SECTION 4.0

ENVIRONMENTAL CONSEQUENCES

SECTION 4.0

ENVIRONMENTAL CONSEQUENCES

4.1 INTRODUCTION

This section describes the environmental consequences that would result from the development of the alternatives. The analysis presented in this section has been prepared in accordance with the Council on Environmental Quality's (CEQ) National Environmental Policy Act (NEPA) Regulations Section 1502.16. The direct environmental effects of each alternative are provided under the resource headings described in **Section 3.0** and listed below. This section also provides analysis of cumulative, indirect, and growth-inducing effects. Consistent with the CEQ's NEPA Regulations Section 1508.8, the term "effects" is used synonymously with the term "impacts."

Section	Resource Area/Issue
4.2	Land Resources
4.3	Water Resources
4.4	Air Quality
4.5	Biological Resources
4.6	Cultural and Paleontological Resources
4.7	Socioeconomic Conditions and Environmental Justice
4.8	Resource Use Patterns
4.9	Public Services
4.10	Other Values
4.11	Cumulative Effects
4.12	Indirect and Growth-Inducing Effects

4.1.1 DETERMINATION OF SIGNIFICANCE

CEQ Regulations for Implementing NEPA (40 CFR 1508.27) define significance of effects in terms of context and intensity, as indicated below.

(a) *Context. This means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action.*

For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.

(b) Intensity. This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action. The following should be considered in evaluating intensity:

(1) Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.

(2) The degree to which the proposed action affects public health or safety.

(3) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

(4) The degree to which the effects on the quality of the human environment are likely to be highly controversial.

(5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

(6) The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

(7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.

(8) The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

(9) The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

(10) Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

Significance criteria are more precisely defined in standard practices, environmental compliance criteria, or in the statutes and ordinances of the jurisdictional entities. Thus, National Indian Gaming Commission's (NIGC) determination of significance of impacts is accomplished with the assistance of governmental entities that have jurisdiction or special expertise for each resource. While some other entities or consultants may also possess special expertise for assessing impacts to key resources, NIGC is particularly interested in the unique aspects of special expertise offered

by the governmental entities in the locality of the occurrence of impacts. Further, NIGC may use the standard practices and criteria already established by those entities prior to the preparation of this Environmental Impact Statement (EIS). Note that the significance of impacts is determined in this EIS as an attempt to be as informative as possible to the public on the magnitude of potential impacts.

4.1.2 JURISDICTION AND SPECIAL EXPERTISE

Consistent with 40 CFR 1508.27, above, the NIGC identified several parties having jurisdiction and/or special expertise regarding the proposed project. These entities have the role providing consultation, reviewing and commenting on preliminary draft documents, and assisting the NIGC in the determination of significant impacts for areas within their jurisdiction and/or area of special expertise. The following agencies have agreed to serve as Cooperating Agencies for the purpose of this EIS: the Bureau of Indian Affairs (BIA), U.S. Army Corps of Engineers (USACE), the California Department of Transportation (Caltrans), and Sonoma County.

4.2 LAND RESOURCES

This section identifies the environmental and safety impacts of the Proposed Project and Alternatives related to the land resources identified in **Section 3.2**. The general topics considered here include topography, soils, seismicity and mineral resources. Mitigation measures are discussed in **Section 5.2.1**. As noted in **Section 3.2**, the geotechnical studies supporting the data below appear in **Appendix F**. At the time of the study conducted by GEOCON (2004), the Wilfred site was not under consideration. Therefore, the nomenclature for the project alternatives described by GEOCON are not consistent with this EIS. What GEOCON references as Alternatives A through D appear in this Environmental Impact Statement (EIS) as Alternatives B through E, respectively.

A geotechnical study of the northeastern portion of the Wilfred site was conducted for Blackman Consulting by Michelucci and Associates, Inc. in 2005 (included in **Appendix F**). In the geotechnical study for Blackman Consulting, the Wilfred site is referenced as a portion of the Northwest Specific Plan Area (NWSP area), for which an Initial Study (IS) has been prepared in 2005 by the City of Rohnert Park as part of the environmental review process for planned development under the California Environmental Quality Act (CEQA). The NWSP area shares considerable overlap with the northeast portion of the Wilfred site. On its southwest portion, the Wilfred site also shares considerable overlap with the Stony Point site, and thus the Wilfred site, the NWSP area and the Stony Point site are substantially similar in soil and geomorphic makeup. This is reflected in the Michelucci geotechnical study, **Section 3.2,** and in area soil maps provided by the Natural Resources Conservation Service (NRCS). Therefore, GEOCON's analysis of impacts posed by the project alternatives on the Stony Point site generally applies to those identified for the southwestern portion of the Wilfred site by Michelucci and Associates, Inc.

Where conditions of land resources would impact the development proposed in the project alternatives, it follows that the resulting damage to facilities could present a hazard affecting the safety of patrons using the facilities. Such impacts as they pertain to land resources are identified below. Impacts to general public safety are discussed within **Section 4.9, Public Services**.

4.2.1 ALTERNATIVE A – PROPOSED PROJECT

TOPOGRAPHY

Build-out of Alternative A would generally entail alterations to the topographical characteristics of the Wilfred site. The Wilfred site is essentially flat, and the result of on-site grading would not alter this characteristic. Fill would be incorporated into on-site grading in order to facilitate

proper drainage. Therefore, a less-than-significant impact to the topography of the site would occur.

Landslides

As noted above, an analysis of the site of Alternatives B through E (Stony Point) was conducted by GEOCON in 2004. As discussed in **Section 3.2.2**, there is no sloping ground that may be subject to instability or landslides on or adjacent to the Stony Point site (GEOCON, 2004) (**Appendix F**). This analysis applies to the relatively flat and level Wilfred site. Thus, the potential for damage to development under Alternative A or its surrounding areas due to instability of slopes or landslides is low. The side slopes of the Bellevue-Wilfred Channel and Laguna de Santa Rosa are the only exception to the overall topography of the Wilfred site and vicinity. If development were to occur too close to these steep banks the slopes may become compromised and result in slippage into the drainage. Recommendations by GEOCON (2004) to maintain a buffer zone between the developments and the side slopes have been implemented in the project design (**Appendix F**). Therefore, a less-than-significant landslides impact for Alternative A would occur.

SOILS

Expansive Soil

Expansive soils are present on the surface of the Wilfred site. The expansion rating for these near-surface soils ranges from "very low" to "very high." Generally, the soils on the eastern portion of the site are more expansive, and highly subject to change brought about by seasonal moisture variations. If unmitigated, these expansive soils may cause damage to overlying structures or shallow-depth utilities, creating public hazards. Mitigation measures related to Wilfred site soils are identified in **Section 5.2.1** to reduce any impact to be less than significant.

Soil Corrosivity

Corrosion is an electrochemical process affecting degradation of metals or metal-containing materials in contact with water. The rates of corrosion vary depending on the acidity of the water, its electrical conductivity, oxygen concentration, and temperature. Both ground and surface water can be acidic. Surface water tends to have higher oxygen concentrations than groundwater. Groundwater also tends to be more insulated from temperature variation than surface water.

Generally, corrosion occurs on structures that are exposed to several types of environments or electrolytes. Such electrolytes include raw and treated water, salt water and fresh water, various soils, rainwater and airborne contaminants. These electrolytes serve to complete electrochemically corrosive circuits between different metals within the same environment. The

flow of electrical current in the corrosion circuit is proportionate to the loss of metal in the corrosion process. Ferrous materials corrode at the rate of 20 pounds per ampere-year.

Soil corrosivity at the Wilfred site is therefore evidenced according to resistivity and conductivity. One of the three soil samples submitted by GEOCON (**Appendix F**) for corrosion potential testing exhibited a low resistivity, or high conductivity. As such, the soil on the Wilfred site may be considered mildly corrosive to concrete or steel. Corrosion could compromise structural integrity, resulting in an impact upon public safety, in this case potentially resulting from soil corrosivity. Standard construction practices would include consultation with a corrosion engineer to minimize any soil corrosion effects to construction materials; therefore, have a less-than-significant effect.

Subsidence

The Rohnert Park/Cotati Valley area of Sonoma County is a large alluvial valley with significant groundwater storage. As such, numerous groundwater extraction wells are located within the Cotati Valley for domestic use. Continued groundwater withdrawal with limited recharge causes the potential for land mass subsidence, resulting in the descent of the ground surface elevation. There is no on-site evidence that subsidence is occurring; however, any subsidence in the Cotati Valley would be regional; unlike local differential settlement, it would not likely have a significant effect on the proposed building foundations at the Wilfred site or storm/sewer facilities (or other utilities) that rely on gravity-driven flow.

SEISMICITY

Regional Faulting and Probability

Section 3.2 identifies the probability for a seismic event to cause destructive ground acceleration at the Wilfred site. Based on the associated table (**Table 3.2-1**), a seismic event and related structural damage and resulting hazard to public safety would be considered a potentially significant impact. Mitigation measures related to seismicity on the Wilfred site appear in **Section 5.2.1** to reduce any significant impacts

Liquefaction

Based on the liquefaction analyses appearing in **Section 3.2**, there is the potential for liquefaction to occur in localized lenses of liquefiable soils on the Wilfred site. This poses a potentially significant impact. Mitigation measures respondent to liquefaction appear in **Section 5.2.1** to reduce any impact to a less-than-significant level.

Lateral Spreading

Based on the analysis in **Section 3.2**, there is a low potential for lateral spreading on the Wilfred site. This low potential indicates that any lateral spreading effect will result in a less-than-significant impact.

Seismically Induced Flooding

Based on the Wilfred site's spatial and topographical distance from the Pacific Ocean, the Wilfred site is well protected from tsunamis from an offshore seismic event. Moreover, the site is not located downstream from any major dams or reservoirs that could inundate the site in the event of seismically induced breakage, and would not cause any significant impact.

MINERAL RESOURCES

The alterations in land use on the Wilfred site would not result in a loss of economically viable aggregate rock or diminish the extraction of important ores or minerals. There are no known or mapped mineral resources within the Wilfred site; and the development and use of the land would not affect or be affected by such resources. There are no abandoned mines, shafts, or tailing that would affect development.

4.2.2 ALTERNATIVE B – NORTHWEST STONY POINT CASINO

TOPOGRAPHY

Build-out of Alternative B would generally entail alterations to the topographical characteristics of the Stony Point site. It is estimated that 150,000-cubic yards of earthwork would be required, but it is anticipated that on-site grading will be balanced based upon detention basin excavation and borrowing from other locations on-site (Robert A. Karn & Associates, Inc., 2004). The Stony Point site is essentially flat and the proposed grading and excavation activities would balance the amount of fill; therefore a less-than-significant impact would occur. Additional issues or consequences related to the alteration of site topography are discussed below.

Landslides

As discussed in **Section 3.2.2** and **Section 4.2.1**, there is no sloping ground that may be subject to instability or landslides on or adjacent to the Stony Point site (GEOCON, 2004) (**Appendix F**). Thus, the potential for damage to development under Alternative B or its surrounding areas due to instability of slopes or landslides is low. The side slopes of the Bellevue-Wilfred Channel and Laguna de Santa Rosa are the only exception to the overall flat and level topography of the Stony Point site and vicinity. Development that occurs too close to these steep slopes could compromise the slopes and result in slippage into the drainage. Recommendations by GEOCON (2004) to maintain a buffer zone between the developments and the side slopes have been

implemented in the project design (**Appendix F**). Therefore, a less-than-significant landslides impact for Alternative B would occur.

SOIL

Expansive Soil

Expansive soils are present on the surface of the Stony Point site. The expansion rating for these near-surface soils ranges from "very low" to "very high." Generally, the soils on the eastern portion of the site are more expansive, and highly subject to change brought about by seasonal moisture variations. If unmitigated, these expansive soils may cause damage to overlying structures or shallow-depth utilities. Mitigation measures related to Stony Point site soils are identified in **Section 5.2.1** to reduce any impacts to a less-than-significant level.

Soil Corrosivity

Corrosion is an electrochemical process affecting degradation of metals or metal-containing materials in contact with water. The rates of corrosion vary depending on the acidity of the water, its electrical conductivity, oxygen concentration, and temperature. Both ground and surface water can be acidic. Surface water tends to have higher oxygen concentrations than groundwater. Groundwater also tends to be more insulated from temperature variation than surface water.

Generally, corrosion occurs on structures that are exposed to several types of environments or electrolytes. Such electrolytes include raw and treated water, salt water and fresh water, various soils, rainwater and airborne contaminants. These electrolytes serve to complete electrochemically corrosive circuits between different metals within the same environment. The flow of electrical current in the corrosion circuit is proportionate to the loss of metal in the corrosion process. Ferrous materials corrode at the rate of 20 pounds per ampere-year.

Soil corrosivity at the Stony Point site is therefore evidenced according to resistivity and conductivity. One of the three soil samples submitted by GEOCON (**Appendix F**) for corrosion potential testing exhibited a low resistivity, or high conductivity. As such, the soil on the Stony Point site may be considered mildly corrosive to concrete or steel. Standard construction practices would include consultation with a corrosion engineer to minimize effects to construction materials. Therefore a less-than-significant effect would result.

Subsidence

The Rohnert Park/Cotati Valley area of Sonoma County is a large alluvial valley with significant groundwater storage. As such, numerous groundwater extraction wells are located within the Cotati Valley for domestic use. Continued groundwater withdrawal with limited recharge causes

the potential for land mass subsidence, resulting in the lowering of the ground surface elevation. There is no on-site evidence that subsidence is occurring; however, any subsidence in the Cotati Valley would be regional. Unlike local differential settlement, it would not likely have a significant effect on proposed building foundations at the Stony Point site or storm/sewer facilities (or other utilities) that rely on gravity-driven flow.

SEISMICITY

Regional Faulting and Probability

Section 3.2 identifies the probability for a seismic event to cause destructive ground acceleration at the site of Alternative B. Based on the associated table (**Table 3.2-1**), a seismic event and related structural damage and resulting hazard to public safety would be considered a potentially significant impact. Mitigation measures related to seismicity on the Stony Point site appear in **Section 5.2.1** to reduce any impacts to a less-than-significant level.

Liquefaction

Based on the liquefaction analyses appearing in **Section 3.2**, there is the potential for liquefaction to occur in localized lenses of liquefiable soils on the Stony Point site. This poses a potentially significant impact. Mitigation measures respondent to liquefaction appear in **Section 5.2.1** to reduce any impacts to a less-than-significant level.

Lateral Spreading

Based on the analysis in **Section 3.2**, there is a low potential for lateral spreading on the Stony Point site. This low potential indicates that any lateral spreading effect will result in a less-than-significant impact.

Seismically Induced Flooding

Based on the Stony Point site's spatial and topographical distance from the Pacific Ocean, the Stony Point site is well protected from tsunamis from an offshore seismic event. Moreover, the site is not located downstream from any major dams or reservoirs that could inundate the site in the event of seismically induced breakage and would not result in a significant impact.

MINERAL RESOURCES

The alterations in land use on the Stony Point site would not result in a loss of economically viable aggregate rock or diminish the extraction of important ores or minerals. There are no known or mapped mineral resources within the Stony Point site and the development and use of the land would not affect or be affected by such resources. There are no abandoned mines, shafts, or tailing that would affect development.

4.2.3 ALTERNATIVE C – NORTHEAST STONY POINT CASINO

TOPOGRAPHY

The topographical characteristics of the Stony Point site would be altered in order to provide a suitable building location for Alternative C. It is estimated that 350,000-cubic yards of earthwork would be required. On-site grading will be balanced based upon detention basin excavation and borrowing from other portions of the site (Robert A. Karn & Associates, Inc., 2004) (**Appendix C**). Since the Stony Point site is essentially flat and level, a less-than-significant impact is identified to the topography of the site. Additional issues or consequences related to the alteration of site topography are discussed below.

Landslides

Landslide impacts are similar to those analyzed for Alternative B. Please see above discussion under Alternative B.

SOILS

Expansive Soil

The soils on the eastern portion of the site are more expansive than on the western portion, and highly subject to change brought about by seasonal moisture variations. If unmitigated, these expansive soils may cause damage to overlying structures or shallow-depth utilities. Mitigation measures related to Stony Point site soils are identified in **Section 5.2.1** to reduce any impacts to a less-than-significant level.

Soil Corrosivity

Conditions would be similar to those under Alternative B and result in a less-than-significant effect.

Subsidence

As discussed for Alternative B above, geological and subsurface conditions indicate that subsidence would not likely have a significant effect on proposed building foundations at the Stony Point site or storm/sewer facilities (or other utilities) that rely on gravity-driven flow.

SEISMICITY

The seismic conditions (regional faulting and probability, liquefaction, lateral spreading, and seismically induced flooding), hazards and impacts related to Alternative C are identical to those identified for Alternative B, above.

MINERAL RESOURCES

The alternations in land use under Alternative C would not result in a loss of economically viable aggregate rock or diminish the extraction of important ores or minerals. As with Alternative B above, there are no known or mapped mineral resources, abandoned mines, shafts, or tailing that would affect or be affected by development.

4.2.4 ALTERNATIVE D – REDUCED INTENSITY (STONY POINT SITE)

TOPOGRAPHY

Buildout of Alternative D would entail similar alterations to the topographical characteristics of the Stony Point site as for Alternative B, although at a slightly smaller scale and would not result in any significant impacts.

SOIL

Expansive Soil

Impacts to project developments from expansive soils are identical to those analyzed for Alternative B. Mitigation measures related to Stony Point site soils are identified in **Section 5.2.1** to reduce any significant impacts.

Soil Corrosivity

Effects would be similar to Alternative B and result in a less-than-significant effect.

Subsidence

As discussed for Alternative B above, geological and subsurface conditions indicate that subsidence would not likely have a significant effect on proposed building foundations at the Stony Point site or storm/sewer facilities (or other utilities) that rely on gravity-driven flow.

SEISMICITY

The seismic conditions (regional faulting and probability, liquefaction, lateral spreading, and seismically induced flooding), hazards and impacts related to Alternative D are identical to those identified for Alternatives B.

MINERAL RESOURCES

The alterations in land use under Alternative D would not result in a loss of economically viable aggregate rock or diminish the extraction of important ores or minerals. As with Alternative B above, there are no known or mapped mineral resources, abandoned mines, shafts, or tailing that would affect or be affected by development.

4.2.5 ALTERNATIVE E – BUSINESS PARK

TOPOGRAPHY

Buildout of Alternative E would entail similar alterations to the topographical characteristics of the Stony Point site as for Alternative B, although at a slightly smaller scale, and would not result in any significant impacts.

SOILS

Expansive Soil

Impacts to project developments from expansive soils are similar to those analyzed for Alternative B. Mitigation measures related to Stony Point site soils are identified in **Section 5.2.1** to reduce any impacts to a less-than-significant level.

Soil Corrosivity

Conditions would be similar to those under Alternative B and result in a less-than-significant effect.

Subsidence

As discussed for Alternative B above, geological and subsurface conditions indicate that subsidence would not likely have a significant effect on proposed building foundations at the Stony Point site or storm/sewer facilities (or other utilities) that rely on gravity-driven flow.

SEISMICITY

The seismic conditions (regional faulting and probability, liquefaction, lateral spreading, and seismically induced flooding),, hazards and impacts related to Alternative E are identical to those identified for Alternative B.

MINERAL RESOURCES

The alterations in land use under Alternative E would not result in a loss of economically viable aggregate rock or diminish the extraction of important ores or minerals. As with Alternative B above, there are no known or mapped mineral resources, abandoned mines, shafts, or tailing that would affect or be affected by development.

4.2.6 ALTERNATIVE F – LAKEVILLE CASINO

TOPOGRAPHY

Build-out of Alternative F would entail alterations to the topographical characteristics of the Lakeville site. It is estimated that 404,000-cubic yards of earthwork would be required. On-site

excavation would yield approximately 338,000-cubic yards. Thus, an additional 66,000 cubic yards would need to be imported to the site (Robert A. Karn & Associates, Inc., 2004). Although moderately hilly portions of the Lakeville site would be subject to grading for Alternative F, major topographic changes to the site or area would not result. Therefore, a less-than-significant impact is identified to the topography of the site. Specific issues or consequences related to the alteration of site topography are discussed below.

Landslides

According to geologic literature, the Upper Petaluma Formation within the upland area of the Lakeville site is prone to landslides. However, the existing slopes within the Lakeville site are not considered steep enough to present an unstable condition. Additionally, the formational material encountered in the exploratory test pits and borings was severely weathered with no evident bedding plains. However, adverse bedding plains can exist in less weathered portions of this formation. Deep cuts within this material may expose adverse bedding plains, which can lead to unstable slope conditions particularly when saturated and subjected to seismic activity. Deep cuts are not anticipated within this material and a less-than-significant landslides impact would occur.

SOILS

Expansive Soil

Expansive soils are present across the surface of both the lowland and upland portions of the Lakeville site. If unmitigated, these expansive soils could cause damage to overlying structures or shallow-depth utilities. Mitigation measures related to Lakeville site soils are identified in **Section 5.2.1** and will minimize any associated impacts to a less-than-significant level. .

Soil Corrosivity

Typically, soil is considered corrosive to reinforced concrete and steel if the soluble salt (chloride and sulfate) content is high. In general, cohesive soils are more corrosive than granular soils, especially cohesive soils that are close to saltwater bodies. Therefore, the Bay Mud materials within the lowland portion of the site may be potentially corrosive. Soil within the upland portion of the site is less likely to be corrosive. Most development of Alternative F is proposed for the upland portion of the site. For development planned on the lowland portion of the site, standard construction practices would include consultation with a corrosion engineer to minimize any soil effects to construction materials and result in a less-than-significant effect.

Subsidence

Bay Mud deposits in the lowland areas of the site are underlain at deeper levels by a relatively thick plane of alluvium. While supply wells are deemed unlikely to pose subsidence-related

impacts (**Appendix F**), construction-related dewatering activities could potentially cause displacement of deeper alluvial matter, resulting in the subsidence of the Bay Mud strata. Therefore, subsidence would be a potential impact during construction activities on-site. Given the temporary and localized nature of this potential impact, a less-than-significant impact would result.

Mudwaves

Mudwaves can occur when fill embankments are constructed rapidly over a relatively thick layer of weak Bay Mud. A mudwave is the displacement of the soft Bay Mud supporting an embankment under the weight of a new fill load. Due to the presence of the thick layer of Younger Bay Mud, mudwaves are possible within the lowland areas of the site. Since the development is primarily planned in the upland portion of the Lakeville site, a less-than-significant impact would result from mudwaves.

SEISMICITY

Regional Faulting and Probability

In **Section 3.2.2**, the possibility that a substantial ground-shaking event could occur in the vicinity of the Lakeville site is identified. Ground acceleration during such an event could fall between a Modified Mercalli Intensity Scale value of Level VIII and Level IX in intensity, which is a potentially significant impact. **Section 5.2.1** introduces mitigation measures to reduce any effects to a less-than-significant level.

Liquefaction

Although not observed during GEOCON's investigation, Bay Mud deposits within the lowland portion of the site can contain lenses of saturated, granular material. These materials may be subject to liquefaction during a seismic event. Since the development is primarily planned in the upland portion of the Lakeville site, a less-than-significant impact would result from liquefaction.

Lateral Spreading

In **Section 3.2.3** potentially liquefiable sand layers beneath the Lakeville site are described as non-existent or relatively thin and isolated. The resultant potential for lateral spreading is considered low; and a less-than-significant impact in relation to lateral spreading would occur.

Seismically Induced Flooding

San Pablo Bay is well protected from tsunamis emanating from the Pacific Ocean. The Lakeville site, located north of undeveloped agricultural land that borders the Bay, is unlikely to be impacted by tsunamis and/or seiche waves and are considered as a less then significant impact.

MINERAL RESOURCES

The alterations in land use would not result in a loss of economically viable aggregate rock or diminish the extraction of important ores or minerals. Because there are no known or mapped mineral resources within the Lakeville site, development and use of the Lakeville site would not be affected by or affect such resources. There are no abandoned mines, shafts, or tailing that would affect development.

4.2.7 ALTERNATIVE G – NO ACTION

TOPOGRAPHY

Alternative G would lead to general alterations to the topographical characteristics of the Northwest Specific Plan Area to accommodate planned development. However, the predominant topographical profile of the NWSP Area is essentially flat and level. Therefore, a less-than-significant impact is identified to the topography of the site. Specific issues or consequences related to the alteration of site topography are discussed below.

Landslides

The Northwest Specific Plan Area, much like the rest of Rohnert Park, has a moderate grade of less than 2 percent from east to west. The steepest slopes in the region are 5 to 8 percent, and located northeast of the City, along Petaluma Hill Road. Approximately 4 miles east of the City, the "eastern ridgeline rise" has an elevation of approximately 2,300 feet above mean sea level (amsl). The generally flat topography, combined with low soil permeability, contribute to the assessment that there is little risk of mudslides or landslides in the area. Thus, landslide-related impacts for Alternative G would be less than significant.

SOILS

Expansive Soil

The Rohnert Park General Plan EIR identified potentially significant impacts related to expansive soils for foundation support in the project area. These findings were confirmed in the geotechnical study for Blackman Consulting located in **Appendix F**. Portions of planned development under Alternative G would be located on this expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994). The resulting risks to public safety would be considered a significant impact. Mitigation appears in **Section 5.2.1** to reduce any impacts to a less-than-significant level.

Soil Corrosivity

The soil on the NWSP area may be considered mildly corrosive to concrete or steel (**Appendix F**). Corrosion could compromise structural integrity, resulting in an impact upon public safety, in

this case potentially resulting from soil corrosivity. Standard construction practices would include consultation with a corrosion engineer to minimize any soil effects on construction materials. Therefore, a less-than-significant effect would result.

Subsidence

The Rohnert Park/Cotati Valley area of Sonoma County is a large alluvial valley with significant groundwater storage. As such, numerous groundwater extraction wells are located within the Cotati Valley for domestic use. Continued groundwater withdrawal with limited recharge causes the potential for land mass subsidence, resulting in the lowering of the ground surface elevation. There is no evidence that subsidence is occurring on any site; however, any subsidence in the Cotati Valley would be regional, unlike local differential settlement, it would not likely have a significant effect on proposed building foundations at the NWSP area or storm/sewer facilities (or other utilities) that rely on gravity-driven flow.

SEISMICITY

Regional Faulting and Probability

In **Section 3.2.2**, the possibility that a substantial ground-shaking event could occur in the vicinity of the NWSP area/Wilfred site is identified. The possibility that ground acceleration during such an event could fall between a Modified Mercalli Intensity Scale value of Level VIII and Level IX in intensity, which is a potentially significant impact. **Section 5.2.1** introduces measures to reduce effects to a less-than-significant-level.

Liquefaction

Liquefaction occurs in loose, incohesive sands, silts, and artificial fills that are saturated with water. Because most soils in the Rohnert Park area are clays with low permeability, liquefaction potential is expected be low (City of Rohnert Park, 2000a) and under Alternative G, a less-than-significant impact is expected.

Lateral Spreading

The low potential for lateral spreading described in **Section 3.2** indicates that lateral spreading on the Wilfred site is considered low. The resulting determination is that development under Alternative G presents a less-than-significant impact for this value.

Seismically Induced Flooding

San Pablo Bay is well protected from tsunamis emanating from the Pacific Ocean. The NWSP area, located north of undeveloped agricultural land that borders the Bay, is unlikely to be impacted by tsunamis and/or seiche waves. No impact is anticipated under Alternative G.

MINERAL RESOURCES

The alterations in land use under Alternative G would not result in a loss of economically viable aggregate rock or diminish the extraction of important ores or minerals. Because there are no known or mapped mineral resources within the NWSP area, development and use of the NWSP area would not be affected by or affect such resources. There are no abandoned mines, shafts, or tailing that would affect development.

4.2.8 ALTERNATIVE H –REDUCED INTENSITY (WILFRED SITE)

TOPOGRAPHY

Build-out of Alternative H would entail similar alterations to the topographical characteristics of the Wilfred site, as Alternative D would have to the Stony Point site. Due to the relatively flat characteristic of the Wilfred site, on-site grading would not alter the topography of the site. Therefore, a less-than-significant impact would result from the development of Alternative H.

Landslides

As noted above, the potential for damage to development under Alternative H or its surrounding areas due to instability of slopes or landslides is low. As discussed above under Alternative A, the side slopes of the Bellevue-Wilfred Channel and the Laguna de Santa Rosa, require mitigation to reduce potential impacts. Similar to Alternative A, the implementation of buffer zones is recommended between the development and side slopes to reduce potential impacts from land slides to a less-than-significant level.

SOILS

Expansive Soil

Expansive soils are present on the surface of the Wilfred site. Therefore, the development of Alternative H would be subject to the mitigation measures related to Wilfred site soils identified in **Section 5.2.1** to reduce any impacts to a less-than-significant level.

Soil Corrosivity

Soils on the Wilfred site may be considered mildly corrosive to concrete or steel. Therefore, standard construction practices would include consultation with a corrosion engineer to minimize any soil effects to construction materials. Therefore a less-than-significant effect would result.

Subsidence

As stated under Alternative A, there is no evidence that subsidence is occurring on the Wilfred site. Therefore, subsidence would not likely have a significant effect on the development of

Alternative H, including the proposed building foundations at the Wilfred site or storm/sewer facilities (or other utilities) that rely on gravity-driven flow.

SIESMICITY

Regional Faulting and Probability

As stated under Alternative A, a seismic event and related structural damage and resulting hazards to public safety would be considered a potentially significant impact under Alternative H. Mitigation measures are provided in **Section 5.2.1** to reduce any impacts to a less-than-significant level.

Liquefaction

As stated under Alternative A, there is the potential for liquefaction to occur in localized lenses of liquefiable soils on the Wilfred site. This poses a potentially significant impact to the development of Alternative H. Mitigation measures respondent to liquefaction appear in **Section 5.2.1**.

Lateral Spreading

As with Alternative A, and based on the analysis in Section 3.2, there is low potential for lateral spreading on the Wilfred site. Since Alternative H is a reduced version of Alternative A, the low potential indicates that any lateral spreading effects would result in less-than-significant levels of impact.

Seismically Induced Flooding

As stated under Alternative A, the low potential for seismically induced flooding on the Wilfred site would result in a less-than-significant impact to development.

MINERAL RESOURCES

The alterations in land use on the Wilfred site, under Alternative H, would not result in a loss of economically viable aggregate rock or diminish the extraction of important ores or minerals. As previously discussed under Alternative A, development and use of the land would not affect or be affected by such resources. Therefore, a less-than-significant impact would result from the development of Alternative H.

4.3 WATER RESOURCES

4.3.1 ALTERNATIVE A – PROPOSED PROJECT

SURFACE WATER

Flooding

The layout of the hardscape for Alternative A's buildings and structures is designed outside of the 100-year floodplain. Thus, loss of floodplain storage would not occur. The portion of the site within 100-year flood zone would be used for sprayfields and open space. The project would, therefore, be consistent with Federal Executive Order 11988. Though the hardscape would be built outside of the 100-year floodplain, the increase in impervious surfaces would cause increased runoff into the floodplain. The drainage plan incorporates a detention basin that would collect stormwater runoff. Stormwater runoff from hardscape could then be released over time, reducing impacts to downstream flooding. The incorporation of a detention basin ensures that impacts from the project stormwater to downstream flooding are less than significant. In addition, a second detention basin would be added to the southern portion of the site to compensate for the loss of flood storage created by the development of Alternative A facilities in the 500-year floodplain. In fact, given that this southern detention basin was designed to compensate for the development of Alternative B or C in the 100-year floodplain, an increase in flood storage can be expected from the development of the same detention basin for Alternative A, because Alternative A is displacing less flood storage than the alternatives in the 100-year floodplain.

Should on-site wastewater treatment occur, the wastewater treatment plant, seasonal storage ponds, and portions of the spray fields would be located outside of the 100-year floodplain. In addition, the required Clean Water Act National Pollutant Discharge Elimination System (NPDES) permit will not allow discharge of treated wastewater to surface water during a flood event. Sprayfields would be operated to reduce runoff to surface waters and thus, would not be operated during flood events. Thus, the operation of on-site wastewater treatment facilities would not significantly impact flooding.

Construction Impacts

Project construction would result in ground disturbance that could lead to erosion. Erosion can increase sediment discharge to surface waters during storm events. Project construction also has the potential to generate waste materials (e.g., concrete, drywall, metal and wood from building rubble and diesel, oil and grease from heavy equipment and temporary on-site fuel storage) that can be entrained in surface flow and washed into nearby surface waters during storm events.

Discharges of pollutants to surface waters from construction wastes, fuel spills, and leaks would be a potentially significant impact. Mitigation is discussed in **Section 5.2.2** to reduce any impacts to a less-than-significant level.

Stormwater Runoff

The expansion of impervious surface areas created by the proposed construction of the casino, hotel and associated parking facilities would generate increased stormwater. On-site stormwater runoff would be diverted into an on-site detention system that would be sized to accommodate excess water draining from impervious surfaces (Robert A. Karn & Associates, Inc., 2006; **Appendix C**). Since the detention basin would be part of the project, the impact of stormwater runoff would be less than significant.

Runoff from surface parking lots and project facilities could impact water quality by flushing debris (trash, oil, sediment, and grease) into area surface waters. Fertilizers and other chemicals used in landscaped areas may also result in impacts to water quality if allowed to enter nearby surface waters. As noted in **Section 2.2.6**, the drainage plan (Robert A. Karn & Associates, Inc., 2006; **Appendix C**) includes the use of several features designed to filter the surface runoff prior to release into the natural drainage channels, including sediment/grease traps. These measures are expected to remove suspended solids such as trash, soil sediment, oil, grease and other potential materials that could degrade surface water quality. Runoff from impervious surfaces and landscaped areas would be directed to the drainage system, which would be protected by the above features and the impact to water quality from stormwater runoff would be less than significant. Mitigation measures have been included in **Section 5.2.2** to further reduce stormwater runoff impacts.

Wastewater

As described in **Section 2.3.7** and **Appendix D**, wastewater generated from the project's facilities would either be conveyed to the Laguna Subregional Treatment Plant, or be treated to a tertiary level at an on-site wastewater treatment plant (WWTP). While the Laguna WWTP has the capacity for Alternative A's wastewater, it is unclear whether the City of Rohnert Park has sufficient allocation to cover the addition of wastewater from Alternative A. No agreement has been reached for hookup to the Laguna WWTP. Mitigation is included in **Section 5.2.2** to reduce impacts to a less-than-significant level. Title 22 of the California Administrative Code defines the tertiary treatment process as wastewater that has been oxidized, coagulated, clarified, and filtered. If the on-site treatment plant option is operated, the treatment process would be designed to recycle water so that turbidity does not exceed two nephelometric turbidity units (NTUs) on average, does not exceed 5 NTUs more than five percent of the operation time during any 24-hour period, and does not exceed 10 NTUs at any time. Tertiary treated wastewater would comply with the California Department of Health Services' (DHS) regulations under Title 22,

Division 4, Chapter 3, of the California Administrative Code. Project-generated wastewater would meet Title 22 standards and would also comply with United States Environmental Protection Agency (USEPA) standards and federal drinking water standards for nitrate and turbidity. Use of recycled water on trust lands is regulated by the Indian Health Services and the USEPA. Disposal of tertiary treated wastewater would either occur on-site through the use of seasonal storage and land disposal (sprayfields) or partially off-site through the use of seasonal storage, land disposal, and surface water disposal (eventually flowing off-site). Should the treated wastewater be disposed entirely on-site to land there would be no discharge and, therefore, no impact to surface waters. Should the treated wastewater be disposed of to surface waters, then potential impacts to surface water quality would occur.

The proposed membrane bioreactor (MBR) WWTP would provide nitrification and de-nitrification of the wastewater influent, as well as oxidation. Thus, the ammonia in the wastewater influent would be converted to nitrates and then to nitrogen gas (HydroScience, 2008). It has been estimated that the casino project would discharge an average of 6 kilograms per day of total nitrogen. This is 0.01 percent of the total maximum load published in the 1995 RWQCB report, *Waste Reduction Strategy for the Laguna de Santa Rosa* (Morris, 1995).

As detailed in **Appendix D**, disinfection would be provided by constructing an ultraviolet (UV) disinfection system. Though the UV facilities would disinfect the treated wastewater, they do not continue to disinfect the wastewater after it leaves the UV channel. In order to prevent regrowth of bacteria in the recycled water distribution system, sodium hypochlorite would be added in small quantities. The introduction of this chemical creates a residual concentration of chlorine that persists in the recycled water, ensuring it is safe to use after it leaves the facility. Chlorine is a very common disinfectant in the treatment and disinfection of wastewater. Any water discharged to surface water s would be fully de-chlorinated prior to discharge.

The on-site wastewater facility would pump surplus tertiary treated water into storage reservoirs and apply it to sprayfields during the dry months. The spray fields would only be located on trust lands. In the winter months, surplus tertiary treated water may be discharged into a nearby tributary of the Bellevue-Wilfred Canal. Such discharges to surface water would only occur when the Russian River's water level is high enough to allow discharges, in accordance with California State Water Resources Control Board (State Water Board) Water Quality Order No. 2000-02. Projected wastewater discharge rates appear in **Appendix D**.

Operation of the outfall could cause an incremental increase in the daily load of phosphates and nitrates, further impairing water quality in the waterway. Incremental increases in phosphates and nitrates, though, would be very diluted with large volumes of water. Increases in stream temperature could also result in negative impacts to fish and other freshwater aquatic life. These

issues would be addressed in a NPDES waste discharge permit to be obtained from the USEPA. The USEPA regulates wastewater disposal on trust lands. It is not known what conditions the USEPA will include in their permit, but typically, the USEPA implements the regulations promulgated by local regulatory agencies, which include the RWQCB. Recent similar permits issued by USEPA for other Tribal wastewater disposal projects demonstrates that the USEPA typically implements water quality standards and rate limitations equivalent to existing federal regulations and the local adopted Basin Plan. The Tribe would comply with the conditions of the NPDES permit, including an anticipated restriction of discharges to the Laguna de Santa Rosa from May through September (HydroScience, Inc., 2008). Compliance with all NPDES permit requirements would provide a less-than-significant impact to water quality from the allowed discharge of tertiary treated wastewater. Nonetheless, mitigation measures have been included in **Section 5.2.2** that would reduce impacts from wastewater.

GROUNDWATER

Groundwater Levels

Under Alternative A. groundwater would be supplied by installing two new production wells. These two wells would have an estimated sustained long-term pumping rate of 200 gallons per minute (gpm), equivalent to 0.29 million gallons per day (MGD) (note that this is a conservative estimate since average water demand is 165 gpm). The equivalent of one well would operate at a time. The remaining capacity would be in place for redundancy and backup functions. It is not expected that the Indian Health Services will classify one of the on-site wells to be used for emergency or backup uses only. The wells are expected to alternate in use based on water supply requirements, exercising the wells to maintain their operation, and to equalize run times for equipment located on each well.

The new wells would be drilled approximately 600 feet below ground surface (bgs) and the screened intervals would be installed in permeable zones between 200 and 600 feet bgs. The three existing on-site wells would be abandoned because they are inadequate for the needs of the project. One well is known to be active, one is presumed active, and one is of unknown status (HydroScience, 2008; KOMEX, 2007a).

A portion of the Wilfred site overlaps the City of Rohnert Park's Northwest Specific Plan (South) area. The portion of overlap contains the proposed casino hardscape. If the area were to be built-out as planned in the Northwest Specific Plan (South), the projected water demand for the area of overlap would be approximately 95 gpm. Development of Alternative A would result in the above-mentioned 95 gpm not being utilized for the Northwest Specific Plan (South), and reduce the net impact to water resources. For the purpose of this analysis, it is assumed that the 95 gpm used by the Northwest Specific Plan (South) in the area of overlap would be partly sourced from

groundwater. The proportion of groundwater used in the area of overlap is assumed to be equivalent to the proportion of water supply for the City that the City projected to be from groundwater. The City projects that, through 2010, 26 percent of its water will be from groundwater (Table 4-1, City of Rohnert Park, 2005). Thus, the 95 gpm used in the area of overlap would be approximately 25 gpm sourced from groundwater. Development of Alternative A would remove the area of overlap from the possibility of future build-outbuild-out under the Northwest Specific Plan (South). The 25 gpm of groundwater projected to be used by the Northwest Specific Plan (South) in the area of overlap would not be utilized. The net average impact to groundwater, therefore, would be 140-gpm for Alternative A over and above that required for the build out of the Northwest specific plan.

A drawdown the water table to nearby wells may be the result of groundwater pumping on the Wilfred site. The project-related drawdown at any affected well (interference drawdown) will result in a decreased saturated thickness (depth to which a well penetrates below the water table) available to be pumped at that well. In the most extreme case, this could result in drawdown of the water level in a well to a depth where the well can no longer be pumped (*i.e.*, the affected well goes dry as a result of project pumping). At the other extreme, the effect of project pumping may be so small that the project-related drawdown is insignificant relative to short-term or seasonal fluctuations; or the drawdown could represent an insignificant impact to the well user. The following potentially significant impacts could occur:

- Impact 1 - The interference drawdown results in the water level in the aquifer being drawn down below the screen of the well (*i.e.*, the well goes dry as discussed above).
- Impact 2 - The interference drawdown results in the water level in the aquifer being drawn down to a point where the remaining saturated thickness is too small for the affected well to provide an adequate water supply for the intended use, or the pumping water level is too close to the intake level of the pump, exposing it to potential damage.
- Impact 3 - The interference drawdown results in the water level in the well during pumping (the well's pumping water level) being drawn near the intake of the pump, requiring lowering of the pump intake in order for the well to remain operational. This is essentially a variation of case 2, but there is space below the pump allowing an adequate flow rate to be restored by lowering the pump. Energy costs would be expected to increase after the pump is lowered.
- Impact 4 - The interference drawdown causes a decrease in saturated thickness such that the well and pump can continue to operate and produce adequate amounts of water, but pumping must occur at either greater frequency or duration, and must lift water for a greater height. As a result more energy is used, resulting in greater operational and maintenance costs. This condition can develop prior to the onset of impacts 1, 2 or 3.

Two primary hydrogeologic factors dictated which of the above impacts would occur: the saturated thickness of the well (before interference drawdown) and the amount of interference drawdown that is applied (which varies with the distance of the impacted well from the project well). The impact from interference drawdown has the potential to be more severe if it represents a higher percentage of the well's initial saturated thickness prior to the onset of interference drawdown. For example, a 10-foot drop in water level has a greater potential to cause Impacts 1 or 2 in a shallower well; whereas, the same drop in water level in a deeper well might result in less serious, but potentially significant impacts 3 or 4. In general, small variations in saturated thickness are not considered significant when assessing transmissivity values from the interpretation of aquifer test drawdown data (Jacob, 1950). However, in assessing the impacts of interference drawdown to neighboring pumping wells, a small change in saturated thickness could still cause a significant increase in electrical costs. These cases are discussed in additional detail below and in **Appendix G**.

The impacts resulting from interference drawdown are also dependant on several factors that may vary from well to well, even if the wells have the same saturated thickness and applied interference drawdown. These well-specific factors include the following:

- Local variations in the transmissivity of the saturated sediments in which the well is completed (*i.e.*, their ability to yield water to the well with a given amount of drawdown in the aquifer);
- The condition and efficiency of the well (*i.e*., the water level in the well bore compared to the water level in the aquifer just outside the well, which can be significantly lower if the well is in poor condition or poorly designed);
- The well's pump specifications, including its rating curve, the depth at which the pump intake is set, and the resulting pumping water level in the well during operation;
- The well's screened interval, which usually, but not always, extends to the bottom of a well; and
- The minimum required water production rate of the well.

The factors listed above affect the amount of water a well can produce, the amount of drawdown in the aquifer needed to produce that water, and the pumping water level inside the well while it is operating, which may be lower than the water level in the aquifer. As such, information regarding these factors is important when assessing impacts to individual wells; however, it is not readily available. For this reason, our present evaluation uses saturated thickness and interference drawdown, which can be determined by applying our analytical drawdown model to available information regarding nearby wells, to assess the range of potential impacts that may reasonably be expected. In addition, it is possible that other wells may be located in the vicinity of the Site for which even basic locational information is not available.

Wells screened in the shallower zone are defined for purposes of this report as being less than 200 feet deep. These wells are generally privately-owned domestic wells, with a smaller number of agricultural wells (see Table 1 in **Appendix G**). As a result, the shallower wells are more numerous than the deeper wells in the area surrounding the Site, but the shallower wells tend to have lower pumping rates. For evaluation of interference drawdown-related impact, the shallower wells are important because they are sensitive to smaller levels of drawdown than are deeper wells. For this reason, shallow wells are evaluated for Impacts 1 through 4; whereas, deeper wells (greater than 200 feet deep) are not considered to be at risk for Impacts 1 and 2 and are evaluated only for Impacts 3 and 4.

For the purposes of this analysis, Impacts 1 and 2 are considered a significant impact and may be grouped together since they both result in a well's being rendered unusable. Whether Impact 3 occurs depends on how deep a well's pump is set, which is a well-specific factor that may or may not be applicable to a given well. Thus, the prevalence of Impact 3 is unknown due to unknown well-specific factors important to determining the occurrence of Impact 3. Impact 3 is therefore considered to be a potentially significant impact in neighboring wells (wells within 1.5 miles of the center of the Site). Impact 4 can occur in shallow or deeper wells that may or may not be at risk of the first three impacts and its significance is dependent on the relative cost increase that results to the well user.

Near the center of the Wilfred site (a possible well location), 193 shallow wells were identified within 1.5-miles. The saturated thickness of the 193 shallow wells ranges from 3.0 to 160 feet. It is estimated that if an on-site extraction well were pumped at 200 gpm (0.29 MGD) (a conservative analysis that projects a worst case scenario), then a drop of 2.9 to 9.1 feet would occur in neighboring, shallow water wells. Estimated remaining saturated thickness after deducting interference drawdown ranges from -1.0 to 154.5 feet.

Wells with a remaining saturated thicknesses of less than 20 feet may be considered at greatest risk for going dry or being rendered unusable by having insufficient available drawdown to support normal, primarily residential, pumping. Eight such wells were identified and are highlighted in Table 1 in **Appendix G**. Wells with remaining saturated thicknesses between 20 and 40 feet may have a smaller, but still significant risk of experiencing these impacts. There are 31 such wells in the vicinity of the Wilfred site. Wells with remaining saturated thicknesses over 60 feet are probably not at a significant risk of being dewatered or rendered unusable. Therefore, eight of the neighboring shallow wells would be rendered ineffective (Impacts 1 and 2), 31 wells would be at significant risk of being rendered ineffective, and 154 wells would be at low risk of being rendered ineffective (KOMEX, 2007a). It is possible that lowering of the pump (Impact 3) would be required in some of the neighboring shallow wells that are not otherwise rendered

ineffective. Whether or not these impacts are experienced depends on whether groundwater levels continue to recover in the area surrounding the site, and the degree to which deeper groundwater pumping actually affects the shallow zone.

Within 1.5 miles of a possible well location near the center of the site, 61 deeper wells were found. These wells have reported depths of 201 to 1,501 feet, with estimated saturated thickness ranging from 66 to 1,367 feet. Estimated drawdown of deep wells ranged from 3.1 to 17.8 feet. All of the deep wells are expected to experience some drawdown; however, no deep wells would be at risk of being rendered ineffective (Impacts 1 and 2) (KOMEX, 2007a). It is possible that lowering of the pump (Impact 3) would be required in some of the neighboring shallow wells.

Significant (Impacts 1 and 2) and potentially significant (Impact 3) impacts to well operation would occur at wells within the vicinity of the site soon after pumping begins for the project. Mitigation measures contained in **Section 5.2.2** would reduce these impacts to a less-than-significant level.

As described in detail in **Appendix G**, lower capacity (mostly residential) wells would not be noticeably affected by increased pumping costs caused by decreased water levels (Impact 4). Increased costs at these wells are only expected to be a few dollars per year. Costs would be higher for higher capacity wells, but the percentage increase of pumping and electrical costs would still be very small. Thus, significant increases in pumping costs (Impact 4) would not occur. Nonetheless, mitigation measures are included in **Section 5.2.2** that would reduce less-than-significant impacts to pumping costs. Given that there is incomplete or unavailable information regarding the analysis of impacts to groundwater, pursuant to the Council on Environmental Quality's NEPA Guidelines (40 CFR 1502.22), we have attempted to provide as much information as possible, note where the information is lacking, and have made reasonable assumptions based on the information that we have available. **Section 5.2.2** outlines a detailed monitoring and mitigation program that would be implemented in order to clarify the impacts that actually result and well as provide appropriate mitigation.

In addition to concerns regarding local access to water supply as resulting from a new on-site well, there is a perception that a groundwater supply is in a state of overdraft. Effects on regional groundwater sustainability are analyzed in **Section 4.12**.

Groundwater Quality

As discussed in **Section 2.2.7**, wastewater would either be conveyed to the Laguna Subregional Treatment Plant, or treated on-site. As described in the Water/Wastewater Feasibility Study (**Appendix D**) and **Section 2.2.7**, on-site treatment would be by a "Tertiary Treatment Process" that has the capability of treating wastewater to a quality level that meets California Title 22

standards for Unrestricted Irrigation Water Reclamation. Treated wastewater would be temporarily stored in an on-site storage pond. Treated-wastewater disposal would occur through the use of sprayfields, and possibly via the Bellevue-Wilfred Channel during the wet season. Discharge of treated wastewater would occur under an NPDES permit. Since discharge would meet requirements of an NPDES permit, impacts to groundwater quality would be less than significant.

4.3.2 ALTERNATIVE B – NORTHWEST STONY POINT CASINO

SURFACE WATER

Flooding

Under Alternative B, Less than half of the hardscape proposed would be located within the 100-year floodplain. Proposed plans would elevate the buildings and structures five feet in elevation above the footprint of the 100-year floodplain. The parking areas would be at least one-foot above the floodplain. The import of fill soils to raise the elevation of the project facilities would reduce total floodplain storage during a flood event and can increase the intensity of flooding downstream.

A grading and drainage plan has been prepared as part of the project to remedy the potential loss of floodplain storage caused by Alternative B. To accomplish this, stormwater detention has been incorporated into the constructed wetland design for the southerly portions of the Stony Point site (see **Figure 2-11**). Design of the stormwater detention basin takes into account the increase in runoff created by constructed impervious surfaces (parking lots, sidewalks, and rooftops), encroachment into the 100-year floodplain by the grading footprint comprised of fill soils associated with the proposed hotel, casino, parking lots, roads, and the potential discharge of 300,000 gpd of treated waste water effluent (Robert A. Karn & Associates, Inc., 2006; **Appendix C**). Stormwater detention basins would account for any flood storage lost by development of Alternative B; therefore, meet the requirements of Federal Executive Order 11988. A less-than-significant impact to downstream flooding from loss of floodplain storage and stormwater runoff would result.

A seasonal storage pond and portions of the spray fields are located outside of the 100 year floodplain. The WWTP and a seasonal storage pond would be located within the 100-year floodplain (see **Figures 2-12** and **2-13**). The required NPDES permit will not allow discharge of treated wastewater to surface water during a flood event. Sprayfields would be operated to insure no runoff to surface waters and would therefore also not be operated during flood events. The WWTP and seasonal storage ponds within the 100-year floodplain would be elevated above the 100-year floodplain elevation (see **Section 2.3.6** and **Appendix D**) in order to minimize the commingling of flood waters with untreated wastewater and to insure unanticipated discharges to

flood waters do not occur. Thus, the operation of on-site wastewater treatment facilities would not significantly impact flooding.

Construction Impacts

Construction impacts of Alternative B would be similar to those of Alternative A, with only minor differences between the designs of the two alternatives. Construction impacts would be potentially significant. Mitigation is discussed in **Section 5.2.2** to reduce impacts from construction.

Stormwater Runoff

Operational impacts of Alternative B from stormwater would be similar to Alternative A as the extent of parking surfaces and rooftops of Alternative B is similar to Alternative A; only configured differently. Use of detention basins and runoff filtering discussed in Alternative A would be similar for Alternative B. Thus, the impact of runoff to drainage and water quality would be less than significant. Nonetheless, mitigation measures have been included in **Section 5.2.2** that would reduce impacts from stormwater runoff.

Wastewater

Unlike Alternative A, Alternative B would not include the option of conveying wastewater to the Laguna WWTP. Wastewater quality and permitting requirements for an on-site WWTP would be similar to Alternative A. See analysis of impacts from wastewater above under Alternative A for full discussion. Impacts from treatment plant operations would be less than significant. Nonetheless, mitigation measures have been included in **Section 5.2.2** that would reduce impacts from wastewater.

GROUNDWATER

Groundwater Levels

Alternative B groundwater demands would be the same as Alternative A. Unlike Alternative A, Alternative B would not reduce long-term City water usage by a projected 95 gpm, because the Stony Point site does not overlap with the City of Rohnert Park's Northwest Specific Plan (South) area. The four wells existing on the Stony Point site would be abandoned because they are inadequate for the needs of Alternative B. Two wells are currently active and two are currently abandoned and sealed. Unlike Alternative A, with Alternative B, full build-out of the City of Rohnert Park's Northwest Specific Plan (South) would proceed. This build-out is further discussed in **Section 4.12**, Cumulative Effects. For further discussion of impacts to groundwater, see analysis for Alternative A, above.

Pumping of groundwater at the Stony Point site would potentially result in dewatering or a significant reduction in saturated thickness of neighboring wells as under Alternative A, given that both Alternatives A and B would include new wells pumping at the same levels. The groundwater level impacts would be significant. Mitigation is discussed in **Section 5.2.2** to reduce impacts to groundwater levels.

As described under Alternative A, impacts to increased pumping costs for neighboring wells would be less than significant. Nonetheless, mitigation measures are included in **Section 5.2.2** that would further reduce impacts to a less-than-significant level.

In addition to concerns regarding local access to water supply as resulting from a new on-site well, there is a perception that a groundwater supply is in a state of overdraft. Effects on regional groundwater sustainability are analyzed in **Section 4.12**.

Groundwater Quality

Alternative B would use storage and disposals systems for treated wastewater that are similar to those described for the on-site treatment option for Alternative A. As described for Alternative A, effects to groundwater quality would be less than significant.

4.3.3 ALTERNATIVE C – NORTHEAST STONY POINT CASINO

SURFACE WATER

Flooding

Under Alternative C, slightly over half of the hardscape proposed would be located within the 100-year floodplain. As with Alternative B, proposed plans would elevate the buildings and structures five feet in elevation above the footprint of the 100-year floodplain. The parking areas would be at least one foot above the floodplain. The import of fill soils to raise the elevation of the project facilities would reduce total floodplain storage during a flood event and can increase the intensity of flooding downstream.

A grading and drainage plan has been prepared as part of the project to remedy the potential loss of floodplain storage caused by Alternative C. To accomplish this, stormwater detention has been incorporated into the constructed wetland design for southerly portions of the Stony Point site (see **Figure 2-16**). Design of the basin takes into account the increase in runoff created by constructed impervious surfaces (parking lots, sidewalks, and rooftops), encroachment into the 100-year floodplain by the grading footprint and fill soils of the hotel, casino, parking lots, roads, and the potential discharge of 300,000 gpd of treated waste water effluent (Robert A. Karn & Associates, Inc., 2006; **Appendix C**). Stormwater detention basins would account for any flood storage lost by development of Alternative C; therefore, meet the requirements of Federal

Executive Order 11988. Thus, a less-than-significant impact to downstream flooding from loss of floodplain storage and stormwater runoff would result.

A seasonal storage pond and portions of the sprayfields are located outside of the 100-year floodplain. The WWTP and a seasonal storage pond would be located within the 100-year floodplain (see **Figures 2-17** and **2-18**). The required NPDES permit will not allow discharge of treated wastewater to a surface water during a flood event. Sprayfields would be operated to insure no runoff to surface waters and would therefore not be operated during flood events. The wastewater treatment plant and seasonal storage ponds within the 100-year floodplain would be elevated above the 100-year floodplain elevation (see **Section 2.4.6** and **Appendix D**) in order to minimize the commingling of flood waters with untreated wastewater and to insure unanticipated discharges to flood waters do not occur. Thus, the operation of on-site wastewater treatment facilities would not significantly impact flooding.

Construction Impacts

Construction impacts of Alternative C would be similar to those of Alternative A, with only minor differences between the designs of the two alternatives. Construction impacts would be potentially significant. Mitigation is discussed in **Section 5.2.2** to reduce impacts from construction.

Stormwater Runoff

Operational impacts of Alternative C from stormwater would be similar to Alternative A as the extent of parking surfaces and rooftops of Alternative C is similar to Alternative A; only configured differently. Use of detention basins and runoff filtering discussed in Alternative A would be similar for Alternative C. Thus, the impact of runoff to drainage and water quality would be less than significant. Nonetheless, mitigation measures have been included in **Section 5.2.2** that would reduce impacts from stormwater runoff.

Wastewater

Wastewater quality and permitting requirements would not differ from Alternative A. See analysis of impacts from wastewater above under Alternative A. Impacts from treatment plant operations would therefore be less than significant. Nonetheless, mitigation measures have been included in **Section 5.2.2** that would reduce impacts from wastewater.

GROUNDWATER

Groundwater Levels

Alternative C would utilize the same amount of groundwater as Alternative B from an on-site well (with a second well constructed for redundancy). For a discussion of impacts to

groundwater, see the analysis under Alternative B, above. Pumping of groundwater at the Stony Point site would potentially result in dewatering or significant reduction in saturated thickness of neighboring wells to a similar level as Alternative A given that both alternatives would include new wells pumping at the same levels. These would be significant impacts and mitigation is discussed in **Section 5.2.2** to reduce impacts to groundwater to a less-than-significant level.

As described under Alternative A, impacts to increased pumping costs for neighboring wells would be less than significant. Nonetheless, mitigation measures are included in **Section 5.2.2** that would reduce less-than-significant impacts to pumping costs.

Aside from concerns regarding local access to water supply as a result of extraction from a new well on-site, is the perception that the groundwater supply is in a state of overdraft. Effects on regional groundwater sustainability are analyzed in **Section 4.12**.

Groundwater Quality

Design of storage systems for treated wastewater would not differ from Alternative B. As described for Alternative B, effects to groundwater quality would be less than significant.

4.3.4 ALTERNATIVE D – REDUCED INTENSITY (STONY POINT SITE)

SURFACE WATER

Flooding

As with Alternative B, less than half of the hardscape proposed for Alternative D would be located within the 100-year floodplain. Under Alternative D,, proposed plans would elevate the buildings and structures five feet in elevation above the footprint of the 100-year floodplain. The parking areas would be at least one foot above the floodplain. The import of fill soils to raise the elevation of the project facilities would reduce total floodplain storage during a flood event and could increase the intensity of flooding downstream.

A grading and drainage plan has been prepared as part of the project to remedy the loss of floodplain storage caused by Alternative D. To accomplish this, stormwater detention has been incorporated into the constructed wetland design for southerly portions of the Stony Point site (see **Figure 2-11**). Design of the basin takes into account the increase in runoff created by constructed impervious surfaces (parking lots, sidewalks, and rooftops), encroachment into the 100-year floodplain by the grading footprint and fill of the hotel, casino, parking lots, and roads, and the potential discharge of treated waste water effluent (Robert A. Karn & Associates, Inc., 2006; **Appendix C**). Stormwater detention basins would account for any flood storage lost by development of Alternative D; therefore, meet the requirements of Federal Executive Order

11988. A less-than-significant impact to downstream flooding from loss of floodplain storage and stormwater runoff would result.

A seasonal storage pond and portions of the sprayfields are located outside of the 100-year floodplain. The wastewater treatment plant and a seasonal storage pond would be located within the 100-year floodplain (see **Figures 2-21** and **2-22**). The required NPDES permit will not allow discharge of treated wastewater to a surface water during a flood event. Sprayfields would be operated to insure no runoff to surface waters and would therefore also not be operated during flood events. The wastewater treatment plant and seasonal storage ponds within the 100-year floodplain would be elevated above the 100-year floodplain elevation (see **Section 2.5.6** and **Appendix D**) in order to minimize the commingling of flood waters with untreated wastewater and to insure unanticipated discharges to flood waters do not occur. Thus, the operation of on-site wastewater treatment facilities would not significantly impact flooding.

Construction Impacts

Construction impacts of Alternative D would be similar to those of Alternative A, with Alternative D construction occurring at a smaller scale, but with a similar footprint. Construction impacts would be potentially significant. Mitigation is discussed in **Section 5.2.2** to reduce impacts from construction.

Stormwater Runoff

The impact of stormwater runoff associated with Alternative D would be similar to those of Alternative A, with the exception that the extent of parking surfaces and roof tops associated with Alternative D are slightly smaller in area. Use of detention basins and runoff filtering discussed above under Alternative A would be similar for Alternative D. Thus, the impact of runoff to drainage and water quality would be less than significant. Nonetheless, mitigation measures have been included in **Section 5.2.2** that would reduce impacts from stormwater runoff.

Wastewater

Wastewater quality and permitting requirements related to Alternative D would not differ from Alternative A. See analysis of impacts from wastewater above under Alternative A. Impacts from treatment plant operations would therefore be less than significant. Nonetheless, mitigation measures have been included in **Section 5.2.2** that would reduce impacts from wastewater.

GROUNDWATER

Groundwater Levels

Under Alternative D, groundwater would be used to a lesser extent than under Alternatives A, B, and C with an average water demand at 115 gpm. The project would receive its water supply

from two new production wells with a sustained long-term pumping rate of 150 gpm or 0.14 MGD. One well can be used as an extraction well while the other new well would serve as a groundwater-monitoring well and would provide a back-up supply when the main well cannot be used due to maintenance or repair. These wells would be screened in permeable zones between 200 and 600 feet bgs. The four existing on-site wells would be abandoned and a number of new on-site well locations have been proposed (HydroScience, 2008). With development of Alternative D, full build-out of the City of Rohnert Park's Northwest Specific Plan (South) would proceed. This build-out is further discussed in **Section 4.12**, Cumulative Effects.

Net water use under Alternative D would be significantly reduced compared to Alternatives B and C, but equivalent to Alternative A (although the Alternative A development would utilize more groundwater than Alternative D it would also displace groundwater usage under the Northwest Specific Plan). Dewatering or significant reductions in the saturated thickness of neighboring wells are possible. These represent significant impacts. Mitigation is contained in **Section 5.2.2** that would reduce groundwater effects to a less-than-significant level.

As described under Alternative A, impacts to increased pumping costs for neighboring wells would be less than significant. Nonetheless, mitigation measures are included in **Section 5.2.2** that would reduce less-than-significant impacts to pumping costs.

Aside from concerns regarding local access to water supply as a result of extraction from a new well on-site, is the perception that the groundwater supply is in a state of overdraft. Effects on regional groundwater sustainability are analyzed in **Section 4.12**.

Groundwater Quality

Design of storage systems for treated wastewater would not differ from Alternative B. As described for Alternative B, effects to groundwater quality would be less than significant.

4.3.5 ALTERNATIVE E – BUSINESS PARK

SURFACE WATER

Flooding

A less-than-half portion of the hardscape proposed under Alternative E would be located within the 100-year floodplain. Under Alternative E, proposed plans would elevate the buildings and structures five feet in elevation above the footprint of the 100-year floodplain. The parking areas would be at least one foot above the floodplain. The import of fill soils to raise the elevation of the project facilities would reduce total floodplain storage during a flood event and can increase the intensity of flooding downstream.

A grading and drainage plan has been prepared as part of the project to remedy the potential loss of floodplain storage caused by Alternative E. To accomplish this, stormwater detention has been incorporated into the constructed wetland design for southerly portions of the Stony Point site (see **Figure 2-11**). Design of the basin takes into account the increase in runoff created by constructed impervious surfaces (parking lots, sidewalks, and rooftops), encroachment into the 100-year floodplain by the grading footprint and fill soils of the hotel, casino, parking lots, and roads, and the potential discharge of treated waste water effluent (Robert A. Karn & Associates, Inc., 2006; **Appendix C**). Stormwater detention basins would account for any flood storage lost by development of Alternative E; therefore, meet the requirements of Federal Executive Order 11988. Thus, a less-than-significant impact to downstream flooding from loss of floodplain storage and stormwater runoff would result.

A seasonal storage pond and portions of the sprayfields are located outside of the 100-year floodplain. The wastewater treatment plant and a seasonal storage pond would be located within the 100-year floodplain (see **Figures 2-26** and **2-27**). The required NPDES permit will not allow discharge of treated wastewater to a surface water during a flood event. Sprayfields would be operated to insure no runoff to surface waters and would therefore also not be operated during flood events. The WWTP and seasonal storage ponds within the 100-year floodplain would be elevated above the 100-year floodplain elevation (see **Section 2.6.6** and **Appendix D**) in order to minimize the commingling of flood waters with untreated wastewater and to eliminate unanticipated discharges to flood waters do not occur. Thus, the operation of on-site wastewater treatment facilities would not significantly impact flooding.

Construction Impacts

Construction impacts of Alternative E would be similar to those of Alternative A, with Alternative E construction occurring at a smaller scale, but with a similar footprint. Construction impacts would be potentially significant. Mitigation is discussed in **Section 5.2.2** to reduce construction impacts.

Stormwater Runoff

Operational impacts of Alternative E would be similar to Alternative B to the extent that the surface area of parking structures and roof-tops of Alternative E would be slightly smaller but similar to Alternative B. Use of detention basins and runoff filtering discussed above under Alternative B would be similar for Alternative E. Thus, the impact of runoff to drainage and water quality would be less than significant. Nonetheless, mitigation measures have been included in **Section 5.2.2** that would reduce impacts from stormwater runoff.

Wastewater

Wastewater quality and permitting requirements would not differ from Alternative B (see analysis of impacts from wastewater above under Alternative B). Impacts from treatment plant operations would therefore be less than significant. Nonetheless, mitigation measures have been included in **Section 5.2.2** that would reduce impacts from wastewater.

GROUNDWATER

Groundwater Levels

Under Alternative E, groundwater would be used to a lesser extent than under Alternatives A, B, and C with an average water demand is estimated at 43 gpm. The project would receive its water supply from two new 50 gpm wells drilled approximately 600 feet deep. One of the wells would be a production well and the other would serve as a groundwater monitoring well and provide, a back up supply when the main well cannot be used due to maintenance or repair. These wells would be screened in permeable zones between 200 and 600 feet bgs. The four existing on-site wells would be abandoned and a number of new on-site well locations have been proposed (HydroScience, 2008). With development of Alternative E, full build-out of the City of Rohnert Park's Northwest Specific Plan (South) would proceed. This build-out is further discussed in the **Section 4.12**, Cumulative Effects.

Alternative E would effectively utilize approximately 50 percent less water than Alternatives A and D; and approximately 75 percent less water than Alternatives B and C. Thus, impacts to groundwater levels would be reduced with Alternative E. Nevertheless, dewatering or significant reductions in the saturated thickness of neighboring wells are possible and represent significant impacts. Mitigation is contained in **Section 5.2.2** that would reduce groundwater effects to a less-than-significant level.

As described under Alternative A, impacts to increased pumping costs for neighboring wells would be less than significant. Nonetheless, mitigation measures are included in **Section 5.2.2** that would reduce less-than-significant impacts to pumping costs.

Aside from concerns regarding local access to water supply as a result of extraction from a new well on-site, is the perception that the groundwater supply is in a state of overdraft. Effects on regional groundwater sustainability are analyzed in **Section 4.12**.

Groundwater Quality

Design of storage systems for treated wastewater would not differ from Alternative B. As described for Alternative B, effects to groundwater quality would be less than significant.

4.3.6 ALTERNATIVE F – LAKEVILLE CASINO

SURFACE WATER

Flooding

A portion of the hardscape proposed under Alternative F would be located within the 100-year floodplain. As with Alternative B, proposed plans would elevate the buildings and structures five feet in elevation above the footprint of the 100-year floodplain. The parking areas would be at least one foot above the floodplain. The import of fill soils to raise the elevation of the project facilities would reduce total floodplain storage during a flood event and can increase the intensity of flooding downstream.

A grading and drainage plan has been prepared to remedy the loss of floodplain storage caused by Alternative F. To accomplish this, stormwater detention basins have been incorporated into the project design on the Lakeville site (**Figure 2-29**). Design of the basins takes into account the increase in runoff created by the construction of impervious surfaces (parking lots, sidewalks, and rooftops); encroachment into the 100-year floodplain by the grading footprint and fill of the hotel, casino, parking lots, and roads; and the potential discharge of 300,000 gpd of treated wastewater effluent (Robert A. Karn & Associates, Inc., 2006; **Appendix C**). Stormwater detention basins would account for any flood storage lost by development of Alternative F and; therefore, meet the requirements of Federal Executive Order 11988. Thus, a less-than-significant impact to downstream flooding from loss of floodplain storage and stormwater runoff would result.

The wastewater treatment plant and seasonal storage ponds would be located within the 100-year floodplain (see **Figures 2-30** and **2-31**). Portions of the sprayfields are located outside of the 100-year floodplain. The required NPDES permit will not allow discharge of treated wastewater to surface water during a flood event. Sprayfields would be operated to eliminate runoff to surface waters and would therefore also not be operated during flood events. The WWTP and seasonal storage ponds within the 100-year floodplain would be elevated above the 100-year floodplain elevation (see **Section 2.7.6** and **Appendix D**) in order to minimize the commingling of flood waters with untreated wastewater and to eliminate unanticipated discharges to flood waters do not occur. Thus, the operation of on-site wastewater treatment facilities would not significantly impact flooding.

Construction Impacts

Construction impacts from Alternative F would be similar to those of Alternative A, with only minor differences between the designs of the two alternatives. Construction impacts would be potentially significant. Mitigation is discussed in **Section 5.2.2** to reduce construction impacts.

Stormwater Runoff

The impacts of stormwater runoff associated with Alternative F would be similar to those of Alternative A, with the exception of the layout of parking surfaces and roof-tops associated with Alternative F are arranged in a different configuration. The use of detention basins and runoff filtering discussed under Alternative B would be similar for Alternative F. Thus, the impact of runoff to drainage and water quality would be less than significant. Nonetheless, mitigation measures have been included in **Section 5.2.2** that would reduce impacts from stormwater runoff.

Wastewater

Wastewater quality and permitting requirements for Alternative F would be similar to Alternative A, under Alternative F, the wastewater would be discharged to an unnamed on-site drainage and would eventually flow to the Petaluma River instead of the Russian River (see analysis of impacts from wastewater above under Alternative A). Impacts from treatment plant operations would therefore be less than significant. Nonetheless, mitigation measures have been included in **Section 5.2.2** that would reduce impacts from wastewater.

GROUNDWATER

Groundwater Levels

Alternative F would utilize the same volume of groundwater as Alternative A from an on-site well (with a second well constructed for redundancy). At least one of the wells used would be a recently constructed well located on the southwestern corner of the Lakeville site. Well testing conducted by Hydroscience (2008) in 2003 found satisfactory flows and generally good water quality in the recently drilled well.

Potential adverse impacts to the production capacity of neighboring water supply wells may occur due to on-site pumping lowering the water level (e.g. dewatering or reducing the saturated thickness from which to extract groundwater) of the neighboring wells (see description of the range of impact above under Alternative A).

There are 57 wells located in the vicinity of the Lakeville site, all of which may be expected to experience drawdown impacts except for well 12 (which is located across the Petaluma River from the site) and wells 26, 27, and 28 (located in fractured bedrock) (see **Appendix G** and **Figure 3.9-1**). An analytical drawdown model prepared by KOMEX (2007b) predicted drawdown impacts to the identified neighboring wells of at a minimum of 10-feet and, in some cases, over 100-feet near the site. Under Alternative F, wells at risk for interference drawdown impacts are those completed at shallow depths, located at close proximity to the project site, and those having low efficiencies. A significant impact would result if a neighboring well goes dry, either through the lowering of the water table below the well or the pump level (Impacts 1, 2, or

3). As discussed under Alternative A, neighboring wells could also experience increased electrical costs from increased pumping under Alternative F. Like Alternatives A-E, cost increases would be minimal and less than significant for smaller capacity wells. However, for a larger capacity well that is located close to the site, a significant pumping cost increase of over ten percent could result. Mitigation is discussed in **Section 5.2.2** that would reduce impacts to a less-than-significant level.

Aside from concerns regarding local access to water supply as a result of extraction from a new well on-site, is the perception that the groundwater supply is in a state of overdraft. Effects on regional groundwater sustainability are analyzed in **Section 4.12**.

Groundwater Quality

It is possible that pumping at the Lakeville site would induce seawater intrusion into the aquifer. The extent to which seawater intrusion would occur is was not possible to determine. Seawater intrusion, if it were to occur, would impact off-site wells between the Lakeville site and the Petaluma River or the San Pablo Bay. Seawater intrusion would cause well, pump and pipe corrosion; render water objectionable or unusable; and create the need for water treatment prior to use. Additionally, seawater intrusion could trigger regulatory requirements to cease pumping to possibly to restore affected groundwater. Impacts to groundwater quality would be potentially significant. Mitigation is discussed in **Section 5.2.2** that would reduce impacts to groundwater quality.

4.3.7 ALTERNATIVE G – NO ACTION

Under the No Action Alternative, it is assumed that future development of the Wilfred site, Stony Point site, and Lakeville site would be guided by existing land use plans. For the Stony Point site and Lakeville site there are currently no known development plans. .According to the Northwest Specific Plan (South; City of Rohnert Park, 2004) the northeast corner of the Wilfred site would be developed with residential and commercial uses

SURFACE WATER

Flooding

All three Sites (Wilfred, Stony Point, and Lakeville) predominantly occur within the 100-year floodplain. No change in land use or development of facilities is expected on the Stony Point or Lakeville sites. The only currently known development, on the northwest corner of the Wilfred site consistent with the Northwest Specific Plan, is outside of the 100-year floodplain. No alteration of the floodplain is reasonably foreseeable. Development under the Northwest Specific Plan would result in increases in stormwater runoff from increased hardscape on the Wilfred site. According to the Initial Study for the City of Rohnert Park Northwest Specific Plan (South)

Project, drainage channels downstream of the Wilfred site would need to be expanded to accommodate increased flows from the Wilfred site. Even with the expansion of immediate drainage channels such as Labath Creek, potentially significant increases in downstream flows may occur during flood events. Mitigation measures that would decrease potentially significant impacts to a less-than-significant level are located in **Section 5.2.2**.

Construction Impacts

No development plans are currently known for the Stony Point or Lakeville sites. As mentioned the northeast corner of the Wilfred site would be developed in accordance with the Northwest Specific Plan (South). Such development could cause impacts similar to those described for Alternative A. Impacts from development at the Wilfred site would be potentially significant. Mitigation is discussed in **Section 5.2.2** to reduce any construction impacts to a less-than-significant level.

Stormwater Runoff

Stormwater runoff would not change at the Stony Point or Lakeville sites as a result of Alternative G. The northeast corner of the Wilfred site would be developed according to the Northwest Specific Plan (South). Impervious surfaces may be increased due to the construction of buildings and paved areas; therefore, increasing stormwater runoff in the area. As previously described, runoff from facilities such as parking lots could flush trash, debris, oil, and other contaminants into area surface waters. The Northwest Specific Plan (South) incorporates a plan to improve La Bath Creek. The improvements would increase the width and depth of the creek, improving hydraulic capacity and post-construction storm water cleaning. Storm drains would also be included in improvements to Dowdell, La Bath, and Langner Avenues. Impacts from stormwater runoff would be less than significant.

Wastewater

Wastewater would not be generated at the Stony Point and Lakeville sites as there are no new development plans proposed in the areas. Wastewater would be generated from the development associated with the Northwest Specific Plan (South) on the northeast corner of the Wilfred site. Furthermore, the City of Rohnert Park has 0.48 MGD of unused allotment in the subregional wastewater disposal system, and has authorization from the City of Santa Rosa to use a portion of its unused allotment. The City of Rohnert Park has access to sufficient unused capacity to serve the Northwest Specific Plan (South). The City of Rohnert Park was also planning and constructing an interceptor line that would carry effluent from the City to the Llano plant in the Northwest Specific Plan (South). Treated wastewater would be discharged under an existing NPDES permit held by the wastewater disposal system. Impacts from wastewater would be less than significant.

GROUNDWATER

Groundwater Levels

There are no development plans currently proposed for the Stony Point or Lakeville sites. At the Stony Point site, at least two wells would continue pumping a comparatively small amount of water for agricultural purposes. Impacts to groundwater levels would be less than significant. At the Lakeville site, three existing wells would continue to pump water for agricultural purposes. Two wells have undetermined pumpage rates. One well was tested by KOMEX (2007b) in a 48-hour constant pumping test at an average of 90 gpm (0.13 MGD); however, this is a higher rate than would be expected during normal use. Impacts to groundwater levels would be less than significant.

Development of the northeast corner of the Wilfred site would utilize groundwater. As discussed in Alternative A, projected water use in the area of overlap between the Wilfred site and the Northwest Specific Plan, would be approximately 95 gpm. Based on the City of Rohnert Park's projected proportion of use of groundwater to overall water use, approximately 25 gpm of groundwater would be used. The City of Rohnert Park's Water Supply Assessment (2005) has allotted sufficient water to allow for development of the Northwest Specific Plan (South). Therefore, impacts to groundwater levels would be less than significant.

Groundwater Quality

No development plans are currently proposed for the Stony Point or Lakeville sites. The two sites would presumably remain as agricultural use. The ongoing level of impact on groundwater quality due to leachate from cattle grazing would continue at both Sites. Impacts to groundwater quality would be less than significant.

The northeast corner of the Wilfred site would be developed in accordance with the Northwest Specific Plan (South), and the remaining portion of the site would presumably remain as agricultural use. Wastewater would be treated by the subregional wastewater disposal system, and discharged under an existing NPDES permit. Stormwater would be drained from the site in accordance with the Northwest Specific Plan (South). Impacts to groundwater quality would be less than significant.

4.3.8 ALTERNATIVE H –REDUCED INTENSITY (WILFRED SITE)

Development of Alternative H would result in similar but reduced effects from flooding, construction impacts, stormwater runoff, wastewater, and groundwater impacts as Alternative A.

SURFACE WATER

Flooding

As with Alternative A, the layout of the hardscape for Alternative H's buildings and structures is designed to be located outside of the 100-year floodplain. Therefore, no loss of 100-year floodplain storage would occur, and the portion of the site within the floodplain would be utilized for sprayfields and open space. Sprayfields would not be operated during flood events in order to eliminate additional runoff to surface waters would occur. Additionally, the NPDES permit for wastewater discharge would not allow discharge of treated wastewater to a surface water during a flood event. Therefore, operation of the on-site wastewater treatment facilities would not significantly impact flooding.

Flooding effects resulting from increased impervious surfaces due to construction of Alternative H would be similar to those under Alternative A, but reduced in intensity. In addition, the same southern detention basin design as proposed under Alternative A would be included for Alternative H, resulting in an even greater benefit to area flood storage than Alternative A due to the reduced footprint of Alternative H. Incorporation of the stormwater detention basin and other measures, as specified in the drainage plan, would enable temporary collection of stormwater runoff from hardscape areas. Stormwater runoff would then be released over time, to reduce the impacts to downstream flooding and result in less-than-significant downstream flooding impacts.

Construction Impacts

Construction impacts resulting from implementation of Alternative H would be similar to those of Alternative A. Alternative H would result in reduced construction activities, similar to those identified in Alternative D. Incorporation of the mitigation measures specified in **Section 5.2.2** would reduce these impacts to less-than-significant levels.

Stormwater Runoff Construction of Alternative H would contain a reduced size of impervious surfaces (roof-tops and parking structures) as Alternative A; however, would consist of the same components of Alternative D. Therefore, operational impacts from stormwater under Alternative H would occur to the same extent as Alternative A, but would have the reduced intensity similar to Alternative D. Detention basins and runoff filtering utilized for Alternative H would be similar to that proposed for Alternative D. Therefore, the impacts to drainage and water quality would be less than significant. Implementation of the mitigation measures included in **Section 5.2.2** would further reduce impacts related to stormwater runoff.

Wastewater

Wastewater quality and permitting requirements related to Alternative H would not differ from Alternative D, except for the additional option of wastewater treatment at the Laguna WWTP

described under Alternative A. A full analysis of wastewater impacts are located in Alternative A and D (**Sections 4.3.1** and **4.3.4**). Methods for wastewater disposal under Alternative H would be the same as those described for Alternative A, except that volumes required for seasonal storage ponds and sprayfields would be the same as Alternative D. Impacts from treatment plant and disposal operations would be less than significant. Mitigation measures have been included in **Section 5.2.2** to further reduce any impacts from wastewater.

GROUNDWATER

Groundwater Levels

In comparison to Alternative A, groundwater usage would be reduced under implementation of Alternative H and would be the same as that of Alternative D. New water supply facilities would also be the same as those described in Alternative D, except that they would be located on the Wilfred site. Potential impacts related to groundwater pumping for Alternative H would be the same extent as those described in the analysis of Alternative D, except that they would also occur on the Wilfred site (see **Section 4.3.4).** Mitigation measures for potential groundwater impacts that would occur under the implementation of Alternative H are included in **Section 5.2.2**, and these mitigation measures would reduce groundwater impacts to less-than-significant levels, as described in the analysis of Alternative D, above. Effects on regional groundwater sustainability are analyzed in **Section 4.12.**

Groundwater Quality

Under implementation of Alternative H, the design of storage systems and other facilities for treated wastewater would not differ from Alternative D, except that they would be located at the Wilfred site. Therefore, effects to groundwater quality would be less than significant.

4.4 AIR QUALITY

4.4.1 METHODOLOGY

The following is a description of the technical analysis approaches used to analyze the potential air quality impacts of the Proposed Project and Alternatives.

CONSTRUCTION-RELATED IMPACTS

URBEMIS 2002 version 8.7.0 was used to estimate emissions from all construction-related sources of the Proposed Project and Alternatives. URBEMIS is a California-specific computer model that is owned and modified by the local air pollution control districts and air quality management districts (AQMDs) in the State of California and recognized by the USEPA. URBEMIS estimates construction, area source, and operational emissions of ozone (O_3) precursors (reactive organic gases (ROG) and nitrogen oxides (NO_X)), carbon monoxide (CO), sulfur dioxide (SO_2), and inhalable particulate matter (PM_{10}) from potential land uses, using the most recent approved version of relevant California Air Resources Board (CARB) emissions models and emission factors and/or District-specific emission factors; and estimates emissions reductions. As discussed in **Section 3.4** of this EIS, the pollutants of concern in the Bay Area are ozone and particulate matter ten microns in size, therefore this document will primarily only provide information on the pollutants of concern. Because of URBEMIS's many enhancements, its ease of use, and its ready availability, the Bay Area Air Quality Management District (BAAQMD) strongly encourages Lead Agencies to use the model to estimate motor vehicle emissions from development proposals.[1] According to training documents, URBEMIS is typically used for CEQA, NEPA, & General Conformity.[2] The program is available from http://www.urbemis.com.

Previous versions of URBEMIS were designed to estimate only emissions from motor vehicle trips generated by land use development. The latest versions of URBEMIS have been enhanced so that the user can estimate construction and area source emissions and select mitigation measures for construction emissions, area sources, and employee motor vehicle trips.

For this project, URBEMIS defaults and site specific data were used with estimated construction times to begin in June of 2007, operating an average of 22 days per month for 27 months for Alternatives A, B, C, and F and 24 months for the reduced Alternatives D, E, G, and H. Output files from the URBEMIS 2002 model are presented in **Appendix W**.

[1] BAAQMD CEQA Guidelines – Assessing the Air Quality Impacts of Projects and Plans, Bay Area Air Quality Management District, December, 1999.
[2] URBEMIS 2002 Training, Sacramento Metropolitan AQMD, December 7, 2005.

There are two distinct phases during construction of the Proposed Project; the demolition and site-grading phase and the building phase. During the demolition and site grading phase, Alternative A and H will demolish two houses with a total volume of 85,540 cubic feet and Alternatives B, D, E, and G will demolish a barn with a volume of 210,000 cubic feet. These two phases do not overlap and therefore are evaluated separately. Site grading takes place in 2007, while construction takes place in 2008 and 2009. Construction impacts are short-term and will not overlap in time with operational emissions; therefore, construction impact significance is determined by comparing emissions associated with construction to the general conformity *de minimis* levels. General conformity thresholds do not apply to Alternative G; therefore, local thresholds are determined by the BAAQMD. The BAAQMD states that construction emissions are generally short-term in duration, but may still cause adverse air quality impacts. Experience has shown that there are a number of feasible control measures that can be reasonably implemented to reduce construction emissions. The BAAQMD has determined that significance with respect to construction emissions should be based on a consideration of the control measures to be implemented. If all appropriate control measures indicated in Table 2 of their Guidelines (BAAQMD, 1999) are implemented, construction impacts would be considered less than significant for PM_{10}. For the purposes of this EIS, in an attempt to be more comprehensive and after discussions with BAAQMD staff, construction-related emissions should be considered significant if they equal or exceed 100 tpy of ROG emissions, 100 tpy of NO_X emissions, 100 tpy of CO emissions, or 100 tpy of PM_{10} emissions (Bourguignon, 2004). These standards mirror the general conformity *de minimus* thresholds and are used in determining significance for this project. Although the San Francisco Bay Area Air Basin has not been designated as nonattainment for $PM_{2.5}$, for the purposes of this EIS we assume that emissions greater than 100 tpy (the $PM_{2.5}$ conformity de minimus threshold) should be considered significant.

Diesel Particulate Matter (DPM) has become a concern, since it was included as a toxic air contaminate in 1998. DPM is mainly emitted by heavy construction equipment and emissions in some instances can have a potentially significant impact. However, the Proposed Project and alternatives are located in areas where there are no more than 6 homes within 500 feet of the project sites. Given the sparely populated area and mitigation measures outlined in Section 5.2.3 B construction DPM emissions would be less than significant and are not discussed in subsequent sections.

OPERATIONAL IMPACTS

URBEMIS 2002 for version 8.7.0 for Windows was also used to estimate emissions associated with long-term operation of the Proposed Project and Alternatives. Input values for the URBEMIS 2002 model included URBEMIS defaults and data from the traffic studies for the Proposed Project and Alternatives (Kimly-Horn and Associates, Inc., 2004a, 2004b, 2005).

URBEMIS is a computer program that can be used to estimate emissions associated with land development projects in California such as residential neighborhoods, shopping centers, and office buildings and area sources such as gas appliances, wood stoves, fireplaces, and landscape maintenance equipment, as well as construction as mentioned above. URBEMIS uses data that is stratified by trip purpose. The trip categories are home to work, home to shop, home to other, other to work, and other to other. For non-home based trips, URBEMIS uses work, i.e. employee-based and non-work trips when analyzing all non-residential projects (commercial, industrial, institutional, etc).

Consistent with the approach applied in the traffic studies, the operational effects on air quality were analyzed with both near-term 2008 conditions, and with long-term 2020 conditions. Long-term air quality conditions are analyzed in **Section 4.12**.

Trip generation rates for the URBEMIS 2002 model runs have been adjusted to reflect primary and diverted-link trips estimated to be generated by the Proposed Project and Alternatives. This was done so that pass-by trips are not included in the URBEMIS 2002 analysis. Pass-by trips were excluded from the analysis to focus the analysis presented in this EIS on the net effects of each alternative. It was determined in the traffic study that although it was likely, some trips to the site would be pass-by trips, there was no empirical data to determine pass-by rate, so pass-by trips were conservatively not assumed in the analysis, however diverted-link trips were estimated at 15 percent.

The average length of vehicle trips associated with the Proposed Project and Alternatives is expected to vary from the default trip length values included in the URBEMIS 2002 model. Therefore, project-specific trip length values were used in the air quality analysis. The average trip length was estimated by:

- Identifying three geographic patron market areas (near market, medium distance, and long distance);
- Estimating the average distance to patrons in each market area;
- Estimating the percent of total patrons traveling from each market area; and
- Calculating an average trip length for all patrons.

Table 4.4-1 presents information on the calculation of the project-specific trip length values.

TABLE 4.4-1
CALCULATION OF AVERAGE TRIP LENGTH

Market Area	Population Centers	Average One-Way Trip Length (in miles)	Percent of Market
Alternatives A, B, C, D, E, and H			
Near Market	Santa Rosa to Petaluma	10	35%
Medium Distance	San Francisco, Oakland, Berkeley, Richmond, Martinez, Vallejo, Concord, Pittsburg, Fairfield, Vacaville, Napa County, Healdsburg, Cloverdale	40	50%
Long Distance	San Mateo County, Santa Clara County, central & eastern Alameda and Contra Costa counties, Yolo County, Sacramento County, Lake County, Mendocino County	80	15%
Weighted Average of All Three Markets		35.5	
Alternative F			
Near Market	Santa Rosa, Sonoma, Petaluma, San Rafael, Vallejo, Napa	10	45%
Medium Distance	San Francisco, San Mateo County, Oakland, Berkeley, Contra Costa County, Western Alameda County, Fairfield, Vacaville, Sausalito, Healdsburg, Cloverdale	40	45%
Long Distance	Santa Clara County, Eastern Alameda County, Yolo County, Sacramento County, Lake County, Mendocino County	80	10%
Weighted Average of All Three Markets		30.5	

Source: KDA, 2004; AES, 2005.

Operational Carbon Monoxide (CO) Impacts

Screening Procedures

Elevated concentrations of CO can occur in "hotspots" that experience substantial traffic volumes and traffic congestion. Therefore, there is possibility for localized adverse effects of elevated CO levels on sensitive receptors. The optimum condition for high CO concentrations would be cool and calm weather (stable and reduced air mixing layer) at a congested major roadway intersection (e.g. arterials and majors) with high traffic volumes and idling vehicles.

An initial screening was conducted to determine the need for detailed microscale dispersion modeling of carbon monoxide concentrations. The potential impact of the project alternatives on

local CO levels was assessed by applying screening procedures described in the *Transportation Project-Level Carbon Monoxide Protocol* (Institute of Transportation Studies, University of California, Davis 1996) and then, if indicated by the screening procedures, conducting detailed microscale air quality dispersion modeling.

The screening procedure applied in this EIS focuses on the effects that project alternatives have on intersection operations. Since elevated CO concentrations are associated with traffic congestion, a project is considered to have no potential for significant impacts on CO concentrations if it does not substantially contribute to excessive traffic congestion.

According to Section 4.7.4 of the *Transportation Project-Level Carbon Monoxide Protocol*, projects that would result in operation of a signalized intersection worsening from a level of service (LOS) D or better to a lower LOS rating (E or F) are considered to have the potential to result in a significant CO air quality impact. In addition, according to Section 4.7.3 of the protocol document, projects that would result in the worsening of a signalized intersection already operating at LOS E or F are considered to have the potential for resulting in a significant CO air quality impact.

Projects that meet such criteria are considered to have the potential to result in a significant CO air quality impact. According to the Protocol document, detailed dispersion modeling is not needed for projects that do not meet these criteria.

The screening procedures described above were applied to traffic analysis results presented in **Section 4.8**. The traffic analysis presents peak hour LOS at study intersections. Both the LOS results, and a comparison of LOS with and without the proposed project, are used to determine whether CO concentrations in excess of the air quality standards would occur. The CO screening procedure indicated that detailed modeling is not needed.

$PM_{2.5}$

Scientific evidence suggests that Sulfur Oxides (Sox), Volatile Organic Compounds (VOC's), Nitrogen Oxides (NOx), and ammonia (NH_3) are precursors to $PM_{2.5}$, however VOC's, and NH_3 have not been confirmed. At present the BAAQMD is in attainment for $PM_{2.5}$, however, in December 2006 the EPA changed the $PM_{2.5}$ NAAQS from 65 micrograms per cubic meters (ug/m^3) to 35 ug/m^3. The new standard would most likely result in violations of the $PM_{2.5}$ National Ambient Air Quality Standards (NAAQS) within the BAAQMD and ultimately cause the basin to be designated nonattainment. However, this will not happen until 2009 once the EPA evaluates the 2007 and 2008 $PM_{2.5}$ data recorded by the District's monitoring stations (see **Table 3.4-5**). The BAAQMD could possibly be required to prepare a $PM_{2.5}$ attainment plan by 2013.

ODOR IMPACTS

While offensive odors rarely cause any physical harm, they can be very unpleasant, and lead to considerable distress among the public and often generate citizen complaints to local governments and the local air districts. Any project with the potential to frequently expose members of the public to objectionable odors will be deemed to have a significant impact. Odor impacts on residential areas and other sensitive receptors, such as hospitals, day-care centers, schools, etc., warrant the closest scrutiny. Consideration should also be given to other land uses where people may congregate, such as recreational facilities, worksites, and commercial areas. Analysis of potential odor impacts should be conducted for the following two situations:

- Generators – projects that would potentially generate odorous emissions proposed to locate near existing sensitive receptors or other land uses where people may congregate; and
- Receivers – residential or other sensitive receptor projects or other projects built for the intent of attracting people locating near existing odor sources.

Because offensive odors rarely cause any physical harm and no requirements for their control are included in state or federal air quality regulations, the local air districts usually have no rules or standards related to odor emissions, other than a typical nuisance rule. For the Bay Area Air Quality Management District the nuisance rule is Regulation 1-301. Any actions related to odors are based on citizen complaints to local governments and the local air districts. BAAQMD Regulation 7 would be applicable if the BAAQMD receives odor complaints from ten or more complainants within a 90-day period. To test for a potential odor concern, a visual evaluation is made to determine whether the proposed project, either as a generator or a receiver, would result in sensitive receptors being affected by odors. If the alternative would result in sensitive receptors being located in an area affected by offensive odors, a more detailed analysis would be conducted.

To conduct a more detailed analysis, the BAAQMD's Compliance and Enforcement Division would be contacted for information regarding odor complaints. For projects involving a new receptor being located near an existing odor source(s), the Compliance and Enforcement Division would be asked to provide information on odor complaints logged for the facility(ies) for the previous three years. Odor complaints would be mapped in relation to the odor source to establish a general boundary of any existing impacts. The location of the project would also be identified.

TOXIC AIR CONTAMINANT (TAC) IMPACTS

Neither ambient air quality standards nor emission control standards have been established for most toxic air contaminants. In lieu of ambient air quality standards, toxic air contaminant impacts are considered significant if there is a reasonable concern that proposed project patrons and/or employees would be subject to exposure concentrations harmful to human health or welfare.

ASBESTOS IMPACTS

Demolition Activities

Project construction sometimes requires the demolition of existing buildings where construction occurs. Buildings often include materials containing asbestos. Most demolitions and many renovations are subject to an asbestos inspection prior to start of activity. The demolition, renovation or removal of asbestos-containing building materials is subject to the limitations of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) regulations as listed in the Code of Federal Regulations (CFR) requiring notification, inspection, and compliance with local air district regulations (in this case, BAAQMD Regulation 11, Rule 2: Hazardous Materials; Asbestos Demolition, Renovation and Manufacturing). Any demolition activity subject to, but not complying with the requirements of District Regulation 11, Rule 2 would be considered to have a significant impact.

Naturally Occurring Asbestos (NOA)

A preliminary review of the *General Location Guide for Ultramafic Rocks in California - Areas More Likely to Contain Naturally Occurring Asbestos*, (California Department of Conservation, Division of Mines and Geology, August 2000) was conducted to verify if the alternative is located in an area of NOA, followed by an on-site visual inspection to determine the presence of ultramafic rocks.

Climate Change

Climate change is a global phenomenon attributable to the sum of all human activities and natural processes. It is not possible to attribute a particular climate change impact to a single development project. Project impacts are therefore most appropriately addressed in terms of the incremental contribution to a global cumulative impact. Please refer to discussion of cumulative impacts in **Section 4.12** for this analysis.

FEDERAL AIR QUALITY CONFORMITY

The project alternatives were evaluated to determine if the federal air quality conformity regulations are applicable. Emissions estimates used in the evaluation were developed using the URBEMIS version 8.7 model. Because the San Francisco Bay Area Air Basin (SFAAB) is a

marginal nonattainment area for 8-hour ozone and the urbanized areas of the SFBAAB are maintenance areas for carbon monoxide, the *de minimis* thresholds for ozone precursors (VOC and NO_X) and CO are 100 tons per year. At the time of preparation of this FEIS, the EPA has not yet determined the attainment status of $PM_{2.5}$ for the SFBAAB. Should the SFBAAB be designated nonattainment for $PM_{2.5}$, there may be a need to demonstrate conformity for $PM_{2.5}$.

IMPACTS TO FEDERAL CLASS I AREAS

A radius surrounding each of the alternatives is investigated to determine if there are any Federal Class I areas within 100 kilometers. Emissions estimates are used to determine if the project is determined to be a major source with regards to the Prevention of Significant Deterioration (PSD) program.

IMPACTS TO INDOOR AIR QUALITY

The project alternatives were evaluated to determine if they complied with applicable rules, regulations, and standards regarding indoor air quality.

4.4.2 ALTERNATIVE A – PROPOSED PROJECT

CONSTRUCTION-RELATED IMPACTS OF ALTERNATIVE A

Construction of Alternative A would result in the temporary generation of ozone precursors (ROG, NO_X), carbon monoxide (CO), and particulate matter less than 10 and 2.5 microns in diameter (PM_{10} & $PM_{2.5}$) emissions. **Table 4.4-2** presents emissions from the construction phase (demolition/grading or building) with the highest construction-related emissions for Alternative A (and all other alternatives for ease of comparison). Construction of Alternative A is estimated to result in:

- 3.3 tons per year (tpy) of ROG,
- 16.0 tpy of NO_X,
- 21.2 tpy of CO,
- 4.2 tpy of $PM_{10,}$
- 4.2 typ of $PM_{2.5,}$ and
- 0.0 tpy of SOx emissions.

TABLE 4.4-2
CONSTRUCTION-RELATED EMISSIONS
(TONS PER YEAR)

Project Alternative	ROG[c]	NO_X[cb]	CO	SOx[b]	$PM_{2.5}$[a]	PM_{10}
Alternative A – Proposed Project						
Amount of Emissions	3.3	16.0	21.2	0.0	4.2	4.2
Significant Effect?	*No*	*No*	*No*	*No*	*No*	*No*
Alternative B – Northwest Stony Point Casino						
Amount of Emissions	2.9	16.0	21.0	0.0	3.4	3.4
Significant Effect?	*No*	*No*	*No*	*No*	*No*	*No*
Alternative C – Northeast Stony Point Casino						
Amount of Emissions	3.3	16.0	21.0	0.0	4.1	4.1
Significant Effect?	*No*	*No*	*No*	*No*	*No*	*No*
Alternative D – Reduced Intensity						
Amount of Emissions	2.1	10.3	13.4	0.0	1.3	1.3
Significant Effect?	*No*	*No*	*No*	*No*	*No*	*No*
Alternative E – Business Park						
Amount of Emissions	1.4	6.2	6.9	0.0	2.8	2.8
Significant Effect?	*No*	*No*	*No*	*No*	*No*	*No*
Alternative F – Lakeville Casino						
Amount of Emissions	2.3	14.5	18.7	0.0	1.6	1.6
Significant Effect?	*No*	*No*	*No*	*No*	*No*	*No*
Alternative G – No Action						
Amount of Emissions	1.3	7.0	7.2	0.0	2.9	2.9
Significant Effect?	*N/A*	*N/A*	*N/A*	*N/A*	*NA*	*N/A*
Alternative H – Wilfred Site Reduced Intensity						
Amount of Emissions	2.1	10.8	13.7	0.0	2.7	2.7
Significant Effect?	*No*	*No*	*No*	*No*	*No*	*No*

NOTES: Emissions shown are for the highest year in the multi-year construction period without the implementation of mitigation measures. Significance threshold amount is 100 tons per year for ROG, NO_X, CO, $PM_{2.5,}$ and PM_{10}. Alternative G is not a federal action and therefore not subject to conformity.

[a] CARB speciation profile shows that 99.2% of PM_{10} is $PM_{2.5}$ for gasoline powered engine emissions and 92.0% for diesel powered engine emissions. 99.2% is assumed here for a conservative analysis.

[b] $PM_{2.5}$ precursors.

[c] Ozone precursors.

SOURCE: KDA 2004, URBEMIS, 2002.

