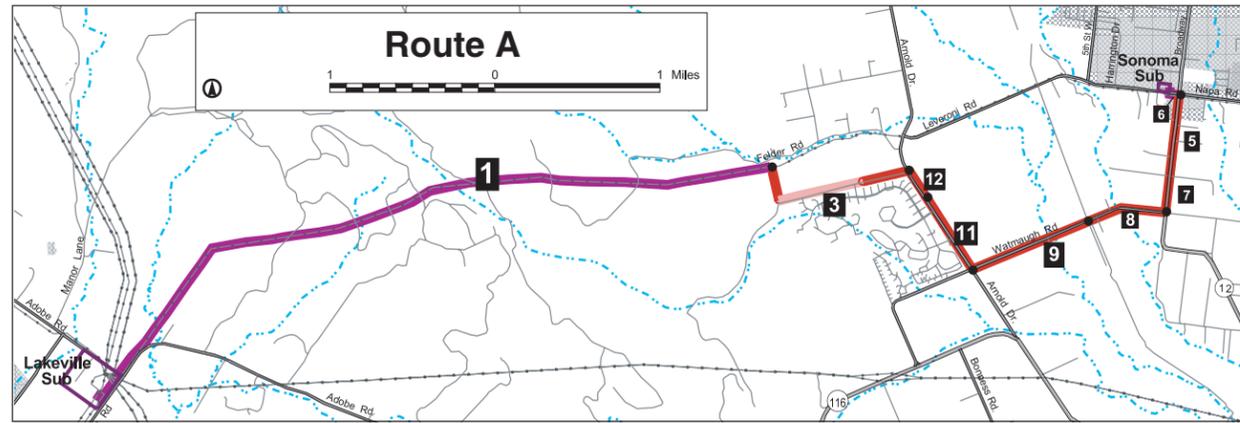
Route A (Segment 1-3-12-11-9-8-7-5-6)

Route A follows the same alignment as the Proposed Project along the west half of the route (Segment 1). As with the Proposed Project, for the portion of the project in Segment 1 located on the Moon Ranch property, the transmission line would be installed within the existing ROW. Near the junction of Felder Road and Felder Creek, at approximately pole 71 of the Proposed Project, the route turns south and runs adjacent to Temelec, a residential subdivision (Segment 3,12,11), before turning east at Watmaugh Road (Segment 9, 8) and north along Highway 12 (Segment 7,5,6). As with the Proposed Project, Segment 1 would replace an existing single-circuit wood pole 115 kV transmission line with a double-circuit 115 kV transmission line on tubular steel poles. The eastern half of Route A would involve installing a new single-circuit transmission line that would carry existing distribution lines underneath. Note that approximately 3,000 feet of the route on Segment 3 would involve installing a new transmission line adjacent to a portion of the Temelec subdivision where no distribution or transmission lines currently exist. Construction methods and equipment usage for Route A would be the same as those described for the Proposed Project in the MND/IS. Route A is over one mile longer than the Proposed Project.

Evaluation of Environmental Factors

For those issue areas where there would be no difference in environmental impacts between Route A and the Proposed Project, an analysis is provided in the Draft MND/IS for Segment 1 of the Proposed Project for all issues areas. For Segment 3, 5, 6, 7, 8, 9, 11, 12 the differences are as follows:

Aesthetics: Although Route A would reduce visual impacts of the Proposed Project at the ~~Sonoma Creek Gateway~~ and the scenic vista located at Leveroni Road at Harrington Drive, other visual impacts would occur. Segments 5, 7, 11, and 12 would involve installing a new transmission line along Highway 12 and Arnold Drive, which are county-designated scenic corridors for a distance of about 3/4-mile on each road. Highway 12 is also considered "eligible" for the State Scenic Highway program, but it has not officially been designated. However, since there are existing distribution poles and lines in place along Highway 12 and Arnold Drive that would be used to co-locate the new line with the



Proposed / Alternative Transmission Lines

- | | | |
|-------------------------------------|---|----------------------------|
| TSP Single Circuit | Wood Pole Single Circuit w/ Dist Under | Existing Transmission Line |
| TSP Double Circuit | Wood Pole Double Circuit w/ Dist Under
(Some TSP used mostly for angle poles.) | Existing Substation |
| Wood Pole Single Circuit (new line) | Route Segment # | |
| Underground Transmission Line | | |

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existing distribution lines on shared poles (albeit taller than the existing poles), this would be a less-than-significant impact.

Segments 5 and 6 would conflict with the City of Sonoma's General Plan policy to "enhance" the appearance of its designated Four Corners "gateway" at the Broadway/Highway 12 & Napa Road intersection (City of Sonoma 1995). However, as the new transmission line would be co-located with existing transmission and distribution lines on shared poles (albeit taller), there would not be a significant change from the existing visual character of the intersection and thus would not represent a significant visual impact.

Route A could result in a significant visual impact by installing a new transmission line along the north side of the Temelec residential subdivision where there is a neighborhood walkway with views of adjacent open space and vineyards. Currently there are no transmission or distribution lines along the western half of Segment 3; Route A would likely be a significant change to the existing visual character of the walkway and would likely be noticed by people who regularly use this walkway for relaxation, exercise, and views of adjacent open space. Therefore, Route A would result in greater visual impacts than the Proposed Project.

For a portion of Segment 8 along Watmaugh Road, extensive tree removal and cutting of cypress trees would be necessary for safety reasons. Removal and/or cutting would adversely affect the existing visual character of Watmaugh Road, as well as the view of the trees from Highway 12, which could be a significant visual impact, depending on the amount of cutting or tree removal needed.