The USEPA published a rule (referred to as the "general conformity rule") that describes how federal agencies determine whether their actions conform to the applicable State Implementation Plan (SIP) (40 CFR § 51.853). The rule establishes *de minimis* emissions thresholds that are used to determine whether a detailed conformity determination is required. The general conformity rule presents different threshold levels for some pollutants, with the specific level being based on the severity of the pollution problem. Thresholds for ozone precursors are considered separately, not as combined. Based on discussions with BAAQMD staff, construction-related emissions should be considered significant if they equal or exceed 100 tpy of ROG emissions, 100 tpy of NO_X emissions, 100 tpy of CO emissions, or 100 tpy of PM_{10} emissions (Bourguignon, 2004). These standards mirror the general conformity de minimus thresholds. Although the San Francisco Bay Area Air Basin has not been designated as nonattainment for $PM_{2.5}$, for the purposes of this EIS we assume that emissions greater than 100 tpy (the $PM_{2.5}$ conformity de minimus threshold) should be considered significant.

As shown in **Table 4.4-2,** ROG, NO_X, CO, SOx, $PM_{2.5,}$ and PM_{10} construction emissions would be less than 100-tpy each and result in a less-than-significant effect. However, mitigation measures are contained in **Section 5.2.3** that will reduce PM_{10} emissions due to fugitive dust levels and exhaust emissions from the construction of Alternative A and work to minimize any temporary and intermittent impacts that accompanies construction activities.

ASBESTOS IMPACTS OF ALTERNATIVE A

Impacts from Demolition

Implementation of Alternative A would result in the demolition of two existing structures located on the Wilfred site. Airborne asbestos fibers pose a serious health threat if adequate control techniques are not carried out when the material is disturbed. Such techniques are required by federal NESHAP regulations. Therefore, a less-than-significant asbestos impact would result from Alternative A.

Impacts from Naturally Occurring Asbestos (NOA)

A review of the *General Location Guide for Ultramafic Rocks in California* (DMG, 2000) shows that Alternative A is not located in an area of NOA, thus Alternative A would have a less-than-significant impact.

OPERATIONAL IMPACTS OF ALTERNATIVE A

Suitable emissions thresholds for air quality impacts are contained within the *BAAQMD CEQA Guidelines - Assessing the Air Quality Impacts of Projects and Plans* (BAAQMD, 1999). This document is meant to assure compliance with the state and federal Clean Air Acts (CAAs). The

thresholds for the ozone precursors ROG and NO_X are to be considered individually, not as combined. The BAAQMD's thresholds are:

- 80 pounds per day (ppd) and 15 tpy of ROG,
- 80 ppd and 15 tpy of NO_X, and
- 80 ppd and 15 tpy of PM_{10} emissions.

Given that there are no local emissions thresholds for $PM_{2.5}$ and SO_x, general conformity *de minimus* thresholds (100 tpy) were used to determine significance for $PM_{2.5}$ and SO_x.

Operation of Alternative A would result in the generation of ROG, NO_X, CO, $PM_{2.5}$, SO_x, and PM_{10} emissions primarily from traffic generated by the project. **Table 4.4-3** presents an estimate of these operational emissions for Alternative A with near-term conditions. The results for the other alternatives are also presented in **Table 4.4-3** for ease of comparison. Operation of Alternative A is estimated to result in:

- 378 pounds per summer day (ppsd)[3] and 77 tpy of ROG,
- 730 ppsd and 156 tpy of NO_X,
- 779 ppd and 142 tpy of PM_{10},
- 773 ppd and 141 tpy of $PM_{2.5}$, and
- 4.41 ppsd and 0.80 tpy of SOx emissions.

It should be noted that for the purpose of this analysis, pounds per summer day (ppsd) was used for ROG and NO_X to represent the ozone season and get a worst-case evaluation; therefore there is no simple correlation between the daily and the yearly numbers. SO_x would be less than the 100 tpy threshold and would be a less-than-significant effect. ROG, NO_X, and PM_{10} emissions would be more than the 80 ppd and 15 tpy thresholds, and would be a significant effect. $PM_{2.5}$ emissions would be greater than the 100 tpy conformity threshold and would therefore be considered a significant effect. Mitigation measures contained in **Section 5.2.3** would reduce significant effects on air quality to a less-than-significant level.

General Conformity

The general conformity rule applies to direct and indirect emissions, which are analyzed in this EIS and presented in **Table 4.3-3**, as required by the CAA.

The entire SFBAAB is in marginal nonattainment for ozone and therefore has a *de minimis* threshold of 100 tons per year (tpy) of ozone precursors (NO_X and VOC). In addition, Alternative A is part of the urbanized areas of the SFBAAB that are considered maintenance

[3] Pounds per summer day is used to represent the ozone season and get a worst-case evaluation

areas for carbon monoxide (CO) and therefore has a *de minimis* threshold of 100 tpy of CO. Alternative A exceeds the *de minimis* thresholds for NO_X and CO. A Conformity Determination was conducted for NOx and CO to determine further requirements and is shown in **Appendix W**. It was determined that conformity requirements are met for CO emissions, warranting no further action. It was determined that NOx emissions would have to be fully offset with emissions credits (effectively lowering NOx emissions to zero) for the Proposed Project to be in conformity with the applicable State Implementation Plan.

Carbon Monoxide Hot Spot Impacts of Alternative A

As shown in **Section 4.8.2** and **5.2.7**, all of the study intersections under Alternative A would operate at, or will be mitigated to a LOS D or higher, under 2008 conditions. Based on **Section 4.7.4** of the *Transportation Project-Level Carbon Monoxide Protocol*, Alternative A is not considered to have the potential to result in a significant CO air quality impact. Therefore, this impact is considered to be less than significant.

Alternative A would include a parking structure. Vehicles operating within the parking structure would generate CO emissions. The parking structure would include openings on the exterior surfaces to provide for flow-through ventilation. Additional mechanical ventilation is not proposed, but could be added at the design stage to improve airflow within the parking structure. The primary occupied structure in the vicinity of the parking garage would be the casino, however rural residential land uses are located nearby. Therefore, CO emitted by the flow-through ventilation of the parking structure would not have a significant effect on air quality. However, should mechanical ventilation be employed, concentrated CO emissions could result in a significant effect if directed toward sensitive receptors. Mitigation measures to reduce this potential effect to a less-than-significant level are included in **Section 5.2.3**.

TABLE 4.4-3
NEAR-TERM OPERATIONAL EMISSIONS

Project Alternatives	ROG[c]		NOx[bc]		PM2.5[a]		PM10		SOx[b]		CO
	ppsd	tpy	ppsd	tpy	ppd	tpy	ppd	tpy	ppsd	tpy	tpy
Alternative A - Proposed Project											
Amount of Emissions	378	77	730	156	773	141	779	142	4.41	0.80	1,177
Locally significant effect?	*Yes*	*Yes*	*Yes*	*Yes*	*N/A*	*N/A*	*Yes*	*Yes*	*N/A*	*N/A*	*N/A*
Greater than de minimis?	*N/A*	*No*	*N/A*	*Yes*	*N/A*	*Yes*	*N/A*	*N/A*	*N/A*	*No*	*Yes*
Alternative B - Northwest Stony Point Casino											
Amount of Emissions	380	78	730	156	773	141	779	142	4.41	0.80	1,177
Locally significant effect?	*Yes*	*Yes*	*Yes*	*Yes*	*N/A*	*N/A*	*Yes*	*Yes*	*N/A*	*N/A*	*N/A*
Greater than de minimis?	*N/A*	*No*	*N/A*	*Yes*	*N/A*	*Yes*	*N/A*	*N/A*	*N/A*	*No*	*Yes*
Alternative C - Northeast Stony Point Casino											
Amount of Emissions	380	78	730	156	773	141	779	142	4.41	0.80	1,177
Locally significant effect?	*Yes*	*Yes*	*Yes*	*Yes*	*N/A*	*N/A*	*Yes*	*Yes*	*N/A*	*N/A*	*N/A*
Greater than de minimis?	*N/A*	*No*	*N/A*	*Yes*	*N/A*	*Yes*	*N/A*	*N/A*	*N/A*	*No*	*Yes*
Alternative D - Reduced Intensity											
Amount of Emissions	263	54	509	109	541	98	545	99	3	0.56	823
Locally significant effect?	*Yes*	*Yes*	*Yes*	*Yes*	*N/A*	*N/A*	*Yes*	*Yes*	*N/A*	*N/A*	*N/A*
Greater than de minimis?	*N/A*	*No*	*N/A*	*Yes*	*N/A*	*No*	*N/A*	*N/A*	*N/A*	*No*	*Yes*
Alternative E - Business Park											
Amount of Emissions	61	12	70	15	69	13	70	13	0.49	0.08	136
Locally significant effect?	*No*	*No*	*No*	*No*	*N/A*	*N/A*	*No*	*No*	*N/A*	*N/A*	*N/A*
Greater than de minimis?	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
Alternative F - Lakeville Casino											
Amount of Emissions	380	78	730	156	773	141	779	142	4.41	0.80	1,177
Locally significant effect?	*Yes*	*Yes*	*Yes*	*Yes*	*N/A*	*N/A*	*Yes*	*Yes*	*N/A*	*N/A*	*N/A*
Greater than de minimis?	*N/A*	*No*	*N/A*	*Yes*	*N/A*	*Yes*	*N/A*	*N/A*	*N/A*	*No*	*Yes*
Alternative G - No Action											
Amount of Emissions	138	27	133	28	116	21	117	21	0.84	0.14	259
Locally significant effect?	*Yes*	*Yes*	*Yes*	*Yes*	*N/A*	*N/A*	*Yes*	*Yes*	*N/A*	*N/A*	*N/A*
Greater than de minimis?	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
Alternative H – Wilfred Site Reduced Intensity											
Amount of Emissions	263	54	509	109	541	98	545	99	3	0.56	823
Locally significant effect?	*Yes*	*Yes*	*Yes*	*Yes*	*N/A*	*N/A*	*Yes*	*Yes*	*N/A*	*N/A*	*N/A*
Greater than de minimis?	*N/A*	*No*	*N/A*	*Yes*	*N/A*	*No*	*N/A*	*N/A*	*N/A*	*No*	*Yes*

NOTES: ROG = reactive organic gases; NO_X = nitrogen oxides; PM_{10} = particulate matter 10 microns in size; $PM_{2.5}$ = particulate matter 2.5 microns in size; SO_X = sulfur oxides; CO = carbon monoxide. Emissions shown are for mobile sources and area sources without the implementation of mitigation measures. Source for local significance thresholds is BAAQMD 1999. Significance threshold amount is 15 tpy and 80 ppd for ROG, NO_X, and PM_{10}. Source for conformity (de minimus) thresholds is Title 40, Part 51, Section 51.853(b). CO is only reported in tons per year for conformity purposes. The BAAQMD does not have a local emissions threshold for CO, SO_x, or $PM_{2.5}$.

[a] CARB speciation profile shows that 99.2% of PM_{10} is $PM_{2.5}$ for gasoline powered engine emissions and 92.0% for diesel powered engine emissions. 99.2% is assumed here for a conservative analysis.

[b] $PM_{2.5}$ precursors. [c] Ozone precursors. N/A = not applicable.

SOURCE: KDA 2004, URBEMIS, 2002.

ODOR IMPACTS OF ALTERNATIVE A

Alternative A itself would not contribute odors to the region. There are no existing odor generators that might impact the sensitive receptors associated with Alternative A. However, if the on-site wastewater treatment plant (WWTP) option is chosen, and not properly operated, could produce sources of odors that could represent a potentially significant nuisance to the nearby residences. Mitigation measures are listed in **Section 5.2.3** that will reduce the adverse odor effects from the expanded wastewater treatment facilities to less than significant levels.

TOXIC AIR CONTAMINANT (TAC) IMPACTS OF ALTERNATIVE A

The gaming facility under Alternative A would not itself contribute or generate toxic air contaminants. However, bus and diesel trucks traveling to and from the gaming facility; especially in loading areas, would result in an increased concentration of diesel emissions. This increase in diesel emissions could result in a potentially significant impact of toxic air contaminants in the area. Application of mitigation measures listed in **Section 5.2.3** would reduce effects to less than significant levels.

FEDERAL CLASS I AREAS IMPACTS OF ALTERNATIVE A

The Point Reyes National Seashore is the only federal Class I area within 100 kilometers of Alternative A. Analysis of operational emissions associated with Alternative A is broken down into mobile and area (facility) sources. Only area sources are considered a "direct stationary source" under the Prevention of Significant Deterioration (PSD) program. As shown in the URBEMIS model results in **Appendix W**, Alternative A's area source emissions of regulated pollutants would be no higher than 0.72 tons per year (for CO), which is well below the PSD "major source" threshold (**Section 3.4**) and therefore does not trigger need for preconstruction review and further assessment of impacts. Thus, since the standards of Title 1, Part C of the federal CAA would be met by Alternative A, a less-than-significant impact to Federal Class 1 areas would result.

INDOOR AIR QUALITY IMPACTS OF ALTERNATIVE A

Environmental tobacco smoke (ETS), also known as second-hand smoke, is a complex mixture of chemicals generated during the burning and smoking of tobacco products to which non-smokers are exposed. On January 26, 2006, CARB identified ETS as a TAC. ETS is now formally identified as an airborne toxic substance that may cause and/or contribute to death or serious illness. Since smoking will be permitted indoors at the casino, patrons of the proposed gaming facility could be exposed to toxics and carcinogens from indoor tobacco use. Although the deleterious effects of ETS are widely known, it is possible that some employees or patrons would

be unknowingly exposed to ETS without realizing its harmful effects. Such exposure to ETS from Alternative A would be a potentially significant effect.

Other indoor pollution sources that release gases or particles into the air can be the cause of indoor air quality problems in buildings. Inadequate ventilation can increase indoor pollutant levels by not bringing in enough outdoor air to dilute emissions from indoor sources and by not carrying indoor air pollutants out of the building. High temperature and humidity levels can also increase concentrations of some pollutants. Ventilation is a standard engineering approach to assuring good indoor air quality and comfort. Ventilation removes and dilutes indoor contaminants, removes moisture from the air, which helps to prevent mold growth, and removes body effluents such as carbon dioxide that lead to a stuffy environment. Natural ventilation, through open windows and doors, is the primary ventilation route for residences, while mechanical ventilation, using heating, ventilation, and air conditioning (HVAC) systems, is most common in commercial buildings. Adequate and effective ventilation, and ducting of exhaust from combustion appliances, are necessary for acceptable indoor air quality, even when known air contaminants are minimized.

While there are no federal requirements for controlling indoor air pollution or existing indoor air pollution thresholds, industry standards are available for reducing the concentrations of indoor air pollution. Industry and professional groups have developed numerous guidelines for improving indoor air quality. An example is the building ventilation standard of the American Society of Heating, Refrigerating, and Air-conditioning Engineers (ASHRAE), (*Ventilation for Acceptable Indoor Air Quality*, ASHRAE Standard 62-2001). Even though industry and professional guidelines may vary in their degree of indoor air quality protection, they are widely used and generally have helped reduce some indoor pollutants over the years. Such measures will be evaluated at the time that detailed plans and specifications are prepared for the HVAC system in order to remain in compliance with ordinances of the Tribe that might be implemented to be consistent with state and local indoor air requirements.

The effect of Alternative A on indoor air quality is significant with regards to environmental tobacco smoke but less-than-significant with regards to other sources. Compliance with mitigation measures listed in **Section 5.2.3** of this document will reduce effects of environmental tobacco smoke, to a less-than-significant level for Alternative A. Other mitigation measures are contained in **Section 5.2.3** to reduce the effects of other sources on indoor air quality of Alternative A even further.

4.4.3 ALTERNATIVE B – NORTHWEST STONY POINT CASINO

CONSTRUCTION-RELATED IMPACTS OF ALTERNATIVE B

Construction of Alternative B would result in the temporary generation of ROG, NO_X, CO, and PM_{10} emissions. **Table 4.4-2** presents emissions from the construction phase with the highest construction-related emissions for Alternative B. Construction of Alternative B is estimated to result in:

- 2.9 tons per year (tpy) of ROG,
- 16.0 tpy of NO_X,
- 21.0 tpy of CO,
- 3.4 tpy of PM_{10},
- 3.4 tpy of $PM_{2.5,}$ and
- 0.0 tpy of SOx emissions.

A discussion of the general conformity rule and BAAQMD construction emission thresholds appears in **Section 4.4.2**. As shown in **Table 4.4-2,** ROG, NO_X, CO, SOx, $PM_{2.5,}$ and PM_{10} construction emissions would be less than 100 tpy and would therefore result in a less-than-significant effect. However, mitigation measures are contained in **Section 5.2.3** that will reduce the fugitive dust levels from construction of Alternative B and work to prevent the temporary and intermittent impact that accompanies construction activities.

ASBESTOS IMPACTS OF ALTERNATIVE B

Impacts from Demolition

Implementation of Alternative B would result in the demolition of a barn structure on the Stony Point site. Airborne asbestos fibers pose a serious health threat if adequate control techniques are not carried out when the material is disturbed. Such techniques are required by federal NESHAP regulations; therefore, are considered as a less-than-significant impact would result.

Impacts from Naturally Occurring Asbestos (NOA)

A review of the *General Location Guide for Ultramafic Rocks in California* (DMG, 2000) shows that the Stony Point site is not located in an area of NOA, thus Alternative B would have a less-than-significant impact from NOA.

OPERATIONAL IMPACTS OF ALTERNATIVE B

Operation of Alternative B would result in the generation of ROG, NO_X, $PM_{2.5}$, SOx, and PM_{10} emissions primarily from traffic generated by the project (mobile sources). **Table 4.4-3** presents an estimate of these operational emissions for Alternative B with near-term conditions. Operation of Alternative B is estimated to result in:

- 380 ppsd and 78 tpy of ROG,
- 730 ppsd and 156 tpy of NO_X,
- 779 ppd and 142 tpy of PM_{10},
- 773 ppd and 141 tpy of $PM_{2.5}$, and
- 4.41 ppsd and 0.80 tpy of SOx emissions.

It should be noted that for the purpose of this analysis, pounds per summer day (ppsd) was used for ROG and NO_X to represent the ozone season and get a worst-case evaluation; therefore there is no simple correlation between the daily and the yearly numbers. SO_x would be less than the 100 tpy threshold and would be a less-than-significant effect. ROG, NO_X, and PM_{10} emissions would be more than the 80 ppd and 15 tpy thresholds, and would be a significant effect. $PM_{2.5}$ emissions would be greater than the 100 tpy conformity threshold and would therefore be considered a significant effect. Mitigation measures contained in **Section 5.2.3** would reduce significant effects on air quality to a less-than-significant level.

General Conformity

The entire SFBAAB is marginal nonattainment for ozone and therefore has a *de minimis* threshold of tpy of ozone precursors (NO_X and VOC). In addition, Alternative B is part of the urbanized areas of the SFBAAB that are considered maintenance areas for CO and therefore has a *de minimis* threshold of 100 tpy of CO. Alternative B exceeds the *de minimis* thresholds for NO_X and CO. A Conformity Determination was conducted for NOx to determine further requirements (see **Appendix W**). It was determined that conformity requirements are met for CO emissions, warranting no further action. It was determined that NOx emissions would have to be fully offset with emissions credits (effectively lowering NOx emissions to zero) for the Proposed Project to be in conformity with the applicable SIP.

Hot Spot Impacts of Alternative B

As shown in **Sections 4.8.3** and **5.2.7**, all of the study intersections under Alternative B would operate at, or be mitigated to, a LOS D or better under 2008 conditions. Based on Section 4.7.4 of the *Transportation Project-Level Carbon Monoxide Protocol*, Alternative B is not considered to have the potential to result in a significant CO air quality impact. Alternative B would have a similar parking structure as Alternative A; therefore, the impact would be the same. Therefore, this impact is considered less than significant.

ODOR IMPACTS OF ALTERNATIVE B

Alternative B itself would not contribute odors to the region. There are no existing odor generators that might impact the sensitive receptors associated with Alternative B. However, the on-site wastewater treatment plant, if not properly operated, could produce sources of odors that

represent a potentially significant nuisance to the nearby residences. Mitigation measures are listed in **Section 5.2.3** that will reduce the adverse odor effects from the expanded wastewater treatment facilities to less than significant.

TOXIC AIR CONTAMINANTS (TACS) IMPACTS OF ALTERNATIVE B

The gaming facility under Alternative B would not itself contribute or generate TACs. However, bus and diesel truck travel to and from the gaming facility, especially loading areas, would result in an increased concentration of diesel emissions in those areas. This increase in diesel emissions could result in a potentially significant impact of toxic air contaminants in the area. Application of mitigation measures listed in **Section 5.2.3** would reduce effects to less than significant levels.

FEDERAL CLASS I AREAS IMPACTS OF ALTERNATIVE B

The Point Reyes National Seashore is the only Federal Class I area within 100 kilometers of Alternative B. Analysis of operational emissions associated with Alternative B is broken down into mobile and area (facility) sources. Only area sources are considered a "direct stationary source" under the PSD program. As shown in the URBEMIS model results in **Appendix W**, Alternative B's area source emissions of regulated pollutants would be no higher than 0.72 tons per year (for CO), which is well below the PSD "major source" threshold (**Section 3.4**) and therefore does not trigger need for preconstruction review and further assessment of impacts. Thus, since the standards of Title 1, Part C of the federal CAA would be met by Alternative B, a less-than-significant impact to Federal Class 1 areas would result.

INDOOR AIR QUALITY OF ALTERNATIVE B

A discussion of indoor air quality appears in **Section 4.4.2**.

The effect of Alternative B on indoor air quality is significant with regards to environmental tobacco smoke, but less than significant with regards to other sources. Compliance with mitigation measure listed in **Section 5.2.3** of this document will reduce effects of environmental tobacco smoke to a less-than-significant level for Alternative B. Other mitigation measures are contained in **Section 5.2.3** to reduce the effects of other sources on indoor air quality of Alternative B even further.

4.4.4 ALTERNATIVE C – NORTHEAST STONY POINT CASINO

CONSTRUCTION-RELATED IMPACTS OF ALTERNATIVE C

Implementation of Alternative C would result in temporary construction-related generation of ROG, NO_X, CO, and PM_{10} emissions. **Table 4.4-2** presents emissions from the construction

phase with the highest construction-related emissions for Alternative C. Construction of Alternative C is estimated to result in:

- 3.3 tons per year (tpy) of ROG,
- 16.0 tpy of NO_X,
- 21.0 tpy of CO,
- 4.1 tpy of PM_{10},
- 4.1 tpy of $PM_{2.5,}$ and
- 0.0 tpy of SOx emissions.

A discussion of the general conformity rule and BAAQMD construction emission thresholds appears in **Section 4.4.2**. As shown in **Table 4.4-2,** ROG, NO_X, CO, SOx, $PM_{2.5,}$ and PM_{10} construction emissions would be less than 100-tpy and would therefore result in a less-than-significant effect. However, mitigation measures are contained in **Section 5.2.3** that will reduce the fugitive dust levels from construction of Alternative C and work to prevent the temporary and intermittent impact that accompanies construction activities.

ASBESTOS IMPACTS OF ALTERNATIVE C

Impacts from Demolition

Implementation of Alternative C would result in the demolition of a barn structure on the Stony Point site. Airborne asbestos fibers pose a serious health threat if adequate control techniques are not carried out when the material is disturbed. Such techniques are required by federal NESHAP regulations; therefore, result in a less-than-significant impact.

Impacts from Naturally Occurring Asbestos (NOA)

A review of the *General Location Guide for Ultramafic Rocks in California* (DMG, 2000) shows that Alternative C is not located in an area of NOA, thus Alternative C would have a less-than-significant impact from NOA.

OPERATIONAL IMPACTS OF ALTERNATIVE C

Operation of Alternative C would result in the generation of ROG, NO_X, $PM_{2.5}$, SOx, and PM_{10} emissions primarily from traffic generated by the project (mobile sources). **Table 4.4-3** presents an estimate of these operational emissions for Alternative C with near-term conditions. Operation of Alternative C is estimated to result in:

- 380 ppsd and 78 tpy of ROG,
- 730 ppsd and 156 tpy of NO_X,
- 779 ppd and 142 tpy of PM_{10},

- 773 ppd and 141 tpy of $PM_{2.5}$, and
- 4.41 ppsd and 0.80 tpy of SOx emissions.

It should be noted that for the purpose of this analysis, pounds per summer day (ppsd) was used for ROG and NO_X to represent the ozone season and get a worst-case evaluation; therefore there is no simple correlation between the daily and the yearly numbers. SO_x would be less than the 100 tpy threshold and would be a less-than-significant effect. ROG, NO_X, and PM_{10} emissions would be more than the 80 ppd and 15 tpy thresholds, and would be a significant effect. $PM_{2.5}$ emissions would be greater than the 100 tpy conformity threshold and would therefore be considered a significant effect. Mitigation measures contained in **Section 5.2.3** would reduce significant effects on air quality to a less-than-significant level.

General Conformity

The entire SFBAAB is marginal nonattainment for ozone and therefore has a *de minimis* threshold of tpy of ozone precursors (NO_X and VOC). In addition, Alternative C is part of the urbanized areas of the SFBAAB that are considered maintenance areas for CO and therefore has a *de minimis* threshold of 100 tpy of CO. Alternative C exceeds the *de minimis* thresholds for NO_X and CO. A Conformity Determination was conducted for NOx to determine further requirements (see **Appendix W**). It was determined that conformity requirements are met for CO emissions, warranting no further action. It was determined that NOx emissions would have to be fully offset with emissions credits (effectively lowering NOx emissions to zero) for the Proposed Project to be in conformity with the applicable SIP.

Carbon Monoxide Hot Spot Impacts of Alternative C

As shown in **Sections 4.8.4** and **5.2.7**, all of the study intersections for Alternative C would operate at, or be mitigated to, a LOS D or better under 2008 conditions. Based on Section 4.7.4 of the *Transportation Project-Level Carbon Monoxide Protocol*, Alternative C is not considered to have the potential to result in a significant CO air quality impact. Alternative C would have a similar parking structure as Alternative A; therefore, the impact would be the same. Therefore, this impact is considered less than significant.

ODOR IMPACTS OF ALTERNATIVE C

Alternative C itself would not contribute odors to the region. There are no existing odor generators that might impact the sensitive receptors associated with Alternative C. However, the on-site wastewater treatment plant, if not properly operated, could produce sources of odors that represent a potentially significant nuisance to the nearby residences. Mitigation measures are listed in **Section 5.2.3** that will reduce the adverse odor effects from the expanded wastewater treatment facilities to less than significant.

TOXIC AIR CONTAMINANTS IMPACTS (TACS) OF ALTERNATIVE C

The gaming facility under Alternative C would not itself contribute or generate TACs However, bus and diesel truck travel to and from the gaming facility, especially loading areas, would result in an increased concentration of diesel emissions in those areas. This increase in diesel emissions could result in a potentially significant impact of toxic air contaminants in the area. Application of mitigation measures listed in **Section 5.2.3** would reduce effects to less than significant levels.

FEDERAL CLASS I AREAS IMPACTS OF ALTERNATIVE C

The Point Reyes National Seashore is the only Federal Class I area within 100 kilometers of Alternative C. Analysis of operational emissions associated with Alternative C is broken down into mobile and area (facility) sources. Only area sources are considered a "direct stationary source" under the PSD program. As shown in the URBEMIS model results in **Appendix W**, Alternative C's area source emissions of regulated pollutants would be no higher than 0.72 tons per year (for CO), which is well below the PSD "major source" threshold (**Section 3.4**) and therefore does not trigger need for preconstruction review and further assessment of impacts. Thus, since the standards of Title 1, Part C of the federal CAA would be met by Alternative C, a less-than-significant impact to Federal Class 1 areas would result.

INDOOR AIR QUALITY OF ALTERNATIVE C

A discussion of indoor air quality appears in **Section 4.4.2**.

The effect of Alternative C on indoor air quality is significant with regards to environmental tobacco smoke, but less than significant with regards to other sources. Compliance with mitigation measure listed in **Section 5.2.3** of this document will reduce effects of environmental tobacco smoke to a less-than-significant level for Alternative C. Other mitigation measures are contained in **Section 5.2.3** to reduce the effects of other sources on indoor air quality of Alternative C even further.

4.4.5 ALTERNATIVE D – REDUCED INTENSITY (STONY POINT SITE)

CONSTRUCTION-RELATED IMPACTS OF ALTERNATIVE D

Implementation of Alternative D would result in temporary construction-related generation of ROG, NO_X, CO, and PM_{10} emissions. **Table 4.4-2** presents emissions from the construction phase with the highest construction-related emissions for Alternative D.. Construction of Alternative D is estimated to result in:

- 2.1 tpy of ROG,
- 10.3 tpy of NO_X,

- 13.4 tpy of CO,
- 1.3 tpy of PM_{10},
- 1.3 tpy of $PM_{2.5}$, and
- 0.0 tpy of SOx emissions.

Discussion on the general conformity rule and BAAQMD construction emission thresholds appears in **Section 4.4.2**. As shown in **Table 4.4-2,** ROG, NO_X, CO, SOx, $PM_{2.5}$, and PM_{10} construction emissions would be less than 100-tpy and would therefore result in a less-than-significant effect. However, mitigation measures are contained in **Section 5.2.3** that will reduce the fugitive dust levels from construction of Alternative D and work to prevent the temporary and intermittent impact that accompanies construction activities.

ASBESTOS IMPACTS OF ALTERNATIVE D

Impacts from Demolition

Implementation of Alternative D would result in the demolition of a barn structure on the Stony Point site. Airborne asbestos fibers pose a serious health threat if adequate control techniques are not carried out when the material is disturbed. Such techniques are required by federal NESHAP regulations; therefore, a result in a less-than-significant impact.

Impacts from Naturally Occurring Asbestos (NOA)

A review of the *General Location Guide for Ultramafic Rocks in California* (DMG, 2000) shows that Alternative D is not located in an area of NOA, thus Alternative D would have a less-than-significant impact from NOA.

OPERATIONAL IMPACTS OF ALTERNATIVE D

Operation of Alternative D would result in the generation of ROG, NO_X, $PM_{2.5}$, SOx, and PM_{10} emissions primarily from traffic generated by the project (mobile sources). **Table 4.4-3** presents an estimate of these operational emissions for Alternative D with near-term conditions. Operation of Alternative D is estimated to result in:

- 263 ppsd and 54 tpy of ROG,
- 509 ppsd and 109 tpy of NO_X,
- 545 ppd and 99 tpy of PM_{10},
- 541 ppd and 98 tpy of $PM_{2.5}$, and
- 3 ppsd and 0.56 tpy of SOx emissions.

It should be noted that for the purpose of this analysis, pounds per summer day (ppsd) was used for ROG and NO_X to represent the ozone season and get a worst-case evaluation; therefore there

is no simple correlation between the daily and the yearly numbers. SO_x would be less than the 100 tpy threshold and would be a less than significant effect. ROG, NO_X, and PM_{10} emissions would be more than the 80 ppd and 15 tpy thresholds, and would be a significant effect. $PM_{2.5}$ emissions would be less than the 100 tpy conformity threshold and would therefore be considered to have a less than significant effect. Mitigation measures contained in **Section 5.2.3** would reduce significant effects on air quality to a less-than-significant level.

General Conformity

The entire SFBAAB is marginal nonattainment for ozone and therefore has a *de minimis* threshold of tpy of ozone precursors (NO_X and VOC). In addition, Alternative D is part of the urbanized areas of the SFBAAB that are considered maintenance areas for CO and therefore has a *de minimis* threshold of 100 tpy of CO. Alternative D exceeds the *de minimis* thresholds for NO_X and CO. A Conformity Determination was conducted for NOx to determine further requirements (see **Appendix W**). It was determined that conformity requirements are met for CO emissions, warranting no further action. It was determined that NOx emissions would have to be fully offset with emissions credits (effectively lowering NOx emissions to zero) for the Proposed Project to be in conformity with the applicable SIP.

Carbon Monoxide Hot Spot Impacts of Alternative D

As shown in **Sections 4.8.5** and **5.2.7**, all of the study intersections under Alternative D would operate at, or be mitigated to, a LOS D or better under 2008 conditions. Based on **Section 4.7.4** of the *Transportation Project-Level Carbon Monoxide Protocol*, Alternative D is not considered to have the potential to result in a significant CO air quality impact. Alternative D would have a similar parking structure as Alternative A; therefore, the impact would be the same. Therefore, this impact is considered less than significant.

ODOR IMPACTS OF ALTERNATIVE D

Alternative D itself would not contribute odors to the region. There are no existing odor generators that might impact the sensitive receptors associated with Alternative D. However, the on-site wastewater treatment plant, if not properly operated, could produce sources of odors that could represent a potentially significant nuisance to the nearby residences. Mitigation measures are listed in **Section 5.2.3** that will reduce the adverse odor effects from the expanded wastewater treatment facilities to less than significant.

TOXIC AIR CONTAMINANTS (TACS) IMPACTS OF ALTERNATIVE D

The gaming facility under Alternative D would not itself contribute or generate toxic air contaminants. However, bus and diesel truck travel to and from the gaming facility, especially loading areas, would result in an increased concentration of diesel emissions in those areas. This

increase in diesel emissions could result in a potentially significant impact of toxic air contaminants in the area. Application of mitigation measures listed in **Section 5.2.3** would reduce effects to less than significant levels.

FEDERAL CLASS I AREAS IMPACTS OF ALTERNATIVE D

The Point Reyes National Seashore is the only Federal Class I area within 100 kilometers of Alternative D. Analysis of operational emissions associated with Alternative D is broken down into mobile and area (facility) sources. Only area sources are considered a "direct stationary source" under the PSD program. As shown in the URBEMIS model results in **Appendix W**, Alternative D's area source emissions of regulated pollutants would be no higher than 0.33 tons per year (for CO), which is well below the PSD "major source" threshold (**Section 3.4**) and therefore does not trigger need for preconstruction review and further assessment of impacts. Thus, since the standards of Title 1, Part C of the federal CAA would be met by Alternative D, a less than significant impact to Federal Class 1 areas would result.

INDOOR AIR QUALITY OF ALTERNATIVE D

A discussion of indoor air quality impacts appears in **Section 4.4.2**.

The effect of Alternative D on indoor air quality is significant with regards to environmental tobacco smoke, but less-than-significant with regards to other sources. Compliance with mitigation measure listed in **Section 5.2.3** of this document will reduce adverse effects of environmental tobacco smoke to less-than-significant for Alternative D. Other mitigation measures are contained in **Section 5.2.3** to reduce the adverse effects of other sources on indoor air quality of Alternative D even further.

4.4.6 ALTERNATIVE E – BUSINESS PARK

CONSTRUCTION-RELATED IMPACTS OF ALTERNATIVE E

Implementation of Alternative E would result in temporary construction-related generation of ROG, NO_X, CO, and PM_{10} emissions. **Table 4.4-2** presents emissions from the construction phase with the highest construction-related emissions for Alternative E.. Construction of Alternative E is estimated to result in:

- 1.4 tpy of ROG,
- 6.2 tpy of NO_X,
- 6.9 tpy of CO,
- 2.8 tpy of PM_{10},
- 2.8 tpy of $PM_{2.5}$, and
- 0.0 tpy of SOx emissions.

A discussion on the general conformity rule and BAAQMD construction emission thresholds appears in **Section 4.4.2**. As shown in **Table 4.4-2,** ROG, NO_X, CO, and PM_{10} construction emissions would be less than 100-tpy and would therefore result in a less-than-significant effect. However, mitigation measures are contained in **Section 5.2.3** that will reduce the fugitive dust levels from construction of Alternative E and work to prevent the temporary and intermittent impact that accompanies construction activities.

ASBESTOS IMPACTS OF ALTERNATIVE E

Impacts from Demolition

Implementation of Alternative E would result in the demolition of some existing structures on the Stony Point site. Airborne asbestos fibers pose a serious health threat if adequate control techniques are not carried out when the material is disturbed. Such techniques are required by federal NESHAP regulations; therefore, result in a less-than-significant impact.

Impacts from Naturally Occurring Asbestos (NOA)

A review of the *General Location Guide for Ultramafic Rocks in California* (DMG, 2000) shows that Alternative E is not located in an area of NOA, thus Alternative E would have a less-than-significant impact from NOA.

OPERATIONAL IMPACTS OF ALTERNATIVE E

Operation of Alternative E would result in the generation of ROG, NO_X, $PM_{2.5}$, SOx, and PM_{10} emissions primarily from traffic generated by the project (mobile sources). **Table 4.4-3** presents an estimate of these operational emissions for Alternative E with near-term conditions. Operation of Alternative E is estimated to result in:

- 61 ppsd and 12 tpy of ROG,
- 70 ppsd and 15 tpy of NO_X,
- 70 ppd and 13 tpy of PM_{10},
- 69 ppd and 13 tpy of $PM_{2.5}$, and
- 0.49 ppsd and 0.08 tpy emissions.

It should be noted that for the purpose of this analysis, pounds per summer day (ppsd) was used for ROG and NO_X to represent the ozone season and get a worst-case evaluation; therefore there is no simple correlation between the daily and the yearly numbers. With near-term conditions, ROG emissions would be less than the 80 ppd and 15 tpy thresholds, and would be a less-than-significant effect. NO_X emissions would not exceed the 80 ppd and 15 tpy thresholds, and would be a less-than-significant effect. PM_{10} emissions would be less than the 80 ppd and 15 tpy

thresholds, and would be a less-than-significant effect. PM 2.5 and SOx emissions are less then the conformity threshold of 100 tpy and therefore would be considered to have a less-than-significant effect.

General Conformity

Alternative E does not include a federal action. General Conformity does not apply as there would be no management contract approval by the NIGC.

Carbon Monoxide Hot Spot Impacts of Alternative E

As shown in **Sections 4.8.6** and **5.2.7**, all of the study intersections under Alternative E would operate at, or be mitigated to, a LOS D or better under 2008 conditions. Based on Section 4.7.4 of the *Transportation Project-Level Carbon Monoxide Protocol*, Alternative E is considered to not have the potential for resulting in a significant CO air quality impact. Therefore, this impact is considered less than significant.

ODOR IMPACTS OF ALTERNATIVE E

There is the potential of future on-site businesses to produce offensive odors. Mitigation measures listed in **Section 5.2.3** would reduce this potential effect to a less than significant level.

Additionally, the on-site wastewater treatment plant, if not properly operated, could represent sources of odors that could represent a potentially significant nuisance to the nearby residences. Mitigation measures are listed in **Section 5.2.3** that will reduce the adverse odor effects from the expanded wastewater treatment facilities to a less-than-significant level.

TOXIC AIR CONTAMINANTS (TAC) IMPACTS OF ALTERNATIVE E

The commercial development under Alternative E would not itself contribute or generate toxic air contaminants. However, bus and diesel truck travel to and from the commercial areas, especially loading areas, would result in an increased concentration of diesel emissions in those areas. This increase in diesel emissions could result in a potentially significant impact of toxic air contaminants in the area. Application of mitigation measures listed in **Section 5.2.3** would reduce effects to less than significant levels.

Alternative E has the potential to locate dry cleaning facilities and/or gasoline stations among its proposed commercial/retail land uses. Perchloroethylene (perc) is the solvent most commonly used by the dry cleaning industry to clean clothes and other materials, and inhalation of perc may result in both cancer and adverse non-cancer health effects (CARB 2005d). Perc dry cleaners statewide are required to comply with CARB and BAAQMD regulations to reduce emissions. However, even with these controls, some emissions continue to occur. Air quality studies

indicate that there is still the potential for substantial risks even near well-controlled dry cleaners (CARB 2005d). These studies also indicate that the health risks from perc dry cleaners decrease rapidly as the distance from the facility increases. The California Air Pollution Control Officers Association is currently developing industry-wide risk assessment guidelines for perchloroethylene dry cleaners which, when published, will provide detailed information on public health risk from exposure to emissions from this source.

Alternative E also has the potential to locate gasoline-dispensing facilities. Refueling at gasoline dispensing facilities releases benzene into the air. Benzene is a potent carcinogen and is one of the highest risk air pollutants regulated by CARB. Although gasoline-dispensing facilities account for a small part of total benzene emissions, near-source exposures for large facilities can be substantial. Benzene emissions from the largest gas stations may result in near-source health risk beyond the regional background and district health risk thresholds. Air quality modeling of the health risks from gasoline dispensing facilities indicate that the impact from such facilities decreases rapidly as the distance from the facility increases, and as the size (throughput, measured in gallons per year) of the facilities is decreased.

The proposed project could potentially locate a perc dry cleaner in the same building or in close proximity to a sensitive receptor (e.g., a day care center or residences). However, it is important to note that all stationary sources that have the potential to emit TACs are required to obtain permits from BAAQMD. Permits may be granted to these operations if they are located, constructed, and operated in accordance with applicable regulations. Given that compliance with applicable standards is required for the development and operation of land uses that may result in the emissions of TACs, toxic air emissions from stationary sources both within and adjacent to the project area would be anticipated to be within established standards. Nonetheless, applicable design guidelines from CARB's *Air Quality and Land Use Handbook* (CARB 2005d) are provided under mitigation measure listed in **Section 5.2.3** of this EIS to reduce any impacts to a less-than-significant level.

FEDERAL CLASS I AREAS IMPACTS OF ALTERNATIVE E

The Point Reyes National Seashore is the only Federal Class I area within 100 kilometers of Alternative E. Analysis of operational emissions associated with Alternative E is broken down into mobile and area (facility) sources. Only area sources are considered a "direct stationary source" under the PSD program. As shown in the URBEMIS model results in **Appendix W**, Alternative E's area source emissions of regulated pollutants would be no higher than 0.40 tons per year (for CO), which is well below the PSD "major source" threshold (**Section 3.4**) and therefore does not trigger need for preconstruction review and further assessment of impacts. Thus, since the standards of Title 1, Part C of the federal CAA would be met by Alternative E, a less-than-significant impact to Federal Class 1 areas would result.

INDOOR AIR QUALITY OF ALTERNATIVE E

A discussion of indoor air quality appears in **Section 4.4.2**.

The effect of Alternative E on indoor air quality is significant with regards to environmental tobacco smoke, but less-than-significant with regards to other sources. Compliance with mitigation measure listed in **Section 5.2.3** of this document will reduce adverse effects of environmental tobacco smoke to less-than-significant for Alternative E. Other mitigation measures are contained in **Section 5.2.3** to reduce the adverse effects of other sources on indoor air quality of Alternative E even further.

4.4.7 ALTERNATIVE F – LAKEVILLE CASINO

CONSTRUCTION-RELATED IMPACTS OF ALTERNATIVE F

Implementation of Alternative F would result in temporary construction-related generation of ROG, NO_X, CO, and PM_{10} emissions. **Table 4.4-2** presents emissions from the construction phase with the highest construction-related emissions for Alternative F.. Construction of Alternative F is estimated to result in:

- 2.4 tons per year (tpy) of ROG,
- 14.5 tpy of NO_X,
- 18.7 tpy of CO,
- 1.6 tpy of PM_{10},
- 1.6 tpy of $PM_{2.5}$, and
- 0.0 tpy of SOx emissions.

A discussion of the general conformity rule and BAAQMD construction emission thresholds appears in **Section 4.4.2**. As shown in **Table 4.4-2,** ROG, NO_X, CO, and PM_{10} construction emissions would be less than 100-tpy and would therefore result in a less-than-significant effect. However, mitigation measures are contained in **Section 5.2.3** that will reduce the fugitive dust levels from construction of Alternative F and work to prevent the temporary and intermittent impact that accompanies construction activities.

ASBESTOS IMPACTS OF ALTERNATIVE F

Impacts from Demolition

Alternative F would not result in demolition activity, so there are no impacts related to asbestos.

Impacts from Naturally Occurring Asbestos (NOA)

A review of the *General Location Guide for Ultramafic Rocks in California* (DMG, 2000) shows that Alternative F is not located in an area of NOA, thus Alternative F would have a less-than-significant impact from NOA.

OPERATIONAL IMPACTS OF ALTERNATIVE F

Operation of Alternative F would result in the generation of ROG, NO_X, $PM_{2.5}$, SOx, and PM_{10} emissions primarily from traffic generated by the project (mobile sources). **Table 4.4-3** presents an estimate of these operational emissions for Alternative F with near-term conditions. Operation of Alternative F is estimated to result in:

- 380 ppsd and 78 tpy of ROG, and
- 730 ppsd and 156 tpy of NO_X, and
- 779 ppsd and 142 tpy of PM_{10}, and
- 773 ppd and 141 tpy of $PM_{2.5}$, and
- 4.41 ppsd and 0.80 tpy of SOx, emissions.

It should be noted that for the purpose of this analysis, pounds per summer day (ppsd) was used for ROG and NO_X to represent the ozone season and get a worst-case evaluation; therefore there is no simple correlation between the daily and the yearly numbers. SO_x would be less than the 100 tpy threshold and would be a less-than-significant effect. ROG, NO_X, and PM_{10} emissions would be more than the 80 ppd and 15 tpy thresholds, and would be a significant effect. $PM_{2.5}$ emissions would be greater than the 100 tpy conformity threshold and would therefore be considered a significant effect. Mitigation measures contained in **Section 5.2.3** would reduce significant effects on air quality to a less-than-significant level.

General Conformity

The entire SFBAAB is marginal nonattainment for ozone and therefore has a *de minimis* threshold of tpy of ozone precursors (NO_X and VOC). Alternative F is not part of the urbanized areas of the SFBAAB that is considered a maintenance areas for CO and therefore has no conformity requirements for CO. Alternative F exceeds the *de minimis* threshold for NO_X. A Conformity Determination was conducted for NOx to determine further requirements (see **Appendix W).**It was determined that NOx emissions would have to be fully offset with emissions credits (effectively lowering NOx emissions to zero) for the Proposed Project to be in conformity with the applicable SIP.

Carbon Monoxide Hot Spot Impacts of Alternative F

As shown in **Sections 4.8.7** and **5.2.7**, all of the study intersections under Alternative F would operate at, or be mitigated to, LOS D or better under 2008 conditions. Based on Section 4.7.4 of the *Transportation Project-Level Carbon Monoxide Protocol*, Alternative F is not considered to have the potential to result in a significant CO air quality impact. Alternative F would have a similar parking structure as Alternative A; therefore, the impact would be the same. Therefore, this impact is considered less than significant.

ODOR IMPACTS OF ALTERNATIVE F

Alternative F itself would not contribute odors to the region. There are no existing odor generators that might impact the sensitive receptors associated with Alternative F. However, the on-site wastewater treatment plant, if not properly operated, could represent sources of odors that could represent a potentially significant nuisance to the nearby residences. Mitigation measures are listed in **Section 5.2.3** that will reduce the adverse odor effects from the expanded wastewater treatment facilities to less than significant.

TOXIC AIR CONTAMINANTS (TACS) IMPACTS OF ALTERNATIVE F

The gaming facility under Alternative F would not itself contribute or generate toxic air contaminants. However, bus and diesel truck travel to and from the gaming facility, especially loading areas, would result in an increased concentration of diesel emissions in those areas. This increase in diesel emissions could result in a potentially significant impact of toxic air contaminants in the area. Application of mitigation measures listed in **Section 5.2.3** would reduce effects to less than significant levels.

FEDERAL CLASS I AREAS IMPACTS OF ALTERNATIVE F

The Point Reyes National Seashore is the only federal Class I area within 100 kilometers of Alternative F. Analysis of operational emissions associated with Alternative F is broken down into mobile and area (facility) sources. Only area sources are considered a “direct stationary source” under the PSD program. As shown in the URBEMIS model results in **Appendix W**, Alternative F's area source emissions of regulated pollutants would be no higher than 0.72 tons per year (for CO), which is well below the PSD "major source" threshold (**Section 3.4**) and therefore does not trigger need for preconstruction review and further assessment of impacts. Thus, since the standards of Title 1, Part C of the federal CAA would be met by Alternative F, a less-than-significant impact to Federal Class 1 areas would result.

INDOOR AIR QUALITY OF ALTERNATIVE F

A discussion of indoor air quality appears in **Section 4.4.2**.

The effect of Alternative F on indoor air quality is significant with regards to environmental tobacco smoke, but less than significant with regards to other sources. Compliance with mitigation measure listed in **Section 5.2.3** of this document will reduce adverse effects of environmental tobacco smoke to less-than-significant for Alternative F. Other mitigation measures are contained in **Section 5.2.3** to reduce the adverse effects of other sources on indoor air quality of Alternative F even further.

4.4.8 ALTERNATIVE G – NO ACTION

CONSTRUCTION-RELATED IMPACTS OF ALTERNATIVE G

Build-out of the Northwest Specific Plan (South) on the Wilfred site, as represented in Alternative G, would result in temporary construction-related generation of ROG, NO_X, CO, and PM_{10} emissions. **Table 4.4-2** presents emissions from the construction phase with the highest construction-related emissions for Alternative G. Construction of Alternative G is estimated to result in:

- 1.3 tons per year (tpy) of ROG,
- 7.0 tpy of NO_X,
- 7.2 tpy of CO,
- 2.9 tpy of PM_{10},
- 2.9 tpy of $PM_{2.5}$, and
- 0.0 tpy of SOx emissions.

Impacts from construction of Alternative G would be less than significant. Nonetheless, mitigation measures that would further reduce these impacts are contained in **Section 5.2.3** (including all appropriate control measures, pursuant to BAAQMD CEQA Guidelines (BAAQMD, 1999)).

ASBESTOS IMPACTS OF ALTERNATIVE G

Impacts from Demolition

Build-out of the Northwest Specific Plan (South), as represented as Alternative G, would result in the demolition of some existing structures. Airborne asbestos fibers pose a serious health threat if adequate control techniques are not carried out when the material is disturbed. Any demolition activity will be subject to the requirements of BAAQMD Regulation 11, Rule 2. Strict compliance with BAAQMD regulations will result in a less-than-significant adverse impact.

Impacts from Naturally Occurring Asbestos (NOA)

A review of the *General Location Guide for Ultramafic Rocks in California - Areas More Likely to Contain Naturally Occurring Asbestos,* (CDC/DMG, August 2000) shows that Alternative G is not located in an area of NOA, therefore a less-than-significant effect would result.

OPERATIONAL IMPACTS OF ALTERNATIVE G

Build-out of the Northwest Specific Plan (South), as represented as Alternative G, would result in the generation of ROG, NO_X, and PM_{10} emissions primarily from increased traffic generated by the project (mobile sources). **Table 4.4-3** presents an estimate of these operational emissions for Alternative G with near-term conditions. Operation of Alternative G is estimated to result in:

- 138 ppsd and 27 tpy of ROG,
- 133 ppsd and 28 tpy of NO_X,
- 117 ppd and 21 tpy of $PM_{10,}$
- 116 ppd and 21 tpy of PM2.5, and
- 0.84 ppsd and 0.14 tpy of SOx emissions.

With near-term conditions, ROG, NO_X, and PM_{10} emissions would be more than the 80 ppd and 15 tpy thresholds, and would be a significant effect. Mitigation measures contained in **Section 5.2.3** would reduce the significant effect on air quality to a less-than-significant level. PM 2.5 and SOx emissions are less then the conformity threshold of 100 tpy and therefore would be considered to have a less-than-significant effect.

General Conformity

General conformity would not apply to Alternative G.

Carbon Monoxide Hot Spot Impacts of Alternative G

As shown in **Sections 4.8.8** and **5.2.7**, all of the study intersections under Alternative G would operate at, or be mitigated to, a LOS D or better under 2008 conditions. Based on Section 4.7.4 of the *Transportation Project-Level Carbon Monoxide Protocol,* Alternative G is considered to not have the potential to result in a significant CO air quality impact. Therefore, this impact is considered less than significant.

ODOR IMPACTS OF ALTERNATIVE G

Even though most of the operations that are known to produce odors occur in manufacturing zones, the proposed Build-out of the Northwest Specific Plan (South) has commercial operations planned and there is a potential of siting businesses at this location that may produce offensive

odors. BAAQMD permitting procedures would reduce this potential impact to less-than-significant level.

TOXIC AIR CONTAMINANTS (TAC) IMPACTS OF ALTERNATIVE G

The commercial development under Alternative G may contribute or generate toxic air contaminants. In addition, bus and diesel truck travel to and from the areas, especially loading areas, would result in an increased concentration of diesel emissions in those areas. This could result in a significant effect. However, it is important to note that all stationary sources that have the potential to emit TACs are required to obtain permits from BAAQMD. Permits may be granted to these operations if they are located, constructed, and operated in accordance with applicable regulations. Given that compliance with applicable standards is required for the development and operation of land uses that may result in the emissions of TACs, toxic air emissions from stationary sources both within and adjacent to the project area would be anticipated to be within established standards, therefore rendering the effect of this Alternative less-than-significant with regard to TACs.

FEDERAL CLASS I AREAS IMPACTS OF ALTERNATIVE G

The Point Reyes National Seashore is the only federal Class I area within 100 kilometers of Alternative G. Analysis of operational emissions associated with Alternative G is broken down into mobile and area (facility) sources. Only area sources are considered a “direct stationary source” under the PSD program. As shown in the URBEMIS model results in Appendix W, Alternative G's area source emissions of regulated pollutants would be no higher than 0.95 tons per year (for CO), which is well below the PSD "major source" threshold (**Section 3.4**) and therefore does not trigger need for preconstruction review and further assessment of impacts. Thus, since the standards of Title 1, Part C of the federal CAA would be met by Alternative G, a less-than-significant impact to Federal Class 1 areas would result.

INDOOR AIR QUALITY OF ALTERNATIVE G

The City of Rohnert Park has an existing smoking ordinance (Smoking Ordinance of the City of Rohnert Park – Ord. 509 § I, 1989) that prohibits smoking in many enclosed spaces, several unenclosed spaces, and places of employment within the City of Rohnert Park. This regulation would render the effect of ETS as less than significant.

While there are no requirements for controlling other sources of indoor air pollution or existing indoor air pollution thresholds, industry standards are available for reducing the concentrations of indoor air pollution. Even though industry and professional guidelines may vary in their degree of indoor air quality protection, they are widely used and generally have helped reduce some indoor pollutants over the years. The effect of Alternative G with regards to other indoor air

quality sources is less than significant. Compliance with mitigation measure listed in **Section 5.2.3** of this document reduces the adverse effects on indoor air quality of Alternative G even further.

4.4.9 ALTERNATIVE H –REDUCED INTENSITY (WILFRED SITE)

CONSTRUCTION-RELATED IMPACTS OF ALTERNATIVE H

Implementation of Alternative H would result in temporary construction-related generation of ROG, NO_X, CO, and PM_{10} emissions. **Table 4.4-2** presents emissions from the construction phase with the highest construction-related emissions for Alternative H. Construction of Alternative H is estimated to result in:

- 2.1 tons per year (tpy) of ROG,
- 10.8 tpy of NO_X,
- 13.7 tpy of CO,
- 2.7 tpy of PM_{10},
- 2.7 tpy of $PM_{2.5}$, and
- 0.0 tpy of SOx emissions.

Discussion on the general conformity rule and BAAQMD construction emission thresholds appears in **Section 4.4.2**. As shown in **Table 4.4-2,** ROG, NO_X, CO, SOx, $PM_{2.5}$, and PM_{10} construction emissions would be less than 100-tpy and would therefore result in a less-than-significant effect. However, mitigation measures are contained in **Section 5.2.3** that will reduce the fugitive dust levels from construction of Alternative H and work to prevent the temporary and intermittent impact that accompanies construction activities.

ASBESTOS IMPACTS OF ALTERNATIVE H

Impacts from Demolition

Implementation of Alternative H would result in the demolition of two existing structures on the Wilfred site. Airborne asbestos fibers pose a serious health threat if adequate control techniques are not carried out when the material is disturbed. Such techniques are required by federal NESHAP regulations; therefore, a less-than-significant impact.

Impacts from Naturally Occurring Asbestos (NOA)

A review of the *General Location Guide for Ultramafic Rocks in California* (DMG, 2000) shows that Alternative H is not located in an area of NOA, thus Alternative H would have a less-than-significant impact from NOA.

OPERATIONAL IMPACTS OF ALTERNATIVE H

Operation of Alternative H would result in the generation of ROG, NO_X, $PM_{2.5}$, SOx, and PM_{10} emissions primarily from traffic generated by the project (mobile sources). **Table 4.4-3** presents an estimate of these operational emissions for Alternative H with near-term conditions. Operation of Alternative H is estimated to result in:

- 263 ppsd and 54 tpy of ROG,
- 509 ppsd and 109 tpy of NO_X,
- 545 ppd and 99 tpy of PM_{10},
- 541 ppd and 98 tpy of $PM_{2.5}$, and
- 3 ppsd and 0.56 tpy of SOx emissions.

SO_x would be less than the 100 tpy threshold and would be a less-than-significant effect. ROG, NO_X, and PM_{10} emissions would be more than the 80 ppd and 15 tpy thresholds, and would be a significant effect. $PM_{2.5}$ emissions would be less than the 100 tpy conformity threshold and would therefore be considered to have a less-than-significant effect. Mitigation measures contained in **Section 5.2.3** would reduce significant effects on air quality to a less-than-significant level.

General Conformity

The entire SFBAAB is marginal nonattainment for ozone and therefore has a *de minimis* threshold of tpy of ozone precursors (NO_X and VOC). In addition, Alternative H is part of the urbanized areas of the SFBAAB that are considered maintenance areas for CO and therefore has a *de minimis* threshold of 100 tpy of CO. Alternative H exceeds the *de minimis* thresholds for NO_X and CO. A Conformity Determination was conducted for NOx to determine further requirements (see **Appendix W**). It was determined that conformity requirements are met for CO emissions, warranting no further action. It was determined that NOx emissions would have to be fully offset with emissions credits (effectively lowering NOx emissions to zero) for the Proposed Project to be in conformity with the applicable SIP.

Carbon Monoxide Hot Spot Impacts of Alternative H

As shown in **Sections 4.8.9** and **5.2.7**, all of the study intersections under Alternative H would operate at, or be mitigated to, a LOS D or better less than 2008. Based on **Section 4.7.4** of the *Transportation Project-Level Carbon Monoxide Protocol*, Alternative H is not considered to have the potential to result in a significant CO air quality impact. Alternative H would have a similar parking structure as Alternative A; therefore, the impact would be the same. Therefore, this impact is considered less than significant.

ODOR IMPACTS OF ALTERNATIVE H

Alternative D itself would not contribute odors to the region. There are no existing odor generators that might impact the sensitive receptors associated with Alternative H. However, the on-site wastewater treatment plant, if not properly operated, could produce sources of odors that represent a potentially significant nuisance to the nearby residences. Mitigation measures are listed in **Section 5.2.3** that will reduce the adverse odor effects from the expanded wastewater treatment facilities to less than significant.

TOXIC AIR CONTAMINANTS (TACS) IMPACTS OF ALTERNATIVE H

The gaming facility under Alternative H would not itself contribute or generate toxic air contaminants. However, bus and diesel truck travel to and from the gaming facility, especially loading areas, would result in an increased concentration of diesel emissions in those areas. These increases in diesel emissions could result in a potentially significant impact of toxic air contaminants in the area. Application of mitigation measures listed in **Section 5.2.3** would reduce effects to less than significant levels.

FEDERAL CLASS I AREAS IMPACTS OF ALTERNATIVE H

The Point Reyes National Seashore is the only Federal Class I area within 100 kilometers of Alternative H. Analysis of operational emissions associated with Alternative H is broken down into mobile and area (facility) sources. Only area sources are considered a “direct stationary source” under the PSD program. As shown in the URBEMIS model results in **Appendix W**, Alternative H's area source emissions of regulated pollutants would be no higher than 0.33 tons per year (for CO), which is well below the PSD "major source" threshold (**Section 3.4**) and therefore does not trigger need for preconstruction review and further assessment of impacts. Thus, since the standards of Title 1, Part C of the federal CAA would be met by Alternative H, a less-than-significant impact to Federal Class 1 areas would result.

INDOOR AIR QUALITY OF ALTERNATIVE H

A discussion of indoor air quality impacts appears in **Section 4.4.2**.

The effect of Alternative H on indoor air quality is significant with regards to environmental tobacco smoke, but less-than-significant with regards to other sources. Compliance with mitigation measure listed in **Section 5.2.3** of this document will reduce adverse effects of environmental tobacco smoke to less-than-significant for Alternative H. Other mitigation measures are contained in **Section 5.2.3** to reduce the adverse effects of other sources on indoor air quality of Alternative H even further.

4.5 BIOLOGICAL RESOURCES

The purpose of this section is to analyze the potential effects of the Proposed Action and Alternatives on biological resources including wildlife and habitats, federally-listed species, migratory birds, and jurisdictional "waters of the U.S." The analysis of potential effects was based on the biological setting as determined from field surveys conducted by the Huffman-Broadway Group and Analytical Environmental Services (AES) in 2004, by consultation with the U.S. Fish and Wildlife Service (USFWS), and by reviewing known literature and metadata, including the California Department of Fish and Game (DFG) California Natural Diversity Database (CNDDB).

The project area in the vicinity of the Wilfred and Stony Point sites is located within the Santa Rosa Plain, which encompasses much of central Sonoma County, and is characterized by vernal pools, seasonal wetlands, and associated grasslands. These habitats support a unique population of the federally listed endangered California tiger salamander (*Ambystoma californiense*), and three federally listed endangered plant species that have a large proportion of their population on the Plain. The Santa Rosa Plain Conservation Strategy (Conservation Strategy) and recently-released 2007 Programmatic Biological Opinion ("Programmatic Biological Opinion for U.S. Army Corps of Engineers Permitted Projects that May Affect California Tiger Salamander and Three Endangered Plant Species on the Santa Rosa Plain, California") was crafted during the period from 2005-2007 by the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), and interested stakeholders to allow some development to continue, and to specifically preserve habitat for the three listed plant and animal species. The 2007 Programmatic Biological Opinion streamlines applications for Corps permits for both federal and non-federal applicants. An Implementation Plan for the Conservation Strategy is in preparation. Consultation with the USFWS was initiated by the National Indian Gaming Commission in July 2007. A Biological Opinion (BO) was issued by the USFWS on February 3, 2009 (**Appendix JJ**).

4.5.1 ALTERNATIVE A – PROPOSED PROJECT

Potential Effects to Wildlife and Habitats

Development of wastewater treatment options for Alternative A would affect habitats that are utilized by wildlife species. **Table 4.5-1** - **Table 4.5-3** provide a summary of the acreage of each habitat type that would be affected under Alternative A. Wastewater treatment options for each alternative are summarized in **Table 2-2**. Development of Option 1 would impact 62.08 acres,

Option 2 would impact 68.42 acres and Option 3 would impact 83.88 acres. Most of the habitat disturbance resulting from the development of Alternative A would occur in cultivated fields, 60.83, 66.34 and 77.1 acres respectively for each option. Ground disturbance (such as grading) is a potentially significant impact to both resident and foraging wildlife. Mitigation is discussed in **Section 5.2.4** to reduce impacts to a less-than-significant level.

TABLE 4.5-1
ANTICIPATED EFFECTS TO HABITAT TYPES – ALTERNATIVE A OPTION 1

Habitat Type	Acreage Affected	Percentage Affected (Based on 253 total acres)
California Annual Grassland	0	0%
Seasonal Pools and Wetlands	0.81	0.32%
Drainage Ditches	0.44	0.17 %
Irrigated Pasture	0	0%
Cultivated Fields	60.83	24.00%
Disturbed/Ruderal	0	0%
Total	**62.08**	**24.54%**

Source: The Huffman-Broadway Group, Inc., 2007.

TABLE 4.5-2
ANTICIPATED EFFECTS TO HABITAT TYPES – ALTERNATIVE A OPTION 2

Habitat Type	Acreage Affected	Percentage Affected (Based on 253 total acres)
California Annual Grassland	0	0%
Seasonal Pools and Wetlands	1.60	0.63%
Drainage Ditches	0.48	0.19%
Irrigated Pasture	0	0%
Cultivated Fields	66.34	26.22%
Disturbed/Ruderal	0	0%
Total	**68.42**	**27.04**

Source: The Huffman-Broadway Group, Inc., 2007.

TABLE 4.5-3
ANTICIPATED EFFECTS TO HABITAT TYPES – ALTERNATIVE A OPTION 3

Habitat Type	Acreage Affected	Percentage Affected (Based on 253 total acres)
California Annual Grassland	4.41	1.74%
Seasonal Pools and Wetlands	1.60	0.63%
Drainage Ditches	0.77	0.30%
Irrigated Pasture	0	0%
Cultivated Fields	77.1	30.47%
Disturbed/Ruderal	0	0%
Total	**83.88**	**33.14**

Source: The Huffman-Broadway Group, Inc., 2007.

Federally-listed Species

The following discussion evaluates the potential direct effects Options 1-3 may have on each federally-listed species with a potential to be affected by activities within the Wilfred site. Habitat for two federally Endangered plant species, the Sonoma sunshine and Burke's goldfields, has been documented in historical records in the vicinity of Options 1-3 (see **Section 3.5** for full discussion).

Formal consultation with the USFWS under Section 7 of the Endangered Species Act was initiated in July 2007. A Biological Opinion issued in February 2009 constitutes the final determination of impacts to federally-listed species that are the subject of the Biological Opinion (**Appendix JJ**).

Special-status Plant Species

The implementation of either Option 1, 2 or 3 would have no direct effect on the recently-discovered population of Sonoma sunshine, nor would these options have any affect on the area of historical occurrence of Sonoma sunshine and Burke's goldfields mapped in the CNDDB. Option 1 would impact 0.81 acres of seasonal wetlands and Options 2 and 3 would impact 1.60 acres of seasonal wetlands that provide potentially suitable habitat for the listed plant species of the Santa Rosa Plain. Species-specific surveys were conducted in this area of impact (see **Section 3.5.4**). None of the listed plants was observed. Therefore, impacts to special status plant species would be less than significant. Nonetheless, mitigation is required by the Santa Rosa Plain Conservation Strategy. Mitigation for the impact to occupied and/or suitable habitat for the endangered plants is recommended in **Section 5.2.4**.

California Tiger Salamander (CTS)

Based on the 2004 protocol-level surveys, it is likely that CTS occurs on the Wilfred site. All areas that would be graded to support the gaming facility are considered aestivation habitat for the CTS. As such, impacts to aestivation habitat would occur throughout the development footprint for each of the options. The USFWS considers that habitat areas used for sprayfields would be altered to the extent that CTS cannot utilize such areas effectively. Because floodplains are not considered suitable CTS habitat, only the proposed sprayfields outside of the floodplain are considered to have impacts to CTS aestivation habitat. Additional impacts to the CTS that may occur with grading and development activities include the direct impacts to salamanders by earth moving activities, infrastructure improvements, building construction, landscaping and other construction. Other impacts from construction may occur due to disruption of surface movement, disruption of complete loss of reproduction, harassment from increased human

activity, and permanent and temporary loss of shelter. Additionally, night lighting practices in and around the construction areas may disrupt nocturnal movement patterns.

The potential for all options of Alternative A to impact acreage of CTS aestivation habitat is shown in **Table 4.5-4**. Development of Option 1 would result in impacts to 62.08-acres of CTS aestivation habitat, development of Option 2 would result in impacts to 68.42-acres of CTS aestivation habitat, and development of Option 3 would result in impacts to 82.17 acres of CTS aestivation habitat. The Programmatic Biological Opinion requires mitigation at a ratio of 3:1 for projects that are within 500 feet of a breeding site; 2:1 for projects that are greater than 500 feet and within 2200 feet of a known breeding site, and projects beyond 2200 feet from a known breeding site, but within 500 feet of an adult occurrence; and 1:1 for projects that are greater than 2200 feet and within 1.3 miles of a known breeding site. As most of the open space area is within the 100-year floodplain, little to no opportunity exists for setting aside CTS habitat within the on-site open space preserve. Therefore, CTS mitigation would be accomplished off-site.

TABLE 4.5-4
IMPACTS AND MITIGATION REQUIREMENTS FOR ALTERNATIVE A OPTIONS 1, 2 AND 3

Option	Approximate Acreage of Site (acres)	Impacts of Development to CTS Habitat (acres) (graded footprint and sprayfields)	Required CTS Mitigation (acres)	Approximate Ungraded On-Site Open Space Preserve (acres) (little to no CTS habitat)	Portion of Open Space to be used as Sprayfields (acres)	Wetland Preservation in On-Site Open Space Preserve (acres)
1	253	62.08	62.08	191	0.0	17.19
2	253	68.42	68.42	185	54.0	16.36
3	253	82.17	86.85	169	111.4	16.07

Source: The Huffman-Broadway Group, Inc., 2007; USFWS, 2009.

Under all three options, nearly the entire graded footprint is proposed in areas outside of the 100-year floodplain. Under Option 2 and Option 3, all areas of sprayfields are proposed within the floodplain. Therefore, nearly all the graded footprint is within areas considered as CTS habitat, and all of the proposed sprayfields are in areas not considered CTS habitat.

Development impacts on aestivation habitat for the CTS within the 66-acre portion of the Wilfred site contained in the Northwest Specific Plan have been previously evaluated in a Section 7 Biological Opinion (BO) for a different project. The USFWS issued a BO on August 5, 2005 related to a Section 7 consultation conducted as part of the USACE permit application process for a mixed use project (commercial, residential and light industrial) proposed by Redwood Equities, L.P. The BO is valid for a commercial project at the Wilfred site and has not expired as it is in response to a request made by the USACE for Section 7 consultation for an existing on-going permit application. The BO for the mixed use project requires mitigation for CTS aestivation

habitat at a ratio of 0.5:1. Discussions with USFWS have found that USFWS would consider an amendment to the existing BO as the means to obtain the requisite "take" authorization from the agency related to the CTS. The applicant has proposed to move mitigation for CTS aestivation habitat from the less stringent 0.5:1 ratio required in the previous BO to a more stringent 1:1 ratio subject to further Section 7 consultation with the USFWS. The USFWS issued a BO in February 2009 for the Preferred Alternative (Alternative A, Option 3) that requires mitigation at a 1:1 ratio for impacts to areas within 1.3 miles from extant or extirpated breeding pools and at a 2:1 ratio for impacts to areas within 500 feet of an adult occurrence.

Table 4.5-4 evaluates the mitigation requirements for Options 1-3 assuming a 1:1 ratio. Note that this assumption is made for all alternatives except for the Preferred Alternative, for which a USFWS BO has prescribed mitigation ratios. Mitigation requirements would range from 62.08-acres for Alternative A Option 1 to 86.85-acres for Alternative A Option 3. None of the mitigation would be accomplished on-site as most of the area available for open space dedication is within the 100-year floodplain and not considered suitable CTS habitat. All mitigation would be accomplished off-site and would consist of purchasing CTS credits from an approved mitigation bank or the purchase of farm land within known CTS habitat and placement of the land under conservation easement. Under the latter method, the purchased land would be placed in a conservation easement and subject to funding agreements and a long-term management program aimed at CTS conservation. Mitigation is further discussed in **Section 5.2.4**.

Special-status Fish Species

There are reports of steelhead fish occurring in Coleman Creek, which is upstream of the confluence of the Laguna de Santa Rosa and the Bellevue-Wilfred Channel (Entrix, 2004). Steelhead fish ostensibly migrate from the Russian River into the Laguna de Santa Rosa and Coleman Creek. The effects of the project's treated wastewater discharges on this species include higher creek temperatures, eutrophication, and possible feminization of fish from endocrines in wastewater. These effects are described and referenced in the Effluent Study (**Appendix V**). It is unlikely, however, that the United States Environmental Protection Agency (USEPA) would allow discharge of effluent into the Laguna de Santa Rosa except during the winter months when Russian River flow is high (more than 1,000 cfs at the Hacienda Bridge), thus diluting constituent concentrations. Since effluent would be diluted with high flows in the Russian River, the impact of the project's treated wastewater discharges on this species would be less than significant. Additionally, siltation of the Laguna de Santa Rosa from site grading could occur. However, adoption of Best Management Practices (BMPS) outlined in the project description (**Section 2.2.5**) including implementation of a stormwater pollution prevention plan (SWPPP) would eliminate siltation of the Laguna de Santa Rosa.

In a ten-year study of the Russian River drainage, the City of Santa Rosa reports that agricultural diversions and drought had the greatest impact on migrating and spawning salmonid fish (Santa Rosa, 2003; Merritt-Smith, 2003a, b). The City's study and the subsequent environmental impact reports (EIRs) (Santa Rosa, 2003, 2004b) reveal that discharges of tertiary treated wastewater into the Laguna de Santa Rosa in the winter months do not significantly impact biological resources, including threatened and endangered salmonid fish, amphibians, or invertebrates. The City of Santa Rosa's studies, including the subsequent EIR's are discussed in the context of the proposed project in the Effluent Study (**Appendix V**).

The Effluent Study (**Appendix V**) concludes that the general effects of tertiary treated wastewater discharges on salmonids of the Russian River system are negligible. Therefore, the effects of Alternative A on steelhead fish are considered less-than-significant due to the anticipated winter discharge requirement of the USEPA and the relatively insignificant constituent concentrations that will be contributed to the Russian River from the proposed wastewater treatment plant (Figure 8 of **Appendix V**). Nevertheless, Section 7 Consultation with National Oceanic and Atmospheric Administration (NOAA) Fisheries will be initiated if treated wastewater is discharged into the Laguna de Santa Rosa.

Migratory Birds and Other Federal Species of Concern

Several raptor species have the potential to utilize the site, primarily as foraging habitat. These species include the burrowing owl (also a species of federal concern), northern harrier, white-tailed kite, sharp-shinned hawk, Cooper's hawk and golden eagle. Winter use of the site by these species is possible, however, in all cases, with the exception of burrowing owl, appropriate nesting habitat does not appear to be present. A burrowing owl was observed at the site in January 2004. Subsequent surveys uncovered no evidence that the species used the site for nesting. Three raptors that may occur are designated as state species of special concern based on presence of wintering habitat (Ferruginous Hawk, Golden Eagle, and Merlin). Ferruginous Hawk is also a federal species of special concern. These species are wide-ranging species often wintering over a broad area, and incidental use of the site by these species, primarily during winter, is certainly possible. The site provides no unique features that would highlight the importance of the site as a wintering location for any of these species.

Nighttime lighting from the operation of the Proposed Project has a potentially significant impact on both migrating and local bird populations. Increased lighting has been shown to increase collisions of birds and structures, as well as causing a disorientation effect on species. Mitigation measures to reduce potentially significant nighttime lighting impacts are identified in **Section 5.2.4**.

Potential significant adverse direct effects to migratory birds and other special status species will be less-than-significant with implementation of the mitigation measures identified in **Section 5.2.4**.

Waters of the U.S.

A formal delineation of waters of the U.S. has been conducted on the Wilfred Site. An application has been submitted for an individual Department of the Army Permit for placement of fill into waters of the U.S. Issuance of the permit is pending.

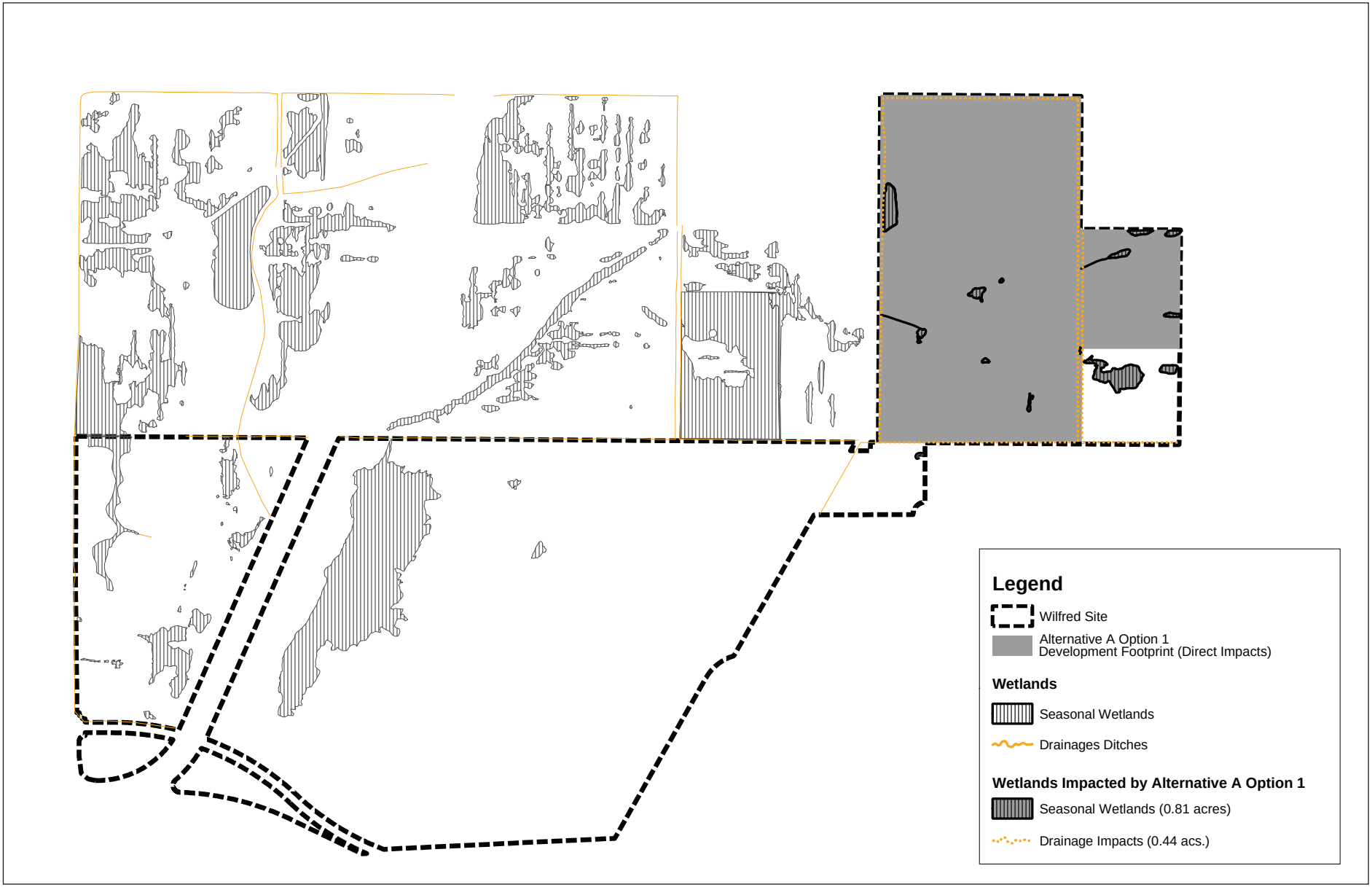
Potential Effects to Wetlands

Under Alternative A, approximately 0.81-acres of seasonal pools and wetlands would be graded and filled by wastewater treatment Option 1, and approximately 1.6-acres would be graded and filled by wastewater treatment Options 2 and 3. Seasonal pools and wetlands constitute habitat for both aquatic and terrestrial wildlife including insects, amphibians, reptiles, birds and small mammals. Grading of the topsoil and herbaceous layer of native and introduced vegetation would remove primary decomposers and producers thus disrupting the food chain leading to the aquatic and terrestrial organisms. This is a significant impact.

Potential Effects to Drainages

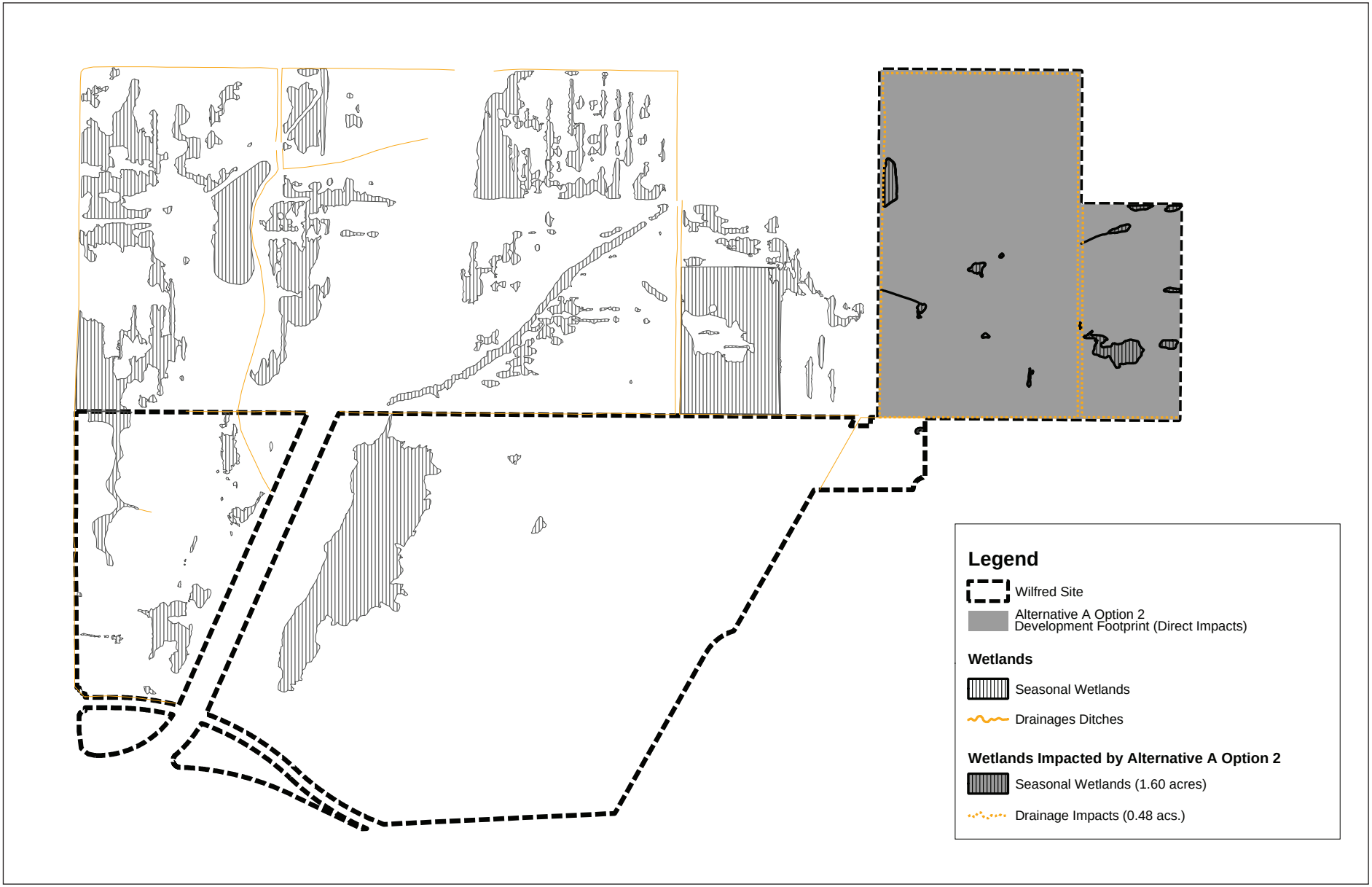
The proposed development of Option 1 would impact 0.44-acres, Option 2 would impact 0.48-acres and development of Option 3 would impact 0.77-acres of drainages. The floor and sides of the ditch where the treated wastewater outfall structure is proposed are vegetated with weedy species. Flowing water and aquatic life were absent when viewed on June 9, 2004. The addition of a permanent water source along the ditch would stimulate the growth of hydrophytes, and ultimately create conditions for the growth of hydrophytic vegetation. This is a potentially significant, but beneficial impact. No mitigation is required.

A formal delineation identified 18.44-acres of "waters of the U.S." on the Wilfred site. These features are subject to USACE jurisdiction under the Clean Water Act (CWA) and any discharge of dredged or fill material within the "waters of the U.S." would require a CWA, Section 404 permit. As discussed in the preceding paragraphs, anticipated direct effects to jurisdictional "waters of the U.S." total 1.25-acres with the development of Option 1, 2.08-acres with the development of Option 2 and 2.37-acres with the development of Option 3. **Table 4.5-5- Table 4.5-7** summarize the impacts of all options for Alternative A. **Figure 4.5-1 - Figure 4.5-3** show the wetland impacts of each option. As noted in **Section 2.2.6**, a flood storage area would be created on the southern portion of the Wilfred site that would likely also result in the creation of wetlands.



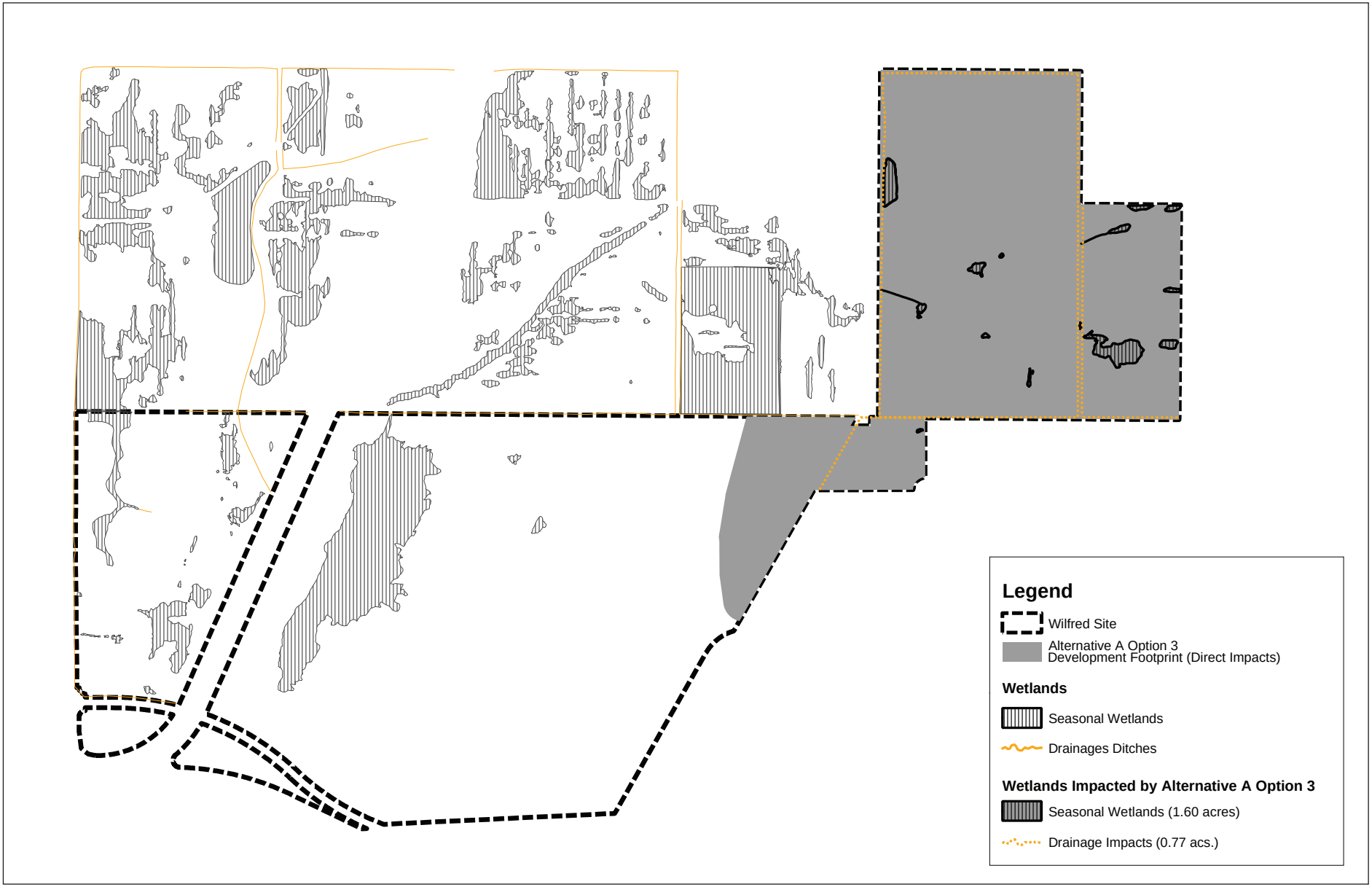
SOURCE: Huffman Broadway, 2006; AES, 2009

Figure 4.5-1
Wetland Impacts - Alternative A Option 1



SOURCE: Huffman Broadway Group, 2006; AES, 2009

Figure 4.5-2
Wetland Impacts - Alternative A Option 2



SOURCE: Huffman Broadway Group, 2006; AES, 2009

Figure 4.5-3
Wetland Impacts - Alternative A Option 3

It is possible that these created wetlands will satisfy any mitigation required by the Section 404 permit. However, in any case, the Tribe would be required to comply with any requirements contained in the CWA Section 404 permit. Mitigation measures are identified in **Section 5.2.4.**

TABLE 4.5-5
ANTICIPATED DIRECT EFFECTS TO WATERS OF THE U.S. – ALTERNATIVE A OPTION 1

Wetland Feature	Acreage Affected
Seasonal Ponds and Wetlands	0.81
Drainage Ditches	0.44
Total	**1.25**

Source: The Huffman-Broadway Group, Inc., 2007.

TABLE 4.5-6
ANTICIPATED DIRECT EFFECTS TO WATERS OF THE U.S. – ALTERNATIVE A OPTION 2

Wetland Feature	Acreage Affected
Seasonal Ponds and Wetlands	1.60
Drainage Ditches	0.48
Total	**2.08**

Source: The Huffman-Broadway Group, Inc., 2007.

TABLE 4.5-7
ANTICIPATED DIRECT EFFECTS TO WATERS OF THE U.S. – ALTERNATIVE A OPTION 3

Wetland Feature	Acreage Affected
Seasonal Ponds and Wetlands	1.60
Drainage Ditches	0.77
Total	**2.37**

Source: The Huffman-Broadway Group, Inc., 2007.

4.5.2 ALTERNATIVE B – NORTHWEST STONY POINT CASINO

Potential Effects to Wildlife and Habitats

Development of wastewater treatment options for Alternative B would affect habitats that are utilized by wildlife species. **Table 4.5-8** and **Table 4.5-9** provide a summary of the acreage of each habitat type that would be affected under Alternative B. Wastewater treatment options for each alternative are summarized in **Table 2-2**. Development of Option 1 would impact 82.55 acres; Option 2 would impact 99.17 acres. Most of the habitat disturbance resulting from the development of Alternative B, Option 1, would occur in Irrigated Pasture (48.22 acres) and Seasonal Pools and Wetlands (21.14-acres). Most of the habitat disturbance resulting from the development of Alternative B, Option 2, would also occur in Irrigated Pasture (48.22 acres) and Seasonal Pools and Wetlands (26.43-acres). Ground disturbance such as grading is a potentially significant impact to both resident and foraging wildlife. Mitigation is discussed in **Section 5.2.4**.

TABLE 4.5-8
ANTICIPATED EFFECTS TO HABITAT TYPES – ALTERNATIVE B OPTION 1

Habitat Type	Acreage Affected	Percentage Affected (Based on 360 total acres)
California Annual Grassland	0	0%
Seasonal Pools and Wetlands	21.14	5.87%
Drainage Ditches	0.73	0.20%
Irrigated Pasture	48.22	13.39%
Cultivated Fields	4.8	1.33%
Disturbed/Ruderal	7.66	2.12%
Total	**82.55**	**22.91**

Source: The Huffman-Broadway Group, Inc., 2007.

TABLE 4.5-9
ANTICIPATED EFFECTS TO HABITAT TYPES – ALTERNATIVE B OPTION 2

Habitat Type	Acreage Affected	Percentage Affected (Based on 360 total acres)
California Annual Grassland	0.02	<0.1%
Seasonal Pools and Wetlands	26.43	7.34%
Drainage Ditches	0.73	0.20%
Irrigated Pasture	48.22	13.39%
Cultivated Fields	16.11	4.48%
Disturbed/Ruderal	7.66	2.12%
Total	**99.17**	**27.54**

Source: The Huffman-Broadway Group, Inc., 2007.

Federally-listed Species

Options 1 and 2 would directly impact 1.38 acres of occupied habitat for two federally Endangered plant species: Sonoma sunshine and Burke's goldfields. Habitat for these species has been documented in historical records on a portion of the site, adjacent to Stony Point Road along the site boundary, including a portion of the irrigated pasture to be impacted by Alternative B. The agricultural areas of the Stony Point site are within the Santa Rosa Plain Conservation Area for the federally-listed CTS. More detailed discussion of the impacts of Options 1 and 2 appear below.

Special-status Plant Species

The grading footprint of Options 1 and 2 would directly impact approximately 1.38 acres of habitat that is known to have historically supported two federally Endangered Species, Sonoma sunshine and Burke's goldfields. Furthermore, surveys conducted in 2005 and 2007 found Sonoma sunshine present at the Stony Point site. The entire 1.38-acres of habitat is assumed to contain seed banks for the two species. Impacts to 1.38-acres of Sonoma sunshine and Burke's

goldfields habitat and seed bank constitute a significant impact. Mitigation is outlined in **Section 5.2.4**.

California Tiger Salamander (CTS)

It is likely that CTS occurs on the 360-acre Stony Point site. Impacts to CTS are likely to occur from development of Alternative B. The CTS retreats to upland refugial sites after breeding; sometimes at distances greater than a mile away from breeding ponds. Impacts to refugial or aestivation habitat could result from development of uplands within any portion of the project site. All areas that would be graded to support the gaming facility are considered aestivation habitat for the California tiger salamander. As such, impacts to aestivation habitat would occur throughout the development footprint for each of the options. The USFWS considers that habitat areas used as sprayfields would be altered such that CTS cannot utilize such areas effectively. Because floodplains are not considered suitable CTS habitat, only the proposed sprayfields outside of the floodplains are considered to have impacts to CTS aestivation habitat. Additional impacts to the CTS may occur with grading and development activities that include the potential for direct impacts to salamanders by earth moving activities, infrastructure improvements, building construction, landscaping and other construction. Other impacts from construction may occur due to possible disruption of surface movement, disruption to or complete loss of reproduction, harassment from increased human activity, and permanent and temporary loss of shelter. Additionally, lighting practices in and around construction areas may disrupt nocturnal movement patterns.

Table 4.5-10 shows the acreage that would be considered impacted from the standpoint of CTS aestivation habitat through development of the project footprint of both options for Alternative B. The Programmatic Biological Opinion requires mitigation at a ratio of 3:1 for projects that are within 500 feet of a breeding site; 2:1 for projects that are greater than 500 feet and within 2200 feet of a known breeding site, and projects beyond 2200 feet from a known breeding site but within 500 feet of an adult occurrence; and 1:1 for projects that are greater than 2200 feet and within 1.3 miles of a known breeding site. As most of the open space area is within the 100-year floodplain, little to no opportunity exists for setting aside CTS habitat within the on-site open space preserve. Therefore, CTS mitigation would be accomplished off-site. The CTS mitigation requirement for each option is summarized in **Table 4.5-10**.

TABLE 4.5-10
MITIGATION REQUIREMENTS FOR ALTERNATIVE B OPTIONS 1 AND 2

Option	Approximate Acreage of Site (acres)	Impacts of Development to CTS Habitat (acres) (graded footprint and sprayfields)	Required CTS Mitigation (acres)	Approximate Ungraded On-Site Open Space Preserve (acres) (little to no CTS habitat)	Portion of Open Space to be used as Sprayfields (acres)	Wetland Preservation in on site Open Space Preserve (acres)
1	360	83.97	151.00	277	78.0	39.75
2	360	100.43	167.46	261	111.4	34.46

Source: The Huffman-Broadway Group, Inc., 2007.

Development of Option 1 under Alternative B would result in impacts to 83.97-acres of CTS aestivation habitat (**Table 4.5-10**). Development of Option 2 would result in impacts to 100.43 acres. Under both options, part of the graded footprint is proposed in areas outside of the 100-year floodplain. Also under both options, parts of the proposed sprayfields are within the floodplain. The parts of the graded footprint and sprayfields that are outside of floodplain are considered CTS habitat. All areas of impact to CTS habitat are between 2200 feet and 1.3 miles from the nearest known breeding location. All impacted areas in these alternatives would therefore require mitigation at a ratio of 1:1. Mitigation is further discussed in **Section 5.2.4**.

Special-status Fish Species

There are reports of steelhead fish occurring in Coleman Creek, which is upstream of the confluence of the Laguna de Santa Rosa and the Bellevue-Wilfred Channel (Entrix, 2004). Steelhead fish ostensibly migrate from the Russian River into the Laguna de Santa Rosa and Coleman Creek. The effects of the project's treated wastewater discharges on this species include higher creek temperatures, eutrophication, and possible feminization of fish from endocrines in wastewater. These effects are described and referenced in the Effluent Study (**Appendix V**). It is unlikely, however, that the EPA would allow discharge of effluent into the Laguna de Santa Rosa except during the winter months when Russian River flow is high (more than 1,000 cfs at the Hacienda Bridge), thus diluting constituent concentrations. Since effluent would be diluted with high flows in the Russian River, the impact of the project's treated wastewater discharges on this species would be less than significant. Additionally, siltation of the Laguna de Santa Rosa from site grading could occur. However, adoption of BMPs outlined in the project description (**Section 2.2.5**) including implementation of a stormwater pollution prevention plan (SWPPP) would eliminate siltation of the Laguna de Santa Rosa.

In a ten-year study of the Russian River drainage, the City of Santa Rosa reports that agricultural diversions and drought had the greatest impact on migrating and spawning salmonid fish (Santa

Rosa, 2003; Merritt-Smith, 2003a, b). The City's study and the subsequent EIRs (Santa Rosa, 2003, 2004b) reveal that discharges of tertiary treated wastewater into the Laguna de Santa Rosa in the winter months do not significantly impact biological resources, including threatened and endangered salmonid fish, amphibians, or invertebrates. The City of Santa Rosa's studies, including the subsequent EIR's are discussed in the context of the proposed project in the Effluent Study (**Appendix V**).

The Effluent Study (**Appendix V**) concludes that the general effects of tertiary treated wastewater discharges on salmonids of the Russian River system are negligible. Therefore, the effects of Alternative A on steelhead fish are considered less-than-significant due to the anticipated winter discharge requirement of the USEPA and the relatively insignificant constituent concentrations that will be contributed to the Russian River from the proposed wastewater treatment plant (**Figure 8** of **Appendix V**). Nevertheless, Section 7 Consultation with NOAA Fisheries will be initiated if treated wastewater is discharged into the Laguna de Santa Rosa.

Migratory Birds and Other Federal Species of Concern

The development of Alternative B would affect tall grasses and weedy vegetation that could potentially support active bird species that may not include western burrowing owl, and tricolored blackbird (nests), and foraging federal Species of Concern including northern harrier, white-tailed kite, sharp-shinned hawk, Cooper's hawk, ferruginous hawk, golden eagle, merlin, California-horned lark, loggerhead shrike, and yellow warbler. According to the federal Migratory Bird Treaty Act foraging migratory birds and their nests are protected from "take".

Alternative B could adversely affect active migratory bird nests located at ground-level or in tall weeds if vegetation removal activities associated with project construction occur during the nesting season. This is a potentially significant impact. Likewise, mass grading the footprints of Option 1 and 3 would eliminate upland basking sites for the western pond turtle. Potential adverse direct effects to migratory birds and other special status species will be less-than-significant with implementation of the mitigation measures identified in **Section 5.2.4**.

Nighttime lighting of the operation of Alternative B has a potentially significant impact on migrating and local bird populations. Increased lighting has been shown to increase collisions of birds and structures, as well as causing a disorientation effect on many species. Mitigation measures to reduce potentially significant nighttime lighting impacts are identified in **Section 5.2.4**.

Waters of the U.S.

Potential Effects to Wetlands

Under Alternative B, the implementation of Option 1 would impact 21.14-acres of seasonal pools and wetlands (**Table 4.5-11**). Option 2 would impact 26.43-acres of seasonal pools and wetlands (**Table 4.5-12**). Seasonal pools and wetlands constitute habitat for both aquatic and terrestrial wildlife including insects, amphibians, reptiles, birds and small mammals. Grading of the topsoil and herbaceous layer of native and introduced vegetation would remove primary decomposers and producers thus disrupting the food chain leading to aquatic and terrestrial organisms. This is a significant impact. Mitigation is discussed in **Section 5.2.4**.

A formal delineation identified more than 61.77-acres of "waters of the U.S." on the Stony Point site. These features are subject to USACE jurisdiction under the Clean Water Act and any discharge of dredged or fill material within the "waters of the U.S." would require a Clean Water Act, Section 404 permit. Development of Option 1 would impact 21.87-acres of "waters of the U.S."; development of Option 2 would impact 27.16-acres of "waters of the U.S." (**Figure 4.5-4**; **Figure 4.5-5; Table 4.5-11; Table 4.5-12**). This is a significant impact. However, as noted in **Section 2.3.6**, a flood storage area would be created on the southern portion of the Stony Point site that would likely also result in the creation of wetlands. It is possible that these created wetlands will satisfy any mitigation required by the Section 404 permit. However, in any case, the Tribe would be required to comply with any requirements contained in the CWA Section 404 permit. Mitigation measures are identified in **Section 5.2.4.**

TABLE 4.5-11
ANTICIPATED DIRECT EFFECTS TO WATERS OF THE U.S. – ALTERNATIVE B OPTION 1

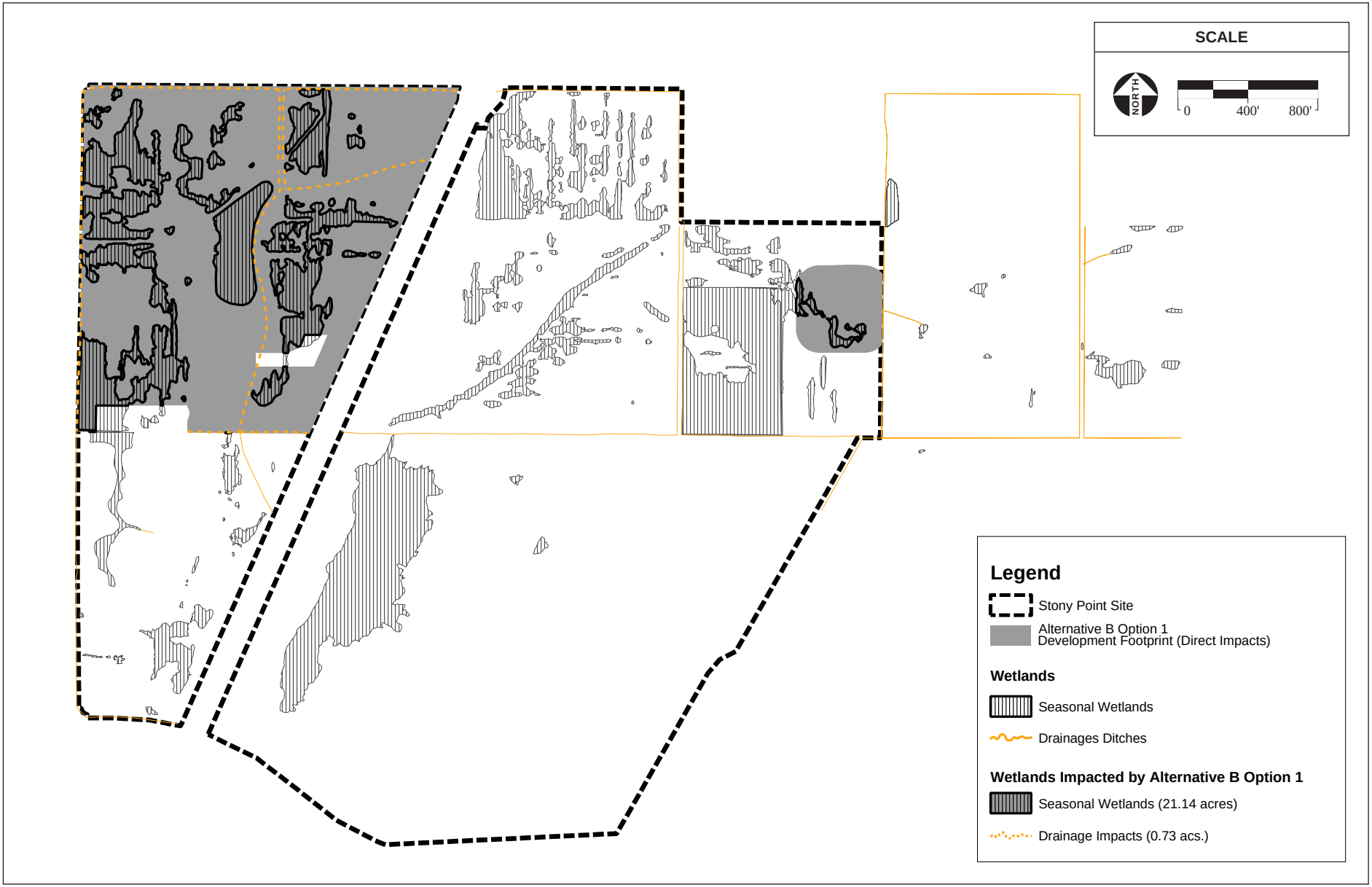
Wetland Feature	Acreage Affected
Seasonal Ponds and Wetlands	21.14
Drainage Ditches	0.73
Total	**21.87**

Source: The Huffman-Broadway Group, Inc., 2007.

TABLE 4.5-12
ANTICIPATED DIRECT EFFECTS TO WATERS OF THE U.S. – ALTERNATIVE B OPTION 2

Wetland Feature	Acreage Affected
Seasonal Ponds and Wetlands	26.43
Drainage Ditches	0.73
Total	**27.16**

Source: The Huffman-Broadway Group, Inc., 2007.



SOURCE: Huffman Broadway Group, 2006; AES, 2007

Figure 4.5-4
Wetland Impacts – Alternative B Option 1

SOURCE: Huffman Broadway Group, 2006; AES, 2007

Figure 4.5-5
Wetland Impacts – Alternative B Option 2

Potential Effects to Drainages

The proposed development of Options 1 and 2 would impact 0.73-acres of drainages. There is no ecological value to the weeds on the floor and sides of the ditch where the proposed wastewater outfall would be located; therefore, impacts would be less than significant. Flowing water and aquatic life were absent when viewed on June 9, 2004. The addition of a permanent water source along the ditch would stimulate the growth of hydrophytes, and ultimately create conditions for the growth of hydrophytic vegetation. This is a potentially significant, but beneficial impact; therefore, no mitigation is required.

4.5.3 ALTERNATIVE C – NORTHEAST STONY POINT CASINO

Potential Effects to Wildlife and Habitats

Development of wastewater treatment options for Alternative C would affect habitats that are utilized by wildlife species. **Table 4.5-13** and **Table 4.5-14** provide a summary of the acreage of each habitat type that would be affected under Option 1 and 2. Wastewater treatment options for each alternative are summarized in **Table 2-2**. As shown in **Table 4.5-13**, Option 1 would affect approximately 26.44 percent of the 360-acres of habitat within the Stony Point site. Most of the habitat disturbance associated with Option 1 (70.91-acres) would occur in cultivated fields. As shown in **Table 4.5-14**, Option 2 would affect 30.65 percent of the approximately 360 acres of habitat within the Stony Point site. Most of the habitat disturbance associated with Option 2 would also occur in cultivated fields (67.99-acres). Grading is a potentially significant impact to both resident and foraging wildlife. Mitigation is discussed in **Section 5.2.4** to reduce impacts to less-than-significant levels.

TABLE 4.5-13
ANTICIPATED EFFECTS TO HABITAT TYPES – ALTERNATIVE C OPTION 1

Habitat Type	Acreage Affected	Percentage Affected (Based on 360 total acres)
California Annual Grassland	1.65	0.46%
Seasonal Pools and Wetlands	21.79	6.05%
Drainage Ditches	0.49	0.14%
Irrigated Pasture	0	0%
Cultivated Fields	70.91	19.70%
Disturbed/Ruderal	0.34	0.09%
Total	**95.18**	**26.44**

Source: The Huffman-Broadway Group, Inc., 2007.

TABLE 4.5-14
ANTICIPATED EFFECTS TO HABITAT TYPES – ALTERNATIVE C OPTION 2

Habitat Type	Acreage Affected	Percentage Affected (Based on 360 total acres)
California Annual Grassland	1.29	0.36%
Seasonal Pools and Wetlands	25.70	7.14%
Drainage Ditches	0.49	0.14%
Irrigated Pasture	14.17	3.94%
Cultivated Fields	67.99	18.89%
Disturbed/Ruderal	0.66	0.18%
Total	**110.3**	**30.65%**

Source: The Huffman-Broadway Group, Inc., 2007.

Federally-listed Species

The following discussion evaluates potential direct effects of Options 1 and 2 on federally-listed species within the Stony Point site. Historical records for two federally endangered species, Sonoma sunshine and Burke's goldfields, as well as a recent record of Sonoma sunshine, have been documented at the western end of the Stony Point site, adjacent to Stony Point Road. Under Options 1 and 2, only sprayfields and open space are proposed for the area in which these species have been documented. The agricultural areas of the Stony Point site are within the Santa Rosa Plain Conservation Area for the federally-listed California tiger salamander (CTS). More detailed discussion of the impacts of Options 1 and 2 appear below.

Special-status Plant Species

The grading footprint of Option 1 and 2 would directly impact approximately 21.79- and 25.70-acres of seasonal wetlands, respectively. This is a significant impact. Mitigation is outlined in **Section 5.2.4**.

The grading footprint of Options 1 and 2 would not directly impact known habitat for the site's two federally-listed plant species: Sonoma sunshine and Burke's goldfields. Installation of pipes and sprinklers for sprayfields would cause temporary impacts to approximately 1.38-acres of habitat for the two species. Operation of sprayfields could impact approximately 1.38-acres of habitat for the two species. Operation of sprayfields could cause the habitat to be wet year-round, rather than seasonal, giving a competitive advantage to non-native species such as Italian ryegrass (*Lolium multiflorum*). This is a potentially significant impact that would require mitigation as outlined in **Section 5.2.4**.

California Tiger Salamander

It is likely that California tiger salamander (CTS) occurs on the 360-acre Stony Point site. Impacts to CTS are likely to occur from development of Options 1 or 2. Impacts to the CTS would be similar to those identified in **Section 4.5.2**, **Alternative B**. This is a significant impact.

Table 4.5-15 shows the acreage that would be considered impacted from the standpoint of CTS aestivation habitat through development of the project footprint of both options for Alternative C. The Programmatic Biological Opinion requires mitigation at a ratio of 3:1 for projects that are within 500 feet of a breeding site; 2:1 for projects that are greater than 500 feet and within 2200 feet of a known breeding site, and projects beyond 2200 feet from a known breeding site, but within 500-feet of an adult occurrence; and 1:1 for projects that are greater than 2200 feet and within 1.3 miles of a known breeding site. As most of the open space area is within the 100-year floodplain, little to no opportunity exists for setting aside CTS habitat within the on-site open space preserve. Therefore, CTS mitigation would be accomplished off-site. The CTS mitigation requirement for each option is summarized in **Table 4.5-15**.

Development of Option 1 would result in impacts to 86.90-acres of CTS aestivation habitat (**Table 4.5-15**). Development of Option 2 would result in impacts to 98.30 acres. Under both options, part of the graded footprint is proposed in areas outside of the 100-year floodplain. Also under both options, parts of the proposed sprayfields are within the floodplain. The parts of the graded footprint and sprayfields that are outside of floodplain are considered CTS habitat. All areas of CTS habitat impact are between 2200 feet and 1.3 miles from the nearest known breeding location. All impacted areas in these alternatives would therefore require mitigation at a ratio of 1:1. Mitigation is further discussed in **Section 5.2.4**.

TABLE 4.5-15
MITIGATION REQUIREMENTS FOR ALTERNATIVE C OPTIONS 1 AND 2

Option	Approximate Acreage of Site (acres)	Impacts of Development to CTS Habitat (acres) (graded footprint and sprayfields)	Required CTS Mitigation (acres)	Approximate Unimpacted On-Site Open Space Preserve (little to no CTS habitat) (acres)	Portion of Open Space to be used as Sprayfields (acres)	Wetland Preservation in on site Open Space Preserve (acres)
1	360	86.90	152.25	259	78.0	38.19
2	360	98.30	162.59	238	111.4	31.70

Source: The Huffman-Broadway Group, Inc., 2007.

Special-status Fish Species

The general effects of tertiary treated wastewater discharges on steelhead trout and salmonids of the Russian River system are negligible according to the recent studies performed by fisheries biologists (Santa Rosa, 2003; Merritt-Smith, 2003a, b). The impacts to the Laguna de Santa Rosa under Alternative C variants are similar to impacts identified in **Section 4.5.2**. It is concluded that the effects of Options 1 and 2 on steelhead fish are less than significant. Nevertheless, if treated wastewater is discharged into the Laguna de Santa Rosa, Section 7 Consultation with NOAA Fisheries will be initiated.

Migratory Bird and Other Federal Species of Concern

The development of Options 1 and 2 would affect tall grass and weedy vegetation that could potentially support any active western burrowing owl and tricolored blackbird nests and provide foraging habitat for federal Species of Concern including the northern harrier, white-tailed kite, sharp-shinned hawk, Cooper's hawk, ferruginous hawk, golden eagle, merlin, California horned lark, loggerhead shrike, and yellow warbler. According to the federal Migratory Bird Treaty Act foraging migratory birds and their nests are protected from "take".

Nighttime lighting of the operation of Alternative C has a potentially significant impact on migrating and local bird populations. Increased lighting has been shown to increase collisions of birds and structures, as well as causing a disorientation effect on species. Mitigation measures to reduce potentially significant nighttime lighting impacts are identified in **Section 5.2.4**.

Options 1 and 2 could adversely affect active migratory bird nests located at ground level or in tall weeds if vegetation removal activities associated with project construction occur during the nesting season. This is a significant impact. Likewise, mass grading of the footprint for Options 1 and 2 would eliminate upland basking sites for western pond turtle. Potential adverse direct effects to migratory birds and other special status species will be avoided or minimized by implementation of the mitigation measures identified in **Section 5.2.4**.

Waters of the U.S.

Potential Effects to Wetlands

Option 1 would impact 22.28-acres of jurisdictional "waters of the U.S."; Option 2 would impact a total of 26.28-acres of jurisdictional "waters of the U.S." (**Figure 4.5-6; Figure 4.5-7; Table 4.5-16; Table 4.5-17**). This is a significant impact. However, as noted in **Section 2.4.6**, a flood storage area would be created on the southern portion of the Stony Point site that would likely also result in the creation of wetlands. It is possible that these created wetlands will satisfy any mitigation required by the Section 404 permit. However, in any case, the Tribe would be

required to comply with any requirements contained in the CWA Section 404 permit. Mitigation measures are identified in **Section 5.2.4.**

Potential Effects to Drainages

Impacts to plant species within the ditch where the treated wastewater outfall structure is proposed would be similar to Options 1 and 2 under Alternative B. This is a potentially significant, but beneficial impact. No mitigation is required.

TABLE 4.5-16
ANTICIPATED DIRECT EFFECTS TO WATERS OF THE U.S. – ALTERNATIVE C OPTION 1

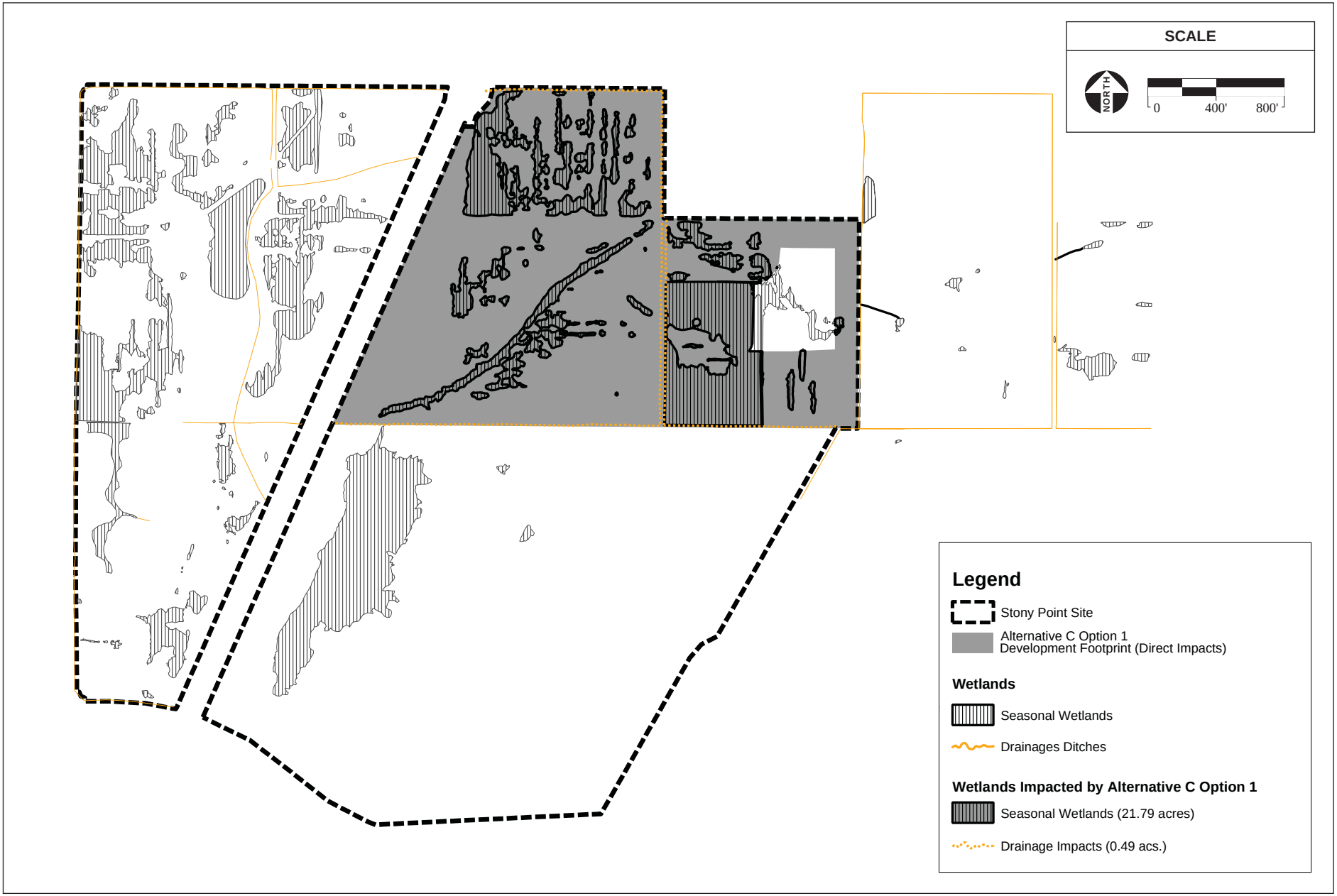
Wetland Feature	Acreage Affected
Seasonal Ponds and Wetlands	21.79
Drainage Ditches	0.49
Total	**22.28**

Source: The Huffman-Broadway Group, Inc., 2007.

TABLE 4.5-17
ANTICIPATED DIRECT EFFECTS TO WATERS OF THE U.S. – ALTERNATIVE C OPTION 2

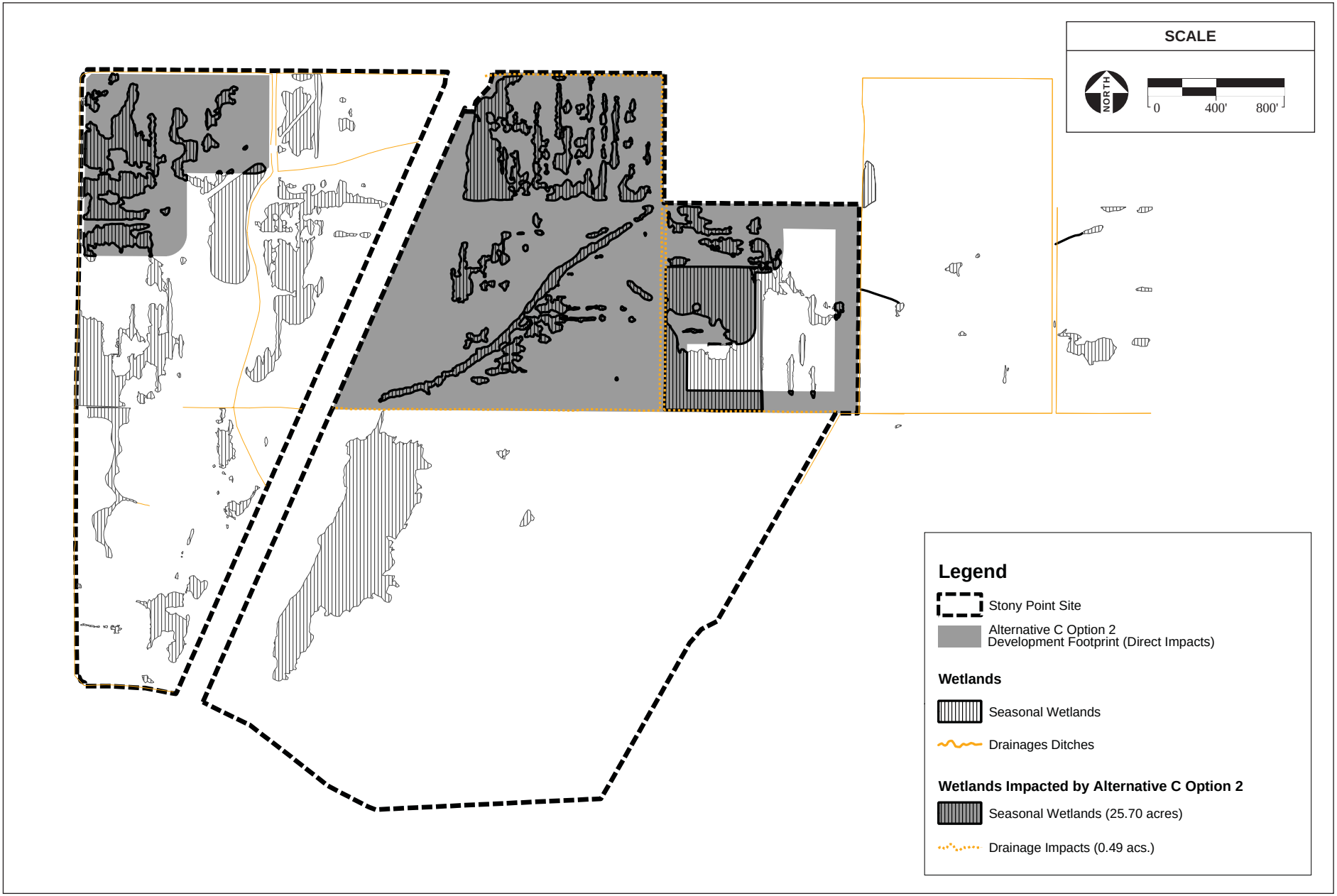
Wetland Feature	Acreage Affected
Seasonal Ponds and Wetlands	25.70
Drainage Ditches	0.49
Total	**26.28**

Source: The Huffman-Broadway Group, Inc., 2007.



SOURCE: Huffman Broadway Group, 2006; AES, 2007

Figure 4.5-6
Wetland Impacts – Alternative C Option 1



SOURCE: Huffman Broadway Group, 2006; AES, 2007

Figure 4.5-7
Wetland Impacts – Alternative C Option 2

4.5.4 ALTERNATIVE D – REDUCED INTENSITY (STONY POINT SITE)

Potential Effects to Wildlife and Habitats

Despite the reduction in the intensity of land development, the grading footprint for Alternative D Options 1 and 2 would be similar to those under Alternative B. Development of Options 1 or 2 for Alternative D would generally impact the same habitats as Options 1 or 2 for Alternative B. **Table 4.5-18** and **Table 4.5-19** provide a summary of the acreage of each habitat type that would be affected under Options 1 or 2. Grading is a potentially significant impact to both resident and foraging wildlife. Mitigation is discussed in **Section 5.2.4**.

TABLE 4.5-18
ANTICIPATED EFFECTS TO HABITAT TYPES – ALTERNATIVE D OPTION 1

Habitat Type	Acreage Affected	Percentage Affected (Based on 360 total acres)
California Annual Grassland	0	0%
Seasonal Pools and Wetlands	19.77	5.49%
Drainage Ditches	0.73	0.20%
Irrigated Pasture	47.31	13.14%
Cultivated Fields	3.09	0.86%
Disturbed/Ruderal	7.66	2.13%
Total	**78.56**	**21.82**

Source: The Huffman-Broadway Group, Inc., 2007

TABLE 4.5-19
ANTICIPATED EFFECTS TO HABITAT TYPES – ALTERNATIVE D OPTION 2

Habitat Type	Acreage Affected	Percentage Affected (Based on 360 total acres)
California Annual Grassland	0	0%
Seasonal Pools and Wetlands	21.91	6.07%
Drainage Ditches	0.76	0.21%
Irrigated Pasture	47.31	13.14%
Cultivated Fields	13.46	3.74%
Disturbed/Ruderal	7.66	2.13%
Total	**91.10**	**25.29%**

Source: The Huffman-Broadway Group, Inc., 2007.

Federally-listed Species

Impacts from Alternative D to federally-listed species are similar to impacts from Alternative B to federally-listed species. Like Alternative B, Alternative D would impact the CTS and the special status plant species: Burke's goldfields, and the Sonoma sunshine. Potential adverse direct impacts from Alternative D to these three species would be significant. Implementation of

mitigation measures identified in **Section 5.2.4** would offset these impacts and be considered as less than significant.

Special-status Plant Species

The grading footprint of Options 1 and 2 would directly impact approximately 1.38-acres of habitat that is known to have historically supported two federally Endangered Species, Sonoma sunshine and Burke's goldfields. Furthermore, surveys conducted in 2005 and 2007 found Sonoma sunshine at the location. The entire 1.38 acres of habitat is assumed to contain seed banks for the two species. Impacts to 1.38 acres of Sonoma sunshine and Burke's goldfields habitat and seed bank constitute a significant impact. Mitigation is outlined in **Section 5.2.4**.

California Tiger Salamander

The acreage that would be considered impacted from the standpoint of CTS aestivation habitat through development of the project footprint of both options for Alternative D is shown in **Table 4.5-20**. The CTS mitigation requirement for each of the two options is summarized in **Table 4.5-20**. As most of the open space area is within the 100-year floodplain, little to no opportunity exists for setting aside CTS habitat within the on-site open space preserve. Therefore, CTS mitigation would be accomplished off-site. Impacts to the CTS are similar to the impacts outlined for Alternative B (**Section 4.5.2**). Under both options, part of the graded footprint is proposed in areas outside of the 100-year floodplain. Also under both options, parts of the proposed sprayfields are within the floodplain. The parts of the graded footprint and sprayfields that are outside of the floodplain are considered CTS habitat. All areas of CTS habitat impact are between 2200 feet and 1.3 miles from the nearest known breeding location. All impacted areas in these alternatives would therefore require mitigation at a ratio of 1:1. This is a significant impact. Mitigation is discussed in **Section 5.2.4**.

TABLE 4.5-20
MITIGATION REQUIREMENTS FOR ALTERNATIVE D OPTIONS 1 AND 2

Option	Approximate Acreage of Site (acres)	Impacts of Development to CTS Habitat (acres) (graded footprint and sprayfields)	Required CTS Mitigation (2:1 mitigation) (acres)	Approximate Unimpacted On-Site Open Space Preserve (little to no CTS habitat) (acres)	Portion of Open Space to be used as Sprayfields (acres)	Wetland Preservation in on site Open Space Preserve (acres)
1	360	66.92	133.91	281	57.0	41.11
2	360	99.77	166.65	269	101.0	38.94

Source: The Huffman-Broadway Group, Inc., 2007.

Special-status Fish Species

Impacts to steelhead trout and salmonoids under Alternative D options are identical to impacts outlined for Alternative B (**Section 4.5.2**).

Migratory Birds and Other Federal Species of Concern

Alternative D could adversely affect active migratory bird nests located at ground level or in tall weeds if vegetation removal activities associated with project construction occur during the nesting season. This is a potentially significant impact. Likewise, mass grading of Options 1 or 2 footprint, would eliminate upland basking sites for western pond turtle. Potential adverse direct effects to migratory birds and other special status species will be less-than-significant with implementation of the mitigation measures identified in **Section 5.2.4**. Nighttime lighting of the operation of Alternative D has a potentially significant impact on migrating and local bird populations. Increased lighting has been shown to increase collisions of birds and structures, as well as causing a disorientation effect on species. Mitigation measures to reduce potentially significant nighttime lighting impacts are identified in **Section 5.2.4**.

Waters of the U.S.

Potential Effects to Wetlands

Option 1 would affect 19.77 acres of seasonal pools and wetland (**Table 4.5-21; Figure 4.5-8**); Option 2 would affect 21.91 acres of the same habitat type (**Table 4.5-22; Figure 4.5-9**). This is a significant impact. However, as noted in **Section 2.5.6**, a flood storage area would be created on the southern portion of the Stony Point site that would likely also result in the creation of wetlands. It is possible that these created wetlands will satisfy any mitigation required by the Section 404 permit. However, in any case, the Tribe would be required to comply with any requirements contained in the CWA Section 404 permit. Mitigation measures are identified in **Section 5.2.4.**

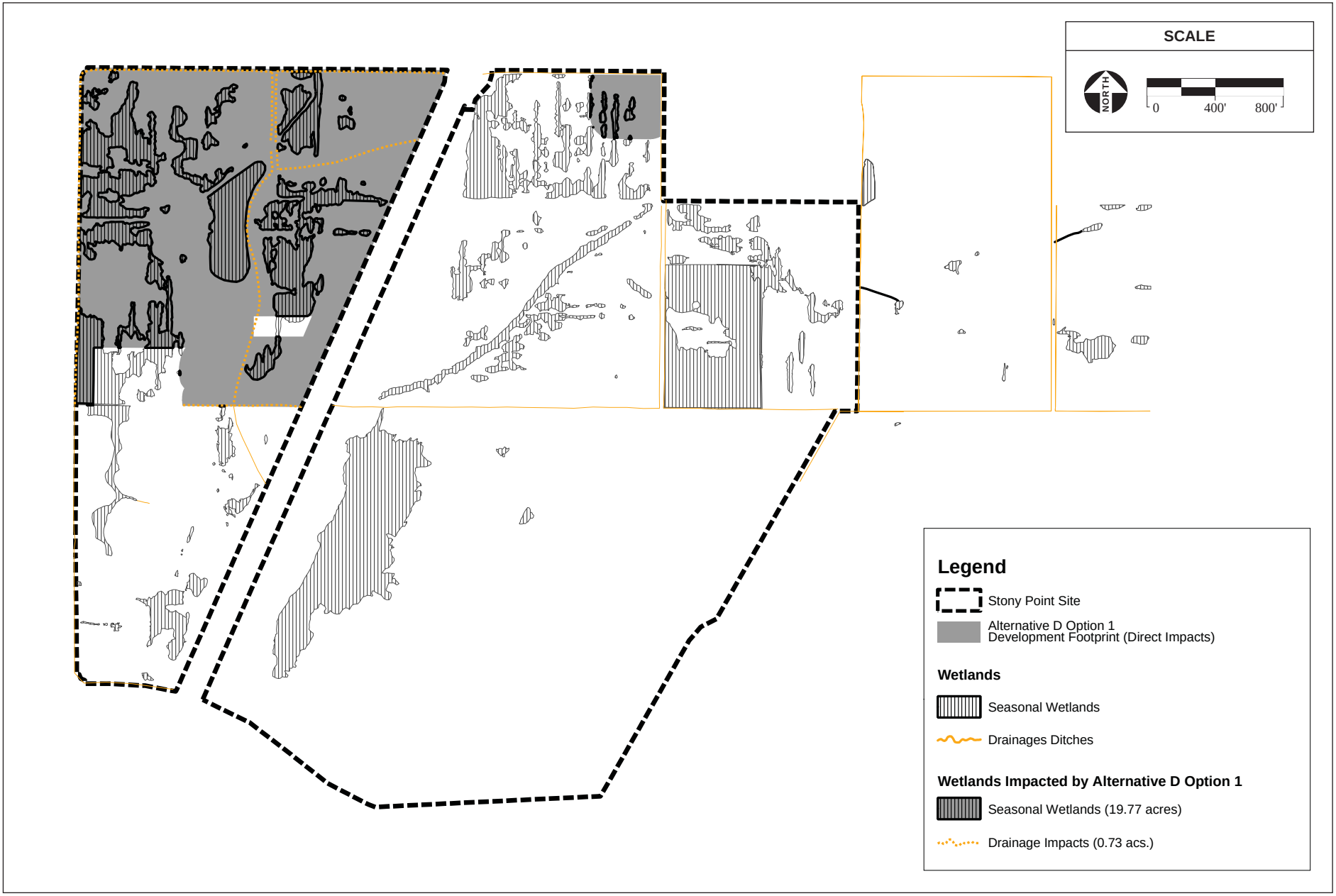
Potential Effects to Drainages

Impacts to plant species within the ditch where the treated wastewater outfall structure is proposed would be the same as Options 1 and 2 under Alternative B. This is a potentially significant, but beneficial impact. No mitigation is required.

TABLE 4.5-21
ANTICIPATED DIRECT EFFECTS TO WATERS OF THE U.S. – ALTERNATIVE D OPTION 1

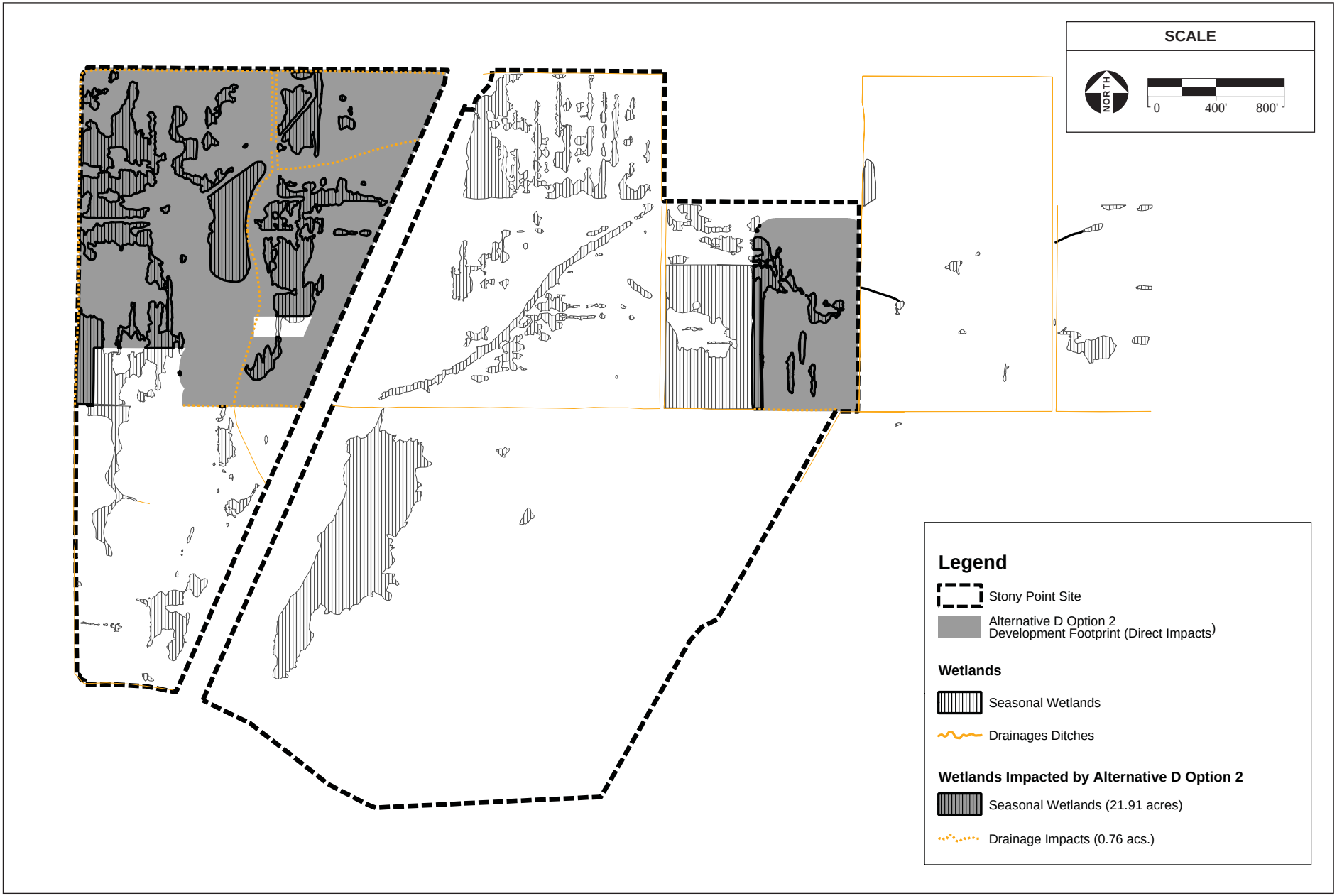
Wetland Feature	Acreage Affected
Seasonal Ponds and Wetlands	19.77
Drainage Ditches	0.73
Total	**20.5**

Source: The Huffman-Broadway Group, Inc., 2007.



SOURCE: Huffman Broadway Group, 2006; AES, 2007

Figure 4.5-8
Wetland Impacts – Alternative D Option 1



SOURCE: Huffman Broadway Group, 2006; AES, 2007

Figure 4.5-9
Wetland Impacts – Alternative D Option 2

TABLE 4.5-22
ANTICIPATED DIRECT EFFECTS TO WATERS OF THE U.S. – ALTERNATIVE D OPTION 2

Wetland Feature	Acreage Affected
Seasonal Ponds and Wetlands	21.91
Drainage Ditches	0.76
Total	**22.67**

Source: The Huffman-Broadway Group, Inc., 2007.

4.5.5 ALTERNATIVE E – BUSINESS PARK

Potential Effects to Wildlife and Habitats

Despite the reduction in the intensity of land development, the grading footprint of Options 1 and 2 for Alternative E would be similar to that of Alternative B. Development of Options 1 and 2 of Alternative E would therefore generally impact the same habitats as those of Alternative B (**Table 4.5-23; Table 4.5-24)**. Grading is a potentially significant impact to both resident and foraging wildlife. Mitigation is discussed in **Section 5.2.4**.

TABLE 4.5-23
ANTICIPATED EFFECTS TO HABITAT TYPES – ALTERNATIVE E OPTION 1

Habitat Type	Acreage Affected	Percentage Affected (Based on 360 total acres)
California Annual Grassland	0	0%
Seasonal Pools and Wetlands	19.69	5.47%
Drainage Ditches	0.72	0.20%
Irrigated Pasture	47.50	13.19%
Cultivated Fields	1.56	0.43%
Disturbed/Ruderal	7.64	2.12%
Total	**77.11**	**21.41**

Source: The Huffman-Broadway Group, Inc., 2007.

TABLE 4.5-24
ANTICIPATED EFFECTS TO HABITAT TYPES – ALTERNATIVE E OPTION 2

Habitat Type	Acreage Affected	Percentage Affected (Based on 360 total acres)
California Annual Grassland	0	0%
Seasonal Pools and Wetlands	20.96	5.82%
Drainage Ditches	0.73	0.20%
Irrigated Pasture	47.50	13.19%
Cultivated Fields	6.29	1.74%
Disturbed/Ruderal	7.64	2.12%
Total	**83.12**	**23.07%**

Source: The Huffman-Broadway Group, Inc., 2007.

Potential Effects to Wetlands

Options 1 and 2 of Alternative E would impact the same seasonal pools and wetlands as those of Alternative D. Impacts to plant species within the ditch where the treated wastewater outfall structure is proposed would be the same as those of Alternative D. This is a potentially significant but beneficial impact. No mitigation is required.

Federally-listed Species

Impacts on federally-listed species are similar to those of Alternative D and would include impacts to the CTS, and the special status species: Burke's goldfields, and the Sonoma sunshine. This is a significant impact. Mitigation measures are identified in **Section 5.2.4**.

Special-status Plant Species

The grading footprint of Options 1 and 2 would directly impact approximately 1.38-acres of habitat that is known to have historically supported two federally Endangered Species, Sonoma sunshine and Burke's goldfields. Furthermore, surveys conducted in 2005 and 2007 found Sonoma sunshine at the location. The entire 1.38-acres of habitat is assumed to contain seed banks for the two species. Impacts to 1.38-acres of Sonoma sunshine and Burke's goldfields habitat and seed bank constitute a significant impact. Mitigation is outlined in **Section 5.2.4**.

California Tiger Salamander

Table 4.5-25 shows the acreage that would be considered impacted from the standpoint of CTS aestivation habitat through development of the project footprint for both variants of Alternative E. The CTS mitigation requirement for each option is summarized in **Table 4.5-25**. As most of the open space area is within the 100-year floodplain, little to no opportunity exists for setting aside CTS habitat within the on-site open space preserve. Therefore, CTS mitigation would be accomplished off-site. Impacts to the CTS are similar to the impacts outlined in **Section 4.5.2**. Under both options, part of the graded footprint is proposed in areas outside of the 100-year floodplain. Also under both options, parts of the proposed sprayfields are within the floodplain. The parts of the graded footprint and sprayfields that are outside of the floodplain are considered CTS habitat. All areas of CTS habitat impact are between 2200 feet and 1.3 miles from the nearest known breeding location. All impacted areas in these alternatives would therefore require mitigation at a ratio of 1:1. This is a significant impact. Mitigation is discussed in **Section 5.2.4**.

TABLE 4.5-25
MITIGATION REQUIREMENTS FOR ALTERNATIVE E OPTIONS 1 AND 2

Option	Approximate Acreage of Site (acres)	Impacts of Development to CTS Habitat (acres) (graded footprint and sprayfields)	Required CTS Mitigation (acres)	Approximate Unimpacted On-Site Open Space Preserve (little to no CTS habitat) (acres)	Portion of Open Space to be used as Sprayfields (acres)	Wetland Preservation in on site Open Space Preserve (acres)
1	360	48.36	106.76	283	19.0	41.36
2	360	55.03	113.42	277	37.0	40.08

Source: The Huffman-Broadway Group, Inc., 2007.

Special-status Fish Species

Impacts to steelhead trout and salmonoids under Alternative E options are identical to impacts outlined for Alternative B (**Section 4.5.2**).

Migratory Birds and Other Federal Species of Concern

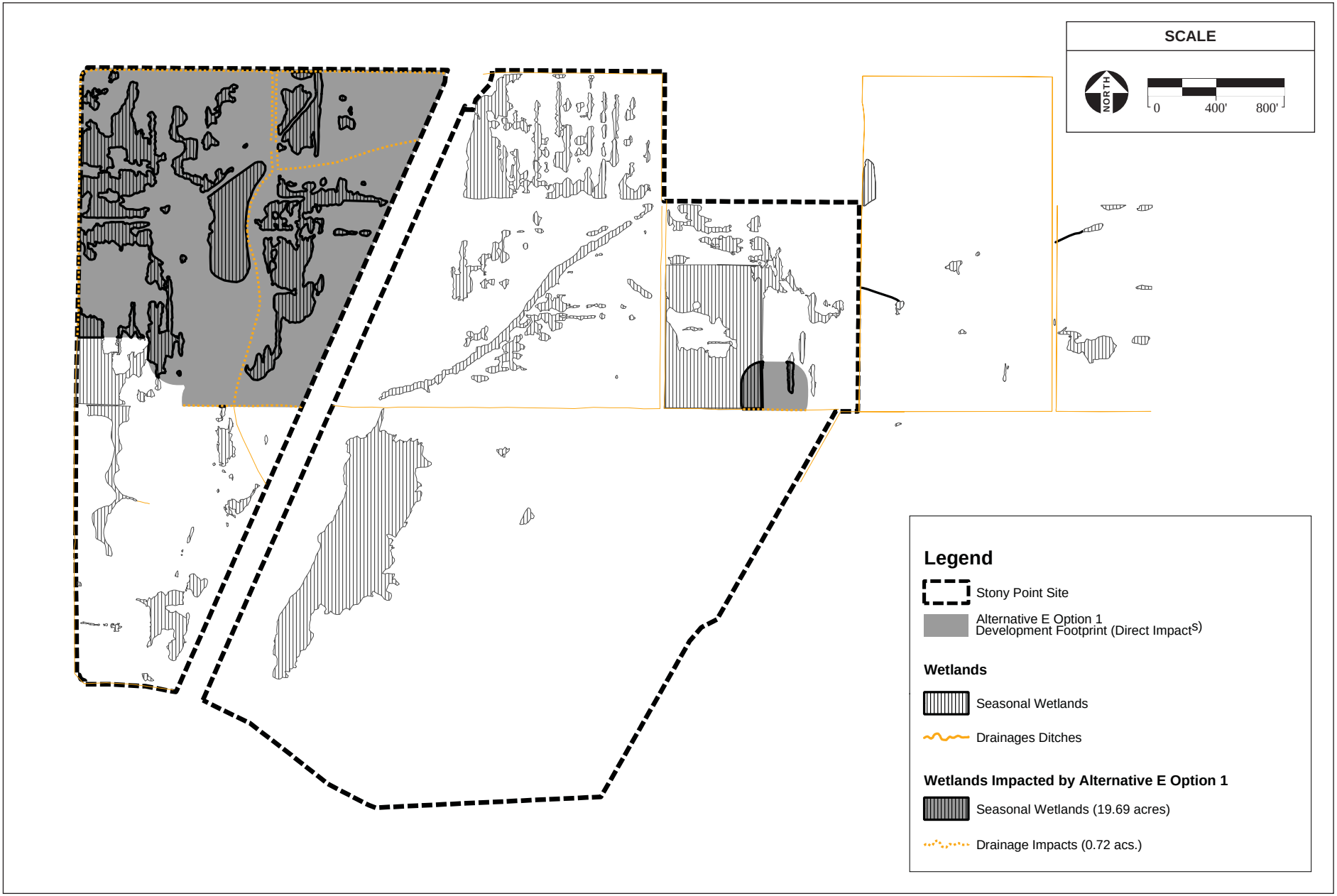
Options 1 and 2 could adversely affect active migratory bird nests located at ground level or in tall weeds if vegetation removal activities associated with project construction occur during the nesting season. This is a potentially significant impact. Likewise, mass grading of Options 1 or 2 footprint would eliminate upland basking sites for western pond turtle. Potential significant adverse direct effects to migratory birds and other special status species will be less-than-significant with implementation of the mitigation measures identified in **Section 5.2.4**.

Nighttime lighting of the operation of Alternative E has a potentially significant impact on migrating and local bird populations. Increased lighting has been shown to increase collisions of birds and structures, as well as causing a disorientation effect on species. Mitigation measures to reduce potentially significant nighttime lighting impacts are identified in **Section 5.2.4**.

Waters of the U.S.

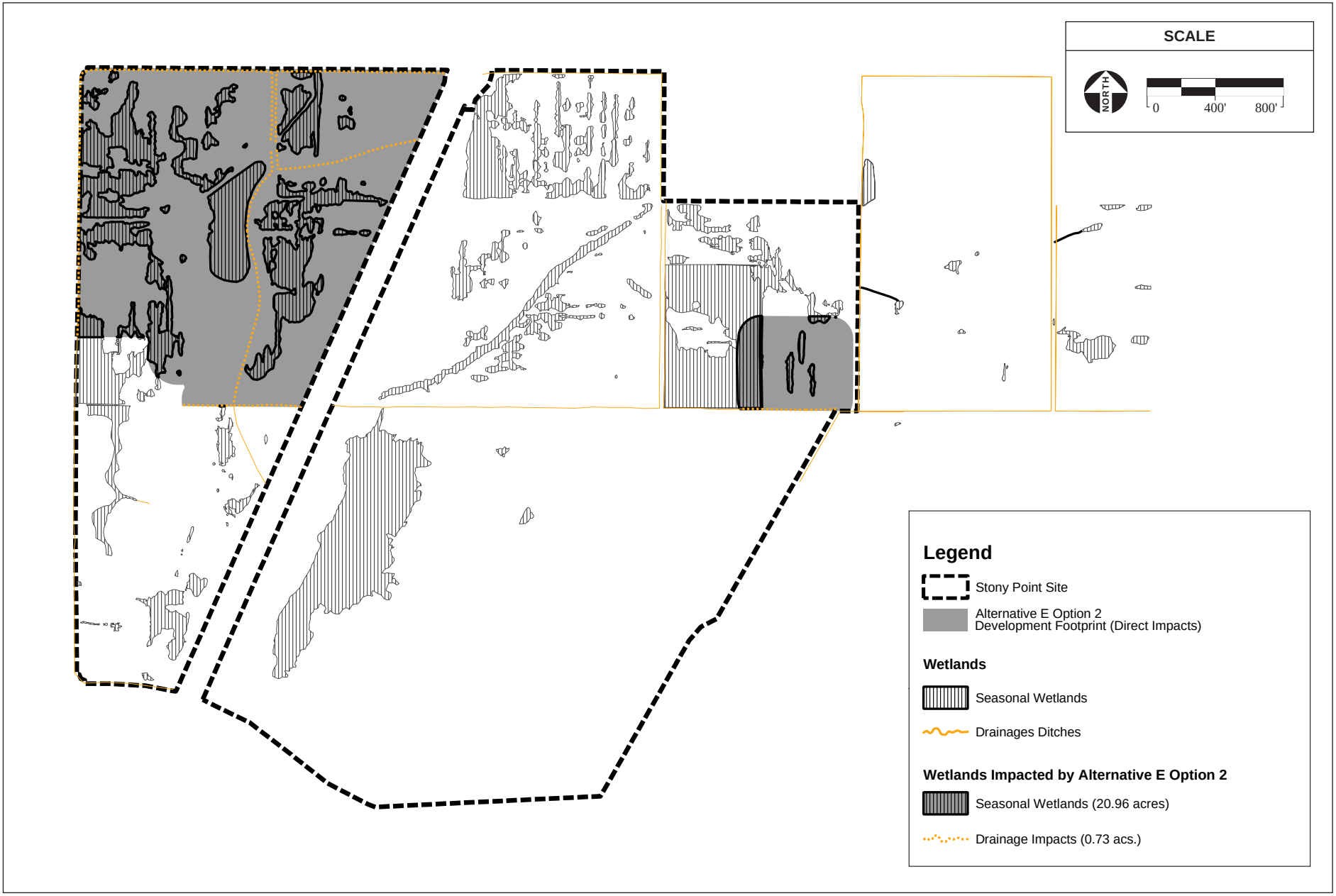
Potential Effects to Wetlands

Option 1 would affect 19.69 acres of seasonal pools and wetlands (**Table 4.5-26; Figure 4.5-10**); Option 2 would affect 20.96 acres of the same habitat type (**Table 4.5-27; Figure 4.5-11**). This is a significant impact. However, as noted in **Section 2.6.4**, a flood storage area would be created on the southern portion of the Stony Point site that would likely also result in the creation of wetlands. It is possible that these created wetlands will satisfy any mitigation required by the Section 404 permit. However, in any case, the Tribe would be required to comply with any requirements contained in the CWA Section 404 permit. Mitigation measures are identified in **Section 5.2.4.**



SOURCE: Huffman Broadway Group, 2006; AES, 2007

Figure 4.5-10
Wetland Impacts – Alternative E Option 1



SOURCE: Huffman Broadway Group, 2006; AES, 2007

Figure 4.5-11
Wetland Impacts – Alternative E Option 2

TABLE 4.5-26
ANTICIPATED DIRECT EFFECTS TO WATERS OF THE U.S. – ALTERNATIVE E OPTION 1

Wetland Feature	Acreage Affected
Seasonal Ponds and Wetlands	19.69
Drainage Ditches	0.72
Total	**20.41**

Source: The Huffman-Broadway Group, Inc., 2007.

TABLE 4.5-27
ANTICIPATED DIRECT EFFECTS TO WATERS OF THE U.S. – ALTERNATIVE E OPTION 2

Wetland Feature	Acreage Affected
Seasonal Ponds and Wetlands	20.96
Drainage Ditches	0.73
Total	**21.69**

Source: The Huffman-Broadway Group, Inc., 2007.

Potential Effects to Drainages

Impacts to plant species within the ditch where the treated wastewater outfall structure is proposed would be the same as those of Alternative B. This is a potentially significant, but beneficial impact. No mitigation is required.

4.5.6 ALTERNATIVE F – LAKEVILLE SITE

Potential Effects to Wildlife and Habitats

Development of Alternative F would affect habitats that are utilized by wildlife species indigenous to the Lakeville site. **Table 4.5-28** and **Table 4.5-29** provide a summary of the acreage of each habitat type that would be affected under Options 1 and 2 (**Appendix K**). As shown in this table, Option 1 would affect 50.2 percent of the 329 acres of habitat and Option 2 would affect 64.17 percent of the 329-acres within the Lakeville site. The habitat disturbance, approximately 165 and 212-acres respectively, would more or less be divided into grassland and marsh. Grading is a potentially significant impact to both resident and foraging wildlife. Mitigation is discussed in **Section 5.2.4**.

TABLE 4.5-28
ANTICIPATED EFFECTS TO HABITAT TYPES – ALTERNATIVE F OPTION 1

Habitat Type	Acreage Affected	Percentage Affected (Based on 329 total acres)
California Annual Grassland	66.48	20.20%
Fresh Emergent Marsh	98.65	29.98%
Total	**165**	**50.2%**

Source: The Huffman-Broadway Group, Inc., 2007.

TABLE 4.5-29
ANTICIPATED EFFECTS TO HABITAT TYPES – ALTERNATIVE F OPTION 2

Habitat Type	Acreage Affected	Percentage Affected (Based on 329 total acres)
California Annual Grassland	100.48	30.54%
Fresh Emergent Marsh	110.65	33.63%
Total	**212.13**	**64.17%**

Source: The Huffman-Broadway Group, Inc., 2007.

Federally-listed Species

The following discussion evaluates the potential direct effects Alternative F may have on each federally-listed species with a potential to be affected by activities within the alternative Lakeville site. Alternative F would remove potential habitat for Callippe Silverspot and Myrtle's Silverspot Butterfly and California red-legged frog, including several potential breeding ponds (The Huffman-Broadway Group, Inc., 2003). This is a potentially significant impact. Mitigation is discussed in **Section 5.2.4**.

Special-status Plant Species

The grading footprint of Alternative F would directly impact approximately 20.65-acres of seasonal wetlands that are known to have historically supported two federally Endangered Species, and is currently known to support dwarf downingia and saline clover. This is a significant impact that will require mitigation as outlined in **Section 5.2.4**. The footprint would also directly impact approximately 20.65-acres of seasonal wetlands that may support Sonoma sunshine. If the Lakeville site were pursued for development, rare plant surveys in March or April would be implemented.

California Red-legged Frog

The north section of the Lakeville site has suitable habitat characteristics for the California red-legged frog. Wetland areas with inundation sufficient to support breeding populations are present

in the northern and western portions of the site (Huffman-Broadway Group, Inc. 2007; **Appendix K**). This is a potentially significant impact. Mitigation measures are identified in **Section 5.2.4**.

Callippe Silverspot and Myrtye's Silverspot

Callippe Silverspot and Myrtye's Silverspot are butterflies documented to occur in the area of the proposed development. These species feed exclusively on *Viola* spp. Development of the Lakeville site could destroy breeding and feeding habitats for these species. This is a potentially significant impact. Mitigation measures are identified in **Section 5.2.4**.

Special-status Fish Species

Several species of federally-listed fish occur in the region, principally due to the proximity of the site to San Pablo Bay and the Petaluma River. These include green sturgeon, tidewater goby, Delta smelt, river lamprey, Pacific lamprey, Coho salmon, steelhead, Chinook salmon, Sacramento splittail, and long-fin smelt. This is a potentially significant impact. Mitigation measures are identified in **Section 5.2.4**.

Migratory Birds and Other Federal Species of Concern

There are numerous bird species of federal concern known from the region. These include tri-colored blackbird, Bell's sage sparrow, Vaux's swift, black swift, white-tailed kite, ferruginous hawk, marbled godwit, San Pablo song sparrow, Rufous hummingbird, Allen's hummingbird, Lewis' woodpecker, bank swallow, black skimmer, burrowing owl, horned lark, and loggerhead shrike. The development of Alternative F would affect vegetation communities that could potentially support active migratory bird nests. Migratory birds and their nests are protected from any "take" according to the federal Migratory Bird Treaty Act. Alternative F could affect active migratory bird nests if vegetation removal activities associated with project construction occur during the nesting season. This is a potentially significant impact. Potential adverse direct effects to migratory birds will be less-than-significant with implementation of the mitigation measures identified in **Section 5.2.4.**

Nighttime lighting of the operation of Alternative F has a potentially significant impact on migrating and local bird populations. Increased lighting has been shown to increase collisions of birds and structures, as well as causing a disorientation effect on species. Mitigation measures to reduce potentially significant nighttime lighting impacts are identified in **Section 5.2.4**.

Waters of the U.S.

Potential Effects to Wetlands

Development of Options 1 and 2 under Alternative F would directly affect 98.65 and 110.65-acres, respectively, of fresh emergent marshes (**Table 4.5-30** and **Table 4.5-31**), including several

breeding ponds for the California red-legged frog. This is a potentially significant impact. Mitigation is discussed in **Section 5.2.4**.

TABLE 4.5-30
ANTICIPATED DIRECT EFFECTS TO WATERS OF THE U.S. – ALTERNATIVE F OPTION 1

Wetland Feature	Acreage Affected
Fresh Emergent Marsh	98.65
Total	**98.65**

Source: The Huffman-Broadway Group, Inc., 2007.

TABLE 4.5-31
ANTICIPATED DIRECT EFFECTS TO WATERS OF THE U.S. – ALTERNATIVE F OPTION 2

Wetland Feature	Acreage Affected
Fresh Emergent Marsh	110.65
Total	**110.65**

Source: The Huffman-Broadway Group, Inc., 2007.

Potential Effects to Drainages

Approximately 20.65-acres of wetland and "waters of the U.S." would be impacted by the footprint of Alternative F. Wetlands surround the project footprint to the south and west. Approximately 150-acres of wetlands are present on the 329-acre Lakeville site. This is a potentially significant impact. Mitigation is discussed in **Section 5.2.4**.

4.5.7 ALTERNATIVE G – NO ACTION

Under the No Action Alternative, neither the Wilfred/Stony Point sites nor the Lakeville site would be developed as described in the alternatives and the accompanying options presented above. The Wilfred site Stony Point site and the Lakeville site would remain in their current condition. Future development of either site would be guided by existing land use plans.

However, a portion of the Wilfred site, overlaps with a specific plan recently prepared by the City of Rohnert Park (**Figure 2-32**). In the event that Alternative A is not implemented, the area of overlap would be subject to the program of development set forth in the Northwest Specific Plan Southern Area (Southern Specific Plan). An overview of the various elements of the Southern Specific Plan is presented in **Section 2.8**. The developed area of Alternative G, would be similar to Alternative A (but slightly reduced given that no treated wastewater storage ponds, sprayfields, or surface water treated wastewater discharge would occur on-site), resulting in similar impacts to biological resources (see **Section 4.5.1**). As discussed above, potentially significant impacts to

biological resources would result from the development of the northeast corner of the Wilfred site. Mitigation measures are included in **Section 5.2.4** that would reduce impacts to biological resources to a less-than-significant level.

4.5.8 ALTERNATIVE H –REDUCED INTENSITY (WILFRED SITE)

Potential Effects to Wildlife and Habitats

Development of wastewater treatment options for Alternative H would affect habitats that are utilized by wildlife species. **Table 4.5-32 - Table 4.5-34** provide a summary of the acreage of each habitat type that would be affected under Alternative H. Wastewater treatment options for each alternative are summarized in **Table 2-2**. Development of Option 1 would impact 57.19 acres; Development of Option 2 would impact 65.18 acres; Option 3 would impact 75.95 acres. Most of the habitat disturbance resulting from the development of Alternative H would occur in cultivated fields, 56.05, 63.21 and 73.98 acres respectively. Ground disturbance (such as grading) is a potentially significant impact to both resident and foraging wildlife. Mitigation is discussed in **Section 5.2.4**.

TABLE 4.5-32
ANTICIPATED EFFECTS TO HABITAT TYPES – ALTERNATIVE H OPTION 1

Habitat Type	Acreage Affected	Percentage Affected (Based on 253 total acres)
California Annual Grassland	0	0%
Seasonal Pools and Wetlands	0.70	0.28%
Drainage Ditches	0.44	0.17%
Irrigated Pasture	0	0%
Cultivated Fields	56.05	22.15%
Disturbed/Ruderal	0	0%
Total	**57.19**	**22.60%**

Source: The Huffman-Broadway Group, Inc., 2007.

TABLE 4.5-33
ANTICIPATED EFFECTS TO HABITAT TYPES – ALTERNATIVE H OPTION 2

Habitat Type	Acreage Affected	Percentage Affected (Based on 253 total acres)
California Annual Grassland	0	0%
Seasonal Pools and Wetlands	1.49	0.59%
Drainage Ditches	0.48	0.19%
Irrigated Pasture	0	0%
Cultivated Fields	63.21	24.98%
Disturbed/Ruderal	0	0%
Total	**65.18**	**25.76**

Source: The Huffman-Broadway Group, Inc., 2007.

TABLE 4.5-34
ANTICIPATED EFFECTS TO HABITAT TYPES – ALTERNATIVE H OPTION 3

Habitat Type	Acreage Affected	Percentage Affected (Based on 253 total acres)
California Annual Grassland	0	0%
Seasonal Pools and Wetlands	1.49	0.59%
Drainage Ditches	0.48	0.19%
Irrigated Pasture	0	0%
Cultivated Fields	73.98	29.24%
Disturbed/Ruderal	0	0%
Total	**75.95**	**30.02%**

Source: The Huffman-Broadway Group, Inc., 2007.

Federally-listed Species

The following discussion evaluates the potential direct effects Options 1, 2 and 3 may have on each federally-listed species by development activities on the Wilfred site. Habitat for two federally Endangered plant species, the Sonoma sunshine and Burke's goldfields, has been documented in historical records in the vicinity of all Options.

Special-status Plant Species

The implementation of either Option 1, 2 or 3 would have no effect on the recently discovered population of Sonoma sunshine, nor would either of these options have any affect on the area of historical occurrence of Sonoma sunshine and Burke's goldfields mapped in the CNDDB. Options 1 would impact 0.70-acres of seasonal wetlands and Options 2 and 3 would impact 1.49-acres of seasonal wetlands that provide potentially suitable habitat for the listed plant species of the Santa Rosa Plain. Species-specific surveys were conducted in this area of impact (see **Section 3.5.4**). None of the listed plants were observed. Therefore, impacts to special status plant species would be less than significant. Nonetheless, mitigation is required by the Santa Rosa Plain Conservation Strategy. Mitigation for the impact to occupied and/or suitable habitat for the endangered plants is recommended in **Section 5.2.4**.

California Tiger Salamander

It is likely that California tiger salamander occurs on the Wilfred site. **Table 4.5-35** shows the acreage that would be considered impacted from the standpoint of CTS aestivation habitat through development of the project footprint for both options for Alternative H. The Programmatic Biological Opinion requires mitigation at a ratio of 3:1 for projects that are within 500 feet of a breeding site; 2:1 for projects that are greater than 500 feet and within 2200 feet of a known breeding site, and projects beyond 2200 feet from a known breeding site but within 500

feet of an adult occurrence; and 1:1 for projects that are greater than 2200 feet and within 1.3 miles of a known breeding site. As most of the open space area is within the 100-year floodplain, little to no opportunity exists for setting aside CTS habitat within the on-site open space preserve. Therefore, CTS mitigation would be accomplished off-site. The mitigation requirement for each site option is summarized in **Table 4.5-35**.

Development of Option 1 of Alternative H would result in impacts to 57.77-acres of CTS aestivation habitat (**Table 4.5-35**). Development of Option 2 of Alternative H would result in impacts to 65.28-acres of CTS aestivation habitat. Development of Option 3 of Alternative H would result in impacts to 76.05 acres. Under all options, nearly the entire graded footprint is proposed in areas outside of the 100-year floodplain. Also under both options, all areas of sprayfields are proposed within the floodplain. Nearly the entire graded footprint is in areas considered CTS habitat, and all of the areas proposed for sprayfields are in areas not considered CTS habitat. All areas of CTS habitat impact are between 2200 feet and 1.3 miles from the nearest known breeding location. All impacted areas in these alternatives would therefore require mitigation at a ratio of 1:1.

Development impacts on aestivation habitat for the CTS within the 66-acre portion of this site contained within the Northwest Specific Plan, have been previously evaluated in a Section 7 Biological Opinion (BO) for a different project. The USFWS issued a Biological Opinion on August 5, 2005 related to a Section 7 consultation conducted as part of the USACE permit application process for a mixed use project (commercial, residential and light industrial) proposed by Redwood Equities, L.P. The BO for the mixed use project requires mitigation for CTS aestivation habitat at a ratio of 0.5:1. Discussions with USFWS have found that USFWS would consider an amendment to the existing BO as the means to obtain the requisite "take" authorization from the agency related to the CTS. The BO is valid for a commercial project at the site and has not expired as it is in response to a request made by the U.S. Army Corps of Engineers for Section 7 consultation for an existing on-going permit application. The applicant proposes to move mitigation for CTS aestivation habitat from the less stringent 0.5:1 ratio required in the previous BO to a more stringent 1:1 ratio.

TABLE 4.5-35
IMPACTS AND MITIGATION REQUIREMENTS FOR ALTERNATIVE H OPTIONS 1, 2 AND 3

Option	Approximate Acreage of Site (acres)	Impacts of Development to CTS Habitat (acres) (graded footprint and sprayfields)	Required CTS Mitigation (acres)	Approximate Ungraded On-Site Open Space Preserve (acres) (little to no CTS habitat)	Portion of Open Space to be used as Sprayfields (acres)	Wetland Preservation in On-Site Open Space Preserve (acres)
1	253	57.77	57.77	195	0	17.30
2	253	65.28	65.28	188	37.0	16.45
3	253	76.05	76.05	177	83.0	16.16

Source: The Huffman-Broadway Group, Inc., 2007.

Table 4.5-35 evaluates the mitigation requirements for Alternative H Options 1, 2 and 3. Mitigation requirements would equal 57.77 acres for Alternative H Option 1, 65.28 acres for Alternative H Option 2, and 76.05 acres for Alternative H Option 3. None of the mitigation would be accomplished on-site as most of the area available for open space dedication is within the 100-year floodplain and not considered suitable CTS habitat. All mitigation would be accomplished off-site and would consist of the purchasing of CTS credits from an approved mitigation bank or the purchase of farmland within known CTS habitat (where CTS is known to occur) and placement of the land under conservation easement. Under the latter method, the purchased land would be placed in a conservation easement and subject to funding agreements and a long-term management program aimed at CTS conservation. Mitigation is further discussed in **Section 5.2.4**.

Special-status Fish Species

There are reports of steelhead fish occurring in Coleman Creek, which is upstream of the confluence of the Laguna de Santa Rosa and the Bellevue-Wilfred Channel (Entrix, 2004). Steelhead fish ostensibly migrate from the Russian River into the Laguna de Santa Rosa and Coleman Creek. The effects of the project's treated wastewater discharges on this species include higher creek temperatures, eutrophication, and possible feminization of fish from endocrines in wastewater. These effects are described and referenced in the Effluent Study (**Appendix V**). It is unlikely, however, that the EPA would allow discharge of effluent into the Laguna de Santa Rosa except during the winter months when Russian River flow is high (more than 1,000 cfs at the Hacienda Bridge), thus diluting constituent concentrations. Since effluent would be diluted with high flows in the Russian River, the impact of the project's treated wastewater discharges on this species would be less than significant. Additionally, siltation of the Laguna de Santa Rosa from site grading could occur. However, adoption of BMPs outlined in the project description (**Section 2.2.5**) including implementation of a stormwater pollution prevention plan (SWPPP) would eliminate siltation of the Laguna de Santa Rosa.

In a ten-year study of the Russian River drainage, the City of Santa Rosa reports that agricultural diversions and drought had the greatest impact on migrating and spawning salmonid fish (Santa Rosa, 2003; Merritt-Smith, 2003a, b). The City's study and the subsequent EIRs (Santa Rosa, 2003, 2004b) reveal that discharges of tertiary treated wastewater into the Laguna de Santa Rosa in the winter months do not significantly impact biological resources, including threatened and endangered salmonid fish, amphibians, or invertebrates. The City of Santa Rosa's studies, including the subsequent EIR's are discussed in the context of the proposed project in the Effluent Study (**Appendix V**).

The Effluent Study (**Appendix V**) concludes that the general effects of tertiary treated wastewater discharges on salmonids of the Russian River system are negligible. Therefore, the effects of Alternative H on steelhead fish are considered less-than-significant due to the anticipated winter discharge requirement of the USEPA and the relatively insignificant constituent concentrations that will be contributed to the Russian River from the proposed wastewater treatment plant (**Figure 8** of **Appendix V**). Nevertheless, Section 7 Consultation with NOAA Fisheries will be initiated if treated wastewater is discharged into the Laguna de Santa Rosa.

Migratory Birds and Other Federal Species of Concern

Several raptor species have the potential to utilize the site, primarily as foraging habitat. These species include the burrowing owl (also a species of federal concern), northern harrier, white-tailed kite, sharp-shinned hawk, Cooper's hawk and golden eagle. Winter use of the site by these species is possible, however, in all cases, with the exception of Burrowing Owl, appropriate nesting habitat does not appear to be present. A burrowing owl was observed on-site in January 2004. Subsequent surveys uncovered no evidence that the species used the site for nesting. Three raptors that may occur are designated as state species of special concern based on presence of wintering habitat (Ferruginous Hawk, Golden Eagle, and Merlin). Ferruginous Hawk is also a federal species of special concern. These species are wide-ranging species often wintering over a broad area, and incidental use of the site by these species, primarily during winter, is certainly possible. The site, provides no unique features that would highlight the importance of the site as a wintering location for any of these species.

Nighttime lighting of the operation of Alternative H has a potentially significant impact on migrating and local bird populations. Increased lighting has been shown to increase collisions of birds and structures, as well as causing a disorientation effect on species. Mitigation measures to reduce potentially significant nighttime lighting impacts are identified in **Section 5.2.4**.

Potential significant adverse direct effects to migratory birds and other special status species will be less-than-significant with implementation of the mitigation measures identified in **Section 5.2.4**.

Waters of the U.S.

Potential Effects to Wetlands

Approximately 0.70 acres of seasonal pools and wetlands would be graded and filled by wastewater treatment option1 and approximately 1.49 acres of seasonal pools and wetlands would be graded and filled by wastewater treatment options 2 and 3. Seasonal pools and wetlands constitute habitat for both aquatic and terrestrial wildlife including insects, amphibians, reptiles, birds and small mammals. Grading of the topsoil and herbaceous layer of native and introduced vegetation would remove primary decomposers and producers thus disrupting the food chain leading to the aquatic and terrestrial organisms. This is a significant impact.

Potential Effects to Drainages

The proposed development of Option 1 would impact 0.44-acres of drainages and the proposed development of either Option 2 or 3 would each impact 0.48-acres of drainages. The floor and sides of the ditch where the treated wastewater outfall structure is proposed are vegetated with weedy species. Flowing water and aquatic life were absent when viewed on June 9, 2004. The addition of a permanent water source along the ditch would stimulate the growth of hydrophytes, and ultimately create conditions for the growth of hydrophytic vegetation. This is a potentially significant, but beneficial impact. No mitigation is required.

A formal delineation identified 18.44-acres of "waters of the U.S." on the Wilfred site. These features are subject to USACE jurisdiction under the Clean Water Act and any discharge of dredged or fill material within the "waters of the U.S." would require a Clean Water Act, Section 404 permit. Anticipated direct effects to jurisdictional "waters of the U.S." total 1.14-acres with the development of Option 1 and 1.97-acres with the development of either Option 2 or 3. **Table 4.5-36** - **Table 4.5-38** summarize the impacts of options for Alternative H. **Figure 4.5-12** - **Figure 4.5-14** show the wetland impacts of each option. A significant impact would result for each option. As noted in **Section 2.10.6**, a flood storage area would be created on the southern portion of the Wilfred site that would likely also result in the creation of wetlands. It is possible that these created wetlands will satisfy any mitigation required by the Section 404 permit. However, in any case, the Tribe would be required to comply with any requirements contained in the CWA Section 404 permit. Mitigation measures are identified in **Section 5.2.4.**

TABLE 4.5-36
ANTICIPATED DIRECT EFFECTS TO WATERS OF THE U.S. – ALTERNATIVE H OPTION 1

Wetland Feature	Acreage Affected
Seasonal Pools and Wetlands	0.70
Drainage Ditches	0.44
Total	**1.14**

Source: The Huffman-Broadway Group, Inc., 2007.

TABLE 4.5-37
ANTICIPATED DIRECT EFFECTS TO WATERS OF THE U.S. – ALTERNATIVE H OPTION 2

Wetland Feature	Acreage Affected
Seasonal Pools and Wetlands	1.49
Drainage Ditches	0.48
Total	**1.97**

Source: The Huffman-Broadway Group, Inc., 2007.

TABLE 4.5-38
ANTICIPATED DIRECT EFFECTS TO WATERS OF THE U.S. – ALTERNATIVE H OPTION 3

Wetland Feature	Acreage Affected
Seasonal Pools and Wetlands	1.49
Drainage Ditches	0.48
Total	**1.97**

Source: The Huffman-Broadway Group, Inc., 2007.

SOURCE: Huffman Broadway, 2006; AES, 2009

Figure 4.5-12
Wetland Impacts - Alternative H Option 1

SOURCE: Huffman Broadway, 2006; AES, 2009

Figure 4.5-13
Wetland Impacts - Alternative H Option 2

SOURCE: Huffman Broadway, 2006; AES, 2009

Figure 4.5-14
Wetland Impacts - Alternative H Option 3

4.6 CULTURAL AND PALEONTOLOGICAL RESOURCES

4.6.1 ALTERNATIVE A – PROPOSED PROJECT

Development proposed under this Alternative A would not adversely effect any known historic properties. Historic archaeological site RPC-5, which is recommended eligible to the NRHP for treatment purposes, is located outside the Alternative A archaeological area of potential effect (APE). Located approximately 0.75 miles across the Santa Rosa Canal, is a home and dairy built circa 1915 (5151 Stony Point Road) are recommended eligible to the National Register of Historic Places (NRHP) criteria A (events) and B (people). This property is outside of the construction areas for Alternative A. Due to the physical separation and distance of the property from construction areas, construction and operation of Alternative A would not adversely effect known historic properties and thus is not considered a significant impact.

Development proposed under this alternative may adversely effect unknown subsurface prehistoric or historic archaeological resources. This is a potentially significant impact. Mitigation measures are presented in **Section 5.2.5** for the treatment of unanticipated discoveries of archaeological sites. Implementation of these mitigation measures would reduce impacts to cultural resources to a less-than-significant level.

PALEONTOLOGICAL RESOURCES

No paleontological or unique geological resources are known to exist in the area of the site. Geologic formations that underlie the Wilfred site have a low probability of containing paleontological resources, and no impacts are expected.

There is always a possibility that unknown paleontological resources will be encountered during construction activities. Continued construction upon exposed paleontological materials would likely cause destruction of these resources. This would be a significant impact. Mitigation measures are presented in **Section 5.2.5** for the protection and preservation of unanticipated discoveries of paleontological resources. Implementation of these mitigation measures would reduce impacts to paleontological resources to a less-than-significant level.

4.6.2 ALTERNATIVE B – NORTHWEST STONY POINT CASINO

CULTURAL RESOURCES

Development proposed under Alternative B would adversely effect known historic properties. Historic archaeological site RPC-1, which has been recommended eligible to the NRHP for treatment purposes, is located within the Alternative B archaeological APE.

A circa 1910 house and dairy (597 Wilfred Avenue) is recommended eligible to the NRHP under criteria A (events), B (people), and C (workmanship). In addition, a circa 1949 house with outbuildings (605 Wilfred Avenue) is recommended eligible to the NRHP under criteria A (events) and B (people). Both properties are located across from areas of construction on Wilfred Avenue. Construction and operation of Alternative B would adversely effect these historic properties by impacting their integrity of setting, association, and feeling. Therefore, Alternative B would adversely effect known historic properties, resulting in a significant impact.

Development proposed under this alternative may adversely effect unknown subsurface prehistoric or historic archaeological resources. This is a potentially significant impact.

Mitigation measures are presented in **Section 5.2.5** for the protection and preservation of RPC-1, and for the treatment of unanticipated discoveries of archaeological sites. Implementation of these mitigation measures would reduce impacts to cultural resources to a less-than-significant level.

PALEONTOLOGICAL RESOURCES

No paleontological or unique geological resources are known to exist in the area of the site. Geologic formations that underlie the Stony Point site have a low probability of containing paleontological resources. Therefore, no impacts are expected.

There is always a possibility that unknown paleontological resources will be encountered during construction activities. Continued construction upon exposed paleontological materials would likely cause destruction of these resources. This is a significant impact.

Mitigation measures are presented in **Section 5.2.5** for the protection and preservation of unanticipated discoveries of paleontological resources. Implementation of these mitigation measures would reduce impacts paleontological resources to a less-than-significant level.

4.6.3 ALTERNATIVE C – NORTHEAST STONY POINT CASINO

CULTURAL RESOURCES

Development proposed under this alternative would not adversely effect any known historic properties. Historic archaeological sites RPC-1 and RPC-5, which are recommended eligible to the NRHP for treatment purposes, are located outside the Alternative C archaeological APE.

597 Wilfred Avenue, a circa 1910 house and dairy, is recommended eligible to the NRHP under criteria A (events), B (people), and C (workmanship). 605 Wilfred Avenue, a circa 1949 house

with outbuildings, is recommended eligible to the NRHP under criteria A (events), and B (people). Both properties are located approximately 1,000 feet from construction areas on the opposite side of the Santa Rosa Canal. Due to the physical separation of the properties from construction areas, construction and operation of Alternative C would not adversely effect these historic properties and thus is not considered a significant impact.

Development proposed under this alternative may adversely effect unknown subsurface prehistoric or historic archaeological resources. This is a potentially significant impact.

Mitigation measures are presented in **Section 5.2.5** for the treatment of unanticipated discoveries of archaeological sites. Implementation of these mitigation measures would reduce impacts cultural resources to a less-than-significant level.

PALEONTOLOGICAL RESOURCES

No paleontological or unique geological resources are known to exist in the area of the site. Geologic formations that underlie the Stony Point site have a low probability of containing paleontological resources. Therefore, no impacts are expected.

There is always a possibility that unknown paleontological resources will be encountered during construction activities. Continued construction upon exposed paleontological materials would likely cause destruction of these resources. This is a significant impact.

Mitigation measures are presented in **Section 5.2.5** for the protection and preservation of unanticipated discoveries of paleontological resources. Implementation of these mitigation measures would reduce impacts paleontological resources to a less-than-significant level.

4.6.4 ALTERNATIVE D – REDUCED INTENSITY (STONY POINT SITE)

CULTURAL RESOURCES

Development proposed under Alternative D would be similar to impacts described under Alternative B. This is a potentially significant impact. Mitigation measures are presented in **Section 5.2.5** for the protection and preservation of RPC-1, and for the treatment of unanticipated discoveries of archaeological sites. Implementation of these mitigation measures would reduce impacts to cultural resources to a less-than-significant level.

PALEONTOLOGICAL RESOURCES

No paleontological or unique geological resources are known to exist in the area of the site. Geologic formations that underlie the Stony Point site have a low probability of containing paleontological resources. Therefore, no impacts are expected.

There is always a possibility that unknown paleontological resources will be encountered during construction activities. Continued construction upon exposed paleontological materials would likely cause destruction of these resources. This is a significant impact.

Mitigation measures are presented in **Section 5.2.5** for the protection and preservation of unanticipated discoveries of paleontological resources. Implementation of these mitigation measures would reduce impacts to paleontological resources to a less-than-significant level.

4.6.5 ALTERNATIVE E – BUSINESS PARK

CULTURAL RESOURCES

Development proposed under Alternative E would be similar to impacts described under Alternative B and is considered a potentially significant impact. Mitigation measures are presented in **Section 5.2.5** for the protection and preservation of RPC-1, and for the treatment of unanticipated discoveries of archaeological sites. Implementation of these mitigation measures would reduce impacts to cultural resources to a less-than-significant level.

PALEONTOLOGICAL RESOURCES

No paleontological or unique geological resources are known to exist in the area of the Stony Point site. Geologic formations that underlie the area have a low probability of containing paleontological resources. Therefore, no impacts to paleontological resources are expected.

There is always a possibility that unknown paleontological resources will be encountered during construction activities. Continued construction upon exposed paleontological materials would likely cause destruction of these resources. This is a significant impact.

Mitigation measures are presented in **Section 5.2.5** for the protection and preservation of unanticipated discoveries of paleontological resources. Implementation of these mitigation measures would reduce impacts to paleontological resources to a less-than-significant level.

4.6.6 ALTERNATIVE F – LAKEVILLE CASINO

CULTURAL RESOURCES

Development proposed under this alternative would not adversely effect any historic properties. CA-SON-204, a prehistoric archaeological site, is located outside the Alternative F archaeological APE. Additionally, 7697 Lakeville Highway, a circa 1902 house and outbuildings recommended eligible to the NRHP under criteria A (events), B (people), and C (workmanship) is located approximately 0.5-miles from construction areas on the opposite side of Lakeville

Highway. Due to the physical separation and distance of the property from construction areas, construction and operation of Alternative F would not adversely effect historic properties and thus is not considered a significant impact.

Development proposed under this alternative may adversely effect unknown subsurface prehistoric or historic archaeological resources. This is a potentially significant impact. Mitigation measures are presented in **Section 5.2.5** for the protection and preservation of CA-SON-204, and for the treatment of unanticipated discoveries of archaeological sites. Implementation of these mitigation measures would reduce impacts to cultural resources to a less-than-significant level.

PALEONTOLOGICAL RESOURCES

No paleontological or unique geological resources are known to exist in the area of the site. Geologic formations that underlie the Lakeville site have a low probability of containing paleontological resources. Therefore, no impacts are expected.

There is always a possibility that unknown paleontological resources will be encountered during construction activities. Continued construction upon exposed paleontological materials would likely cause destruction of these resources. This is a significant impact.

Mitigation measures are presented in **Section 5.2.5** for the protection and preservation of unanticipated discoveries of paleontological resources. Implementation of these mitigation measures would reduce impacts to paleontological resources to a less-than-significant level.

4.6.7 ALTERNATIVE G – NO ACTION

Development proposed under this alternative would not adversely effect known historic or archaeological sites. However, development proposed under this alternative may adversely effect unknown subsurface prehistoric or historic archaeological resources. This would be a potentially significant impact.

Mitigation measures are presented in **Section 5.2.5** for the treatment of unanticipated discoveries. Implementation of these mitigation measures would reduce impacts to cultural resources to a less-than-significant level.

PALEONTOLOGICAL RESOURCES

No paleontological or unique geological resources are known to exist in the area of the site. Geologic formations that underlie the NWSP area have a low probability of containing paleontological resources. Therefore, no impacts are expected.

There is always a possibility that unknown paleontological resources will be encountered during construction activities. Continued construction upon exposed paleontological materials would likely cause destruction of these resources. This is a significant impact. Mitigation measures are presented in **Section 5.2.5** for the protection and preservation of unanticipated discoveries to paleontological resources.

4.6.8 ALTERNATIVE H –REDUCED INTENSITY (WILFRED SITE)

CULTURAL RESOURCES

As is the case under Alternative A, development proposed under Alternative H would not adversely effect any known historic properties. Historic archaeological site RPC-5, which is considered eligible to the NRHP for treatment purposes, is located outside the Alternative H archaeological APE. A circa 1915 house and dairy (5151 Stony Point Road), recommended eligible to the NRHP under criteria A (events) and B (people) is located approximately 0.75-miles from construction areas on the opposite side of the Santa Rosa Canal. Due to the physical separation and distance of the property from construction areas, construction and operation of Alternative H would not adversely effect historic properties and thus is not considered a significant impact.

Development proposed under this alternative has the potential to adversely effect unknown subsurface prehistoric or historic archaeological resources. This is a potentially significant impact.

Mitigation measures are presented in **Section 5.2.5** for the treatment of unanticipated discoveries of archaeological sites. Implementation of these mitigation measures would reduce impacts to cultural resources to a less-than-significant level.

PALEONTOLOGICAL RESOURCES

No paleontological or unique geological resources are known to exist in the area of the site. Geologic formations that underlie the Wilfred site have a low probability of containing paleontological resources. Therefore, no impacts are expected.

There is always a possibility that unknown paleontological resources will be encountered during construction activities. Continued construction upon exposed paleontological materials would likely cause destruction of these resources. This would be a significant impact.

Mitigation measures are presented in **Section 5.2.5** for the protection and preservation of unanticipated discoveries of paleontological resources. Implementation of these mitigation measures would reduce impacts paleontological resources to a less-than-significant level.

4.7 SOCIOECONOMIC CONDITIONS AND ENVIRONMENTAL JUSTICE

4.7.1 SOCIOECONOMIC CONDITIONS

This section provides an analysis of the socioeconomic effects of each alternative. Effects analyzed include increased employment and revenue, changes to City and County revenue and expenditure, community infrastructure and housing effects, and social effects from increased gambling. A socioeconomic study was recently completed that analyzes the socioeconomic impacts of each alternative (Bay Area Economics, 2008). A copy of this study appears in **Appendix N**. Growth inducing impacts of the alternatives are analyzed in **Section 4.11**.

ALTERNATIVE A – PROPOSED PROJECT

Direct Economic Effects

Construction

Construction required for Alternative A would generate substantial economic activity within Sonoma County and the larger nine-county Bay Area region (includes Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma Counties). Direct impacts primarily consist of expenditures to local construction and engineering firms necessary for construction of the project facilities. Note that it is assumed that these expenditures would occur locally as the physical building would be located in the local economy and all workers would need to be in the local economy for the duration of the construction period (**Appendix N**).

For the purposes of this analysis, construction expenses were estimated. These estimates are the basis for identifying the potential effects from the construction of Alternative A. SC Sonoma Management, LLC (the Tribe's management/development partner) estimated total construction costs for the proposed project at $450 million (**Table 4.7-1**). Additionally, SC Sonoma Management, LLC estimates that 750 jobs would be generated over the entire construction period, which is estimated at 27 months. This is a beneficial economic impact to the region.

Secondary effects from construction of Alternative A would entail local economic activity resulting from the patronage by construction personnel of local retailers and hospitalities. While precise economic projections are not available, this economic activity would bring outside revenues into the local private enterprise as well as generate local tax revenue. This would be a beneficial impact.

TABLE 4.7-1
DIRECT ECONOMIC IMPACT DURING CONSTRUCTION

Direct Construction Impacts	No. of Employees	Expenditures
Alternative A	750	$450 million
Alternative B	750	$450 million
Alternative C	750	$450 million
Alternative D	750	$433 million
Alternative E	90	$54.2 million
Alternative F	750	$450 million
Alternative H	750	$433 million

SOURCE: Bay Area Economics, 2008.

Operation

Alternative A is expected to result in the employment of between 2,200 and 2,600 full-time workers, with an average of 2,400 workers. The casino/hotel resort is expected to generate annual receipts between $455 million and $582 million, with an average of $533 million (Bay Area Economics, 2008; **Appendix N**). A more detailed breakdown of expected receipts can be found in **Table 4.7-2**. Note that although the economic activity physically takes place in the local economy, not all of the revenues represent a direct economic impact to the local economy.

TABLE 4.7-2
DIRECT ANNUAL OPERATING SOCIOECONOMIC IMPACT

		Casino Expenses by Category (Millions of Dollars)					
	Number of Employees	Casino/ Retail	Food and Beverage	Entertain -ment	Hotel	Other	Total Sales
Alternative A	2,200 – 2,600	$380 – $500	$43 – $49	$4.5	$19 – $20	$8	$454.5 – $581.5
Alternative B	2,200 – 2,600	$380 – $500	$43 – $49	$4.5	$19 – $20	$8	$454.5 – $581.5
Alternative C	2,200 – 2,600	$380 – $500	$43 – $49	$4.5	$19 – $20	$8	$454.5 – $581.5
Alternative D	2,100	$340	$36	$0	$5	$7	$388
Alternative E	2,000	$0	$0	$0	$0	$0	$136.5
Alternative F	2,200 – 2,600	$380 – $500	$43 – $49	$4.5	$19 – $20	$8	$454.5 – $581.5
Alternative H	2,100	$340	$36	$0	$5	$7	$388

SOURCE: Bay Area Economics, 2008.

Thus, the direct economic impact to the local economy would be approximately $255 million. This is a significant and beneficial impact to the socioeconomics of the region. No mitigation is required. A discussion of indirect and induced jobs and revenues that would flow from these direct effects can be found in **Section 4.11.2**. A discussion of indirect fiscal impacts to the region can also be found in **Section 4.11.2**.

Indirect and Induced Economic Effects

Alternative A would result in jobs and revenues that are induced or indirectly a result of the operation of the casino/hotel resort (indirect/induced economic impacts). Indirect employment and revenues would result from inter-industry trade, which the casino/hotel engages in with other businesses (e.g., janitorial supply services). Induced employment and revenues would result from economic activity spawned by the household trade that occurs when casino/hotel employees act as consumers.

Methodology

Estimates of indirect and induced impacts to regional employment and economic activity were prepared by Bay Area Economics using the IMPLAN (IMpact Analysis for PLANing) economic model originally developed for the United States Department of Agriculture (USDA) Forest Service in cooperation with the Federal Emergency Management Agency (FEMA) and the USDI Bureau of Land Management (BLM). The IMPLAN model has been in use since 1979 and closely follows the accounting conventions used in the "Input-Output Study of the U.S. Economy" by the Bureau of Economic Analysis and the rectangular format recommended by the United Nations. IMPLAN automates the process of developing input-output models for regions within the United States. At the heart of the model is an input-output dollar flow table. For the specified region, the input-output table accounts for all of the dollar flows between the different sectors within the economy. Using this information, the IMPLAN software models the way income injected into one sector is then spent, and re-spent in other sectors of the economy, generating waves of economic activity, or so-called "economic multiplier" effects.

Regions studied using the IMPLAN model can be defined at various geographic levels to fit the particular analysis. The developers of the IMPLAN model maintain large databases of economic and trade data that are collected and published by the federal government, and compiled and formatted for use in the computer model. The data that IMPLAN uses are customized to reflect the specific, detailed economic characteristics of each individual county that is included within the specified regional study area. The data regarding input-output relationships between sectors used in the model for this analysis are from 2001 (latest currently available), and have been adjusted to provide results expressed in 2004 dollar figures.

The IMPLAN model is able to summarize the economic effects of a given economic "event" that is entered into the model, expressing the impacts in terms of direct, indirect, and induced jobs, and output, value added, and income by industry sector. Output is defined as the value of production by industry per year. Employment represents total wage and salary of employees, as well as self-employed jobs in a region, for both full-time and part-time workers. Total value added is defined as all income to workers paid by employers; self-employed income; interests, rents, royalties, dividends, and profit payments; and excise and sales taxes paid by individuals to businesses. The IMPLAN model is respected as the industry standard for projecting economic impacts resulting from future "events." For the purposes of analysis in this EIS, the projected construction and operating budgets make up the "events" in the IMPLAN model.

In general, two types of employment and economic activity effects are estimated by IMPLAN: indirect effects and induced effects. Indirect impacts calculated by the IMPLAN model reflect changes in interindustry purchases, effectively measuring the impact of expenditures for other goods and services by the proposed development as they cycle through the economy. Induced impacts calculated by the IMPLAN model reflect changes in spending from households as income/population increases or decreases due to changes in production, effectively measuring the impact of wages paid as they cycle through the economy.

Construction

The construction budget was used as a proxy for output along with the IMPLAN model, to determine the indirect and induced impacts of construction on Sonoma County and the nine-County Bay Area that includes Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma Counties. Rohnert Park and other nearby jurisdictions will benefit from Alternative A's indirect and induced impacts insofar as local businesses can provide services and goods that the casino will require for construction and that the households supported by this new construction activity will demand. Otherwise, establishments where out-of-town based workers can eat and sleep, and local providers of concrete, wood, and other building materials and services would experience the largest benefit from project construction (Bay Area Economics, 2008).

Indirect and induced impacts of the casino/hotel resort's construction phase on the County and Bay Area are shown in **Table 4.7-3**. All development alternatives are within **Table 4.7-3** for comparison analysis. Note that these are temporary impacts lasting the duration of the construction period estimated at 27 months. As shown in the table, most of the indirect and induced construction impacts are occurring in Sonoma County. A beneficial, temporary indirect impact would result to the region.

TABLE 4.7-3
INDIRECT AND INDUCED CONSTRUCTION IMPACT

	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G	Alternative H
Sonoma County								
Indirect Impacts								
Number of Employees	492	492	492	532	111	492	213	532
Output	$102,510,000	$102,510,000	$102,510,000	$98,630,000	$15,980,000	$102,510,000	$35,930,000	$98,630,000
Value Added	$67,000,000	$67,000,000	$67,000,000	$64,470,000	$10,450,000	$67,000,000	$22,940,000	$64,470,000
Induced Impacts								
Number of Employees	985	985	985	1,067	139	985	220	1,067
Output	$214,880,000	$214,880,000	$214,880,000	$206,760,000	$21,690,000	$214,880,000	$41,260,000	$206,760,000
Value Added	$128,850,000	$128,850,000	$128,850,000	$123,980,000	$13,260,000	$128,850,000	$25,230,000	$123,980,000
Indirect and Induced Impacts								
Number of Employees	1,477	1,476	1,476	1,599	250	1,476	433	1,599
Output	$317,390,000	$317,390,000	$317,390,000	$305,390,000	$37,670,000	$317,390,000	$77,190,000	$305,390,000
Value Added	$195,850,000	$195,850,000	$195,850,000	$188,450,000	$23,710,000	$195,850,000	$48,170,000	$188,450,000
Bay Area								
Indirect Impacts[1]								
Number of Employees	538	538	538	583	51	538	220	583
Output	$122,920,000	$122,920,000	$122,920,000	$118,270,000	$7,220,000	$122,920,000	$41,840,000	$118,270,000
Value Added	$74,650,000	$74,650,000	$74,650,000	$71,830,000	$4,830,000	$74,650,000	$25,520,000	$71,830,000
Induced Impacts[1]								
Number of Employees	985	985	985	1,067	139	985	215	1,067
Output	$220,680,000	$220,680,000	$220,680,000	$220,680,000	$9,670,000	$220,680,000	$42,770,000	$220,680,000
Value Added	$128,850,000	$128,850,000	$128,850,000	$123,980,000	$13,260,000	$128,850,000	$25,230,000	$123,980,000
Indirect and Induced Impacts								
Number of Employees	1,523	1,523	1,523	1,650	190	1,523	435	1,650
Output	$343,600,000	$343,600,000	$343,600,000	$338,950,000	$16,890,000	$343,600,000	$84,610,000	$338,950,000
Value Added	$203,500,000	$203,500,000	$203,500,000	$195,810,000	$18,090,000	$203,500,000	$50,750,000	$195,810,000
Estimated Construction Period	27 months	27 months	27 months	24 months	20 months	27 months	24 months	24 months

NOTES: [1] Includes output related to services that would be provided to users of the project facilities by outside vendors. This portion of output is assumed to be new to Sonoma County, but not new to the Bay Area. Therefore, the output figure for the Bay Area is less than the figure for Sonoma County.
SOURCE: Bay Area Economics, 2008.

TABLE 4.7-4
INDIRECT AND INDUCED OPERATION IMPACT

	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G	Alternative H
Sonoma County								
Indirect Impacts								
Number of Employees	646 – 821	646 – 821	646 – 821	550	68	646 – 821	10	550
Output	$58.1M - $73.7M	$58.1M - $73.7M	$58.1M - $73.7M	$49,480,000	$5,560,000	$58.1M - $73.7M	$1,320,000	$49,480,000
Value Added	$35.4M - $45.0M	$35.4M - $45.0M	$35.4M - $45.0M	$30,150,000	$3,770,000	$35.4M - $45.0M	$920,000	$30,150,000
Induced Impacts								
Number of Employees	662 – 834	662 – 834	662 – 834	565	86	662 – 834	67	565
Output	$63.2M - $79.6M	$63.2M - $79.6M	$63.2M - $79.6M	$52,930,000	$8,000,000	$63.2M - $79.6M	$6,260,000	$52,930,000
Value Added	$38.5M - $48.5M	$38.5M - $48.5M	$38.5M - $48.5M	$32,370,000	$4,890,000	$38.5M - $48.5M	$3,830,000	$32,370,000
Indirect and Induced Impacts								
Number of Employees	1,308 – 1,655	1,308 – 1,655	1,308 – 1,655	1,115	153	1,308 – 1,655	77	1,115
Output	$121.3M - $153.3M	$121.3M - $153.3M	$121.3M - $153.3M	$102,410,000	$13,560,000	$121.3M - $153.3M	$7,580,000	$102,410,000
Value Added	$73.9M - $93.5M	$73.9M - $93.5M	$73.9M - $93.5M	$62,520,000	$8,660,000	$73.9M - $93.5M	$4,750,000	$62,520,000
Bay Area								
Indirect Impacts								
Number of Employees	718 – 913	718 – 913	718 – 913	612	86	718 – 913	11	612
Output	$68.0M - $86.1M	$68.0M - $86.1M	$68.0M - $86.1M	$57,850,000	$7,220,000	$68.0M - $86.1M	$1,390,000	$57,850,000
Value Added	$40.5M - $51.4M	$40.5M - $51.4M	$40.5M - $51.4M	$34,480,000	$4,830,000	$40.5M - $51.4M	$960,000	$34,480,000
Induced Impacts								
Number of Employees	662 – 834	662 – 834	662 – 834	565	97	662 – 834	66	565
Output	$65.9M - $83.1M	$65.9M - $83.1M	$65.9M - $83.1M	$55,250,000	$9,670,000	$65.9M - $83.1M	$6,530,000	$55,250,000
Value Added	$38.5M - $48.5M	$38.5M - $48.5M	$38.5M - $48.5M	$32,370,000	$5,650,000	$38.5M - $48.5M	$3,810,000	$32,370,000
Indirect and Induced Impacts								
Number of Employees	1,380 – 1,747	1,380 – 1,747	1,380 – 1,747	1,178	183	1,380 – 1,747	76	1,178
Output	$133.9M - $169.2M	$133.9M - $169.2M	$133.9M - $169.2M	$113,100,000	$16,890,000	$133.9M - $169.2M	$7,920,000	$113,100,000
Value Added	$79.0M - $99.9M	$79.0M - $99.9M	$79.0M - $99.9M	$66,850,000	$10,480,000	$79.0M - $99.9M	$4,770,000	$66,850,000

SOURCE: Bay Area Economics, 2008.

Operation

The operation budget was used as a proxy for output along with the IMPLAN model, to determine the indirect and induced impacts of project operation on Sonoma County and the Bay Area. Rohnert Park and other nearby jurisdictions will benefit from the indirect and induced impacts of Alternative A insofar as local businesses can provide services and goods that the casino/hotel will require during operation and that the households supported by this new business will demand (Bay Area Economics, 2008).

Table 4.7-4 shows the indirect and induced impacts of the casino/hotel resort's operation phase on Sonoma County and the Bay Area. All development alternatives are compared in **Table 4.7-4**. As shown in the table, most of the indirect and induced operation impacts are occurring in Sonoma County. A beneficial indirect economic impact would result to the region.

Potential substitution effects (the loss of customers at existing commercial businesses to the new business) of Tribal casinos on existing restaurant, recreation, and retail establishments must be considered when attempting to determine the true magnitude of the casino's impact on the economy. The magnitude of the substitution effect can generally be expected to vary greatly by specific location and according to a number of variables that are difficult to quantify. That is, how much of the casino's revenue comes at the expense of other business establishments in the area depends on how many and what type of other establishments are within the same market area as the casino, disposable income levels of local residents and their spending habits, as well as other economic and psychological factors affecting the consumption decisions of local residents. To the extent that the casino acts as a destination location, substitution effects become more diffuse, as the casino is drawing patrons from a widespread area. Quantifying the substitution effects of the casino would require knowledge of how residents spend their entertainment dollars, how patrons rank their preferences for different types of entertainment, and the distribution of where casino patrons originate. Given that most of the above variables for determining substitution effects are not known, an attempt to quantify substitution effects has not been made in the EIS. Nonetheless, **Appendix N** contains an attempt to provide a qualitative analysis of the potential magnitude of the substitution effect based on four types of potential visitors: tourists, local residents who would otherwise spend their money on local entertainment, local residents who would otherwise leave the County for entertainment, and local residents who would otherwise save their money.