Due to the potential of significant visual impacts to the residences of the Temelec subdivision and to Watmaugh Road, this route would have slightly greater impacts than the Proposed Project.

Agricultural Resources: Segment 3 contains some vineyard farmland which is under Williamson Act contract. A small amount would be taken up by pole footprints; however, this would not conflict with the Williamson Act contract, however the potential impact is greater than in the Proposed Project since no contracted lands would be affected.

Air Quality: Impacts would be similar to the Proposed Project.

Biological Resources: Impacts associated with Route A would be similar to the Proposed Project. Cutting or removal of the cypress trees along Watmaugh Road (Segment 8) would not constitute a significant impact on biological resources as long as removal occurs during non-nesting season to protect birds, and would not conflict with County ordinances which permit tree trimming around utility lines.

Cultural Resources: Route A could impact a cultural resource (CA-Nap-260 prehistoric habitation site) and require mitigation which may include archaeological excavation. There are four previously identified cultural resources along Route A: the Petaluma Adobe building (State Historic Landmark 18) inside the Petaluma Adobe State Historic Park; a historic stone wall, Temelec Hall (State Historic Landmark 237), and site CA-Nap-260 (a prehistoric habitation site). Temelec Hall was erected in 1858 by Granville P. Swift, a member of the Bear Flag Party. General Percifor Smith, U.S. military commander in California, lived nearby in 1849. CA-Nap-260 was first identified in 1958 when obsidian and clamshells were noted in midden deposits. The site is extensive, measuring approximately 250' x 135' at the time it was originally recorded. Like the Proposed Project, impacts to the Petaluma Adobe State Historic Park and the stone wall would be less-than-significant. There would be no impact on Temelec Hall (near Segment 3) under Route A, although there could be impacts to CA-Nap-260 should the site extend into the area where new transmission line poles would be installed. Therefore, Route A would have slightly greater impacts than the Proposed Project.

Geology, Soils, and Seismicity: Impacts would be similar to the Proposed Project.

Hazards and Hazardous Materials: Impacts would be similar to the Proposed Project.

Hydrology and Water Quality: Impacts would be similar to the Proposed Project.

Land Use and Planning: Segments 5 and 6 would conflict with the City of Sonoma’s General Plan policy to “enhance” the appearance of its designated Four Corners “gateway” at the Broadway/Highway 12 & Napa Road intersection. Since the new transmission line would be combined with existing transmission and distribution lines on shared poles (albeit taller), this would not result in a significant change from the existing visual character of the intersection and thus would not represent a significant visual impact.

Route A would also bring the transmission line adjacent to a greater number of residences and businesses than the proposed project; adjacent to homes (Segments 3, 12, 11, 9, 8, 7 and 5), adjacent to businesses (Segments 5 and 7), as well as adjacent to a school on the west side of Highway 12 in the middle of Segment 5, where no transmission line currently exists. Note, no residences or businesses along Segments 5 and 7 would need to be relocated.

New right-of-way would be acquired along part of Segment 3, but this would not create significant land use impacts on the vineyard and residential subdivision, as property owners would be compensated for the value of the easement and restrictions on land uses under the transmission line.

Due to the proximity of the Route to a greater number of residences and businesses than the proposed project as well as the need to acquire new right-of-way, Route A would have slightly greater impacts than the Proposed Project.

Mineral Resources: Impacts would be similar to the Proposed Project.

Noise: The primary difference between the Proposed Project and Route A relative to noise is the proximity of sensitive receptors (schools, residences, churches, etc.). Route A would bring the transmission line adjacent to a greater number of residents (e.g., Segments 3, 11, 12, 9, 8, 5 and 7) constituting a temporary impact to nearby residents. Therefore, Route A would have slightly greater impacts than the Proposed Project.

Population and Housing: Impacts would be similar to the Proposed Project.

Public Services: Impacts would be similar to the Proposed Project.

Recreation: Impacts would be similar to the Proposed Project.

Transportation and Traffic: Impacts would be similar to the Proposed Project. However this route would parallel California State Highway 12. Therefore, construction efforts would need to be coordinated with Caltrans; and long-term plans for widening Highway 12 may be needed in this area.

Utilities and Services Systems: Impacts would be similar to the Proposed Project.

Conclusion: While Route A would reduce visual impacts at the ~~Sonoma Creek Gateway~~ and the scenic vista located at Leveroni Road at Harrington Drive; Route A was not selected as the preferred route because of the potential impacts related to Aesthetics, Agricultural Resources, Biological Resources, Noise and Land Use.

Route B (Segment 1-2-13-12-4-5-6)

Route B follows the same alignment as the Proposed Project along the western half of the route (Segment 1, 2). As with the Proposed Project, for portion of Segment 1 located on the Moon Ranch property, the transmission line would be installed within the existing ROW pole for pole. At the junction of Felder Road and Leveroni Road, Pole 89 of the Proposed Project, the route then turns south at Arnold Drive (Segment 13, 12), continuing approximately 2,000 feet and then cuts east across agricultural lands, crossing Sonoma Creek (Segment 4), before turning north along Highway 12 (Segment 5,6). The portion of Segment 4 that cuts east from Arnold Drive to just before the crossing of Sonoma Creek would involve installing a new single-circuit transmission line where no distribution or transmission lines currently exist. Construction methods and equipment usage for Route B would be the

same as those described for the Proposed Project in the MND/IS. Route B is about half a mile longer than the Proposed Project.