Based on the types of visitors likely to visit the casino (most substitution will occur within the category of local residents who would otherwise spend their money on local entertainment – other categories of customers would largely counteract substitution effects), it is likely that some of the casino's receipts will come at the expense of other local venues, and therefore would not represent new benefits to the County. Substitution impacts would be diffuse because there are a

large number of existing businesses that already operate in a competitive environment. Moreover, in the first year, the new economic benefits to the County will likely be smaller than over the long-term due to substitution effects once local residents experience the casino and return to their normal spending patterns. Worst-case substitution effects, occurring in rural environments, have shown on average a nine-percent decrease in earnings at local restaurants and bars and an increase in earnings in other commercial sectors. Given that the hotel/casino resort would be located in an urban setting such effects would not apply. Nonetheless, it may be inferred that substitution is only expected at restaurants or bars and that the substitution would be some percentage lower than nine percent. Given that it is not possible to reliably quantify the substitution effects, this analysis does not arbitrarily reduce the economic impacts from the proposed casino and other alternatives to account for substitution effects. As the casino/hotel resort would draw non-residents to the area, the associated increase in new visitor demand for off-site entertainment venues, restaurants, and bars would make up for some area residents choosing to eat within the proposed casino hotel, rather than at existing eateries. Thus, less-than-significant substitution effects would occur.

Fiscal Impacts on Local Jurisdictions

In addition to determining the indirect and induced employment and economic activity impacts resulting from the development alternatives, fiscal impacts were also examined. The employees needed to staff the developments would be drawn from the existing labor pool, meaning that the developments would not generate secondary service demand from its employees who may choose to live in Rohnert Park or Sonoma County. Rather, there are adequate numbers of people living in Rohnert Park and nearby who are not currently employed; who could fill those new jobs. The City and County are already providing services to those local residents; thus, a significant increase in City or County service demand or costs from new residents would not occur. An increase in costs is expected to be associated with the increased visitation and spillover effects from casino employees for the City as well as the County.

City of Rohnert Park

Since there would not be a direct increase in the service population associated with the proposed casino or other alternatives, there would be no additional sales tax revenues, motor vehicle in lieu fees, or franchise fee revenues that the City can expect to collect from an increased service population. There would likely be some additional sales tax collections from people traveling through Rohnert Park to and from the Casino; however that additional revenue is expected to be fairly minor in relation to the overall City budget, since most travelers would be traveling within the City for only a short duration between US-101 to the site (Bay Area Economics, 2008).

Based on the project's proximity to the City and contributions for facilities in the Memorandum of Understanding (MOU), the Tribe would most likely contract with the City for fire and emergency services. Although the MOU does not apply to the Wilfred Site, it is assumed that it would be renegotiated with similar terms for a casino on the Stony Point Site (see **Section 2.2.10**). In the MOU, the Tribe has agreed with the City to many recurring and non-recurring contributions to numerous local public safety-related projects (see **Section 2.2.10**) at an identically sized casino on the nearby Stony Point Site (the terms of this MOU are assumed to apply to Alternative A). For instance, the Tribe agreed to contribute $2,250,000 to the City to be used to construct a new public safety building (including a two-story training tower). The Tribe also agreed to contribute $350,000 to the City to be used to purchase a Type I fire engine that would be stationed at the new public safety building. Under the MOU, $410,000 would also be contributed to the City to be used for the purchase of public safety vehicles. As of September 2006, the Tribe has contributed $1,325,000 to establish a Special Enforcement Unit (SEU), a neighborhood enforcement team to combat gangs, illegal drug use, and other criminal activity. The Tribe has agreed to make annual contributions of $500,000 to the City to support this neighborhood enforcement team (note that the Tribe has made and continues to make these annual contributions although not specifically required to do so until the casino is operational). The Tribe has agreed to continue to fully fund the SEU through June 30, 2008, which will bring its total contribution for SEU funding to $2,200,000. In June 2007, at the request of Rohnert Park, the Tribe also agreed to provide $153,000 in additional funding for two new Public Safety Department positions beginning January 1, 2008, including a school resource officer and a records supervisor (**Appendix II**). Finally, the Tribe agreed to make an annual contribution of $5,000,000 to mitigate additional potential impacts of the project on the City. The City and the Tribe agreed in the MOU that this amount is sufficient to mitigate any unidentified impacts of the project (MOU, 2003). These contributions not only give the City better capabilities for internal back-up, they also provide additional resources for providing back-up services to other agencies that are parties to mutual or automatic aid agreements, thereby creating a benefit to the overall region.

The cost to provide fire and emergency services to the casino/hotel resort would be between $244,600 and $289,100 (Bay Area Economics, 2008). Under the MOU, the Tribe will donate approximately $10.9 million to fund capital improvements including an additional fire truck. The Tribe will also donate approximately $9.7 million per year to the City to mitigate any ongoing impacts (see **Section 2.2.10**). This is equal to approximately 37-percent of the City's existing General Fund budget. Therefore, accounting for these annual contributions, beneficial impacts to the City's budget would be expected after the implementation of Alternative A (Bay Area Economics,-2008).

Sonoma County

Although fire and emergency services are assumed to be provided by the City, other fiscal impacts are expected to the County for Alternative A. For example, although the City would provide fire and emergency services, the County would provide law enforcement services (absent an agreement stating otherwise). For Alternative A, there would be an equivalent increase in the County service population of approximately 1,200 persons (since the land would be held in trust, the County service population would not actually increase), which is assumed to be equal to one-half the estimated number of casino employees (2,400 employees, **Table 4.7-2**), based on standard fiscal impact analysis convention (**Tables 4.7-5** and **4.7-6**).

TABLE 4.7-5
EXISTING SONOMA COUNTY SERVICE POPULATION

	Sonoma County
Total Existing Residents	472,725
Total Existing Households	179,565
Total Number of Jobs/Employees	223,466
Total Service Population	584,458

SOURCE: Bay Area Economics, 2008.

TABLE 4.7-6
ESTIMATED INCREASE IN SONOMA COUNTY SERVICE POPULATION PER ALTERNATIVE

	Alternative A	**Alternative B**	**Alternative C**	**Alternative D**	**Alternative E**	**Alternative F**	**Alternative H**
Employment (High Estimate)	2,600	2,600	2,600	2,100	2,000	2,600	2,100
Employment (Low Estimate)	2,200	2,200	2,200	2,100	2,000	2,200	2,100
Estimated Service Population (High Estimate)	1,300	1,300	1,300	1,050	1,000	1,300	1,050
Estimated Service Population (Low Estimate)	1,100	1,100	1,100	1,050	1,000	1,100	1,050

SOURCE: Bay Area Economics, 2008.

The County would not directly collect any revenues from the proposed casino. This is because the casino/hotel resort would not be subject to local property taxation nor required to collect sales taxes. The County would not have the authority to levy other types of taxes and charges on the casino/hotel resort. Small increases in revenues would be expected as a result of the proposed

project for items such as local fines and forfeitures, to the extent that casino patrons or employees are cited for infractions off the Wilfred site. As shown in **Table 4.7-7**, revenues of this type that would not rely on direct levies of taxes are expected to generate approximately $143 annually per service population (Bay Area Economics, 2008).

Based on the County's current general fund cost structure, and by calculating simple average costs per current service population, the County spends, on average, $283 per service population on General Fund services within the unincorporated area (**Table 4.7-8**). However, given that it is assumed that the City would provide public safety services, the net cost per service population is $176.

Table 4.7-9 shows the net fiscal impacts to the County from the proposed casino and other alternatives. As shown in **Table 4.7-9**, Alternative A would generate a negative fiscal impact to the County based on an expectation of increased County service costs coupled with lesser anticipated increase in revenues. As shown, the anticipated net fiscal cost to the County from Alternative A is between $153,766 and $181,724 per year. As noted in **Section 2.2.10**, the Tribe has entered into an initial MOU with Sonoma County, in which the Tribe and County have agreed to commence negotiations towards executing an intergovernmental agreement that would insure the timely mitigation of any significant environmental effects that occur within the County. Negotiation for this agreement has commenced. A potentially significant fiscal effect to the County would result should these negotiations not result

TABLE 4.7-7
EXISTING ANNUAL SONOMA COUNTY REVENUE SOURCES

Revenue Sources	Revenue (dollars)	Percentage of Total Revenue
Taxes	114,600,000	58
Charges for Service/Program Fees	47,300,000	24
Other[1]	36,200,000	18
2003-2004 General Fund Revenues[2]	*198,100,000*	*100*
Annual Non-Taxes Per Service Population Revenues[3]	143	

NOTES: [1] Includes Licenses/Permits/Franchises ($13.9 million), Fines/Forfeitures/Penalties ($6.7 million), Miscellaneous Revenues ($3.6 million), Use of Money ($7.1 million), and other financing sources ($4.9 million).
[2] General Fund revenues net of intergovernmental (Federal and State) revenues, and prior year reserves.
[3] This is the sum of charges for service/program fees plus other revenues, divided by the 2004 service population. These are County revenues that could potentially increase in response to the increased service population associated with project employment.
SOURCE: Bay Area Economics, 2008.

TABLE 4.7-8
EXISTING ANNUAL SONOMA COUNTY APPROPRIATIONS

General Fund Category	Expenditures (dollars)[1]	Percentage
General Government	22,900,000	14
Health/Sanitation	4,400,000	3
Other[2]	2,500,000	2
General Government Transfers	1,100,000	1
Sheriff and Emergency Services, Net of Law Enforcement Dispatch Services	62,100,000	38
Dispatch Services, Law Enforcement Only[3]	3,000,000	2
All Other Public Protection[4]	63,400,000	38
Public Assistance	5,800,000	21
Total	*165,200,000*	*100*
Annual Per Service Population Expenditures[5]	283	
Annual Net Per Service Population Expenditures[6]	176	

NOTES: 1 General fund expenditures reflect County expenditures paid for with discretionary revenues.

2 Includes Public Ways/Facilities, Education, Recreation/Cultural Services, Provisions for Reserves/Designations, and Appropriations for Contingencies.

3 County provides dispatch for law enforcement only. The County and cities contract with a private company to perform dispatch services for fire and emergency medical services.

4 Includes District Attorney, Public Defender, Superior/Municipal Court, Grand Jury, County Clerk, Detention, Probation Department, Juvenile Halls, Permit and Resource Management, Agricultural Commissioner, L.A.F.C.O., and Recorder.

5 This does not include fire and emergency services.

6 Under the No Action Alternative (Alternative G) the City of Rohnert Park would annex the site prior to development, and thus, would be responsible for providing the site with law enforcement, fire, and emergency services.

SOURCE: MOU, 2003; Bay Area Economics, 2008.

in offsetting contributions to the County to mitigate for the fiscal impact of Alternative A. Mitigation measures in **Section 5.2.6** would insure fiscal effects to the County are less than significant.

Property Values

The construction of a casino may result in changes to local property values, which could impact local tax assessor rolls and in turn, local property tax revenues. Changes in appreciation rates of properties adjacent to the casino could also impact future property tax revenues. The direction and magnitude of change can be affected by the proximity of the property to the casino and whether or not the casino is located in an urban area. According to the Lied Institute of Real Estate Studies, a new casino built within one-mile of residential households will result in a 4.6-percent decrease in home values, while homes located more than one mile experience no impact on property value. This study was conducted in suburban Las Vegas; however, it should be noted

that the Bay Area housing market tends to be stronger than elsewhere in the nation and may be resistant to changes related to a casino. As property values and taxes can vary for a variety of reasons unrelated to the casino, it would be speculative to measure the impacts to property values.

TABLE 4.7-9
ESTIMATED ANNUAL FISCAL IMPACTS TO SONOMA COUNTY PER ALTERNATIVE

	Net Cost Differential		Net Revenue Differential		Net Impact	
	High Estimate	**Low Estimate**	**High Estimate**	**Low Estimate**	**High Estimate**	**Low Estimate**
Alternative A	$367,452	$310,921	$185,728	$157,154	($181,724)	($153,766)
Alternative B	$367,452	$310,921	$185,728	$157,154	($181,724)	($153,766)
Alternative C	$367,452	$310,921	$185,728	$157,154	($181,724)	($153,766)
Alternative D	$296,788	$296,788	$150,011	$150,011	($146,777)	($146,777)
Alternative E	$282,655	$282,655	$142,867	$142,867	($139,788)	($139,788)
Alternative F	$1,367,452[1]	$1,310,921[1]	$185,728	$157,154	($1,181,724)[1]	($1,153,766)[1]
Alternative H	$296,788	$296,788	$150,011	$150,011	($146,777)	($146,777)

NOTE: Parentheses indicate the amount of financial burden to Sonoma County.
1 Note that this is the cost for the first year that includes $1,000,000 for the building of a fire station near the Lakeville Site. Annual fiscal impacts after the first year would range between $153,766 and $181,724.
SOURCE: Bay Area Economics, 2008.

Social Effects

On balance, through case studies of existing casino communities as well as a review of various statistics and literature, the socioeconomic study (**Appendix N**) found examples of both negative and positive impacts associated with casinos; however, in almost all cases it is impossible to attribute the entire cause of these impacts to casinos themselves (Bay Area Economics, 2008). In an attempt to identify social impacts of Alternative A, the following five California communities were surveyed that have Indian gaming casinos within close proximity or in their jurisdiction:

- Thunder Valley Casino in Lincoln, Placer County;
- Chumash Casino Resort in Santa Ynez, Santa Barbara County;
- Pala Casino Resort and Spa, in Pala, San Diego County;
- Spa Resort Casino in Palm Springs, Riverside County; and
- Barona Valley Ranch Resort and Casino in Lakeside, San Diego County.

Each of the casinos listed above offers slot machines, gaming tables and hotel accommodations with the exception of Thunder Valley Casino, whose amenities do not include hotel accommodations. **Table 4.7-10** summarizes the year in which each casino opened, square footage of the casino, number of slot machines, number of gaming tables, number of hotel rooms

and the population of the neighboring cities. All of the casinos opened in the last several years. Spa Resort Casino in Palm Springs has the smallest square footage dedicated to its casino (45,000 square feet) whereas Barona Valley Ranch Casino has the largest casino square footage of 310,000. Each casino offers an average of 2,000 slot machines, an average of 70 gaming tables, and where available, an average of approximately 300 hotel rooms.

For the survey, local law enforcement offices were contacted to inquire about the impacts of the casinos and whether the facilities induced a higher incidence of crime. In addition, historical crime statistics were reviewed for a correlation between the presence of casinos and higher than average crime rates. Local social service agencies were also contacted to document any increase in social service demand since the opening of the casinos. Finally, a literature review on the topic of the social impacts of casino gambling was conducted. A brief summary of the general conclusions found in literature on the subject can be found below. A more detailed accounting of the analysis conducted is located in **Appendix N**.

TABLE 4.7-10
COMPARATIVE CASINOS

	Location	Year Opened	Casino Square Footage	No. of Slot Machines	No. of Hotel Rooms	Local Population (2000)
Graton Casino	Rohnert Park, Sonoma County, CA	NA	408,150	NA	300	42,000
Thunder Valley Casino	Lincoln, Placer County, CA	2003	200,000	2,700	0	13,900
Chumash Casino Resort	Santa Ynez, Santa Barbara County, CA	2003 (casino) 2004 (hotel)	94,000	2,000	106	4,584
Pala Casino Resort and Spa	Pala, San Diego County, CA	2001 (casino) 2004 (hotel)	185,000	2,250	507	133,559
Spa Resort Casino	Palm Springs, Riverside County, CA	2003	45,000	1,000	228	42,807
Barona Valley Ranch Resort and Casino	Lakeside, San Diego County, CA	2003	310,000	2,000	397	19,560

SOURCE: Bay Area Economics, 2008.

Crime Rates

In general, each local law enforcement agency with a casino within its jurisdiction reported an increase in law enforcement service demand after the opening of each casino. All reported that the typical crimes and/or calls for service that have increased include, but are not limited to, driving under the influence, personal robbery, credit card fraud, auto thefts, disorderly conduct, and assault.

Although instances of these crimes have increased in all of the casino communities, no department could implicate the casino land use as the direct cause of the increase in crime. Rather, each department expressed that the increased concentration of people within the local area led to the increase in crime. Three of the five casinos provided statistical reports on the number of crimes specifically in and around the individual casinos. As summarized in **Table 4.7-11**, the total number of crimes is minimal in comparison to the overall number of crimes in the surrounding communities. Chumash Casino in Santa Ynez had 204 calls for service in 2003, 20 of which were larceny-theft arrests, and one which resulted in a violent crime arrest. Pala Casino Resort and Spa in Pala, California had 181 calls for service in 2003, 21 of which were property crime arrests, 12 of which were larceny-theft arrests, and six of which resulted in violent crime arrests. All departments reported the largest impact directly attributed to the casino in their community is the increase in traffic and traffic-related accidents.

In addition to the interviews with local law enforcement officials, uniform crime reporting statistics were also compiled for the different host communities published by the State Attorney General's Office. Crime data for the local jurisdiction as well as the overall county in which each is located was collected. Per capita crime rates were reached by combining this information with population figures for each area. These data are incorporated into **Table 4.7-11** and show that crime rates in Lincoln, the community nearest the Thunder Valley Casino are very similar to the rates in Placer County overall. Crime rates in unincorporated Santa Barbara County, where the Chumash Casino Resort is located, are slightly below the County average. Crime rates in Palm Springs, where the Spa Resort and Casino is located are substantially higher than in Riverside County overall. Crime rates in unincorporated San Diego County, where the Barona Valley Ranch Resort and Spa and Pala Casino Resort and Spa are located, are significantly below the crime rates in the County overall. With three local jurisdictions experiencing lower crime rates, one experiencing comparable crime rates, and one jurisdiction experiencing greater crime rates, this data does not show a definitive link between crime rates and the presence of casinos.

Finally, the Rohnert Park Department of Public Safety study of the impacts to crime from the Thunder Valley casino was reviewed. The Department of Public Safety analyzed the number and types of offenses reported near the Thunder Valley casino, and spoke with Placer County Sheriff's Department, to extrapolate the actual impacts of casino operations on local crime. The Sheriff's Department indicated that one unintended consequence of the casino was that because the casino monitored its premises with video technology, the number of required detective follow-ups to reports of crime was much higher than would otherwise occur. Video technology enables the casino to provide video evidence implicating a perpetrator to the local authorities.

TABLE 4.7-11
2003 CRIME STATISTICS BY COMPARATIVE CASINOS

		Population	Total Number of Crimes	Violent Crimes[a]	Property Crimes[b]	Larceny/ Theft[c]	Calls for Service
Thunder Valley Casino	Casino Site		256	Not available	Not available	Not available	585
	Lincoln	19,923	614	47	217	350	
	Crimes per 1,000 residents		31	2	11	18	
	Placer County	283,454	8,480	577	2,703	5,200	
	Crimes per 1,000 residents		30	2	10	18	
	Percent of County Crime at Casino		3.0%	Not available	Not available	Not available	
Chumash Casino Resort	Casino Site		21	1	0	20	204
	Unincorporated Area	135,305	1,912	215	546	1,151	
	Crime per 1,000 residents		14	2	4	9	
	Santa Barbara County	410,268	8,536	1,114	2,181	5,241	
	Crime per 1,000 residents		21	3	5	13	
	Percent of County Crime at Casino		0.2%	0.1%	0.0%	0.4%	
Pala Casino Resort and Spa	Casino site		39	6	21	12	181
	Unincorporated area	460,615	10,148	1,272	4,487	4,389	
	Crime per 1,000 residents		22	3	10	10	
	San Diego County	2,976,104	110,642	14,006	42,358	54,278	
	Crime per 1,000 residents		37	5	14	18	
	Percent of County Crime at Casino		0.04%	0.04%	0.05%	0.02%	
Spa Resort Casino	Casino site		Not available	Not available	Not available	Not available	Not available
	Palm Springs	44,363	3,746	390	1,317	2,039	
	Crime per 1,000 residents		84	9	30	46	
	Riverside County	1,719,004	72,003	9,124	26,474	36,405	
	Crime per 1,000 residents		42	5	15	21	
	Percent of County Crime in Palm Springs		5.2%	4.3%	5.0%	5.6%	
Barona Valley Ranch Resort and Casino	Casino site		Not available	Not available	Not available	Not available	Not available
	Unincorporated area	460,615	10,148	1,272	4,487	4,389	
	Crime per 1,000 residents		22	3	10	10	
	San Diego County	2,976,104	110,642	14,006	42,358	54,278	
	Crime per 1,000 residents		37	5	14	18	
	Percent of County Crime in San Diego		9.2%	9.1%	10.6%	8.1%	

NOTES: [a] Violent crimes are defined as homicide, forcible rape, robbery, and aggravated assault.
[b] Property crimes are defined as burglary and motor vehicle theft.
[c] Larceny is defined as thefts over $400 and theft is defined as thefts under $400.
SOURCE: Bay Area Economics, 2008.

Thus, local law enforcement officials would have sufficient evidence to pursue a purse-snatcher or car thief after the crime occurred. While this is clearly a benefit to the community, such follow-ups require additional resources. The Sergeant also indicated that the rate of growth in Placer County, and particularly around Lincoln, where the casino is located, generated more

service demand than the casino, and that the casino mainly generated the types of calls that would occur in tandem with the opening of a tourist attraction.

In order to estimate the potential increase in service demand from the casino, the Department of Public Safety examined the changes in per capita crime rates between the 18 months prior to the casino's opening and 18 months after the casino's opening, and found that the average number of monthly reports did increase per capita for all types of crime, with the largest increases (43-percent) in drug related arrests on casino routes, and (21-percent) in property crimes that occur in already-developed residential and industrial neighborhoods near casino routes.

The Department of Public Safety's analysis focused on the areas adjacent to the casino, and looked at raw data to determine the potential impacts of the casino. However, one cannot determine with certainty the impacts of casino operation on local crime rates without accounting for crime that occurs within a community, but away from the casino site, and utilizing statistical inference analysis that accounts for other community characteristics that are related to the incidence of crime. In order to determine the actual nature of the relationship between crime rates and the presence of a casino, we defer to a review of the literature on the link between crime and casinos.

A comprehensive literature review was conducted to determine the relationship of gaming to crime rates (**Appendix N**). The National Opinion Research Council (NORC) found that insufficient data exists to quantify or determine the relationship between casino gambling within a community and crime rates. Some argue that there is incentive for casino operators to support local law enforcement and encourage law-abiding behavior around their premises, while others argue that casinos lead to increased instances of crime among pathological and problem gamblers. While several studies found an increase in crime within an area after the opening of a new casino, the amount was not much different than from the opening of any other type of tourist attraction (Bay Area Economics, 2008). However, such results may evolve from model specifications, rather than the data. In their 2004 *Casinos, Crime, and Community Costs* study published in the "Journal of Economic Literature," Grinols and Mustard develop a comprehensive model specification for crime impacts of casinos, and find that casinos do generate additional crime. The model examines the differences in numbers of crimes over time between counties containing an operating casino versus those without a casino, for all counties in the nation. Their model accounts for over 45 different population and location characteristics that could be related to crime. This specification allows the authors to get a clearer picture of the impacts of casinos on local crime rates. Next, their model specifies types of crime into seven categories: aggravated assault, rape, larceny, burglary, robbery, auto thefts, and murder. Finally, the authors include time variables to account for the expected decrease in crime that additional jobs would create when the casino opens, and allow them to examine the crime impacts of pathological gamblers.

The time element of the specification allows for the distinction between crimes of opportunity and those from problem and pathological gamblers, and shows which crimes fall into each of these two categories. Crimes of opportunity refer to the types of crime that generally follow the opening of tourist attractions. These types of crimes generally include car thefts, but could also include some robbery and fraud as well. According to Grinols and Mustard, auto thefts increase by approximately 153 incidents per 100,000 population in the first year of casino operations and robberies increase by approximately 11 incidents per 100,000 population. Both types of crime continue to increase steadily in each subsequent year of operations. Although the increase in the visitor population from the attraction would present the opportunity for more auto thefts, casinos tend to have security cameras in their parking lots, which would deter some auto thefts to the extent that the criminal population knows that the cameras are filming the parking lot. Over time, some of the increase in auto thefts may also be related to problem and pathological gamblers.

Problem and pathological gamblers are persons who gamble compulsively and whose relationships and lives often suffer as a result of their gambling habits. According to Breen and Zimmerman's 2003 study: *Rapid Onset of Pathological Gambling in Machine Gamblers*, it takes between one and 3.5 years for a person to develop into a pathological gambler, become desperate, and exhaust his or her resources. The 2006 *Gambling in the Golden State: 1998 Forward* report states that in a survey of recovering pathological gamblers roughly 29 percent admitted to committing criminal offenses. As it takes time for a person to develop a gambling problem, the impacts of pathological gamblers on crime would not manifest until two or three years after the opening of the casino. Grinols and Mustard account for this delayed impact with variables that examine the impacts of the casino in the third, fourth, and fifth years of operations. They find that casinos do indeed generate additional cases of assault, larceny, robbery, rape, and auto thefts, and that all of these crimes increase over time. Thus, the data show that the presence of a casino leads to an increase in crimes that lag the casino's opening. Given the lag, and the nature of the crimes, it is likely that problem and pathological gamblers make up a significant portion of these perpetrators.

It should be noted that the Grinols and Mustard study focuses on communities with no casino presence prior to the opening of a casino. Sonoma County already has one casino with a second located nearby in Lake County. Thus, the conclusions from the Grinols and Mustard study (and other studies based on similar data sets) are likely overstated as residents with the propensity to gamble and develop gambling problems are likely to currently visit one of the area's existing casinos. Thus, the increase in crime from an additional casino is likely to be less dramatic than Grinols and Mustard find.

After surveying similar California casino communities and reviewing relevant literature, a definitive link between casinos and regional crime rates was not found, although recent studies do point to such a link, possibly a link that does not materialize until some time has passed. If these studies are correct, then an increase in regional crime rates would result from Alternative A, particularly in the absence of adequate funding for law enforcement services.

The MOU with the City of Rohnert Park states that the Tribe and the City agree that the compensation specified in the MOU (see **Section 2.2.10**) is sufficient to offset the cost of equipment, other capital improvements, and other expenditures that the City deems necessary or appropriate to mitigate impacts of Alternative A on the City's law enforcement services (although the MOU does not specifically apply to the Wilfred site, it is expected to be renegotiated to apply to the Wilfred site with the same substantive provisions). Also, consistent with Section 8.0 of the anticipated Tribal-State Compact, the Tribe would be committed to providing on-site security for casino operations to reduce and prevent criminal and civil incidents.

As part of their analysis, Grinols and Mustard estimate that the total annual countywide social costs of having an operating casino within the county, cost per victimization figures from the 1996 National Institute of Justice's "Victim's Costs and Consequences: A New Look" analysis. Using these cost per victim estimates, Grinols and Mustard estimate that the presence of a casino, either in a city or an unincorporated area, are approximately $75 per adult county resident. According to Grinols and Mustard, approximately $30, or 40 percent of the total social costs are related to police, judicial services, and theft, including the cost of both crimes of opportunity and crimes from problem and pathological gamblers. Applying this methodology to the population of adults over the age of 17 in the unincorporated county and all cities within ten miles of the Wilfred and Stony Point sites[1] yields a total cost estimate of approximately $8.3 million.[2] Although the authors use this methodology for estimating crime costs, there is no consensus in the literature on how to measure these costs, and the topic is hotly debated. In addition, it should be noted that of all of the studies that analyze the crime impacts from casinos, this is the only one that estimates a cost associated with these crimes. As noted above, since there are already two casinos located within the area, the additional impacts from the proposed casino would not likely increase crime as dramatically as Grinols and Mustard find for communities that do not have an existing casino. Some of the literature suggests that additional casino crime is related to an increased population concentration, not unlike the opening of a mall or amusement park. According to *Gambling in the Golden State: 1998 Forward*, Counties and Tribes typically

[1] Analysis uses a ten mile radius to estimate the impacts from new problem and pathological gamblers. Should crime rates be increased, the effects are expected primarily within this area. See Problem and Pathological Gambling section.

[2] Estimate does not include costs to Rohnert Park because the City and Tribe have already agreed to mitigation terms per the 2003 MOU.

negotiate law enforcement contributions averaging $700,000 annually to mitigate crime impacts. Under the City MOU, the Tribe agrees to pay the City of Rohnert Park $500,000 per year to combat crime. As noted in the MOU and according to Rohnert Park's Sergeant Sweeney, this should sufficiently mitigate any law enforcement impacts to the City.

The lack of consensus among the various articles makes estimating the impacts of increased crime difficult. Given that an increased crime rate appears likely based on the limited information available to analyze such an impact, we estimate that a significant impact would result if adequate compensation is not provided to law enforcement service providers within ten miles of the site. Mitigation measures in **Section 5.2.6** would reduce this impact to a less than significant level.

Social Service Demand

Interviews were conducted with the county social service departments in each individual case study project jurisdiction. Generally, each of the five counties contacted has seen a minimal increase in social service demand in their community as a result of the project. The specific type of demand universally felt by all social service departments is substance abuse assistance. The increase in need for assistance is primarily related to, but not limited to, alcohol abuse, narcotic abuse, and problem gambling. Three of the five social service departments have seen an increase in the divorce rate, but do not necessarily attribute this to the project. None of the county social service departments contacted directly attributes the minimal increase in demand for their services to the project in their communities (Bay Area Economics, 2008). Thus, an increase in demand for social services would be less than significant.

Problem and Pathological Gambling

Like other social impacts, the causal relationship between casinos and problem gambling is difficult to measure. Although only 30 states allow for legal forms of casino gambling, all but Hawaii and Utah allow for some type of legal gambling. Thus, problem gamblers are likely to already exist in most communities. Pathological and problem gambling is unlikely to be the sole cause for increases in crime because pathological and problem gambling is likely to coincide with other addictions and disorders, including alcohol and drug abuse (United States General Accounting Office (GAO)). Also, with access to gambling in some form in 48 states, there is no evidence that pathological gamblers will relocate to areas with Indian gaming casinos (Bay Area Economics, 2008). However, there are several recent studies that suggest that the presence of a casino results in a higher rate of resident problem and pathological gamblers than in counties without a casino, and that these gamblers are more likely to file bankruptcy than the general population. According to Grinols and Mustard, the Las Vegas community has a problem and pathological gambler population that is nearly six percent higher than in a non-casino community.

Ricardo Gazel finds in his *Economic Impacts of Casino Gambling at the State and Local Level* article, that the incidence of problem and pathological gamblers can be between one to four percent higher in a casino community than for the general population, depending on the type of gambling that's prevalent. He finds that communities with a higher percentage of slot machines have a higher problem and pathological gambler differential than in areas with other types of gambling. Several studies suggest that these population differentials take effect for residents within a 50 mile radius of a casino, and increase to the above mentioned rates as the casino moves closer to the population. According to Welte et al., the probability of being a problem or pathological gambler increases by approximately 100-percent for those persons living within ten miles of a casino. At the national level, approximately four-percent of the adult population are considered problem or pathological gamblers. In 2003, there were approximately 32,288 residents over the age of 16 in Rohnert Park. Applying national problem and pathological incidence rates to the adult population suggests that in 2003, approximately 1,290 residents were problem or pathological gamblers. Thus, the casino would roughly double the number of problem and pathological gamblers in the City, resulting in a net increase of approximately 1,290 new problem and pathological gamblers that live in Rohnert Park. In addition, considering a potential doubling of the problem gambler population within the entire ten mile radius of the potential casino sites, there could be an additional 8,760 new problem and pathological gamblers located outside of Rohnert Park resulting from the alternatives located on the Wilfred or Stony Point sites. Thus, Alternative A could result in a net increase of 10,050 new problem and pathological gamblers, according to this methodology.

Although the literature states that the prevalence of problem and pathological gambling increases for all residents within 50 miles of a casino, no study estimates the rate of increase for those residents living between 11 and 50 miles of a casino. In addition, studies that estimate the increase in the problem and pathological gambling rates focus on increases in communities that do not have existing casinos. Since the existing River Rock and Twin Pine casinos are located within 50 miles of all Sonoma County residents, this analysis assumes that some of those residents would have already started gambling at one of the other local casinos. Thus, we assume there would not be any additional problem and pathological gambling instances for those residents living more than ten miles from the casino alternatives, which is reasonable given that since those persons that would live within ten miles of the casino alternative sites are also within 50 miles of the other casinos, the addition of the Graton Rancheria would likely result in a less than 100 percent increase in the problem and pathological gambling rates. Thus, the analysis presents a relatively conservative estimate of new problem and pathological gamblers.

Under the City MOU, Tribe agrees to provide $125,000 annually to a treatment and prevention organization for the purpose of funding problem and pathological gambling programs. According to the *Gambling in the Golden State: 1998 Forward* report, the California Council on Problem

Gambling, which provides statewide treatment services, estimated that a typical six-week intensive treatment program would cost approximately $2,800 before referring the recovering gambler to Gambler's Anonymous for free ongoing support. A study for the State of Oregon titled *Gambling and Problem Gambling in Oregon: Report to the Oregon Gambling Addiction Treatment Foundation*, anticipates that approximately three percent of all statewide problem and pathological gamblers will seek treatment each year. In addition, the State of Oregon, which was recognized for its innovative and effective problem and pathological gambling treatment and prevention programs, estimates that the annual cost of providing prevention and treatment programs is approximately $828 per problem and pathological gambler that seeks treatment. The MOU specified payments allow for approximately $3,200 annually per Rohnert Park problem and pathological gambler that seeks treatment. However, accounting for problem and pathological gamblers located within the entire ten-mile radius of the Wilfred site, yields an average MOU payment of $413 per treatment seeker, which is less than the $828 threshold per treatment seeker, based on the Oregon program. Thus, the MOU's specified payments to problem and pathological gambling programs may not be sufficient to provide prevention and treatment to problem and pathological gamblers, resulting in a significant impact. Mitigation measures in **Section 5.2.6** recommending increased annual treatment program funding of $415 per gambler seeking treatment, or $125,100 would reduce this impact to a less than significant level.

Although some studies have preliminarily examined the relationship between gambling and other mental health issues, including addiction, not enough evidence exists to suggest a causal link between having a local casino and other mental health and addiction disorders (**Appendix N**).

ALTERNATIVE B – NORTHWEST STONY POINT SITE

Direct Economic Effects

Construction

Construction required for Alternative B will generate substantial economic activity within Sonoma County and the larger nine-county Bay Area region (includes Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma Counties). Direct impacts primarily consist of expenditures to local construction and engineering firms necessary for construction of the project facilities.

SC Sonoma Management, LLC (the Tribe's management/development partner) estimated total construction costs for the proposed project at $450 million (**Table 4.7-1**). Additionally, SC Sonoma Management, LLC estimates that 750 jobs would be generated over the entire construction period, which is estimated at 27 months. This is a beneficial economic impact to the region.

Secondary effects from construction of Alternative B would entail local economic activity resulting from the patronage by construction personnel of local retailers and hospitalities. While precise economic projections are not available, this economic activity would bring outside revenues into the local private enterprise as well as generate local tax revenue. This would be a beneficial impact.

Operation

Alternative B is expected to result in the employment of between 2,200 and 2,600 full-time workers, with an average of 2,400 workers. The casino/hotel resort is expected to generate annual receipts between $455 million and $582 million, with an average of $533 million (Bay Area Economics, 2008; **Appendix N**). A detailed breakdown of expected receipts can be found in **Table 4.7-2**. This is a significant, beneficial impact to the socioeconomics of the region. No mitigation is required. A discussion of indirect and induced jobs and revenues that would flow from these direct effects can be found in **Section 4.11.2**. A discussion of indirect fiscal impacts to the region can also be found in **Section 4.11.2**.

Indirect and Induced Economic Effects and Fiscal Effects

The indirect impacts of Alternative B on socioeconomics are similar to those of Alternative A, given that Alternative B is similarly sized to Alternative A and is located on the Stony Point site, which is adjacent to the Wilfred site. All induced socioeconomic impacts of Alternative B to the region would be either beneficial or less-than-significant, except for indirect fiscal impacts to Sonoma County, where a potentially significant effect would occur. Mitigation measures in **Section 5.2.6** would reduce the fiscal effects to the County to a less-than-significant.

Property Values

Impacts to property values from Alternative B are similar to those of Alternative A, given that Alternative B is similar is size and scope when compared with Alternative A. As property values and taxes can vary for a variety of reasons unrelated to the casino it would be speculative to measure the impacts to property values.

Social Effects

The social effects of Alternative B would not differ from Alternative A, given that Alternative B is similar is size and scope when compared with Alternative A. A -significant effect would result. Mitigation measures in **Section 5.2.6** would further reduce social effects to a less than significant level. Please see **Section 4.9.2** for an analysis of effects to public services for Alternative B.

ALTERNATIVE C – NORTHEAST STONY POINT SITE

Direct Economic Effects

Construction

Economic effects from local expenditures and the creation of construction jobs would not differ from Alternative B, given that Alternative C is similar is size and scope to Alternative B. **Table 4.7-1** shows the direct construction effects for each project alternative, including Alternative C. A beneficial economic impact would result to the region.

Secondary effects from construction of Alternative C would entail local economic activity resulting from the patronage by construction personnel of local retailers and hospitalities. While precise economic projections are not available, this economic activity would bring outside revenues into the local private enterprise as well as generate local tax revenue. This would be a beneficial impact.

Operation

Economic effects from job creation and revenues would not differ from Alternative B, given that Alternative C is similar in size and scope to Alternative B. **Table 4.7-2** shows the direct operation effects for each project alternative, including Alternative C. A beneficial economic impact to the region would result.

Indirect and Induced Economic Effects and Fiscal Effects

The impacts of Alternative C on socioeconomics are similar to those of Alternative B, given that Alternative C is similarly sized to Alternative B and is located on the same Stony Point site. All indirect socioeconomic impacts of Alternative C to the region would be either beneficial or less-than-significant, except for indirect fiscal impacts to Sonoma County, where a potentially significant effect is expected. Mitigation measures in **Section 5.2.6** would reduce the fiscal effects to the County to a less-than-significant level.

Property Values

Impacts to property values from Alternative C are similar to those of Alternative B, given that Alternative C is similar is size and scope when compared with Alternative B. As property values and taxes can vary for a variety of reasons unrelated to the casino it would be speculative to measure the impacts to property values.

Social Effects

The social effects of Alternative C would not differ from Alternative B, given that Alternative C is similar is size and scope when compared with Alternative B. A -significant effect would result.

Mitigation measures in **Section 5.2.6** would further reduce social effects to a less than significant level. Please see **Section 4.9.3** for an analysis of effects to public services for Alternative C.

ALTERNATIVE D – REDUCED INTENSITY (STONY POINT SITE)

Direct Economic Effects

Construction

Under Alternative D, the casino/hotel resort would be reduced in size when compared with Alternative B. The number of construction employees would be the same as Alternative B, at 750 employees. However, the direct expenditures required for construction would be reduced, at approximately $433 million. **Table 4.7-1** shows the direct construction effects for each project alternative, including Alternative D. A beneficial economic impact would result to the region.

Secondary effects from construction of Alternative D would entail local economic activity resulting from the patronage by construction personnel of local retailers and hospitalities, though it would be reduced in scale from that of the other Alternatives. While precise economic projections are not available, this economic activity would bring outside revenues into the local private enterprise as well as generate local tax revenue. This would be a beneficial impact.

Operation

Economic effects from job creation and revenues would be similar, but reduced, when compared with Alternative B, given that Alternative D is reduced in size and scope to Alternative B. **Table 4.7-2** shows the direct operation effects for each project alternative, including Alternative D. Alternative D is expected to result in the employment of 2,100 employees. The casino/hotel resort is expected to generate annual receipts of $388 million. Note that although the economic activity physically takes place in the local economy, not all of the revenues represent a direct economic impact to the local economy. Thus, the direct economic impact to the local economy would be approximately $189 million. A beneficial economic impact to the region would result.

Indirect and Induced Economic Effects

Alternative D would result in jobs and revenues that are induced or indirectly a result of the operation of the casino/hotel resort (indirect/induced economic impacts). These indirect/induced economic impacts would be similar to, but slightly less than those occurring under Alternative A. As shown in **Table 4.7-3**, construction of Alternative D would result in 1,650 indirect and induced jobs in the Bay Area and a total indirect/induced regional output of $338,950,000. As shown in **Table 4.7-4**, operation of Alternative D would result in 1,599 indirect and induced jobs in the Bay Area and a total indirect/induced regional output of $305,390,000. A beneficial indirect impact to the region would result.

Fiscal Impacts on Local Jurisdictions

Fiscal impacts to the local jurisdictions would be similar, but reduced when compared to Alternative A. As shown in **Table 4.7-9**, a net fiscal impact to Sonoma County of $146,777 would occur under Alternative D. Mitigation measures in **Section 5.2.6** would reduce the fiscal effects to the County to a less-than –significant level.

Property Values

Impacts to property values from Alternative D are similar, but reduced, when compared with Alternative B, given that Alternative D is reduced in size and scope to Alternative B. As property values and taxes can vary for a variety of reasons unrelated to the casino it would be speculative to measure the impacts to property values.

Social Effects

The social effects of Alternative D would be slightly reduced when compared to Alternative B, given that Alternative D is reduced in size and scope when compared with Alternative B. A - significant effect would result. Mitigation measures in **Section 5.2.6** would further reduce social effects to a less than significant level. Please see **Section 4.9.4** for an analysis of effects to public services for Alternative D.

ALTERNATIVE E – BUSINESS PARK

Direct Economic Effects

Construction

Under Alternative E, a business park would be developed that would be substantially reduced in size when compared with Alternative B. Approximately 90 employees would be required to construct the facilities. Direct expenditures for construction would be approximately $54.2 million. **Table 4.7-1** shows the direct construction effects for each project alternative, including Alternative E. Although Alternative E's construction expenditures and job creation are substantially reduced when compared with Alternative B, they nonetheless represent a substantial addition of economic activity for the region and would result in a beneficial economic impact.

Secondary effects from construction of Alternative E would entail local economic activity resulting from the patronage by construction personnel of local retailers and hospitalities, though it would be reduced in scale from that of Alternatives A, B and C. While precise economic projections are not available in general or in comparison with Alternative D, this economic activity would bring outside revenues into the local private enterprise as well as generate local tax revenue. This would be a beneficial impact.

Operation

Economic effects from job creation and revenues for Alternative E would be substantially reduced when compared with Alternative B, given that Alternative E includes the development of a business park rather than a casino. The specific uses of Alternative E's commercial and industrial facilities are unknown. Revenues and employment could vary widely depending on the businesses that occupy the available spaces in the business park. Market data for business parks suggest that there will be one worker per 250 square feet, or 2,000 employees for Alternative E. The IMPLAN (IMpact Analysis for PLANing) model was used to estimate annual revenues of approximately $136.5 million based on this employment (see **Table 4.7-2**) (Bay Area Economics, 2008). Note that although the economic activity physically takes place in the local economy, not all of the revenues represent a direct economic impact to the local economy. Thus, the direct economic impact to the local economy would be approximately $49 million within Sonoma County and $57 million within the San Francisco Bay Area. Further information on the IMPLAN model can be found in **Appendix N**. A beneficial economic impact to the region would result.

Indirect and Induced Economic Effects

Alternative E would result in jobs and revenues that are induced or indirectly a result of the operation of the business park (indirect/induced economic impacts). These indirect/induced economic impacts would be similar, but substantially reduced when compared with Alternative B, given that Alternative E includes a much smaller project that does not include a casino/hotel component. As shown in **Table 4.7-3**, construction of Alternative E would result in 190 indirect and induced jobs in the Bay Area and a total indirect/induced regional output of $16,890,000. As shown in **Table 4.7-4**, operation of Alternative E would result in 183 indirect and induced jobs in the Bay Area and a total indirect/induced regional output of $16,890,000. A beneficial indirect impact to the region would result.

Fiscal Impacts on Local Jurisdictions

Fiscal impacts to the local jurisdictions would be similar, but reduced when compared to Alternative A. As shown in **Table 4.7-9**, a net fiscal impact to Sonoma County of $139,788 would occur under Alternative E. Mitigation measures in **Section 5.2.6** would reduce the fiscal effects to the County to a less-than-significant level.

Property Values

Potential impacts to property values associated with operation of a casino would not be present with the business park development proposed for Alternative E. Commercial and light industrial uses associated with a business park are not expected to result in decreased property values, although industrial uses can result in nuisances on nearby residences, which would tend to enact a negative influence on property values. Nonetheless, the level of industrial development and

potential future nuisance concerns are not known. Thus, an attempt to measure impacts to property values would be speculative for this reason and for the reasons stated above.

Social Effects

The potential social effects that are associated with operation of a casino would not be present with the business park development proposed for Alternative E. Commercial and industrial uses associated with a business park are not expected to characteristically result in increased crime rates to the region, although a moderate increase in crime would likely occur due to the presence of developments on the site (**Appendix N**). A less-than-significant effect would result. An increased public presence on the Stony Point site could lead to an increased demand in calls for law enforcement service. Please see **Section 4.9.5** for an analysis of effects to public services.

ALTERNATIVE F – LAKEVILLE CASINO

Direct Economic Effects

Construction

Economic effects from local expenditures and the creation of construction jobs would not differ from Alternative B, given that Alternative F is similar is size and scope to Alternative B. **Table 4.7-1** shows the direct construction effects for each project alternative, including Alternative F. A beneficial economic impact would result to the region.

Secondary effects from construction of Alternative F would entail local economic activity resulting from the patronage by construction personnel of local retailers and hospitalities. While precise economic projections are not available, this economic activity would bring outside revenues into the local private enterprise as well as generate local tax revenue. This would be a beneficial impact.

Operation

Economic effects from job creation and revenues would not differ from Alternative B, given the similar size and scope of Alternative F. **Table 4.7-2** shows the direct operation effects for each project alternative, including Alternative F. A beneficial economic impact to the region would result.

Indirect and Induced Economic Effects

Alternative F would result in jobs and revenues that are induced or indirectly a result of the operation of the casino/hotel resort (indirect/induced economic impacts). These indirect/induced economic impacts would be the same as those of Alternative A, given that Alternative F is similarly sized when compared to Alternative A. A beneficial indirect impact to the region would result.

Substitution effects would likely be greater for Alternative F when compared to Alternative A, because unlike the Wilfred site, the Lakeville site is a rural setting where greater substitution effects at local restaurants are expected (Bay Area Economics, 2008). Specifically, up to a nine-percent substitution could potentially result from Alternative F; generally resulting in less than one-percent reduction in profits. This is a minor amount, which could be offset by additional advertising, restructuring, or other methods to account for new competition. Thus, less-than-significant substitution effects would occur.

Fiscal Impacts on Local Jurisdictions

City of Rohnert Park

Alternative F would result in negligible fiscal impacts to the City of Rohnert Park, since the Lakeville site is not located near the City. Thus, a less-than-significant effect would result.

Sonoma County

Unlike Alternatives A through E, the City of Rohnert Park MOU would not apply to Alternative F and would not be expected to be renegotiated given the distance between the City and the Lakeville site. Thus, the costs to the County would increase substantially. As shown in **Table 4.7-9**, this increase would lead to a potentially significant annual fiscal impact to the County of between $1,181,724 and $1,153,766 for the first year (including costs to construct a fire station near the Lakeville site) and between $181,724 and $153,766 annually thereafter. Mitigation measures in **Section 5.2.6** would reduce the fiscal effects to the County to a less-than-significant level.

Property Values

Impacts to property values from Alternative F are similar to those of Alternative A, given that Alternative F is similar is size and scope when compared with Alternative A. As property values and taxes can vary for a variety of reasons unrelated to the casino it would be speculative to measure the impacts to property values.

Social Effects

The social effects of Alternative F would be similar to Alternative A, given that Alternative F is similar is size and scope when compared with Alternative A. Problem gambling impacts would be similar, but likely more diffuse when compared to Alternative A, given that the Lakeville site is not located adjacent to a city. Considering a potential doubling of the problem gambler population within the entire ten mile radius of the Lakeville site, there could be an additional 3,030 new problem and pathological gamblers associated with Alternative F. Using the

methodology described in **Appendix N**, the cost to treat the problem gamblers expected to seek treatment would be $43,200 per year.

The Alternative F casino/hotel resort would be located on the Lakeville site, rather than the Stony Point site. Thus, the MOU with the City of Rohnert Park would not apply to Alternative F and the compensation to local law enforcement services and problem gambling services would not occur. As discussed under Alternative A, the introduction of a casino could lead to increases in crime rates and problem gambling. If adequate funding of law enforcement services and problem gambling treatment programs is absent then a significant impact to crime and problem gambling would result. Mitigation measures in **Section 5.2.6** would reduce impacts to a less-than-significant level. Please see **Section 4.9.6** for an analysis of effects to public services.

ALTERNATIVE G – NO ACTION

Under the No Action Alternative the Stony Point site and the Lakeville site would remain undeveloped. The northeast corner of the Wilfred site would be developed consistent with the Northwest Specific Plan (see **Section 2.8**). The planned commercial development would create jobs and economic activity for the community, a beneficial effect. Specifically, Alternative G would generate 104 jobs during construction and cost approximately $125,068,000 to construct over a period of 24 months. Alternative G would generate 302 jobs during operation of its various commercial uses and result in total sales of $75,410,254. Note that although the economic activity physically takes place in the local economy, not all of the revenues represent a direct economic impact to the local economy. Thus, the direct economic impact to the local economy would be approximately $19 million. As shown in **Tables 4.7-3** and **4.7-4**, Alternative G would also result in positive indirect and induced impacts both in jobs created and in capital flowing through the community. However, the jobs created, in particular would be much lower than the other alternatives. The planned residential development would increase the regional housing opportunities, also a beneficial effect.

Unlike Alternatives A through F, the land would not be taken into trust under Alternative G. Instead, the portion of the Wilfred Site planned for development would be annexed by the City of Rohnert Park. Thus, most fiscal impacts would be to the City although secondary fiscal impacts would occur to the County (similar to those expected should the development area be taken into trust). An accounting of fiscal impacts is located in **Appendix N**. Development on the site would increase land values, thereby increasing property tax revenues to local government. Commercial development would also generate sales tax revenues, benefiting both the state and local government. Negative fiscal impacts to local jurisdictions would be offset by increased property taxes and the imposition of development fees. Therefore, a less-than-significant impact would result.

Social Effects

Alternative G does not include a gaming component, so it would not lead to the same social impact concerns typically raised for gaming projects. The planned development would greatly increase the number of people on the site, leading to moderately increased criminal activity typically occurring near residential and commercial development, such as burglaries, robberies, assault, and auto theft. Required development fees would provide funding for local police services, reducing crime effects to a less-than-significant level.

ALTERNATIVE H –REDUCED INTENSITY (WILFRED SITE)

Direct Economic Effects

Construction

Under Alternative H, the casino/hotel resort would be reduced in size when compared with Alternative A. The number of construction employees would be the same as Alternative A, at 750 employees. However, the direct expenditures required for construction would be reduced, at approximately $433 million. **Table 4.7-1** shows the direct construction effects for each project alternative, including Alternative H. A beneficial economic impact would result to the region.

Secondary effects from construction of Alternative H would entail local economic activity resulting from the patronage by construction personnel of local retailers and hospitalities, though it would be reduced in scale from that of Alternative A. While precise economic projections are not available, this economic activity would bring outside revenues into the local private enterprise as well as generate local tax revenue. This would be a beneficial impact.

Operation

Economic effects from job creation and revenues would be similar, but reduced, when compared with Alternative A, given that Alternative H is reduced in size and scope to Alternative A. **Table 4.7-2** shows the direct operation effects for each project alternative, including Alternative H. Alternative H is expected to result in the employment of 2,100 employees. The casino/hotel resort is expected to generate annual receipts of $388 million. Note that although the economic activity physically takes place in the local economy, not all of the revenues represent a direct economic impact to the local economy. Thus, the direct economic impact to the local economy would be approximately $189 million. A beneficial economic impact to the region would result.

Indirect and Induced Economic Effects

Alternative H would result in jobs and revenues that are induced or indirectly a result of the operation of the casino/hotel resort (indirect/induced economic impacts). These indirect/induced economic impacts would be similar to, but slightly less than those occurring under Alternative A. As shown in **Table 4.7-3**, construction of Alternative H would result in 1,650 indirect and

induced jobs in the Bay Area and a total indirect/induced regional output of $338,950,000. As shown in **Table 4.7-4**, operation of Alternative H would result in 1,178 indirect and induced jobs in the Bay Area and a total indirect/induced regional output of $113,100,000. A beneficial indirect impact to the region would result.

Fiscal Impacts on Local Jurisdictions

City of Rohnert Park

Since there would not be a direct increase in the service population associated with Alternative H, there would be no additional sales tax revenues, motor vehicle in lieu fees, or franchise fee revenues that the City can expect to collect from an increased service population. There would likely be some additional sales tax collections from people traveling through Rohnert Park to and from the Casino; however, that additional revenue is expected to be fairly minor in relation to the overall City budget, since most travelers would be traveling within the City for only a short time, from US-101 to the site (Bay Area Economics, 2008).

It is not assumed for this alternative that the City of Rohnert Park would provide fire and emergency services, as the MOU does not apply. As discussed under Alternative A, the Tribe has made contributions to the City of Rohnert Park for public safety. As there is no agreement for fire or emergency services there is no foreseeable fiscal impact to the City of Rohnert Park and fiscal impacts to the City of Rohnert Park would be less than significant. Please see **Section 4.9.8** for an analysis of effects to public services.

Sonoma County

Fiscal impacts to the local jurisdictions would be similar, but reduced when compared to Alternative A. As shown in **Table 4.7-9**, a net fiscal impact to Sonoma County of $146,777 would occur under Alternative H. Mitigation measures in **Section 5.2.6** would ensure fiscal effects to the County are less than significant.

Property Values

Impacts to property values from Alternative H are similar, but reduced, when compared with Alternative A, given that Alternative H is reduced in size and scope to Alternative A. As property values and taxes can vary for a variety of reasons unrelated to the casino it would be speculative to measure the impacts to property values.

Social Effects

The social effects of Alternative H would be slightly reduced when compared to Alternative A, given that Alternative H is reduced in size and scope when compared with Alternative A. A - significant effect would result. Mitigation measures in **Section 5.2.6** would further reduce social

effects to a less than significant level. Please see **Section 4.9.8** for an analysis of effects to public services.

4.7.2 ENVIRONMENTAL JUSTICE

In accordance with Executive Order 12898, this section identifies communities where minority and low-income populations reside, as defined in **Section 3.7.4**, and analyzes project impacts related to these communities. Compliance with this Executive Order has been incorporated into the National Environmental Policy Act compliance requirements of the National Indian Gaming Commission. A significant environmental justice effect would result if the analysis results in a disproportionately high, adverse effect to minority and low-income populations or if such an effect occurs with greater frequency for these populations than for the general population as a whole.

ALTERNATIVES A-E AND H

No minority or low-income communities were identified in **Section 3.7.4** in the vicinity of the Wilfred and Stony Point sites. Thus, potential environmental justice impacts for the Wilfred site and Stony Point site alternatives would be limited to potential competition-related impacts to nearby casinos operated by the Dry Creek Rancheria Band of Pomo Indians and the Middletown Rancheria Band of Pomo Indians. Environmental justice effects to Indian tribes must be evaluated, as required by Executive Order 12898. Alternative E, located on the Stony Point site, does not include a casino component; therefore, no environmental justice impacts would result.

Competition

Of the Wilfred and Stony Point sites Alternatives A, B, C, D, and H all contain a casino component, which could potentially compete with the River Rock Casino and Twin Pine Casino, that are operated by the Dry Creek Rancheria Band of Pomo Indians and the Middletown Rancheria Band of Pomo Indians. The development of a casino at the Wilfred or Stony Point site would have two countervailing effects on the gaming market in Sonoma County and beyond. First, since the Wilfred and Stony Point sites are located closer to large population centers (specifically, San Francisco) some people will choose to visit the Graton Casino instead of either the River Rock or Twin Pine Casinos, solely based on a shorter travel distance (convenience losses). Second, per capita gambling participation rates would increase as the availability of slot machines increases from current levels (participation gains). Therefore, some people might choose to visit the Graton Casino other than River Rock or Twin Pine due to ease of access; while other people will choose to gamble at the River Rock, Twin Pine, and Graton Casinos that would not have otherwise done so.

After the implementation of Alternatives A, B, or C River Rock would experience a 13 percent convenience loss, Twin Pine would experience a 14 percent convenience loss; whereas, both would experience participation gains of 38 percent. Both losses and gains would be lower under Alternative D or H. Thus, although it appears that increases in market participation would offset losses due to the convenient location of the proposed Graton Casino, even assuming a worst-case participation gain of 0, both the River Rock and Twin Pine Casinos are expected to remain profitable (although unavailability of revenue data at Twin Pine does not allow a detailed analysis). Therefore, disproportionately high and adverse effects to nearby tribes would not occur and a less-than-significant environmental justice effect would result. Note that should the Dry Creek Band expand their casino substantially as recently announced, they should be able to compete more effectively with the Graton Casino, despite Graton's more convenient location to the Bay Area (Santa Rosa Press Democrat, 2007).

ALTERNATIVE F

In **Section 3.7.4**, four minority communities and one low-income community were identified, that have the potential to be adversely affected by Alternative F. These communities are all located in Solano County, in or near the City of Vallejo. The environmental effects of Alternative F on these communities would be limited to increased traffic and possibly localized carbon monoxide (CO) increases caused by traffic congestion.

After the implementation of Alternative F, intersections located within the four minority and low-income communities would operate at an acceptable level, with the exception of the study intersections within the City of Vallejo (see **Section 4.8.7**). Impacts on these intersections from Alternative F would be less-than-significant with the implementation of mitigation, as described in **Section 5.2.7**. However, at two freeway segments/ramps, Wilson Avenue EB Off-Ramp and Wilson Avenue WB On-Ramp, significant traffic impacts would remain in 2020. Thus, significant traffic impacts would disproportionately impact minority/low-income communities, resulting in a significant environmental justice impact.

Regional air quality effects would not disproportionately affect minority or low-income communities. Carbon monoxide "hot spots" (areas with high levels of CO) can result near large intersections that are heavily congested. Thus, an initial screening was conducted to determine the need for detailed microscale dispersion modeling of CO concentrations at intersections within minority and low-income communities. The potential impact of Alternative F on local CO levels was assessed by applying screening procedures described in the *Transportation Project-Level Carbon Monoxide Protocol* (Institute of Transportation Studies, University of California, Davis 1996) and then, if indicated by the screening procedures, conducting detailed microscale air quality dispersion modeling.

The screening procedure applied focuses on the effects of Alternative F and intersection operations. Since elevated CO concentrations are associated with traffic congestion, a project is considered to have no potential for significant impacts on CO concentrations if it does not substantially contribute to excessive traffic congestion.

According to Section 4.7.4 of the *Transportation Project-Level Carbon Monoxide Protocol*, projects that would result in operation of a signalized intersection worsening from a Level of Service (LOS) D or better to a LOS E or F are considered to have the potential for resulting in a significant CO air quality impact. In addition, according to Section 4.7.3 of the protocol document, projects that will result with the worsening of a signalized intersection already operating at LOS E or F are considered to have the potential for resulting in a significant CO air quality impact.

Projects that would meet these criteria are considered to have the potential for resulting in a significant CO air quality impact. According to the Protocol document, detailed dispersion modeling is not needed for projects that do not meet these criteria. Based on Section 4.7.4 of the *Transportation Project-Level Carbon Monoxide Protocol*, Alternative F is not considered to have the potential for resulting in a significant CO air quality impact at these intersections within minority and/or low-income communities.

Competition

Alternative F would include the development of a casino at the Lakeville site, which is in the same general market as the Wilfred and Stony Point sites. Thus, similar impacts to nearby tribal casinos would result. Due to the location of the Lakeville site being closer to San Francisco, convenience losses would be slightly higher for Alternative F. With the implementation of Alternative F, River Rock would experience a 22 percent convenience loss, Twin Pine would experience a 23 percent convenience loss; both would experience a 38 percent participation gain. Thus, as with Alternatives A through D, it appears that increases in market participation would offset losses due to the convenient location of the proposed Graton Casino. Even assuming a worst-case participation gain of 0, both the River Rock and Twin Pine Casinos are expected to remain profitable. The unavailability of Twin Pine revenue data obscures the impact to this casino under Alternative F. Under a worst case scenario the Twin Pine Casino may be pushed closer to the point where it is not profitable as it currently operates. Given that even under a worst-case scenario, both competing Tribal casinos would remain profitable (although profitability would decrease), a disproportionately high and adverse effect to nearby tribes would not occur and a less-than-significant environmental justice effect would result. For these reasons, a less-than-significant environmental justice effect would result from competition.

ALTERNATIVE G

Under the No Action Alternative, no development is proposed on the Lakeville site and no disproportionate effects to low-income or minority populations would occur.

Development associated with the City of Rohnert Park's Northwest Specific Plan would occur on the northeast corner of the Wilfred site (see **Section 2.8**). However, since this development does not include a casino (with associated competition-related impacts) and no low-income or minority communities are present in the vicinity of the Wilfred site, no environmental justice impacts would occur.

4.8 RESOURCE USE PATTERNS

4.8.1 INTRODUCTION

TRANSPORTATION/CIRCULATION

A detailed traffic study was developed for the Proposed Action and alternatives. This study and its associated appendices are presented within **Appendix O** of this EIS.

Study Area

All of the Alternatives, except Alternative G, would generate new vehicle trips that would increase traffic volumes on the nearby street networks. To assess changes in traffic conditions, thirty-one intersections, ten freeway segments and twenty-six freeway segments and ramps were evaluated for Alternatives A-E and H. Fifteen intersections, twenty-nine highway segments and ramps were evaluated for Alternative F. **Section 3.8** lists the study intersections and freeway segments and ramps.

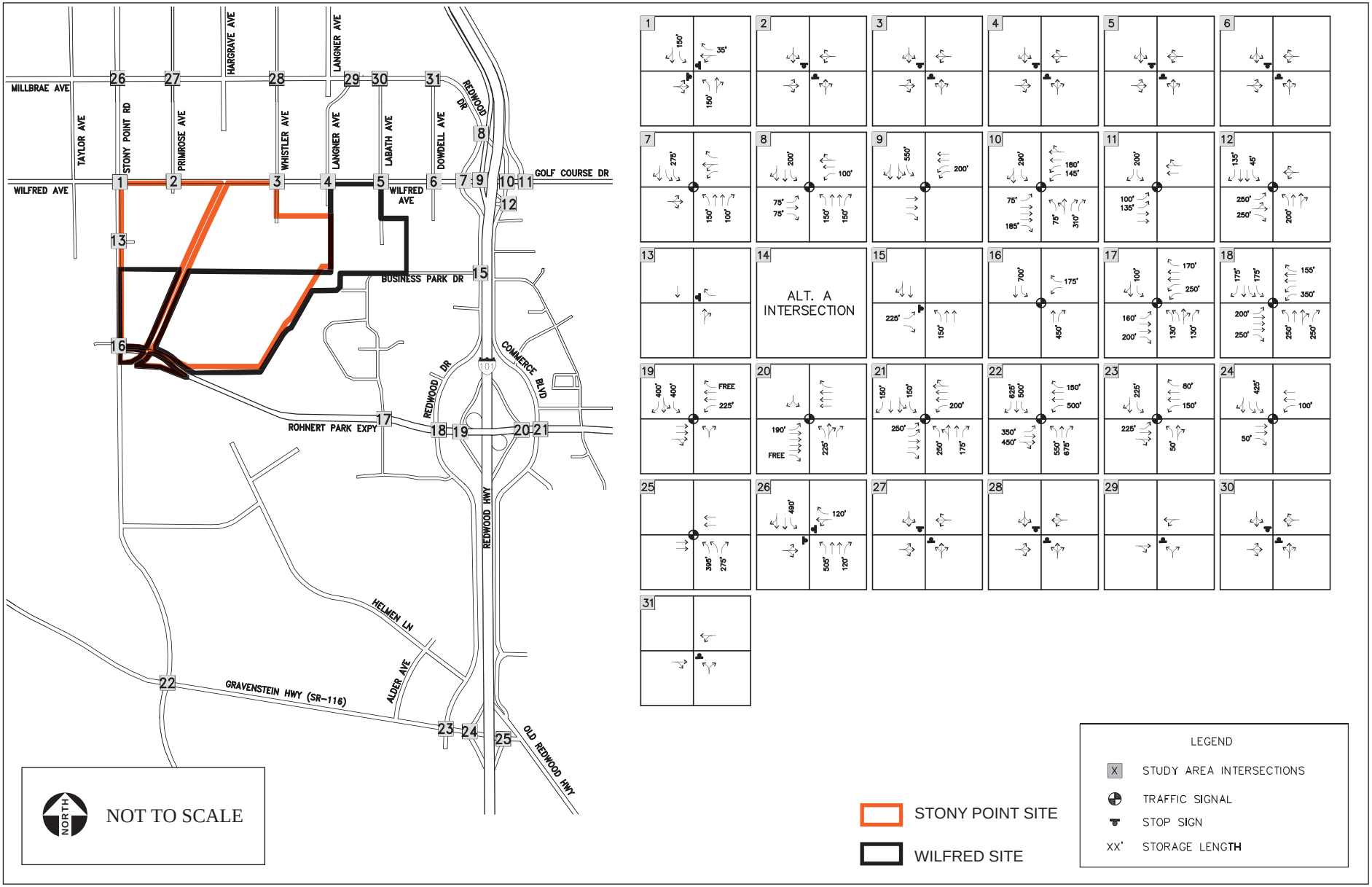
Methodologies

This traffic analysis is based on planning conditions assumed in the Rohnert Park General Plan (adopted July 2000), the Sonoma County General Plan (adopted 1989), as well as information provided by Caltrans and Sonoma County Regional Transportation Authority. The different situations analyzed in this section are:

- 2008 Without Project: The analysis is based on background traffic volumes and a street network anticipated to occur in the year 2008 without development of the project alternatives; and
- 2008 Plus Project: The analysis is based on background traffic volumes and a street network anticipated to occur in the year 2008 with the development of project alternatives.

Refer to **Section 3.8** for discussion of existing conditions, **Section 4.12** for discussion of cumulative conditions (2020), and **Section 5.2.7** for discussion of mitigation measures.

Figure 4.8-1 illustrates the 2008 lane geometry and traffic control in the vicinity of the Wilfred and Stony Point sites. **Figure 4.8-23** illustrates the 2008 lane geometry and traffic control in the vicinity of the Lakeville site.



SOURCE: Kimley Horn & Associates, 2006; AES, 2008

Figure 4.8-1

2008 Lane Geometry and Traffic Control – Wilfred and Stony Point Site Vicinity

To reflect the traffic levels anticipated to occur in the year 2008, annual growth rates were determined for study intersections based on the year 2020 forecast contained in the Rohnert Park General Plan. These rates were applied to the existing traffic volumes to increase the turning movement counts between the time they were collected and the year 2008. The rate of increase per year varies on location and proximity to planned development, however the average increase is roughly two-percent per year. (**Appendix O**). **Figure 4.8-2** shows the projected 2008 traffic volumes without the project.

Traffic analysis for all alternatives was completed using Synchro software at signalized intersections and Highway Capacity Software (HCS) at intersections, ramps, and freeway segments. Both software programs are based on the methodology of the *Highway Capacity Manual*.

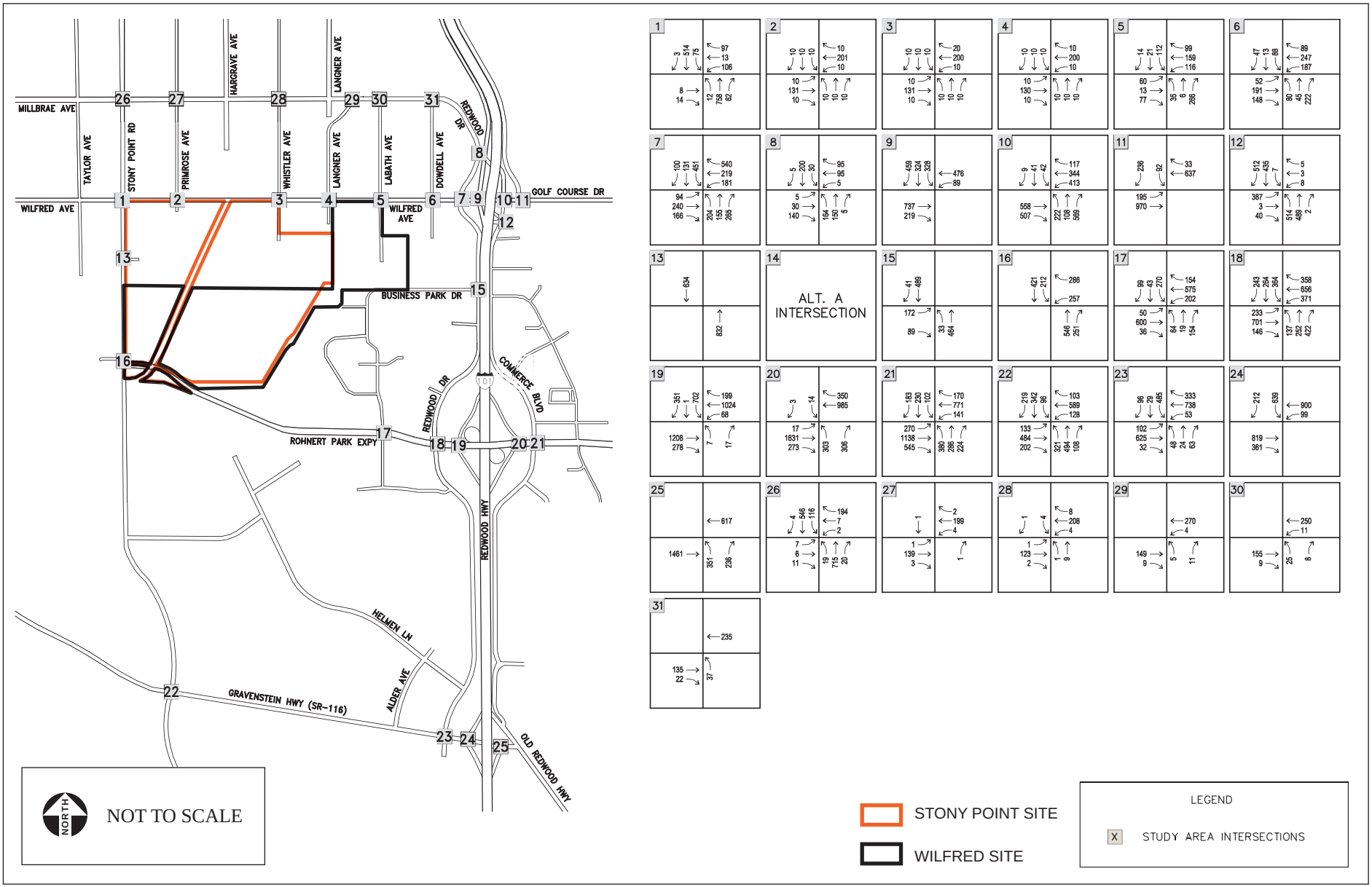
Analysis Methodologies

Operating conditions experienced by drivers are described in terms of Level of Service (LOS). This term is a qualitative measure that includes factors such as speed, travel time, delay, freedom to maneuver, and driving comfort and convenience. LOS is represented as letters ranging from LOS A to LOS F, whereby LOS A represents the best traffic-flow driving conditions and LOS F represents the worst traffic-flow driving conditions. See **Section 3.8.1** for more discussion of the analysis methodologies used and **Table 3.8-1** for intersection LOS definitions.

Analysis of Significance

Significance of impacts is based on acceptable LOS, as determined by the California Department of Transportation (Caltrans) Guide for the Preparation of Traffic Impact Studies, the Sonoma County Guidelines for Traffic Studies, and the Rohnert Park General Plan. See **Section 3.8.1** for further discussion of the LOS standards.

Traffic signals may be justified when traffic operations fall below acceptable thresholds and when one or more signal warrants are satisfied. Traffic volumes at the unsignalized study intersections were assessed using the peak hour warrant in the Caltrans Traffic Manual. Traffic Signal Warrant #3 – Peak Hour Volume Warrant is satisfied when traffic volumes on the major and minor approaches exceed thresholds for one hour of the day. This warrant is generally the first warrant to be satisfied. The warrant applies to traffic conditions during a one-hour peak that are sufficiently high such that minor street traffic experiences excessive delay in entering and crossing the street.



SOURCE: Kimley Horn & Associates, 2006; AES, 2006

Figure 4.8-2

2008 No Project PM Traffic Volumes – Wilfred and Stony Point Site Vicinity

2008 Condition –Build-Out Without Project

Major roadway improvements are currently planned in the vicinity of the Wilfred and Stony Point sites. No major roadway improvement projects were identified in the vicinity of the Lakeville site prior to 2008. More detailed discussion of planned improvements is contained in **Appendix O**.

Planned Caltrans improvements to the roadway network in the vicinity of the Wilfred and Stony Point sites that are expected to occur in 2008 include the addition of High Occupancy Vehicle lanes (HOV) to the US-101 freeway from SR-37 through Santa Rosa and the reconstruction of the US-101/Wilfred Avenue interchange.

The interchange reconstruction will connect Golf Course Drive directly with Wilfred Avenue and raise the freeway over the new street connection. Commerce Drive under the freeway (between Golf Course Drive and Redwood Drive) will be removed in the long-term, but will remain in the near-term.

With the reconstruction of the US-101/Wilfred Avenue interchange, auxiliary lanes will be constructed from the Rohnert Park Expressway Overcrossing to the Wilfred Avenue interchange and northbound from Wilfred Avenue to Santa Rosa Avenue Overcrossing. The existing northbound and southbound on-ramps at Wilfred Avenue will be widened for ramp metering which will be installed with the completion of the interchange. According to Caltrans, the interchange will remain open during construction, including the freeway ramps. The project will be constructed in three general phases:

1. Build collector-distributor road from Santa Rosa interchange and southbound on-ramp.
2. Demolish and build northbound structures.
3. Demolish and build southbound structures.

Environmental studies for the proposed interchange project are completed and the design phase is currently in progress with reconstruction planned to begin in 2008 and be completed by 2011. Because the interchange is expected to be completed at approximately the same time or closely following development occurring under Alternatives A through E, it was assumed that the US-101/Wilfred Avenue interchange was completed in the 2008 analysis scenarios.

Caltrans also plans to add HOV lanes to the US-101 freeway from SR-37 through Santa Rosa. HOV lane projects near the Wilfred and Stony Point sites are as follows:

- HOV lanes on US-101 from Old Redwood Highway (in Petaluma) to Rohnert Park Expressway. Construction would start approximately 2009 or 2010. Environmental

studies are currently underway, but actual construction may be delayed due to funding limitations.

- HOV lanes on US-101 from Rohnert Park Expressway to Wilfred Avenue. This project is to be completed at the same time as the Wilfred Avenue interchange. Environmental studies are currently underway, but actual construction may be delayed due to funding limitations.
- HOV lanes on US-101 from Wilfred Avenue to SR-12 (Santa Rosa). This project was completed in 2003.

Other intersection projects are identified in the Rohnert Park General Plan. Some of the projects are intended to increase intersection capacities near the US-101 interchanges. Wilfred Avenue would be widened to four lanes plus left-turn lanes from the 1999 City Limits to the Urban Growth Boundary (at Langner Avenue). The left-turn lanes on Wilfred Avenue were assumed to be 150 feet long.

In addition, the City plans to construct an overpass across US-101 that connects Business Park Drive to the west with State Farm Drive to the east. Exact configuration of the overpass has not been determined by the city; therefore, lane geometry in this evaluation was assumed based on engineering judgment.

Freeway Segment and Ramp Performance

Table 4.8-1 summarizes the 2008 baseline freeway segment and ramp performance condition in the vicinity of the Wilfred and Stony Point sites. As shown in **Table 4.8-1**, no freeway segment would operate unacceptably in the 2008 baseline condition.

Peak Hour Intersection Performance

2008 Without Project Condition traffic volumes at study intersections are provided as a baseline. Significant delays are expected, particularly at the Wilfred Avenue/Stony Point Road intersection and on Wilfred Avenue from Labath Avenue to Redwood Drive. **Table 4.8-2** shows the baseline 2008 LOS at study intersections in the vicinity of the Wilfred and Stony Point sites. The signal control is listed as TS for a signalized intersection and TWSC for a two-way stop-controlled intersection. The overall intersection LOS is reported for signalized intersections. For unsignalized intersections only the worst approach LOS is reported. Additional detail is provided in **Appendix O**.

TABLE 4.8-1
FREEWAY SEGMENT AND RAMP PERFORMANCE - 2008 WITHOUT PROJECT
WILFRED AND STONY POINT SITES

		2008	
US-101 Segment/Ramp	**Criteria LOS**	**LOS**	**Density (PC/MI/LN)[1]**
Northbound			
US-101 South of SR 116	E	C	19.1
SR-116 Off-ramp	E	C	27.4
SR-116 On-ramp	E	D	29.5
US-101 between SR-116 and Rohnert Park Expressway (NB)	E	C	23.5
Rohnert Park Expressway NB Off-Ramp	E	D	28.8
Rohnert Park Expressway NB On-Ramp (Loop Ramp)	E	C	21.8
Rohnert Park Expressway NB On-Ramp	E	C	22.1
US-101 between Rohnert Park Expressway and Wilfred Ave (NB)	E	C	22.1
Wilfred Ave NB Off-Ramp	E	C	22.1
Wilfred Ave NB On-Ramp	E	D	30.3
US-101 between Wilfred Ave and Santa Rosa Avenue	E	D	30.3
Santa Rosa Avenue NB Off-ramp	E	D	30.3
US-101 North of Santa Rosa Avenue	E	C	22.0
Southbound			
US-101 North of Santa Rosa Avenue	E	C	24.1
Santa Rosa Avenue On-ramp	E	//[2]	//[2]
US-101 between Santa Rosa Avenue and Wilfred Ave (SB)	E	D	32.7
Wilfred Ave SB Off-Ramp	E	E	38.8
Wilfred Ave SB On-Ramp	E	D	33.4
US-101 between Rohnert Park Expressway and Wilfred Ave (SB)	E	D	33.4
Rohnert Park Expressway SB Off-Ramp	E	D	33.4
Rohnert Park Expressway SB On-Ramp (Loop Ramp)	E	D	30.9
Rohnert Park Expressway SB On-Ramp	E	D	30.1
US-101 between Rohnert Park Expressway and SR-116 (SB)	E	C	22.3
SR-116 SB Off-ramp	E	D	29.2
SR-116 SB On-ramp	E	D	32.1
US-101 South of SR-116	E	C	21.8

NOTE: 1 - pc/mi/ln = passenger cars per mile per lane.
2 - Intersection no longer exists due to planned roadway improvement.
SOURCE: Kimley-Horn and Associates 2008; AES 2007.

TABLE 4.8-2
2008 PM PEAK INTERSECTION CONDITIONS WITHOUT PROJECT
WILFRED AND STONY POINT SITES

	Intersection	Signal Control	Criteria	2008 without Project	
				LOS	Delay[1]
1	Wilfred Avenue/Stony Point Road	TWSC	D	**F**	**495.5**
2	Wilfred Avenue/Primrose Avenue	TWSC	D	B	11.4
3	Wilfred Avenue/Whistler Avenue	TWSC	D	B	11.4
4	Wilfred Avenue/Langner Avenue	TWSC	D	B	11.3
5	Wilfred Avenue/Labath Avenue	TWSC	D	F	**77.4**
6	Wilfred Avenue/Dowdell Avenue	TWSC	D	**F**	623.3
7	Wilfred Avenue/Redwood Drive	TS	D	**E**	**77.6**
8	Redwood Drive/Commerce Boulevard	TS	C	C	26.0
9	Wilfred Avenue/ US-101 SB Ramps	TS	D	C	23.2
10	Golf Course Drive/Commerce Boulevard	TS	D	**E**	**71.7**
11	Golf Course Drive/Roberts Lake Road	TS	C	B	18.3
12	US-101 NB Ramps/Commerce Boulevard	TS	D	D	46.7
13	Project Driveway/Stony Point Road	TWSC	D	A	0.0
14	Business Park Drive/Labath Avenue	-	D	*I*[2]	*I*[2]
15	Business Park Drive/Redwood Drive	TWSC	D	D	27.5
16	Rohnert Park Expressway/Stony Point Road	TS	D	B	19.1
17	Rohnert Park Expressway/Labath Avenue	TS	C	C	25.8
18	Rohnert Park Expressway/Redwood Drive	TS	C	C	26.3
19	Rohnert Park Expressway/US-101 SB Ramps	TS	D	B	16.9
20	Rohnert Park Expressway/US-101 NB Ramps	TS	D	B	10.8
21	Rohnert Park Expressway/Commerce Boulevard	TS	C	**D**	**44.6**
22	Gravenstein Hwy/Stony Point Road	TS	D	D	37.1
23	Gravenstein Hwy/Redwood Drive	TS	D	C	26.2
24	Gravenstein Hwy/SB US-101 Ramps	TS	D	B	19.9
25	Gravenstein Hwy/NB US-101 Off-ramp	TS	D	B	11.5
26	Millbrae Avenue/Stony Point Road	TWSC	D	**E**	**43.5**
27	Millbrae Ave/Primrose Ave	TWSC	D	B	11.5
28	Millbrae Ave/Whistler Ave	TWSC	D	B	11.5
29	Millbrae Ave/Langner Ave	TWSC	D	A	9.9
30	Millbrae Ave/Labath Ave	TWSC	D	B	11.7
31	Millbrae Ave/Dowdell Ave	TWSC	D	B	11.4

	Intersection	Signal Control	Criteria	2008 without Project	
				LOS	Delay[1]

NOTE: 1 - Delay in seconds.
2 - Intersection only exists under Alternative A with project. Bold text denotes unacceptable LOS.
SOURCE: Kimley-Horn and Associates, 2008; AES, 2007.

The following intersections and approaches would fail to meet acceptable LOS thresholds under the 2008 Without Project Condition:

- Stony Point Road/Wilfred Avenue
- Labath Avenue/Wilfred Avenue
- Dowdell Avenue/Wilfred Avenue
- Redwood Drive/Wilfred Avenue
- Golf Course Drive/Commerce Boulevard
- Rohnert Park Expressway/Commerce Boulevard
- Millbrae Avenue/Stony Point Road

Traffic Signal Warrant Analysis

Near-term and long-term traffic volumes (without the project) at unsignalized study intersections were compared against the peak hour warrant in the *2003 Manual on Uniform Traffic Control Devices (MUTCD)* and the *California Supplement*.

Results of the analysis showed that the following intersection would satisfy traffic signal (TS) Warrant #3 by the year 2008:

- Stony Point Road/Wilfred Avenue
- Dowdell Avenue/Wilfred Avenue
- Millbrae Avenue/Stony Point Road

LAND USE

Land use regulations for Sonoma County and the City of Rohnert Park would not apply to land that is taken into trust. The only applicable land use regulations would be federal or Tribal. The Federated Indians of Graton Rancheria rely upon the Tribal Council, the governing body of the Tribal Government, to guide and regulate land use on tribal lands.

Select goals, objectives, and policies of the Sonoma County General Plan (see **Table 4.8-3**) and the City of Rohnert Park General Plan (see **Table 4.8-4**) are shown in relation to the proposed development Alternatives.

TABLE 4.8-3
SONOMA COUNTY GENERAL PLAN CONSISTENCY – PROJECT ALTERNATIVES

	Sonoma County General Plan Consistency					
	Alternatives A and H	**Alternative B**	**Alternative C**	**Alternative D**	**Alternative E**	**Alternative F**
Land Use Element[a]						
Goal LU-3 Locate future growth within the cities and unincorporated urban service areas in a compact manner using vacant "infill" parcels and lands next to existing development at the edge of these areas.	Alternatives A and H are consistent with this goal, development would take place adjacent to and at the edge of other development in Rohnert Park.	Alternative B would be inconsistent with this goal, although this alternative would not facilitate further development outside of the cities and unincorporated urban service areas.	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B
Policy LU-3c Avoid extension of sewer or water services outside of a sphere of influence or urban service area, except to resolve an existing public health hazard, where a substantial overriding public benefit would result, or for property located within a water district boundary as of March 1989.	Alternatives A and H are inconsistent with this policy. Water and wastewater service for the project is not within the Rohnert Park sphere of influence.	Alternative B would be inconsistent with this policy.	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B
Goal LU-5 Identify important open space areas between the county's cities and communities and maintain their open or natural character with low intensities of development.	Alternatives A and H are consistent with this goal. The portion of the site that is in an open space corridor would be retained.	Alternative B would be inconsistent with this goal. However, approximately 76 acres out of the 360 total Stony Point site acres would be removed from their natural open setting.	Same as Alternative B, although approximately 101 acres out of the 360 total Stony Point site acres would be removed from their natural open setting.	Same as Alternative B	Same as Alternative B	Same as Alternative B, although approximately 79 acres out of the 322 total Lakeville site acres would be removed from their natural open setting.
Objective LU-5.1 Retain low intensities of use in open space "separators" between cities and communities along the	Alternatives A and H are consistent with this objective.	Alternative B would be inconsistent with this objective.	Same as Alternative B.	Same as Alternative B.	Same as Alternative B.	Not applicable

	Sonoma County General Plan Consistency					
	Alternatives A and H	**Alternative B**	**Alternative C**	**Alternative D**	**Alternative E**	**Alternative F**
Highway 101 corridor and within the central Sonoma County area.						
Policy LU-5c Avoid commercial and industrial land uses in community separators, except those allowed in the agricultural and resource categories. Consider amendments for outdoor recreational or other uses with a low intensity of structures only in those community separators along the Highway 101 corridor.	Alternatives A and H would be inconsistent with this policy.	Same as Alternative A.	Same as Alternative A.	Same as Alternative A.	Same as Alternative A.	Not applicable
Goal LU-8 Protect lands currently in agricultural production and lands with characteristics that make them potentially suitable for agricultural use. Retain large parcel sizes and avoid incompatible non-agricultural uses.	Alternatives A and H are inconsistent with this goal.	Alternative B would be inconsistent with this goal. However, approximately 71.68 acres out of the 360 total Stony Point site acres would become an incompatible non-agricultural use.	Same as Alternative B, although approximately 79.79 acres out of the 360 total Stony Point site acres would become an incompatible non-agricultural use.	Same as Alternative B, although approximately 61.80 acres out of the 360 total Stony Point site acres would become an incompatible non-agricultural use.	Same as Alternative B, although approximately 59.09 acres out of the 360 total Stony Point site acres would become an incompatible non-agricultural use.	Same as Alternative B, although approximately 78.75 acres out of the 322 total Lakeville site acres would become an incompatible non-agricultural use.
Objective LU-8.1 Avoid conversion of lands currently used for agricultural production to non-agricultural use.	Alternatives A and H are consistent with this objective. The portion of the site that is currently used for agriculture or grazing would not be developed.	Alternative B would be inconsistent with this objective. However, approximately 71.68 acres out of the 360 total Stony Point site acres would be converted to non-agricultural production.	Approximately 79.79 acres out of the 360 total Stony Point site acres would be converted to non-agricultural production.	Approximately 61.80 acres out of the 360 total Stony Point site acres would be converted to non-agricultural production.	Approximately 59.09 acres out of the 360 total Stony Point site acres would be converted to non-agricultural production.	Approximately 78.75 acres out of the 322 total Lakeville site acres would be converted to non-agricultural production.

	Sonoma County General Plan Consistency					
	Alternatives A and H	**Alternative B**	**Alternative C**	**Alternative D**	**Alternative E**	**Alternative F**
Objective LU-8.2 Retain large parcels in agricultural production areas and avoid new parcels less than 20 acres in the "Land Intensive Agriculture" category.	Alternatives A and H are consistent with this objective. The project does not remove parcels from agricultural production or create new parcels less than 20 acres in size.	Alternative B would be inconsistent with this objective.	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B
Goal LU-9 Uses and intensities of any land development shall be consistent with preservation of important biotic resource areas and scenic features.	Alternatives A and H are consistent with this goal.	Alternative B would be inconsistent with this goal. Minimization measures would be incorporated into the project to reduce impacts to biotic resource areas and scenic features.	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B
Open Space Element[a]						
Goal OS-1 Preserve the visual identities of communities by maintaining open space areas between cities and communities.	Alternatives A and H are consistent with this goal.	Alternative B would be inconsistent with this goal. The developed area is 76 acres in size.	Same as Alternative B. The developed area is 101 acres in size.	Same as Alternative B.	Same as Alternative B	Same as Alternative B. The developed area is 79 acres in size.
Objective OS-1.1 Preserve important open space areas in the community separators shown on Figures OS-5a through OS-5i of the Open Space Element.	Alternatives A and H would be inconsistent with this objective.	Same as Alternative A	Same as Alternative A	Same as Alternative A	Same as Alternative A	Not applicable
Objective OS-1.4 Preserve existing specimen trees and tree stands within community separator areas.	Alternatives A and H would be consistent with this objective.	Same as Alternative A	Same as Alternative A	Same as Alternative A	Same as Alternative A	Not applicable

	Sonoma County General Plan Consistency					
	Alternatives A and H	**Alternative B**	**Alternative C**	**Alternative D**	**Alternative E**	**Alternative F**
Policy OS-1b Avoid commercial or industrial uses in community separators, except those that are permitted by the agricultural or resource land use categories. Consider amendments for outdoor recreational and other uses with a low intensity of structures only in those community separators along the Highway 101 Corridor.	Alternatives A and H would be inconsistent with this policy.	Same as Alternative A	Same as Alternative A	Same as Alternative A	Same as Alternative A	Not applicable
Policy OS-2b Avoid commercial or industrial uses in scenic landscape units, except those that are permitted by the agricultural or resource land use categories.	Alternatives And H are consistent with this policy.	Alternative B would be inconsistent with this policy.	Same as Alternative B	Same as Alternative B	Same as Alternative B	Not applicable

NOTE: [a]Information is summarized in this table, a more detailed discussion of the GP is included in **Section 3.8** of the EIS.
SOURCE: Sonoma County General Plan, 1989; AES, 2006.

TABLE 4.8-4
CITY OF ROHNERT PARK GENERAL PLAN CONSISTENCY – PROJECT ALTERNATIVES

Section	City of Rohnert Park General Plan Consistency				
	Alternatives A and H	**Alternative B**	**Alternative C**	**Alternative D**	**Alternative E**
Growth Management Element[a]					
Goal GM-G Require all urban development in the Rohnert Park Planning Area to be located within the Urban Growth Boundary	Alternatives A and H are consistent with this goal.	Alternative B would be inconsistent with this goal.	Same as Alternative B	Same as Alternative B	Same as Alternative B
Open Space Element[a]					
Goal OS-A Maintain a greenbelt around the city that provides a physical and visual space between Rohnert Park-Cotati and Santa Rosa, Petaluma, and Penngrove.	Alternatives A and H are consistent with this goal.	Alternative B would be inconsistent with this goal.	Same as Alternative B	Same as Alternative B	Same as Alternative B
Goal OS-B Maintain land surrounding the city as open space.	Alternatives A and H are consistent with this goal.	Alternative B would be inconsistent with this goal.	Same as Alternative B	Same as Alternative B	Same as Alternative B
Policy OS-4A Only land within the Rohnert Park Planning Area is suitable for mitigating impacts to the Community Separator. First priority: • Lands adjacent to the Urban Growth Boundary; • Lands that would serve as "green belts" around the City of Rohnert Park; and • View corridors along Petaluma Hill Road. Second priority: • View corridors along Railroad Avenue and Stony Point Road; • Prime Farmland • Lands under Williamson Act agreements; and • Environmentally sensitive habitat areas.	Alternatives A and H are consistent with this policy.	Alternative B would be inconsistent with this policy.	Same as Alternative B	Same as Alternative B	Same as Alternative B

NOTE: [a]Information in this table is discussed in **Table 3.8-8** in **Section 3.8** of the EIS.
SOURCE: City of Rohnert Park General Plan, 2000; AES, 2006

4.8.2 ALTERNATIVE A – PROPOSED PROJECT

TRANSPORTATION AND CIRCULATION

This subsection discusses the Build-Out traffic conditions with the project trips calculated for Alternative A added to the baseline condition.

Site Access

Main access points to the project would be located on Langner Avenue and Labath Avenue via Wilfred Avenue. These approaches are assumed to operate as full movement driveways with no turn limitations. The project would extend Labath Avenue to the south to intersect Business Park Drive. A third project access would be on Labath Avenue just north of Business Park Drive and is assumed to be a full-movement driveway with no turn limitations.

Construction Impacts

The day-to-day construction operations for Alternative A would include traffic impacts related to construction employees, fill, and construction material importation. The principal activities expected to generate traffic related to the construction are: employee trips, heavy equipment delivery, and construction materials import.

Employee trips are based on the number of employees estimated to be on-site during different points throughout the project. Each employee is assumed to drive to and from the site alone each day and it is assumed that 20 percent of the workers leave and return to the site for various purposes during the day. Heavy equipment delivery is based on the number of large construction vehicles expected during the project duration. Construction materials importation is based on the number of trucks required to deliver construction materials to the site, and includes building materials such as wood, steel, and masonry.

Using the expected traffic information above, construction-related traffic generation was estimated. Construction activity would generate different volumes of traffic at different points in the project. For example, the delivery and removal of heavy equipment to the site would happen only a few times during the project duration. The construction-related employee traffic is expected to remain relatively consistent throughout the project. It is estimated that it would take 27 months to complete construction of the Alternative A developments, including 5 months for the grading of the site.

Employees – There would be 600 to 800 employees on-site during construction. Construction workers arrival would peak between 6:30 AM and 7:30 AM, and departure would peak between 4:00 PM and 5:00 PM. This AM this peak is prior to the area wide commute peak of 7:30 AM to 8:30 AM. In the evening, there would be a period of overlap in the employee commute peak and the area wide commute peak of 4:30 PM to 5:30 PM. The impacts of construction related

employee traffic would have only a brief period of overlap with commuter peak and would not cause any significant impacts.

Workers would generate peak parking demand equivalent to roughly 800 vehicles during the peak construction period. Additional deliveries, visits, and other activities may generate peak non-worker parking demand of up to another 50 trucks and autos. Therefore, an approximate demand of 850 vehicle parking spaces would be required during the peak construction period for the construction employees. It is anticipated that this demand would be met on-site. Alternatively, the project could lease a remote lot and shuttle employees to the construction site. Thus, parking demand would not significantly impact the nearby community.

Heavy Equipment – Approximately 30 pieces of heavy equipment would be used based on wide-load permits necessary throughout construction. Delivery and removal of heavy equipment would occur outside of the area-wide commute peak and equipment would be moved in and out of the site on different days. The periodic delivery of heavy equipment during off-peak hours would constitute a minimum disruption of traffic.

Construction Material Import – It is estimated that 300,000 cubic yards of earthwork would be required to develop the site for Alternative A. It is expected that construction of the proposed project would involve 25,000 cubic yards of earthwork from an on-site location adjacent to the development area, which would not generate any traffic on the surrounding roadways.

275,000 cubic yards of fill would be taken from an on-site location separated from the development area which would generate traffic on the surrounding roadways. The on-site separated location is the southern portion of the Wilfred site where truck traffic would travel on an approximately 5 mile loop from Rohnert Park Expressway to Stony Point Road to Wilfred Avenue to Redwood and back to Rohnert Park Expressway. Trucks would leave/enter the on-site fill location at the Rohnert Park Expressway driveway just east of the Bellevue-Wilfred Channel. The trucks would leave/enter the development area at the Wilfred/Labath intersection. Based on a carrying capacity of 12 cubic yards per truck, it is estimated that it would take approximately 22,917 trucks to complete this task. Doubling to account for the inbound and outbound component of each round trip, this would result in approximately 45,834 trip ends. Assuming that these were spread out over a period of 5 months, with trucks operating at 6 days per week, 10 hours per day, this would result in 191 trucks making 382 trip ends on an average day with 19 trucks making 38 trip ends in any given hour (including potentially the peak hour) on the 5 mile loop.

Once the site is graded, Alternative A would require importation of construction material including raw materials, the building pad, concrete, parking lot base and asphalt paving. As a result somewhere between 3,000 to 4,000 truckloads of material would be delivered over

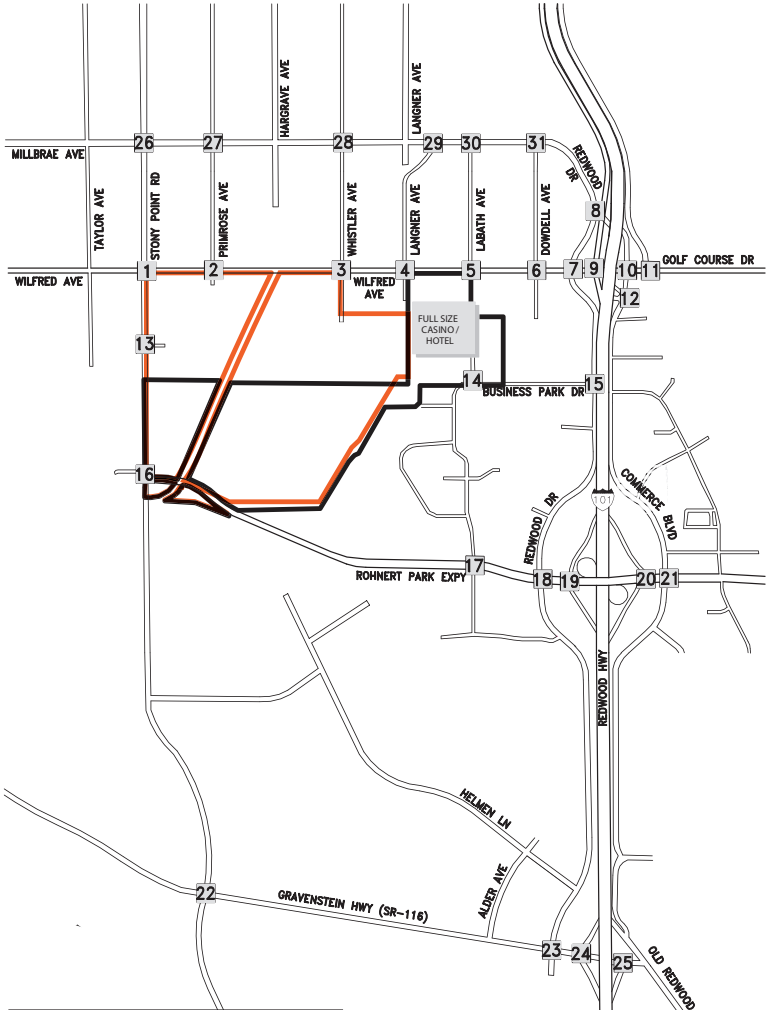
approximately 23 months. The importation would require approximately 8 to 9 truck trips per day. Each truck would generate one inbound and one outbound trip accounting for 2 trips. Therefore, during the peak construction period the project would generate about 18 truck trips ends per day. Because the import truck traffic generates significantly less than the project's equivalent passenger car traffic generation and the vehicle path travels through generally uncongested intersection movements, it would not significantly impact the capacity of any study intersection.

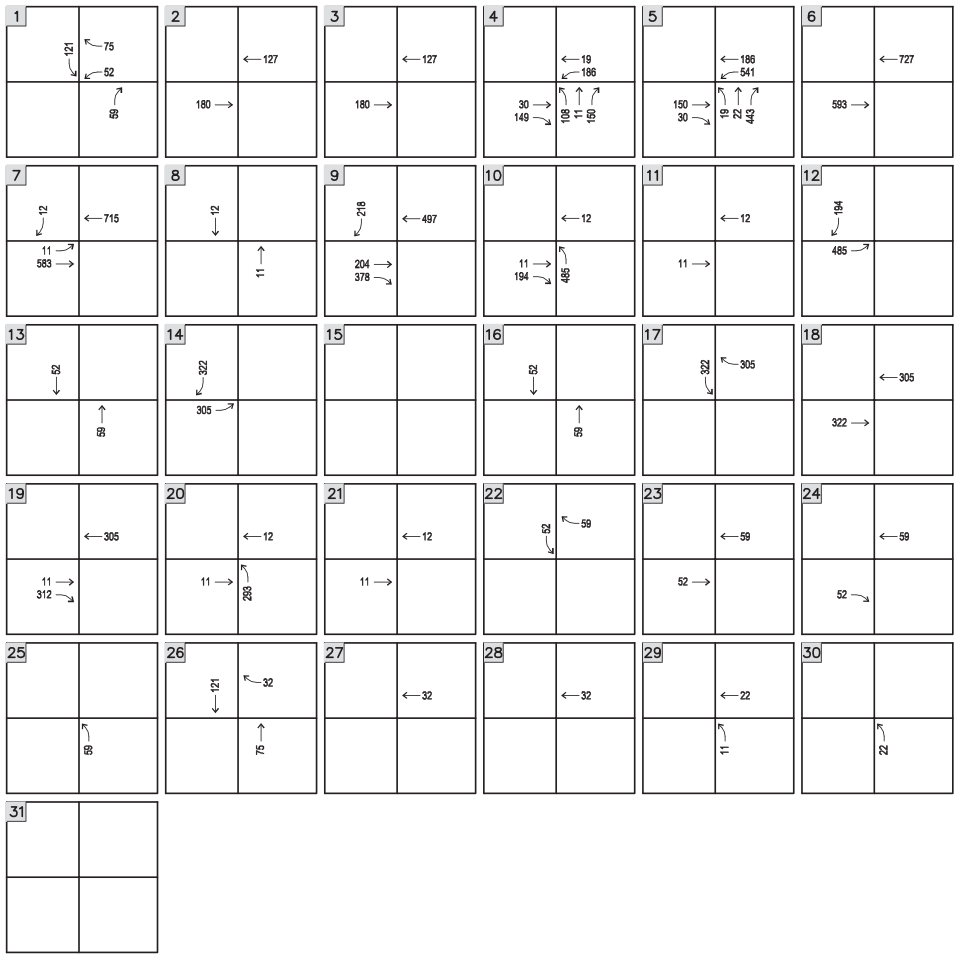
Because the import truck traffic generates significantly less traffic than the project's equivalent operational passenger car traffic generation (even when added to employee trips) and the vehicle path travels through generally uncongested intersection movements, it should not significantly impact the capacity of any study intersection. The construction traffic impact would represent a temporary and less-than-significant inconvenience to travelers on affected roadways and area residents. However, this level of truck traffic may have an impact on quality of life including increased noise, visual impact, and a perception of lower traffic safety. Tracking of debris and mud onto roadways may also create a perceptual impact as well as a physical impact. Mitigation measures are included in **Section 5.2.7** to minimize the impacts associated with construction.

Project Trip Generation

Trip generation was calculated based on the previous discussions and is reported in **Table 4.8-5.** As seen in this table, Alternative A is expected to generate 1,384 new trips in the AM and 2,287 new trips in the weekday PM peak hour. Since Alternatives A, B and C all propose casinos with the same amount of gaming and hotel space, trip generation numbers are the same for all three alternatives. Although project trip generation was prepared for daily, AM peak period, and PM peak periods, only the PM traffic conditions were used to evaluate impacts caused by the project. More trips would be generated by the casino facility on Saturday evenings than during the weekdays, but the background traffic is lower at that time, resulting in an overall lower number of vehicles on the road. As such, the weekday PM peak hour is used to evaluate potential impacts from the project. PM peak time represents the time period when the project would contribute to the greatest amount of congestion and have the highest potential mitigation; therefore, the PM peak represents the worst-case period to evaluate. **Figure 4.8-3** shows the project-generated PM traffic volumes for Alternative A.

Sometimes developments also attract trips already on the road that stop as they pass by the site. These are not new vehicle trips and are considered to be pass-by trips. Although some trips to the





SOURCE: Kimley Horn & Associates, 2006; AES, 2006

Figure 4.8-3

2008 Project Generated PM Traffic Volumes – Alternative A

site would be pass-by trips, no empirical data was readily available to determine a reasonable pass-by rate. Therefore, pass-by trips are conservatively not assumed in the analysis.

TABLE 4.8-5
PROJECT TRIP GENERATION – ALTERNATIVE A

	Trips						
	Daily Total	AM Peak Hour			PM Peak Hour		
		Entering	Exiting	Total	Entering	Exiting	Total
Casino & Entertainment 450,000 sf[1]	17,744	930	398	1,328	1,181	1,047	2,228
Hotel & Spa 300 room[2]	817	34	22	56	31	28	59
Net New Vehicle Trips	*18,261*	*964*	*420*	*1,384*	*1,212*	*1,075*	*2,287*

NOTE: 1 sf = square foot
2 Hotel trip rate is reduced by 2/3 to account for internal capture to/from casino.
SOURCE: Kimley-Horn and Associates, 2008; AES, 2007.

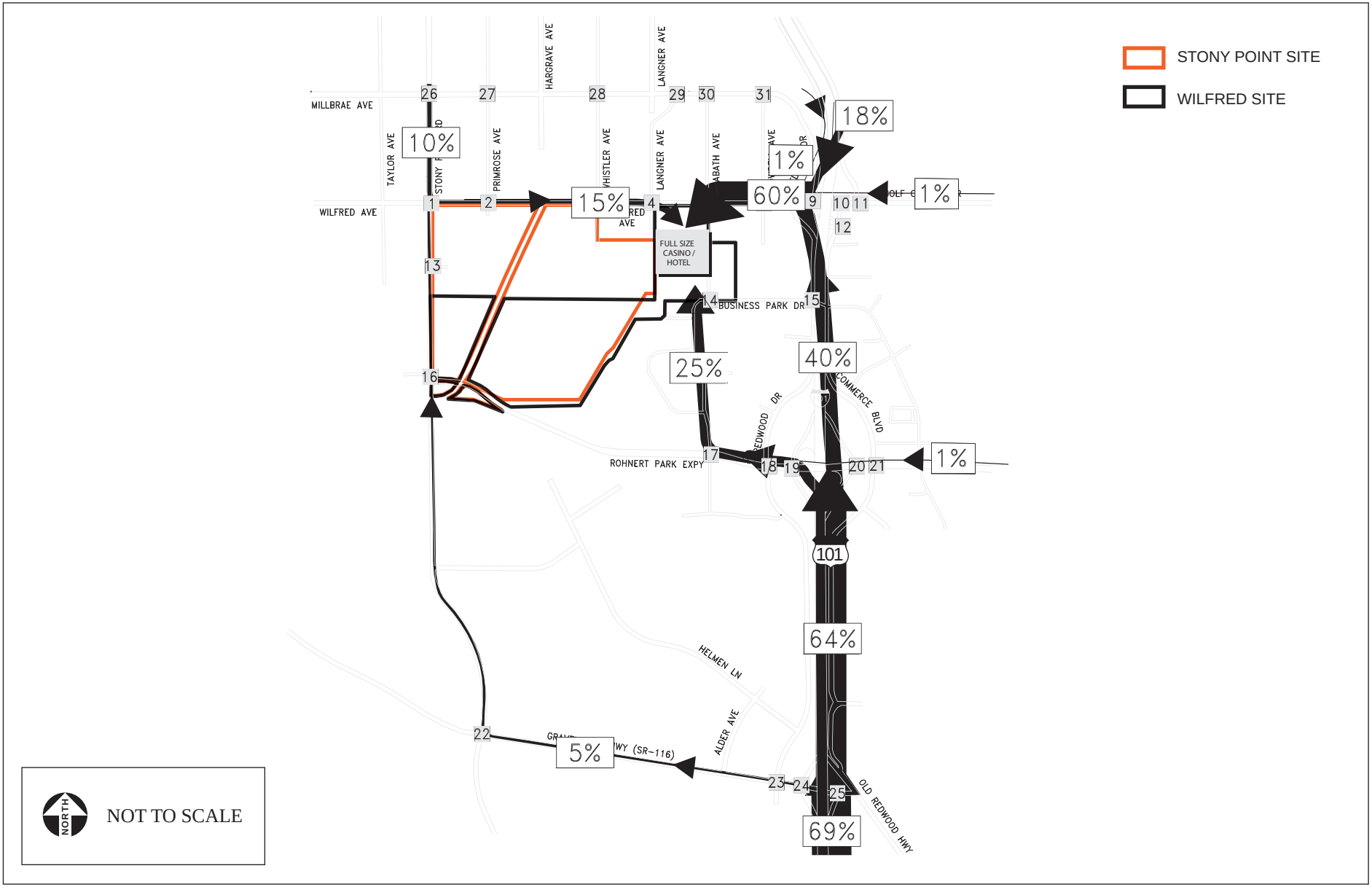
Project Trip Distribution and Assignment

It is estimated that approximately 30 percent of the project traffic would arrive at the casino from destinations north of the site, with the remaining 70 percent arriving from south of the site. For a conservative analysis, no project traffic is assumed to be generated or attracted in the immediate vicinity of the Wilfred site. The project trip distribution for Alternative A is shown in **Figures 4.8-4 and 4.8-5.**

Most of the project traffic is expected to come from US 101 and, it was assumed that most of the traffic would use Labath Avenue to enter the site because of its close proximity to the freeway. As noted in the distribution, some traffic leaving the site is expected to avoid congestion at Wilfred Avenue and Stony Point Road by using Millbrae Avenue.

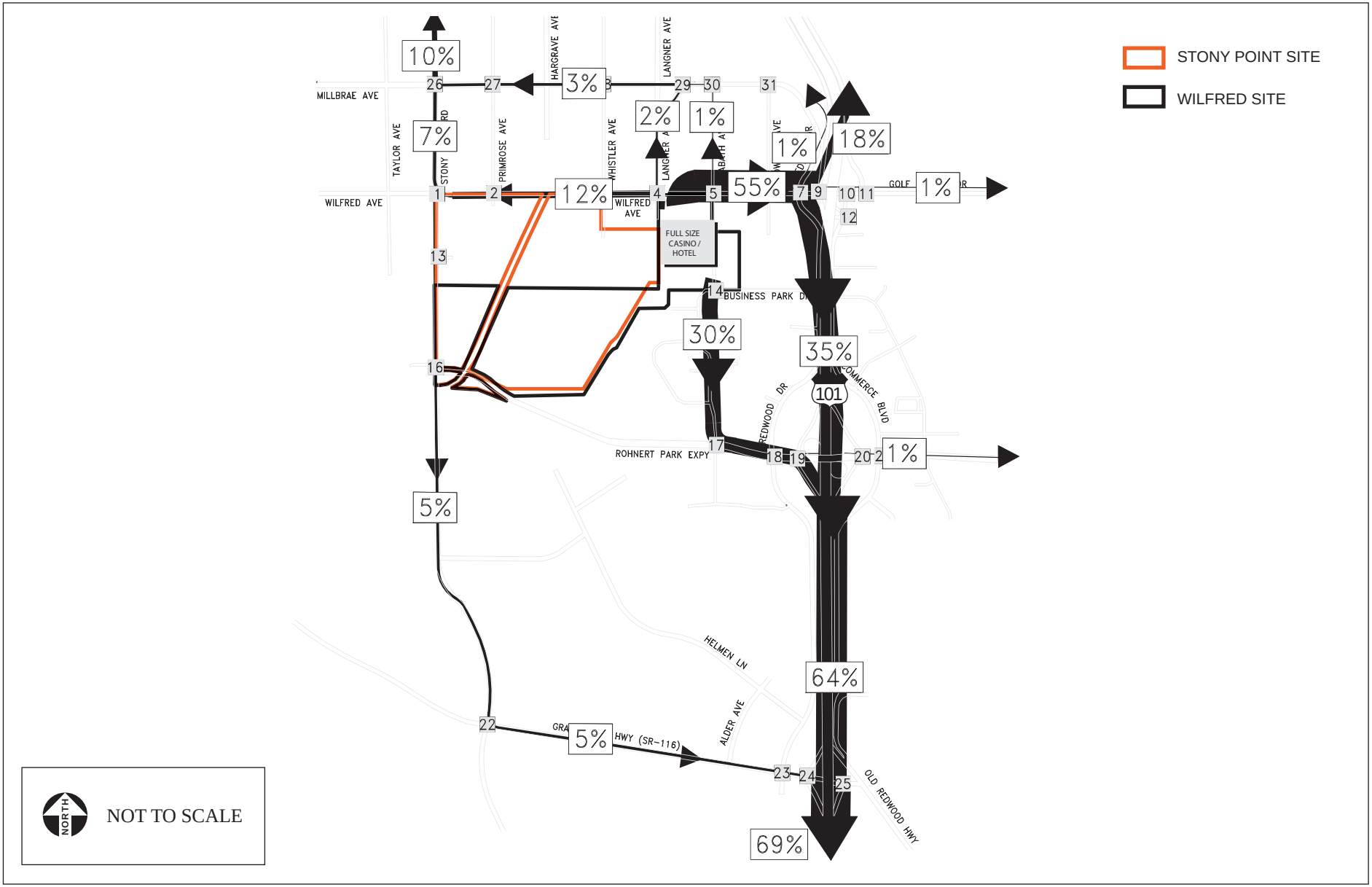
Freeway Segment and Ramp Performance

Project trips generated by the proposed project were added to the year 2008 forecasted freeway volumes. Traffic analyses were completed to evaluate the operation of the following freeway segments and ramps in the year 2008 Plus Alternative A. **Table 4.8-6** summarizes the 2008 Plus Alternative A freeway segment and ramp performance condition. As shown in **Table 4.8-6**, no freeway segments or ramps would operate at an unacceptable LOS with the addition of Alternative A traffic in 2008.



SOURCE: Kimley Horn & Associates, 2006; AES, 2006

Figure 4.8-4
Project Trip Distribution(In) – Alternative A



SOURCE: Kimley Horn & Associates, 2006; AES, 2006

Figure 4.8-5
Project Trip Distribution (Out) – Alternative A

TABLE 4.8-6
FREEWAY SEGMENT AND RAMP PERFORMANCE
2008 - ALTERNATIVE A

US-101 Section/Ramp	Criteria LOS	2008 with Alternative A	Density (pc/mi/ln)[1]
Northbound			
US-101 South of SR-116	E	D	26.9
SR-116 Off-ramp	E	E	35.2
SR-116 On-ramp	E	E	36.5
US-101 between SR-116 and Rohnert Park Expressway (NB)	E	D	31.7
Rohnert Park Expressway NB Off-Ramp	E	D	33.9
Rohnert Park Expressway NB On-Ramp (Loop Ramp)	E	C	24.5
Rohnert Park Expressway NB On-Ramp	E	D	31.2
US-101 between Rohnert Park Expressway and Wilfred Ave (NB)	E	D	31.2
Wilfred Ave NB Off-Ramp	E	D	31.2
Wilfred Ave NB On-Ramp	E	D	33.6
US-101 between Wilfred Ave and Santa Rosa Avenue	E	D	33.6
Santa Rosa Avenue NB Off-ramp	E	D	33.6
US-101 North of Santa Rosa Avenue	E	C	23.8
Southbound			
US-101 North of Santa Rosa Avenue	E	D	26.1
Santa Rosa Avenue On-ramp	E	//[2]	//[2]
US-101 between Santa Rosa Avenue and Wilfred Ave (SB)	E	E	36.2
Wilfred Ave SB Off-Ramp	E	E	40.8
Wilfred Ave SB On-Ramp	E	E	39.4
US-101 between Rohnert Park Expressway and Wilfred Ave (SB)	E	E	39.4
Rohnert Park Expressway SB Off-Ramp	E	E	39.4
Rohnert Park Expressway SB On-Ramp (Loop Ramp)	E	D	35.4
Rohnert Park Expressway SB On-Ramp	E	D	36.1
US-101 between Rohnert Park Expressway and SR-116 (SB)	E	D	29.8
SR-116 SB Off-ramp	E	E	36.1
SR-116 SB On-ramp	E	E	38.3
US-101 South of SR-116 (SB)	E	D	29.0

NOTE: 1 - pc/mi/ln = passenger cars per mile per lane.
2 - Intersection no longer exists due to planned roadway improvement.
SOURCE: Kimley-Horn and Associates 2008; AES 2007.

Peak Hour Intersection Performance

To evaluate the peak-hour impact of the project on study intersections, the 2008 Without Project Condition traffic volumes were combined with vehicle trips expected to be generated by Alternative A. **Table 4.8-7** summarizes the 2008 Plus Alternative A PM Peak Hour intersection conditions. The signal control is listed as TS for a signalized intersection and TWSC for a two-way stop-controlled intersection. The overall intersection LOS is reported for signalized intersections. For unsignalized intersections only the worst approach LOS is reported. Additional detail is provided in **Appendix O**.

As shown in **Table 4.8-7**, the following intersections and approaches would fail to meet acceptable level of service thresholds based on established significance criteria with the addition of project-related traffic:

- Wilfred Avenue/Stony Point Road
- Wilfred Avenue/Labath Avenue
- Wilfred Avenue/Langner Avenue
- Wilfred Avenue/Dowdell Avenue
- Wilfred Avenue/Redwood Drive
- Golf Course Drive/Commerce Boulevard
- US-101 NB Ramps/Commerce Boulevard
- Labath Avenue/Rohnert Park Expressway
- Rohnert Park Expressway/ Commerce Boulevard
- Millbrae Avenue/ Stony Point Road

Traffic Signal Warrant Analysis

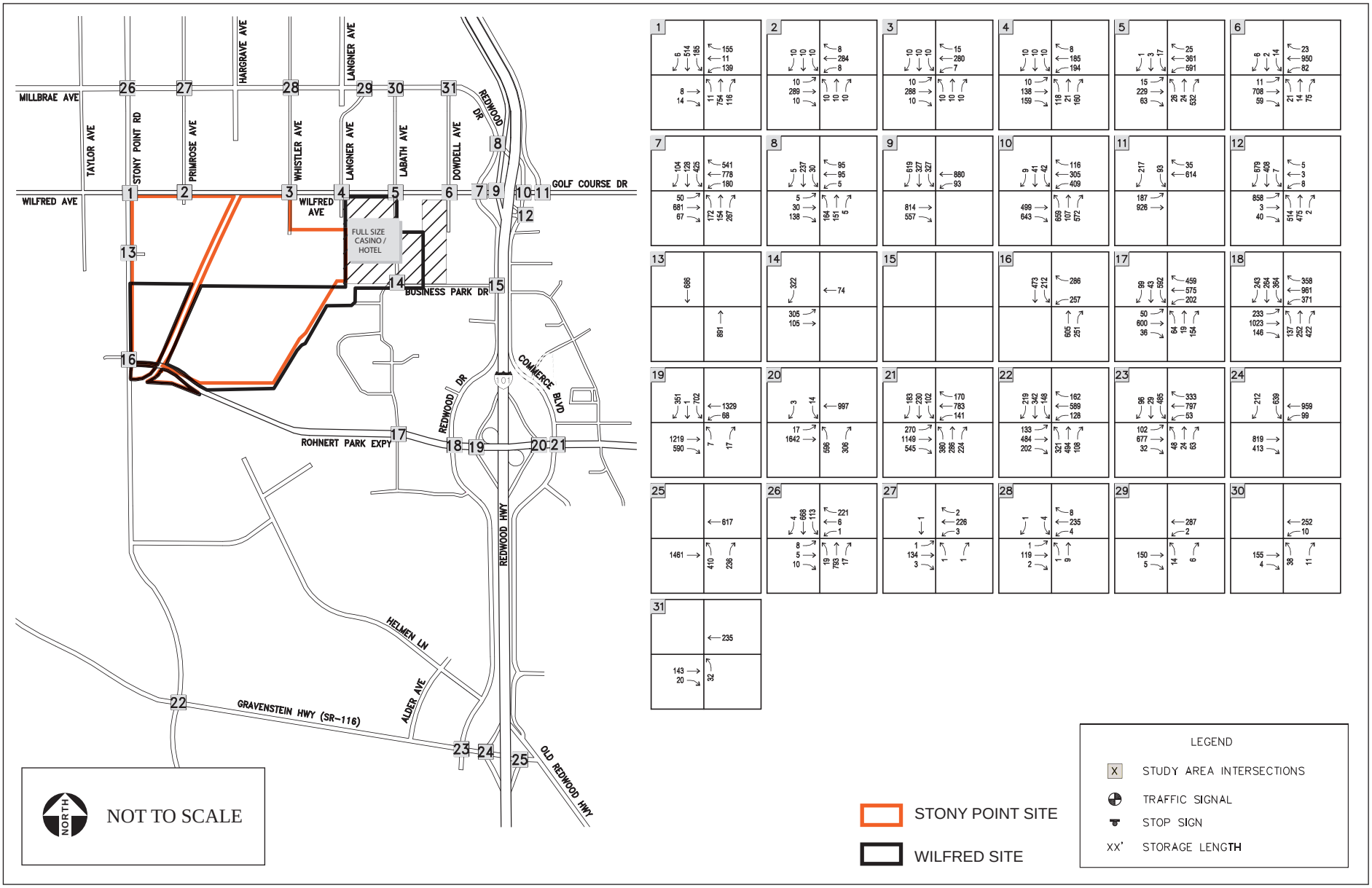
Results of the analysis showed that the following intersections would satisfy traffic signal Warrant #3 by year 2008 with the addition of Alternative A traffic:

- Wilfred Avenue/Stony Point Road
- Wilfred Avenue/Labath Avenue
- Wilfred Avenue/Langner Avenue
- Wilfred Avenue/Dowdell Avenue
- Millbrae Avenue/ Stony Point Road

2008 traffic volumes with Alternative A for study intersection are shown in **Figure 4.8-6.**

TABLE 4.8-7
INTERSECTION LOS – ALTERNATIVE A

	Intersection	Signal Control	Criteria	2008 with Alternative A	
				LOS	Delay[1]
1	Wilfred Avenue/Stony Point Road	TWSC	D	**F**	**OVRFL**
2	Wilfred Avenue/Primrose Avenue	TWSC	D	B	13.8
3	Wilfred Avenue/Whistler Avenue	TWSC	D	B	13.8
4	Wilfred Avenue/Langner Avenue	TWSC	D	**F**	**51.3**
5	Wilfred Avenue/Labath Avenue	TWSC	D	**F**	**OVRFL**
6	Wilfred Avenue/Dowdell Avenue	TWSC	D	**F**	**OVRFL**
7	Wilfred Avenue/Redwood Drive	TS	D	**F**	**148.7**
8	Redwood Drive/Commerce Boulevard	TS	C	C	22.5
9	Wilfred Avenue/Us-101 SB Ramps	TS	D	C	27.7
10	Golf Course Drive/ Commerce Boulevard	TS	D	E	**69.4**
11	Golf Course Drive/Roberts Lake Road	TS	C	B	14.3
12	US-101 NB Ramps/Commerce Boulevard	TS	D	**F**	**103.0**
13	Project Driveway/Stony Point Road	TWSC	D	A	0.0
14	Business Park Drive/Labath Avenue	-	D	B	10.6
15	Business Park Drive/Redwood Drive	TWSC	D	D	27.5
16	Rohnert Park Exp/Stony Point Road	TS	D	B	19.8
17	Rohnert Park Exp/Labath Avenue	TS	C	**D**	**43.3**
18	Rohnert Park Exp/Redwood Drive	TS	C	C	26.0
19	Rohnert Park Exp/US-101 SB Ramps	TS	D	B	16.2
20	Rohnert Park Exp/US-101 NB Ramps	TS	D	B	18.5
21	Rohnert Park Exp/Commerce Boulevard	TS	C	**D**	**38.9**
22	Gravenstein Hwy/Stony Point Road	TS	D	D	37.6
23	Gravenstein Hwy /Redwood Drive	TS	D	C	28.0
24	Gravenstein Hwy / SB US-101 Ramps	TS	D	B	17.4
25	Gravenstein Hwy /NB US-101 Off-ramp	TS	D	B	11.4
26	Millbrae Avenue/Stony Point Road	TWSC	D	**F**	**72.0**
27	Millbrae Ave/Primrose Ave	TWSC	D	B	11.6
28	Millbrae Ave/Whistler Ave	TWSC	D	B	11.7
29	Millbrae Ave/Langner Ave	TWSC	D	B	11.0
30	Millbrae Ave/Labath Ave	TWSC	D	B	12.0
31	Millbrae Ave/Dowdell Ave	TWSC	D	B	11.4
NOTE: 1Delay in seconds. SOURCE: Kimley-Horn and Associates 2008; AES 2007.					



SOURCE: Kimley Horn & Associates, 2006; AES, 2006

Figure 4.8-6

2008 Plus Project PM Traffic Volumes – Alternative A

Mitigation Measures

As shown in the peak-hour intersection performance, Alternative A would have a significant impact on intersections. Mitigation measures for the 2008 plus project PM traffic volumes are discussed in **Section 5.2.7**. With the incorporation of project mitigation measures, each of the intersections that are shown to have an unacceptable LOS would be improved to an acceptable LOS, resulting in a less-than-significant impact.

Potential Effects on Intersection Safety

Traffic volumes generated by Alternative A were reviewed in consideration of existing intersection collision history and the potential for increased accidents (**Appendix O**). According to collision data, the frequency of accidents involving bicyclists and pedestrians is very low. Many intersections did not report any collisions of this type during the survey period. This suggests that bicycle and pedestrian volumes are relatively low and study intersections have minimal safety hazards for individuals biking or walking. Although the project would introduce increased traffic volumes at some intersections, bicyclists and pedestrians are expected to be able to travel through study intersections with similar levels of safety. Historically, casinos and hotels do not attract a significant amount of bicycle and pedestrian traffic. The expected amount of pedestrian and bicycle traffic is nominal and a significant increase in bicycle and pedestrian accidents is unlikely.

The potential for increased collisions between motorized vehicles was also considered. Collision frequency and severity are a function of many complex factors that vary depending on the location and type of intersection or roadway segment. Factors include traffic control such as signals or stop signs, lane and shoulder widths, grades, driveway densities, roadside hazards or obstacles, presence of left and right turn lanes, sight distance, congestion, and others.

Because of the number and interrelationships of the variables, accurate crash prediction is difficult. However, the development alternatives would increase roadway congestion, a factor that could result in an increase in traffic collisions if left unmitigated. Other factors are expected to remain unaffected.

As noted previously, traffic studies have been conducted (**Appendix O**) to address the traffic and transportation effects of the development alternatives. This includes mitigation improvements to restore traffic operations to levels within acceptable standards or to levels as good as or better than without the development alternative. Any potential increases in accidents due to project-related traffic would be offset by the implementation of roadway improvements included as mitigation. Therefore, if mitigation measures are implemented as proposed in **Section 5.2.7**, no significant increase in daytime or nighttime collisions would occur.

LAND USE

The approximately 252-acre Wilfred site is bordered by residences, farmland, a dairy, light industrial land uses, a business park and the Laguna de Santa Rosa to the south. As described in **Section 3.8, Resource Use Patterns** and shown in **Figure 3.8-9**, existing development in the immediate vicinity of the Wilfred site includes, large retail stores (including WalMart, Home Depot, Costco, and Target), a movie theatre, a miniature golf course with batting cages, gas stations, a mobile home park, multi-family residential, and multiple commercial and industrial developments. The casino/hotel resort would be developed adjacent to the western boundary of the City of Rohnert Park and within the City's sphere of influence. Development is planned on approximately 66 acres in the northeast corner of the Wilfred site; the remainder of the site would remain undeveloped and be used for open space, pasture, biological habitat, and recycled water sprayfields. A large portion of the project site is currently located within unincorporated Sonoma County; however, under Alternative A the project site would be taken into federal trust and local land use plans or policies would no longer apply to the project site (**Figure 3.8-12**). Furthermore, most development under Alternative A would be located within an area planned by the City of Rohnert Park for commercial/industrial/residential development (Northwest Specific Plan). Although the Northwest Specific Plan does not contemplate the development of a Class III casino, neither does any specific land use designation in California, since such developments are not legal on non-Indian lands. Thus, although most of the area proposed for development under Alternative A is currently planned for development, Alternative A would technically be inconsistent with local land use plans. Alternative A would not result in any significant environmental impacts to land uses, however, such as land use conflicts. Examples of land use conflicts would include an obstruction of access or the preclusion of allowable uses. Note that treated wastewater would flow off-site for a short distance along existing drainage channels and through an existing 54-inch culvert should a seasonal surface water discharge be utilized for treated wastewater disposal (see **Section 2.2.7**). The treated wastewater flow is less than one percent of the flow capacity of the 54-inch culvert (see **Appendix D**). Thus, land use conflicts from exceeding capacity of the culverts (such as overflow or erosion) would not occur. Therefore, a less-than-significant land use effect would result.

In addition, unlike the Stony Point site alternatives, although Alternative A development is located within a community separator as designated by the County Open Space Element, this area has been planned for development by the City of Rohnert Park, and would not be maintained as open space should Alternative A not be developed. Alternative A would be developed away from the only concentrated residential development in the area (the mobile home park) as are the other alternatives. Also like the other alternatives, the southern 182 acres of the Wilfred site would be retained in open space under Alternative A. As summarized in **Section 2.2.10**, the Tribe has agreed in an MOU with the City of Rohnert Park in an MOU to make contributions up to $2,700,000 towards the purchase of open space. The Tribe also agreed in the Rohnert Park MOU to contribute $2,664,000 to the City of Rohnert Park. All or a portion of these funds could be

used for the purchase or preservation of open space. Thus, Alternative A would have a less-than-significant impact on regional open space.

AGRICULTURE

The development of Alternative A would result in the direct conversion of up to 81.7-acres of rural lands to urban uses that are located on the northeastern portion of the Wilfred site. This land is currently unirrigated and not in agricultural production. According to the National Resource Conservation Service (NRCS), the land proposed for development under each option of Alternative A does not consist of prime and unique farmland or farmland of statewide and local importance (**Appendix P**).

As discussed in **Section 3.8.3**, the California Land Conservation Act (LCA) of 1965, also known as the Williamson Act (CGC §51200 *et. seq*.), is designed to preserve agricultural and open space lands by discouraging their premature and unnecessary conversion to urban uses. Four parcels totaling 181.71 acres in the southern portion of the Wilfred site are under Williamson Act contracts (**Figure 3.8-17**)**.** These parcels are partially irrigated and currently used as pasturelands. Removing property from the Williamson Act requires an application for non-renewal to be filed. To date, no application for non-renewal has been submitted for any of the parcels within the Wilfred site. Under Alternative A, Option 2 and Option 3 for wastewater disposal involves the use of the eastern Williamson Act parcel as a sprayfield. This action would serve as an irrigation source for the parcel and would not require removing the land from agricultural use. In addition, Option 2 and Option 3 of Alternative A would include the development of a seasonal water storage pond on the northeastern corner of the eastern Williamson Act Parcel (**Figure 2-6** and **Figure 2-7** respectively). This development would be considered an allowable use under the Williamson Act as it would aid in irrigation of the land and the primary use of the parcel would remain agricultural. In accordance with Section 3.1(b) of the MOU between the Tribe and Sonoma County (**Appendix E** of the DEIS), the Tribe shall enter into a binding and enforceable agreement with the County "regarding any loss of open space, community separator, and Williamson Act issues." Based on this provision, it is expected that the Intergovernmental Agreement to be negotiated between the County and the Tribe pursuant to the MOU will provide the County with an enforceable right to provide that the land is used in a manner consistent with the terms of the Williamson Act contract.

The area proposed for the development of the casino and hotel complex is located adjacent to agricultural operations. Proximity to agricultural operations could result in potential impacts associated with noise from farm equipment, dust, irrigation overspray, and other effects. However, parking areas and proposed roadways would provide a minimum buffer of 300 feet between adjacent agricultural fields and outdoor activity areas, including the pool area. This buffer meets the minimum width requirements of the Sonoma County Right-to-Farm Ordinance, and accordingly would be sufficient to insure that adjacent agricultural operations would not

result in significant conflicts with the proposed development and would minimize the likelihood that the Tribe would seek to curtail nearby agricultural activities due to nuisance concerns. Furthermore, the Sonoma County Right-to-Farm Ordinance will continue to protect neighboring farmers from nuisance suits brought by the Tribe or potential patrons on the project site.

Given that the proposed developments are compatible with the agricultural use of the southern Williamson Act parcels and adjacent agricultural lands, and no conversion of important farmland would occur, Alterative A would have a less-than-significant impact on agriculture.

4.8.3 ALTERNATIVE B – NORTHWEST STONY POINT CASINO

TRANSPORTATION/CIRCULATION

This subsection discusses the build-out traffic conditions with the project trips calculated for Alternative B added to the baseline condition**.**

Site Access

The main project access is from the south side of Wilfred Avenue, where an existing driveway aligns with Primrose Avenue. This approach would operate as a full movement driveway with no turn limitations. A second project access is from Stony Point Road, located approximately 880 feet south of the Stony Point Road/Wilfred Avenue intersection. This location is at an existing driveway access; however, due to conflicts with the northbound turn bay at the Stony Point Road/Wilfred Avenue intersection, the access would be limited to right in/out operation. Currently, neither access is signalized or stop sign controlled.

Construction Impacts

It is estimated that 150,000 cubic yards of earthwork would be required to develop the site for Alternative B. It is expected that construction would involve 150,000 cubic yards of fill that would be taken from an on-site location separated from the development area which would generate traffic on the surrounding roadways. The on-site separated location is the southern portion of the Stony Point site where truck traffic would travel on an approximately 5 mile loop from Rohnert Park Expressway to Stony Point Road to Wilfred Avenue to Redwood and back to Rohnert Park Expressway. Trucks would leave/enter the on-site fill location at the Rohnert Park Expressway driveway just east of the Bellevue-Wilfred Channel. The trucks would leave/enter the development area at the Stony Point Road/Project Driveway intersection. Assuming that the trips were spread out over a period of 4 months, with trucks operating at 6 days per week, 10 hours per day, this would result in 131 trucks making 262 trip ends on an average day with 13 trucks making 26 trip ends in any given hour (including potentially the peak hour) on the 5 mile loop.

Once the site is graded, the project would also require the importation of construction material including, raw materials, the building pad, concrete, the parking lot base and asphalt paving. This results in a material importation of 3,000 to 4,000 truckloads of material which would occur over approximately 23 months. The importation will require approximately 8 to 9 truck trips per day outside of the off-site fill delivery. Each truck will generate 1 inbound and 1 outbound trip, accounting for 2 trips. Therefore, during the peak construction period the project would generate about 18 truck trips ends per day.

Because the import truck traffic generates significantly less traffic than the project's equivalent passenger car traffic generation (even when added to employee trips) and the vehicle path travels through generally uncongested intersection movements, it should not significantly impact the capacity of any study intersection. The construction traffic impact would represent a temporary and less-than-significant inconvenience to travelers on affected roadways and area residents. However, this level of truck traffic may have an impact on quality of life including increased noise, visual impact, and a perception of lower traffic safety. Tracking of debris and mud onto roadways may create a perceptual impact as well as a physical impact. Mitigation measures are included in **Section 5.2.7** to minimize the impacts associated with construction.

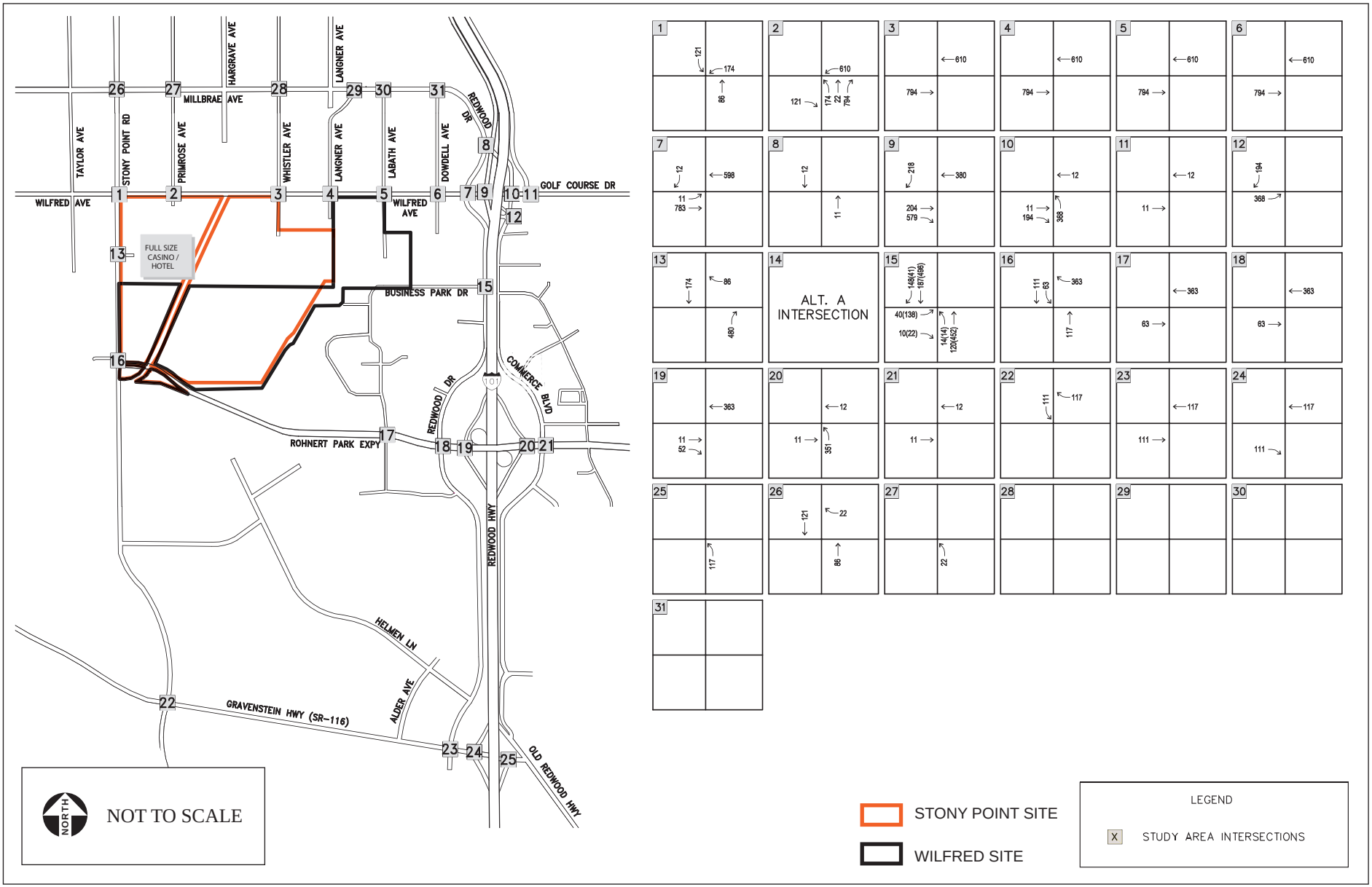
Project Trip Generation

As summarized in **Table 4.8-8**, Alternative B would generate 1,384 new trips to the circulation network in the AM and 2,287 new trips in the PM peak hour. Since Alternatives A, B, and C are all proposed casinos with the same amount of gaming space and hotel space, trip generation numbers are the same for all three alternatives. Although project trip generation was prepared for both the AM and PM peak hours, only the PM peak hour was evaluated in the traffic study as it represents the time period for which the project would contribute to the greatest amount of congestion and potential for mitigation. As such, the weekday PM peak hour is used to evaluate potential impacts from the project. **Figure 4.8-7** shows the project-generated PM traffic volumes for Alternative B.

TABLE 4.8-8
PROJECT TRIP GENERATION - ALTERNATIVE B

Land Use	Trips						
	Daily Total	AM Peak Hour			PM Peak Hour		
		Entering	Exiting	Total	Entering	Exiting	Total
Casino & Entertainment 450,000 sf[1]	17,744	930	398	1,328	1,181	1,047	2,228
Hotel & Spa 300 room[2]	817	34	22	56	31	28	59
Net New Vehicle Trips	*18,261*	*964*	*420*	*1,384*	*1,212*	*1,075*	*2,287*

NOTES: [1] sf = square foot
[2] Trip rate is ITE Land Use Code 310 – Hotel. Rate reduced by 2/3 to account for internal capture to/from casino.
SOURCE: Kimley-Horn and Associates, 2008; AES, 2007.



SOURCE: Kimley Horn & Associates, 2006; AES, 2006

Figure 4.8-7

2008 Project Generated PM Traffic Volumes – Alternative B

Sometimes developments also attract trips that are already on the road and stop as they pass by the site. These are not new vehicle trips, but are considered to be pass-by trips. Although it is likely that some trips to the site would be pass-by trips, no empirical data was readily available to determine a reasonable pass-by rate. Therefore, pass-by trips are conservatively not assumed in the Alternative B analysis.

Project Trip Distribution and Assignment

It is estimated that approximately 30 percent of the project traffic would be distributed to destinations north of the site, with the remaining 70 percent distributed south of the site. For a conservative analysis, no project traffic is assumed to be generated or attracted in the immediate vicinity of the Wilfred site. The project traffic distribution for Alternative B is shown in **Figures 4.8-8** and **4.8-9**.

Freeway Segment and Ramp Performance

Project trips generated by the proposed casino and hotel were added to the year 2008 forecast freeway volumes. **Table 4.8-9** summarizes the 2008 Plus Alternative B freeway segment and ramp performance condition. As shown in **Table 4.8-9**, the following freeway segments and ramps would operate unacceptably in 2008 after the addition of Alternative B traffic:

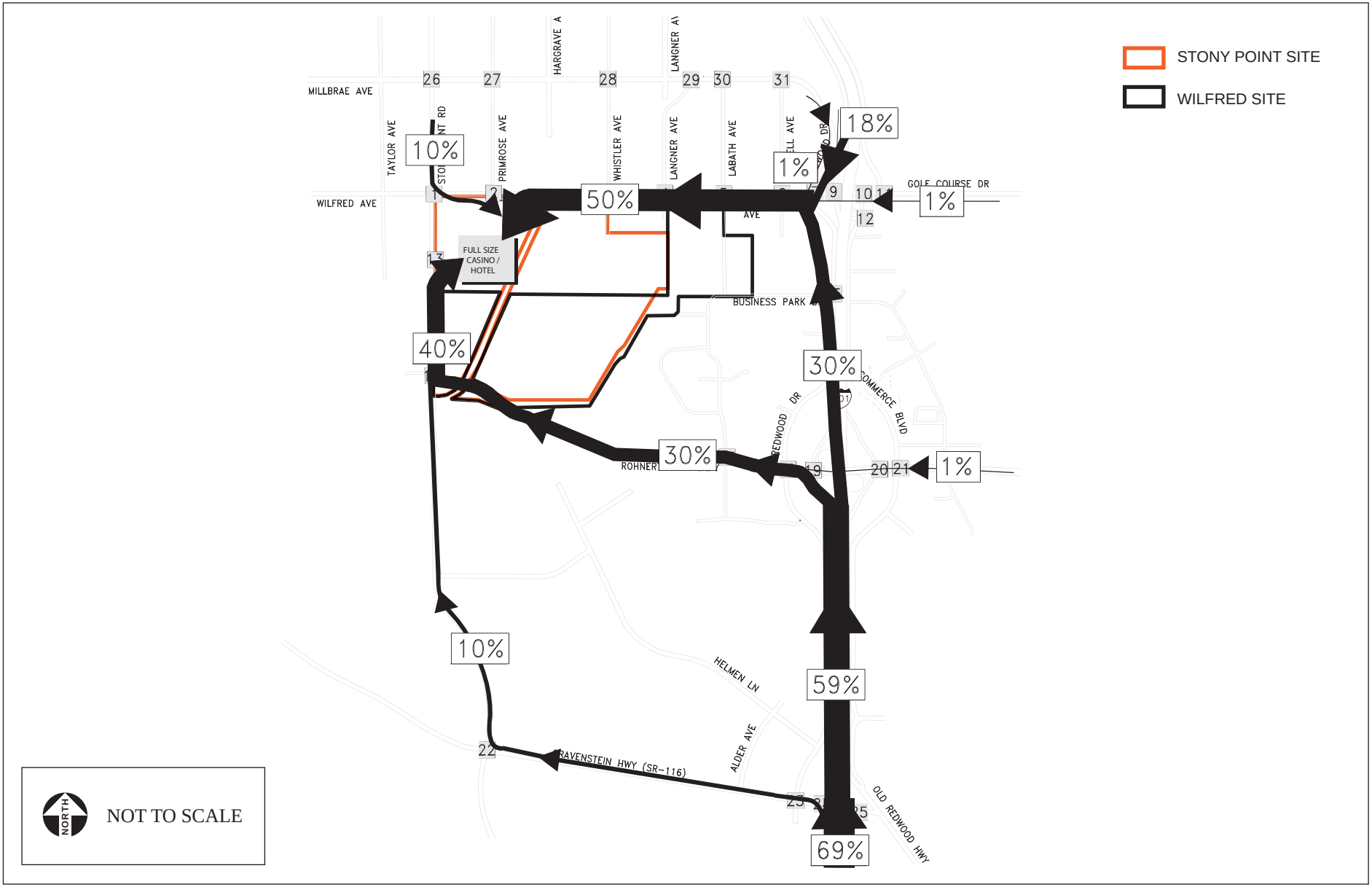
- Wilfred Avenue SB On-Ramp
- US-101 between Rohnert Park Expressway and Wilfred Avenue (SB)
- Rohnert Park Expressway SB Off-Ramp

Peak Hour Intersection Performance

To evaluate the peak hour impact of the project on study intersections 2008 Without Project Condition traffic volumes were combined with vehicle trips expected to be generated by Alternative B.

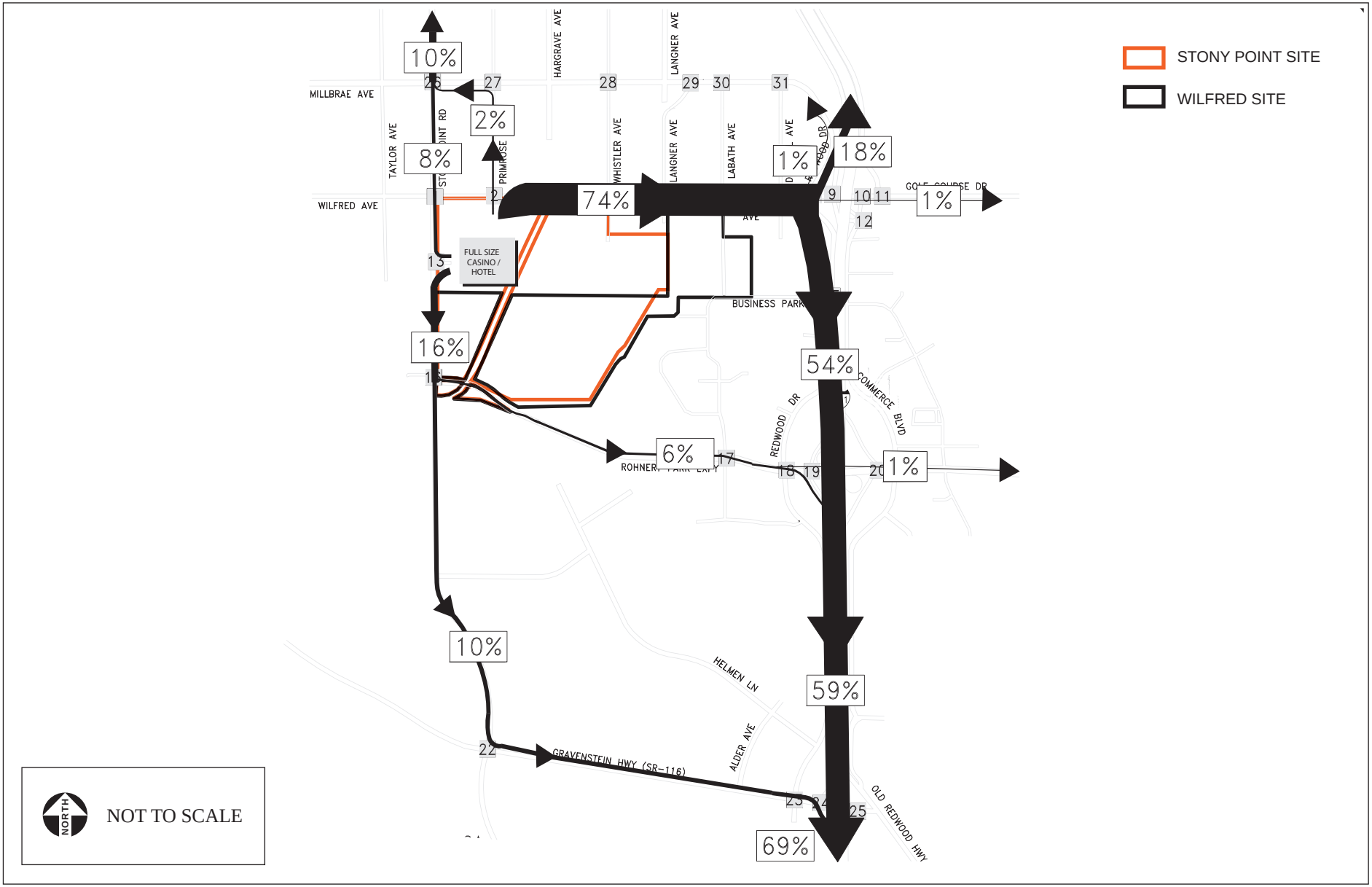
Table 4.8-10 summarizes the 2008 Plus Alternative B Peak Hour intersection conditions. The signal control is listed as TS for a signalized intersection and TWSC for a two-way stop-controlled intersection. Additional detail is provided in **Appendix O**. The following intersections and approaches would fail to meet acceptable LOS thresholds based on established significance criteria and with the addition of project-related traffic:

- Wilfred Avenue/Stony Point Road
- Wilfred Avenue/Primrose Avenue
- Wilfred Avenue/Redwood Drive
- Wilfred Avenue/Whistler Avenue



SOURCE: Kimley Horn & Associates, 2006; AES, 2006

Figure 4.8-8
Project Trip Distribution (In) – Alternative B



SOURCE: Kimley Horn & Associates, 2006; AES, 2006

Figure 4.8-9
Project Trip Distribution (Out) – Alternative B

- Wilfred Avenue/ Langner Avenue
- Wilfred Avenue /Labath Avenue
- Wilfred Avenue /Dowdell Avenue
- Golf Course Drive/Commerce Boulevard
- Rohnert Park Expressway/Labath Avenue
- Commerce Boulevard/US-101 NB Ramps
- Millbrae Avenue/Stony Point Road
- Rohnert Park Expressway/Commerce Boulevard

TABLE 4.8-9
FREEWAY SEGMENT AND RAMP PERFORMANCE
2008 - ALTERNATIVE B

US-101 Section/Ramp	Criteria LOS	2008 with Alternative B	Density (pc/mi/ln) [1]
Northbound			
US-101 South of SR_116	E	C	25.1
SR-116 Off-ramp	E	D	33.7
SR-116 On-ramp	E	E	35.2
US-101 between SR-116 and Rohnert Park Expressway (NB)	E	D	28.8
Rohnert Park Expressway NB Off-Ramp	E	D	34.2
Rohnert Park Expressway NB On-Ramp (Loop Ramp)	E	C	21.8
Rohnert Park Expressway NB On-Ramp	E	D	29.1
US-101 between Rohnert Park Expressway and Wilfred Ave (NB)	E	D	29.1
Wilfred Ave NB Off-Ramp	E	D	29.1
Wilfred Ave NB On-Ramp	E	D	33.9
US-101 between Wilfred Ave and Santa Rosa Avenue	E	D	33.9
Santa Rosa Avenue NB Off-ramp	E	D	33.9
US-101 North of Santa Rosa Avenue	E	C	23.8
Southbound			
US-101 North of Santa Rosa Avenue	E	D	26.1
Santa Rosa Avenue On-ramp	E	//[2]	//[2]
US-101 between Santa Rosa Avenue and Wilfred Ave (SB)	E	E	39.3
Wilfred Ave SB Off-Ramp	E	E	40.8
Wilfred Ave SB On-Ramp	E	**F**	**45.0**
US-101 between Rohnert Park Expressway and Wilfred Ave (SB)	E	**F**	**45.0**
Rohnert Park Expressway SB Off-Ramp	E	**F**	**45.0**
Rohnert Park Expressway SB On-Ramp (Loop Ramp)	E	D	34.5
Rohnert Park Expressway SB On-Ramp	E	D	34.1
US-101 between Rohnert Park Expressway and SR-116 (SB)	E	D	27.1
SR-116 SB Off-ramp	E	D	34.0
SR-116 SB On-ramp	E	E	37.2
US-101 South of SR-116	E	D	27.4

NOTE: [1]pc/mi/ln = passenger cars per mile per lane.
[2]Intersection no longer exists due to planned roadway improvement.
SOURCE: Kimley-Horn and Associates 2008; AES 2007.

TABLE 4.8-10
INTERSECTION LOS – ALTERNATIVE B

	Intersection	Signal Control	Criteria	2008 with Alternative B	
				LOS	Delay[1]
1	Wilfred Avenue/Stony Point Road	TWSC	D	**F**	**OVRFL**
2	Wilfred Avenue/Primrose Avenue	TWSC	D	**F**	**OVRFL**
3	Wilfred Avenue/Whistler Avenue	TWSC	D	**F**	**86.6**
4	Wilfred Avenue/Langner Avenue	TWSC	D	**F**	**82.9**
5	Wilfred Avenue/Labath Avenue	TWSC	D	**F**	**OVRFL**
6	Wilfred Avenue/Dowdell Avenue	TWSC	D	**F**	**OVRFL**
7	Wilfred Avenue/Redwood Drive	TS	D	**F**	**344.5**
8	Redwood Drive/Commerce Boulevard	TS	C	C	22.8
9	Wilfred Avenue/ US-101 SB Ramps	TS	D	D	52.2
10	Golf Course Drive/Commerce Boulevard	TS	D	**F**	**135.1**
11	Golf Course Drive/Roberts Lake Road	TS	C	B	14.5
12	US-101 NB Ramps/Commerce Boulevard	TS	D	**F**	**96.1**
13	Project Driveway/Stony Point Road	TWSC	D	D	27.6
14	Business Park Drive/Labath Avenue	-	D	/[2]	/[2]
15	Business Park Drive/Redwood Drive	TWSC	D	D	27.5
16	Rohnert Park Expressway/Stony Point Road	TS	D	D	43.0
17	Rohnert Park Expressway/Labath Avenue	TS	C	**D**	**39.5**
18	Rohnert Park Expressway/Redwood Drive	TS	C	C	26.1
19	Rohnert Park Expressway/US-101 SB Ramps	TS	D	B	16.7
20	Rohnert Park Expressway/US-101 NB Ramps	TS	D	C	21.3
21	Rohnert Park Expressway/Commerce Boulevard	TS	C	**D**	**38.1**
22	Gravenstein Hwy/Stony Point Road	TS	D	D	44.0
23	Gravenstein Hwy /Redwood Drive	TS	D	C	28.1
24	Gravenstein Hwy / SB US-101 Ramps	TS	D	C	20.4
25	Gravenstein Hwy /NB US-101 Off-ramp	TS	D	B	12.8
26	Millbrae Avenue/Stony Point Road	TWSC	D	**F**	**69.0**
27	Millbrae Ave/Primrose Ave	TWSC	D	B	11.5
28	Millbrae Ave/Whistler Ave	TWSC	D	B	11.5
29	Millbrae Ave/Langner Ave	TWSC	D	A	9.9
30	Millbrae Ave/Labath Ave	TWSC	D	B	11.7
31	Millbrae Ave/Dowdell Ave	TWSC	D	B	11.4

NOTE: 1Delay in seconds.
2Intersection only exists under Alternative A with project.
Bold text denotes unacceptable LOS.
SOURCE: Kimley-Horn and Associates, 2008; AES, 2007.

Results of the analysis showed that the following intersections would satisfy traffic signal Warrant #3 by year 2008:

- Wilfred Avenue/Stony Point Road
- Wilfred Avenue/Primrose Avenue
- Wilfred Avenue/Labath Avenue
- Wilfred Avenue/Dowdell Avenue
- Project Driveway/Stony Point Road
- Millbrae Avenue/Stony Point Road

The Alternative B 2008 traffic volumes for each study intersection are shown in **Figure 4.8-10.**

These local traffic improvements would reduce the project impact at the Wilfred Avenue/Dowdell Avenue, Wilfred Avenue/Labath Avenue, Wilfred Avenue/Langner Avenue, and Wilfred Avenue/Redwood Drive intersections. Improvements to project impacts would also occur at the Rohnert Park Expressway intersections, including the Rohnert Park Expressway/Rancho Verde Mobile Home Park access.

Mitigation Measures

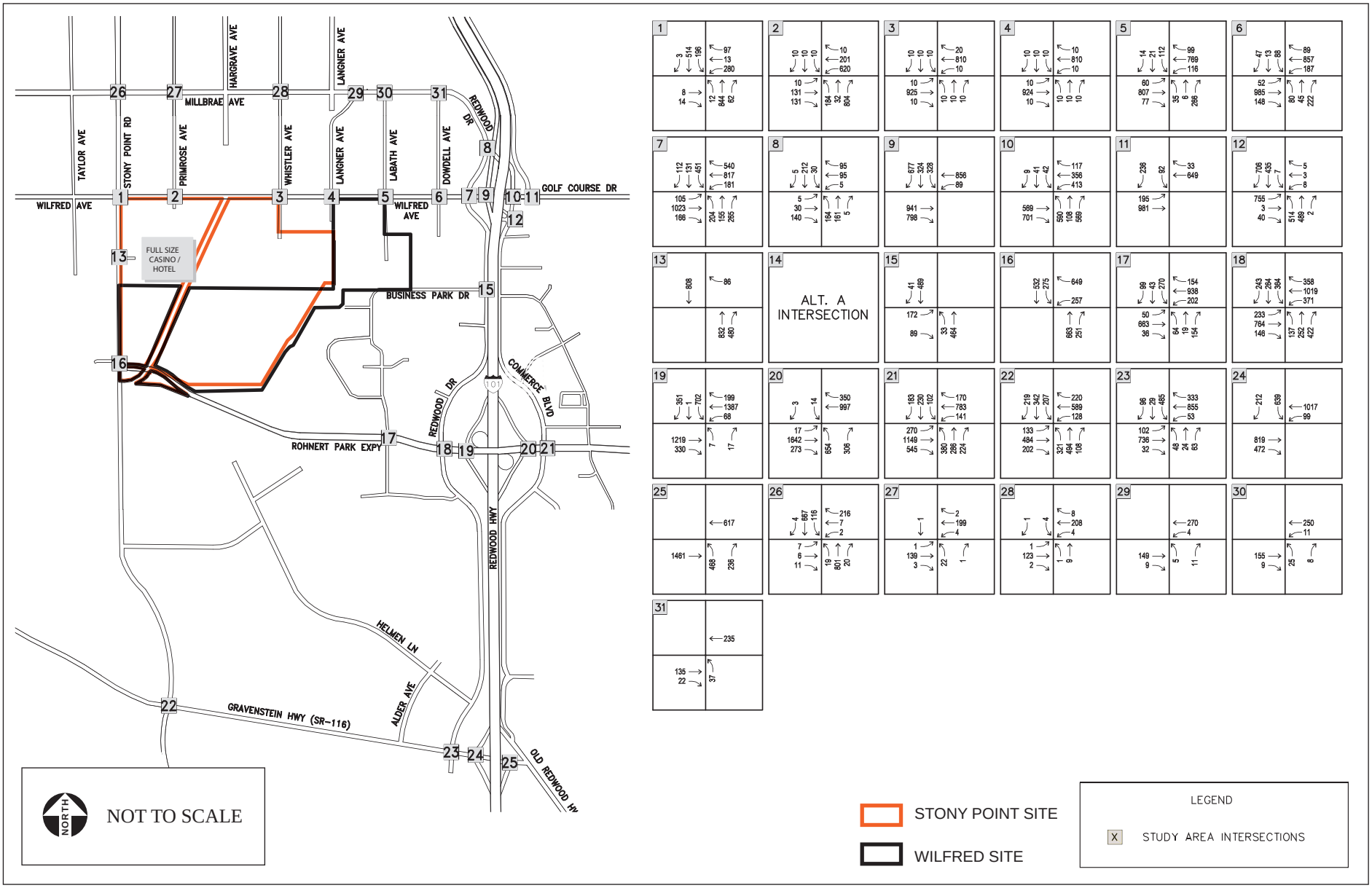
As shown above, Alternative B would have a significant impact on intersections and freeway segments and ramps. Mitigation measures for the 2008 plus project PM traffic volumes are discussed in **Section 5.2.7**. With the incorporation of project mitigation measures a significant impact would remain for two study intersections.

Potential Effects on Intersection Safety

Potential effects on intersection safety are not expected to differ substantially from Alternative A. Therefore, if mitigation measures are implemented as proposed in **Section 5.2.7**, no significant increase in daytime or nighttime collisions would occur for Alternative B.

LAND USE

Land uses surrounding the Stony Point site include rural residences to the north and northeast; commercial areas, a business park and mobile home next to open space to the east; Laguna de Santa Rosa to the south, and agriculture uses to the west. Alternative B would result in the development of a casino/hotel resort on a site that was largely undeveloped, not planned for development, and in a community separator. This development would not, however result in any conflicts with surrounding land uses, such as denial of access or preclusion of allowable uses. As with Alternative A, the project site is currently located within unincorporated Sonoma County; however, under Alternative B the project site would be taken into trust and local land use plans or policies would no longer apply to the project site.



SOURCE: Kimley Horn & Associates, 2006; AES, 2006

Figure 4.8-10

2008 Plus Project PM Traffic Volumes – Alternative B

Note that treated wastewater would flow off-site for a short distance along existing drainage channels and through an existing 54-inch culvert should a seasonal surface water discharge be utilized for treated wastewater disposal (see **Section 2.3.7**). The treated wastewater flow is less than one percent of the flow capacity of the 54-inch culvert (see **Appendix D**). Thus, land use conflicts from exceeding capacity of the culverts (such as overflow or erosion) would not occur. In addition, Alternative B would be developed away from the only concentrated residential development in the surrounding areas (mobile home park) as is the case for the other alternatives. There would be no significant land use conflicts would occur.

The casino/hotel resort would be developed in an area designated as a "community separator" by local planning regulations. This would result in a local loss of open space. As summarized in **Section 2.2.10**, the Tribe has agreed in an MOU with the City of Rohnert Park to make contributions up to $2,700,000 towards the purchase of open space. The Tribe also agreed in the Rohnert Park MOU to contribute $2,664,000 to the City of Rohnert Park. All or a portion of these funds could be used for the purchase or preservation of open space.

In anticipation of development of Alternative B on the Stony Point site, the Tribe permitted the landowners of approximately 1,679 acres of open space along the San Pablo Bay in Southern Sonoma County to negotiate a land purchase agreement with the Sonoma Land Trust by relinquishing their rights to the land under an exclusive option agreement. In addition, the Tribe contributed $75,000 to the Sonoma Land Trust to launch its capital campaign to raise funds for the purchase. The Tribe also plans to keep the southern 182 acres of the Stony Point site as open space. Finally, the Stony Point site represents only a portion of open space present in the area. Rural residential or agricultural lands are currently present on all sides of the Stony Point site except for lands to the southeast. The impact on regional open space on Alternative B would be less than significant.

AGRICULTURE

Alternative B proposes the development of a casino and hotel complex on the northwest portion of the Stony Point site. This portion of the site is currently used as unirrigated pasturelands. Two options exist for wastewater treatment and disposal that could potentially have different impacts to agricultural resources. The development of Alternative B Option 1 (**Figure 2-12**), would directly convert 74.4 acres of rural lands to urban uses. According to the NRCS, 32.2 acres (of the 74.4 acres) are considered prime and unique farmland and 2.7 acres are considered farmland of statewide and local importance. The 74.4 acres represent approximately 0.0056 percent of the farmland in the County. The NRCS evaluated the land at a California Storie Index rating of 41, which indicates that crop growth on the land is limited to a small number of crops and requires special management. The site assessment rating has been computed at 64 out of 160. The combined Farmland Protection Policy Act (FPPA) point total for Alternative B, Option 1 is 105

out of 260 possible points, which is lower than the USDA protection threshold of 160 points (**Appendix P**).

The development of Alternative B, Option 2 (**Figure 2-13**) would directly convert 89.1 acres of rural lands to urban uses. According to the NRCS, 46 acres (of the 89.1 acres) are considered prime and unique farmland and 2.7 acres are considered farmland of statewide and local importance. The 89.1 acres represent approximately 0.0078 percent of the farmland in the County. The NRCS evaluated the land at a California Storie Index rating of 39, which indicates that crop growth on the land is severely limited and requires special management. The site assessment rating has been computed at 64 out of 160. The combined FPPA point total for Alternative B, Option 1 is 103 out of 260 possible points, which is lower than the USDA protection threshold of 160 points (**Appendix P**).

Four parcels totaling 181.71 acres in the southern portion of the Stony Point site are under Williamson Act Contracts. Removing property from the Williamson Act requires an application for non-renewal to be filed. To date, no application for non-renewal has been submitted for any of the parcels within the Stony Point site. Under Alternative B, wastewater disposal Option 2 involves the use of the eastern Williamson Act parcel as a sprayfield. This action would serve as an irrigation source for the parcel and would not require removing the land from agricultural use.

The area proposed for development of the casino and hotel complex is located adjacent to agricultural operations. Since the development would take place on trust land, the Sonoma County Right to Farm Ordinance, which requires that properly conducted agricultural operations shall not be considered a nuisance to the proposed development, would not apply. Proposed parking areas and roadways would function as buffers between agricultural operations and outdoor activity areas, thereby reducing the potential for conflicts to occur. These buffers meet the minimum width requirements specified in the Sonoma County Right to Farm Ordinance, and accordingly would be sufficient to insure that adjacent agricultural operations would not result in signification conflicts with the proposed development and would minimize the likelihood that the Tribe would seek to curtain nearby agricultural activities due to nuisance concerns. Furthermore, the Sonoma County Right to Farm Ordinance will continue to protect neighboring farmers from nuisance suits brought by the Tribe or potential patrons on the project site.

Given the inferior quality of agricultural soils where development is proposed, the combined FPPA score of no more than 105, the retention of the southern Williamson Act parcels for agricultural purposes, and the avoidance of land use conflicts with adjacent agricultural operations, Alternative B would have a less-than-significant impact on agriculture.

4.8.4 ALTERNATIVE C – NORTHEAST STONY POINT CASINO

TRANSPORTATION AND CIRCULATION

This subsection discusses the build-out traffic conditions with the project trips calculated for Alternative C added to the baseline condition.

Site Access

The sole project access is from Wilfred Avenue from the south leg of Whistler Avenue. This approach is assumed to operate as a full movement intersection with no turn limitations. Currently, the access is unsignalized.

Construction Impacts

It is estimated that 350,000 cubic yards of earthwork will be required to develop the site for Alternative C. It is expected that construction will involve 350,000 cubic yards of fill that would be taken from an on-site location separated from the development area which would generate traffic on the surrounding roadways. The on-site separated location is the southern portion of the Wilfred site where truck traffic will travel on an approximately 5 mile loop from Rohnert Park Expressway to Stony Point Road to Wilfred Avenue to Redwood and back to Rohnert Park Expressway. Trucks would leave/enter the on-site fill location at the Rohnert Park Expressway driveway just east of the Bellevue-Wilfred Channel. The trucks would leave/enter the development area at the Wilfred/Whistler intersection. Assuming that the trips were spread out over a period of 5 months, with trucks operating at 6 days per week, 10 hours per day, this would result in 243 trucks making 486 trip ends on an average day with 25 trucks making 50 trip ends in any given hour (including potentially the peak hour) on the 5 mile loop.

Once the site is graded, the project will also require the importation of construction material including, raw materials, the building pad, concrete, the parking lot base and asphalt paving. This results in a material importation of 3,000 to 4,000 truckloads of material which will occur over approximately 23 months. The importation will require approximately 8 to 9 truck trips per day outside of the off-site fill delivery. Each truck will generate 1 inbound and 1 outbound trip, accounting for 2 trips. Therefore, during the peak construction period the project will generate about 18 truck trips ends per day.

Because the import truck traffic generates significantly less traffic than the project's equivalent passenger car traffic generation (even when added to employee trips) and the vehicle path travels through generally uncongested intersection movements, it should not significantly impact the capacity of any study intersection. The construction traffic impact would represent a temporary and less-than-significant inconvenience to travelers on affected roadways and area residents. However, this level of truck traffic may have an impact on quality of life including increased noise, visual impact, and a perception of lower traffic safety. Tracking of debris and mud onto

roadways may create a perceptual impact as well as a physical impact. Mitigation measures are included in **Section 5.2.7** to minimize the impacts associated with construction.

Project Trip Generation

As summarized in **Table 4.8-11**, Alternative C would generate 1,384 new trips to the circulation network in the AM and 2,287 new trips in the PM peak hour. Since Alternatives A, B and C are all proposed casinos with the same amount of gaming space and hotel space, trip generation numbers are the same for all three alternatives. Although project trip generation was prepared for both the AM and PM peak hours, only the PM peak hour was evaluated in the traffic study as it represents the time period for which the project would contribute to the greatest amount of congestion and potential for mitigation. As such, the weekday PM peak hour is used to evaluate potential impacts from the project. **Figure 4.8-11** shows the project-generated PM traffic volumes for Alternative C.

Sometimes developments also attract trips that are already on the road and stop as they pass by the site. These are not new vehicle trips but are considered to be pass-by trips. Although it is likely that some trips to the site would be pass-by trips, no empirical data was readily available to determine a reasonable pass-by rate. Therefore, pass-by trips are conservatively not assumed in the Alternative C analysis.

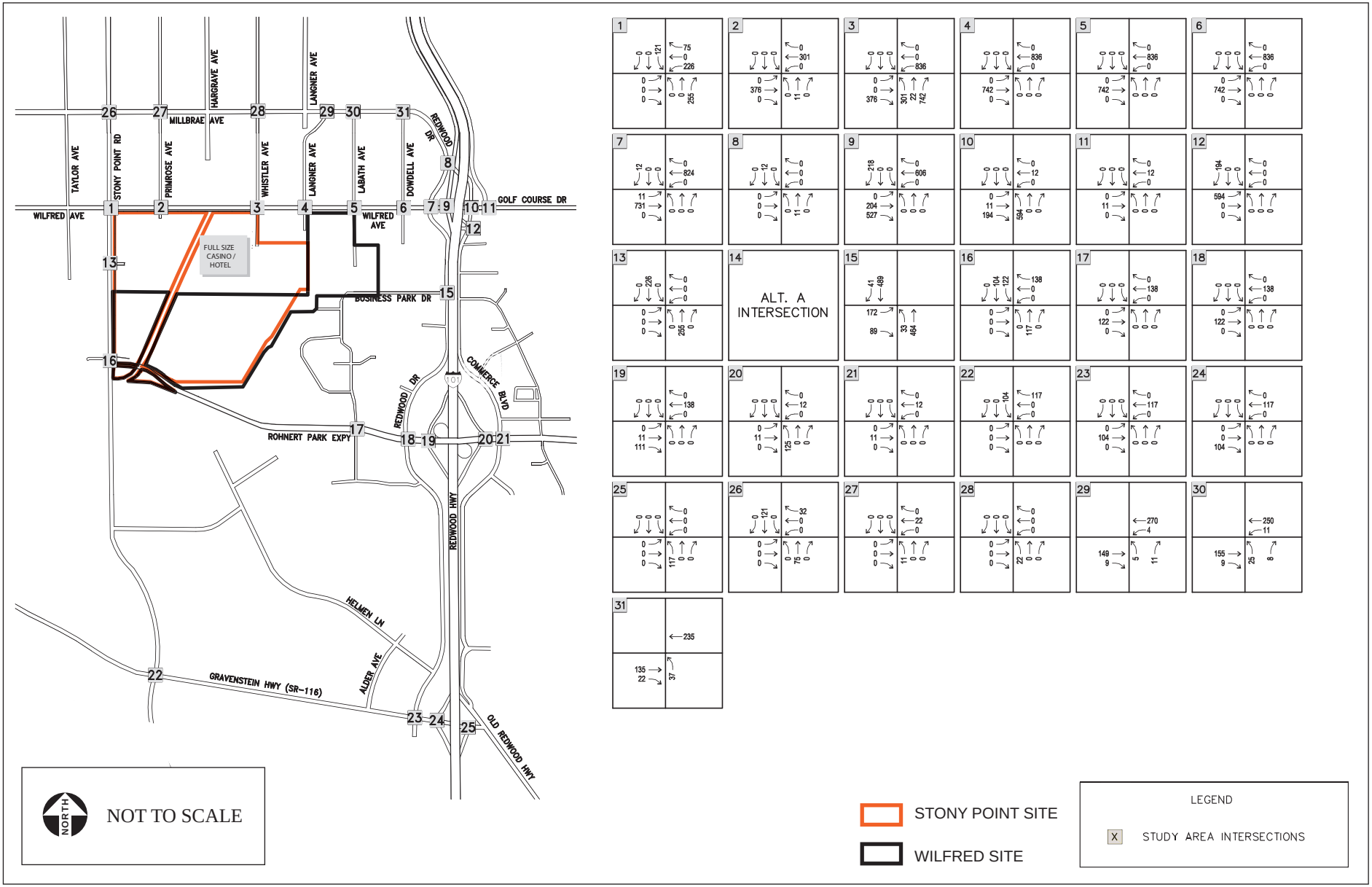
TABLE 4.8-11
PROJECT TRIP GENERATION - ALTERNATIVE C

Land Use	Trips						
	Daily Total	AM Peak Hour			PM Peak Hour		
		Entering	Exiting	Total	Entering	Exiting	Total
Casino & Entertainment 450,000 sf[1]	17,744	930	398	1,328	1,181	1,047	2,228
Hotel & Spa 300 room[2]	817	34	22	56	31	28	59
Net New Vehicle Trips	*18,261*	*964*	*420*	*1,384*	*1,212*	*1,075*	*2,287*

NOTES: 1 sf = square foot
2 Trip rate is ITE Land Use Code 310 – Hotel. Rate reduced by 2/3 to account for internal capture to/from casino.
SOURCE: Kimley-Horn and Associates, 2008; AES, 2007.

Project Trip Distribution and Assignment

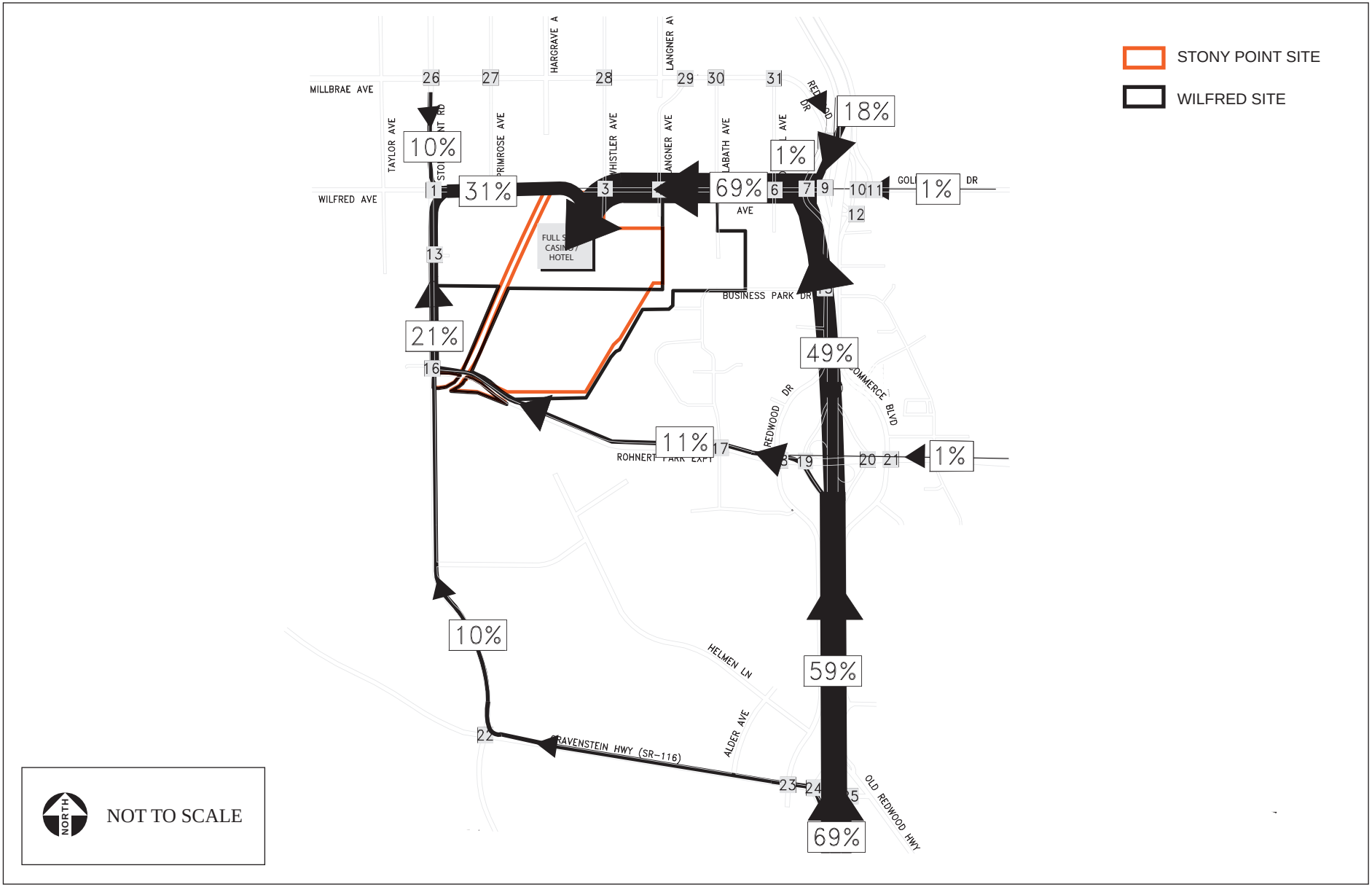
It is estimated that approximately 30 percent of the project traffic would be distributed to destinations north of the site, with the remaining 70 percent distributed south of the site. For a conservative analysis, no project traffic is assumed to be generated or attracted in the immediate



SOURCE: Kimley Horn & Associates, 2006; AES, 2006

Figure 4.8-11

2008 Project Generated PM Traffic Volumes – Alternative C



SOURCE: Kimley Horn & Associates, 2006; AES, 2006

Figure 4.8-12
Project Trip Distribution(In) – Alternative C

vicinity of the Wilfred site. The project traffic distribution for Alternative C is shown in **Figures 4.8-12** and **4.8-13**.

Freeway Segment and Ramp Performance

Project trips generated by the proposed casino and hotel were added to the year 2008 forecast freeway volumes. Traffic analyses were completed to evaluate the operation of the following freeway segments and ramps in the year 2008 Plus Alternative C. Freeway segment analyses were limited to the mix-use travel lanes, which are expected to have significantly more congestion than the future HOV lanes.

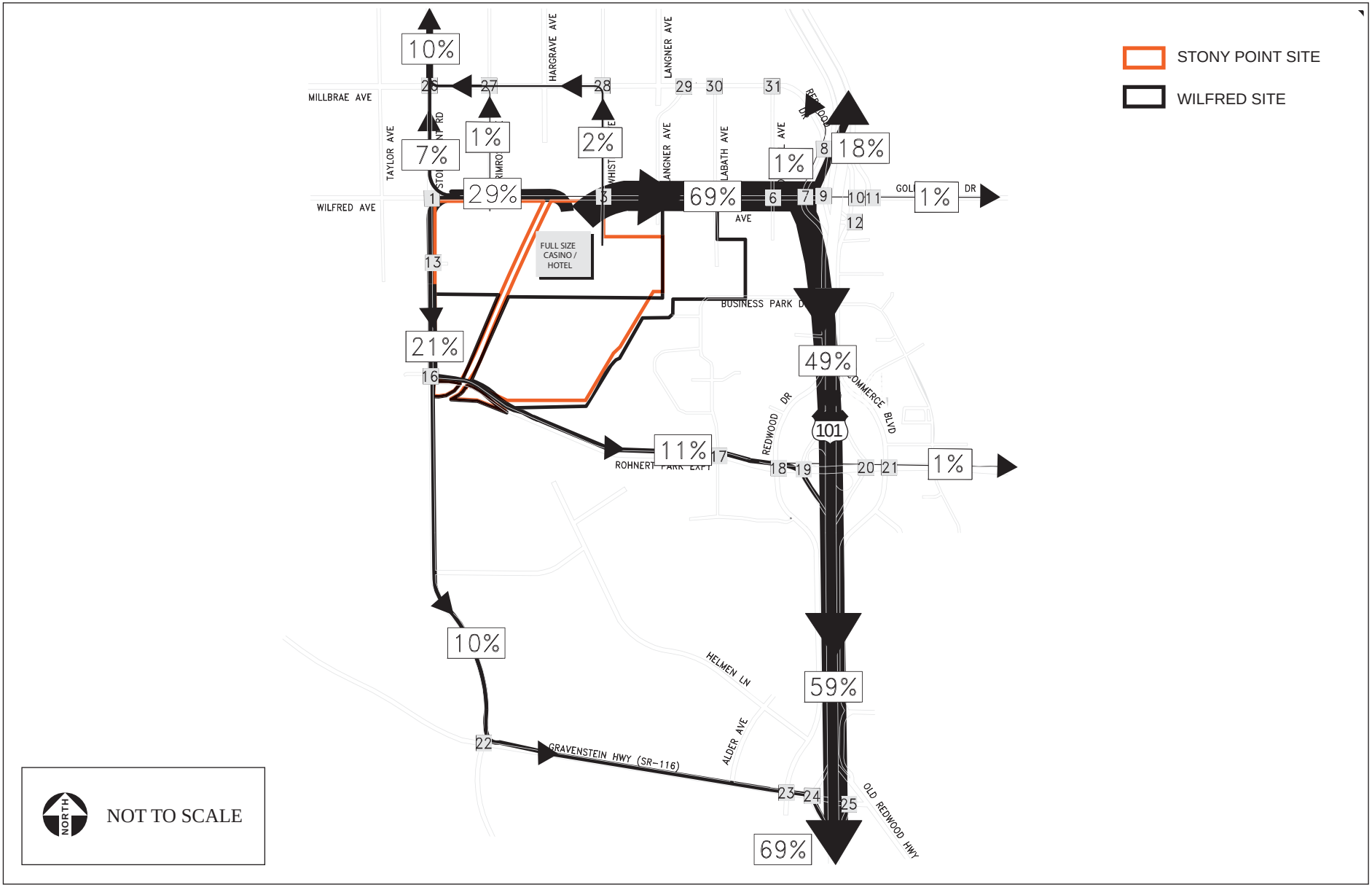
Table 4.8-12 summarizes the 2008 Plus Alternative C freeway segment and ramp performance condition. As shown in **Table 4.8-12**, the following freeway segments and ramps would operate unacceptably in 2008 after the addition of Alternative C traffic:

- Wilfred Avenue SB On-Ramp
- US-101 between Rohnert Park Expressway and Wilfred Avenue (SB)
- Rohnert Park Expressway SB Off-Ramp

Peak Hour Intersection Performance

The 2008 Without Project Condition traffic volumes were combined with vehicle trips expected to be generated by Alternative C. **Table 4.8-13** summarizes the 2008 Plus Alternative C Peak Hour intersection conditions. Signal controls are listed as TS for a signalized intersection and TWSC for a two-way stop-controlled intersection. Additional detail is provided in **Appendix O**. The following intersections would fail to meet acceptable level of service thresholds based on established significance criteria and with the addition of project-related traffic:

- Wilfred Avenue/Stony Point Road
- Wilfred Avenue/Whistler Avenue
- Wilfred Avenue/Redwood Drive
- Wilfred Avenue/Langner Avenue
- Wilfred Avenue/Labath Avenue
- Wilfred Avenue/Dowdell Avenue
- Millbrae Avenue/Stony Point Road
- Golf Course Drive/Commerce Boulevard
- US-101 NB Ramps/Commerce Boulevard
- Rohnert Park Expressway/ Commerce Boulevard



SOURCE: Kimley Horn & Associates, 2006; AES, 2006

Figure 4.8-13
Project Trip Distribution (Out) – Alternative C

TABLE 4.8-12
FREEWAY SEGMENT AND RAMP PERFORMANCE
2008 - ALTERNATIVE C

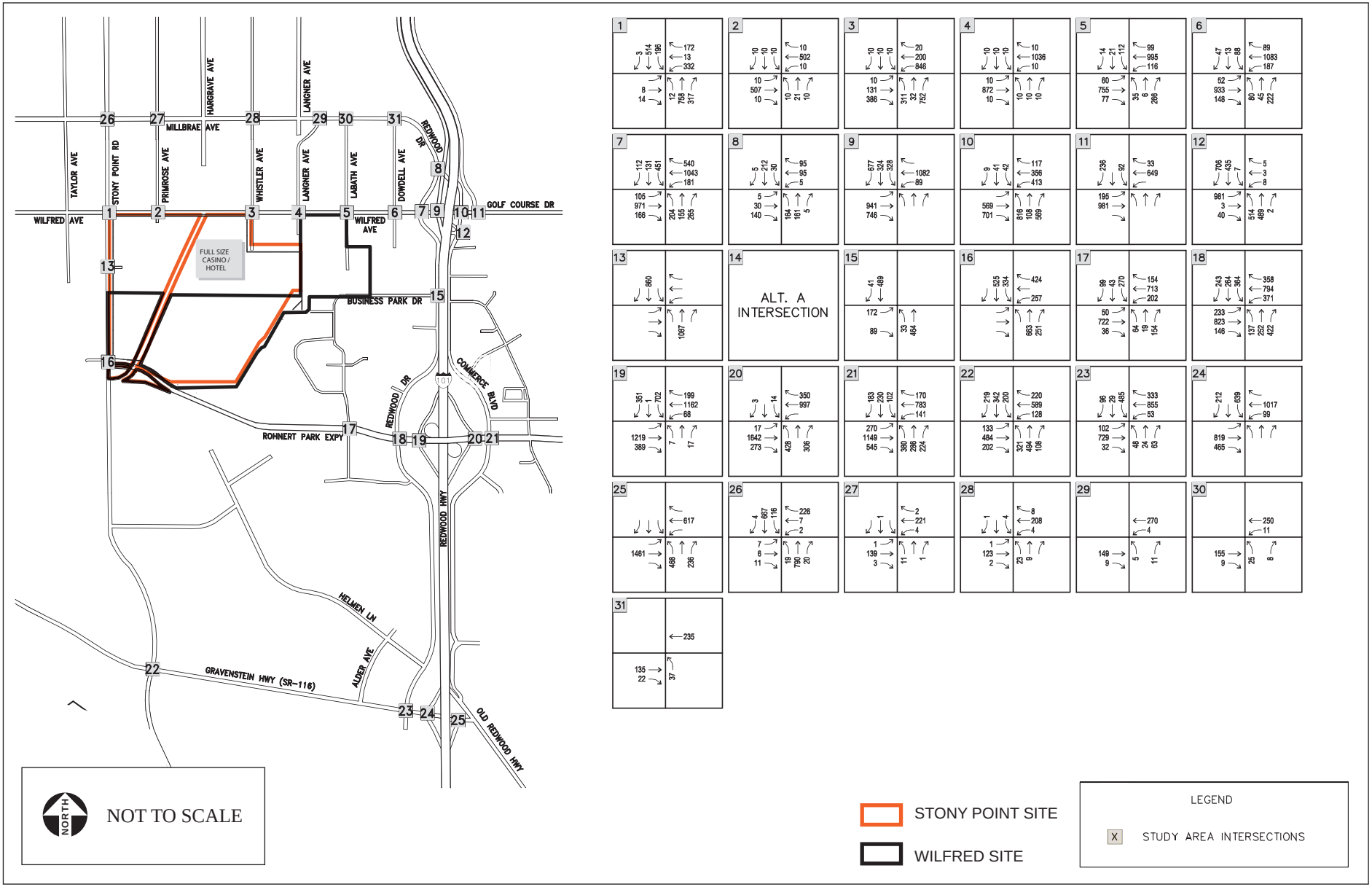
US-101 Section/Ramp	Criteria LOS	2008 with Alternative C	Density (pc/mi/ln)[1]
Northbound			
US-101 South of SR-116	E	C	25.1
SR-116 Off-ramp	E	D	31.8
SR-116 On-ramp	E	D	33.4
US-101 between SR-116 and Rohnert Park Expressway (NB)	E	D	28.8
Rohnert Park Expressway NB Off-Ramp	E	D	32.5
Rohnert Park Expressway NB On-Ramp (Loop Ramp)	E	D	31.4
Rohnert Park Expressway NB On-Ramp	E	D	30.4
US-101 between Rohnert Park Expressway and Wilfred Ave (NB)	E	D	30.4
Wilfred Ave NB Off-Ramp	E	D	30.4
Wilfred Ave NB On-Ramp	E	D	33.9
US-101 between Wilfred Ave and Santa Rosa Avenue	E	D	33.9
Santa Rosa Avenue NB Off-ramp	E	D	33.9
US-101 North of Santa Rosa Avenue	E	C	23.8
Southbound			
US-101 North of Santa Rosa Avenue	E	D	26.1
Santa Rosa Avenue On-ramp	E	*//*[2]	*//*[2]
US-101 between Santa Rosa Avenue and Wilfred Ave (SB)	E	E	36.2
Wilfred Ave SB Off-Ramp	E	E	40.8
Wilfred Ave SB On-Ramp	E	**F**	**46.6**
US-101 between Rohnert Park Expressway and Wilfred Ave (SB)	E	**F**	**46.6**
Rohnert Park Expressway SB Off-Ramp	E	**F**	**46.6**
Rohnert Park Expressway SB On-Ramp (Loop Ramp)	E	D	33.4
Rohnert Park Expressway SB On-Ramp	E	D	32.8
US-101 between Rohnert Park Expressway and SR-116 (SB)	E	D	27.1
SR-116 SB Off-ramp	E	D	32.5
SR-116 SB On-ramp	E	E	35.7
US-101 South of SR-116	E	D	27.4

NOTE: 1 - pc/mi/ln = passenger cars per mile per lane.
2 - Intersection no longer exists due to planned roadway improvement.
Bold text denotes unacceptable LOS.
SOURCE: Kimley-Horn and Associates 2008; AES 2007.

TABLE 4.8-13
INTERSECTION LOS – ALTERNATIVE C

	Intersection	Signal Control	Criteria	2008 with Alternative C	
				LOS	Delay[1]
1	Wilfred Avenue/Stony Point Road	TWSC	D	**F**	**OVRFL**
2	Wilfred Avenue/Primrose Avenue	TWSC	D	C	24.7
3	Wilfred Avenue/Whistler Avenue	TWSC	D	**F**	**OVRFL**
4	Wilfred Avenue/Langner Avenue	TWSC	D	**F**	**132.1**
5	Wilfred Avenue/Labath Avenue	TWSC	D	**F**	**OVRFL**
6	Wilfred Avenue/Dowdell Avenue	TWSC	D	**F**	**OVRFL**
7	Wilfred Avenue/Redwood Drive	TS	D	**F**	**3334.5**
8	Redwood Drive/Commerce Boulevard	TS	C	C	24.9
9	Wilfred Avenue/US-101 SB Ramps	TS	D	C	33.8
10	Golf Course Drive/Commerce Boulevard	TS	D	**F**	**116.7**
11	Golf Course Drive/Roberts Lake Road	TS	C	B	18.5
12	US-101 NB Ramps/Commerce Boulevard	TS	D	**F**	**83.8**
13	Project Driveway/Stony Point Road	TWSC	D	A	0.0
14	Business Park Drive/Labath Avenue	TWSC	D	/[2]	/[2]
15	Business Park Drive/Redwood Drive	TWSC	D	D	27.5
16	Rohnert Park Expressway/Stony Point Road	TS	D	D	39.8
17	Rohnert Park Expressway/Labath Avenue	TS	C	C	29.6
18	Rohnert Park Expressway/Redwood Drive	TS	C	C	24.9
19	Rohnert Park Expressway/US-101 SB Ramps	TS	D	B	16.5
20	Rohnert Park Expressway/US-101 NB Ramps	TS	D	B	13.6
21	Rohnert Park Expressway/Commerce Boulevard	TS	C	**D**	**43.0**
22	SR-116/Stony Point Road	TS	D	D	43.0
23	SR-116/Redwood Drive	TS	D	C	28.3
24	SR-116/SB US-101 Ramps	TS	D	B	19.3
25	SR-116/NB US-101 Off-ramp	TS	D	B	12.1
26	Millbrae Ave/Stony Point Road	TWSC	D	**F**	**69.6**
27	Millbrae Ave/Primrose Ave	TWSC	D	B	11.7
28	Millbrae Ave/Whistler Ave	TWSC	D	B	11.6
29	Millbrae Ave/Langner Ave	TWSC	D	A	9.9
30	Millbrae Ave/Labath Ave	TWSC	D	B	11.7
31	Millbrae Ave/Dowdell Ave	TWSC	D	B	11.4

NOTE: 1 - pc/mi/ln = passenger cars per mile per lane.
2 - Intersection only exists under Alternative A with project.
Bold text denotes unacceptable LOS.
SOURCE: Kimley-Horn and Associates 2008; AES 2007.



SOURCE: Kimley Horn & Associates, 2006; AES, 2006

Figure 4.8-14

2008 Plus Project PM Traffic Volumes – Alternative C

The Alternative C 2008 PM peak traffic volumes for each study intersection are shown in **Figure 4.8-14.**

Results of the analysis showed that the following intersections would satisfy traffic signal Warrant #3 by year 2008:

- Stony Point Road/Wilfred Avenue
- Whistler Avenue/Wilfred Avenue
- Labath Avenue/Wilfred Avenue
- Dowdell Avenue/Wilfred Avenue
- Millbrae Avenue/Stony Point Road

Mitigation Measures

As shown above, Alternative C would have a significant impact on intersections and freeway segments and ramps. Mitigation measures for Alternative C are discussed in **Section 5.2.7** of this document. After the incorporation of project mitigation measures, a significant impact would remain at one study intersection.

Potential Effects on Intersection Safety

Potential effects on intersection safety are not expected to differ substantially from Alternative A. Therefore, if mitigation measures are implemented as proposed in **Section 5.2.7**, no significant increase in daytime or nighttime collisions would occur.

LAND USE

Alternative C's effects on land use would be similar to Alternative B, since the development would be similar in size and scope to Alternative B, and would occur in the northern portion of the Stony Point site. Moreover, under Alternative C the project site would be taken into trust and local land use plans or policies would no longer apply to the project site. As with Alternative B, a less-than-significant land use effect would result. The effects on open space are similar to those of Alternative B and would remain less than significant, although Alternative C's development footprint would be slightly larger than the footprint for Alternative B.

AGRICULTURE

Alternative C proposes the development of a casino and hotel complex on the northeast portion of the Stony Point site. This portion of the site is currently used as unirrigated pasturelands. As with Alternative B, two options exist for wastewater treatment and disposal that could potentially have different impacts to agricultural resources. The development of Alternative C, Option 1 (**Figure 2-17**), would directly convert 80.9 acres of rural lands to urban uses. According to the NRCS, 75 acres (of the 80.9 acres) are considered prime and unique farmland while none of the

land to be converted is considered farmland of statewide and local importance. The 80.9 acres represent approximately 0.012 percent of the farmland in the County. The NRCS evaluated the land at a California Storie Index rating of 41, which indicates that crop growth on the land is limited to a small number of crops and requires special management. The site assessment rating of the Stony Point site has been computed at 64 out of 160. The combined FPPA point total for Alternative C, Option 1 is 105 out of 260 possible points, which is lower than the USDA protection threshold of 160 points (**Appendix P**).

The development of Alternative C, Option 2 (**Figure 2-18**), would directly convert 96.6 acres of rural lands to urban uses. According to the NRCS, 72.8 acres (of the 96.6 acres) are considered prime and unique farmland and 2.9 acres are considered farmland of statewide and local importance. The 96.6 acres represents approximately 0.012 percent of the farmland in the County. The NRCS evaluated the land at a California Storie Index rating of 39, which indicates that crop growth on the land is severely limited and requires special management. The site assessment rating has been computed at 64 out of 160. The combined FPPA point total for Alternative C, Option 2 is 103 out of 260 possible points, which is lower than the USDA protection threshold of 160 points (**Appendix P**).

As mentioned under Alternative B, the four parcels in the southern portion of the Stony Point site are under Williamson Act Contracts. To date, no application for non-renewal of the contracts has been submitted for any of the parcels within the Stony Point site. Under Alternative C, Option 2 for wastewater disposal involves the use of the eastern William Act parcel as a sprayfield. This action would serve as an irrigation source for the parcel and would not require removing the land from agricultural use.

As with Alternative B, the area proposed for development of the casino and hotel complex is located adjacent to agricultural operations. Since the development would take place on trust land, the Sonoma County Right to Farm Ordinance, which requires that properly conducted agricultural operations shall not be considered a nuisance to the proposed development, would not apply. Proposed parking areas and roadways would function as buffers between agricultural operations and outdoor activity areas, thereby reducing the potential for conflicts to occur. These buffers meet the minimum width requirements specified in the Sonoma County Right to Farm Ordinance, and accordingly would be sufficient to insure that adjacent agricultural operations would not result in signification conflicts with the proposed development and would minimize the likelihood that the Tribe would seek to curtain nearby agricultural activities due to nuisance concerns. Furthermore, the Sonoma County Right to Farm Ordinance will continue to protect neighboring farmers from nuisance suits brought by the Tribe or potential patrons on the project site.

Given the inferior quality of agricultural soils where development is proposed, the combined FPPA score of no more than 101, the retention of the southern Williamson Act parcels for

agricultural purposes, and the avoidance of land use conflicts with adjacent agricultural operations, Alternative C would have a less-than-significant impact on agriculture.

4.8.5 ALTERNATIVE D – REDUCED INTENSITY (STONY POINT SITE)

TRANSPORTATION/CIRCULATION

This subsection discusses the build-out traffic conditions with the project trips calculated for Alternative D added to the baseline condition.

Site Access

The site access for this alternative is the same as for Alternative B.

Construction Impacts

It is estimated that 150,000 cubic yards of earthwork would be required to develop the site for Alternative D. It is expected that construction would involve 150,000 cubic yards of fill that would be taken from an on-site location separated from the development area which would generate traffic on the surrounding roadways. The on-site separated location is the southern portion of the Stony Point site where truck traffic will travel on an approximately 5 mile loop from Rohnert Park Expressway to Stony Point Road to Wilfred Avenue to Redwood and back to Rohnert Park Expressway. Trucks would leave/enter the on-site fill location at the Rohnert Park Expressway driveway just east of the Bellevue-Wilfred Channel. The trucks would leave/enter the development area at the Stony Point Road/Project Driveway intersection. Assuming that the trips were spread out over a period of 4 months, with trucks operating at 6 days per week, 10 hours per day, this would result in 131 trucks making 262 trip ends on an average day with 13 trucks making 26 trip ends in any given hour (including potentially the peak hour) on the 5 mile loop.

Once the site is graded, the project would also require the importation of construction material including, raw materials, the building pad, concrete, the parking lot base and asphalt paving. This results in a material importation of 3,000 to 4,000 truckloads of material which would occur over approximately 23 months. The importation would require approximately 8 to 9 truck trips per day outside of the off-site fill delivery. Each truck would generate 1 inbound and 1 outbound trip, accounting for 2 trips. Therefore, during the peak construction period the project would generate about 18 truck trips ends per day.

Because the import truck traffic generates significantly less traffic than the project's equivalent passenger car traffic generation (even when added to employee trips) and the vehicle path travels through generally uncongested intersection movements, it should not significantly impact the capacity of any study intersection. The construction traffic impact would represent a temporary and less-than-significant inconvenience to travelers on affected roadways and area residents.

However, this level of truck traffic may have an impact on quality of life including increased noise, visual impact, and a perception of lower traffic safety. Tracking of debris and mud onto roadways may create a perceptual impact as well as a physical impact. Mitigation measures are included in **Section 5.2.7** to minimize the impacts associated with construction.

Project Trip Generation

As summarized in **Table 4.8-14,** Alternative D would generate 949 new trips to the circulation network in the AM peak hour and 1,580 new trips in the PM peak hour. Although project trip generation was prepared for both the AM and PM peak hours, only the PM peak hour was evaluated in the traffic study as it represents the time period for which the project would contribute to the greatest amount of congestion and potential mitigation. In addition, only PM peak hour future year traffic forecast data was available from the City of Rohnert Park to complete a cumulative analysis.