Evaluation of Environmental Factors

For those issue areas where there would be no difference in environmental impacts between Route B and the Proposed Project, an analysis is provided in the MND/IS for Segment 1 and 2 of the Proposed Project for all issues areas. For Segment 4, 5, 6, 12 and 13 the differences are as follows:

Aesthetics: Route B would reduce visual impacts of the Proposed Project at the ~~Sonoma Creek Gateway~~ and the scenic vista located at Leveroni Road at Harrington Drive; however, other visual impacts would occur. Segments 5, 13, and 12 would involve installing a new transmission line along Highway 12 and Arnold Drive, which are county-designated scenic corridors for a distance of about 3/4-mile on each road. Highway 12 is also considered “eligible” for the State Scenic Highway program, but it has not officially been designated. However, since there are existing distribution poles and lines in place along Highway 12 and Arnold Drive that would be used to co-locate the new line with the existing distribution lines on shared poles (albeit taller than the existing poles), this would be a less-than-significant impact.

Segments 5 and 6 would conflict with the City of Sonoma’s General Plan policy to “enhance” the appearance of its designated Four Corners “gateway” at the Broadway/Highway 12 & Napa Road intersection (City of Sonoma 1995). However, as the new transmission line would be co-located with existing transmission and distribution lines on shared poles (albeit taller), there would not be a significant change from the existing visual character of the intersection and thus would not represent a significant visual impact.

Installation of Segment 4 would conflict with Sonoma County General Plan policies to retain the largely open, scenic character of important scenic landscape units (Sonoma County 1998) and could therefore create a significant visual impact, as it would be placed in open space/agricultural lands where there currently are no electrical lines. Additionally, Segment 4 conflicts with the County policy to preserve scenic values along designated scenic highway corridors, as it would be visible from Arnold Road. Visual impact on the eastern end of Segment 4 would not be significant as there are existing distribution lines within that area.

Therefore, due to the potential of significant visual impacts to open space/agricultural lands and the direct conflict with the Sonoma County General Plan policies, this route would have slightly greater impacts than the Proposed Project.

Agricultural Resources: Impacts would be similar to the Proposed Project.

Air Quality: Impacts would be similar to the Proposed Project.

Biological Resources: Route B impacts would be similar to the Proposed Project with the exception of an additional vernal pool in Segment 4 that could potentially be affected. Therefore, Route B would have a slightly greater impact than the Proposed Project.

Cultural Resources: Impacts would be the same as the Proposed Project.

Geology, Soils, and Seismicity: Impacts would be similar to the Proposed Project.

Hazards and Hazardous Materials: Impacts would be similar to the Proposed Project.

Hydrology and Water Quality: Impacts would be similar to the Proposed Project.

Land Use and Planning: Segments 5 and 6 would conflict with the City of Sonoma’s General Plan policy to “enhance” the appearance of its designated Four Corners “gateway” at the Broadway/Highway 12 & Napa Road intersection. Since the new transmission line would be combined

with existing transmission and distribution lines on shared poles (albeit taller), this would not result in a significant change from the existing visual character of the intersection and thus would not represent a significant visual impact.

Route B would also bring the transmission line adjacent to a greater number of residences and businesses than the Proposed Project; adjacent to homes where no transmission line exist (Segments 13, 12, 4, and 5), adjacent to businesses (Segments 5), as well as adjacent to a school on the west side of Highway 12 in the middle of Segment 5, where no transmission line currently exists. Note, no residences or businesses along Segment 5 would need to be relocated.

Acquisition of a new right-of-way and placement of a transmission line across active agricultural lands where no lines currently exist along most of Segment 4 could cause a significant impact as farmers would have to operate around the transmission poles in their fields. However, generally this can be mitigated to a less-than-significant level with the strategic placement of the transmission line poles or monetary compensation.

Due to the proximity of the Route to a greater number of residences and businesses than the proposed project as well as the need to acquire new right-of-way, Route B would have slightly greater impacts than the Proposed Project.

Mineral Resources: Impacts would be similar to the Proposed Project.

Noise: The primary difference between the Proposed Project and Route B relative to noise is the proximity of sensitive receptors (schools, residences, churches, etc.). Route B would bring the transmission line adjacent to a greater number of residents (e.g., Segments 12, 5 and 6) constituting a temporary impact to nearby residents. Therefore, Route B would have slightly greater impacts than the Proposed Project.

Population and Housing: Impacts would be similar to the Proposed Project.

Public Services: Impacts would be similar to the Proposed Project.

Recreation: Impacts would be similar to the Proposed Project.

Transportation and Traffic: Impacts would be similar to the Proposed Project. However, as with Route A, this route would parallel California State Highway 12. Therefore, construction efforts would need to be coordinated with Caltrans; and long-term plans for widening Highway 12 may be needed in this area.

Utilities and Services Systems: Impacts would be similar to the Proposed Project.

Conclusion: While Route B would reduce visual impacts at the ~~Sonoma Creek Gateway~~ and the scenic vista located at Leveroni Road at Harrington Drive; Route B was not selected as the preferred route because of the additional potential impacts related to Aesthetics, Biological Resources, Noise and Land Use.

Route C (Segment 14-10-11-4-5-6)

Route C proposes a new single-circuit 115 kV transmission line on tubular steel poles that would run parallel to an existing 120-foot 230 kV lattice tower transmission line near Adobe Road and Highway 116 (Segment 14). At approximately ¼ mile before the intersection of Watmaugh Road and Highway 116, a wood pole line would be installed, running in a northwesterly direction until intersecting Watmaugh Road where it would continue north (Segment 10). Then the route continues along the south and east sides of the Temelec residential subdivision (Segment 10, 11), approximately ½ mile on Arnold Drive, before cutting across agricultural lands (Segment 4) and turning north along Highway 12 (Segment 5, 6). Portion of Segment 4, which cuts east from Arnold Drive to just before the crossing of Sonoma Creek, would involve installing a new single-circuit transmission line where no distribution or transmission lines currently exist. Construction methods and equipment usage for Route C would be the

same as those described for the Proposed Project in the MND/IS. Route C is over one mile longer than the Proposed Project.

Evaluation of Environmental Factors

While certain construction related impacts would be the same as the Proposed Project, certain resource impacts would be different as Route C does not have any segments in common with the Proposed Project.

Aesthetics: Route C would reduce visual impacts of the Proposed Project at the ~~Sonoma Creek Gateway~~ and the scenic vista located at Leveroni Road at Harrington Drive; however, other visual impacts would occur. Segments 5 and 11 would involve installing a new transmission line along Highway 12 and Arnold Drive, which are county-designated scenic corridors for a distance of about 3/4-mile on each road. Segment 14 would also cross Adobe Road and be located near Highway 116, another county scenic corridor. Highway 12 is also considered “eligible” for the State Scenic Highway program, but it has not officially been designated. However, since there are existing distribution poles and lines in place along Highway 12 and Arnold Drive that would be used to co-locate the new line with the existing distribution lines on shared poles (albeit taller than the existing poles), this would be a less-than-significant impact. Additionally, since Segment 14 would parallel an existing 230 kV lattice tower transmission line, this would be a less-than-significant impact.

Segments 5 and 6 would conflict with the City of Sonoma’s General Plan policy to “enhance” the appearance of its designated Four Corners “gateway” at the Broadway/Highway 12 & Napa Road intersection. However, as the new transmission line would be co-located with existing transmission and distribution lines on shared poles (albeit taller), there would not be a significant change from the existing visual character of the intersection and thus would not represent a significant visual impact.

Installation of Segment 4 would conflict with Sonoma County General Plan policies to retain the largely open, scenic character of important scenic landscape units (Sonoma County 1998) and could therefore create a significant visual impact, as it would be placed in open space/agricultural lands where there currently are no electrical lines. Additionally, Segment 4 conflicts with the County policy to preserve scenic values along designated scenic highway corridors, as it would be visible from Arnold Road. Visual impact on the eastern end of Segment 4 would not be significant as there are exiting distribution lines within that area.

Therefore, due to the potential of significant visual impacts to open space/agricultural lands and the direct conflict with the Sonoma County General Plan policies, this route would have slightly greater impacts than the Proposed Project.

Agricultural Resources: Impacts would be similar to the Proposed Project.

Air Quality: Impacts would be similar to the Proposed Project.

Biological Resources: Route C construction related impacts to biological resources would be similar to the Proposed Project. However, protocol-level surveys for special-status plants and California red-legged frog (CRLF) (*Rana aurora draytonii*) would be required along Segments 10 and 14 to determine if additional impacts could occur in these areas. Suitable habitat for 18 species of special-status plants is found within Segments 10 and 14.

Impacts to protected valley oaks and landmark and heritage trees may be less likely for Route C than for the Proposed Project. Potential impacts from the spread of invasive plants are likely to be similar, although different species of invasive plants from those noted for the proposed route could cause impacts.

Impacts to high-value wetlands could be less than those of the Proposed Project. However, in Segment 4, one vernal pool could be affected and additional vernal pools may exist in Segment 10.

Potential impacts to sensitive aquatic species would be similar to the Proposed Project assuming that major streams such as Rodgers, Carriger and Sonoma creeks would be spanned by the transmission line and direct impacts to these stream zones would be avoided. The potential risk to nesting birds associated with operation and maintenance may be somewhat greater because the existing Lakeville-Sonoma transmission line would continue to operate along with the proposed new line. This risk would be minimized by implementation of existing avoidance measures for nesting birds.

It is likely that all of these potential impacts could be mitigated to a less-than-significant level although, for special-status plants and CRLF, the results of protocol-level surveys would be needed to determine this with certainty.

Although impacts associated with valley oaks, land mark and heritage trees, high value wetlands appears to be less than the Proposed Project; impacts to vernal pools may be higher; therefore, Route C would have roughly proportional impacts as the Proposed Project.

Cultural Resources: There is one previously identified cultural resource along Route C. This consists of site CA-Nap-260, a prehistoric habitation site which was first identified in 1958 when obsidian and clamshell were noted in midden deposits. This site is extensive, measuring approximately 250' x 135' at the time it was originally recorded. Based on the best available knowledge of this site, Route C is not expected to impact this cultural resource; therefore, this would have slightly less impacts than the Proposed Project. However, if the site extends beyond the known boundary, this will need to be reevaluated.

Geology, Soils, and Seismicity: Impacts would be similar to the Proposed Project.

Hazards and Hazardous Materials: Impacts would be similar to the Proposed Project.

Hydrology and Water Quality: Impacts would be similar to the Proposed Project.