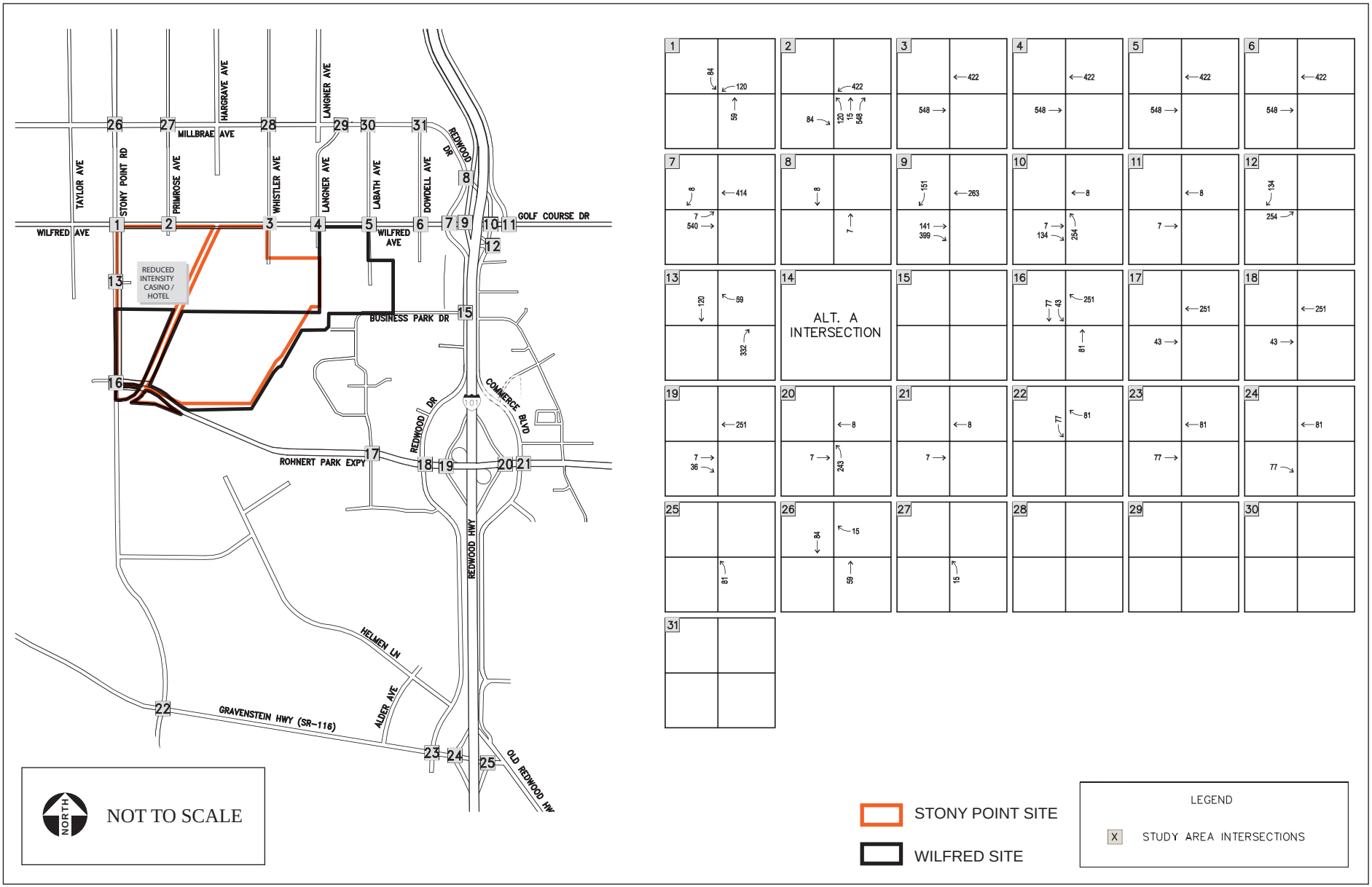
TABLE 4.8-14
PROJECT TRIP GENERATION - ALTERNATIVE D

Land Use	Trips						
	Daily Total	AM Peak Hour			PM Peak Hour		
		Entering	Exiting	Total	Entering	Exiting	Total
Casino & Entertainment 315,100 square feet	12,424	651	279	930	827	733	1,560
Hotel 100 room[1]	272	12	7	19	11	9	20
Net New Vehicle Trips	*12,696*	*663*	*286*	*949*	*838*	*742*	*1,580*

NOTE: 1 Trip rate is ITE Land Use Code 310 – Hotel. Rate reduced by 2/3 to account for internal capture to/from casino.
SOURCE: Kimley-Horn and Associates, 2008; AES, 2007.

Sometimes developments also attract trips that are already on the road and stop as they pass by the site. These are not new vehicle trips but are considered to be pass-by trips. Although it is likely that some trips to the site would be pass-by trips, no empirical data was readily available to determine a reasonable pass-by rate. Therefore, pass-by trips are conservatively not assumed in the Alternative D analysis.

Figure 4.8-15 shows the project-generated PM traffic volumes as for Alternative D.



SOURCE: Kimley Horn & Associates, 2006; AES, 2006

Figure 4.8-15

2008 Project Generated PM Traffic Volumes – Alternative D

Project Trip Distribution and Assignment

The project trip distribution and assignment for this alternative is the same as Alternative B. The project traffic distribution is shown in **Figures 4.8-16** and **4.8-17**.

Freeway Segment and Ramp Performance

Table 4.8-15 summarizes the 2008 Plus Alternative D freeway segment and ramp performance condition. Under 2008 with Alternative D conditions, the following freeway segments and ramps are forecast to operate at an unacceptable LOS:

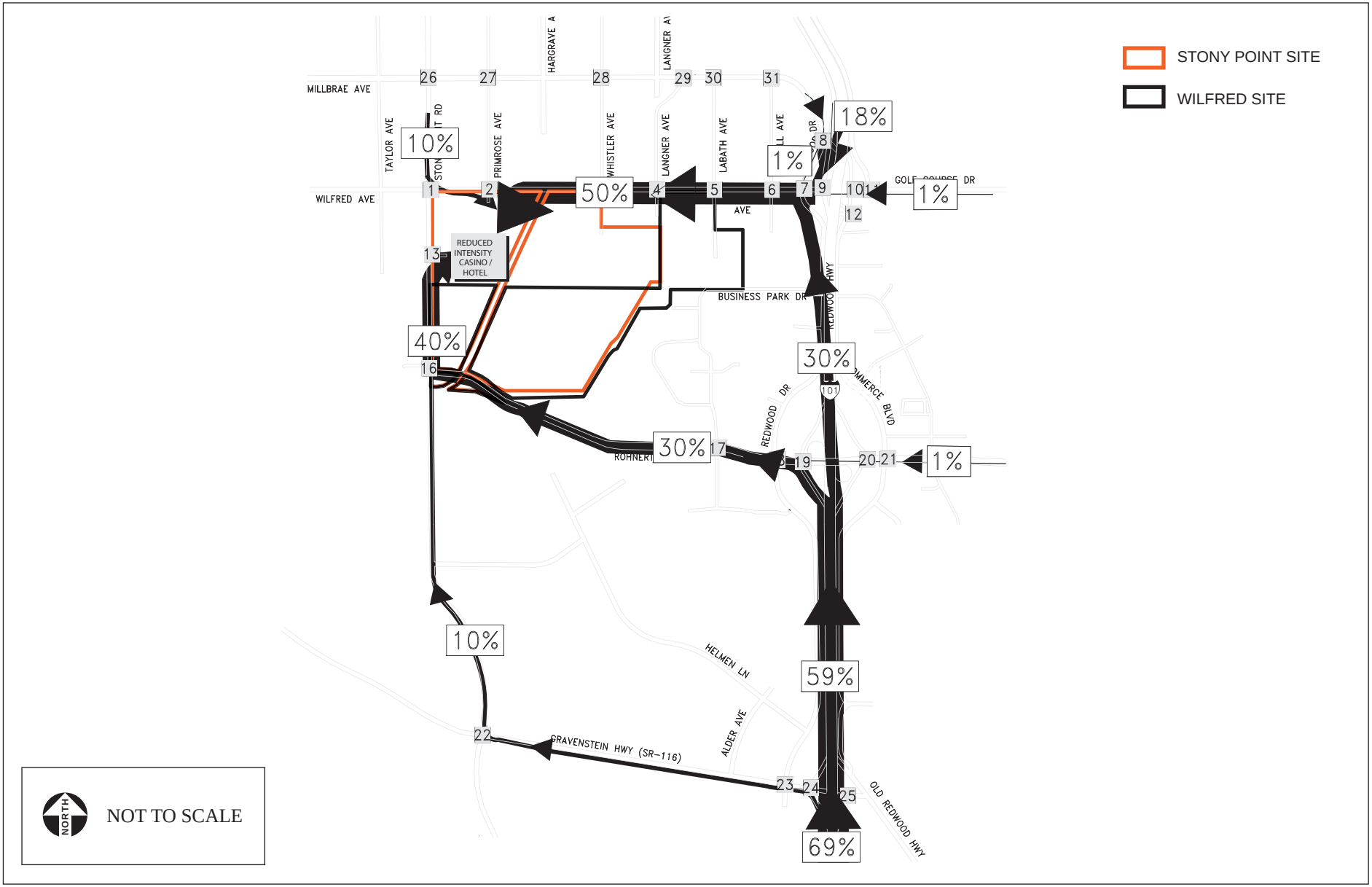
- Wilfred Ave. SB On-Ramp
- US-101 between Rohnert Park Expressway and Wilfred Ave. (SB)
- Rohnert Park Expressway SB Off-Ramp

Peak Hour Intersection Performance

- The 2008 Without Project Condition traffic volumes were combined with vehicle trips expected to be generated by Alternative D. **Table 4.8-16** summarizes the 2008 Plus Alternative D Peak Hour intersection conditions. Signal controls are listed as TS for a signalized intersection and TWSC for a two-way stop-controlled intersection. Additional detail is provided in **Appendix O**.

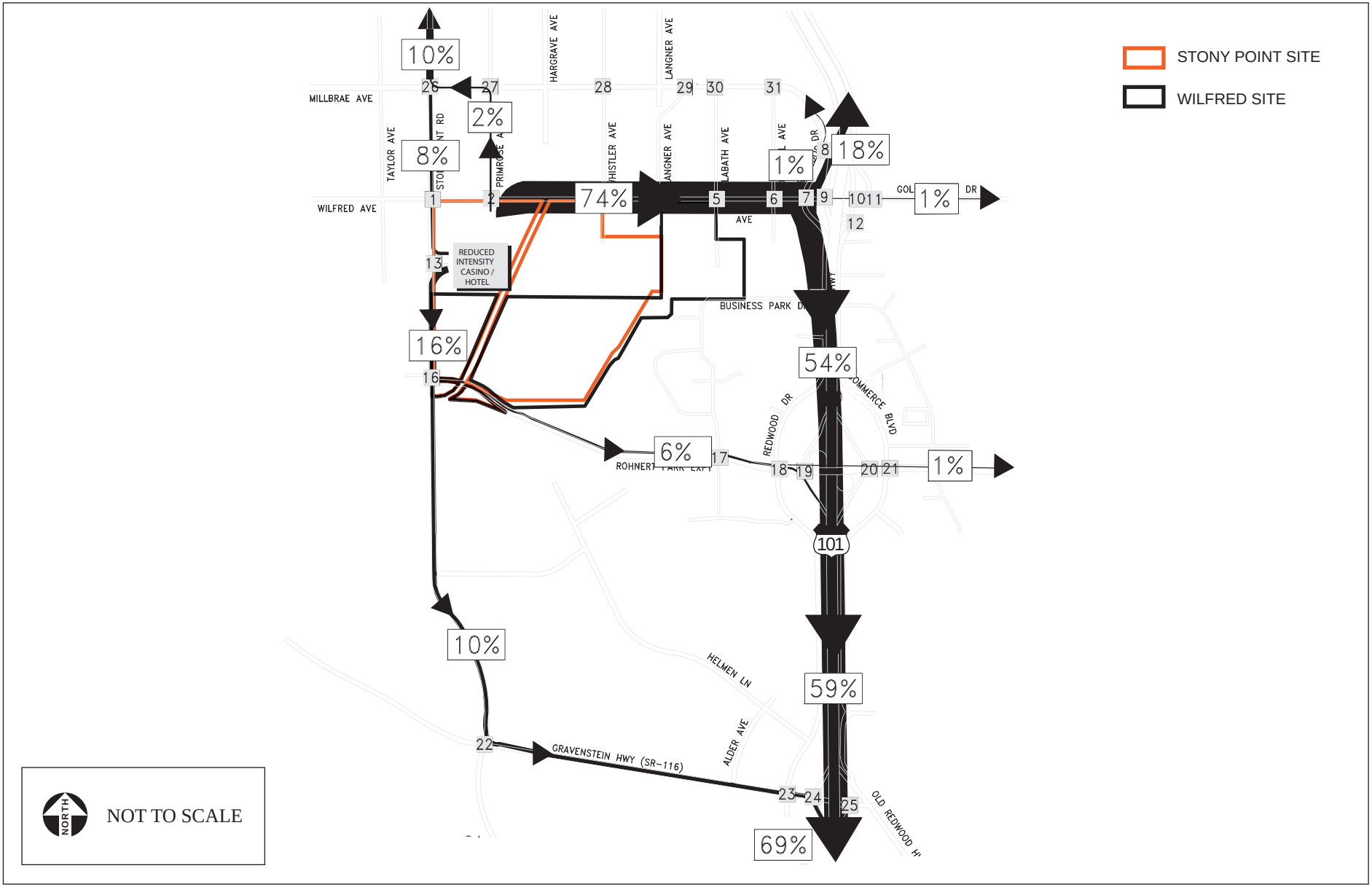
As shown in the results, the following intersections will fail to meet acceptable level of service thresholds based on established significance criteria and with the addition of project-related traffic:

- Wilfred Avenue/Stony Point Road
- Wilfred Avenue/Primrose Avenue
- Wilfred Avenue/Redwood Drive
- Wilfred Avenue/Labath Avenue
- Wilfred Avenue/Dowdell Avenue
- Wilfred Avenue/Langner Avenue
- Wilfred Avenue/Whistler Avenue
- Millbrae Avenue/Stony Point Road
- Golf Course Drive/Commerce Boulevard
- Commerce Boulevard/US-101 NB Ramps
- Rohnert Park Expressway/ Commerce Boulevard



SOURCE: Kimley Horn & Associates, 2006; AES, 2006

Figure 4.8-16
Project Trip Distribution(In) – Alternative D



SOURCE: Kimley Horn & Associates, 2006; AES, 2006

Figure 4.8-17
Project Trip Distribution (Out) – Alternative D

TABLE 4.8-15
FREEWAY SEGMENT AND RAMP PERFORMANCE
2008 - ALTERNATIVE D

US-101 Section/Ramp	Criteria LOS	2008 with Alternative D	Density (pc/mi/ln)[1]
Northbound			
US-101 South of SR_116	E	C	23.1
SR-116 Off-ramp	E	D	31.8
SR-116 On-ramp	E	D	33.4
US-101 between SR-116 and Rohnert Park Expressway (NB)	E	D	27.0
Rohnert Park Expressway NB Off-Ramp	E	D	32.5
Rohnert Park Expressway NB On-Ramp (Loop Ramp)	E	D	31.4
Rohnert Park Expressway NB On-Ramp	E	C	26.8
US-101 between Rohnert Park Expressway and Wilfred Ave (NB)	E	C	26.8
Wilfred Ave NB Off-Ramp	E	C	26.8
Wilfred Ave NB On-Ramp	E	D	32.8
US-101 between Wilfred Ave and Santa Rosa Avenue	E	D	32.8
Santa Rosa Avenue NB Off-ramp	E	D	32.8
US-101 North of Santa Rosa Avenue	E	C	23.2
Southbound			
US-101 North of Santa Rosa Avenue	E	C	25.5
Santa Rosa Avenue On-ramp	E	// [2]	// [2]
US-101 between Santa Rosa Avenue and Wilfred Ave (SB)	E	D	31.0
Wilfred Ave SB Off-Ramp	E	E	40.2
Wilfred Ave SB On-Ramp	E	**F**	**43.3**
US-101 between Rohnert Park Expressway and Wilfred Ave (SB)	E	**F**	**43.3**
Rohnert Park Expressway SB Off-Ramp	E	**F**	**43.3**
Rohnert Park Expressway SB On-Ramp (Loop Ramp)	E	D	33.4
Rohnert Park Expressway SB On-Ramp	E	D	32.8
US-101 between Rohnert Park Expressway and SR-116 (SB)	E	C	25.5
SR-116 SB Off-ramp	E	D	32.5
SR-116 SB On-ramp	E	E	35.7
US-101 South of SR-116	E	D	25.5

NOTE: 1- pc/mi/ln = passenger cars per mile per lane.
2 -Intersection no longer exists due to planned roadway improvement.
SOURCE: Kimley-Horn and Associates 2008; AES 2007.

TABLE 4.8-16
INTERSECTION LOS – ALTERNATIVE D

	Intersection	Signal Control	Criteria	2008 with Alternative D	
				LOS	Delay[1]
1	Wilfred Avenue/Stony Point Road	TWSC	D	**F**	**OVRFL**
2	Wilfred Avenue/Primrose Avenue	TWSC	D	**F**	**743.6**
3	Wilfred Avenue/Whistler Avenue	TWSC	D	**E**	**35.5**
4	Wilfred Avenue/Langner Avenue	TWSC	D	**E**	**35.1**
5	Wilfred Avenue/Labath Avenue	TWSC	D	**F**	**OVRFL**
6	Wilfred Avenue/Dowdell Avenue	TWSC	D	**F**	**OVRFL**
7	Wilfred Avenue/Redwood Drive	TS	D	**F**	**206.0**
8	Redwood Drive/Commerce Boulevard	TS	C	C	25.0
9	Wilfred Avenue/ US-101 SB Ramps	TS	D	C	25.7
10	Golf Course Drive/Commerce Boulevard	TS	D	F	83.0
11	Golf Course Drive/Roberts Lake Road	TS	C	B	18.4
12	US-101 NB Ramps/Commerce Boulevard	TS	D	**E**	**61.7**
13	Project Driveway/Stony Point Road	TWSC	D	C	21.8
14	Business Park Drive/Labath Avenue	-	D	/[2]	/[2]
15	Business Park Drive/Redwood Drive	TWSC	D	D	27.5
16	Rohnert Park Expressway/Stony Point Road	TS	D	C	26.1
17	Rohnert Park Expressway/Labath Avenue	TS	C	C	29.0
18	Rohnert Park Expressway/Redwood Drive	TS	C	C	25.2
19	Rohnert Park Expressway/US-101 SB Ramps	TS	D	B	16.6
20	Rohnert Park Expressway/US-101 NB Ramps	TS	D	B	17.2
21	Rohnert Park Expressway/Commerce Boulevard	TS	C	**D**	**39.9**
22	Gravenstein Hwy/Stony Point Road	TS	D	D	39.6
23	Gravenstein Hwy/Redwood Drive	TS	D	C	27.4
24	Gravenstein Hwy/SB US-101 Ramps	TS	D	B	19.2
25	Gravenstein Hwy/NB US-101 Off-ramp	TS	D	B	11.7
26	Millbrae Avenue/Stony Point Road	TWSC	D	**F**	**59.1**
27	Millbrae Ave/Primrose Ave	TWSC	D	B	11.5
28	Millbrae Ave/Whistler Ave	TWSC	D	B	11.5
29	Millbrae Ave/Langner Ave	TWSC	D	A	9.9
30	Millbrae Ave/Labath Ave	TWSC	D	B	11.7
31	Millbrae Ave/Dowdell Ave	TWSC	D	B	11.4

NOTE: 1Delay in seconds.
2Intersection only exists under Alternative A with project.
Bold text denotes unacceptable LOS.
SOURCE: Kimley-Horn and Associates, 2008; AES, 2007.

The 2008 PM peak intersection traffic volumes with Alternative D are shown in **Figure 4.8-18.**

Results of the analysis showed that the following intersections would satisfy traffic signal Warrant #3 by year 2008:

- Stony Point Road/Wilfred Avenue
- Primrose Avenue/Wilfred Avenue
- Labath Avenue/Wilfred Avenue
- Dowdell Avenue/Wilfred Avenue
- Millbrae Avenue/Stony Point Road

Mitigation Measures

As shown above, Alternative D would have a significant impact on intersections and freeway segments and ramps. Mitigation measures for Alternative D are discussed in **Section 5.2.7** of this document. With the incorporation of project mitigation measures, each of the intersections that are shown to have an unacceptable LOS would be improved to an acceptable LOS.

Potential Effects on Intersection Safety

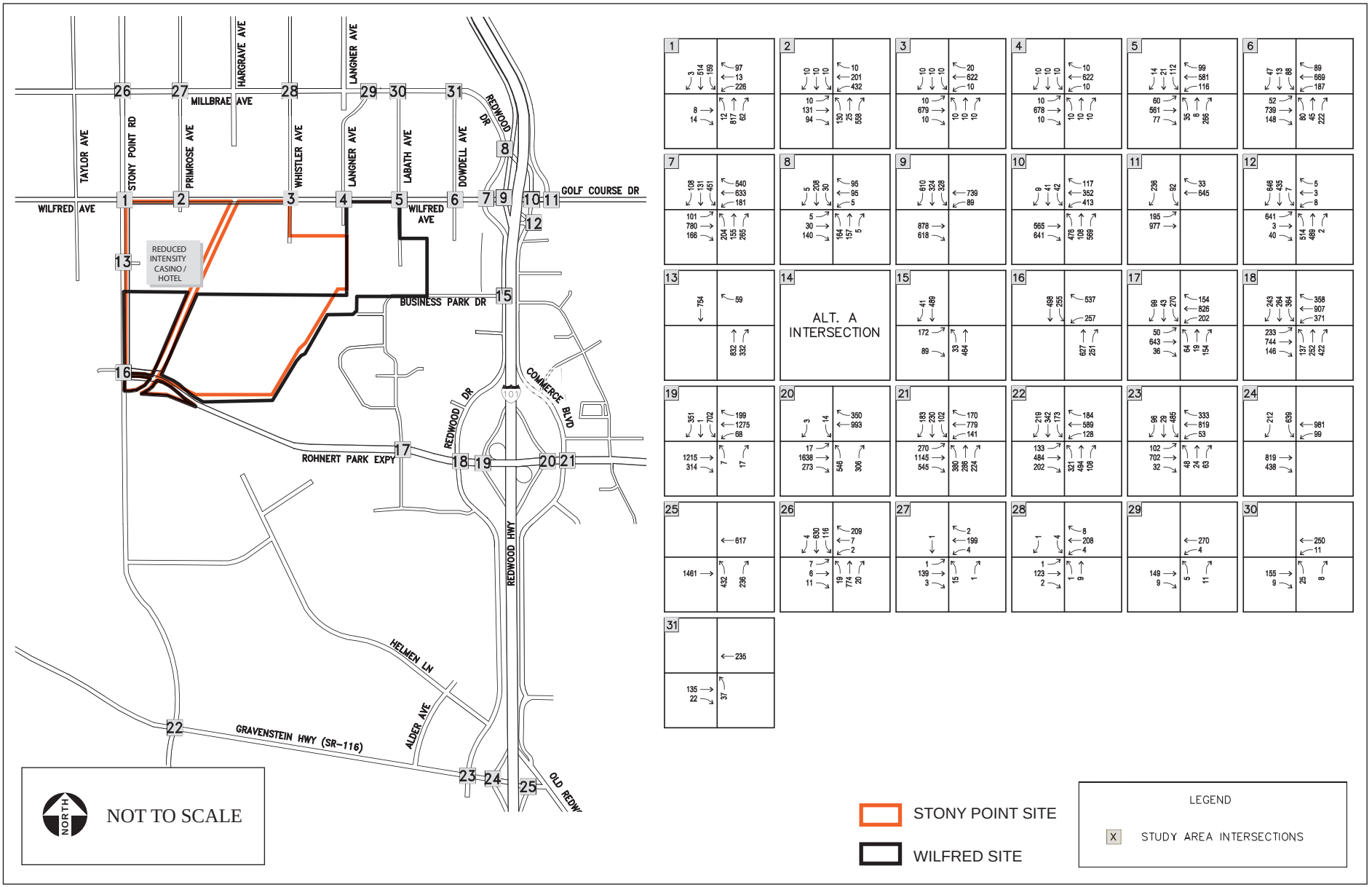
Potential effects on intersection safety are not expected to differ substantially from Alternative A. Therefore, if mitigation measures are implemented as proposed in **Section 5.2.7**, no significant increase in daytime or nighttime collisions would occur.

LAND USE

Land use effects would be similar to those of Alternative B, except at a somewhat reduced scale due to the reduced size of development for Alternative D. The project site would be taken into trust; therefore, local land use plans or policies would no longer apply. As such, a less-than-significant effect to land use would occur. The terms of the City MOU would not apply to Alternative D. Nonetheless, a significant loss of open space would not occur given the large amount of open space that would be retained under Alternative D.

AGRICULTURE

Under Alternative D, a reduced intensity casino and hotel complex would be developed on approximately 76 acres located on the northwest portion of the Stony Point site. Alternative D's development footprint is similar to Alternative B. As with Alternative B, two options exist for wastewater treatment and disposal that could potentially have different impacts to agricultural resources. The development of Alternative D Option 1 (**Figure 2-21**), would directly convert 69.5 acres of rural lands to urban uses. According to the NRCS, 29.9 acres (of the 69.5 acres) are considered prime and unique farmland and 2.7 acres are considered farmland of statewide and local importance. The 69.5 acres represent approximately 0.0052percent of the farmland in the



SOURCE: Kimley Horn & Associates, 2006; AES, 2006

Figure 4.8-18

2008 Plus Project PM Traffic Volumes – Alternative D

County. As with Alternative B, the NRCS evaluated the land at a California Storie Index rating of 41, which indicates that crop growth on the land is limited to a small number of crops and requires special management. The site assessment rating of the Stony Point site has been computed at 64 out of 160. The combined FPPA point total for Alternative D, Option 1 is 105 out of 260 possible points, which is lower than the USDA protection threshold of 160 points (**Appendix P**).

The development of Alternative D Option 2 (**Figure 2-22**), would directly convert 79.6 acres of rural lands to urban uses. According to the NRCS, 40.9 acres (of the 79.6 acres) are considered prime and unique farmland and 2.7 acres are considered farmland of statewide and local importance. The 79.6 acres represents approximately 0.007percent of the farmland in the County. The NRCS evaluated the land at a California Storie Index rating of 41, which indicates that crop growth on the land is limited to a small number of crops and requires special management. The site assessment rating has been computed at 64 out of 160. The combined FPPA point total for Alternative C, Option 2 is 105 out of 260 possible points, which is lower than the USDA protection threshold of 160 points (**Appendix P**). As discussed under Alternative B and Alternative C, the four parcels in the southern portion of the Stony Point site are under Williamson Act Contracts. To date, no application for non-renewal of the contracts has been submitted for any of the parcels within the Stony Point site. Under Alternative D, Option 2 for wastewater disposal would also involve the use of the eastern Williamson Act parcel as a sprayfield. This action would serve as an irrigation source for the parcel and would not require removing the land from agricultural use. Proposed parking areas and roadways would function as buffers between adjacent agricultural operations and outdoor activity areas, thereby reducing the potential for conflicts to occur even though the Sonoma County Right to Farm Ordinance would not apply. Furthermore, the Sonoma County Right to Farm Ordinance will continue to protect neighboring farmers from nuisance suits brought by the Tribe or potential patrons on the project site.

Given the inferior quality of agricultural soils where development is proposed, the combined FPPA score of 105, the retention of the southern Williamson Act parcels for agricultural purposes, and the avoidance of land use conflicts with adjacent agricultural operations, Alternative C would have a less-than-significant impact on agriculture.

4.8.6 ALTERNATIVE E – BUSINESS PARK

TRANSPORTATION/CIRCULATION

This subsection discusses the Build-Out traffic conditions with the project trips calculated for Alternative E added to the baseline condition

Site Access

The site access is the same as that of Alternative B.

Construction Impacts

It is estimated that 150,000 cubic yards of earthwork would be required to develop the site for Alternative E. It is expected that construction would involve 150,000 cubic yards of fill that will be taken from an on-site location separated from the development area which would generate traffic on the surrounding roadways. The on-site separated location is the southern portion of the Stony Point site where truck traffic would travel on an approximately 5 mile loop from Rohnert Park Expressway to Stony Point Road to Wilfred Avenue to Redwood and back to Rohnert Park Expressway. Trucks would leave/enter the on-site fill location at the Rohnert Park Expressway driveway just east of the Bellevue-Wilfred Channel. The trucks would leave/enter the development area at the Stony Point Road/Project Driveway intersection. Assuming that the trips were spread out over a period of 4 months, with trucks operating at 6 days per week, 10 hours per day, this would result in 131 trucks making 262 trip ends on an average day with 13 trucks making 26 trip ends in any given hour (including potentially the peak hour) on the 5 mile loop.

Once the site is graded, the project would also require the importation of construction material including, raw materials, the building pad, concrete, the parking lot base and asphalt paving. This results in a material importation of 3,000 to 4,000 truckloads of material which would occur over approximately 20 months. The importation would require approximately 8 to 9 truck trips per day outside of the off-site fill delivery. Each truck would generate 1 inbound and 1 outbound trip, accounting for 2 trips. Therefore, during the peak construction period the project would generate about 18 truck trips ends per day.

Because the import truck traffic generates significantly less traffic than the project's equivalent passenger car traffic generation (even when added to employee trips) and the vehicle path travels through generally uncongested intersection movements, it should not significantly impact the capacity of any study intersection. The construction traffic impact would represent a temporary and less-than-significant inconvenience to travelers on affected roadways and area residents. However, this level of truck traffic may have an impact on quality of life including increased noise, visual impact, and a perception of lower traffic safety. Tracking of debris and mud onto roadways may create a perceptual impact as well as a physical impact. Mitigation measures are included in **Section 5.2.7** to minimize the impacts associated with construction.

Project Trip Generation

As summarized in **Table 4.8-17,** Alternative E would generate 471 new trips to the circulation

TABLE 4.8-17
PROJECT TRIP GENERATION - ALTERNATIVE E

Land Use	Trips						
	Daily Total	AM Peak Hour			PM Peak Hour		
		Entering	Exiting	Total	Entering	Exiting	Total
Light Industrial 400,000 sf[1]	2,788	324	44	368	47	345	392
Commercial 100,000 sf[1]	4,294	63	40	103	180	195	375
Subtotal	*7,082*	*387*	*84*	*471*	*227*	*540*	*767*
Commercial Pass-By Reduction	N/A	N/A	N/A	N/A	-70	-76	-146
Net New Vehicle Trips	*7,082*	*387*	*84*	*471*	*157*	*464*	*621*

NOTE: 1sf = square foot
SOURCE: Kimley-Horn and Associates, 2008; AES, 2007.

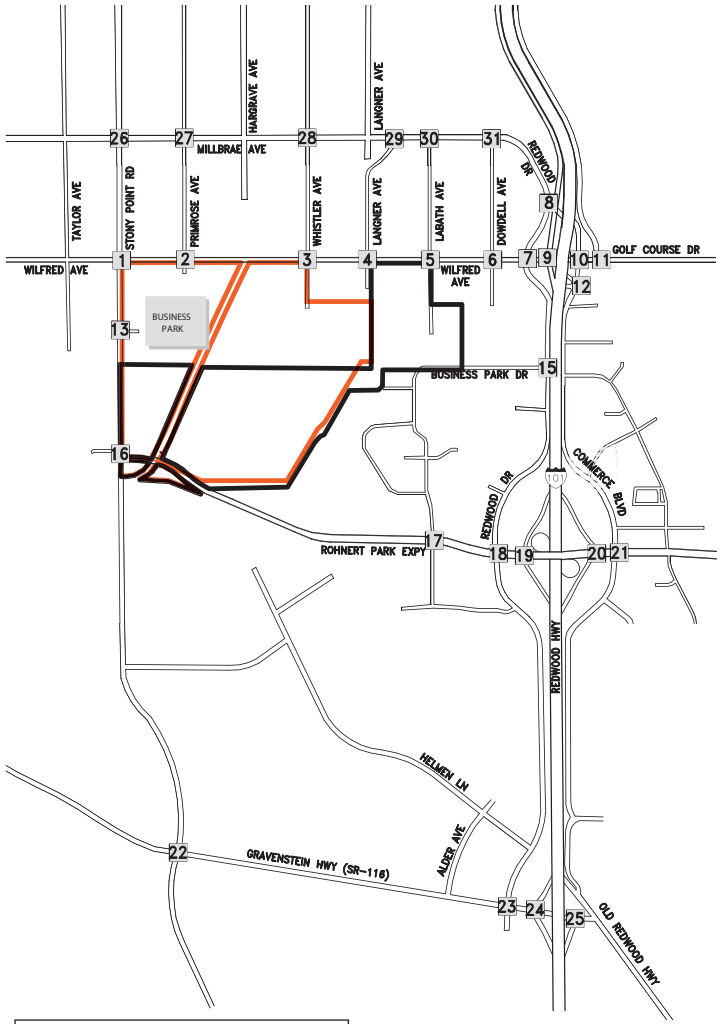
network in the AM peak hour and 621 new trips in the PM peak hour. Although project trip generation was prepared for both the AM and PM peak hours, only the PM peak hour was evaluated in the traffic study as it represents the time period for which the project would contribute to the greatest amount of congestion and potential mitigation. In addition, only PM peak hour future year traffic forecast data were available from the City of Rohnert Park to complete a cumulative traffic analysis.

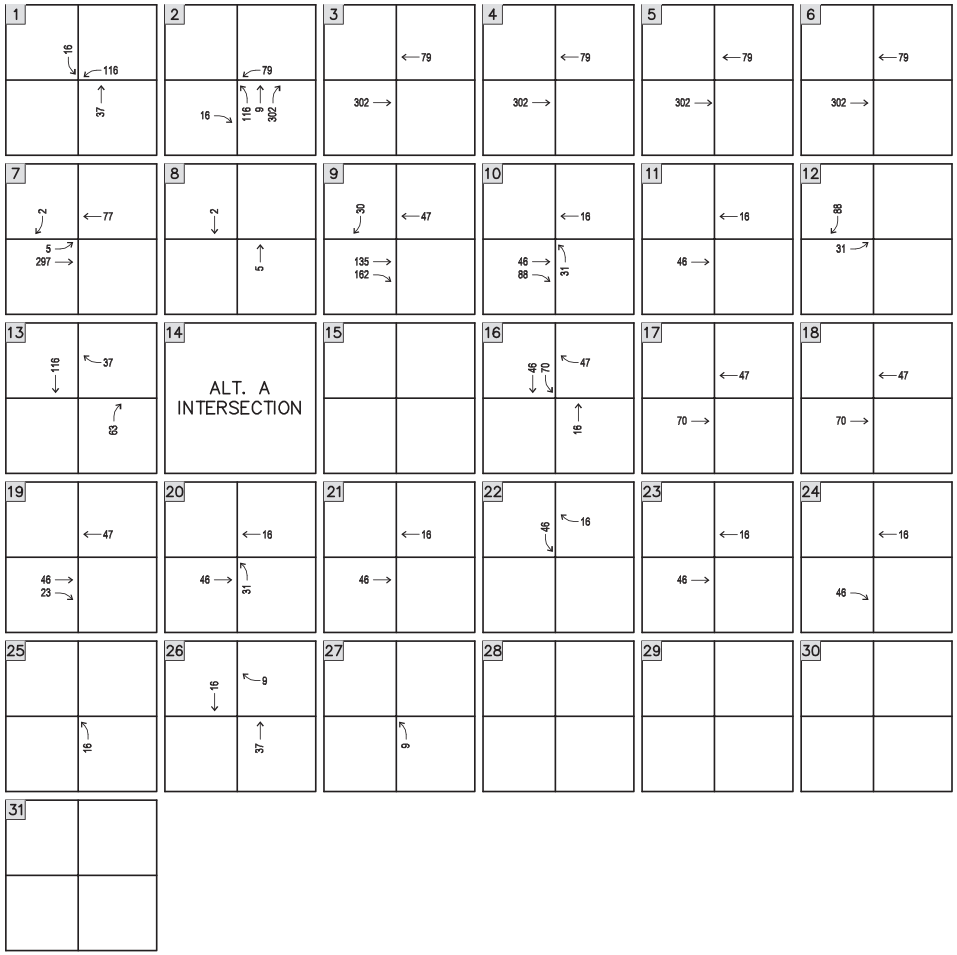
Developments can sometimes attract trips (vehicles) that are already on the road, to stop as they drive by the site. This type of trip is not considered a new vehicle trip, but rather a pass-by trip. A portion of the commercial trips would be attracted from Stony Point Road and Wilfred Avenue as they pass from their origin to their ultimate destination. A pass-by reduction was applied to the project trip generation to determine the net new trips expected to be produced by the industrial and commercial center. Pass-by factors were derived from the Institute of Transportation Engineers *Trip Generation Handbook.* Pass-by trips were applied to the commercial uses, as industrial uses typically do not generate pass-by rates.

Figure 4.8-19 shows project-generated PM volumes for Alternative E.

Project Trip Distribution and Assignment

The project trip distribution for this alternative shows that 30percent of the project traffic would be distributed to destinations north of the site, while 20percent would be directed to Rohnert Park area, and the remaining 50percent would be distributed south of the site. The assignment of trips on the surrounding roadway network is shown in **Figures 4.8-20** and **Figure 4.8-21**.





NOT TO SCALE

STONY POINT SITE

WILFRED SITE

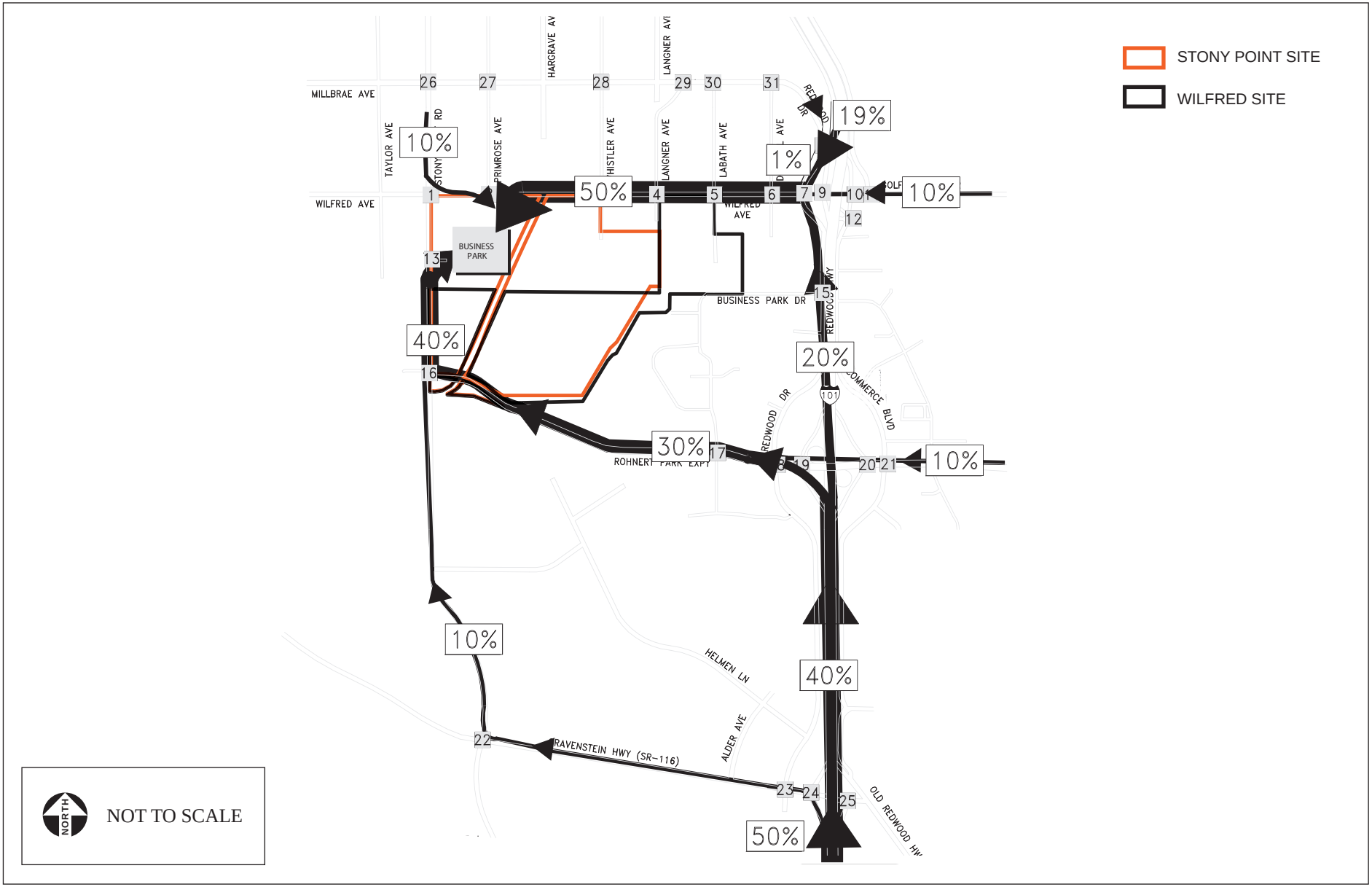
LEGEND

X STUDY AREA INTERSECTIONS

SOURCE: Kimley Horn & Associates, 2006; AES, 2006

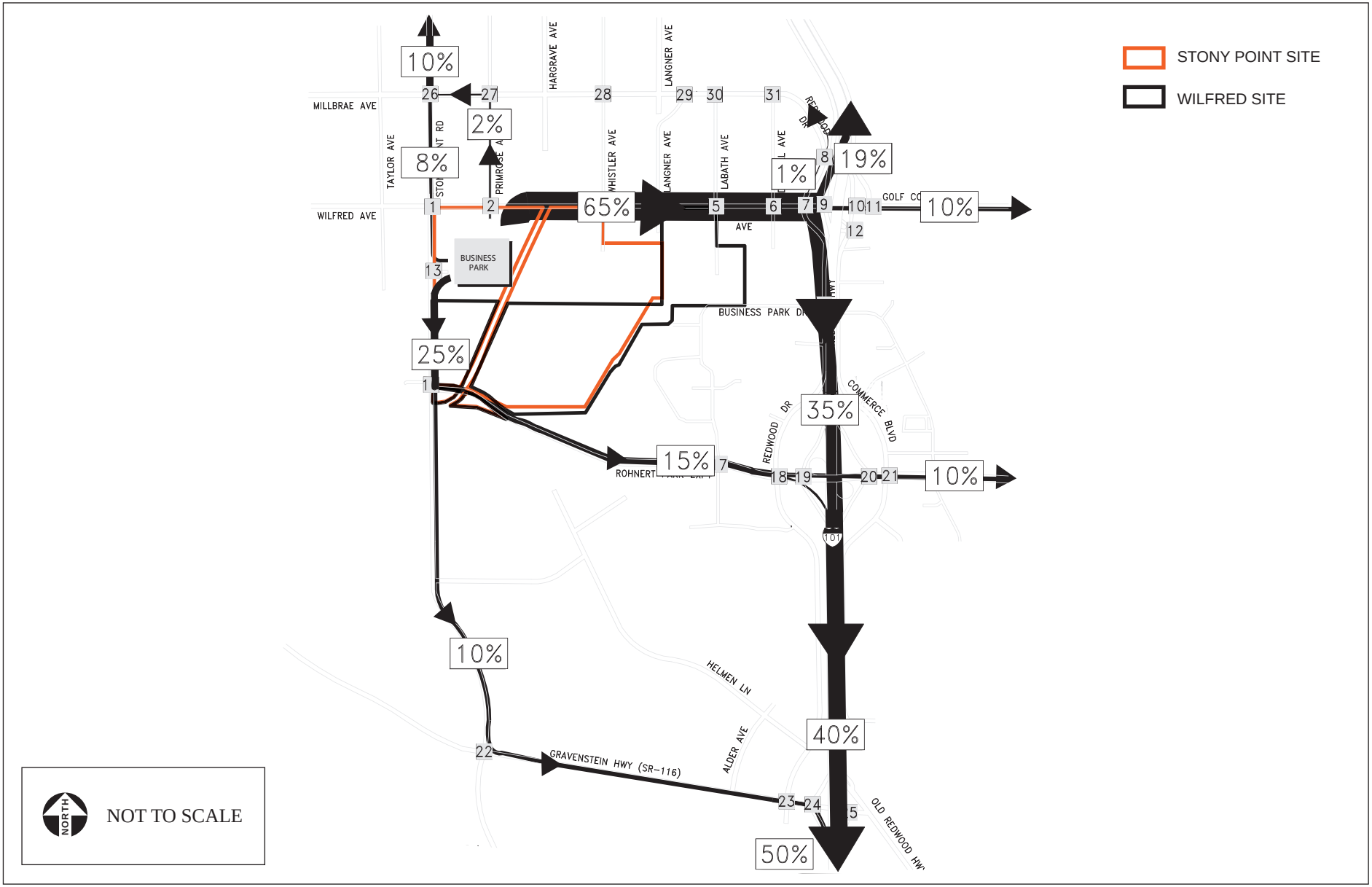
Figure 4.8-19

2008 Project Generated PM Traffic Volumes – Alternative E



SOURCE: Kimley Horn & Associates, 2006; AES, 2006

Figure 4.8-20
Project Trip Distribution (In) – Alternative E



SOURCE: Kimley Horn & Associates, 2006; AES, 2006

Figure 4.8-21
Project Trip Distribution (Out) – Alternative E

Freeway Segment and Ramp Performance

Table 4.8-18 summarizes the 2008 Plus Alternative E freeway segment and ramp performance condition. As shown in **Table 4.8-18**, no freeway segments or ramps would operate unacceptably with the addition of Alternative E traffic in 2008.

TABLE 4.8-18
FREEWAY SEGMENT AND RAMP PERFORMANCE
2008 - ALTERNATIVE E

US-101 Section/Ramp	Criteria LOS	2008 with Alternative E	Density (pc/mi/ln)[1]
Northbound			
US-101 South of SR_116	E	C	19.6
SR-116 Off-ramp	E	C	28.0
SR-116 On-ramp	E	D	30.0
US-101 between SR-116 and Rohnert Park Expressway (NB)	E	C	23.9
Rohnert Park Expressway NB Off-Ramp	E	D	29.3
Rohnert Park Expressway NB On-Ramp (Loop Ramp)	E	D	34.0
Rohnert Park Expressway NB On-Ramp	E	C	22.5
US-101 between Rohnert Park Expressway and Wilfred Ave (NB)	E	C	22.5
Wilfred Ave NB Off-Ramp	E	C	22.5
Wilfred Ave NB On-Ramp	E	D	31.9
US-101 between Wilfred Ave and Santa Rosa Avenue	E	D	31.9
Santa Rosa Avenue NB Off-ramp	E	D	31.9
US-101 North of Santa Rosa Avenue	E	C	22.8
Southbound			
US-101 North of Santa Rosa Avenue	E	C	24.4
Santa Rosa Avenue On-ramp	E	//[2]	//[2]
US-101 between Santa Rosa Avenue and Wilfred Ave (SB)	E	D	33.1
Wilfred Ave SB Off-Ramp	E	E	39.1
Wilfred Ave SB On-Ramp	E	E	38.5
US-101 between Rohnert Park Expressway and Wilfred Ave (SB)	E	E	38.5
Rohnert Park Expressway SB Off-Ramp	E	E	38.5
Rohnert Park Expressway SB On-Ramp (Loop Ramp)	E	D	32.0
Rohnert Park Expressway SB On-Ramp	E	D	31.4
US-101 between Rohnert Park Expressway and SR-116 (SB)	E	C	23.6
SR-116 SB Off-ramp	E	D	30.6
SR-116 SB On-ramp	E	D	33.7
US-101 South of SR-116	E	C	23.4

NOTE: 1pc/mi/ln = passenger cars per mile per lane.
2Intersection no longer exists due to planned roadway improvemen
SOURCE: Kimley-Horn and Associates 2008; AES 2007.

Peak Hour Intersection Performance

The 2008 Without Project Condition traffic volumes were combined with vehicle trips expected to be generated by Alternative E. **Table 4.8-19** summarizes the 2008 Plus Alternative E Peak

Hour intersection conditions. The signal control is listed as TS for a signalized intersection and TWSC for a two-way stop controlled intersection. Additional detail is provided in **Appendix O**. As shown in the results, the following intersections will fail to meet acceptable level of service thresholds based on established significance criteria and with the addition of project-related traffic:

- Wilfred Avenue/Stony Point Road
- Wilfred Avenue/Labath Avenue
- Wilfred Avenue/Dowdell Avenue
- Wilfred Avenue /Redwood Drive
- Millbrae Avenue/Stony Point Road
- Commerce Boulevard /US-101 NB Ramps
- Golf Course Drive/Commerce Boulevard

Figure 4.8-22 shows the 2008 plus project PM traffic volumes at each of the study intersections for Alternative E. Results of the analysis showed that the following intersections would satisfy traffic signal Warrant #3 by year 2008:

- Stony Point Road/Wilfred Avenue
- Primrose Avenue/Wilfred Avenue
- Labath Avenue/Wilfred Avenue
- Dowdell Avenue/Wilfred Avenue
- Millbrae Avenue/Stony Point Road

Mitigation Measures

As shown above, Alternative E would have a significant impact on intersections. Mitigation measures for Alternative E are discussed in **Section 5.2.7** of this document. With the incorporation of project mitigation measures, each of the intersections that are shown to have an unacceptable LOS would be improved to an acceptable LOS.

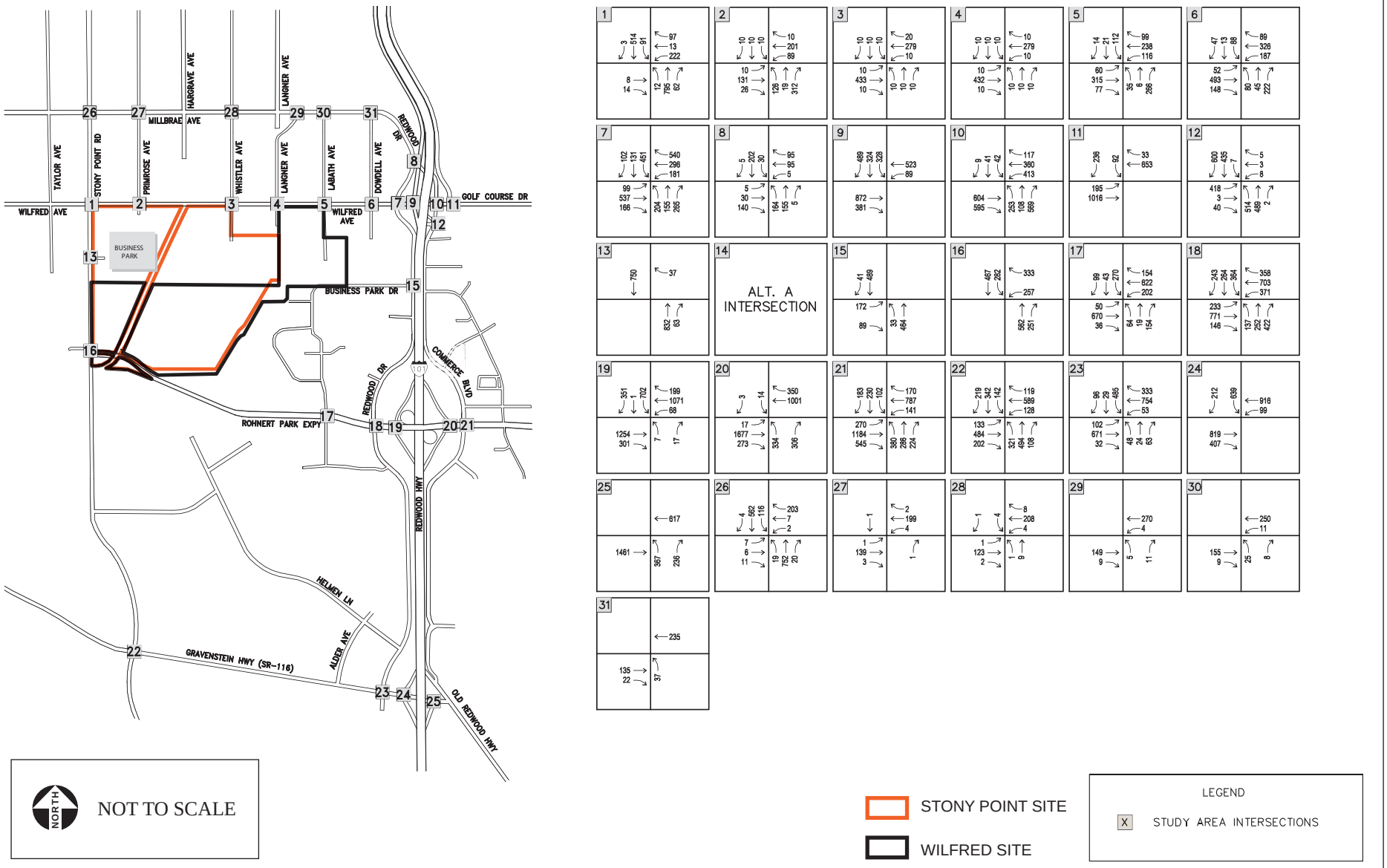
Potential Effects on Intersection Safety

Potential effects on intersection safety are not expected to differ substantially from Alternative A (note that a business park is also not expected to generate substantial pedestrian and bicycle

TABLE 4.8-19
INTERSECTION LOS – ALTERNATIVE E

	Intersection	Signal Control	Criteria	2008 with Alternative E	
				LOS	Delay[1]
1	Wilfred Avenue/Stony Point Road	TWSC	D	**F**	**OVRFL**
2	Wilfred Avenue/Primrose Avenue	TWSC	D	D	27.0
3	Wilfred Avenue/Whistler Avenue	TWSC	D	C	16.3
4	Wilfred Avenue/Langner Avenue	TWSC	D	C	16.2
5	Wilfred Avenue/Labath Avenue	TWSC	D	**F**	**541.2**
6	Wilfred Avenue/Dowdell Avenue	TWSC	D	**F**	**OVRFL**
7	Wilfred Avenue/Redwood Drive	TS	D	**F**	**136.1**
8	Redwood Drive/Commerce Boulevard	TS	C	C	25.8
9	Wilfred Avenue/ US-101 SB Ramps	TS	D	C	21.6
10	Golf Course Drive/Commerce Boulevard	TS	D	**E**	**77.0**
11	Golf Course Drive/Roberts Lake Road	TS	C	B	18.5
12	US-101 NB Ramps/Commerce Boulevard	TS	D	D	52.4
13	Project Driveway/Stony Point Road	TWSC	D	C	17.2
14	Business Park Drive/Labath Avenue	-	D	/[2]	/[2]
15	Business Park Drive/Redwood Drive	TWSC	D	D	27.5
16	Rohnert Park Expressway/Stony Point Road	TS	D	C	27.2
17	Rohnert Park Expressway/Labath Avenue	TS	C	C	27.0
18	Rohnert Park Expressway/Redwood Drive	TS	C	C	25.7
19	Rohnert Park Expressway/US-101 SB Ramps	TS	D	B	16.7
20	Rohnert Park Expressway/US-101 NB Ramps	TS	D	B	11.5
21	Rohnert Park Expressway/Commerce Boulevard	TS	C	C	30.8
22	Gravenstein Hwy/Stony Point Road	TS	D	D	37.4
23	Gravenstein Hwy/Redwood Drive	TS	D	C	26.7
24	Gravenstein Hwy/SB US-101 Ramps	TS	D	B	18.8
25	Gravenstein Hwy/NB US-101 Off-ramp	TS	D	B	10.9
26	Millbrae Avenue/Stony Point Road	TWSC	D	**E**	**46.0**
27	Millbrae Ave/Primrose Ave	TWSC	D	B	11.5
28	Millbrae Ave/Whistler Ave	TWSC	D	B	11.5
29	Millbrae Ave/Langner Ave	TWSC	D	A	9.9
30	Millbrae Ave/Labath Ave	TWSC	D	B	11.7
31	Millbrae Ave/Dowdell Ave	TWSC	D	B	11.4

NOTE: 1 - Delay in seconds.
2 - Intersection only exists under Alternative A with project.
Bold text denotes unacceptable LOS.
SOURCE: Kimley-Horn and Associates, 2008; AES, 2007.



SOURCE: Kimley Horn & Associates, 2006; AES, 2006

Figure 4.8-22

2008 Plus Project PM Traffic Volumes – Alternative E

traffic). Therefore, if mitigation measures are implemented as proposed in **Section 5.2.7**, no significant increase in daytime or nighttime collisions would occur.

LAND USE

Land use effects would be similar to those of Alternative B, except at a somewhat reduced scale due to the reduced size of development for Alternative E. A less-than-significant effect to land use would occur. The terms of the City MOU would not apply to Alternative E. Nonetheless, a significant loss of open space would not occur given the large amount of open space that would be retained under Alternative E.

AGRICULTURE

Under Alternative E, a business park complex would be developed on the northwest corner of the Stony Point site. Impacts would be similar to Alternative B, but lessened somewhat due to the reduced development footprint of Alternative E. As with Alternative B, two options exist for wastewater treatment and disposal that could potentially have different impacts to agricultural resources. The development of Alternative E Option 1 (**Figure 2-26**), would directly convert 70.9 acres of rural lands to urban uses. According to the NRCS, 31.1 acres (of the 70.9 acres) are considered prime and unique farmland 3.1 acres are considered farmland of statewide and local importance. The 70.9 acres represent approximately 0.0055 percent of the farmland in the County. The NRCS evaluated the land at a California Storie Index rating of 41, which indicates that crop growth on the land is limited to a small number of crops and requires special management. The site assessment rating of the Stony Point site has been computed at 64 out of 160. The combined FPPA point total for Alternative E, Option 1 is 151 out of 260 possible points, which is lower than the USDA protection threshold of 160 points (**Appendix P**).

The development of Alternative E Option 2 (**Figure 2-27**), would directly convert 74.7 acres of rural lands to urban uses. According to the NRCS, 35 acres (of the 70.9 acres) are considered prime and unique farmland and 3.1 acres are considered farmland of statewide and local importance. The 70.9 acres represents approximately 0.0061 percent of the farmland in the County. The NRCS evaluated the land at a California Storie Index rating of 41, which indicates that crop growth on the land is limited to a small number of crops and requires special management. The site assessment rating has been computed at 64 out of 160. The combined FPPA point total for Alternative E, Option 2 is 105 out of 260 possible points, which is lower than the USDA protection threshold of 160 points (**Appendix P**).

As discussed under Alternatives B, C, and D, the four parcels in the southern portion of the Stony Point site are under Williamson Act Contracts. To date, no application for non-renewal of the contracts has been submitted for any of the parcels within the Stony Point site. Proposed parking areas and roadways would function as buffers between agricultural operations and outdoor activity areas, thereby reducing the potential for conflicts to occur even though the Sonoma

County Right to Farm Ordinance would not apply. Furthermore, the Sonoma County Right to Farm Ordinance will continue to protect neighboring farmers from nuisance suits brought by the Tribe or potential patrons on the project site.

Given the inferior quality of agricultural soils where development is proposed, the combined FPPA score of 105, the retention of the southern Williamson Act parcels for agricultural purposes, and the avoidance of land use conflicts with adjacent agricultural operations, Alternative E would have a less-than-significant impact on agriculture.

4.8.7 ALTERNATIVE F – LAKEVILLE CASINO

TRANSPORTATION/CIRCULATION

Figure 4.8-23 illustrates the 2008 lane geometry and traffic control in the vicinity of the Lakeville site. **Figure 4.8-24** shows the no project PM peak traffic volumes in the vicinity of the Lakeville site.

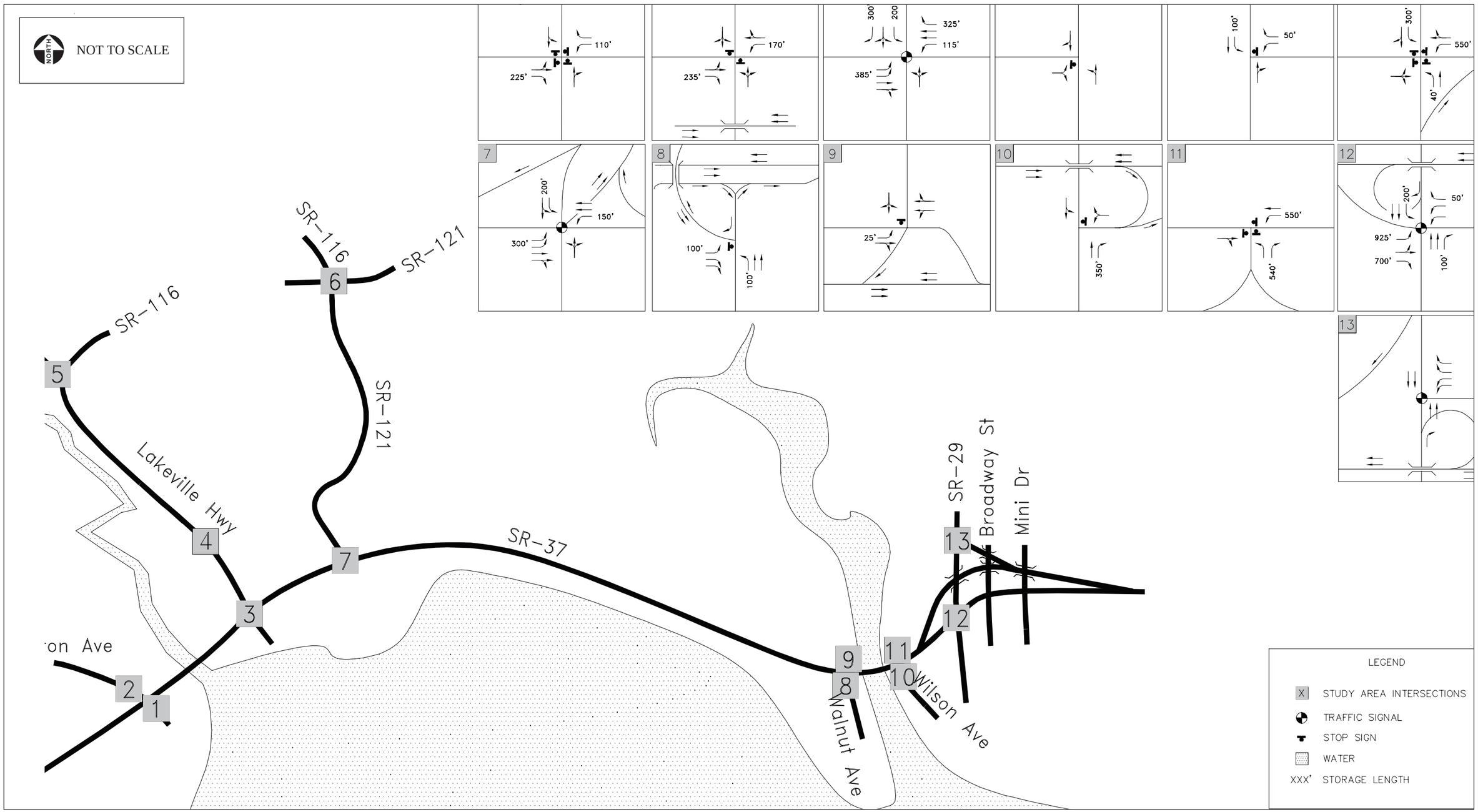
Site Access

The Lakeville site has two existing accesses from Lakeville Highway. The main drive would be in front of the proposed casino and hotel approximately one-mile north of the SR-37/Lakeville Highway intersection. The driveway provides direct access to large surface parking lots near the highway. The other access is approximately a half-mile away, near the south boundary of the parcel and because of its orientation would be lightly used as an exit from the site. To be conservative, all project traffic was assumed to enter and exit the main driveway. Currently, neither access is signalized.

Construction Impacts

Construction Material Import – It is estimated that 404,000 cubic yards of earthwork would be required to develop the Lakeville site. It is expected that construction of the project would involve 338,000 cubic yards of earthwork from an on-site location adjacent to the development area which would not generate any traffic on the surrounding roadways.

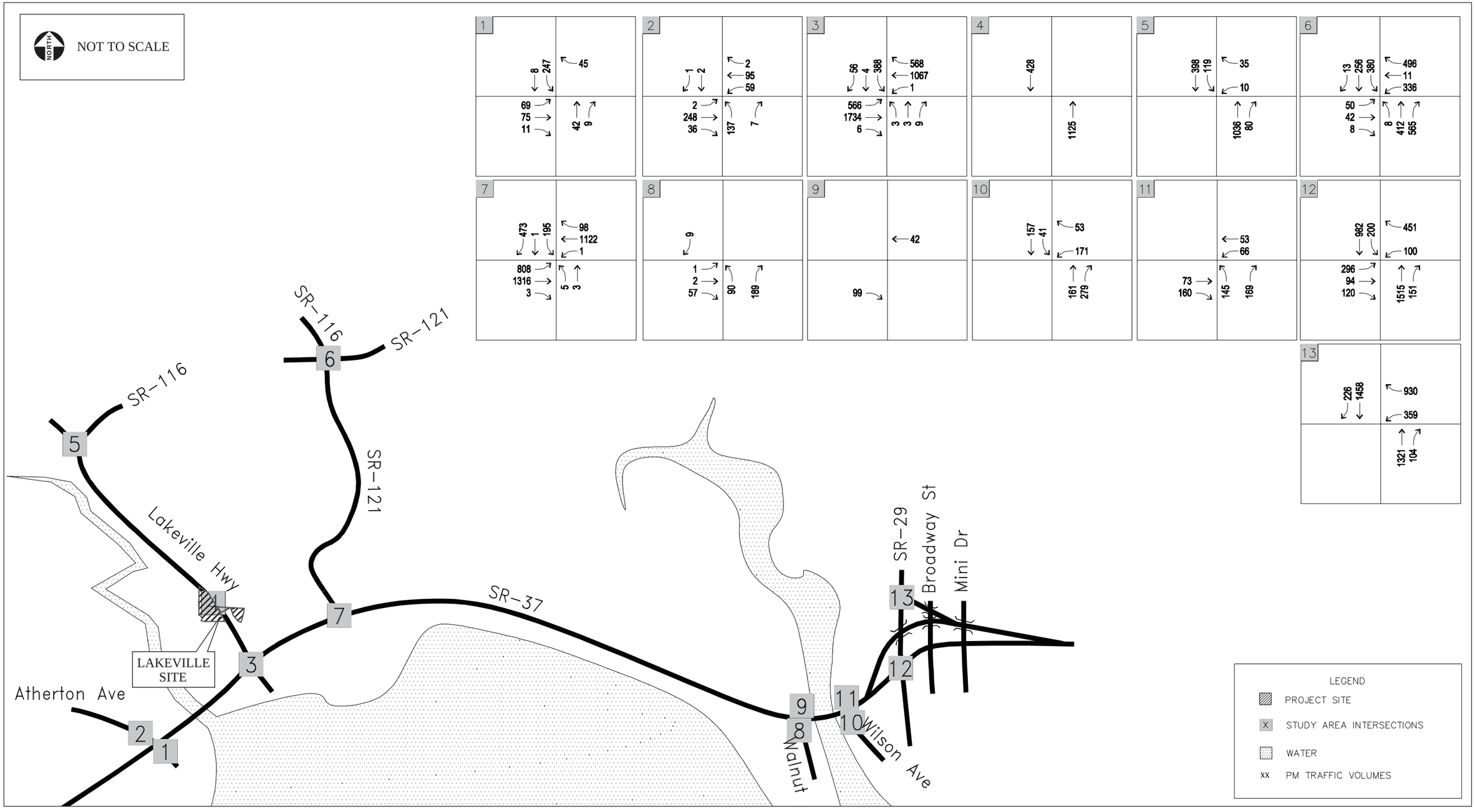
The project would also involve the transfer of fill from a nearby borrow pit to obtain the approximate 66,000 cubic yards that the project grading plan calls for that are not available from on-site excavation. There is a quarry approximately nine miles north of the Lakeville site where the fill can be imported. Trucks would arrive/depart to the off-site fill location from the Main Project Driveway on Lakeville Highway. Based on a carrying capacity of 12 cubic yards per truck, it is estimated that it would take approximately 5,500 trucks to complete this task. Doubling to account for the inbound and outbound component of each round trip, this would



SOURCE: Kimley Horn & Associates, 2004; AES, 2006

Figure 4.8-23
2008 Lane Geometry and Traffic Control - Lakeville Site Vicinity

NOT TO SCALE



SOURCE: Kimley Horn & Associates, 2006; AES, 2006

Figure 4.8-24
2008 No Project PM Traffic Volumes - Lakeville Site Vicinity

result in approximately 11,000 trip ends. Assuming that these were spread out over a period of one month, with trucks operating at 6 days per week, 10 hours per day, this would result in 230 trucks making 460 trip ends on an average day with 23 trucks making 46 trip ends in any given hour (including potentially the peak hour).

Once the site is graded, the project would also require the importation of construction material including, raw materials, the building pad, concrete, the parking lot base and asphalt paving. This results in a material importation of 3,000 to 4,000 truckloads of material which would occur over approximately 23 months. The importation will require approximately 8 to 9 truck trips per day outside of the off-site fill delivery. Each truck would generate 1 inbound and 1 outbound trip, accounting for 2 trips. Therefore, during the peak construction period the project would generate about 18 truck trips ends per day.

Because the import truck traffic generates significantly less traffic than the project's equivalent passenger car traffic generation (even when added to employee trips) and the vehicle path travels through generally uncongested intersection movements, it should not significantly impact the capacity of any study intersection. The construction traffic impact would represent a temporary and less-than-significant inconvenience to travelers on affected roadways and area residents. However, this level of truck traffic may have an impact on quality of life including increased noise, visual impact, and a perception of lower traffic safety. Tracking of debris and mud onto roadways may create a perceptual impact as well as a physical impact. Mitigation measures are included in **Section 5.2.7** to minimize the impacts associated with construction. create a perceptual impact as well as a physical impact. Mitigation measures are included in **Section 5.2.7** to minimize the impacts associated with construction.

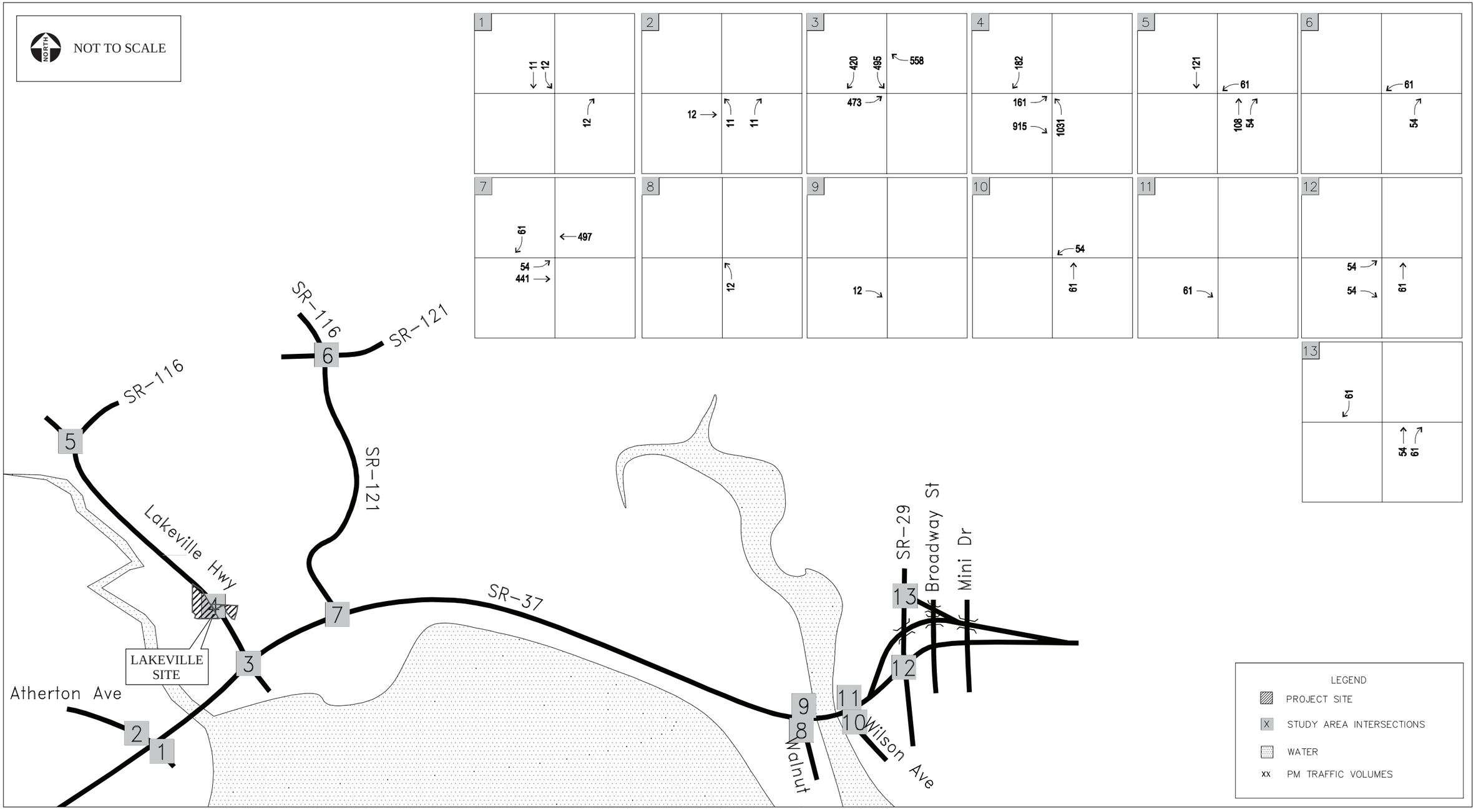
Project Trip Distribution and Assignment

Trip generation for Alternative F would be the same as for Alternative A (**Table 4.8-5**). It was estimated that 40 percent of the project traffic would be distributed to the east towards Vallejo with the remaining 60 percent distributed west towards San Rafael and to destinations north of the site. No project traffic would be generated or attracted in the immediate vicinity of the Lakeville site. **Figure 4.8-25** shows the project-generated PM traffic volumes for Alternative F. The project traffic distribution is shown in **Figures 4.8-26** and **4.8-27.**

Freeway Segment and Ramp Performance

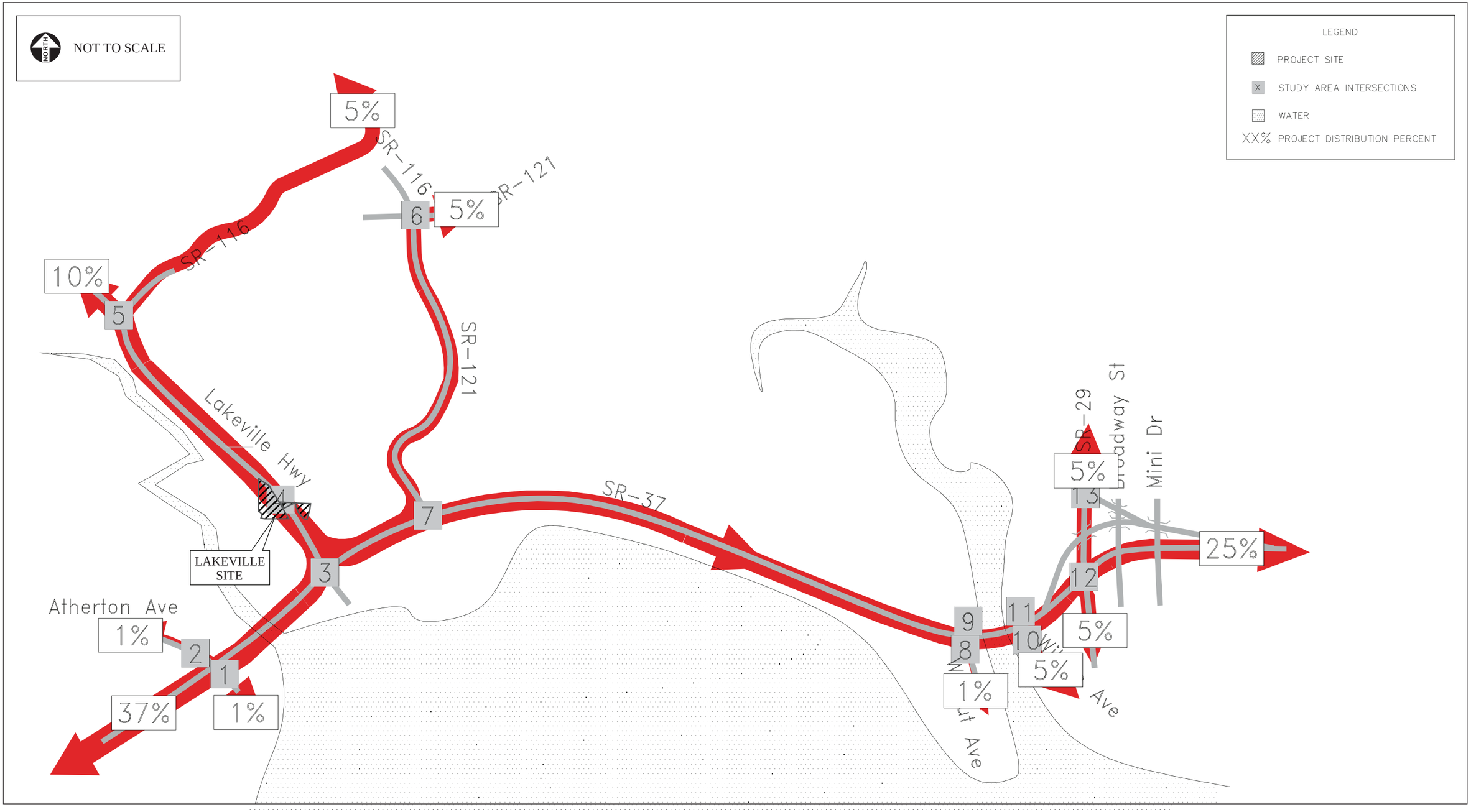
Project trips generated by the proposed casino and hotel were added to the year 2008 forecast freeway volumes. Freeway segment analyses were limited to the mix-use travel lanes, which are expected to have significantly more congestion than the future HOV lanes.

NOT TO SCALE



SOURCE: Kimley Horn & Associates, 2004; AES, 2006

Figure 4.8-25
2008 Project Generated PM Traffic Volumes - Alternative F



SOURCE: Kimley Horn & Associates, 2006; AES, 2006

Figure 4.8-26
Project Trip Distribution (In) - Alternative F

NOT TO SCALE

LEGEND

PROJECT SITE

X STUDY AREA INTERSECTIONS

WATER

XX% PROJECT DISTRIBUTION PERCENT

5%

SR-116

SR-121

6

10%

SR-116

5

5%

SR-121

Lakeville Hwy

SR-37

7

LAKEVILLE SITE

3

Atherton Ave

1%

2

1

37%

1%

9

8

11

10

Walnut Ave

1%

SR-29

Broadway St

Mini Dr

5%

12

25%

Wilson Ave

5%

5%

SOURCE: Kimley Horn & Associates, 2006; AES, 2006

Figure 4.8-27

Project Trip Distribution (Out) - Alternative F

Table 4.8-20 summarizes the 2008 Plus Alternative F highway segment and ramp performance condition. The 2008 Without Project Condition is provided as a baseline. As shown in **Table 4.8-20**, the following freeway segments and ramps would operate unacceptably in 2008 after the addition of Alternative F traffic:

- SR-37 between Atherton Avenue and Lakeville Highway (EB)
- Lakeville Highway between SR-37 and Site (NB)
- Lakeville Highway between Site and SR-116 (NB)
- SR-121 between SR-37 and SR-116 (NB)
- SR-121 between SR-116 and SR-37 (SB)
- Lakeville Highway between SR-37 and Site (SB)
- Lakeville Highway between Site and SR-116 (SB)
- Lakeville Highway between SR-116 and Frates Road (NB)
- Lakeville Highway between Pine View Way and SR-116 (SB)

Peak Hour Intersection Performance

The 2008 Without Project Condition traffic volumes were combined with vehicle trips expected to be generated by Alternative F. **Table 4.8-21** summarizes the 2008 Plus Alternative F Peak Hour intersection conditions. The 2008 Without Project Condition is provided as a baseline. Under the 2008 Plus Alternative F Conditions, the following study intersections are forecast to operate at an unacceptable LOS:

- Lakeville Highway / SR-116
- Lakeville Highway/SR 37
- Lakeville Highway/Main Project Access
- Lakeville Highway/Main Project Access
- SR-121 / SR-116
- SR-121 / SR-37
- SR-29 / SR-37 EB Off-Ramp

Figure 4.8-28 shows the 2008 Plus Project PM traffic volumes at each of the study intersections for Alternative F.

Traffic Signal Warrant Analysis

Results of the analysis showed that the following intersections would satisfy traffic signal Warrant #3 by year 2008 with the addition of Alternative F traffic:

- Lakeville Highway/Main Project Access
- Lakeville Highway/SR-116
- SR-121/SR-116

- Walnut Avenue / SR-37 EB Ramps
- Wilson Avenue / SR-37

TABLE 4.8-20
FREEWAY SEGMENT AND RAMP PERFORMANCE
2008 – ALTERNATIVE F

Highway Section/Ramp	Criteria	2008		2008 with Alt. F	
	LOS	LOS	MOE*	LOS	MOE*
Eastbound / Northbound					
Atherton Avenue EB Off- Ramp	C	C	23.1	C	27.6
SR-37 between Atherton Avenue and Lakeville Hwy (EB)	C	C	22.3	**D**	**27.1**
Lakeville Highway between SR-37 and SR-116 (NB)	C	**E**	**90.9% 39.9**	-	-
Lakeville Highway between SR-37 and Site (NB)	C	-	-	**F**	**95.7% 24.6**
Lakeville Highway between Site and SR-116 (NB)	C	-	-	**E**	**91.2% 37.9**
SR-37 between Lakeville Highway and SR-121 (EB)	C	C	20.7	C	25.5
Lakeville Highway between SR-116 and Frates Road (NB)	C	**E**	**89.7% 40**	**E**	**91.0% 38.4**
Lakeville Highway between Frates Road and US-101 (NB)	C	B	17.5	C	18.3
SR-121 between SR-37 and SR-116 (NB)	C	**E**	**88.3% 40.4**	**E**	**88.6% 39.6**
Walnut Avenue EB Off-Ramp	C	B	15.5	B	19.6
Walnut Avenue EB On- Ramp	C	B	15.0	B	18.5
Wilson Avenue EB Off- Ramp	C	B	14.9	B	18.8
Wilson Avenue EB On- Ramp	C	B	16.9	B	20.0
SR-29 EB Off- Ramp	C	B	11.7	B	15.2
Westbound / Southbound					
SR-29 WB Off- Ramp	C	A	-4.0	A	0.7
SR-29 WB On- Ramp (loop)	C	B	11.7	B	15.2
SR-29 WB On- Ramp	C	B	13.0	B	17.0
Wilson Avenue WB Off- Ramp	C	B	10.9	B	14.8
Wilson Avenue WB On- Ramp	C	B	14.6	B	19.1
Walnut Avenue WB Off- Ramp	C	A	4.5	A	8.9
Walnut Avenue WB On- Ramp	C	B	15.1	B	19.3
Lakeville Highway between US-101 and Pine View Way (SB)	C	B	13.5	B	14.5
Lakeville Highway between Pine View Way and SR-116 (SB)	C	**E**	**86.7% 40.5**	**E**	**88.9% 38.6**
SR-121 between SR-116 and SR-37 (SB)	C	**E**	**87.5% 40.6**	**E**	**88.1% 39.7**
SR-37 between SR-121 and Lakeville Hwy (WB)	C	B	15.9	C	21.3
Lakeville Highway between SR-116 and SR-37 (SB)	C	**E**	**86.1% 40.6**	-	-
Lakeville Highway between SR-37 and Site (SB)	C	-	-	**E**	**89.4% 38.2**
Lakeville Highway between Site and SR-116 (SB)	C	-	-	**F**	**94.6% 24.6**
SR-37 between Lakeville Highway and Atherton (WB)		A	10.9	B	15.0
Atherton Avenue WB Off- Ramp	C	B	13.4	B	17.3
Atherton Avenue WB On- Ramp	C	B	12.9	B	16.3
	C				

NOTE: Bold text denotes unacceptable LOS
*Measure of Effectiveness (MOE) for two lane highways = percent time following & average travel speed (mi/hr)
*MOE for multi-lane highways & ramps = density (pc/mi/ln)
SOURCE: Kimley-Horn and Associates, 2008; AES, 2007.

TABLE 4.8-21
INTERSECTION LOS - ALTERNATIVE F

	Intersection	Criteria	Signal Control	2008			
				Base (w/o Project)		With Project	
				LOS	Delay*	LOS	Delay*
1	Atherton Avenue / Harbor Drive & SR-37 EB Off-Ramp	C	AWSC	A	9.4	A	9.7
2	Atherton Avenue / Glen Lane & SR-37 WB Ramps	C	TWSC	C	16.1	C	16.8
3	Lakeville Highway / SR-37	C	TS	C	28.4	**F**	**158.6**
4	Lakeville Highway / Main Project Access	D	TWSC	A	0.0	**F**	**OVRFL**
5	Lakeville Highway / SR-116	C	TWSC	**D**	**31.9**	**F**	**532.4**
6	SR-121 / SR-116	C	AWSC/TS	**F**	**116.6**	**F**	**139.8**
7	SR-121 / SR-37	C	TS	**D**	**43.9**	**F**	**102.2**
8	Walnut Avenue / SR-37 EB Ramps	C	TWSC	A	8.4	A	8.4
9	Mare Island / SR-37 WB Ramps	C	TWSC	A	0.0	A	0.0
10	Wilson Avenue / SR-37 EB Ramps	C	TWSC	B	14.4	C	18.4
11	Wilson Avenue / SR-37 WB Off-Ramp	C	AWSC	A	9.3	B	10.0
12	SR-29 / SR-37 EB Off-Ramp	C	TS	C	32.8	**D**	**44.6**
13	SR-29 / SR-37 WB Off-Ramp	C	TS	B	18.4	B	18.3
14	Lakeville Highway / US-101 SB Ramps	C	TS	C	25.9	C	28.2
15	Lakeville Highway / US-101 NB Ramps	C	TS	B	10.9	B	11.5

NOTES: *Delay in seconds. Bold text denotes unacceptable LOS.
SOURCE: Kimley-Horn and Associates 2008; AES 2007.

Mitigation Measures

As shown above, Alternative F would have a significant impact on intersections and freeways segments and ramps. Mitigation measures for the 2008 Plus Alternative F conditions are discussed in **Section 5.2.7** of this document. With the incorporation of project mitigation measures, each of the intersections and freeway segments/ramps that are shown to have an unacceptable LOS would be improved to an acceptable LOS.

NOT TO SCALE

1
19 259 45
69 75 11 42 21
2
1 2 2 95 59
2 260 36 148 18
3
476 4 883 1126 1067 1
1039 1734 6 3 3 9
4
182 428
161 915 1031 1125
5
519 119 35 71
1144 134
6
13 256 380 496 11 397
50 42 8 8 412 619
7
534 1 195 98 1619 1
862 1757 3 5 3
8
9
1 2 57 102 189
9
42
111
10
157 41 53 225
222 279
11
53 66
73 221 145 169
12
982 200 451 100
350 94 174 1576 151
13
287 1456 930 359
1375 165

SR-116
SR-121
SR-116
SR-121
SR-37
Lakeville Hwy
LAKEVILLE SITE
Atherton Ave
Walnut Ave
Wilson Ave
SR-29
Broadway St
Mini Dr
1
2
3
4
5
6
7
8
9
10
11
12
13

LEGEND
PROJECT SITE
X STUDY AREA INTERSECTIONS
WATER
xx PM TRAFFIC VOLUMES

SOURCE: Kimley Horn & Associates, 2006; AES, 2006

Figure 4.8-28
2008 Plus Project PM Traffic Volumes - Alternative F

Potential Effects on Intersection Safety

Potential effects on intersection safety are not expected to differ substantially from Alternative A. Therefore, if mitigation measures are implemented as proposed in **Section 5.2.7**, no significant increase in daytime or nighttime collisions would occur.

LAND USE

Alternative F was analyzed with respect to its consistency with select goals, objectives, and policies in the Sonoma County General Plan. See **Table 4.8-4** for the results of this analysis. Alternative F would be consistent with the remaining select goals, objectives, and policies, as discussed in **Section 3.8.2**. As shown in **Table 4.8-4**, Alternative F is inconsistent with several local land use policies. Under Alternative F only Tribal or federal land use authority would apply to the Lakeville site as the project site would be taken into trust and local land use plans or policies would no longer apply. As with the above casino alternatives, inconsistency with local land use regulations would be expected for Alternative F. In addition, considering the zoning of the Lakeville site (Land Extensive Agriculture, 60 acres, and Scenic Resource designation), any development at the site would be expected to be inconsistent with local land use regulations. Alternative F would not result in any land use conflicts, however, such as an obstruction of access or the preclusion of allowable uses. Therefore, a less-than-significant land use effect would result.

Under Alternative F, the casino and hotel would be constructed on the Lakeville site, west of Lakeville Road. Approximately 79 acres out of a total of 321 acres would be developed. The remaining parcels in the Lakeville site would remain consistent with their current open space and agricultural use, resulting in a less-than-significant loss of open space.

AGRICULTURE

Under Alternative F, a casino and hotel would be developed on land adjacent to Lakeville Highway near the junction of Lakeville Highway and SR-37. This would result in the direct conversion of 103.9-acres of rural lands to urban uses. This land is not currently irrigated and is used for cattle grazing. According to the NRCS, the land proposed for development under each of the options for Alternative F does not consist of prime and unique farmland or farmland of statewide and local importance (**Appendix P**). In addition, the site does not contain property under the Williamson Act. Proposed parking areas and roadways would function as buffers between adjacent agricultural operations and outdoor activity areas, thereby reducing the potential for conflicts to occur, even though the Sonoma County Right to Farm Ordinance would not apply. Furthermore, the Sonoma County Right to Farm Ordinance will continue to protect neighboring farmers from nuisance suits brought by the Tribe or potential patrons on the project site.

Due to the inferior quality of County land available for farming purposes on the site and the avoidance of land use conflicts with adjacent agricultural operations, impacts to agriculture from the development of Alternative F are considered less than significant.

4.8.8 ALTERNATIVE G – NO ACTION

TRANSPORTATION/CIRCULATION

The No Action Alternative represents the evaluation of traffic conditions without the construction of the proposed casino and hotel. Under the No Action Alternative, it is assumed that future development of the Wilfred, Stony Point, and Lakeville sites would be guided by existing land use plans. Currently, there are no known development plans for the Stony Point and Lakeville sites. According to Northwest Specific Plan-South (NWSP), the northeastern corner of the Wilfred site would be developed with residential and commercial uses. (City of Rohnert Park, 2004). The NWSP area east of the Wilfred site proposes high-density residential, industrial, business park, and regional commercial development. The northeastern portion of the Wilfred site would be developed with residential land uses as intended under the NWSP.

The No Action Alternative would result in the traffic conditions described above as the baseline conditions for each target year. **Figure 4.8-2** shows the 2008 traffic volumes for the No Action Alternative. Freeway segment analyses results indicate that freeway segments would meet standards in 2008 under the No Action Alternative. Five intersections are projected to experience unacceptable levels of service in 2008 under the No Action Alternative:

- Wilfred Ave./Labath Ave
- Wilfred Ave./Redwood Ave
- Dowdell Avenue/Wilfred Avenue
- Rohnert Park Expressway/Redwood Drive
- Millbrae Avenue/Stony Point Road

The CEQA process for development under the NWSP is expected to require mitigation measures to reduce traffic impacts to a less-than-significant level (similar to many of the measures included in **Section 5.2.7**). Alternative G would therefore result in impacts that are less than significant.

LAND USE

Under this alternative, current land uses would be retained on the Stony Point and Lakeville sites. The northeastern portion of the Wilfred site would be developed as intended under the Northwest Specific Plan, and convert approximately 63 acres of undeveloped land on the Wilfred site to commercial/residential uses. Given that this development would be consistent with the Northwest Specific Plan and no land use conflicts would occur, Alternative G would result in less-than-significant land use impacts.

AGRICULTURE

Under Alternative G, land uses on the Stony Point and Lakeville sites would remain the same. Agricultural uses would not be altered and grazing uses would continue. However, the northeastern portion of the Wilfred site would be developed with residential land uses as intended under the Northwest Specific Plan. This would directly convert approximately 63 acres of rural lands on the Wilfred site to urban uses. According to the NRCS, this area is not considered prime farmland, unique farmland, or farmland of statewide importance. Additionally, the northeastern parcels that would be developed under the Northwest Specific Plan do not contain lands protected under Williamson Act contracts. Therefore, because Alternative G would not result in a net loss of important or protected farmlands, impacts are less than significant.

4.8.9 ALTERNATIVE H –REDUCED INTENSITY (WILFRED SITE)

TRANSPORTATION/CIRCULATION

This subsection discusses the build-out traffic conditions with the project trips calculated for Alternative H added to the baseline condition.

Site Access

The site access for this alternative is the same as for Alternative A.

Construction Impacts

It is estimated that 270,000 cubic yards of earthwork would be required to develop the site for Alternative H. It is expected that construction would involve 25,000 cubic yards of earthwork from an on-site location adjacent to development area, which would not generate any traffic on the surrounding roadways. 245,000 cubic yards of fill would be taken from an on-site location separated from the development area, which would generate traffic on the surrounding roadways. The on-site separated location is the southern portion of the Wilfred site where truck traffic would travel on an approximately 5 mile loop from Rohnert Park Expressway to Stony Point Road to Wilfred Avenue to Redwood and back to Rohnert Park Expressway. Trucks would leave/enter the on-site fill location at the Rohnert Park Expressway driveway just east of the Bellevue-Wilfred Channel. The trucks would leave/enter the development area at the Wilfred/Labath intersection. Assuming that these were spread out over a period of 5 months, with trucks operating at 6 days per week, 10 hours per day, this would result in 171 trucks making 342 trip ends on an average day with 17 trucks making 34 trip ends in any given hour (including potentially the peak hour) on the 5 mile loop.

Once the site is graded, the project would also require the importation of construction material including, raw materials, the building pad, concrete, the parking lot base and asphalt paving. This results in a material importation of 3,000 to 4,000 truckloads of material which would occur over

approximately 23 months. The importation would require approximately 8 to 9 truck trips per day outside of the off-site fill delivery. Each truck would generate 1 inbound and 1 outbound trip, accounting for 2 trips. Therefore, during the peak construction period the project would generate about 18 truck trips ends per day.

Because the import truck traffic generates significantly less traffic than the project's equivalent passenger car traffic generation (even when added to employee trips) and the vehicle path travels through generally uncongested intersection movements, it should not significantly impact the capacity of any study intersection. The construction traffic impact would represent a temporary and less-than-significant inconvenience to travelers on affected roadways and area residents. However, this level of truck traffic may have an impact on quality of life including increased noise, visual impact, and a perception of lower traffic safety. Tracking of debris and mud onto roadways may create a perceptual impact as well as a physical impact. Mitigation measures are included in **Section 5.2.7** to minimize the impacts associated with construction.

Project Trip Generation

As summarized in **Table 4.8-22,** Alternative H would generate 949 new trips to the circulation network in the AM peak hour and 1,580 new trips in the PM peak hour. Although project trip generation was prepared for both the AM and PM peak hours, only the PM peak hour was evaluated in the traffic study as it represents the time period for which the project would contribute to the greatest amount of congestion and potential mitigation. In addition, only PM peak-hour future-year traffic forecast data was available from the City of Rohnert Park to complete a cumulative analysis.

TABLE 4.8-22
PROJECT TRIP GENERATION - ALTERNATIVE H

Land Use	Trips						
	Daily Total	AM Peak Hour			PM Peak Hour		
		Entering	Exiting	Total	Entering	Exiting	Total
Casino & Entertainment 315,100 square feet	12,424	651	279	930	827	733	1,560
Hotel 100 room[1]	272	12	7	19	11	9	20
Net New Vehicle Trips	*12,696*	*663*	*286*	*949*	*838*	*742*	*1,580*

NOTE:1 Trip rate is ITE Land Use Code 310 – Hotel. Rate reduced by 2/3 to account for internal capture to/from casino.
SOURCE:Kimley-Horn and Associates, 2008; AES, 2007.\

Sometimes development also attracts trips that are already on the road and stop as they pass by the site. These are not new vehicle trips, but are considered to be pass-by trips. Although it is likely that some trips to the site would be pass-by trips, no empirical data was readily available to

determine a reasonable pass-by rate. Therefore, pass-by trips are conservatively not assumed in the Alternative H analysis.

Project Trip Distribution and Assignment

The project trip distribution and assignment for this alternative is the same as Alternative A. The project traffic distribution is shown in **Figures 4.8-29** and **4.8-30**.

Freeway Segment and Ramp Performance

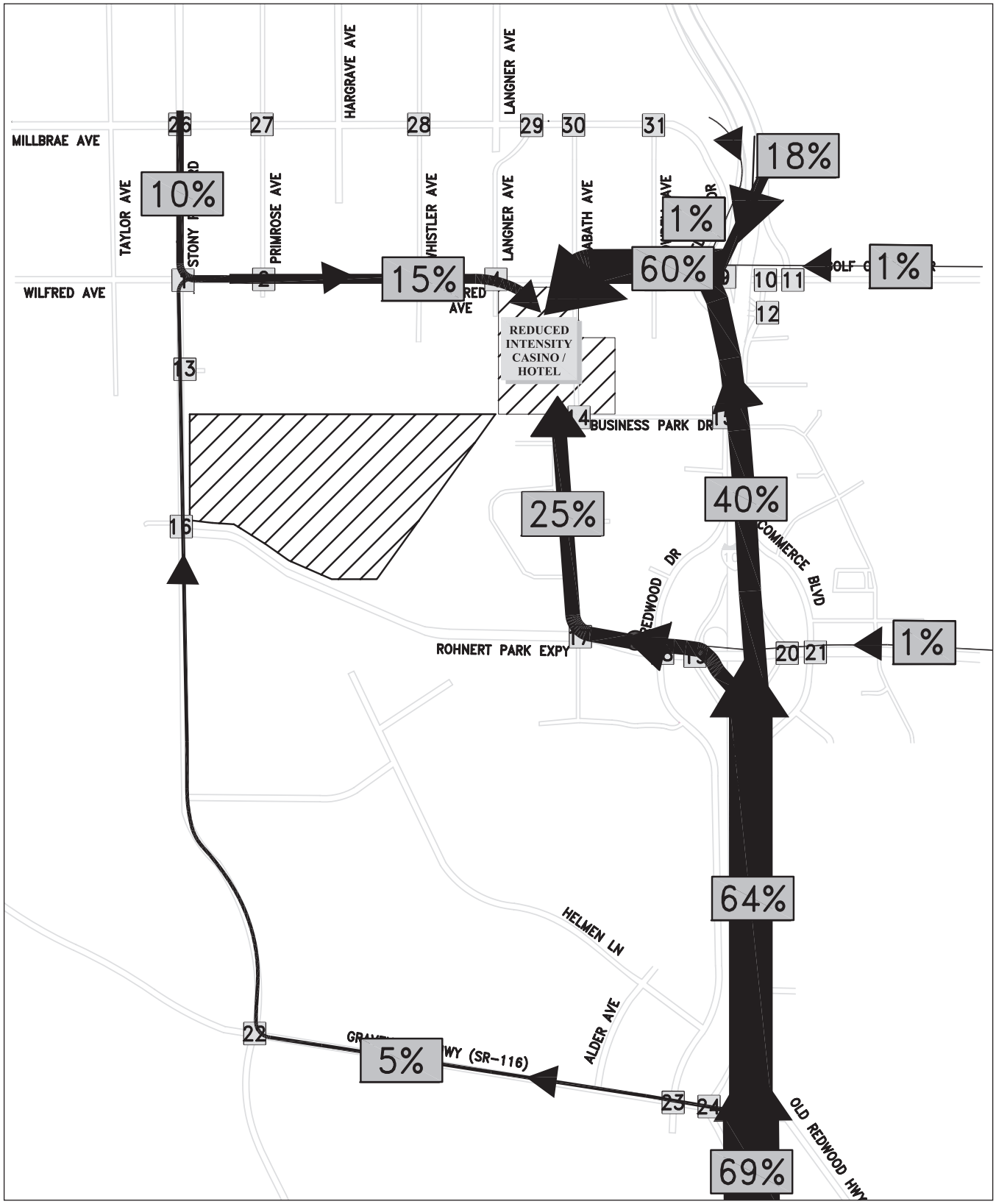
Table 4.8-23 summarizes the 2008 Plus Alternative H freeway segment and ramp performance condition. Under 2008 with Alternative H conditions, there are no freeway segments and ramps that have an unacceptable LOS.

Peak Hour Intersection Performance

The 2008 Without Project Condition traffic volumes were combined with vehicle trips expected to be generated by Alternative H. **Figure 4.8-31** shows the PM traffic volumes without the project.