Land Use and Planning: Segments 5 and 6 would conflict with the City of Sonoma's General Plan policy to "enhance" the appearance of its designated Four Corners "gateway" at the Broadway/Highway 12 & Napa Road intersection. Since the new transmission line would be combined with existing transmission and distribution lines on shared poles (albeit taller), this would not result in a significant change from the existing visual character of the intersection and thus would not represent a significant visual impact. However most of Segment 14, which parallels an existing 230 kV lattice tower transmission line, would not conflict with the Sonoma County General Plan as it encourages the use of existing utility corridors.

Route C would also bring the transmission line adjacent to a greater number of residences and businesses than the Proposed Project; adjacent to homes where no transmission line exist (Segments 4, 5, 10, and 11), adjacent to businesses (Segment 5), as well as adjacent to a school on the west side of Highway 12 in the middle of Segment 5, where no transmission line currently exists. Note, no residences or businesses along Segment 5 would need to be relocated.

Acquisition of a new right-of-way and placement of a transmission line across active agricultural lands where no lines currently exist along most of Segments 4 and 14 could cause a significant impact as farmers would have to operate around the transmission poles in their fields. However, generally this can be mitigated to a less-than-significant level with the strategic placement of the transmission line poles or monetary compensation.

Due to the proximity of Route C to a greater number of residences and businesses than the Proposed Project as well as the need to acquire new right-of-way, Route C would have slightly greater impacts than the Proposed Project.

Mineral Resources: Impacts would be similar to the Proposed Project.

Noise: The primary difference between the Proposed Project and Route C relative to noise is the proximity of sensitive receptors (schools, residences, churches, etc.). Route C would locate the transmission line adjacent to a greater number of residents (e.g., Segments 10, 11, 5 and 6) constituting

a temporary impact to nearby residents. Therefore, Route C would have slightly greater impacts than the Proposed Project.

Population and Housing: Impacts would be similar to the Proposed Project.

Public Services: Impacts would be similar to the Proposed Project.

Recreation: Impacts would be similar to the Proposed Project.

Transportation and Traffic: Impacts would be similar to the Proposed Project. However as with Route A and B, this route would parallel California State Highway 12. Therefore, construction efforts would need to be coordinated with Caltrans; and long-term plans for widening Highway 12 may be needed in this area.

Utilities and Services Systems: Impacts would be similar to the Proposed Project.

Conclusion: While Route C would reduce visual impacts at the ~~Sonoma Creek Gateway~~ and the scenic vista located at Leveroni Road at Harrington Drive, it would be located near a greater number of residences and businesses than the Proposed Project. Additionally, potential impact to protected valley oaks, landmark and heritage trees, wetlands and vernal pools may be slightly less than the Proposed Project. However, Route C was not selected as the preferred route because of the additional potential impacts related to Aesthetics, Land Use and Noise.

Route D (Segment 14-15-16-8-7-5-6)

Route D proposes a new single-circuit 115 kV transmission line on tubular steel poles that would run parallel to an existing 230 kV lattice tower transmission line near Adobe Road and Highway 116 (Segment 14 and 15). Approximately $\frac{3}{4}$ of a mile southeast of where the line crosses over Arnold Drive, a wood pole would be installed, turning north for a short distance before joining up with an existing distribution line that continue to run north and meets up with Watmaugh Road (Segment 16). The line would turn east at Watmaugh Road (Segment 8), then north along Highway 12 (Segment 7 and 5) and proceed west on Napa Road to the Sonoma Substation (Segment 6). Construction methods and equipment usage for Route D would be the same as those described for the Proposed Project in the MND/IS. Portion of Segment 16 would involve installing a new single-circuit transmission line where no distribution or transmission line currently exist. Route D is one and a half miles longer than the Proposed Project.

Evaluation of Environmental Factors

While certain construction related impacts would be the same as the Proposed Project, certain resource impacts would be different as Route D does not have any segments in common with the Proposed Project.

Aesthetics: Route D would reduce visual impacts of the Proposed Project at the ~~Sonoma Creek Gateway~~ and the scenic vista located at Leveroni Road at Harrington Drive; however, other visual impacts would occur. Segments 5 and 7 would involve installing a new transmission line along Highway 12 and Segment 15 would cross Arnold Drive, which are all county-designated scenic corridors. Segment 14 would also cross Adobe Road and be located near Highway 116, another county scenic corridor. Highway 12 is also considered “eligible” for the State Scenic Highway program, but it has not officially been designated. However, since there are existing distribution poles and lines in place along Highway 12 and Arnold Drive that would be used to co-locate the new line with the existing distribution lines on shared poles (albeit taller than the existing poles), this would be a less-than-significant impact. Additionally, since Segment 14 would parallel an existing 230 kV lattice tower transmission line, this would be a less-than-significant impact.

Segments 5 and 6 would conflict with the City of Sonoma's General Plan policy to "enhance" the appearance of its designated Four Corners "gateway" at the Broadway/Highway 12 & Napa Road intersection. However, as the new transmission line would be co-located with existing transmission and distribution lines on shared poles (albeit taller), there would not be a significant change from the existing visual character of the intersection and thus would not represent a significant visual impact.

Installation portion of Segment 16 would conflict with Sonoma County General Plan policies to retain the largely open, scenic character of important scenic landscape units (Sonoma County 1998) and could therefore create a significant visual impact, as it would be placed in open space/agricultural lands where there currently are no electrical lines. Additionally, Segment 15 and potentially 16 conflicts with the County policy to preserve scenic values along designated scenic highway corridors, as it would be visible from Arnold Drive.

Due to the type and size of the cypress trees along Watmaugh Road of Segment 8, extensive tree removal and cutting would be necessary for safety reasons; therefore, adversely affecting the existing visual character of Watmaugh Road, as well as the view of the trees from Highway 12.

Therefore, due to the potential of significant visual impacts to open space/agricultural lands, Watmaugh Road, and the direct conflict with the Sonoma County General Plan policies, this route would have slightly greater impacts than the Proposed Project.

Agricultural Resources: Impacts would be similar to the Proposed Project.

Air Quality: Impacts would be similar to the Proposed Project.

Biological Resources: Construction related impacts to biological resources associated with Route D would be similar to the Proposed Project. However, protocol-level surveys for special-status plants and California red-legged frog (CRLF) (*Rana aurora draytonii*) would be required along Segments 14, 15 and 16 to determine if additional impacts could occur in these areas. Suitable habitat for 18 species of special-status plants is found within these segments.

Impacts to protected valley oaks and landmark and heritage trees may be less likely for Route D than for the Proposed Project. Potential impacts from the spread of invasive plants are likely to be similar, although different species of invasive plants from those noted for the proposed route could cause impacts.

Potential impacts to sensitive aquatic species would be similar to the Proposed Project assuming that major streams such as Rodgers, Fowler and Sonoma creeks would be spanned by the transmission line and direct impacts to these stream zones would be avoided. The potential risk to nesting birds associated with operation and maintenance may be somewhat greater because the existing Lakeville-Sonoma transmission line would continue to operate along with the proposed new line.

Although impacts associated with valley oaks, land mark and heritage trees appears to be less than the Proposed Project; impacts to nesting birds may be more; therefore, Route D would have roughly proportional impacts as the Proposed Project.

Cultural Resources: There is one previously identified cultural resource along Route D. This consists of site CA-Nap-266, a lithic scatter site which may be impacted should the site extend into the area where Route D poles would be installed. Based on the best available knowledge of this site, Route D is not expected to impact this cultural resource; therefore, this would have slightly less impacts than the Proposed Project. However, if the site extends beyond the known boundary, this will need to be reevaluated.

Geology, Soils, and Seismicity: Impacts would be similar to the Proposed Project.

Hazards and Hazardous Materials: Impacts would be similar to the Proposed Project.

Hydrology and Water Quality: Impacts would be similar to the Proposed Project.

Land Use and Planning: Segments 5 and 6 would conflict with the City of Sonoma’s General Plan policy to “enhance” the appearance of its designated Four Corners “gateway” at the Broadway/Highway 12 & Napa Road intersection. Since the new transmission line would be combined with existing transmission and distribution lines on shared poles (albeit taller), this would not result in a significant change from the existing visual character of the intersection and thus would not represent a significant visual impact. However, most of Segment 14, which parallels an existing 230 kV lattice tower transmission line, would not conflict with the Sonoma County General Plan as it encourages the use of existing utility corridors.

Route D would also bring the transmission line adjacent to a greater number of residences and businesses than the Proposed Project; adjacent to homes where no transmission line exist (Segments 5, 7, 8, and 16), adjacent to businesses (Segment 5), as well as adjacent to a school on the west side of Highway 12 in the middle of Segment 5, where no transmission line currently exists. Note, no residences or businesses along Segments 5 or 7 would need to be relocated.

Acquisition of a new right-of-way and placement of a transmission line across active agricultural lands where no lines currently exist along most of Segments 14, 15 and 16 could cause a significant impact as farmers would have to operate around the transmission poles in their fields. However, generally this can be mitigated to a less-than-significant level with the strategic placement of the transmission line poles or monetary compensation.

Due to the proximity of Route D to a greater number of residences and businesses than the Proposed Project as well as the need to acquire new right-of-way, Route D would have slightly greater impacts than the Proposed Project.

Mineral Resources: Impacts would be similar to the Proposed Project.

Noise: The primary difference between the Proposed Project and Route D relative to noise is the proximity of sensitive receptors (schools, residences, churches, etc.). Route D would bring the transmission line adjacent to a greater number of residents (e.g., Segments 5, 7, 8, and 16) constituting a temporary impact to nearby residents. Therefore, Route D would have slightly greater impacts than the Proposed Project.

Population and Housing: Impacts would be similar to the Proposed Project.

Public Services: Impacts would be similar to the Proposed Project.

Recreation: Impacts would be similar to the Proposed Project.

Transportation and Traffic: Impacts would be similar to the Proposed Project. However as with Route A through C, this route would parallel California State Highway 12. Therefore, construction efforts would need to be coordinated with Caltrans; and potential long-term plans for widening Highway 12 in this area.

Utilities and Services Systems: Impacts would be similar to the Proposed Project.

Conclusion: While Route D would reduce visual impacts at the ~~Sonoma Creek Gateway~~ and the scenic vista located at Leveroni Road at Harrington Drive, it was not selected as the preferred route because of the additional potential impacts related to Aesthetics, Land Use and Noise.