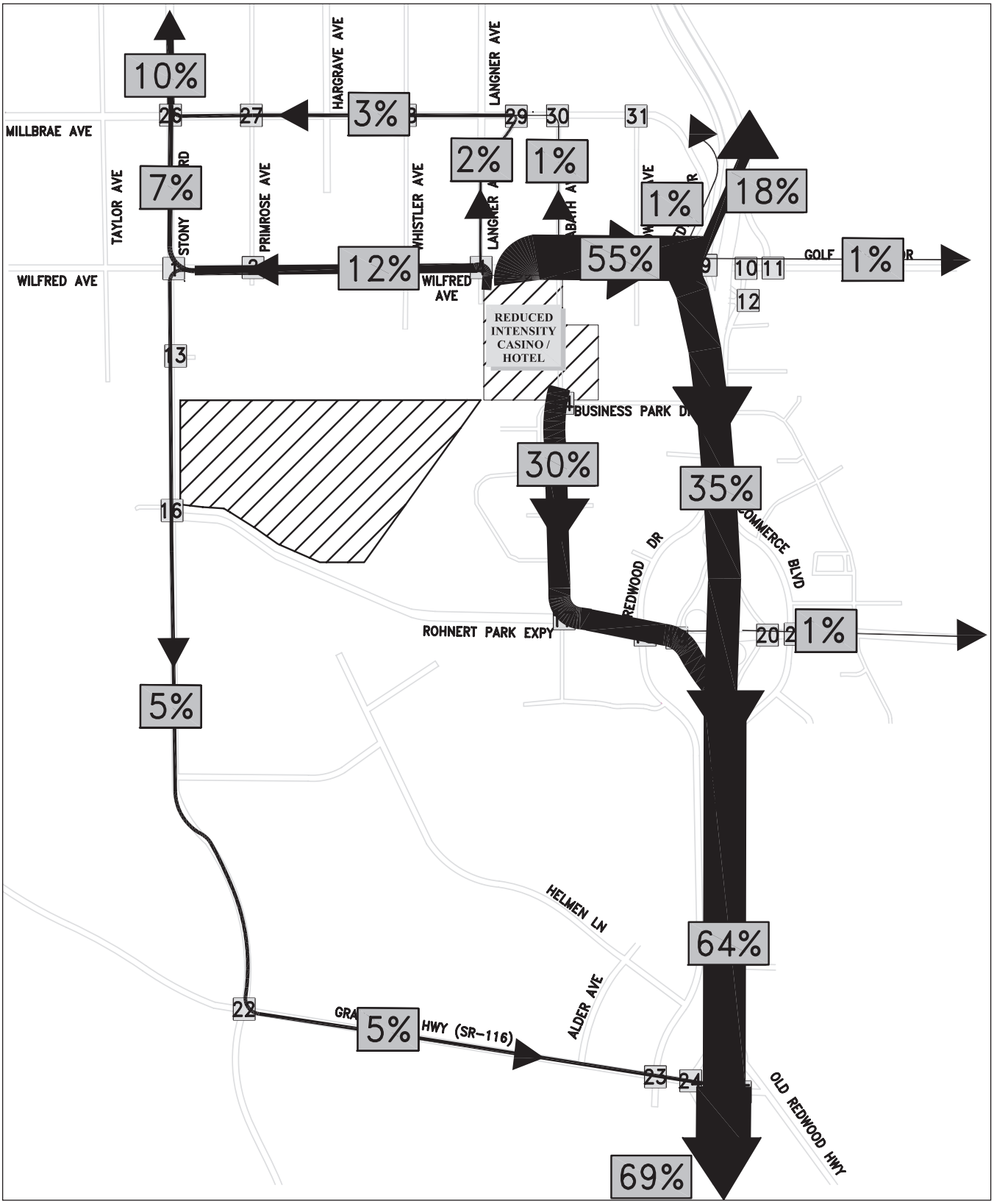
Figure 4.8-32 shows the PM traffic volumes with the project. **Table 4.8-24** summarizes the 2008 Plus Alternative H Peak Hour intersection conditions. Signal controls are listed as TS for a signalized intersection and TWSC for a two-way stop-controlled intersection. Additional detail is provided in **Appendix O**. As shown in the results, the following intersections will fail to meet acceptable level of service thresholds based on established significance criteria and with the addition of project-related traffic:

- Wilfred Avenue/Stony Point Road
- Wilfred Avenue/Redwood Drive
- Wilfred Avenue/Labath Avenue
- Wilfred Avenue/Dowdell Avenue
- Millbrae Avenue/Stony Point Road
- Golf Course Drive/Commerce Boulevard
- Rohnert Park Expressway/Commerce Boulevard
- Commerce Boulevard/US-101 NB Ramp



SOURCE: Kimley-Horn and Associates, Inc.; AES, 2007

Figure 4.8-29
Project Trip Distribution (In) - Alternative H



SOURCE: Kimley-Horn and Associates, Inc.; AES, 2007

Figure 4.8-30
Project Trip Distribution (out) - Alternative H

TABLE 4.8-23
FREEWAY SEGMENT AND RAMP PERFORMANCE
2008 - ALTERNATIVE H

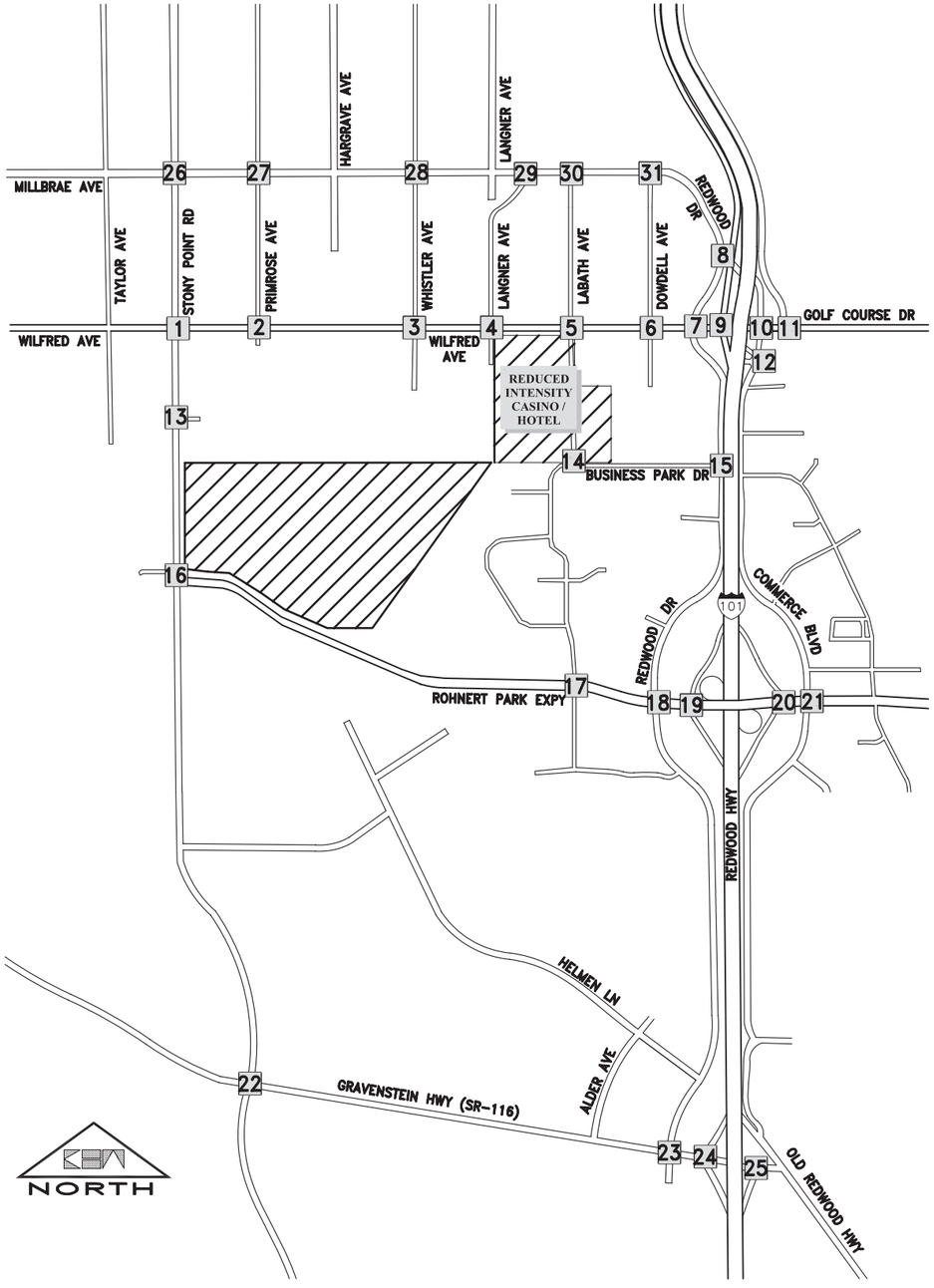
US-101 Section/Ramp	Criteria LOS	2008 with Alternative H	Density (pc/mi/ln)[1]
Northbound			
US-101 South of SR_116	E	C	24.1
SR-116 Off-ramp	E	D	32.8
SR-116 On-ramp	E	D	34.0
US-101 between SR-116 and Rohnert Park Expressway (NB)	E	D	28.4
Rohnert Park Expressway NB Off-Ramp	E	D	33.8
Rohnert Park Expressway NB On-Ramp (Loop Ramp)	E	C	23.4
Rohnert Park Expressway NB On-Ramp	E	C	27.7
US-101 between Rohnert Park Expressway and Wilfred Ave (NB)	E	C	27.7
Wilfred Ave NB Off-Ramp	E	C	27.7
Wilfred Ave NB On-Ramp	E	D	31.2
US-101 between Wilfred Ave and Santa Rosa Avenue	E	D	31.2
Santa Rosa Avenue NB Off-ramp	E	D	31.2
US-101 North of Santa Rosa Avenue	E	C	23.2
Southbound			
US-101 North of Santa Rosa Avenue (SB)	E	C	25.5
Santa Rosa Avenue On-ramp (SB)	E	-	-
US-101 between Santa Rosa Avenue and Wilfred Ave (SB)	E	E	35.1
Wilfred Ave SB Off-Ramp	E	E	40.2
Wilfred Ave SB On-Ramp	E	E	40.9
US-101 between Rohnert Park Expressway and Wilfred Ave (SB)	E	E	40.9
Rohnert Park Expressway SB Off-Ramp	E	E	40.9
Rohnert Park Expressway SB On-Ramp (Loop Ramp)	E	D	33.1
Rohnert Park Expressway SB On-Ramp	E	D	33.9
US-101 between Rohnert Park Expressway and SR-116 (SB)	E	D	26.8
SR-116 SB Off-ramp	E	D	33.6
SR-116 SB On-ramp	E	E	36.4
US-101 South of SR-116 (SB)	E	D	26.5

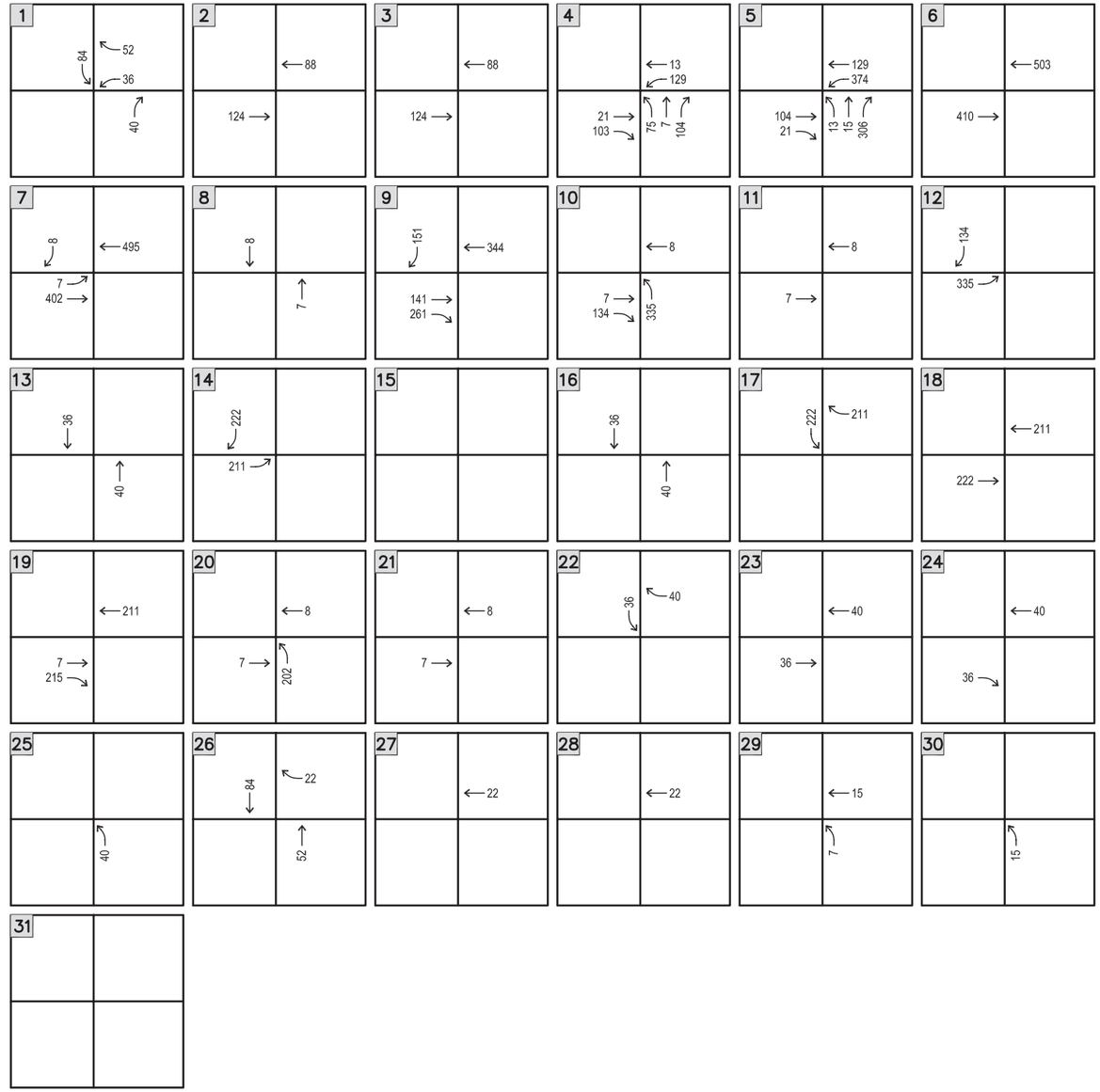
NOTE: 1pc/mi/ln = passenger cars per mile per lane.
2Intersection no longer exists due to planned roadway improvement.
SOURCE: Kimley-Horn and Associates 2008; AES 2007.

TABLE 4.8-24
INTERSECTION LOS – ALTERNATIVE H

	Intersection	Signal Control	Criteria	2008 with Alternative H	
				LOS	Delay[1]
1	Wilfred Avenue/Stony Point Road	TWSC	D	**F**	**OVRFL**
2	Wilfred Avenue/Primrose Avenue	TWSC	D	B	12.7
3	Wilfred Avenue/Whistler Avenue	TWSC	D	B	12.6
4	Wilfred Avenue/Langner Avenue	TWSC	D	C	20.1
5	Wilfred Avenue/Labath Avenue	TWSC	D	**F**	**557.9**
6	Wilfred Avenue/Dowdell Avenue	TWSC	D	**F**	**323.7**
7	Wilfred Avenue/Redwood Drive	TS	D	**F**	**83.4**
8	Redwood Drive/Commerce Boulevard	TS	C	C	24.6
9	Wilfred Avenue/ US-101 SB Ramps	TS	D	**C**	**24.0**
10	Golf Course Drive/Commerce Boulevard	TS	D	**F**	**82.7**
11	Golf Course Drive/Roberts Lake Road	TS	C	B	17.9
12	US-101 NB Ramps/Commerce Boulevard	TS	D	**E**	**63.3**
13	Project Driveway/Stony Point Road	TWSC	D	A	0.0
14	Business Park Drive/Labath Avenue	TWSC	D	A	9.8
15	Business Park Drive/Redwood Drive	TWSC	D	D	27.5
16	Rohnert Park Expressway/Stony Point Road	TS	B	B	19.6
17	Rohnert Park Expressway/Labath Avenue	TS	C	C	29.6
18	Rohnert Park Expressway/Redwood Drive	TS	C	C	25.7
19	Rohnert Park Expressway/US-101 SB Ramps	TS	D	B	16.3
20	Rohnert Park Expressway/US-101 NB Ramps	TS	D	B	15.6
21	Rohnert Park Expressway/Commerce Boulevard	TS	C	**D**	**40.6**
22	SR-116/Stony Point Road	TS	D	D	36.9
23	SR-116/Redwood Drive	TS	D	C	26.8
24	SR-116/ SB US-101 Ramps	TS	D	B	19.0
25	SR-116/NB US-101 Off-ramp	TS	D	B	11.2
26	Millbrae Avenue/Stony Point Road	TWSC	D	**F**	**61.3**
27	Millbrae Ave/Primrose Ave	TWSC	D	B	11.6
28	Millbrae Ave/Whistler Ave	TWSC	D	B	11.7
29	Millbrae Ave/Langner Ave	TWSC	D	B	10.7
30	Millbrae Ave/Labath Ave	TWSC	D	B	11.7
31	Millbrae Ave/Dowdell Ave	TWSC	D	B	11.4

NOTE: 1Delay in seconds.
2-Intersection only exists under Alternative A with project.
Bold text denotes unacceptable LOS.
SOURCE: Kimley-Horn and Associates, 2008; AES, 2007.



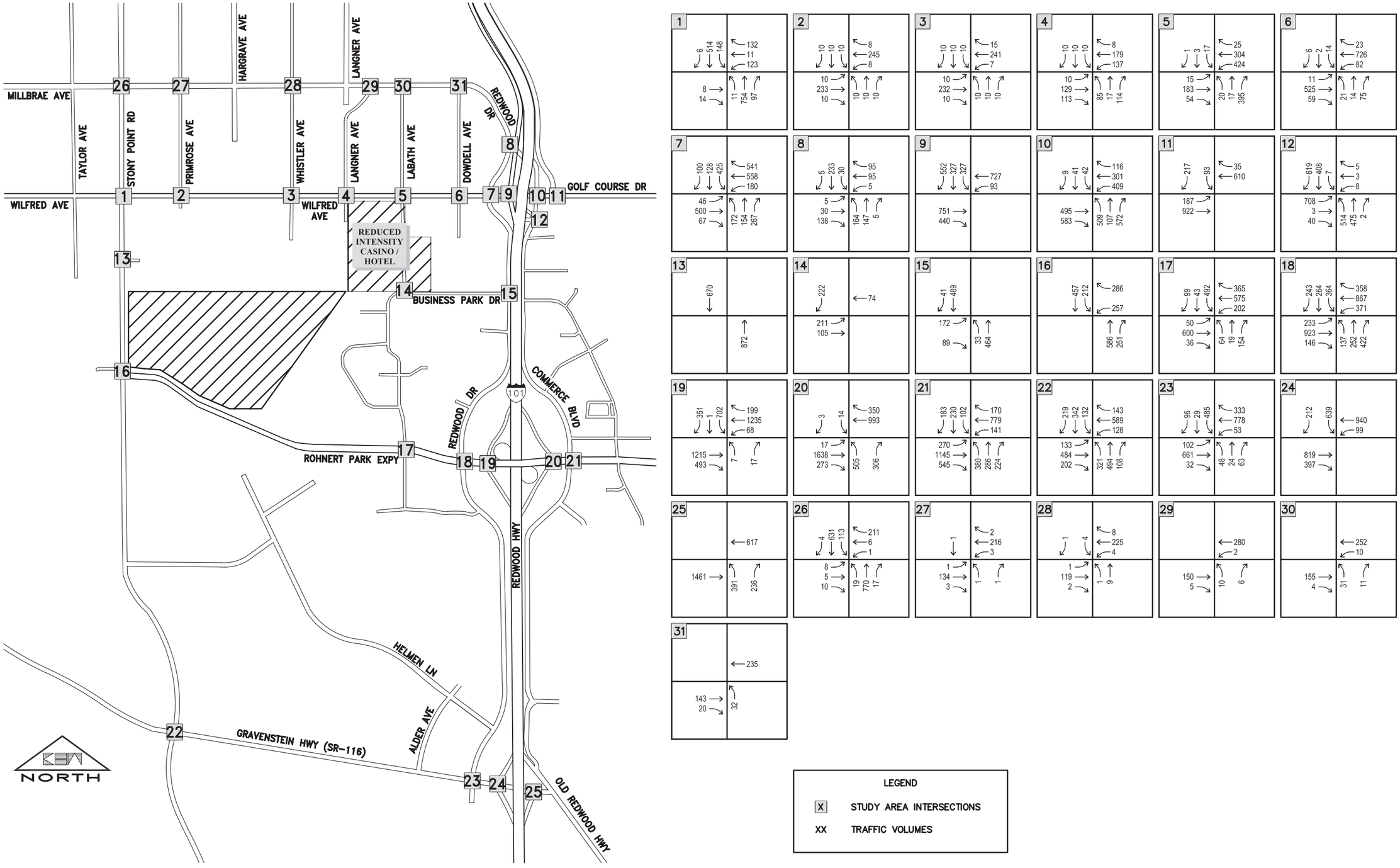


LEGEND

X	STUDY AREA INTERSECTIONS
XX	TRAFFIC VOLUMES

SOURCE: Kimley-Horn and Associates, Inc.; AES, 2007

Figure 4.8-31
2008 Project Generated PM Traffic Volumes - Alternative H



SOURCE: Kimley-Horn and Associates, Inc.; AES, 2007

Figure 4.8-32
2008 Plus Project PM Traffic Volumes - Alternative H

Results of the analysis showed that the following intersections would satisfy traffic signal Warrant #3 by year 2008:

- Stony Point Road/Wilfred Avenue
- Labath Avenue/Wilfred Avenue
- Dowdell Avenue/Wilfred Avenue
- Millbrae Avenue/Stony Point Road

Mitigation Measures

As shown above, Alternative H would not have a significant impact on intersections and freeway segments and ramps. Mitigation measures for Alternative H intersections are discussed in **Section 5.2.7** of this document. With the incorporation of project mitigation measures, each of the intersections that are shown to have an unacceptable LOS would be improved to an acceptable LOS.

Potential Effects on Intersection Safety

Potential effects on intersection safety are not expected to differ substantially from Alternative A. Therefore, if mitigation measures were implemented as proposed in **Section 5.2.7**, no significant increase in daytime or nighttime collisions would occur.

LAND USE

Land use effects would be similar to those of Alternative A, except at a somewhat reduced scale due to the reduced size of development for Alternative H. Most development under Alternative H would be located within an area planned by the City of Rohnert Park for commercial/industrial/residential development (Northwest Specific Plan). Although the Northwest Specific Plan does not contemplate the development of a Class III casino, neither does any specific land use designation in California, since such developments are not legal on non-Indian lands. Thus, although most of the area proposed for development under Alternative H is currently planned for development, Alternative H would technically be inconsistent with local land use plans. However, under Alternative H the project site would be taken into trust and local land use plans or policies would no longer apply. Therefore, Alternative H would not result in any significant environmental impacts to land uses such as land use conflicts. Examples of land use conflicts would include an obstruction of access or the preclusion of allowable uses.

In addition, the development of Alternative H would be located within a community separator as designated by the County Open Space Element, and is planned for future development similar to Alternative A. The development would also be located away from the nearby mobile home park.

As with Alternative A, the MOU with the City of Rohnert Park provides that the Tribe make monetary contributions which would go towards the purchase of open space. Therefore, development of Alternative H would have a less-than-significant impact on regional open space.

AGRICULTURE

The development of Alternative H would be similar to Alternative A, but at a smaller scale and would result in the direct conversion of up to 69.5 acres of rural lands to urban uses located on the northeastern portion of the Wilfred site. As discussed under Alternative A, the land proposed for development under Alternative H does not consist of prime and unique farmland or farmland of statewide and local importance (**Appendix P**).

As stated under Alternative A, four parcels totaling 181.71 acres in the southern portion of the Wilfred site are under Williamson Act contracts (**Figure 3.8-17**). Currently, no application for non-renewal has been submitted for any of the parcels within the Wilfred site. The wastewater treatment and disposal options for Alternative H are similar to those under Alternative A. Therefore, this would be considered an allowable use under the Williamson Act. Even though the Sonoma County Right to Farm Ordinance would not apply the proposed parking areas and roadways would function as buffers between adjacent agricultural operations and outdoor activity areas, thereby reducing the potential for conflicts to occur. Furthermore, the Sonoma County Right to Farm Ordinance will continue to protect neighboring farmers from nuisance suits brought by the Tribe or potential patrons on the project site.

Given the inferior quality of agricultural soils where development is proposed, the retention of the southern Williamson Act parcels for agricultural purposes, and the avoidance of land use conflicts with adjacent agricultural operations, Alternative H would have a less-than-significant impact on agriculture.

4.9 PUBLIC SERVICES

4.9.1 ALTERNATIVE A – PROPOSED PROJECT

WATER SUPPLY

A water and wastewater feasibility study was prepared by HydroScience Engineers, Inc., which analyzes the water and wastewater demands of the Proposed Project, and is included in this report as **Appendix D**. Additionally, a groundwater study was conducted by WorleyParsons Komex, Inc. and is included as **Appendix G**.

The water supply system is described in **Section 2.2.8**. All on-site water demands (including fire flow) would be met by on-site wells and storage, except for recycled water. Recycled water would be supplied from treated effluent from either an on-site wastewater treatment plant or from the Laguna Subregional Waste Water Treatment Plant (WWTP), which maintains recycled water pipelines adjacent to the site. Should the project connect to the Subregional sewer system, the volume of sewage provided to the Laguna WWTP would exceed the required recycled water deliveries for the project and thus would be a less-than-significant demand on recycled water. As discussed in **Section 5.2.8**, the Tribe would coordinate with the WWTP and the City of Rohnert Park to pay appropriate connection fees and ongoing service for recycled water.

An analytical drawdown model was developed for predicting water-level impacts due to pumping in the Wilfred Site vicinity. Hydrographs and time-drawdown graphs for wells in the City of Rohnert Park's well field indicate that drawdown tends to stabilize at a new level about four months after a change in pumping. Therefore, it is assumed that groundwater levels near the Wilfred Site would adjust to the proposed pumping rate and that stable, though lower, groundwater levels would be reached after a period of approximately four months (KOMEX, 2007a). Additionally, the City of Rohnert Park plans to decrease reliance on groundwater wells as discussed in **Section 3.9.1**. **Section 4.3** provides further discussion of project effects to groundwater. Given that the City's water system would not be utilized and that a stable local-groundwater level is expected after use of on-site wells, a less-than-significant impact to public water systems would occur.

WASTEWATER

Facility components were used to calculate the wastewater flows for Alternative A. The facility program provided for Alternative A (**Table 2-1** in **Section 2.0**) describes what type of restaurants are proposed, the respective number of seats where applicable, the number of hotel rooms, square footage of facility areas, etc. Average and peak wastewater flows were obtained from analysis of similar gaming facilities. **Table 4.9-1** summarizes the projections of wastewater volumes generated by Alternative A (HydroScience, 2008). Wastewater flows at gaming facilities are typically higher

on the weekday evenings and on weekends. This assumption is based on the higher utilization of facilities outside of normal business hours. For example, showrooms and nightclubs typically operate during weekday evenings and weekends.

TABLE 4.9-1
ALTERNATIVE A – PROJECTED WASTEWATER FLOWS

Area Description	Estimated Occupancy			Factor (%)		Wastewater Flow (gpd)	
	Number	Units	gpd/Unit	Weekday	Weekend	Weekday	Weekend
Casino Gaming and Support Areas	226	1,000 ft^2	425	80%	100%	77,000	97,000
Buffet	500	Seats	40	80%	100%	16,000	20,000
Coffee Shop	225	Seats	40	80%	100%	8,000	9,000
Food Court	210	Seats	40	80%	100%	7,000	9,000
Leased Restaurants	680	Seats	60	80%	100%	33,000	41,000
Nightclub	6.5	1,000 ft^2	500	50%	100%	2,000	4,000
Bars (7)	350	Seats	35	80%	100%	10,000	13,000
Lounges (2)	400	Seats	35	80%	100%	12,000	14,000
Event Center	1,500	Seats	35	0%	100%	0	53,000
Banquet Room	1,000	Seats	30	0%	100%	0	30,000
Spa	20	1,000 ft^2	750	66%	100%	10,000	15,000
Pool Concessions	50	Seats	35	50%	100%	1,000	2,000
Pool Grill	50	Seats	40	50%	100%	1,000	2,000
Hotel	300	Rooms	150	90%	100%	41,000	45,000
Total Wastewater Generated						***218,000***	***354,000***

NOTES: Gaming area flows include flows associated with patrons' use of casino slot machines, tables, high limit slots, Asian games, and the employees required to serve these patrons.
gpd = gallons per day
All flow values were rounded to the nearest 1,000 gpd.
SOURCE: HydroScience Engineers, Inc., 2008; AES, 2006.

Average weekend demand would be approximately 354,000 gpd. The design flows are higher than the projected flows to provide a safety factor for design and to account for the lack of flow equalization. Alternative A would either convey wastewater to the Laguna Subregional Wastewater WWTP or construct a new wastewater treatment facility on site.

Off-Site Option

The Laguna WWTP has an average daily dry weather flow of 17.5 million gallons per day (MGD); (City of Santa Rosa, 2006) and an average daily dry weather capacity of 21.3 MGD (**Appendix D**). This is sufficient capacity to accept project flows of 0.35 MGD. The ability of the Laguna WWTP to

accept flows at projected growth and build-out of member cities is analyzed in **Section 4.12**, Cumulative Effects.

Connection of Alternative A to the Laguna WWTP could occur by connection to the City of Rohnert Park gravity sewer system, connection to the City's new force main, or construction of a force main directly to the Laguna WWTP (**Figure 2-5)**. The first scenario involves routing wastewater through new sanitary sewers and the existing sanitary sewer on Redwood Drive to the Rohnert Park effluent pump station as envisioned in the Northwest Specific Plan. From the pump station, wastewater would flow through a new 30-inch force main or an existing 24-inch force main, and finally to the Laguna WWTP. Available capacity of this trunk sewer varies between 650 and 1,800 gallons per minute (gpm; Jenkins, pers. comm., 2005). There is available capacity for projected average flows of Alternative A (151 gpm) and peak diurnal flows (500 gpm). Variations in capacity due to peak periods could be met by routing wastewater from the site during low flow periods. The second conveyance scenario would be to pump directly to the City's sewer force main. Although possible, the City has indicated that this would not be permitted. The third scenario would include the development of a new pump station and force main conveying wastewater directly to the Laguna WWTP. For all three scenarios, treatment and conveyance to the Laguna WWTP is subject to political, environmental, and other external factors, including conditions of approval from the City of Rohnert Park (conveyance) and City of Santa Rosa (treatment). As the WWTP and existing lines currently have capacity to convey flows from Alternative A, the impact to capacity is considered less than significant. Should wastewater be treated at the Laguna Subregional WWTP, it would be up to the Laguna Subregional WWTP partners to determine how the project would be considered in allocation calculations. As mitigation in **Section 5.2.8**, it is recommended that the Tribe pay for its fair share of the amendments to the Master Plan, and appropriate environmental documentation, if necessary.

On-Site Option

If treatment at the Laguna WWTP is infeasible, wastewater would be treated on-site with an Immersed Membrane Bioreactor System (MBR). The wastewater treatment facilities for Alternative A would be built with the recommended capacity of 400,000 gpd (**Appendix D**). Description of MBR components and the on-site wastewater system are described in **Section 2.2.7** and **Appendix D**. On-site recycled water use would be maximized. Wastewater effluent would be disposed of using seasonal storage ponds/sprayfields and discharge to the Laguna de Santa Rosa (Laguna). Tertiary-treated effluent would be stored in seasonal storage ponds (typically during the dry season) and then applied to sprayfields year-round at agronomic rates (**Figure 2-6**). Discharge to the Laguna de Santa Rosa would occur during the wet season through the Bellevue-Wilfred Channel. If discharge to the Laguna were infeasible, the seasonal storage and sprayfield requirements would be increased (**Figure 2-7**).

The amount of wastewater generated by the Tribe's project is a small fraction of the wastewater processed at the Laguna Sub-regional Wastewater Treatment Plant. Both the Tribe and the Laguna Sub-regional Wastewater Treatment Plant would be restricted by the terms of a National Pollutant Discharge Elimination System (NPDES) permit from discharging wastewater into the Laguna when Russian River flows fall below 1,000 cubic feet per second (cfs), as measured at the Hacienda Bridge. High flows in the Russian River typically mean high flows in the Laguna de Santa Rosa, a tributary to the Russian River. Finally, the proposed on-site wastewater treatment plant would treat project wastewater to an extremely high level (see **Sections 2.2.7**, **4.3.1**, and **Appendix D**). Given the relatively minimal discharge proposed by Alternative A and the high receiving water flows, which would dilute the discharge and minimize the effect to water quality (see **Section 4.3.1**), the development of an on-site wastewater facility would result in a less-than-significant impact to the regional wastewater treatment system. In addition, the regional wastewater discharge to the Laguna has recently decreased due to diversion to the Geysers Recharge Project, as described in **Section 3.9**.

SOLID WASTE

Construction

Construction of Alternative A would result in a temporary increase in waste generation. Potential solid waste streams from construction are expected to include the following:

- Paper, wood, glass, and plastics from packing materials, waste lumber, insulation, and empty non-hazardous chemical containers;
- Excess concrete from construction practices;
- Excess metal, including steel from welding/cutting operations, packing materials, and empty non-hazardous chemical containers, and aluminum from packing materials and electrical wiring.

Waste that cannot be recycled would be disposed of at the Redwood Landfill or another disposal site, which accepts construction/demolition materials. This impact would be temporary and not significant. Nonetheless, additional mitigation measures are included in **Section 5.2.8** that would reduce the amount of construction/demolition materials disposed of at the Redwood Landfill.

Operation

The California Integrated Waste Management Board (CIWMB) has established waste generation rates for the operation of different business types and residences. The rate is expressed as tons per employee per year. The waste generation resulting from Alternative A's various components is estimated to be 12.1 tons per day (**Table 4.9-2**).

TABLE 4.9-2
SOLID WASTE DISPOSAL ESTIMATE – ALTERNATIVE A

Employment Category	Estimated Number of Jobs	Business Type	Rate (Tons/employee/year)	Tons per year	Tons per day
Gaming	995	38[a]	0.9	896	2.5
Hotel	225	32[b]	2.1	473	1.3
Food and Beverage	830	29[c]	3.1	2,573	7.0
Other Dept	10	33[d]	1.7	17	0.1
Administrative	50	33	1.7	85	0.2
Marketing	50	33	1.7	85	0.2
Maintenance	105	33	1.7	179	0.5
Security	135	38	0.9	122	0.3
Total	***2,400***			***4,430***	***12.1***

NOTES: [a] Includes SIC code 79 Amusement and Recreation Services
[b] Includes SIC code 70 Hotels
[c] Includes SIC code 58 Eating and Drinking Places
[d] Includes SIC code 73 Business Services
SOURCE: AES, 2006; CIWMB, 2004.

The Tribe would contract with Rohnert Park Disposal or Sonoma County disposal services to dispose of solid waste generated by Alternative A. Waste would be outhauled to one of five landfills in the region. Most waste from the County is transferred to the Redwood Landfill.

If an on-site wastewater treatment plant were built, it would produce sludge (biosolids) that would be dewatered using a belt press and then periodically disposed of, either on site through reuse or off site at a landfill. Biosolids would be trucked off-site for disposal at the Redwood Landfill approximately once a week. All biosolids dewatering and storage facilities would be contained indoors and the air scrubbed to minimize odors.

The project would not affect City or County diversion goals as Tribal land is classified as out-of-state waste and is not calculated in local waste diversion statistics (CIWMB, 2006). Alternative A is expected to generate 12.1 tons per day, which would be disposed at one of five landfills in the region. Most waste would be transferred to the Redwood Landfill, which is permitted to receive a maximum of 2,300 tons per day. Project generated waste represents approximately 0.5 percent of the Redwood Landfill's permitted daily intake (CIWMB, 2006b). Alternative A's projected solid waste generation is considered an insignificant contribution to the waste stream and is not expected to significantly decrease the life expectancy of the landfill. Additionally, the Tribe's MOU with Sonoma County provides that one or more intergovernmental agreements may be negotiated by parties to address any

significant effects that occur within the County. However, mitigation is included in **Section 5.2.8** to further reduce the amount of waste transferred to landfill.

ELECTRICITY, NATURAL GAS, AND TELECOMMUNICATIONS

Based on similar gaming facilities, Alternative A would have an approximate connected electrical load of 26.5 watts per square foot. The total connected electrical load would be approximately 20 megawatts. This is a conservative estimate based on National Electricity Code (NEC) calculations, which generally overestimate project demands to assure adequate power is supplied. Additionally, the load estimate assumes that all square footage is used for casino purposes while a hotel and other components of the project would likely have less demand per square foot. Projected electrical load and demand would be prepared by an electrical engineer and submitted upon application for service.

Emergency generators would be provided to service the proposed facilities in the event of a loss of service from the Pacific Gas and Electric (PG&E) grid. Use of the generators would be restricted to emergency purposes only. Three 1.5 megawatt diesel generators and one 1.5 megawatt backup generator would provide a total of 6 megawatts for the casino. The generators would be located near the loading dock of the casino building and would have noise attenuating housing. One 500-750 kilowatt emergency diesel generator would potentially serve the wastewater treatment plant.

In order to provide electrical service to the Wilfred Site, trenching and backfilling to the nearest PG&E power pole along Wilfred Avenue or Labath Avenue and installation of a pad-mounted transformer would be required. The transformer would step down the voltage of the 12-kilovolt power lines to accommodate the needs of Alternative A. These are standard improvements that would be required of any new connection to a 12-kilovolt power line. PG&E has sufficient capacity to accommodate the operation of Alternative A (Rivero, pers. comm., 2005). Therefore, implementation of Alternative A is expected to result in a less-than-significant impact to electricity services provided by PG&E. Nonetheless, mitigation measures have been identified in **Section 5.2.8** to reduce the electrical demand of the project.

The nearest natural gas transmission line is located along Stony Point Road, and the nearest distribution line is located along Wilfred Avenue, adjacent to the Wilfred Site. PG&E has identified that the transmission line along Stony Point Road has the capacity to service the operation of Alternative A (Harris, pers. comm., 2005). It is uncertain whether the 4-inch diameter distribution line would need to be resized to serve the project. Therefore, Alternative A could potentially impact natural gas services provided by PG&E. Mitigation is provided in **Section 5.2.8,** which would reduce the impact to less than significant.

AT&T currently provides telephone service adjacent to the Wilfred Site and extension of phone service would be required for the operation of Alternative A. Installation of a pedestal box on Wilfred Avenue would serve the casino/hotel resort. A pedestal box is a junction point (cabinet) where AT&T connects feeder cables to distribution cables to serve a particular area. The installation of a pedestal box at this location is not a planned extension and the Tribe would be responsible for the cost of installation and extension of services to the Wilfred Site. AT&T has the capacity to service Alternative A and the Tribe would pay for needed improvements. Therefore, a less-than-significant impact to local phone services would result (Graves, pers. comm., 2005).

PUBLIC HEALTH AND SAFETY

Once land is taken into trust, State and local laws and ordinances pertaining to public health and safety would not be applicable to activities on the Wilfred Site. Therefore, there is a concern that these issues would be neglected, impacting the health and safety of customers and employees. Hazardous materials are discussed in **Section 4.10**. Issues regarding building codes, building inspections, fire inspections, food safety and swimming pools are discussed below.

As discussed in **Section 2.2**, the Tribe would enter into a Tribal-State Compact, as required by the Indian Gaming Regulatory Act (IGRA) to govern the conduct of Class III gaming activities, or comply with procedures established by the Secretary of the Interior (pursuant to IGRA and 25 C.F.R. 291) in the event that the State and the Tribe are unable to agree to a compact. All recent (1999 – present) Tribal-State Compacts in California have included regulations regarding building codes and food safety. All compacts have required compliance with either the Uniform Building Code or California Building Code and inspections by a State designated agency. Recent compacts have also required inspections for fire safety and life safety in which a State designated agency must be notified and entitled to attend. Recent compacts have required that tribes adopt and comply with standards no less stringent than State public health standards for food and beverage handling. The Compacts have required further that tribes allow inspection of food and beverage services by State, county or city health inspectors, as applicable, during normal hours of operation, to assess compliance with these standards, unless inspections are routinely made by an agency of the United States government to ensure compliance with equivalent standards of the United States Public Health Service. Violations of these standards are treated as violations of the Compact. It is assumed that similar standards will be included in the Tribal-State Compact (or procedures issued by the Secretary of the Interior in lieu of a Compact) with the Tribe. Additionally, it is anticipated that the existing MOU with Rohnert Park would be renegotiated to apply to the Wilfred Site with similar provisions. The MOU included commitments to building codes and inspection as discussed in **Section 2.2**. Given that the Tribal-State Compact (or Secretarial procedures) would require compliance with building codes, fire inspections, and food safety, impacts would be less-than-significant.

Previous compacts have not specifically mentioned public health and safety measures regarding swimming pools. Although it is not in the Tribe's economic interest to operate their pool facilities in a manner that jeopardizes public health, the absence of standards and oversight represents a potentially significant impact to public health. Mitigation is included in **Section 5.2.8** to address swimming pool design and inspection, reducing potential impacts to a less-than-significant level.

The impacts of the project alternatives on traffic operations are discussed in **Section 4.8**. Traffic delays could impact response times for law enforcement, fire protection, and emergency medical service providers. Mitigation for traffic improvements are identified in **Section 5.2.7** to restore traffic operations to levels within acceptable standards or to levels as good as or better than without the project. Therefore with mitigation, no significant increase in emergency response time is expected.

Law Enforcement

Neither the City's Public Safety Department nor the Sonoma County Sheriff's Department would have authority over civil matters on Tribal lands, therefore no impacts from resolving civil disputes would result. Under Public Law 280, the State of California and other local law enforcement agencies have enforcement authority over criminal activities on Tribal land; both county and city law enforcement can enforce criminal law on Reservations. The majority of the Wilfred Site is located within the unincorporated area of Sonoma County and the Sonoma County Sheriff's Department currently provides services to that area. A small portion (3.86 acres) of the Wilfred Site is located within the City of Rohnert Park and is within the jurisdiction of the Rohnert Park Public Safety Department. Nonetheless, absent an agreement to the contrary, given that the majority of the Wilfred Site is currently located within the unincorporated area of Sonoma County, it is assumed that Sonoma County would have jurisdiction to provide primary services to the hotel/casino resort under Public Law 280. The Tribe may enter into a cooperative law enforcement agreement for the provision of primary services from the City of Rohnert Park Public Safety Department; the City has previously assumed primary law enforcement responsibility through a cooperative law enforcement agreement for Creekside Middle School, which is located in the unincorporated portion of the County. State law reinforces that either a city or county may enter into a contract for law enforcement services with the Tribe; California Government Code 54981.7 states that "[a] city or county may enter into a contract with an Indian tribe for the city or county to provide fire protection services and police or sheriff protection services for the Indian tribe either solely on Indian lands, or on the Indian lands and territory adjacent to those Indian lands." Should the northeastern portion of the Wilfred Site (on which the development of the hotel/casino resort is proposed) be annexed prior to land going into trust, the City of Rohnert Park Public Safety Department may have jurisdiction to provide primary services.

Specific effects to crime rates are uncertain (see **Section 4.7** and **Appendix N**), though it is hypothesized that an attraction of the size proposed for Alternative A would result in increased law enforcement activity on the Wilfred site due at least to increased visitors to the site. Without an agreement or compensation for primary law enforcement services there would either be significant impacts to County resources to provide primary services to the hotel/casino resort without degrading existing services or there would be a significant degradation of services throughout the County caused by allocating some existing resources to the Wilfred site. **Section 4.7** discusses the fiscal impacts to Sonoma County including services funded through the General Fund. Law enforcement services incorporated into the fiscal analysis include patrol, administrative functions, dispatch, the District Attorney, the Public Defender, and the court system, among other services (**Appendix N)**. Mitigation in **Section 5.2.6** includes an annual contribution, which would cover the Tribe's fiscal impacts to law enforcement services. The MOU with Sonoma County (**Appendix E**), provides for an intergovernmental agreement within 55 days of the publication of the Final EIS (subject to binding arbitration if there is no agreement by this time). The primary objective of the intergovernmental agreement is "to provide for binding and enforceable agreements which insure the timely mitigation of significant environmental effects of the Gaming Project" and to provide for mitigation measures which would mitigate any significant impacts on the off-Reservation environment with regard to a wide variety of topics, including public services and socioeconomic effects. The MOU with the County applies to the Wilfred Site. Also, consistent with Section 8.0 of the anticipated Tribal-State Compact, the Tribe would be committed to providing on-site security for casino operations to reduce and prevent criminal and civil incidents. There is currently no specific, formal agreement for the provision of primary services with the County or City (the current City MOU is primarily a funding mechanism). With the fiscal mitigation listed in **Section 5.2.6**, impacts to the County would be less than significant. As an alternative to the fiscal mitigation, the Tribe could enter into a law enforcement agreement with the County, City, or both. Mitigation is recommended in **Section 5.2.8** to ensure effective on-site security.

Additionally, the Rohnert Park Public Safety Department or other local law enforcement agencies may be contacted by the Sonoma County Sheriff's Department for back-up or emergency mutual/automatic aid services. Mutual/automatic aid services are normally not compensated because they provide beneficial impacts to participating departments and are not used regularly when departments are adequately funded. The Tribe would provide compensation to the County for primary services, which would prevent a reliance on mutual/automatic aid services and ensure a less-than-significant effect. Additionally, if the Tribe contracts with the Rohnert Park Public Safety Department to provide fire protection and emergency medical services to the site (discussed below) it would enhance regional law enforcement protection as firefighters are cross-trained as law enforcement officers. The Tribe has also committed to compensating the City for impacts to law enforcement services under the terms of a MOU with the City. The terms of the MOU with the City of Rohnert Park apply to the Stony Point Site, but not the Wilfred Site (**Appendix E**). Given the

proximity of the Wilfred Site to the Stony Point Site, recent informal discussions with the City and the Tribe, and the recent passage of Tribal resolution 05-14 (which affirms the Tribe's commitment to abide by the principle terms and conditions of the existing City MOU on the Wilfred site), it is assumed that the terms of an MOU for the Wilfred Site would be the same or similar to the existing MOU. Details on recurring and non-recurring contributions to the City for law enforcement services are discussed in **Section 2.2.10**. The MOU with the City of Rohnert Park states that the Tribe and the City agree that the compensation specified in the MOU is sufficient to offset the cost of equipment, other capital improvements, and other expenditures which the City deems necessary or appropriate to mitigate impacts of a gaming facility on the City's law enforcement services.

Alcoholic Beverages

The facilities under Alternative A would serve alcohol that potentially increases problems associated with drunken driving and underage drinking. The risk is similar to that from other businesses serving alcohol such as bars, restaurants and sports venues. These problems lead to increased service calls to the California Highway Patrol (CHP) and local law enforcement.

The Tribe would be required to comply with the terms of an alcohol and beverage license, granted from the California Department of Alcoholic Beverage Control, which regulates alcohol sales. The license limits the hours (6 a.m. to 2 a.m. the following day) and location of alcohol sales and includes restrictions on sale to minors and obviously intoxicated persons. Minors are prohibited from the general premises. Suspected violations of the license are investigated and if supported by evidence may result in suspension or revocation of the license and potentially civil or criminal penalties (California Department of Alcoholic Beverage Control, 2007).

As discussed in **Section 2**, patrons would be required to be 21 years old or over and the Tribe proposes to adopt a "Responsible Alcoholic Beverage Policy" that would include, but not be limited to, checking identification of patrons and refusing service to those who appear to have had enough to drink. With these measures incorporated into the project the impact would be less than significant. While impacts are less than significant, additional mitigation measures are recommended in **Section 5.2.8,** to further improve public safety.

Regarding the effectiveness of mitigation measures, sobriety checkpoints, Responsible Beverage Server Training, and enforcement of legal age limits have been shown to be effective in reducing alcohol-related crashed and fatalities (Center for Disease Control and Prevention, 2007; University of Minnesota, 2006).

Fire Protection Services

Construction

Construction of Alternative A would introduce potential sources of fire to the Wilfred Site. During construction, equipment and vehicles may come in contact with wildland areas and accidentally spark and ignite vegetation. Equipment used during grading and construction activities may also create sparks that could ignite vegetation on the Wilfred Site. This risk, which is similar to those that are found at other construction sites, would be considered potentially significant. Mitigation measures described in **Section 5.2.8** would reduce this risk to a less-than-significant level.

Operation

Once land is transferred into trust, there would be no obligation on a local fire department to provide services to the trust lands. The Bureau of Indian Affairs (BIA) maintains fire management responsibility on trust land. Specific requirements and regulations are included in the MOU among BIA, National Resource Conservation Service (NRCS), and Farm Service Agency Relative to Planning and Implementing U.S. Department of Agriculture Conservation Programs on Indian Lands and between BIA and United States Department of Agriculture (USDA), BIA and California Department of Forestry and Fire Protection (CalFire) Agreement approved December 6, 2006 and Cooperative Fire Protection Agreement between BIA and CalFire approved July 18, 2003; however, the BIA lacks the infrastructure to provide services to the site. The Tribe could contract with the Rincon Valley Fire Protection District, the Rohnert Park Department of Public Safety or another city/county agency pursuant to State law; California Government Code 54981.7 states that "[a] city or county may enter into a contract with an Indian tribe for the city or county to provide fire protection services and police or sheriff protection services for the Indian tribe either solely on Indian lands, or on the Indian lands and territory adjacent to those Indian lands." Due to the proximity of the Wilfred and Stony Point sites to the City and contributions for facilities in the MOU (discussed below), it is assumed that the Tribe would most likely contract with the City of Rohnert Park for fire protection and emergency medical services.

Operation of Alternative A would result in increased calls for service and a potential decrease in response time to local fire departments. The majority of fire protection impacts would fall upon the provider of primary services, which is assumed to be the City of Rohnert Park for this analysis. **Section 4.7** discusses the fiscal impacts to the City of Rohnert Park including services funded through the General Fund. Fire protection and emergency medical services incorporated into the fiscal analysis include fire protection services and fire/police personnel (as Rohnert Park Public Safety Department officers are cross-trained in fire and law enforcement services). The Tribe has committed to compensating the City and County for impacts to fire protection services. It is assumed that a MOU similar to that for the Stony Point Site will be provided for the Wilfred Site, for the reasons stated above under Law Enforcement. Details on recurring and non-recurring contributions

to the City for fire protection services in the existing MOU are discussed in **Section 2.2.10**. The City of Rohnert Park and the Tribe state in the existing MOU that the compensation detailed within the MOU is sufficient to cover the cost to the City of constructing and equipping a new public safety building that is of sufficient size and quality to mitigate potential impacts of a gaming facility on fire protection and first responder services.

Compliance with building codes and fire inspections are discussed under Public Health and Safety, above. The California Fire Code (CFC) represents the standard for fire code implementation in California. The CFC requires an access road to within 150 feet of any point of a building's exterior wall, but allows the Fire Chief to allow greater distances for buildings with sprinkler systems. The 150-foot limit would be met for all project facilities. In addition, the buildings would include sprinkler systems. Fire road dimensions and marking would meet the CFC requirements. Vegetation in and around the developed areas would be irrigated, further minimizing the risk of fire. Additionally, the timely detection of fires by individuals working in the proposed facilities, early intervention, and firebreaks created by driveways and roads, would likely reduce the size and duration of fires. Water facilities would be constructed to meet adequate fire flow requirements, including those described in CFC Appendix III-A. Similar to the terms of the existing MOU, the Tribe would construct facilities necessary to assure a fire flow of 2,700 to 3,500 gpm for a two-hour duration. Adequate water would be available for fire fighting by providing an on-site water storage tank, pump system, and emergency backup system. As there is currently no signed agreement for providing primary fire protection services, the impact is considered significant. Mitigation measures have been included in **Section 5.2.8** to reduce impacts to a less than significant level.

Additionally, the Rincon Valley Fire Protection District or City of Santa Rosa may be contacted by the Rohnert Park Public Safety Department for back-up or emergency mutual/automatic aid services (to the Wilfred Site or to provide support in other areas of the City). Mutual/automatic aid services are normally not compensated. An agreement for primary services would prevent a reliance on mutual/automatic aid services, ensuring less than significant impacts to mutual/automatic aid services. In addition, the Tribe is funding efforts, which will improve fire protection in the region including a new public safety building as conditions of the MOU with the City of Rohnert Park. The MOU with Sonoma County (**Appendix E**), provides for an intergovernmental agreement following the publication of the FEIS, which addresses any significant impacts that occur within the County. The MOU with the County applies to the Wilfred Site.

Emergency Medical Services

Operation of Alternative A would result in increased calls for emergency medical service and a potential decrease in response time to local emergency responders. Local fire departments provide emergency medical services as they are often the first responders and American Medical Response

(AMR) provides both emergency medical services and ambulance transport services to the Wilfred site. The existing City MOU provides that the Tribe would provide emergency medical training to certain members of its security staff and provide emergency medical equipment, including defibrillators, at the gaming facilities. It is assumed that a MOU similar to that for the Stony Point Site will be provided for the Wilfred Site for the reasons stated above.

Impacts to local fire departments are discussed above. AMR would provide ambulance transport service, which is primarily funded by the individual requiring transport. The Petaluma Fire Department and other local fire departments may be requested to respond for back-up or mutual/automatic aid services. Mutual/automatic aid assists are not intended to occur regularly and are not normally compensated. As emergency medical services including ambulance are primarily funded by the individual requiring service, increased calls for service should primarily fund increased equipment and staffing needs. It is recommended as mitigation that the Tribe enter into a contract with AMR or another entity for ambulance service. With mitigation this impact is less than significant.

The planned closure of Sutter Medical Center would change the dynamic of emergency medical services in the region. Sutter is contractually obligated to the County to provide access to health care through 2016, which means the construction of a new facility or transaction with Santa Rosa Memorial to subsume Sutter's obligations (Sonoma County Health Services, 2007). Thus, it is not anticipated that the number of emergency or other healthcare facilities would be drastically reduced. Santa Rosa Memorial Hospital is planning an expansion of in-patient, emergency and intensive care services to offset the closure. Over the next 10 years expansion includes increasing to 500 in-patient beds, 38 emergency bays, and 38 intensive care beds. The expansion to 38 emergency bays will occur in 2009 (Santa Rosa Memorial Hospital, 2007). The Wilfred site would still be served by multiple hospitals. Both Petaluma Valley Hospital and Santa Rosa Memorial Hospital are less than seven-miles away. Petaluma Valley Hospital includes 9 emergency room beds and 9 intensive care beds (St. Joseph Health System, 2007). Special consideration will be made in the planning process, with regards to an anticipated increase in emergency medical services. As with other privately provided services, increased demand would fund needed improvements or expansions. The funding of these services would be privately provided and thus fiscal impacts to local government would be less than significant.

SCHOOLS

The nearest schools are approximately 1 mile to the east and are on the other side of Highway 101. Furthermore, **Figures 3.8-11**, **3.8-14**, and **3.9-4** show the El Camino School as being located on Labath Avenue; however, currently this location is in the district office for the Cotati-Rohnert Park Unified School District. Highway 101 serves as a barrier, preventing conflicts between uses of

Alternative A and the nearest schools. Construction and operation of Alternative A would have no direct impact on school services currently provided by Cotati-Rohnert Park Unified School District, Bellevue Union School District or Santa Rosa High School District. As discussed in **Section 2.1.10**, it is anticipated that an MOU similar to that developed for the Stony Point Site would be developed for the Wilfred Site. The MOU states that the Tribe will contribute $1 million a year in block grants for the Cotati-Rohnert Park School District.

As discussed in **Section 4.11**, the existing labor pool would fill the jobs created by Alternative A. Alternative A is not anticipated to significantly increase demands on school services as it is neither creating housing nor creating a significant influx of residents.

Additionally, Alternative A is not anticipated to decrease school enrollment from causing families to move out of the local area. Second, the Wilfred Site is located away from local schools in a commercial area. Finally, local school enrollment data was examined to determine the impact of similar casinos on school enrollment in other casino communities and their respective Counties to determine whether there were any significant deviations from enrollment trends in the school-year following the opening and/or expansion of a casino (Bay Area Economics, 2007). As shown in **Table 4.9-3** and described in **Section 4.7**, the State Department of Education enrollment data show increases for three out of five casino communities. Most notably, enrollment in the year following the opening or expansion of a casino decreased in two of the five communities, Lincoln and Lakeside, California. In Lincoln, enrollment dipped in the first year after the casino opened, but then increased significantly during the following year. In Lakeside, enrollment was declining annually before the casino opened, and continued with this trend after the casino opened. Compared to their respective counties, all but one of the communities experienced slower growth in the year following the opening of the casino. However, without understanding development trends within each of these counties, it is not possible to determine whether this is related to the casino, or relatively aggressive development elsewhere in the County. As the data trends for each of the casinos and without completing a regression analysis, it is not possible to determine whether these decreases were significantly related tot the opening of one of the casinos. Moreover, since enrollment is on the rise in some of the casino communities, the data suggest that over time the presence of the casino does not seem to have a large negative impact on local school enrollment.

4.9.2 ALTERNATIVE B – NORTHWEST STONY POINT CASINO

WATER SUPPLY

Water demand under Alternative B would be the same as Alternative A. As with Alternative A, all on-site water demands would be met by on-site wells and storage. Unlike Alternative A, Alternative B would not include connection to the regional wastewater treatment plant as an option, thus all recycled water would be supplied by the on-site wastewater treatment plant.

TABLE 4.9-3
SCHOOL ENROLLMENT STATISTICS FOR SELECTED CASINO COMMUNITIES 2000-2007

COMMUNITY	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Thunder Valley | Lincoln, CA							
Western Placer							
Enrollment	6,208	7,040	*7,280*	*7,309*	*7,160*	*7,842*	*8,511*
Percentage Change, Yr. to Yr.	N/A	13.4%	3.4%	0.4%	-2.0%	9.5%	8.5%
Placer County							
Enrollment	55,531	58,228	60,716	61,718	62,666	63,742	64,401
Percentage Change, Yr. to Yr.	N/A	4.9%	4.3%	1.7%	1.5%	1.7%	1.0%
Chumash | Santa Ynez, CA							
SY Valley + College Elem							
Enrollment	1,688	1,665	1,651	1,656	1,683	1,629	1,563
Percentage Change, Yr. to Yr.	N/A	-1.4%	-0.8%	0.3%	1.6%	-3.2%	-4.1%
Santa Barbara County							
Enrollment	66,012	66,489	67,089	67,517	67,551	67,225	66,508
Percentage Change, Yr. to Yr.	N/A	0.7%	0.9%	0.6%	0.1%	-0.5%	-1.1%
Pala Resort & Spa | Pala, CA							
Bonsall Union							
Enrollment	1,579	1,599	1,740	1,865	1,785	1,888	1,830
Percentage Change, Yr. to Yr.	N/A	1.3%	8.8%	7.2%	-4.3%	5.8%	-3.1%
San Diego County							
Enrollment	488,377	494,588	499,750	499,356	498,186	495,228	493,708
Percentage Change, Yr. to Yr.	N/A	1.3%	1.0%	-0.1%	-0.2%	-0.6%	-0.3%
Spa Resort | Palm Springs, CA							
Palm Springs Unified							
Enrollment	20,847	21,532	22,067	22,499	23,217	23,689	24,263
Percentage Change, Yr. to Yr.	N/A	3.3%	2.5%	2.0%	3.2%	2.0%	2.4%
Riverside County							
Enrollment	319,910	333,330	349,607	364,857	380,964	395,183	413,059
Percentage Change, Yr. to Yr.	N/A	4.2%	4.9%	4.4%	4.4%	3.7%	4.5%
Barona Valley Ranch | Lakeside, CA							
Lakeside Union							
Enrollment	4,913	5,022	4,974	4,871	4,522	4,358	4,294
Percentage Change, Yr. to Yr.	N/A	2.2%	-1.0%	-2.1%	-7.2%	-3.6%	-1.5%
San Diego County							
Enrollment	488,377	494,588	499,750	499,356	498,186	495,228	493,708
Percentage Change, Yr. to Yr.	N/A	1.3%	1.0%	-0.1%	-0.2%	-0.6%	-0.3%

NOTES: Statistics in bold represent enrollment information for the year following a casino opening and/or expansion.

SOURCE: California Department of Education; Bay Area Economics, 2007.

As with Alternative A, an analytical drawdown model was developed for predicting water-level impacts due to pumping in the Stony Point Site vicinity. Hydrographs and time-drawdown graphs for wells in the City of Rohnert Park's well field indicate that drawdown tends to stabilize at a new level about four months after a change in pumping. Therefore, it is assumed that groundwater levels

near the Stony Point Site would adjust to the proposed pumping rate and that stable, though lower, groundwater levels would be reached after a period of approximately four months (Komex, 2007a). Given that the City's water system would not be utilized and that a stable local groundwater level is expected after use of on-site wells, a less-than-significant impact to public water systems would occur. **Section 4.3** provides a discussion of project impacts to groundwater.

WASTEWATER

Alternative B would utilize an on-site wastewater treatment system similar to that described under Alternative A. Facility components and the resulting wastewater generation are identical to those discussed under Alternative A. As with Alternative A, Alternative B would have an average weekday flow of 218,000 and an average weekend flow of 354,000 gpd (**Figure 4.9-1**). Wastewater treatment facilities for Alternative B would include a MBR treatment plant with a designed capacity of 400,000 gpd to allow for peak flows (HydroScience, 2008). Wastewater influent water quality, treatment plant capacity and the methods for wastewater treatment would be the same as previously described in Alternative A due to similarly sized facilities and uses.

Wastewater effluent would be disposed of using seasonal storage ponds, sprayfields and/or discharge to the Laguna. Under the first disposal option, tertiary treated effluent would be stored in seasonal storage ponds (typically during the dry season) and then applied to sprayfields year-round at agronomic rates (**Figure 2-12**). Discharge to the Laguna would occur during the wet season through the Bellevue-Wilfred Channel. As with Alternative A, discharging wastewater into the Laguna would be limited by the terms of a NPDES permit. If discharge to the Laguna were infeasible the seasonal storage and sprayfield requirements would be increased (**Figure 2-13**).

The northern portion of the Stony Point Site is currently used as a sprayfield for reuse of treated effluent from the Laguna WWTP. Under Alternative B, this portion of the Stony Point Site would be used for development of the casino/hotel resort and for sprayfields used to discharge project wastewater. Thus, Alternative B would reduce the acreage available for regional wastewater reuse. The implementation of the Geysers Recharge Project reduced the demand on Subregional Reclamation Systems sprayfields from approximately 6,400 to 3,600 acres (Santa Rosa, 2004a). The annual irrigation volume required by the system decreased from 3,700 million gallons to 2,100 million gallons, a reduction of 1,600 million gallons. It is assumed that approximately 180 acres for wastewater disposal could be obtained from other areas including areas which previously were used for sprayfields by the Laguna WWTP before the Geysers Recharge Project. Therefore, the removal of the Stony Point Site from use as sprayfields by the Laguna WWTP would not significantly impact sprayfield discharge options for the Subregional Reclamation System. As an independent wastewater treatment system would be used and impacts to municipal wastewater disposal areas would be less than significant, the overall impact to public wastewater services is less than significant.

SOLID WASTE

Construction

Construction of Alternative B would result in a temporary increase in waste generation. Potential solid waste streams from construction are similar to those discussed under Alternative A. Waste that cannot be recycled would be disposed of at the Redwood Landfill or another disposal site, which accepts construction/demolition materials. This impact would be temporary and not significant. Additional mitigation measures are included in **Section 5.2.8** that would reduce the amount of construction/demolition materials disposed of at the Redwood Landfill.

Operation

Operation of Alternative B includes the same number of employees as Alternative A and it is therefore expected to generate the same amount of waste as Alternative A. According to the MOU between the City and the Tribe, the Tribe would either retain Rohnert Park Disposal's services or conduct a competitive bidding process to select the contractor to dispose of solid waste generated by Alternative C (**Appendix E**). Alternative B is expected to generate 12.1 tons per day (**Table 4.9-2**), which represents approximately 0.5 percent of the Redwood Landfill's permitted daily intake. The on-site WWTP will produce sludge (biosolids) that will periodically need to be disposed of, either onsite through reuse or offsite at a landfill as discussed under Alternative A. Waste would be outhauled to one of five landfills in the region. Most waste from the County is transferred to the Redwood Landfill. The amount of waste generated by Alternative B would have a less-than-significant impact on disposal and landfill facilities. Additionally, the Tribe's MOU with Sonoma County provides that one or more intergovernmental agreements may be negotiated by parties to address any significant effects that occur within the County. Mitigation measures in **Section 5.2.8** are recommended to reduce the amount of solid waste.

ELECTRICITY, NATURAL GAS, AND TELECOMMUNICATIONS

Alternative B has the same components as Alternative A and the total connected electrical load would be approximately 20 megawatts. Emergency generators would be provided as described above under Alternative A. In order to provide electrical service to the Stony Point Site, trenching and backfilling to the nearest PG&E power pole along Stony Point Road (adjacent to the Stony Point Site) and installation of a pad-mounted transformer would be required. The transformer would step down the voltage of the 12-kilovolt power lines to accommodate the needs of Alternative B. PG&E has sufficient capacity to accommodate the operation of Alternative B (Rivero, pers. comm., 2005). Therefore, implementation of Alternative B is expected to result in a less than significant impact to electricity services provided by PG&E. Nonetheless, mitigation measures have been identified in **Section 5.2.8** to reduce the electrical demand of the project.

AT&T currently provides telephone service adjacent to the Stony Point Site and extension of phone service would be required for the operation of Alternative B. Installation of a pedestal box on Wilfred Avenue near the junction of Stony Point Road would serve the development. The installation of a pedestal box at this location is not a planned extension and the Tribe would be responsible for the cost of installation and extension of services to the Stony Point Site. AT&T has the capacity to service Alternative B (Graves, pers. comm., 2005) and the Tribe would pay its share of development costs for service; therefore, a less-than-significant impact to local phone services would result.

PUBLIC HEALTH AND SAFETY

Once land is taken into trust, State and local laws and ordinances pertaining to public health and safety would not be applicable to activities on the Stony Point Site. See the discussion under Alternative A which describes building and food safety standards that would be included in the Tribal-State Compact (or procedures issued by the Secretary of the Interior in lieu of a Compact) with the Tribe. Additionally, the MOU with the City, which applies to Alternative B, includes commitments to building codes and inspection as discussed in **Section 2.2**. Given that the Tribal-State Compact (or Secretarial procedures) and MOU with the City would require compliance with building codes, fire inspections, and/or food safety, impacts would be less than significant.

Previous compacts and the MOU with the City have not specifically mentioned public health and safety measures regarding swimming pools. Although it is not in the Tribe's economic interest to operate their pool facilities in a manner that jeopardizes public health, the absence of standards and oversight represents a potentially significant impact to public health. Mitigation is included in **Section 5.2.8** to address swimming pool design and inspection, reducing potential impacts to a less than significant level.

As discussed for Alternative A, mitigation improvements are identified in **Section 5.2.7** to restore traffic operations to levels within acceptable standards or to levels as good as or better than without the project. Therefore, with mitigation, no significant increase in emergency response times is expected.

Law Enforcement

Neither the City's Public Safety Department nor the Sonoma County Sheriff's Department would have authority over civil matters on Tribal lands, therefore no impacts from resolving civil disputes would result. Given that the Stony Point Site is currently located within the unincorporated area of Sonoma County, it is assumed that Sonoma County would have jurisdiction to provide primary services to the hotel/casino resort under Public Law 280. As discussed for Alternative A, the Tribe

may enter into a cooperative law enforcement agreement for the provision of primary services from the City of Rohnert Park Public Safety Department.

Although specific effects to crime rates are uncertain (see **Section 4.7** and **Appendix N**), an attraction of the size proposed for Alternative B would result in increased law enforcement activity on the Stony Point Site due to increased visitors to the site. Without an agreement or compensation for primary law enforcement services there would either be significant impacts to County resources to provide primary services to the hotel/casino resort without degrading existing services or there would be a significant degradation of services throughout the County caused by allocating some existing resources to the Stony Point Site. **Section 4.7** discusses the fiscal impacts to Sonoma County including services funded through the General Fund. Law enforcement services incorporated into the fiscal analysis include patrol, administrative functions, dispatch, the District Attorney, the Public Defender, and the court system, among other services (**Appendix N)**. Mitigation in **Section 5.2.6** includes an annual contribution, which would ensure the Tribe reduces fiscal impacts law enforcement services. The MOU with Sonoma County (**Appendix E**), provides for an intergovernmental agreement following the publication of the Draft EIS, which addresses any significant impacts that occur within the County. The MOU with the County applies to the Stony Point Site. Also, consistent with Section 8.0 of the anticipated Tribal-State Compact, the Tribe would be committed to providing on-site security for casino operations to reduce and prevent criminal and civil incidents. There is currently no specific, formal agreement for the provision of primary services with the County or City (the current City MOU is primarily a funding mechanism). With the fiscal mitigation listed in **Section 5.2.6**, impacts to the County would be less than significant. As an alternative to the fiscal mitigation, the Tribe could enter into a law enforcement agreement with the County, City, or both. Mitigation is recommended in **Section 5.2.8** to ensure effective on-site security.

Additionally, the Rohnert Park Public Safety Department or other local law enforcement agencies may be contacted by the Sonoma County Sheriff's Department for back-up or emergency mutual/automatic aid services. Mutual/automatic aid services are normally not compensated because they provide beneficial impacts to participating departments and are not used regularly when departments are adequately funded. The Tribe would provide compensation to the County for primary services, which would prevent a reliance on mutual/automatic aid services and ensure a less than significant effect. Additionally, if the Tribe contracts with the Rohnert Park Public Safety Department to provide fire protection and emergency medical services to the site (discussed below) it would enhance regional law enforcement protection as firefighters are cross-trained as law enforcement officers.

The Tribe has committed to compensating the City for impacts to law enforcement services. The terms of the Memorandum of Understanding (MOU) with the City of Rohnert Park apply to the

Stony Point Site (**Appendix E**). Details on recurring and non-recurring contributions to the City for law enforcement services are discussed in **Section 2.2.10**. The MOU with the City of Rohnert Park states that the Tribe and the City agree that the compensation specified in the MOU is sufficient to offset the cost of equipment, other capital improvements, and other expenditures which the City deems necessary or appropriate to mitigate impacts of a gaming facility on the City's law enforcement services.

Alcoholic Beverages

Impacts to public safety from serving alcoholic beverages would be similar to Alternative A, given the similar size and scope of facilities under Alternative B. The Tribe would be required to comply with the terms of an alcohol and beverage license, granted from the California Department of Alcoholic Beverage Control. Project measures to reduce impacts from alcohol consumption are the same as those discussed under Alternative A. While impacts are less than significant, additional mitigation measures are recommended in **Section 5.2.8,** to further improve public safety. Mitigation includes support of sobriety checkpoints, Responsible Beverage Server Training, and enforcement of legal age limits, which have been shown to be effective in reducing alcohol-related crashed and fatalities (Center for Disease Control and Prevention, 2007; University of Minnesota, 2006).

Fire Protection Services

Construction

Construction of Alternative B would introduce potential sources of fire to the Stony Point Site. This risk is described under Alternative A and would be considered potentially significant. Mitigation measures described in **Section 5.2.8** would reduce this risk to a less-than-significant level.

Operation

As discussed for Alternative A, the Tribe could contract with the Rincon Valley Fire Protection District, the Rohnert Park Department of Public Safety or another city/county agency for fire protection and emergency medical services. Due to the proximity of the Stony Point Site to the City and contributions for facilities in the MOU (discussed below), it is assumed that the Tribe would most likely contract with the City of Rohnert Park for fire protection and emergency medical services.

Operation of Alternative B would result in increased calls for service and a potential decrease in response time to local fire departments and emergency responders. The majority of fire protection impacts would fall upon the provider of primary services, which is assumed to be the City of Rohnert Park for this analysis. **Section 4.7** discusses the fiscal impacts to the City of Rohnert Park including services funded through the General Fund. The Tribe is committed to compensating the City and County for impacts to fire protection services. Details on recurring and non-recurring contributions

to the City for fire protection services in the MOU are discussed in **Section 2.2.10**. Measures incorporated into project design to reduce the risk of fire including California Fire Code (CFC) design standards and fire flow requirements are the same as those discussed for Alternative A. As there is currently no signed agreement for providing primary fire protection services, the impact is considered significant. Mitigation measures have been included in **Section 5.2.8** to reduce impacts to a less than significant level.

Additionally, the Rincon Valley Fire Protection District or City of Santa Rosa may be contacted by the Rohnert Park Public Safety Department for back-up or emergency mutual/automatic aid services (to the Stony Point Site or to provide support in other areas of the City). Mutual/automatic aid services are normally not compensated. An agreement for primary services would prevent a reliance on mutual/automatic aid services, ensuring less than significant impacts to mutual/automatic aid services. In addition, the Tribe is funding efforts, which will improve fire protection in the region including a new public safety building as conditions of the MOU with the City of Rohnert Park. The MOU with Sonoma County (**Appendix E**), provides for an intergovernmental agreement following the publication of the FEIS, which addresses any significant impacts that occur within the County.

Emergency Medical Services

Operation of Alternative B would result in increased calls for emergency medical service and a potential decrease in response time to local emergency responders. The existing MOU provides that the Tribe would provide emergency medical training to certain members of its security staff and provide emergency medical equipment, including defibrillators, at the gaming facilities. Impacts to local fire departments are discussed above. AMR would provide ambulance transport service, which is primarily funded by the individual requiring transport. The Petaluma Fire Department and other local fire departments may be requested to respond for back-up or mutual/automatic aid services. Mutual/automatic aid assists are not intended to occur regularly and are normally not compensated. As emergency medical services including ambulance are primarily funded by the individual requiring service, increased calls for service should primarily fund increased equipment and staffing needs. It is recommended as mitigation in **Section 5.2.8** that the Tribe enter into a contract with AMR or another entity for ambulance service. With mitigation this impact is less than significant.

Impacts to other emergency services including hospitals are similar to those discussed for Alternative A. Increased emergency services as a result of the project should be taken into consideration for planning purposes. As with other privately provided services, increased demand would fund needed improvements or expansions. The funding of these services would be privately provided and thus fiscal impacts to local government would be less than significant.

SCHOOLS

Highway 101 serves as barrier preventing conflicts between uses of Alternative B and the nearest schools. As with Alternative A, Alternative B would have no direct impact on school services provided by Cotati-Rohnert Park Unified School District, Bellevue Union School District or Santa Rosa High School District. The MOU with the City of Rohnert Park states that the Tribe will contribute $1 million a year to block grants for the Cotati-Rohnert Park School District.

As discussed in **Section 4.11**, the existing labor pool would fill the jobs created by Alternative B. Alternative B is therefore not anticipated to increase demands on school services as it is neither creating housing nor creating a significant influx of residents. As discussed for Alternative A, it is also not anticipated to cause a decline in enrollment trends. Thus impacts to public school services would be less than significant.

4.9.3 ALTERNATIVE C – NORTHEAST STONY POINT CASINO

WATER SUPPLY

Water demand under Alternative C would be the same as Alternative A. As with Alternative A, all on-site water demands would be met by on-site wells and storage. Unlike Alternative A, Alternative C would not include connection to the regional wastewater treatment plant as an option, thus all recycled water would be supplied by the on-site wastewater treatment plant.

As with Alternative A, an analytical drawdown model was developed for predicting water-level impacts due to pumping in the Stony Point Site vicinity. Hydrographs and time-drawdown graphs for wells in the City of Rohnert Park's well field indicate that drawdown tends to stabilize at a new level about four months after a change in pumping. Therefore, it is assumed that groundwater levels near the Stony Point Site would adjust to the proposed pumping rate and that stable, though lower, groundwater levels would be reached after a period of approximately four months (Komex, 2007a). Given that the City's water system would not be utilized and that a stable local groundwater level is expected after use of on-site wells, a less-than-significant impact to public water systems would occur. **Section 4.3** provides a discussion of project impacts to groundwater.

WASTEWATER

As described under Alternative B, construction of an on-site WWTP would provide wastewater treatment and disposal service to Alternative C. Wastewater treatment facilities would be constructed to the east of the Bellevue-Wilfred Channel. Wastewater influent water quality, treatment plant capacity and the methods for wastewater treatment would be the same as previously described in Alternatives A and B due to similarly sized facilities and uses. Effluent disposal options for Alternative C would be the same as for Alternative B, except that the location of the sprayfields,

and surface water discharge would be modified as described in **Section 2.4.7** and displayed in **Figure 2-17** and **Figure 2-18**.

As with Alternative B, Alternative C would reduce the acreage available for regional wastewater disposal. It is assumed that approximately 180 acres for wastewater disposal could be obtained from other areas including the 2,800 acres, which were used for sprayfields before the Geysers Recharge Project. As an independent wastewater treatment system would be used and impacts to municipal wastewater disposal areas would be less than significant, the overall impact to public wastewater services is less than significant.

SOLID WASTE

Construction

Construction of Alternative C would result in a temporary increase in waste generation. Potential solid waste streams from construction are similar to those discussed under Alternative A. Waste that cannot be recycled would be disposed of at the Redwood Landfill or another disposal site, which accepts construction/demolition materials. This impact would be temporary and not significant. Additional mitigation measures are included in **Section 5.2.8** that would reduce the amount of construction/demolition materials disposed of at the Redwood Landfill.

Operation

Operation of Alternative C includes the same number of employees as Alternative A and it is therefore expected to generate the same amount of waste as from Alternative A. According to the MOU between the City and the Tribe, the Tribe would either retain Rohnert Park Disposal's services or conduct a competitive bidding process to select the contractor to dispose of solid waste generated by Alternative C (**Appendix E**). Waste would be outhauled to one of five landfills in the region. Most waste from the County is transferred to the Redwood Landfill. Alternative C is expected to generate 12.1 tons per day (**Table 4.9-2**), which represents approximately 0.5 percent of the Redwood Landfill's permitted daily intake. Alternative C's projected solid waste generation is considered an insignificant contribution to the waste stream and is not expected to significantly decrease the life expectancy of the landfill. The on-site WWTP will produce sludge (biosolids) that will periodically need to be disposed of, either onsite through reuse or offsite at a landfill, as discussed under Alternative A. The amount of waste generated by Alternative C would have a less-than-significant impact on disposal and landfill facilities. Additionally, the Tribe's MOU with Sonoma County provides that one or more intergovernmental agreements may be negotiated by parties to address any significant effects that occur within the County. Mitigation measures in **Section 5.2.8** are recommended to reduce the amount of solid waste.

ELECTRICITY, NATURAL GAS, AND TELECOMMUNICATIONS

Alternative C has the same components as Alternative A and the total connected electrical load would be approximately 20 megawatts. Emergency generators would be provided, as described above under Alternative A. Improvements required for electrical service are the same as those discussed under Alternative B. PG&E has sufficient capacity to accommodate the operation of Alternative C (Rivero, pers. comm., 2005). Therefore, implementation of Alternative C is expected to result in a less-than-significant impact to electricity services provided by PG&E. Nonetheless, mitigation measures have been identified in **Section 5.2.8** to reduce the electrical demand of the project.

Improvements needed for natural gas service are the same as those discussed under Alternative B. PG&E has an adequate supply of natural gas to service the operation of Alternative C (Harris, pers. comm., 2005). As supply is available and the Tribe would pay its share of development costs, Alternative C would result in a less-than-significant impact to natural gas services provided by PG&E.

Improvements for telecommunications service are the same as those discussed under Alternative B. AT&T has the capacity to service Alternative C (Graves, pers. comm., 2005) and the Tribe would pay its share of development costs for service; therefore, a less-than-significant impact to local phone services would result.

PUBLIC HEALTH AND SAFETY

Public health and safety issues are the same as those discussed for Alternative B. Given that the Tribal-State Compact (or Secretarial procedures) and MOU with the City would require compliance with building codes, fire inspections, and/or food safety, impacts regarding these issues would be less than significant. Although it is not in the Tribe's economic interest to operate their pool facilities in a manner that jeopardizes public health, the absence of standards and oversight represents a potentially significant impact to public health. Mitigation is included in **Section 5.2.8** to address swimming pool design and inspection, reducing potential impacts to a less than significant level.

As discussed for Alternative A, mitigation improvements are identified in **Section 5.2.7** to restore traffic operations to levels within acceptable standards or to levels as good as or better than without the project. Therefore, with mitigation, no significant increase in emergency response times is expected.

Law Enforcement

Neither the City's Public Safety Department nor the Sonoma County Sheriff's Department would have authority over civil matters on Tribal lands, therefore no impacts from resolving civil disputes

would result. Given that the Stony Point Site is currently located within the unincorporated area of Sonoma County, it is assumed that Sonoma County would have jurisdiction to provide primary services to the hotel/casino resort under Public Law 280. As discussed for Alternative A, the Tribe may enter into a cooperative law enforcement agreement for the provision of primary services from the City of Rohnert Park Public Safety Department.

Although specific effects to crime rates are uncertain (see **Section 4.7** and **Appendix N**), an attraction of the size proposed for Alternative C would result in increased law enforcement activity on the Stony Point Site due to increased visitors to the site. Without an agreement or compensation for primary law enforcement services there would either be significant impacts to County resources to provide primary services to the hotel/casino resort without degrading existing services or there would be a significant degradation of services throughout the County caused by allocating some existing resources to the Stony Point Site. **Section 4.7** discusses the fiscal impacts to Sonoma County including services funded through the General Fund. Mitigation in **Section 5.2.6** includes an annual contribution, which would ensure the Tribe reduces fiscal impacts law enforcement services. As with Alternative B, the MOU with the County applies to the development. Also, consistent with Section 8.0 of the anticipated Tribal-State Compact, the Tribe would be committed to providing on-site security for casino operations to reduce and prevent criminal and civil incidents. There is currently no specific, formal agreement for the provision of primary services with the County or City (the current City MOU is primarily a funding mechanism). With the fiscal mitigation listed in **Section 5.2.6**, impacts to the County would be less than significant. As an alternative to the fiscal mitigation, the Tribe could enter into a law enforcement agreement with the County, City, or both. Mitigation is recommended in **Section 5.2.8** to ensure effective on-site security.

Additionally, the Rohnert Park Public Safety Department or other local law enforcement agencies may be contacted by the Sonoma County Sheriff's Department for back-up or emergency mutual/automatic aid services. Mutual/automatic aid services are normally not compensated because they provide beneficial impacts to participating departments and are not used regularly when departments are adequately funded. The Tribe would provide compensation to the County for primary services, which would prevent a reliance on mutual/automatic aid services and ensure a less-than-significant effect. If the Tribe contracts with the Rohnert Park Public Safety Department to provide fire protection and emergency medical services to the site (discussed below) it would enhance regional law enforcement protection as firefighters are cross-trained as law enforcement officers. As with Alternative B, the MOU with the City applies to the development. Details on recurring and non-recurring contributions to the City for law enforcement services are discussed in **Section 2.2.10**.

Alcoholic Beverages

Impacts to public safety from serving alcoholic beverages would be similar to Alternative A, given the similar size and scope of facilities under Alternative C. The Tribe would be required to comply with the terms of an alcohol and beverage license, granted from the California Department of Alcoholic Beverage Control. Project measures to reduce impacts from alcohol consumption are the same as those discussed under Alternative A. While impacts are less than significant, additional mitigation measures are recommended in **Section 5.2.8** to further improve public safety. Mitigation includes support of sobriety checkpoints, Responsible Beverage Server Training, and enforcement of legal age limits, which have been shown to be effective in reducing alcohol-related crashed and fatalities (Center for Disease Control and Prevention, 2007; University of Minnesota, 2006).

Fire Protection Services

As discussed for Alternative A, the Tribe could contract with the Rincon Valley Fire Protection District, the Rohnert Park Department of Public Safety or another city/county agency for fire protection and emergency medical services. Due to the proximity of the Stony Point Site to the City and contributions for facilities in the MOU (discussed below), it is assumed that the Tribe would most likely contract with the City of Rohnert Park for fire protection and emergency medical services.

Operation of Alternative C would result in increased calls for service and a potential decrease in response time to local fire departments and emergency responders. The majority of fire protection impacts would fall upon the provider of primary services, which is assumed to be the City of Rohnert Park for this analysis. **Section 4.7** discusses the fiscal impacts to the City of Rohnert Park including services funded through the General Fund. The Tribe is committed to compensating the City and County for impacts to fire protection services. Details on recurring and non-recurring contributions to the City for fire protection services in the MOU are discussed in **Section 2.2.10**. Measures incorporated into project design to reduce the risk of fire including CFC design standards and fire flow requirements are the same as those discussed for Alternative A. As there is currently no signed agreement for providing primary fire protection services, the impact is considered significant. Mitigation measures have been included in **Section 5.2.8** to reduce impacts to a less-than-significant level.

Additionally, the Rincon Valley Fire Protection District or City of Santa Rosa may be contacted by the Rohnert Park Public Safety Department for back-up or emergency mutual/automatic aid services (to the Stony Point Site or to provide support in other areas of the City). Mutual/automatic aid services are normally not compensated. An agreement for primary services would prevent a reliance on mutual/automatic aid services, ensuring a less-than-significant effect. In addition, the Tribe is funding efforts, which will improve fire protection in the region including a new public safety building as conditions of the MOU with the City of Rohnert Park. The MOU with Sonoma County

(**Appendix E**), provides for an intergovernmental agreement following the publication of the FEIS, which addresses any significant impacts that occur within the County.

Emergency Medical Services

Operation of Alternative C would result in increased calls for emergency medical service and a potential decrease in response time to local emergency responders. The existing MOU provides that the Tribe would provide emergency medical training to certain members of its security staff and provide emergency medical equipment, including defibrillators, at the gaming facilities. Impacts to local fire departments are discussed above. AMR would provide ambulance transport service, which is primarily funded by the individual requiring transport. The Petaluma Fire Department and other local fire departments may be requested to respond for back-up or mutual/automatic aid services. Mutual/automatic aid assists are not intended to occur regularly and are normally not compensated. As emergency medical services including ambulance are primarily funded by the individual requiring service, increased calls for service should primarily fund increased equipment and staffing needs. It is recommended as mitigation in **Section 5.2.8** that the Tribe enter into a contract with AMR or another entity for ambulance service. With mitigation this impact is less than significant.

Impacts to other emergency services including hospitals are similar to those discussed for Alternative A. Increased emergency services as a result of the project should be taken into consideration for planning purposes. As with other privately provided services, increased demand would fund needed improvements or expansions. The funding of these services would be privately provided and thus fiscal impacts to local government would be less than significant.

SCHOOLS

Highway 101 serves as barrier preventing conflicts between uses of Alternative C and the nearest schools. As with Alternative A, Alternative C would have no direct impact on school services provided by Cotati-Rohnert Park Unified School District, Bellevue Union School District or Santa Rosa High School District. The MOU with the City of Rohnert Park states that the Tribe will contribute $1 million a year to block grants for the Cotati-Rohnert Park School District.

As discussed in **Section 4.11**, the existing labor pool would fill the jobs created by Alternative C. Alternative C is therefore not anticipated to increase demands on school services as it is neither creating housing nor creating a significant influx of residents. As discussed for Alternative A, it is also not anticipated to cause a decline in enrollment trends. Thus impacts to public school services would be less than significant.

4.9.4 ALTERNATIVE D – REDUCED INTENSITY (STONY POINT SITE)

WATER SUPPLY

Due to a lower demand, on-site water facilities for Alternative D would be of a lesser magnitude when compared to Alternative A. As with Alternative A, all on-site water demands would be met by on-site wells and storage. Alternative D would not include connection to the regional wastewater treatment plant as an option, thus all recycled water would be supplied by the on-site wastewater treatment plant.

As discussed under Alternative A, an analytical drawdown model was developed for predicting water-level impacts due to pumping in the vicinity of the Stony Point Site. Based on this model, it is assumed that groundwater levels near the Stony Point Site would adjust to the proposed pumping rate and that stable, though lower, groundwater levels would be reached after a period of approximately four months (Komex, 2007a). Given that the City's water system would not be utilized and that a stable local groundwater level is expected after use of on-site wells, a less than significant impact to public water systems would occur. **Section 4.3** provides further discussion of project impacts to groundwater.

WASTEWATER

Alternative D consists of similar but reduced components compared to those of Alternative A. As with Alternative A, facility components were used to calculate the wastewater flows for Alternative D. **Table 4.9-4** summarizes the projections of wastewater volumes generated by Alternative D (HydroScience, 2008).

Average weekend demand would be approximately 227,000 gpd. An on-site MBR wastewater treatment plant would be constructed to service Alternative D with a design capacity of 275,000 gpd. Wastewater influent water quality, and the methods for wastewater treatment would be the same as previously described in Alternative A; however, the treatment plant would be designed for lower flows. Effluent disposal options for Alternative D would be the same as for Alternative B, except that the size of the sprayfields would be modified as described in **Section 2.5.7** (**Figure 2-21** and **Figure 2-22**).

As with Alternative B, Alternative D would reduce the acreage available for regional wastewater disposal. It is assumed that approximately 180 acres for wastewater disposal could be obtained from other areas including the 2,800 acres, which were used for sprayfields before the Geysers Recharge Project. As an independent wastewater treatment system would be used and impacts to municipal wastewater disposal areas would be less than significant, the overall impact to public wastewater services is less than significant.

TABLE 4.9-4
ALTERNATIVE D – PROJECTED WASTEWATER FLOWS

Area Description	Estimated Occupancy			Factor (%)		Wastewater Flow	
	Number	Units	gpd/Unit	Weekday	Weekend	Weekday	Weekend
Casino Gaming and Support Areas	196	1,000 ft^2	425	80%	100%	67,000	84,000
Buffet	500	Seats	40	80%	100%	16,000	20,000
Coffee Shop	225	Seats	40	80%	100%	8,000	9,000
Food Court	210	Seats	40	80%	100%	7,000	9,000
Leased Restaurants	480	Seats	60	80%	100%	24,000	29,000
Nightclub	0	1,000 ft^2	500	50%	100%	0	0
Bars (7)	350	Seats	35	80%	100%	10,000	13,000
Lounges (2)	400	Seats	35	80%	100%	12,000	14,000
Event Center	0	Seats	35	0%	100%	0	0
Banquet Room	1,000	Seats	30	0%	100%	0	30,000
Spa	0	1,000 ft^2	750	66%	100%	0	0
Pool Concessions	50	Seats	35	50%	100%	1,000	2,000
Pool Grill	50	Seats	40	50%	100%	1,000	2,000
Hotel	100	Rooms	150	90%	100%	14,000	15,000
Total Wastewater Generated						***160,000***	***227,000***

NOTES: Gaming area flows include flows associated with patrons' use of casino slot machines, tables, high limit slots, Asian games, and the employees required to serve these patrons.
gpd = gallons per day
All flow values were rounded to the nearest 1,000 gpd.
SOURCE: HydroScience Engineers, Inc., 2008; AES, 2006.

SOLID WASTE

Construction

Construction of Alternative D would result in a temporary increase in waste generation. Due to having less square footage, the construction impacts from Alternative D would be less than that of Alternative A. Since the components of Alternative D would be similar to those of Alternative A (only smaller in scale), potential solid waste streams from construction are expected to be similar to those expected for Alternative A. Waste that cannot be recycled would be disposed of at the Redwood Landfill or another disposal site, which accepts construction/demolition materials. This impact would be temporary and not significant. Nonetheless, additional mitigation measures are included in **Section 5.2.8** that would reduce the amount of construction/demolition materials disposed of at the Redwood Landfill.

Operation

The California Integrated Waste Management Board has established waste generation rates for the operation of different business types and residences. The rate is expressed as tons per employee per year. The waste generation resulting from Alternative D's various components is estimated to be 10.6 tons per day (**Table 4.9-5**).

TABLE 4.9-5
SOLID WASTE DISPOSAL ESTIMATE – ALTERNATIVE D

Employment Category	Estimated Number of Jobs	Business Type	Rate (Tons/employee/year)	Tons per year	Tons per day
Gaming	905	38[a]	0.9	815	2.2
Hotel	120	32[b]	2.1	252	0.7
Food and Beverage	770	29[c]	3.1	2,387	6.5
Other Dept.	10	33[d]	1.7	17	0.1
Administrative	45	33	1.7	77	0.2
Marketing	45	33	1.7	77	0.2
Maintenance	90	33	1.7	153	0.4
Security	115	38	0.9	104	0.3
Total	***2,100***			***3,882***	***10.6***

NOTES: [a] Includes SIC code 79 Amusement and Recreation Services
[b] Includes SIC code 70 Hotels
[c] Includes SIC code 58 Eating and Drinking Places
[d] Includes SIC code 73 Business Services
SOURCE: AES, 2006; CIWMB, 2004.

The Tribe would contract with Rohnert Park Disposal or Sonoma County disposal services to dispose of solid waste generated by Alternative D. Waste would be outhauled to one of five landfills in the region. Most waste from the County is transferred to the Redwood Landfill. The on-site wastewater treatment plant will produce sludge (biosolids) that will periodically need to be disposed of, either onsite through reuse or offsite at a landfill, as discussed under Alternative A.

The project would not affect County diversion goals as Tribal land is classified as out-of-state waste and is not calculated in local waste diversion statistics (CIWMB, 2006). Alternative D is expected to generate 10.6 tons per day, which represents approximately 0.5 percent of the Redwood Landfill's permitted daily intake. Alternative D's projected solid waste generation is considered an insignificant contribution to the waste stream and is not expected to significantly decrease the life expectancy of the landfill. However, mitigation is included in **Section 5.2.8** to further reduce the amount of waste transferred to landfill.

ELECTRICITY, NATURAL GAS, AND TELECOMMUNICATIONS

Based on similar gaming facilities, Alternative D would have an approximate connected electrical load of 26.5 watts per square foot. The total connected electrical load would be approximately 11 megawatts. As with Alternative A, this is a conservative estimate based on National Electricity Code (NEC) calculations. Emergency generators would be provided, as described above under Alternative

A. Projected electrical load and demand would be prepared by an electrical engineer and submitted upon application for service.

Improvements required for electrical service are the same as those discussed under Alternative B. PG&E has sufficient capacity to accommodate the operation of Alternative D (Rivero, pers. comm., 2005). Therefore, implementation of Alternative D is expected to result in a less-than-significant impact to electricity services provided by PG&E. Nonetheless, mitigation measures have been identified in **Section 5.2.8** to reduce the electrical demand of the project.

Improvements needed for natural gas service are the same as those discussed under Alternative B. Due to smaller size and scope, it is anticipated that natural gas demands for Alternative D would be less than those discussed for Alternative B. PG&E has an adequate supply of natural gas to service the operation of Alternative D (Harris, pers. comm., 2005). As supply is available and the Tribe would pay its share of development costs, Alternative D would result in a less than significant impact to natural gas services provided by PG&E.

Improvements for telecommunications service are the same as those discussed under Alternative B. Due to smaller size and scope, it is anticipated that telecommunications demands for Alternative D would be less than those discussed for Alternative B. AT&T has the capacity to service Alternative D (Graves, pers. comm., 2005) and the Tribe would pay its share of development costs for service; therefore, a less-than-significant impact to local phone services would result.

PUBLIC HEALTH AND SAFETY

Public health and safety issues are the same as those discussed for Alternative A. Given that the Tribal-State Compact (or Secretarial procedures) and MOU would require compliance with building codes, fire inspections, and food safety, impacts would be less than significant. Terms from the City MOU regarding building codes and inspections would also apply, but the Tribe would likely assert the right to renegotiate certain terms of the MOU due to the reduced intensity of development. Although it is not in the Tribe's economic interest to operate their pool facilities in a manner that jeopardizes public health, the absence of standards and oversight represents a potentially significant impact to public health. Mitigation is included in **Section 5.2.8** to address swimming pool design and inspection, reducing potential impacts to a less than significant level.

As discussed for Alternative A, mitigation improvements are identified in **Section 5.2.7** to restore traffic operations to levels within acceptable standards or to levels as good as or better than without the project. Therefore, with mitigation, no significant increase in emergency response times is expected.

Law Enforcement

Neither the City's Public Safety Department nor the Sonoma County Sheriff's Department would have authority over civil matters on Tribal lands, therefore no impacts from resolving civil disputes would result. Given that the Stony Point Site is currently located within the unincorporated area of Sonoma County, it is assumed that Sonoma County would have jurisdiction to provide primary services to the hotel/casino resort under Public Law 280. As discussed for Alternative A, the Tribe may enter into a cooperative law enforcement agreement for the provision of primary services from the City of Rohnert Park Public Safety Department.

The operation of Alternative D would result in somewhat lessened law enforcement demands when compared with Alternative B and C. This is due to the smaller facility serving fewer patrons. Without an agreement or compensation for primary law enforcement services there would either be significant impacts to County resources to provide primary services to the hotel/casino resort without degrading existing services or there would be a significant degradation of services throughout the County caused by allocating some existing resources to the Stony Point Site. **Section 4.7** discusses the fiscal impacts to Sonoma County including services funded through the General Fund. Mitigation in **Section 5.2.6** includes an annual contribution, which would ensure the Tribe reduces fiscal impacts law enforcement services. Also, consistent with Section 8.0 of the anticipated Tribal-State Compact, the Tribe would be committed to providing on-site security for casino operations to reduce and prevent criminal and civil incidents. There is currently no specific, formal agreement for the provision of primary services with the County or City (the current City MOU is primarily a funding mechanism). With the fiscal mitigation listed in **Section 5.2.6**, impacts to the County would be less than significant. As an alternative to the fiscal mitigation, the Tribe could enter into a law enforcement agreement with the County, City, or both. Mitigation is recommended in **Section 5.2.8** to ensure effective on-site security.

Additionally, the Rohnert Park Public Safety Department or other local law enforcement agencies may be contacted by the Sonoma County Sheriff's Department for back-up or emergency mutual/automatic aid services. Mutual/automatic aid services are normally not compensated because they provide beneficial impacts to participating departments and are not used regularly when departments are adequately funded. The Tribe would provide compensation to the County for primary services, which would prevent a reliance on mutual/automatic aid services and ensure a less than significant effect. Additionally, if the Tribe contracts with the Rohnert Park Public Safety Department to provide fire protection and emergency medical services to the site (discussed below) it would enhance regional law enforcement protection as firefighters are cross-trained as law enforcement officers. Also, the MOU with the City would apply, but given the reduced size and scope of the casino-hotel resort proposed for Alternative D, the Tribe would likely assert the right to

renegotiate certain terms due to the reduced intensity of development. Details on recurring and non-recurring contributions to the City for law enforcement services are discussed in **Section 2.2.10**.

Alcoholic Beverages

Impacts to public safety from serving alcoholic beverages would be similar, but slightly reduced, when compared to Alternative A, given the reduced size and scope of facilities under Alternative D. The Tribe would be required to comply with the terms of an alcohol and beverage license, granted from the California Department of Alcoholic Beverage Control. Project measures to reduce impacts from alcohol consumption are the same as those discussed under Alternative A. While impacts are less than significant, additional mitigation measures are recommended in **Section 5.2.8,** to further improve public safety. Mitigation includes support of sobriety checkpoints, Responsible Beverage Server Training, and enforcement of legal age limits, which have been shown to be effective in reducing alcohol-related crashed and fatalities (Center for Disease Control and Prevention, 2007; University of Minnesota, 2006).

Fire Protection Services

As discussed for Alternative A, the Tribe could contract with the Rincon Valley Fire Protection District, the Rohnert Park Department of Public Safety or another city/county agency for fire protection and emergency medical services. Due to the proximity of the Stony Point Site to the City and contributions for facilities in the MOU (discussed below), it is assumed that the Tribe would most likely contract with the City of Rohnert Park for fire protection and emergency medical services.

Construction of Alternative D would result in similar but reduced potential risks of fire, when compared with Alternative A, due to the reduced size of development. As with Alternative A, operation of Alternative D may increase the calls for services and reduce the response time of the fire department. **Section 4.7** discusses the fiscal impacts to the City of Rohnert Park including services funded through the General Fund. As discussed under law enforcement, the terms of the MOU with the City would apply, but the Tribe would likely assert the right to renegotiate certain terms due to the reduced intensity of development. Details on recurring and non-recurring contributions to the City for fire protection services in the MOU are discussed in **Section 2.2.10**. Measures incorporated into project design to reduce the risk of fire including CFC design standards are the same as those discussed for Alternative A with reduced fire flow requirements due to the reduced size. As there is currently no signed agreement for providing primary fire protection services, the impact is considered significant. Mitigation measures have been included in **Section 5.2.8** to reduce impacts to a less-than-significant level.