Route E (Segments 14-15-16-4-5-6 plus new alignment 16a)

Route E proposes a new single-circuit 115 kV transmission line on tubular steel poles that would run parallel to an existing 230 kV lattice tower transmission line near Adobe Road and Highway 116 (Segment 14 and 15). Approximately $\frac{3}{4}$ of a mile southeast of where the line crosses over Arnold Drive, a wood pole would be installed, turning north for a short distance before joining up with an existing distribution line that continue to run north (Segment 16) until it intersects with the proposed Segment 4 of Route B and C. This line would turn east at Segment 4, then north along Highway 12

(Segment 5) and proceed west on Napa Road to the Sonoma Substation (Segment 6). Portion of Segment 16 would involve installing a new single-circuit transmission line where no distribution or transmission line currently exist. To avoid the impacts associated with the stand of cypress trees on Watmaugh Road (Segment 8) under Route A and D, the Sonoma County Department of Public Works suggested extending Segment 16 (See Figure A-1 referred to as Segment 16a) until it reaches Segment 4. Construction methods and equipment usage for Route E would be the same as those described for the Proposed Project in the MND/IS.

Evaluation of Environmental Factors

While certain construction related impacts would be the same as the Proposed Project, certain resource impacts would be different as Route E does not have any segments in common with the Proposed Project.

Aesthetics: Route E would reduce visual impacts of the Proposed Project at the ~~Sonoma Creek Gateway~~ and the scenic vista located at Leveroni Road at Harrington Drive; however, other visual impacts would occur. Segments 5 and 7 would involve installing a new transmission line along Highway 12 and Segment 15 would cross Arnold Drive, which are all county-designated scenic corridors. Segment 14 would also cross Adobe Road and be located near Highway 116, another county scenic corridor. Highway 12 is also considered “eligible” for the State Scenic Highway program, but it has not officially been designated. However, since there are existing distribution poles and lines in place along Highway 12 and Arnold Drive that would be used to co-locate the new line with the existing distribution lines on shared poles (albeit taller than the existing poles), this would be a less-than-significant impact. Additionally, since Segment 14 would parallel an existing 230kV lattice tower transmission line, this would be a less-than-significant impact.

Segments 5 and 6 would conflict with the City of Sonoma’s General Plan policy to “enhance” the appearance of its designated Four Corners “gateway” at the Broadway/Highway 12 & Napa Road intersection. However, as the new transmission line would be co-located with existing transmission and distribution lines on shared poles (albeit taller), there would not be a significant change from the existing visual character of the intersection and thus would not represent a significant visual impact.

Installation portion of Segment 16 and the proposed extension to connect with Segment 4 of Route B and C would conflict with Sonoma County General Plan policies to retain the largely open, scenic character of important scenic landscape units (Sonoma County 1998). Therefore, this could create a significant visual impact, as it would be placed in open space/agricultural lands where there currently are no electrical lines. Segment 15, potentially Segment 16 and the proposed extension to connect with Segment 4 of Route B and C would conflicts with the County policy to preserve scenic values along designated scenic highway corridors, as it would be visible from Arnold Drive.

Therefore, due to the potential of significant visual impacts to open space/agricultural lands, and the direct conflict with the Sonoma County General Plan policies, Route E would have slightly greater impacts than the Proposed Project.

Agricultural Resources: Impacts would be similar to the Proposed Project.

Air Quality: Impacts would be similar to the Proposed Project.

Biological Resources: Route E construction related impacts to biological resources would be similar to the Proposed Project. However, protocol-level surveys for special-status plants and California red-legged frog (CRLF) (*Rana aurora draytonii*) would be required along Segments 14, 15, 16 and the proposed extension to connect with Segment 4 of Route B and C to determine if additional impacts could occur in these areas. Suitable habitat for 18 species of special-status plants is found within these segments.

Impacts to protected valley oaks and landmark and heritage trees may be less likely for Route E than for the Proposed Project. Potential impacts from the spread of invasive plants are likely to be similar,

although different species of invasive plants from those noted for the proposed route could cause impacts.

Potential impacts to sensitive aquatic species would be similar to the Proposed Project assuming that major streams such as Rodgers, Fowler and Sonoma creeks would be spanned by the transmission line and direct impacts to these stream zones would be avoided. The potential risk to nesting birds associated with operation and maintenance may be somewhat greater because the existing Lakeville-Sonoma transmission line would continue to operate along with the proposed new line.

Although impacts associated with valley oaks, land mark and heritage trees appears to be less than the Proposed Project; impacts to nesting birds may be more; therefore, Route E would have roughly proportional impacts as the Proposed Project.

Cultural Resources: There is one previously identified cultural resource along Route E. This consists of site CA-Nap-266, a lithic scatter site which may be impacted should the site extend into the area where Route E poles would be installed. Based on the best available knowledge of this site, Route E is not expected to impact this cultural resource; therefore, this would have slightly less impacts than the Proposed Project. However, if the site extends beyond the known boundary, this will need to be reevaluated.

Geology, Soils, and Seismicity: Impacts would be similar to the Proposed Project.

Hazards and Hazardous Materials: Impacts would be similar to the Proposed Project.

Hydrology and Water Quality: Impacts would be similar to the Proposed Project.

Land Use and Planning: Segments 5 and 6 would conflict with the City of Sonoma's General Plan policy to "enhance" the appearance of its designated Four Corners "gateway" at the Broadway/Highway 12 & Napa Road intersection. Since the new transmission line would be combined with existing transmission and distribution lines on shared poles (albeit taller), this would not result in a significant change from the existing visual character of the intersection and thus would not represent a significant visual impact. However, most of Segment 14, which parallels an existing 230 kV lattice tower transmission line, would not conflict with the Sonoma County General Plan as it encourages the use of existing utility corridors.

Route E would also bring the transmission line adjacent to a greater number of residences and businesses than the Proposed Project; adjacent to homes where no transmission line exist (Segments 5, and 16), adjacent to businesses (Segment 5), as well as adjacent to a school on the west side of Highway 12 in the middle of Segment 5, where no transmission line currently exists. Note, no residences or businesses along Segment 5 would need to be relocated.

Acquisition of a new right-of-way and placement of a transmission line across active agricultural lands where no lines currently exist along most of Segments 4, 14, 15, 16 and the proposed extension to connect with Segment 4 of Route B could cause a significant impact as farmers would have to operate around the transmission poles in their fields. However, generally this can be mitigated to a less-than-significant level with the strategic placement of the transmission line poles or monetary compensation.

Due to the proximity of Route E to a greater number of residences and businesses than the Proposed Project as well as the need to acquire new right-of-way, Route E would have slightly greater impacts than the Proposed Project.

Mineral Resources: Impacts would be similar to the Proposed Project.

Noise: The primary difference between the Proposed Project and Route E relative to noise is the proximity of sensitive receptors (schools, residences, churches, etc.). Route E would bring the transmission line adjacent to a greater number of residents (e.g., Segments 5 and 16) constituting a temporary impact to nearby residents. Therefore, Route E would have slightly greater impacts than the Proposed Project.

Population and Housing: Impacts would be similar to the Proposed Project.

Public Services: Impacts would be similar to the Proposed Project.

Recreation: Impacts would be similar to the Proposed Project.

Transportation and Traffic: Impacts would be similar to the Proposed Project. However as with Route A through D, this route would parallel California State Highway 12. Therefore, construction efforts would need to be coordinated with Caltrans; and potential long-term plans for widening Highway 12 in this area.

Utilities and Services Systems: Impacts would be similar to the Proposed Project.

Conclusion: While Route E would reduce visual impacts at the ~~Sonoma Creek Gateway~~ and the scenic vista located at Leveroni Road at Harrington Drive, as well as concerns raised by the County of Sonoma ~~associated regarding~~ visual and biological impact associated with the cypress trees along Watmaugh Road, it was not selected as the preferred route because of the additional potential impacts related to Aesthetics, Land Use and Noise.

Preferred Route (Segments 1-2-17 including underground)

~~The Preferred Route follows the same alignment as the Proposed Project except that the City of Sonoma has suggested under grounding the portion of Segment 17 located on Leveroni Road from 5th Street (Pole 108) to the Sonoma Substation. This route assumes that the construction method employed for the modified portion of the Proposed Project would be open trenching. Please see the MND/IS for a detailed evaluation of this route as well as a detailed discussion of the impacts associated with the implementation of Mitigation Measure 2.1-1, which calls for the under grounding of the portion of the Proposed Project located on Leveroni Road from 5th Street (Pole 108) to the Sonoma Substation.~~

~~This Preferred Route poses fewer overall environmental impacts as well as alleviates the concerns raised by the City of Sonoma by avoiding the potential visual impact and conflict with local land use designation that the Proposed Project would have on the Sonoma Creek and Four Corners “gateways” area.~~

Conclusion

~~This Preferred Route Proposed Project was chosen as the Preferred Route over the Proposed Project other routes because it poses fewer overall environmental impacts as well as alleviates the concerns raised by the City of Sonoma. The Preferred Route and avoids potential visual impacts and land use designation conflict that the Proposed Project would have on the Sonoma Creek and Four Corners “gateways” area. Therefore, the CPUC staff concluded that the Proposed Project, including a mitigation measure in the Land Use Section and referenced in the Aesthetics Section of the Lakeville Sonoma 115kV Transmission Line Project CEQA documentation, is the environmentally superior route.~~

Table A-1. Summary Comparison of Routes to the Proposed Project

Evaluation Factor	Route A	Route B	Route C	Route D	Route E	Preferred Route
ENVIRONMENTAL FACTORS						
Environmental Impacts	Better than Proposed Project: • None	Better than Proposed Project: • None	Better than Proposed Project: • Cultural Resources	Better than Proposed Project: • Cultural Resources	Better than Proposed Project: • Cultural Resources	Better than Proposed Project: • Aesthetics • Land Use
	Worse than Proposed Project: • Aesthetics • Agricultural Resources • Land Use • Cultural Resources	Worse than Proposed Project: • Aesthetics • Biological Resources • Noise • Land Use	Worse than Proposed Project: • Aesthetics • Noise • Land Use	Worse than Proposed Project: • Aesthetics • Noise • Land Use	Worse than Proposed Project: • Aesthetics • Noise • Land Use	Worse than Proposed Project: • None
Creation of Utility Corridors	Creates new electrical transmission corridor in a portion of Segment 3	Creates an entirely new electrical transmission corridor in most of Segment 4	Creates an entirely new electrical transmission corridor in most of Segment 4	Creates an entirely new electrical transmission corridor in most of Segment 16	Creates an entirely new electrical transmission corridor in most of Segment 16 and proposed extension (16a) to meet Segment 4	None
TECHNICAL AND ECONOMIC FACTORS						
System Reliability	Feasible	Feasible	Feasible	Feasible	Feasible	Feasible
Engineering and Design	Feasible	Feasible	Feasible	Feasible	Feasible	Feasible
Length of Line	8.4 miles	7.85 miles	8.30 miles	8.78 miles	7.43 miles	7.23 miles
Construction and Operation Access	Feasible	Feasible	Feasible	Feasible	Feasible	Feasible
Construction and Maintenance Cost	Greater than Proposed Project	Greater than Proposed Project	Greater than Proposed Project	Greater than Proposed Project	Greater than Proposed Project	Greater than Proposed Project