Additionally, the Rincon Valley Fire Protection District or City of Santa Rosa may be contacted by the Rohnert Park Public Safety Department for back-up or emergency mutual/automatic aid services (to the Stony Point Site or to provide support in other areas of the City). Mutual/automatic aid services are normally not compensated. An agreement for primary services would prevent a reliance on mutual/automatic aid services, ensuring less-than-significant impacts to mutual/automatic aid services. In addition, the Tribe is funding efforts, which will improve fire protection in the region including a new public safety building as conditions of the MOU with the City of Rohnert Park. The MOU with Sonoma County (**Appendix E**), provides for an intergovernmental agreement following the publication of the FEIS, which addresses any significant impacts that occur within the County.

Emergency Medical Services

As with Alternative A, Alternative D may increase calls for emergency medical service and potentially decrease response times to local emergency responders; however, impacts would be to a lesser degree due to the reduced size of development. It is anticipated that the Tribe would renegotiate the MOU and provide emergency medical training to certain members of its security staff and provide emergency medical equipment, including defibrillators, at the gaming facilities. Impacts to local fire departments are discussed above. AMR would provide ambulance transport service, which is primarily funded by the individual requiring transport. The Petaluma Fire Department and other local fire departments may be requested to respond for back-up or mutual/automatic aid services. Mutual/automatic aid assists are not intended to occur regularly and are normally not compensated. As emergency medical services including ambulance are primarily funded by the individual requiring service, increased calls for service should primarily fund increased equipment and staffing needs. It is recommended as mitigation in **Section 5.2.8** that the Tribe enter into a contract with AMR or another entity for ambulance service. With mitigation this impact is less than significant.

Impacts to other emergency services including hospitals are similar to those discussed for Alternative A. Increased emergency services as a result of the project should be taken into consideration for planning purposes. As with other privately provided services, increased demand would fund needed improvements or expansions. The funding of these services would be privately provided and thus fiscal impacts to local government would be less than significant.

SCHOOLS

Highway 101 serves as barrier preventing conflicts between uses of Alternative D and the nearest schools. As with Alternative A, Alternative D would have no direct impact on school services provided by Cotati-Rohnert Park Unified School District, Bellevue Union School District or Santa Rosa High School District. The MOU with the City of Rohnert Park states that the Tribe will contribute $1 million a year in block grants for the Cotati-Rohnert Park School District.

As discussed in **Section 4.11**, the existing labor pool would fill the jobs created by Alternative D. Alternative D is therefore not anticipated to increase demands on school services as it is neither creating housing nor creating a significant influx of residents. As discussed for Alternative A, it is also not anticipated to cause a decline in enrollment trends. Thus impacts to public school services would be less than significant.

4.9.5 ALTERNATIVE E – BUSINESS PARK

WATER SUPPLY

Under Alternative E, on-site water facilities would be of smaller magnitude than those of the other alternatives, because a business park is not anticipated to result in particularly high water demands. As with Alternative A, all on-site water demands would be met by on-site wells and storage. Unlike Alternative A, Alternative E would not include connection to the regional wastewater treatment plant as an option, thus all recycled water would be supplied by the on-site wastewater treatment plant.

As discussed under Alternative A, an analytical drawdown model was developed for predicting water-level impacts due to pumping in the vicinity of the Stony Point Site. Based on this model, it is assumed that groundwater levels near the Stony Point Site would adjust to the proposed pumping rate and that stable, though lower, groundwater levels would be reached after a period of approximately four months (Komex, 2007a). Given that the City's water system would not be utilized and that a stable local groundwater level is expected after use of on-site wells, a less-than-significant impact to public water systems would occur. **Section 4.3** provides further discussion of project impacts to groundwater.

WASTEWATER

Wastewater demands for Alternative E were obtained from analysis of similar business park type facilities. In general, flows from a business park development would have a lower strength influent than a gaming facility. **Table 4.9-6** summarizes the projections of wastewater volumes generated by Alternative E (HydroScience, 2008).

Average weekday demand would be approximately 78,000 gpd. An on-site MBR wastewater treatment plant would be constructed to service Alternative E with a design capacity of 90,000 gpd. The methods for wastewater treatment would be the same as previously described in Alternative A; however, the treatment plant would be designed for lower flows. Effluent disposal options for Alternative E would be the same as for Alternative B, except that the size of the sprayfields would be modified as described in **Section 2.6.5** (**Figure 2-26** and **Figure 2-27**).

TABLE 4.9-6
ALTERNATIVE E – PROJECTED WASTEWATER FLOWS

Area Description	Estimated Occupancy			Factor (%)		Wastewater Flow	
	Number	Units	gpd/Unit	Weekday	Weekend	Weekday	Weekend
Light Industrial Business	400	1,000 ft^2	155	100%	50%	62,000	31,000
Commercial Business	100	1,000 ft^2	155	100%	50%	16,000	8,000
Total Wastewater Generated						***78,000***	***39,000***

NOTES: Gaming area flows include flows associated with patrons' use of casino slot machines, tables, high limit slots, Asian games, and the employees required to serve these patrons.
gpd = gallons per day
All flow values were rounded to the nearest 1,000 gpd.
SOURCE: HydroScience Engineers, Inc., 2008; AES, 2006.

As with Alternative B, Alternative E would reduce the acreage available for regional wastewater disposal. It is assumed that approximately 180 acres for wastewater disposal could be obtained from other areas including the 2,800 acres, which were used for sprayfields before the Geysers Recharge Project. As an independent wastewater treatment system would be used and impacts to municipal wastewater disposal areas would be less than significant, the overall impact to public wastewater services is less than significant.

SOLID WASTE

Construction

Construction of Alternative E would result in a temporary increase in waste generation. Due to smaller square footage, the impact from Alternative E would be less than Alternative A. Potential solid waste streams from construction are expected to be similar to those discussed for Alternative A. Waste that cannot be recycled would be disposed of at the Redwood Landfill or another disposal site, which accepts construction/demolition materials. This impact would be temporary and not significant. Nonetheless, additional mitigation measures are included in **Section 5.2.8** that would reduce the amount of construction/demolition materials disposed of at the Redwood Landfill.

Operation

The California Integrated Waste Management Board has established waste generation rates for the operation of different business types and residences. The waste generation resulting from Alternative E's various reduced intensity components would be approximately 10.4 tons per day (**Table 4.9-7**).

The Tribe would be expected to either retain Rohnert Park Disposal's services or conduct a competitive bidding process to select a contractor to dispose of solid waste generated by Alternative E. Waste would be outhauled to one of five landfills in the region. Most waste from the County is

transferred to the Redwood Landfill. The on-site wastewater treatment plant will produce sludge (biosolids) that will periodically need to be disposed of, either on-site through reuse or offsite at a landfill, as discussed under Alternative A.

TABLE 4.9-7
SOLID WASTE DISPOSAL ESTIMATE – ALTERNATIVE E

Employment Category	Estimated Number of Jobs	Business Type	Rate (Tons/employee/year)	Tons per year	Tons per day
Light Industrial	1,600	18	1.9	3,040	8.3
Commercial Business	400	30	1.9	760	2.1
Total	***2,000***			***3,800***	***10.4***

SOURCE: AES, 2006; CIWMB, 2004.

The project would not affect County diversion goals as Tribal land is classified as out-of-state waste and is not calculated in local waste diversion statistics (CIWMB, 2006). Alternative E is expected to generate 10.4 tons per day, which represents approximately 0.5 percent of the Redwood Landfill's permitted daily intake. Alternative E's projected solid waste generation is considered an insignificant contribution to the waste stream and is not expected to significantly decrease the life expectancy of the landfill. However, mitigation is included in **Section 5.2.8** to further reduce the amount of waste transferred to landfill.

ELECTRICITY, NATURAL GAS, AND TELECOMMUNICATIONS

Based on a planning standard for similar uses of 30-35 kilowatts per developed acre, it is anticipated that the development of approximately 78 acres under Alternative E would result in an electrical load of 2.3 to 2.7 megawatts. Emergency generators would be provided for the development. Projected electrical load and demand would be prepared by an electrical engineer and submitted upon application for service.

Improvements required for electrical service are the same as those discussed under Alternative B. PG&E has sufficient capacity to accommodate the operation of Alternative E (Rivero, pers. comm., 2005). Therefore, implementation of Alternative E is expected to result in a less than significant impact to electricity services provided by PG&E. Nonetheless, mitigation measures have been identified in **Section 5.2.8** to reduce the electrical demand of the project.

Improvements needed for natural gas service are the same as those discussed under Alternative B. Due to a smaller size and scope, it is anticipated that natural gas demands for Alternative E would be less than those discussed for Alternative B. PG&E has an adequate supply of natural gas to service the operation of Alternative E (Harris, pers. comm., 2005). As supply is available and the Tribe

would pay its share of development costs, Alternative E would result in a less-than-significant impact to natural gas services provided by PG&E.

Improvements for telecommunications service are the same as those discussed under Alternative B. Due to a smaller size and scope, it is anticipated that telecommunications demands for Alternative E would be less than those discussed for Alternative B. AT&T has the capacity to service Alternative E (Graves, pers. comm., 2005) and the Tribe would pay its share of development costs for service; therefore, a less-than-significant impact to local phone services would result.

PUBLIC HEALTH AND SAFETY

Once land is taken into trust, State and local laws and ordinances pertaining to public health and safety would not be applicable to activities on the Stony Point Site. Issues of concern include: construction to applicable building standards, inspection of buildings to satisfy building and fire codes, and food safety at commercial facilities. Although it is not in the Tribe's economic interest to construct or operate facilities in a manner that jeopardizes public health, the absence of standards and oversight represents a potentially significant impact to public health. Mitigation is included in **Section 5.2.8** to reduce potential impacts to a less than significant level. **Section 5.2.1** recommends that construction of facilities adhere to the Uniform Building Code (UBC). **Section 5.2.8** addresses building and fire inspections and food safety.

As discussed for Alternative A, mitigation improvements are identified in **Section 5.2.7** to restore traffic operations to levels within acceptable standards or to levels as good as or better than without the project. Therefore, with mitigation, no significant increase in emergency response times is expected.

Law Enforcement

Neither the City's Public Safety Department nor the Sonoma County Sheriff's Department would have authority over civil matters on Tribal lands, therefore no impacts from resolving civil disputes would result. Given that the Stony Point Site is currently located within the unincorporated area of Sonoma County, it is assumed that Sonoma County would have jurisdiction to provide primary services to the hotel/casino resort under Public Law 280. As discussed for Alternative A, the Tribe may enter into a cooperative law enforcement agreement for the provision of primary services from the City of Rohnert Park Public Safety Department.

Alternative E would result in fewer calls for service for medical-related and public safety-related incidences than the other alternatives. This reduction is due to the fact that no alcohol would be served in association with Alternative E, fewer visitors would access the facility and the hours of operation would be reduced. Without an agreement or compensation for primary law enforcement

services there would either be significant impacts to County resources to provide primary services to the hotel/casino resort without degrading existing services or there would be a significant degradation of services throughout the County caused by allocating some existing resources to the Stony Point Site. **Section 4.7** discusses the fiscal impacts to Sonoma County including services funded through the General Fund. Mitigation in **Section 5.2.6** includes an annual contribution, which would ensure the Tribe reduces fiscal impacts law enforcement services. There is currently no specific, formal agreement for the provision of primary services with the County or City (the current City MOU is primarily a funding mechanism). With the fiscal mitigation listed in **Section 5.2.6**, impacts to the County would be less than significant. As an alternative to the fiscal mitigation, the Tribe could enter into a law enforcement agreement with the County, City, or both. Mitigation is recommended in **Section 5.2.8** to ensure effective on-site security.

Additionally, the Rohnert Park Public Safety Department or other local law enforcement agencies may be contacted by the Sonoma County Sheriff's Department for back-up or emergency mutual/automatic aid services. Mutual/automatic aid services are normally not compensated because they provide beneficial impacts to participating departments and are not used regularly when departments are adequately funded. The Tribe would provide compensation to the County for primary services, which would prevent a reliance on mutual/automatic aid services and ensure a less-than-significant effect. Additionally, if the Tribe contracts with the Rohnert Park Public Safety Department to provide fire protection and emergency medical services to the site (discussed below) it would enhance regional law enforcement protection as firefighters are cross-trained as law enforcement officers. Also, the terms of the City MOU would apply, but given that Alternative E does not have a gaming component and would therefore produce much lower revenues, the Tribe would likely assert the right to renegotiate certain terms. Details on recurring and non-recurring contributions to the City for law enforcement services are discussed in **Section 2.2.10**.

Alcoholic Beverages

Under Alternative E, the impacts to public safety from serving alcoholic beverages would be minimal and they would primarily fall upon the individual businesses that serve the alcohol in the proposed business park. The businesses would provide a variety of services, with the sale of alcohol not designated as a primary activity, and furthermore, significant alcohol consumption is not expected under these circumstances on a regular basis. These impacts would be less than significant given that. businesses serving alcohol would be required to comply with the terms of an alcohol and beverage license, granted from the California Department of Alcoholic Beverage Control. While impacts are less than significant, additional mitigation measures are recommended in **Section 5.2.8,** to further improve public safety.

Fire Protection Services

As discussed for Alternative A, the Tribe could contract with the Rincon Valley Fire Protection District, the Rohnert Park Department of Public Safety or another city/county agency for fire protection and emergency medical services. Due to the proximity of the Stony Point Site to the City and contributions for facilities in the MOU (discussed below), it is assumed that the Tribe would most likely contract with the City of Rohnert Park for fire protection and emergency medical services.

When compared with Alternative A, construction of Alternative E would result in similar but reduced potential risks of fire, largely due to the reduced size of development. Operation of Alternative E would result in fewer calls for service for medical-related and fire-related incidences than the other alternatives. This reduction is due to fewer visitors to the facility and the reduction of hours of operation. **Section 4.7** discusses the fiscal impacts to the City of Rohnert Park including services funded through the General Fund. The terms of the City MOU would apply, but given that Alternative E does not have a gaming component and would therefore produce much lower revenues, the Tribe would likely assert the right to renegotiate certain terms. Details on recurring and non-recurring contributions to the City for fire protection services in the MOU are discussed in **Section 2.2.10**. On-site water supplies for fire protection are discussed in **Section 2.6.6**. As there is currently no signed agreement for providing primary fire protection services, the impact is considered significant. Mitigation measures have been included in **Section 5.2.8** to reduce impacts to a less-than-significant level.

Additionally, the Rincon Valley Fire Protection District or City of Santa Rosa may be contacted by the Rohnert Park Public Safety Department for back-up or emergency mutual/automatic aid services (to the Stony Point Site or to provide support in other areas of the City). Mutual/automatic aid services are normally not compensated. An agreement for primary services would prevent a reliance on mutual/automatic aid services, ensuring less-than-significant impacts to mutual/automatic aid services. In addition, the Tribe is funding efforts, which will improve fire protection in the region including a new public safety building as conditions of the MOU with the City of Rohnert Park.

Emergency Medical Services

Operation of Alternative E would result in fewer calls for service for medical-related incidences than the other alternatives. This reduction is due to fewer visitors to the facility and the reduction of hours of operation. Impacts to local fire departments are discussed above. AMR would provide ambulance transport service, which is primarily funded by the individual requiring transport. The Petaluma Fire Department and other local fire departments may be requested to respond for back-up or mutual/automatic aid services. Mutual/automatic aid assists are not intended to occur regularly and are normally not compensated. As emergency medical services including ambulance are primarily

funded by the individual requiring service, increased calls for service should primarily fund increased equipment and staffing needs. An impact to emergency hospitals is not expected as the number of calls for service would be small and services would be privately funded. It is recommended as mitigation in **Section 5.2.8** that the Tribe enter into a contract with AMR or another entity for ambulance service. With mitigation this impact is less than significant.

SCHOOLS

Highway 101 serves as barrier preventing conflicts between uses of Alternative E and the nearest schools. As with Alternative A, Alternative E would have no direct impact on school services provided by Cotati-Rohnert Park Unified School District, Bellevue Union School District or Santa Rosa High School District.

As discussed in **Section 4.11**, the existing labor pool would fill the jobs created by Alternative E. Alternative E is therefore not anticipated to increase demands on school services as it is neither creating housing nor creating a significant influx of residents. As discussed for Alternative A, it is also not anticipated to cause a decline in enrollment trends. Thus impacts to public school services would be less than significant.

4.9.6 ALTERNATIVE F – LAKEVILLE CASINO

WATER SUPPLY

Water demand under Alternative F would be the same as Alternative A. As with Alternative A, all on-site water demands would be met by on-site wells and storage. Unlike Alternative A, Alternative F would not include connection to a regional wastewater treatment plant as an option, thus all recycled water would be supplied by the on-site wastewater treatment plant. Also, Alternative F includes development on the Lakeville Site in southern Sonoma County unlike the other alternatives. The nearest public water supply wells to the Lakeville Site are located in the City of Petaluma, approximately 9 miles northwest of the Lakeville Site. There would be no impact to groundwater levels within City of Petaluma wells. As Alternative F would utilize an independent water system and groundwater impacts would not affect municipal wells, the impact to municipal water services would be less than significant.

WASTEWATER

Alternative F would utilize an on-site wastewater treatment system similar to that described under Alternative A. Facility components and the resulting wastewater generation are identical to those discussed under Alternative A. As with Alternative A, Alternative F would have an average weekday flow of 218,000 and an average weekend flow of 354,000 gpd.

The nearest wastewater treatment systems to the Lakeville Site are operated by the Novato Sanitary District (NSD) and the City of Petaluma. Neither the service area nor infrastructure for these systems extends to the Lakeville Site. As such, Alternative F would likely not be able to obtain sewer service from either NSD or the City of Petaluma without modifying the service area or negotiating an agreement to treat project sewage. Therefore, Alternative F would utilize an on-site MBR treatment plant, with a designed capacity of 400,000 gpd to allow for peak flows (HydroScience, ~~2006~~ 2008). Wastewater influent water quality, treatment plant capacity and the methods for wastewater treatment would be the same as previously described in Alternative A due to similarly sized facilities and uses.

Wastewater effluent would be disposed of using seasonal storage ponds, sprayfields and/or discharge to surface waters (which flow to the Petaluma River). Under the first disposal option, tertiary treated effluent would be stored in seasonal storage ponds (typically during the dry season) and then applied to sprayfields year-round at agronomic rates (**Figure 2-30**). Discharge to surface waters would occur during the wet season via an existing, unnamed stream on the Lakeville Site. Discharging wastewater into surface waters would be limited by the terms of a NPDES permit. If discharge to surface waters were infeasible, the seasonal storage and sprayfield requirements would be increased (**Figure 2-31**). As an independent wastewater treatment system and municipal wastewater disposal areas would not be affected, the overall impact to public wastewater services is less than significant.

SOLID WASTE

Construction

Construction of Alternative F would result in a temporary increase in waste generation. Potential solid waste streams from construction are similar to those discussed under Alternative A. Waste that cannot be recycled would be disposed of at the Redwood Landfill or another disposal site, which accepts construction/demolition materials. This impact would be temporary and not significant. Additional mitigation measures are included in **Section 5.2.8** that would reduce the amount of construction/demolition materials disposed of at the Redwood Landfill.

Operation

The California Integrated Waste Management Board has established waste generation rates for the operation of different business types and residences. The rate is expressed as tons per employee per year. As Alternative A and F have the same number of employees, the predicted waste generation is the same. Alternative F is expected to generate 12.1 tons per day (**Table 4.9-2**), which represents approximately 0.5 percent of the Redwood Landfill's permitted daily intake. Alternative F's projected solid waste generation is considered an insignificant contribution to the waste stream and is not expected to significantly decrease the life expectancy of the landfill. The on-site wastewater treatment plant will produce sludge (biosolids) that will periodically need to be disposed of, either onsite through reuse or offsite at a landfill as discussed under Alternative A.

Sonoma County currently provides solid waste collection service to the vicinity of the Lakeville Site. The Tribe would contract with Sonoma County or an independent waste hauler for collection services. Waste would be outhauled to one of five landfills in the region. Most waste from the County is transferred to the Redwood Landfill. The amount of waste generated by Alternative F would have a less-than-significant impact on disposal and landfill facilities. Mitigation measures in **Section 5.2.8** are recommended to reduce the amount of solid waste.

ELECTRICITY, NATURAL GAS, AND TELECOMMUNICATIONS

Alternative F shares the same components as Alternative A, and the total connected electrical load would be approximately 20 megawatts. Emergency generators would additionally be provided, as described under Alternative A. To provide electrical service to the Lakeville Site, construction would require trenching and backfilling to the nearest PG&E power pole along Lakeville Highway (adjacent to the Lakeville Site) and the installation of a pad-mounted transformer. The transformer would step down the voltage of the 12-kilovolt power lines to accommodate the needs of the Lakeville Site. PG&E has sufficient capacity to accommodate the operation of Alternative F (Rivero, pers. comm., 2005). Implementation of Alternative F is expected to result in a less-than-significant impact to electric services provided by PG&E. Nonetheless, mitigation measures have been identified in **Section 5.2.8** to reduce the electrical demand of the project.

There are no natural gas lines in the project vicinity (Hogan, pers. comm., 2005). The Tribe would use electrical appliances or pay for infrastructure necessary to connect to the nearest natural gas facilities. Thus, Alternative F would have a less-than-significant impact on natural gas services.

AT&T currently provides telephone service adjacent to the Lakeville Site and extension of phone service would be required for the operation of Alternative F. Service to the Lakeville Site would be fed along Lakeville Highway from Petaluma and would require the installation of a pedestal box. AT&T may request an easement at the edge of the property to place a new pedestal box that would provide service to the Lakeville Site. AT&T has the capacity to service Alternative F (Graves, pers. comm., 2005) and the Tribe would pay its share of development costs for service; therefore, a less-than-significant impact to local phone services would result.

PUBLIC HEALTH AND SAFETY

Public health and safety issues are the same as those discussed for Alternative A. Given that the Tribal-State Compact (or Secretarial procedures) would require compliance with building codes, fire inspections, and food safety, impacts would be less than significant. Although it is not in the Tribe's economic interest to operate their pool facilities in a manner that jeopardizes public health, the absence of standards and oversight represents a potentially significant impact to public health.

Mitigation is included in **Section 5.2.8** to address swimming pool design and inspection, reducing potential impacts to a less-than-significant level.

As discussed for Alternative A, mitigation improvements are identified in **Section 5.2.7** to restore traffic operations to levels within acceptable standards or to levels as good as or better than without the project. Therefore, with mitigation, no significant increase in emergency response times is expected.

Law Enforcement

Neither the City's Public Safety Department nor the Sonoma County Sheriff's Department would have authority over civil matters on Tribal lands, therefore no impacts from resolving civil disputes would result. It is assumed that Sonoma County would have jurisdiction to provide primary services to the hotel/casino resort under Public Law 280.

The operation of the casino, hotel, and events center facilities is expected to result in law enforcement demands as described under Alternative A, except that the Lakeville Site is not located near a city. Without an agreement or compensation for primary law enforcement services there would either be significant impacts to County resources to provide primary services to the hotel/casino resort without degrading existing services or there would be a significant degradation of services throughout the County caused by allocating some existing resources to the Lakeville Site. **Section 4.7** discusses the fiscal impacts to Sonoma County including services funded through the General Fund. Law enforcement services incorporated into the fiscal analysis include patrol, administrative functions, dispatch, the District Attorney, the Public Defender, and the court system, among other services (**Appendix N)**. Mitigation in **Section 5.2.6** includes an annual contribution, which would ensure the Tribe reduces fiscal impacts to law enforcement services. The existing MOU with Sonoma County would require concurrence from the County to apply to the Lakeville Site. Also, consistent with Section 8.0 of the anticipated Tribal-State Compact, the Tribe would be committed to providing on-site security for casino operations to reduce and prevent criminal and civil incidents. There is currently no specific, formal agreement for the provision of primary services with the County. With the fiscal mitigation listed in **Section 5.2.6**, impacts to the County would be less than significant. As an alternative to the fiscal mitigation, the Tribe could enter into a law enforcement agreement with the County or another local law enforcement agency. Mitigation is recommended in **Section 5.2.8** to improve on-site security.

Additionally, the City of Petaluma Police Department or other local law enforcement agencies may be contacted by the Sonoma County Sheriff's Department for back-up or emergency mutual/automatic aid services. Mutual/automatic aid services are normally not compensated because they provide beneficial impacts to participating departments and are not used regularly when

departments are adequately funded. The Tribe would provide compensation to the County for primary services, which would prevent a reliance on mutual/automatic aid services, ensuring a less-than-significant effect to mutual/automatic aid services.

Alcoholic Beverages

Impacts to public safety from serving alcoholic beverages would be similar to Alternative A, given the similar size and scope of facilities under Alternative F. The Tribe would be required to comply with the terms of an alcohol and beverage license, granted from the California Department of Alcoholic Beverage Control. Project measures to reduce impacts from alcohol consumption are the same as those discussed under Alternative A. While impacts are less than significant, additional mitigation measures are recommended in **Section 5.2.8,** to further improve public safety. Mitigation includes support of sobriety checkpoints, Responsible Beverage Server Training, and enforcement of legal age limits, which have been shown to be effective in reducing alcohol-related crashed and fatalities (Center for Disease Control and Prevention, 2007; University of Minnesota, 2006).

Fire Protection Services

It is assumed that the Tribe would most likely contract with the Lakeville Volunteer Fire Department for fire protection and emergency medical services. Given that Alternative F is similar in size and scope to Alternative A, fire protection and emergency medical services demands are not expected to differ substantially. Construction and operation of the casino and hotel may introduce potential sources of fire to the Lakeville Site as described under Alternative A, except that the Lakeville Site is not located near any cities. Also, given that the Lakeville site is currently located in a rural setting, existing fire protection services are not equipped to adequately respond to fires at the hotel/casino on the Lakeville site. Additionally, there would be increased calls for service to fire protection and emergency medical services in Sonoma County.

Section 4.7 discusses the fiscal impacts to Sonoma County including services funded through the General Fund. Mitigation in **Section 5.2.6** includes an annual contribution, which would ensure the Tribe reduces fiscal impacts to fire protection and emergency medical services. Measures incorporated into project design to reduce the risk of fire including CFC design standards and fire flow requirements are the same as those discussed for Alternative A. The existing MOU with Sonoma County would require concurrence from the County to apply to the Lakeville Site. As there is currently no signed agreement for providing primary fire protection services, the impact is considered significant. Mitigation measures have been included in **Section 5.2.8** to reduce impacts to a less than significant level.

Additionally, the Petaluma Fire Department or other local fire protection agencies may be contacted by the County for back-up or emergency mutual/automatic aid services. Mutual/automatic aid

services are normally not compensated. An agreement for primary services would prevent a reliance on mutual/automatic aid services, ensuring less-than-significant impacts to mutual/automatic aid services.

Emergency Medical Services

Operation of Alternative F would result in increased calls for emergency medical service and a potential decrease in response time to local emergency responders. The existing MOU provides that the Tribe would provide emergency medical training to certain members of its security staff and provide emergency medical equipment, including defibrillators, at the gaming facilities; however, the existing MOU with Sonoma County would require concurrence from the County to apply to the Lakeville Site. Impacts to local fire departments are discussed above. The City of Petaluma would provide ambulance transport service, which is primarily funded by the individual requiring transport. Novato Ambulance may be requested to respond for back-up or mutual/automatic aid services. Mutual/automatic aid assists are not intended to occur regularly and are normally not compensated. As emergency medical services including ambulance are primarily funded by the individual requiring service, increased calls for service should primarily fund increased equipment and staffing needs. It is recommended as mitigation in **Section 5.2.8** that the Tribe enter into a contract with the City of Petaluma for ambulance service. With mitigation this impact is less than significant.

Impacts to other emergency services including hospitals are similar to those discussed for Alternative A. As with other privately provided services, increased demand would fund needed improvements or expansions. The funding of these services would be privately provided and thus fiscal impacts to local government would be less than significant.

SCHOOLS

The nearest schools are located approximately 4 miles to the southwest of the Lakeville Site. The uses of Alternative F would not affect nearby schools as this distance is not substantial. Construction and operation of Alternative F would have no direct impact on school services currently provided by Old Adobe Union School District or Petaluma Joint Union High School District.

As discussed in **Section 4.11**, the existing labor pool would fill the jobs created by Alternative F. Alternative F is therefore not anticipated to increase demands on school services as it is neither creating housing nor creating a significant influx of residents. As discussed for Alternative A, it is also not anticipated to cause a decline in enrollment trends. Thus impacts to public school services would be less than significant.

4.9.7 ALTERNATIVE G – NO ACTION

Under the No Action Alternative it is assumed that future development of the Wilfred Site, Stony Point Site, and Lakeville Site would be guided by existing land use plans. For the Stony Point Site and Lakeville Site there are currently no known development plans. According to the Northwest Specific Plan the Wilfred Site would be developed with residential and commercial uses (Southern Area; City of Rohnert Park, 2004). As stated in the Northwest Specific Plan it is anticipated that developers of the Southern Area will fund the installation of public services and will contribute through City fees to the funding of off-site services. These fees would include, but not be limited to, school mitigation fees and connection fees for sewer and water. The significance determinations for impacts to public services from Alternative G are discussed in the following paragraphs; overall the impacts from Alternative G to public services are less than significant.

WATER SUPPLY

Under the No Action Alternative, there would be no additional water supply demands for the Stony Point Site or Lakeville Site, as there are no development plans for either location. Thus, the impact from these sites to water supply systems would be less than significant.

As discussed in **Section 2.8**, the Wilfred Site would be developed with residential and commercial uses consistent with the Northwest Specific Plan. Water would be supplied by the City of Rohnert Park. The City's water system is described in **Section 3.9.1**. Assuming appropriate water conservations measures are implemented and continued utilization of municipal wells and water from the Sonoma County Water Agency (SCWA), the Northwest Specific Plan indicates that adequate water supply would be available. However, additional storage facilities would be needed on-site or at existing SCWA storage facilities (City of Rohnert Park, 2004). It is also anticipated that the development would pay water connection fees (City of Rohnert Park, 2004). Given that the there is adequate water supply and the development would be required to pay for water storage facilities, the impact is considered less than significant.

WASTEWATER

Under the No Action Alternative, there would be no additional wastewater service demands for the Stony Point Site or Lakeville Site, as there are no development plans for either location. Thus, the impact from these sites to wastewater services would be less than significant.

As discussed above, the Wilfred Site would be developed with residential and commercial uses. The Northwest Specific Plan (Southern Area) indicates that wastewater treatment for the development would occur at the Laguna WWTP, described in **Section 3.9.2**. The City of Rohnert Park currently owns 3.43 MGD of capacity and uses 0.48 MGD of the City of Santa Rosa's allotment. After implementation of the Incremental Recycled Water Program, the City of Rohnert Park's allotment

will increase to 5.15 MGD, which meets the estimated wastewater flows at build-out of the General Plan (City of Rohnert Park, 2004). New gravity sewer mains and a new interceptor line to the WWTP are planned if the Wilfred Site is developed according to the Northwest Specific Plan. The approximate location of the new sewer main is at Dowdell Avenue and Business Park Drive, south of an existing pump station (City of Rohnert Park, 2004). The development would be required to pay sewer connection fees (City of Rohnert Park, 2004). Given that adequate capacity is anticipated and the development would pay for development of sewer infrastructure necessary to serve the site, the impact would be less than significant.

SOLID WASTE

Under the No Action Alternative, there would be no solid waste generation for the Stony Point Site or Lakeville Site, as there are no development plans for either location. Thus, the impact from these sites to solid waste services would be less than significant.

As discussed above, the Wilfred Site would be developed with residential and commercial uses. There would be a temporary increase in construction waste from the development, which would be taken to the Redwood Landfill or another disposal site which accepts construction/demolition waste. Rohnert Park Disposal would provide collection and hauling services. The generation for this area is expected to be a small percentage of the Redwood Landfill's permitted daily intake and is not expected to significantly decrease the life expectancy of the landfill. In order to maintain or improve the City's current waste diversion rate it is anticipated that recycling and diversion programs would be implemented as for other commercial and residential areas of the City. The expected waste generation impact from the Wilfred Site under this alternative would be less than significant.

ELECTRICITY, NATURAL GAS, AND TELECOMMUNICATIONS

No development on the Stony Point Site or Lakeville Site would take place under this alternative. Thus, the impacts to electricity, natural gas, and telecommunications providers from these sites would be less than significant.

As discussed above, the Wilfred Site would be developed with residential and commercial uses. PG&E would provide natural gas and electrical services. AT&T would provide telephone services. As discussed for Alternative A, there is infrastructure adjacent to the Wilfred Site. Based on discussions with PG&E for Alternative A, it is anticipated that there is electrical and natural gas capacity. Improvements to service the site would be typical of other residential and commercial developments. As stated in the Northwest Specific Plan it is anticipated that developers will fund the installation of public services. Thus, the impact to electrical, natural gas, and telecommunications service providers would be less than significant.

PUBLIC HEALTH AND SAFETY

Law Enforcement

No development on the Stony Point Site or Lakeville Site would take place under this alternative. The impacts to law enforcement services from these sites would be less than significant.

As discussed above, the Wilfred Site would be developed with residential and commercial uses. Development would increase the patrol duties of the Rohnert Park Public Safety Department and increase calls for service to the Department. It is anticipated that development fees or taxes on the development would fund this increased demand. Thus, the impacts to law enforcement services would be less than significant.

Alcoholic Beverages

Impacts to public safety from serving alcoholic beverages would be less than significant given that businesses serving alcohol under Alternative G would be subject to state and local laws preventing the sale of alcohol to minors and given that businesses serving alcohol under Alternative G would mostly be catering to nearby residents, reducing the risk of impacts to drunk driving.

Fire Protection and Emergency Medical Services

No development on the Stony Point Site or Lakeville Site would take place under this alternative. Thus, the impacts to fire protection and emergency medical services from these sites would be less than significant.

As discussed above, the Wilfred Site would be developed with residential and commercial uses. Development would increase demands on the Rohnert Park Public Safety Department and AMR through increased calls for fire protection and emergency medical services. It is anticipated that development fees or taxes on the development would fund this increased demand. Thus, the impacts to these services would be less than significant.

SCHOOLS

No development on the Stony Point Site or Lakeville Site would take place under this alternative. Thus, the impact to schools from these sites would be less than significant.

As discussed above, the Wilfred Site would be developed with residential and commercial uses. The development of residential housing would increase demands for school services by potentially increasing the number of school age children in the Cotati-Rohnert Park Unified School District, Bellevue Union School District and/or Santa Rosa High School District.
It is anticipated that the development would pay school mitigation fees (City of Rohnert Park, 2004). Thus, the impacts to schools would be less than significant.

4.9.8 ALTERNATIVE H –REDUCED INTENSITY (WILFRED SITE)

WATER SUPPLY

Under Alternative H, on-site water facilities would be of a smaller magnitude than those of Alternatives A, because Alternative H would have fewer employees and patrons. As with Alternative A, all on-site water demands would be met by on-site wells and storage. Alternative H would utilize recycled water from an on-site wastewater treatment plant or from existing recycled water pipelines located adjacent to the site. As discussed in **Section 5.2.8**, the Tribe would coordinate with the WWTP and the City of Rohnert Park to pay appropriate connection fees and ongoing service charges for recycled water.

As discussed under Alternative A, an analytical drawdown model was developed for predicting water-level impacts due to pumping in the vicinity of the Wilfred Site. Based on this model, it is assumed that groundwater levels near the Wilfred Site would adjust to the proposed pumping rate and that stable, though lower, groundwater levels would be reached after a period of approximately four months (Komex, 2007a). Given that the City's water system would not be utilized and that a stable local groundwater level is expected after use of on-site wells, a less than significant impact to public water systems would occur. **Section 4.3** provides further discussion of project impacts to groundwater.

WASTEWATER

Wastewater treatment and disposal options for Alternative H would be the same as those discussed for Alternative A. Due to similar sized facility components, wastewater generation would be the same as that described for Alternative D. As with Alternative D, Alternative H would have an average weekday flow of 160,000 gpd and an average weekend flow of 227,000 gpd. The design flows are higher than the projected flows to provide a safety factor for design and to account for the lack of flow equalization. Alternative H would either convey wastewater to the Laguna Subregional Wastewater Treatment Plant (WWTP) or construct a new wastewater treatment facility on site.

Off-Site Option

The Laguna WWTP has an average daily dry weather flow of 17.5 MGD (City of Santa Rosa, 2006) and an average daily dry weather capacity of 21.3 MGD (**Appendix D**). This is sufficient capacity to accept project flows of 0.23 MGD. The ability of the Laguna WWTP to accept flows at projected growth and build-out of member cities is analyzed in **Section 4.12**, Cumulative Effects.

As discussed for Alternative A, connection of Alternative H to the Laguna WWTP could occur by connection to the City of Rohnert Park gravity sewer system, connection to the City's new force main, or construction of a force main directly to the Laguna WWTP. As the City of Rohnert Park's

gravity sewer system has available capacity for Alternative A, it is concluded that there is available capacity for Alternative H, which has lower projected wastewater flows. For all three scenarios, treatment and conveyance to the Laguna WWTP is subject to political, environmental, and other external factors, including conditions of approval from the City of Rohnert Park (conveyance) and City of Santa Rosa (treatment). As the WWTP and existing lines currently have capacity to convey flows from Alternative H, the impact to capacity is considered less than significant. Should wastewater be treated at the Laguna Subregional WWTP, it would be up to the Laguna Subregional WWTP partners to determine how the project would be considered in allocation calculations. As mitigation in **Section 5.2.8**, it is recommended that the Tribe pay for its fair share of the amendments to the Master Plan, and appropriate environmental documentation, if necessary.

On-Site Option

If treatment at the Laguna WWTP is infeasible, wastewater would be treated on-site with an MBR system with a design capacity of 275,000 gpd. Wastewater influent water quality, and the methods for wastewater treatment would be the same as previously described in Alternative A; however, the treatment plant would be designed for lower flows. On-site recycled water use would be maximized. Wastewater effluent would be disposed of using seasonal storage ponds/sprayfields and discharge to the Laguna de Santa Rosa (Laguna). Tertiary-treated effluent would be stored in seasonal storage ponds (typically during the dry season) and then applied to sprayfields year-round at agronomic rates. Discharge to the Laguna would occur during the wet season through the Bellevue-Wilfred Channel. If discharge to the Laguna were infeasible the seasonal storage and sprayfield requirements would be increased.

The amount of wastewater generated by Alternative H is a small fraction of the wastewater processed at the Laguna Sub-regional Wastewater Treatment Plant. Both the Tribe and the Laguna Sub-regional Wastewater Treatment Plant would be restricted by the terms of a National Pollutant Discharge Elimination System (NPDES) permit from discharging wastewater into the Laguna when Russian River flows fall below 1,000 cfs, as measured at the Hacienda Bridge. Finally, the proposed on-site wastewater treatment plant would treat project wastewater to an extremely high level (see **Section 2.2.7**, **Section 4.3.8**, and **Appendix D**). Given the relatively minimal discharge proposed by Alternative H and the high receiving water flows, which would dilute the discharge and minimize the effect to water quality (see **Section 4.3.8**), the development of an on-site wastewater facility would result in a less-than-significant impact to the regional wastewater treatment system. In addition, the regional wastewater discharge to the Laguna has recently decreased due to diversion to the Geysers Recharge Project, as described in **Section 3.9**.

SOLID WASTE

Construction

Construction of Alternative H would result in a temporary increase in waste generation. Due to a smaller square footage, the impact from Alternative H would be less than Alternative A. Since the components of Alternative H would be similar to those of Alternative A (only smaller in scale), potential solid waste streams from construction are expected to be similar to those expected for Alternative A.

Waste that cannot be recycled would be disposed of at the Redwood Landfill or another disposal site, which accepts construction/demolition materials. This impact would be temporary and not significant. Nonetheless, additional mitigation measures are included in **Section 5.2.8** that would reduce the amount of construction/demolition materials disposed of at the Redwood Landfill.

Operation

Alternative H has the same number of estimated employees as Alternative D and is expected to also generate approximately 10.6 tons per day of solid waste (**Table 4.9-5**). The Tribe would contract with Rohnert Park Disposal or Sonoma County disposal services to dispose of solid waste generated by Alternative H. Waste would be outhauled to one of five landfills in the region. Most waste from the County is transferred to the Redwood Landfill. If an on-site wastewater treatment plant were constructed, it would produce sludge (biosolids) that would periodically need to be disposed of, either on-site through reuse or off-site at a landfill, as discussed under Alternative A. Alternative H's projected solid waste generation, which represents approximately 0.5 percent of the Redwood Landfill's permitted daily intake, is considered an insignificant contribution to the waste stream and is not expected to significantly decrease the life expectancy of the landfill. However, mitigation is included in **Section 5.2.8** to further reduce the amount of waste transferred to landfill.

ELECTRICITY, NATURAL GAS, AND TELECOMMUNICATIONS

As with Alternative D, which has the same components as Alternative H, the approximate total connected electrical load would be approximately 11 megawatts, which equals to roughly 26.5 watts per square foot. Emergency generators would be provided, as described above under Alternative A. Improvements required for electrical service are the same as those discussed under Alternative A. As PG&E has sufficient capacity to accommodate the operation of Alternative A which requires more energy, it is concluded that sufficient capacity would be available for Alternative H (Rivero, pers. comm., 2005). Therefore, implementation of Alternative H is expected to result in a less-than-significant impact to electricity services provided by PG&E. Nonetheless, mitigation measures have been identified in **Section 5.2.8** to reduce the electrical demand of the project.

Improvements needed for natural gas service are the same as those discussed under Alternative A. As PG&E has an adequate supply of natural gas to service the operation of larger alternatives on the Wilfred Site, it is concluded that sufficient capacity would be available for Alternative H (Harris, pers. comm., 2005). As supply is available and the Tribe would pay its share of development costs, Alternative H would result in a less than significant impact to natural gas services provided by PG&E.

Improvements for telecommunications service are the same as those discussed under Alternative A. As AT&T has the capacity to service larger-scale alternatives, it is concluded that sufficient capacity would be available for Alternative H (Graves, pers. comm., 2005). The Tribe would pay its share of development costs for service; therefore, a less than significant impact to local phone services would result.

PUBLIC HEALTH AND SAFETY

Public health and safety issues are the same as those discussed for Alternative A. Given that the Tribal-State Compact (or Secretarial procedures) would require compliance with building codes, fire inspections, and food safety, impacts would be less than significant.

Although it is not in the Tribe's economic interest to operate their pool facilities in a manner that jeopardizes public health, the absence of standards and oversight represents a potentially significant impact to public health. Mitigation is included in **Section 5.2.8** to address swimming pool design and inspection, reducing potential impacts to a less than significant level.

As discussed for Alternative A, mitigation improvements are identified in **Section 5.2.7** to restore traffic operations to levels within acceptable standards or to levels as good as or better than without the project. Therefore, with mitigation, no significant increase in emergency response times is expected.

Law Enforcement

Neither the City's Public Safety Department nor the Sonoma County Sheriff's Department would have authority over civil matters on Tribal lands, therefore no impacts from resolving civil disputes would result. As with Alternative A, it is assumed that Sonoma County would have jurisdiction to provide primary services to the hotel/casino resort under Public Law 280. The Tribe may enter into a cooperative law enforcement agreement for the provision of primary services from the City of Rohnert Park Public Safety Department. Should the northeastern portion of the Wilfred Site (on which the development of the hotel/casino resort is proposed) be annexed prior to land going into trust, the City of Rohnert Park Public Safety Department may have jurisdiction to provide primary services.

The operation of Alternative H would result in somewhat lessened law enforcement demands when compared with Alternative A. This is due to the smaller facility serving fewer patrons. Without an agreement or compensation for primary law enforcement services there would either be significant impacts to County resources to provide primary services to the hotel/casino resort without degrading existing services or there would be a significant degradation of services throughout the County caused by allocating some existing resources to the Wilfred site. **Section 4.7** discusses the fiscal impacts to Sonoma County including services funded through the General Fund. Mitigation in **Section 5.2.6** includes an annual contribution, which would ensure the Tribe reduces fiscal impacts law enforcement services. Also, consistent with Section 8.0 of the anticipated Tribal-State Compact, the Tribe would be committed to providing on-site security for casino operations to reduce and prevent criminal and civil incidents. There is currently no specific, formal agreement for the provision of primary services with the County or City. With the fiscal mitigation listed in **Section 5.2.6**, impacts to the County would be less than significant. As an alternative to the fiscal mitigation, the Tribe could enter into a law enforcement agreement with the County, City, or both. Mitigation is recommended in **Section 5.2.8** to ensure effective on-site security.

Additionally, the Rohnert Park Public Safety Department or other local law enforcement agencies may be contacted by the Sonoma County Sheriff's Department for back-up or emergency mutual/automatic aid services. Mutual/automatic aid services are normally not compensated because they provide beneficial impacts to participating departments and are not used regularly when departments are adequately funded. The Tribe would provide compensation to the County for primary services, which would prevent a reliance on mutual/automatic aid services ensuring a less than significant impact to mutual/automatic aid services.

Alcoholic Beverages

Impacts to public safety from serving alcoholic beverages would be similar, but slightly reduced, when compared to Alternative A, given the reduced size and scope of facilities under Alternative H. The Tribe would be required to comply with the terms of an alcohol and beverage license, granted from the California Department of Alcoholic Beverage Control. Project measures to reduce impacts from alcohol consumption are the same as those discussed under Alternative A. While impacts are less than significant, additional mitigation measures are recommended in **Section 5.2.8,** to further improve public safety. Mitigation includes support of sobriety checkpoints, Responsible Beverage Server Training, and enforcement of legal age limits, which have been shown to be effective in reducing alcohol-related crashed and fatalities (Center for Disease Control and Prevention, 2007; University of Minnesota, 2006).

Fire Protection Services

Construction of Alternative H would result in similar, but reduced potential risks of fire, when compared with Alternative A, due to the reduced size of development. As with Alternative A, operation of Alternative H may increase the calls for services and reduce the response time of local fire departments. The Tribe will incorporated measures into the project design to reduce the risk of fire including CFC design standards, which are the same standards as discussed under Alternative A with reduced fire flow requirements due to the reduced size. As there is currently no signed agreement for providing fire protection services, the impact is considered significant. Mitigation measures have been included in **Section 5.2.8** to reduce impacts to a less than significant level.

Mutual/automatic aid services are normally not compensated. An agreement for primary services would prevent a reliance on mutual/automatic aid services to reduce impacts to a less than significant level.

Emergency Medical Services

As with Alternative A, Alternative H may increase calls for emergency medical service and potentially decrease response times to local emergency responders; however, impacts would be to a lesser degree due to the reduced size of development. It is anticipated that the Tribe would renegotiate the MOU and provide emergency medical training to certain members of its security staff and provide emergency medical equipment, including defibrillators, at the gaming facilities. Impacts to local fire departments are discussed above. AMR would provide ambulance transport service, which is primarily funded by the individual requiring transport. The Petaluma Fire Department or other local fire departments may be requested to respond for back-up or mutual/automatic aid services. Mutual/automatic aid assists are not intended to occur regularly and are normally not compensated. As emergency medical services including ambulance are primarily funded by the individual requiring service, increased calls for service should primarily fund increased equipment and staffing needs. It is recommended as mitigation in **Section 5.2.8** that the Tribe enter into a contract with AMR or another entity for ambulance service. With mitigation this impact is less than significant.

Impacts to other emergency services including hospitals are similar to those discussed for Alternative A. Increased emergency services as a result of the project should be taken into consideration for planning purposes. As with other privately provided services, increased demand would fund needed improvements or expansions. The funding of these services would be privately provided and thus fiscal impacts to local government would be less than significant.

SCHOOLS

Highway 101 serves as barrier preventing conflicts between uses of Alternative H and the nearest schools. As with Alternative A, Alternative H would have no direct impact on school services provided by Cotati-Rohnert Park Unified School District, Bellevue Union School District or Santa Rosa High School District.

As discussed in **Section 4.11**, the existing labor pool would fill the jobs created by Alternative H. Alternative H is therefore not anticipated to increase demands on school services as it is neither creating housing nor creating a significant influx of residents. As discussed for Alternative A, it is also not anticipated to cause a decline in enrollment trends. Thus impacts to public school services would be less than significant.

4.10 OTHER VALUES

4.10.1 ALTERNATIVE A – PROPOSED PROJECT

NOISE

Any type of commercial development has the potential to affect the existing ambient noise environment in the immediate project vicinity. The following noise sources are attributable to traffic and site operations:

- Increases in traffic volumes on the local roadway network would result in increases in traffic noise levels along roadways that serve the site.
- Construction activities associated with development would cause short-term increases in the ambient noise environment.
- On-site traffic flow and parking lot activities associated with the development would cause increases in the ambient noise environment.
- Operation of the wastewater treatment facility could cause an increase in the ambient noise environment in the immediate vicinity of that facility.
- Truck deliveries and loading dock activities associated with the ongoing operation of the casino, hotel, retail uses, and restaurants would result in intermittent increases in ambient noise in the immediate vicinity of loading dock areas.
- Mechanical equipment associated with the heating, ventilating, and air conditioning (HVAC) systems as well as refrigeration equipment associated with food cold storage could cause an appreciable permanent increase in ambient noise levels in the immediate project vicinity.

An environmental noise analysis report was conducted to assess the noise impacts identified above, associated with the development of the Proposed Project and Alternatives (**Appendix R**).

Construction Noise

During the construction phase of Alternative A, noise from construction would dominate the noise environment in the immediate area. Equipment used for construction would generate noise levels as indicated in **Table 4.10-1**. A more detailed listing of potential construction equipment noise levels can be found in **Appendix R**. Maximum noise levels from different types of equipment under different operating conditions could range from 70 audible decibels (dBA) to 90 dBA at a distance of 50 feet. The most noticeable project-generated construction noise source would be truck traffic associated with transport of heavy materials and equipment and fixed equipment such as generators. When the activity includes pile driving or pavement breaking, the dominant noise sources are the impacts of the tools themselves.

As described in detail in Appendix R, worst-case average sound levels at nearby sensitive receptors would be 79 dB Ldn. Note, however, that even for the receptors close enough to the site boundary to be exposed to these levels, the noise sources would be located at various places on the site during the various construction phases. In addition, the facilities that would be built nearest the site boundary, and hence the receptors, would be the parking lots. Thus, only the equipment used for that purpose (graders, loaders, backhoes, etc.) would be operated near the homes for any noticeable length of time. Parking lot construction activities would also be of relatively short duration. As a result, the average noise levels received at the nearest sensitive receptors would be substantially lower than 79 dB Ldn.

Construction activities would be temporary in nature, typically occurring during normal daylight hours. Construction noise impacts could be significant, if extensive nighttime operations occur or unusually noisy equipment were used. These noise impacts could result in annoyance or sleep disruption for nearby rural residences along Wilfred Avenue (including connecting streets) and, to a lesser extent, the mobile home park located along Rohnert Park Expressway. However, the temporary nature of construction noise would result in a less-than-significant impact. Nonetheless, mitigation measures are identified in **Section 5.2.9** that would result in reductions in construction noise impacts.

TABLE 4.10-1
TYPICAL CONSTRUCTION NOISE LEVELS

Type of Equipment	Maximum Noise Level, dBA at 50 feet
Scrapers	85
Bulldozers	85
Heavy Trucks	85
Backhoes	80
Pneumatic Tools	85
Generator	82
Concrete Saw	90
Mounted Impact Hammer	90

SOURCE: BBA, 2004, 2007.

Operational Noise Impacts

On-Site Operations Noise

Alternative A will result in on-site operational noise. On-site operations noise would be primarily traffic and parking-related activities in parking lots, use of fans for heating and ventilation (HVAC), truck loading or unloading areas, tour bus parking, wastewater treatment plant (WWTP) operation, and central plant operation.

Noise due to traffic in parking lots would be limited by low speed limits, and as a result, is not expected to represent a substantial source of noise. Human activity in parking lots can produce noise including talking, yelling, and opening and closing of car doors and trunk lids. The noise levels

associated with these activities cannot be precisely defined because of variables such as number of parking movements and the time of day. It is typical for a passing car in a parking lot to produce a maximum noise level of 60 dBA to 65 dBA at a distance of 50 feet, which is comparable to the level of a raised voice. The noise level associated with the idling of a modern diesel bus can be as high as 65 dBA at 50 feet.

The parking areas for Alternative A surround the proposed casino building. The nearest noise-sensitive land uses would be the houses located north and east of the Wilfred site on Wilfred Avenue (see **Figure 3.10-1**). The closest residents would be approximately 50 feet from one or more parking lots. As shown in **Table 4.10-2**, the noise level from passing on-site cars or buses would be 65 dBA at the nearest sensitive receptors. This level is greater than the acceptable noise level of 60 dBA for a short-term on-site noise event, and would therefore be a significant impact to these sensitive receptors. Mitigation measures proposed in **Section 5.2.9** would reduce impacts to sensitive receptors from on-site circulation traffic noise to a less-than-significant level.

TABLE 4.10-2
PREDICTED NOISE LEVELS FROM ON-SITE ACTIVITIES AT SENSITIVE RECEPTORS

Alternative	Noise Source	Nearest Sensitive Receptor Location	Approximate Distance from Noise Source to Nearest Sensitive Receptor, feet	Estimated Sound Level at Nearest Sensitive Receptor, dBA
A	Wastewater Treatment Plant Pumps – not enclosed	Homes at Labath and Wilfred	1150	51
	Wastewater Treatment Plant –enclosed		1150	31
	HVAC on Building		600	32
	Passing Car/Bus		50	65
	Passing Truck at Loading Dock		1200	47*
B	Wastewater Treatment Plant Pumps – not enclosed	Homes on north side of Wilfred	2200	45
	Wastewater Treatment Plant –enclosed		2200	25
	HVAC on Building		900	29
	Passing Car/Bus		115	58
	Passing Truck at Loading Dock		1500	45*
C	Wastewater Treatment Plant Pumps – not enclosed	Homes on east side of Whistler	1750	47*

Alternative	Noise Source	Nearest Sensitive Receptor Location	Approximate Distance from Noise Source to Nearest Sensitive Receptor, feet	Estimated Sound Level at Nearest Sensitive Receptor, dBA
	Wastewater Treatment Plant –enclosed		1750	27*
	HVAC on Building		225	41
	Passing Car/Bus		50	65
	Passing Truck at Loading Dock		850	50*
D	Wastewater Treatment Plant Pumps – not enclosed	Homes on north side of Wilfred	1800	47
	Wastewater Treatment Plant –enclosed		1800	27
	HVAC on Building		625	32
	Passing Car/Bus		100	59
	Passing Truck at Loading Dock		1200	47*
E	Wastewater Treatment Plant Pumps – not enclosed	Homes on north side of Wilfred	2400	44
	Wastewater Treatment Plant –enclosed		2400	24
	HVAC on Building		200	42
	Passing Car/Bus		100	59
	Passing Truck at Loading Dock		500**	55
F	Wastewater Treatment Plant Pumps – not enclosed	Home SE and NE of developed site	3000	43
	Wastewater Treatment Plant –enclosed		3000	23
	HVAC on Building		2300	21
	Passing Car/Bus		1600	35
	Passing Truck at Loading Dock		2500	41
H	Wastewater Treatment Plant Pumps – not enclosed	Homes at Labath and Wilfred	1150	51
	Wastewater Treatment Plant –enclosed		1150	31
	HVAC on Building		600	32
	Passing Car/Bus		50	65
	Passing Truck at Loading Dock		1200	47*

NOTE: * The loading dock would be shielded from view by buildings, so the actual noise level would be 5 to 10 dB lower than shown.
** No loading dock location has been specified, but a loading dock could be part of an individual building design.
SOURCE: BBA, 2008b.

Parking structure surfaces can cause reflections of sound, so that noise from traffic and human activities could seem magnified, with potential adverse impacts to nearby residents. The proposed parking structure would be located southeast and adjacent to the casino in Alternative A. This would be approximately 500 feet from the nearest sensitive receptors to the northeast along Wilfred Avenue. Maximum noise levels from cars moving in and around the parking structure would be about 37 dBA to 42 dBA at the property line, which would be lower than acceptable levels and therefore a less than significant impact.

The greatest potential for significant noise impacts would occur if fans or similar equipment were located near sensitive receptors. The casino would be equipped with roof mounted HVAC units. These would be located near the casino, which is situated approximately 600 feet from the nearest sensitive receptor, resulting in a noise level at the nearest sensitive receptor of 31 dBA, well below the acceptable noise level of 45 dBA for a continuous on-site noise event. Therefore, a less than significant impact would result.

Loading areas for food and other supplies can be significant noise sources, primarily as a result of noise produced by passing trucks. Although the trucks would be moving at low speeds, the engine noise could be significant (typically 70 dBA to 75 dBA at 50 feet), and the number and time of day of truck deliveries could affect nearby noise-sensitive receivers. Loading docks would be located southwest of the casino building, and would be located approximately 1,200 feet from the nearest sensitive receptors. Maximum noise levels at the nearest sensitive receptors due to truck movements at the loading docks would be approximately 47 dBA, well below the acceptable noise level of 60 dBA for a short-term on-site noise event. Therefore, a less than significant impact would result. Nonetheless, mitigation measures in **Section 5.2.9** have been added to further reduce this impact.

Noise from the WWTP and central plant machinery could be significant if these facilities were to be located adjacent to noise-sensitive uses, and if noise levels were to exceed acceptable limits. Note that most noise generating operations of the wastewater treatment plant and central plant would be enclosed except for exterior pumps,. Alternative A plans for these facilities to be located near the southeastern boundary and away from the nearest sensitive receptors. Nonetheless, as show in **Table 4.10-2**, unenclosed wastewater treatment pumps could result in noise levels of 51 dBA at the nearest sensitive receptors along Wilfred Avenue. This is greater than the acceptable noise level of 45 dBA for a continuous on-site noise event and would represent a significant impact. Mitigation measures proposed in **Section 5.2.9** would reduce impacts to sensitive receptors from on-site wastewater treatment plant noise to a less-than-significant level.

Off-site Traffic Noise

For the traffic noise impact analysis, it was assumed that worst-case noise exposures would occur at a reference distance of 50 feet from the centerlines of the roadways. Truck mix was estimated from the short-term traffic counts and from Caltrans data. Day-night distribution of traffic noise was estimated as 87% and 13%, respectively. Based upon the traffic analysis prepared for this project (**Appendix O**), the Federal Highway Administration (FHWA) model was run to predict traffic noise levels for the roadways included in the traffic analysis. **Table 4.10-3** compares the near-term traffic noise levels (at a reference distance of 50 feet from the roadway centerline) with anticipated traffic noise levels after the implementation of Alternative A. **Table 4.10-4** shows the predicted changes in traffic noise levels, as compared with near-term conditions for alternatives located on the Wilfred site. As shown in **Section 3.10.1**, changes in traffic noise levels could be potentially significant when resulting in ambient noise levels greater than 65 dB Ldn or resulting in significant changes to ambient noise levels as shown in **Table 3.10-3**. For comparison, the other project alternatives proposed for the Wilfred and Stony Point (Alt. A, B, C, D, E; H) sites are included in **Tables 4.10-2** and **4.10-3**.

Road segments that are either currently above the 65 dB Ldn land use compatibility criterion or those that would rise above this level with the introduction of project traffic are shown in **Table 4.10-3**. It is assumed that noise sensitive development is present or proposed immediately adjacent to all of the segments that would be above this level and is considered to be a significant impact. Mitigation measures are proposed in **Section 5.2.9** that would reduce traffic related noise impacts to a less-than-significant level (project impacts to baseline conditions would be mitigated, but baseline traffic noise levels may remain greater than 65 dB Ldn).

TABLE 4.10-3
PREDICTED TRAFFIC NOISE LEVELS AT REFERENCE DISTANCES – ALTERNATIVES A-E, H

Roadway	Segment	Predicted L_{dn}, dB						
		Near-Term	Alt. A plus Near-Term	Alt. B plus Near-Term	Alt. C plus Near-Term	Alt. D plus Near-Term	Alt. E plus Near-Term	Alt. H plus Near-Term
Rohnert Park Expressway	Labath to Stony Point	**69.8**	**69.8**	**71.3**	**69.6**	**70.9**	**70.3**	**69.8**
Stony Point Road	Rohnert Park Expressway to Wilfred	**73.2**	**74.1**	**73.9**	**74.5**	**73.7**	**73.7**	**73.5**
Redwood Drive	Rohnert Park Expressway to Wilfred Avenue	**67.4**	**67.5**	**67.4**	**67.5**	**67.4**	**67.4**	**67.4**
Commerce	Rohnert Park Expressway to Golf Course	64.7	64.7	64.7	64.7	64.7	64.7	64.7
Wilfred	Stony Point to Whistler	62.1	64.2	64.6	**66.5**	63.8	63.3	63.5
Wilfred	Whistler to Labath	62.1	64.2	**68.8**	**69.2**	**67.6**	**65.1**	63.4
Wilfred	Labath to Dowdell	**65.3**	**68.8**	**69.7**	**70.0**	**68.7**	**66.9**	**67.6**
Wilfred	Dowdell to Redwood	**66.4**	**69.0**	**70.2**	**70.5**	**69.3**	**67.8**	**67.9**
Wilfred	Redwood to SR101	**69.1**	**70.9**	**71.5**	**71.7**	**70.9**	**69.9**	**70.3**
Business Park	Labath to Redwood	61.6	58.9	61.6	61.6	61.6	61.6	61.6
Roberts Lake	Commerce to Golf Course	63.8	63.6	63.8	63.8	63.8	63.8	63.6
Millbrae	Stony Point to Primrose	61.7	61.9	62.0	62.1	61.9	61.8	61.8

Note: **Bold** values indicate potentially significant noise levels.
SOURCE: BBA, 2004, 2008b.

Changes in traffic noise levels would exceed off-site traffic significance criteria (see **Table 3.10-3**) at several road segments, as shown in **Table 4.10-4**, resulting in a significant impact. Along Rohnert Park Expressway is a mobile home park, which is considered to be a sensitive receptor for noise impacts. The mobile home park has been designed with a large buffer zone and a sound barrier between the park and Rohnert Park Expressway. Traffic noise from Rohnert Park Expressway is therefore not expected to significantly affect this sensitive receptor. Mitigation measures are provided in **Section 5.2.9** that would reduce traffic related noise impacts to a less-than-significant level.

TABLE 4.10-4
CHANGES IN PREDICTED TRAFFIC NOISE LEVELS
AT REFERENCE DISTANCES – ALTERNATIVES A-E, H

Roadway	Segments	Predicted L_{dn}, dB					
		Alt. A minus Near-Term	**Alt. B minus Near-Term**	**Alt. C minus Near-Term**	**Alt. D minus Near-Term**	**Alt. E minus Near-Term**	**Alt. H minus Near-Term**
Rohnert Park Expressway	Labath to Stony Point	0.0	**1.5**	-0.2	1.1	0.5	0.0
Stony Point Road	Rohnert Park Expressway to Wilfred	0.8	0.7	1.2	0.5	0.4	0.2
Redwood Drive	Rohnert Park Expressway to Wilfred Avenue	0.1	0.0	0.0	0.0	0.0	0.0
Commerce	Rohnert Park Expressway to Golf Course	0.0	0.0	0.0	0.0	0.0	0.0
Wilfred	Stony Point to Whistler	2.1	2.5	**4.4**	1.7	1.1	1.3
Wilfred	Whistler to Labath	2.0	**6.7**	**7.1**	**5.4**	**3.0**	1.3
Wilfred	Labath to Dowdell	**3.5**	**4.4**	**4.7**	**3.4**	**1.6**	**2.3**
Wilfred	Dowdell to Redwood	**2.6**	**3.7**	**4.1**	**2.9**	1.4	**1.5**
Wilfred	Redwood to SR101	**1.8**	**2.3**	**2.6**	**1.7**	0.7	1.1
Business Park	Labath to Redwood	-2.7	0.0	0.0	0.0	0.0	0.0
Roberts Lake	Commerce to Golf Course	-0.2	0.0	0.0	0.0	0.0	-0.2
Millbrae	Stony Point to Primrose	0.2	0.3	0.4	0.2	0.1	0.1

NOTE: Bold values indicate a potentially significant increase in noise levels.
SOURCE: BBA, 2004, 2008b.

HAZARDOUS MATERIALS

Construction

There is no reported hazardous materials contamination on the Wilfred site. Thus, known hazardous materials located on the Wilfred site would not affect construction staff or the public. Although not anticipated, the possibility exists that undiscovered contaminated soil and/or groundwater exists on the

Wilfred site and construction staff could encounter contamination during construction-related earth moving activities. If this should happen, it could pose a risk to human health and/or the environment and be considered as a potentially significant impact.

During construction of Alternative A, the demolition of the two existing residential dwellings would be necessary. Although the dwellings are not known to contain asbestos or lead based paint, they appear to be built prior to 1960. Dwellings built prior to 1978 are likely to contain asbestos containing materials (ACMs) and lead based paints. The presence of such ACMs and lead based paint pose a threat to construction workers during demolition and cleanup. Demolition contractors are required by the National Emissions Standards for Air Pollutants (NESHAP) regulations to employ Best Management Practices (BMPs); thereby, reduce any potential risks to construction workers. This will reduce any impact to a less-than-significant level. Mitigation measures are contained in **Sections 5.2.9** and **5.2.3** to further reduce potential impacts from exposure to ACMs and lead based paint.

During grading and construction, the use of hazardous materials would include substances such as gasoline, diesel fuel, motor oil, hydraulic fluid, solvents, cleaners, sealants, welding flux, various lubricants, paint, and paint thinner. These materials would be used for the operation and maintenance of equipment used during the construction. Regular fueling and oiling of construction equipment would be performed daily. Probable hazardous materials releases may involve the dripping of fuels, oil, and grease from construction equipment. These small quantities of fuel, oil, and grease are relatively low toxicity and concentration. No long-term impacts to the soil or groundwater would occur. Typical construction management practices limit and often eliminate the impact of such accidental releases. An accident involving a service or refueling truck would present the worst-case scenario for the release of a hazardous substance. Depending on the relative hazard of the hazardous material, if a spill or leak of significant quantity were to occur, the accidental release could pose a hazard to construction employees as well as to the environment. This impact is potentially significant. Mitigation has been included within **Section 5.2.9** to reduce the significance of the hazardous materials impacts resulting from construction.

Operation

Should an on-site wastewater treatment option occur, the WWTP would require the delivery, storage, and use of hazardous materials, particularly the use of sodium hypochlorite (bleach) and citric acid (HydroScience, 1999, in AES, 2002). Sodium hypochlorite is used in wastewater treatment, in household laundry detergents, and in photochemical and pulp and paper industries. Sodium hypochlorite ingestion can cause severe gastrointestinal corrosion; inhalation can cause pulmonary edema. Citric acid is used in hair products, household cleaners, and in electroplating, printing, and machinery manufacturing industries. For the proposed wastewater treatment plant, a weak (5% strength) solution of sodium hypochlorite would be used to clean or inhibit biogrowth in the

immersed membranes used to filter out solids. Sodium hypochlorite would be stored in a 55-gallon drum, within a chemical spill containment area inside the wastewater treatment plant building. A citric acid solution is periodically used to remove buildup of inorganic materials. Citric acid is purchased in dry form in 40-pound sacks. A 50-gallon mixing tank inside the wastewater treatment plant would be used to prepare the liquid citric acid solution. Both the sodium hypochlorite and the citric acid are pumped directly to a chemical dip tank when required for use.

Diesel fuel storage tanks will be needed for the operation of four emergency generators at the casino, one emergency generator and one fire pump provided for the hotel, and one emergency generator provided for the wastewater treatment facility. Fuel storage is addressed in **Section 2.9.9**.

During operation of the facilities included under Alternative A, the majority of waste produced would be non-hazardous. The small quantities of hazardous materials that would be utilized would include motor oil, hydraulic fluid, solvents, cleaners, lubricants, paint, and paint thinner. These materials would be utilized for the operation and maintenance of the casino, emergency generators, and other project facilities. The amount and type of hazardous materials that would be generated are common to commercial sites and do not pose unusual storage, handling or disposal issues. A hazardous materials release could occur that would pose a hazard to human health or the environment if these materials are not stored, handled, or disposed of according to state, federal, and manufacturer's guidelines.

The two adjacent leaking underground storage tank (LUST) sites have been identified within 0.50 miles of the eastern boundary of the Wilfred site. Remedial activities are ongoing at both sites under the regulatory oversight of the Regional Water Quality Control Board (RWQCB). The shallow groundwater aquifer under the LUST sites has been impacted with methyl tertiary-butyl ether (MTBE) and its breakdown product tertiary-butyl ether (TBA). Groundwater pumping from the deep aquifer on the Wilfred site could cause a downward migration of shallow contamination in the LUST site area. This downward migration of contaminants into the deep aquifer could result in a potentially significant impact. Mitigation is included in **Section 5.2.2** and **5.2.9** to reduce potentially significant impacts from operation of Alternative A to a less-than-significant level.

The amount and types of hazardous materials that would be stored, used, and generated during the operation of Alternative A could have a potentially significant impact to the environment and public. Mitigation is included in **Section 5.2.9** to reduce any impacts to a less-than-significant level.

VISUAL RESOURCES

The following criteria used to determine if the project would have a significant visual impact:

- obstruction of a scenic view from public viewing areas;

- introduction of physical features that are substantially out of character with existing or planned development in adjacent areas;
- alteration of the natural landscape characteristics of the site of which the scale or degree of change appears as a substantial, obvious, and disharmonious modification of the overall scene, to the extent that it clearly dominates the view; or
- disruption of adjacent residential areas from new nighttime lighting. Criteria for determining significance for lighting and glare impacts to public health and safety under 40 Code of Regulations (CFR) 1508.27 is by the intensity of light that overflows from the site to sensitive receptors in the vicinity of the project alternatives.

Impacts Related to Regulatory Setting

As detailed in **Section 3.8** and noted in **Section 3.10**, the majority of the Wilfred site is located within the Rohnert Park/Santa Rosa Community Separator, including the northeast corner of the site proposed for intensive development under Alternative A. The Land Use Element of the Sonoma County General Plan identifies the importance of preserving open space between the County's cities and communities and maintaining them in a largely open or natural character with low intensities of development. The Open Space element identifies the need to preserve the visual identities of communities by maintaining open space areas between cities and communities. Alternative A would encroach development within the Community Separator in seeming contradiction of this need. However, the development of Alternative A is also located within the City of Rohnert Park's Northwest Specific Plan area, within the City of Rohnert Park's sphere of influence and urban growth boundary, and is currently planned by the City for intensive development. In addition, the visual appearance of a regional commercial activity would be consistent with the regional commercial activities just south and east of the Wilfred site, along Redwood Drive and US-101. Therefore, visual impacts in terms of the land use planning would be less than significant.

Regional Impacts

The Wilfred site is located adjacent to a regional commercial area along US-101. Construction of Alternative A would incorporate open space that partitions the sphere of influence for the City of Rohnert Park from agricultural and open space areas under County jurisdiction. Also, construction would further serve to partition the area from the community of Cotati located south of the Wilfred site. With clustered regional commerce already in place along the US-101 at and in the vicinity of Wilfred Avenue and Business Park Drive, regional commuters on US-101 would encounter consistent surroundings. Thus, the regional visual impacts under Alternative A would be less than significant.

Impacts to Wilfred Site Viewshed

Impacts to the Wilfred site viewshed are discussed in terms of impacts within the constituent vistas of the viewshed. While the proposed facilities would be visible, this alone does not constitute an impact. A regional commercial element is generally envisioned for the Northwest Specific Plan Area and the proposed facilities of Alternative A would generally be consistent with such a vision. As shown below, no significant obstructions of views from US-101 would occur, which is designated by the County as a scenic corridor. From most US-101 viewpoints, the proposed development under Alternative A would be mostly or totally obstructed from view or shown as rising slightly above existing commercial development along the US-101 corridor. In addition, the views of the proposed facilities would generally be intermittent. Thus, impacts of the Wilfred site from surrounding viewsheds would be less than significant.

Viewpoints surrounding the Wilfred site are provided and described below:

Vista A – Wilfred Avenue: Residential and Commuter Vista

Figure 3.10-10 shows the view to the Wilfred site under existing conditions, from the northeast corner of Wilfred Avenue and Dowdell Avenue, northeast of the proposed construction area.

Figure 4.10-1 shows the massing of the proposed construction under Alternative A within the same view. Within this vista the residences identified in **Section 3.10** would experience a sustained view of the buildings against a backdrop of commercial development as planned within the guidelines of the City's General Plan and any construction consistent with the Northwest Specific Plan. Westbound commuters on Wilfred Avenue would be offered a dominant view of the proposed facilities upon entering the vista, and would continue observing this view for approximately half a minute until the facilities fall from view at the commuter's left flank.

Figure 3.10-11 provides a view of the existing conditions from the Bellevue-Wilfred Channel, northwest of the proposed construction area.

Figure 4.10-2 shows the massing of the proposed construction under Alternative A within the same view. Residents west of the Bellevue-Wilfred Channel would experience a view to the facilities as described above, though the view would be considerably more distanced from the viewer. Upon entering the vista, eastbound commuters would observe the facilities against a backdrop of mountains, trees and commercial development, with the foreground dominating the view. The viewing time on this approach would be approximately one minute, during which the proposed facilities would come to dominate the southward view briefly before it passes out of view to the commuter's right flank.

Southwest View

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-1

Alternative A Massing: Southwest View of Wilfred Site (RP01)

Southeast View

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-2

Alternative A Massing: Bellevue-Wilfred Channel Looking Southeast (RP03)

Vista B – Stony Point Road: Commuter Vista

Figure 3.10-12 shows the Wilfred site as seen from the corner of Stony Point Road and Wilfred Avenue under existing conditions.

Figure 4.10-3 shows the massing of the proposed construction under Alternative A within the same view. The proposed facilities would be observed at an appreciable distance, against a backdrop of mountains, trees and commercial development, with the foreground dominating the view. As noted in **Section 3.10**, the southbound Stony Point Road commuter vista is approximately 0.34 miles. While the duration of visibility is dependent upon traffic conditions, deceleration and acceleration time where stoppage is required, an average speed of 50 mph offers approximately half a minute of view to southbound commuters on Stony Point Road, until the proposed construction site falls back from view to the commuter's left flank.

Figure 3.10-13 shows the Wilfred site as seen from Stony Point Road near the Rohnert Park Expressway under existing conditions.

Figure 4.10-4 shows the proposed massing of the proposed construction under Alternative A within the same view. The distance of visibility on the northbound passing is approximately 0.7 miles. While the duration of visibility is dependent upon traffic conditions, deceleration and acceleration where stoppage is required, an average speed of 50 mph would offer approximately a one minute view to the proposed construction area before the commuter passes Wilfred Avenue, and the proposed construction area passes from forward-oriented view at the commuter's right flank.

Vista C – Rohnert Park Expressway: Commuter Vista

As discussed in **Section 3.10**, only intermittent views of the construction planned under Alternative A would be afforded to commuters on the Rohnert Park Expressway. The placement of the planned construction would be distanced from view relative to near-ground objects, while the impacts of foreshortening would continue to result in near-ground trees and topographical features dominating the view.

Vista D – Southeast Quadrant: Residential and Business Park Vista

Figure 3.10-14 shows the perspective to the construction portion of the Wilfred site under existing conditions, but was taken at the apex of the berm and parallel to the tree line that would normally obstruct views from the street.

Southeast View

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-3

Alternative A Massing: Corner of Wilfred Avenue and Stony Point Road Looking Southeast (RP04)

Northeast View

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-4

Alternative A Massing: Stony Point Road and Rohnert Park Expressway Looking Northeast (RP05)

Figure 4.10-5 shows the massing of the proposed construction under Alternative A within the same view. As noted in **Section 3.10**, Vista D provides a limited view northward for the trailer park at Rancho Verde Circle off Rohnert Park Expressway and the business park on Business Park Drive, southeast of the Wilfred site. Within this vista, a view of a portion of the proposed construction on the Wilfred site is afforded to westbound commuters on Business Park Drive, although it is largely obstructed by landscaping and trees along the northern side of the street.

Vista E – US-101 and Interchange Businesses: Regional Commercial and Commuter Vista

Regional commuters on US-101 would momentarily observe a portion of the proposed development, which would be consistent with the clustered regional commercial developments already in place along US-101 in the vicinity of Wilfred Avenue.

Figures 3.10-16 – 3.10-19 show the view of the Wilfred site from US-101 under existing conditions. As noted in **Section 3.10.3**, the Wilfred site only momentarily comes into view for southbound commuters on the elevated portion of US-101 over Commerce Blvd.

Figures 4.10-6 – 4.10-9 show the massing of the proposed development under Alternative A within the same views. For much of the view from US-101, the proposed development under Alternative A is mostly obstructed due to existing development and vegetation. With the exception of viewpoint RP08, which was taken from a short, elevated section of US-101 in the vicinity of Wilfred Avenue, generally only the top of the hotel is clearly visible from the roadway. The parking structure is also partially visible from RP09 and RP10 (which is actually elevated above US-101), but note that these viewpoints were chosen in part for their ability to provide partially unobstructed views of the proposed development as well as their spacing in the viewshed. Only RP08 offers a momentary view of a large portion of the parking structure and the hotel from an elevated position.

Lighting and Glare

Development of commercial facilities would introduce a new source of potential lighting and glare. A revised design of the casino and hotel has reduced casino façade windows, but increased hotel façade windows (primarily facing north, west, and south), resulting in an overall increase in the potential for glare (at least for viewpoints from the north, west, and south). The hotel façade would be broken up by protruding non-glass architectural features and balconies, reducing the glare that would result from an all-glass tower. Also, the hotel is fairly centered on the northwest corner of the Wilfred site. Thus, with the exception of on-site traffic, glare impacts would be limited to more distant glare and sunlight reflection on cars traveling upon regional roadways. Finally, the hotel is

Northwest View

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-5

Alternative A Massing: Northwest View from Business Park Drive (RP06)

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-6
Alternative A Massing: RP07

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-7
Alternative A Massing: RP08

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-8
Alternative A Massing: RP09

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-9
Alternative A Massing: RP10

oriented so that no regional roadways face the broadest glass faces of the hotel (the north and south faces), with the possible exception of northbound Labath Ave. through the business park, although the view from Labath would be at least partially shaded by surrounding buildings and trees. Nonetheless, the largely glass design of the hotel could result in a significant glare impact to drivers on-site and on surrounding roadways absent mitigation due to the potential for brief, but intense reflections generated by the hotel. If escaping light were to trespass upon adjacent properties during the night, this would potentially disrupt nearby residential land uses, wildlife, and contribute to the light pollution currently present within the vicinity of Rohnert Park. Absent mitigation, light from parking lots would be expected to trespass onto adjacent properties, resulting in a significant lighting impact. Mitigation is identified in **Section 5.2.9** that reduces lighting and glare impacts to a less-than-significant level.

4.10.2 ALTERNATIVE B – NORTHWEST STONY POINT CASINO

NOISE

Construction Noise

The construction of Alternative B would result in similar noise impacts to those described under Alternative A. Equipment used for construction would generate noise levels as indicated in **Table 4.10-1.** Maximum noise levels from different types of equipment under differing operating conditions could range from 70 dBA to 90 dBA at a distance of 50 feet. Noise from truck traffic would represent the most significant source of noise.

Construction noise impacts could be significant, as extensive nighttime operations or use of unusually noisy equipment could result in annoyance or sleep disruption for nearby rural residences along Wilfred Avenue (including connecting streets) and, to a lesser extent, the mobile home park located along Rohnert Park Expressway. Impacts from construction noise would be less than significant. Mitigation measures are identified in **Section 5.2.9** that would result in further reductions in construction noise impacts.

Operational Noise Impacts

On-Site Operations Noise

As with Alternative A, Alternative B has the potential to result in on-site operational noise. On-site operational noise would be primarily traffic and parking-related activities in parking lots, use of fans for HVAC, truck loading or unloading areas, tour bus parking, WWTP operation, and central plant operation.

Alternative B includes parking areas that surround the proposed casino. The nearest noise-sensitive land uses would be the houses located north of the site on Wilfred Avenue, approximately 115 feet away (see **Figure 3.10-1**). As shown in **Table 4.10-2**, the noise level from passing on-site cars and

buses would be 58 dBA at the nearest sensitive receptors. This level is lesser than the acceptable noise level of 60 dBA for a short-term on-site noise event, and would therefore be a less than significant impact.

Parking structure surfaces can cause reflections of sound, so that noise from traffic and human activities could seem magnified, with potential adverse impacts to nearby residents. The proposed parking structure would be located southeast and adjacent to the casino in Alternative B. This would be greater than 700 feet from the nearest sensitive receptors to the north along Wilfred Avenue. Maximum noise levels from cars moving within or near the parking structure would be approximately 37 dBA to 42 dBA at the property line, which would be lower than acceptable levels and therefore a less than significant impact.

The casino buildings would likely be equipped with roof mounted HVAC fans. These fans would be located approximately 900 feet from the nearest sensitive receptors, resulting in a noise level at the nearest sensitive receptor of 29 dBA, well below the acceptable noise level of 45 dBA for a continuous on-site noise event. Therefore, a less than significant impact would result..

Loading docks would be located south of the parking structure and behind the main casino building, approximately 1,500 feet from the nearest sensitive receptors. Maximum noise levels at the nearest sensitive receptors due to truck movements at the loading docks would be approximately 45 dBA, well below the acceptable noise level of 60 dBA for a short-term on-site noise event. Therefore, a less than significant impact would result. Nonetheless, mitigation measures in **Section 5.2.9** have been added to further reduce this impact.

Noise from the WWTP and central plant machinery could be significant if theses facilities were to be located adjacent to noise-sensitive uses, and if noise levels were to exceed acceptable limits. Note that most noise generating operations of the wastewater treatment plant and central plant would be enclosed except for exterior pumps. Alternative B plans for these facilities to be located near the southern portion of the site and away from the nearest sensitive receptors. Noise levels at the nearest sensitive receptors would be 45 dbA, just within the acceptable noise level of 45 dBA for a continuous on-site noise event. Thus, a less-than-significant impact would result.

Off-site Traffic Noise

The traffic noise impact analysis for Alternative B used the same modeling assumptions as described under Alternative A. **Table 4.10-3** compares the near-term traffic noise levels (at a reference distance of 50 feet from roadway centerline) with anticipated traffic noise levels after the implementation of Alternative B. **Table 4.10-4** shows the predicted changes in traffic noise levels, as compared with near-term conditions for alternatives located on the Stony Point site. As shown in **Section 3.10.1**, changes in traffic noise levels could be potentially significant when resulting in

ambient noise levels greater than 65 dB Ldn or resulting in significant changes to ambient noise levels as shown in **Table 3.10-3**.

Road segments that are either currently above the 65 dB L_{dn} land use compatibility criterion or those at would rise above this level with the introduction of project traffic are shown in **Table 4.10-3**. It is assumed that noise sensitive development is present or proposed immediately adjacent to all of the segments that would be above this level. This is considered to be a significant impact. Mitigation measures are proposed in **Section 5.2.9** that would reduce traffic related noise impacts to a less-than-significant level.

Changes in traffic noise levels would exceed off-site traffic significance criteria (see **Table 3.10-3**) at several road segments, as shown in **Table 4.10-4**, resulting in a significant impact. Along Rohnert Park Expressway is a mobile home park, which is considered to be a sensitive receptor for noise impacts. The mobile home park has been designed with a large buffer zone and a sound barrier between the park and Rohnert Park Expressway. Traffic noise from Rohnert Park Expressway is therefore not expected to significantly affect this sensitive receptor. Mitigation measures are provided in **Section 5.2.9** that would traffic related noise impacts to a less-than-significant level.

HAZARDOUS MATERIALS

Construction

There is no reported hazardous materials contamination on the Stony Point site. Thus, known hazardous materials located on the Stony Point site would not affect construction staff or the public. Although not anticipated, the possibility does exist that undiscovered contaminated soil and/or groundwater exists on the Stony Point site and construction staff could encounter contamination during construction-related earth moving activities. If this should happen, it could pose a risk to human health and/or the environment and be considered as a potentially significant impact..

During grading, construction, and maintenance of equipment, the use of hazardous materials would include substances such as gasoline, diesel fuel, motor oil, hydraulic fluid, solvents, cleaners, sealants, welding flux, various lubricants, paint, and paint thinner. Regular fueling and oiling of construction equipment would be performed daily. Probable hazardous materials releases may involve the dripping of fuels, oil, and grease from construction equipment that may drip even from properly maintained vehicles. Such occurrences would occur in relatively low toxicity and concentration and no long-term impact to the soil, or groundwater would occur. Typical construction management practices limit and often eliminate the impact of such accidental releases. An accident involving a service or refueling truck would present the worst-case scenario for the release of a hazardous substance. Depending on the relative hazard of the hazardous material, if a spill or leak of significant quantity were to occur, the accidental release could pose a hazard to construction

employees, as well as to the environment. This impact is potentially significant. Mitigation has been included within **Section 5.2.9** to reduce the significance of the hazardous materials impacts resulting from construction.

Operation

Should an on-site wastewater treatment option occur, the WWTP would require the delivery, storage, and use of hazardous materials, particularly the use of sodium hypochlorite (bleach) and citric acid (HydroScience, 1999, in AES, 2002). Sodium hypochlorite is used in wastewater treatment, in household laundry detergents, and in photochemical and pulp and paper industries. Sodium hypochlorite ingestion can cause severe gastrointestinal corrosion; inhalation can cause pulmonary edema. Citric acid is used in hair products, household cleaners, and in electroplating, printing, and machinery manufacturing industries. For the proposed wastewater treatment plant, a weak (5% strength) solution of sodium hypochlorite would be used to clean or inhibit biogrowth in the immersed membranes used to filter out solids. Sodium hypochlorite would be stored in a 55-gallon drum, within a chemical spill containment area inside the wastewater treatment plant building. A citric acid solution is periodically used to remove buildup of inorganic materials. Citric acid is purchased in dry form in 40-pound sacks. A 50-gallon mixing tank inside the wastewater treatment plant would be used to prepare the liquid citric acid solution. Both the sodium hypochlorite and the citric acid are pumped directly to a chemical dip tank when required for use.

Diesel fuel storage tanks will be needed for the operation of four emergency generators at the casino, one emergency generator and one fire pump provided for the hotel, and one emergency generator provided for the wastewater treatment facility. Fuel storage is addressed in **Section 2.9.9**.

During operation of the facilities included under Alternative B, the majority of waste produced would be non-hazardous. The small quantities of hazardous materials that would be utilized would include motor oil, hydraulic fluid, solvents, cleaners, lubricants, paint, and paint thinner. These materials would be utilized for the operation and maintenance of the casino, emergency generators, and other project facilities. The amount and type of hazardous materials that would be generated are common to commercial sites and do not pose unusual storage, handling or disposal issues. A hazardous materials release could occur that would pose a hazard to human health or the environment if these materials are not stored, handled, or disposed of according to State, Federal, and manufacturer's guidelines.

The two adjacent LUST sites have been identified within 0.50 miles of the eastern boundary of the Wilfred site and approximately 0.75 miles of the eastern edge of the Stony Point site. Remedial activities are ongoing at both LUST sites under the regulatory oversight of the RWQCB. The shallow groundwater aquifer under the LUST sites has been impacted with methyl tertiary-butyl ether (MTBE) and its breakdown product tertiary-butyl ether (TBA). Groundwater pumping from the deep

aquifer on the Wilfred site could cause migration of shallow contamination from the LUST site. This downward migration of contaminants into the deep aquifer could result in a potentially significant impact. Mitigation is included in **Section 5.2.2** and **Section 5.2.9** to reduce potentially significant impacts from operation of Alternative B to a less-than-significant level.

The amount and types of hazardous materials that would be stored, used, and generated during the operation of Alternative B could have a potentially significant impact to the environment and public. A potentially significant impact would result if a leak or spill were to occur. Mitigation is included in **Section 5.2.9** to reduce any significant impacts to a less-than-significant level for Alternative B.

VISUAL RESOURCES

Impacts Related to Regulatory Setting

The Sonoma County General Plan defines Use Areas to guide community-centered growth as a part of the County's goals. The Land Use Element of the Sonoma County General Plan identifies the importance of preserving open space between the County's cities and communities and maintaining them in a largely open or natural character with low intensities of development. The Open Space element identifies the need to preserve the visual identities of communities. As detailed in **Section 3.8** and noted in **Section 3.10**, the Stony Point site is located in designated Land Extensive Agriculture (LEA) and Diverse Agriculture (DA) districts, overlapped with the Rohnert Park/Santa Rosa Community Separator. Alternative B proposes to construct a regional commercial enterprise within a community separator, impactively encroaching upon the visual partition between communities as envisioned in the Sonoma County General Plan and confounding the visual boundaries between communities. Therefore, a significant visual impact would occur to open space and community separators as envisioned in the Sonoma County General Plan as a result of Alternative B. Since this impact cannot be mitigated, it would qualify as a significant and unavoidable impact.

The Sonoma County Zoning Regulations incorporate the designation of Community Separators in order to preserve such open space from development in support of the County's General Plan. The Zoning districts on the Stony Point site that apply to aesthetic values are "B Combining District 6" and "Scenic Resources Combining District." These districts are defined and explained in **Section 3.8**. The immediate area around the Stony Point site includes the following zone designations: Agriculture and Residential District, Manufactured Home Exclusion Combining District, Rural Residential District and Community Separator. Alternative B proposes construction of a regional commercial activity within a zoned community separator. Thus, a significant visual impact would occur to community separators as envisioned in the Sonoma County Zoning Regulations. Since this impact cannot be mitigated, it would qualify as a significant and unavoidable impact.

Regional Impacts

The Stony Point site is located adjacent to the western boundary of the City of Rohnert Park in Sonoma County. The community of Cotati abuts the southern boundary of Rohnert Park as well and is in the vicinity of the southern boundary of the Stony Point site. The construction of the Alternative B developments would occur in an area where existing development is limited to scattered rural residential development and agricultural uses. The Alternative B developments on the northwest corner of the Stony Point site would be visually inconsistent with the land uses immediately surrounding the development area. This would be a significant impact considering the considerable scope of the proposed developments. Since this impact could not be mitigated, it would qualify as a significant and unavoidable impact.

Impacts to Stony Point Site Viewshed

Impacts to the Stony Point site's viewshed resulting from Alternative B are discussed below in terms of impacts within specific vistas. The view of the proposed facilities from public viewpoints would generally be intermittent and limited to views from surrounding roadways, which are not scenic roadways (except for US-101 which, although designated as a scenic corridor, offers largely urban views in the vicinity of the site). Thus, the visual impact of Alternative B within the below delineated viewsheds would be less than significant.

Vista A – Wilfred Avenue: Residential and Commuter Vista

The portion of the Stony Point site located west of the Bellevue-Wilfred Channel in Vista A is shown on **Figure 3.10-15** as it appears under existing conditions. **Figure 4.10-10** shows the massing of the proposed construction under Alternative B in the same view. The visual exposure times for residents, westbound commuters and eastbound commuters are similar under this alternative, although the facilities proposed under Alternative B would be in stark visual contrast with surrounding existing and planned land uses.

Vista B – Stony Point Road: Commuter Vista

Figure 3.10-12 shows the Stony Point site as seen from the corner of Stony Point Road and Wilfred Avenue. **Figure 4.10-11** shows the massing of the proposed construction under Alternative B within the same view. **Figure 3.10-13** shows the Stony Point site as seen from Rohnert Park Expressway. **Figure 4.10-12** shows the massing of the proposed construction under Alternative B from the same view. The visual exposure times for northbound and southbound commuters are similar under this alternative, although the facilities proposed under Alternative B would be in stark visual contrast with surrounding extant and planned land uses.

Southwest View

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-10

Alternative B Massing: Bellevue-Wilfred Channel Looking Southwest (RP02)

Southeast View

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-11

Alternative B Massing: Corner of Wilfred Avenue and Stony Point Road Looking Southeast (RP04)

Northeast View

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-12

Alternative B Massing: Stony Point Road and Rohnert Park Expressway Looking Northeast (RP05)

Vista C – Rohnert Park Expressway: Commuter Vista

As discussed in **Section 3.10**, only intermittent views of the construction planned under Alternative B would be afforded to commuters on the Rohnert Park Expressway, although the relative placement of the development would grant significantly more clarity in line of sight to passing commuters. As with Alternative A, above, the placement of the planned construction would be distanced from view relative to near-ground objects, while the impacts of foreshortening would continue to result in near-ground trees and topographical features dominating the view.

Vista D – Southeast Quadrant: Residential and Business Park Vista

Figure 3.10-14, above, shows this perspective to the Stony Point site, but was taken at the apex of the berm and parallel to the tree line that normally obstruct views from the street. **Figure 4.10-13** shows the massing of the proposed construction under Alternative B from within the same view. While the view from Business Park drive would be less pronounced under Alternative B, a greater number of residences in the trailer park southeast of the Stony Point site would be exposed to view. The view itself would be that of a regional commercial development surrounded by open space, residential and agricultural land.

Vista E – US-101 and Interchange Businesses: Regional Commercial and Commuter Vista

Regional commuters on US-101 would observe the top of the Alternative B hotel, which would be consistent with the clustered regional commercial developments already in place along US-101 in the vicinity of Wilfred Avenue.

Figures 3.10-16 – 3.10-19 show the view of the Stony Point site from US-101 under existing conditions. As noted in **Section 3.10.3**, the southern portion of the Stony Point site only momentarily comes into view for southbound commuters on the elevated portion of US-101 over Commerce Blvd.

Figures 4.10-14 – 4.10-17 show the massing of the proposed development under Alternative B within the same views. For all of the views from US-101, the proposed development under Alternative B is mostly obstructed due to existing development and vegetation. Generally only the top of the hotel and in some cases a small portion of the parking garage is clearly visible from the roadway. Alternative B development is completely obstructed by trees and commercial development from viewpoints RP09 and RP10.

Lighting and Glare

Development of commercial facilities would introduce a new source of potential lighting and glare. If escaping light were to trespass upon adjacent properties, this would be considered a significant impact. Mitigation is identified in **Section 5.2.9** that reduces lighting and glare impacts to a less-than-significant level.

4.10.3 ALTERNATIVE C – NORTHEAST STONY POINT SITE

NOISE

Construction Noise

Construction noise impacts associated with Alternative C would be similar to those described under the previous alternatives. Mechanical equipment used for construction and construction related traffic would generate noise levels as indicated in **Table 4.10-1**. Maximum noise levels from different types of equipment and under different operating conditions could range from 70 dBA to 90 dBA at a distance of 50 feet. This could result in annoyance or sleep disruption for nearby rural residences along Wilfred Avenue (including connecting streets) and, to a lesser extent, construction-related traffic would impact sensitive receptors along Stony Point Road and Rohnert Park Expressway. However, the temporary nature of construction noise would result in a less-than-significant impact. Mitigation measures are identified in **Section 5.2.9** that would result in further reductions in construction noise impacts.

Operational Noise Impacts

On-Site Operations Noise

Operational activities associated with Alternative C will be similar to those described under the previous alternatives. Noise sources such as on-site traffic and parking-related activities in parking lots, use of HVAC systems, truck loading or unloading areas, tour bus idling, wastewater treatment plant operation, and central plant operation could result in an annoyance to nearby sensitive receptors located along Wilfred Avenue.

Alternative C includes parking areas that surround the casino complex. The nearest noise-sensitive land uses would be the houses located on the east side of Whistler (see **Figure 3.10-1**). The closest residents would be approximately 50 feet from one or more parking lots. As shown in **Table 4.10-2**, the noise level from passing on-site cars or buses would be 65 dBA at the nearest sensitive receptors. This level is greater than the acceptable noise level of 60 dBA for a short-term on-site noise event, and would therefore be a significant impact to these sensitive receptors. Mitigation measures proposed in **Section 5.2.9** would reduce impacts to sensitive receptors from on-site circulation traffic noise to a less-than-significant level.

Parking structure surfaces can cause reflections of sound, so that noise from traffic and human activities could seem magnified, with potential adverse impacts to nearby residents. The proposed parking structure under Alternative C would be located adjacent to the casino, along the eastern side. This would be greater than a 700-foot distance from the nearest sensitive receptors to the north. Maximum noise levels from cars moving within or near the parking structure would be

Northwest View

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-13

Alternative B Massing: Northwest View from Business Park Drive (RP06)

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-14
Alternative B Massing: RP07

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-15
Alternative B Massing: RP08

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-16
Alternative B Massing: RP09

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-17
Alternative B Massing: RP10

approximately 37 dBA to 42 dBA at the property line. which would be lower than acceptable levels and therefore a less than significant impact.

The greatest potential for significant noise impacts would occur if fans or similar equipment were located near sensitive receptors. All proposed buildings would be equipped with roof mounted HVAC units that can be noise sources. The HVAC equipment would be sited at least 225 feet from the nearest sensitive receptors, resulting in a noise level at the nearest sensitive receptor of 41 dBA, well below the acceptable noise level of 45 dBA for a continuous on-site noise event. Therefore, a less than significant impact would result.

Loading dock activity can result in noise levels in the range of 70 dBA to 75 dBA at a distance of 50 feet. At this distance, noise could adversely affect nearby sensitive receptors. Loading docks would be located on the side of the casino facing away from Wilfred Avenue, approximately 850 feet from the nearest sensitive receptors. Maximum noise levels at the nearest sensitive receptors due to truck movements at the loading docks would be approximately 50 dBA, well below the acceptable noise level of 60 dBA for a short-term on-site noise event. Therefore, a less than significant impact would result. Nonetheless, mitigation measures in **Section 5.2.9** have been added to further reduce this impact.

Noise from the WWTP and central plant machinery could be significant if these facilities were to be located adjacent to noise-sensitive uses, and if noise levels were to exceed normally acceptable limits. Note that most noise generating operations of the wastewater treatment plant and central plant would be enclosed except for exterior pumps,. In Alternative C, these facilities would be located far from the nearest sensitive uses. Nonetheless, as show in **Table 4.10-2**, unenclosed wastewater treatment pumps could result in noise levels of 47 dBA at the nearest sensitive receptors along Whistler. This is greater than the acceptable noise level of 45 dBA for a continuous on-site noise event and would represent a significant impact. Mitigation measures proposed in **Section 5.2.9** would reduce impacts to sensitive receptors from on-site wastewater treatment plant noise to a less-than-significant level.

Off-site Traffic Noise

The traffic noise impact analysis for Alternative C used the same modeling assumptions as described under the previous alternatives. **Table 4.10-3** compares the near-term traffic noise levels (at a reference distance of 50 feet from roadway centerline) with anticipated traffic noise levels after the implementation of Alternative C. **Table 4.10-4** shows the predicted changes in traffic noise levels, as compared with near-term conditions for alternatives located on the Stony Point site. As shown in **Section 3.10.1**, changes in traffic noise levels could be potentially significant when resulting in ambient noise levels greater than 65 dB Ldn or resulting in significant changes to ambient noise levels as shown in **Table 3.10-3**.

Road segments that are either currently above the 65 dB L_{dn} land use compatibility criterion or those that would rise above this level with the introduction of project traffic are shown in **Table 4.10-3**. It is assumed that noise sensitive development is present or proposed immediately adjacent to all of the segments that would be above this level. This is considered to be a significant impact. Mitigation measures are proposed in **Section 5.2.9** that would reduce traffic related noise impacts to a less-than-significant level.

Changes in traffic noise levels would exceed off-site traffic significance criteria (see **Table 3.10-3**) at several road segments, as shown in **Table 4.10-4**, resulting in a significant impact. Along Rohnert Park Expressway is a mobile home park, which is considered to be a sensitive receptor for noise impacts. The mobile home park has been designed with a large buffer zone and a sound barrier between the park and Rohnert Park Expressway. Traffic noise from Rohnert Park Expressway is not expected to significantly affect this sensitive receptor. Mitigation measures are provided in **Section 5.2.9** that would reduce traffic related noise impacts to a less-than-significant level.

HAZARDOUS MATERIALS

Construction

Potentially significant impacts are the same as those described under Alternative B; refer to the hazardous materials discussion under Alternative B above. Mitigation has been included within **Section 5.2.9** to reduce the hazardous materials impacts to less than significant.

Operation

The amount and type of hazardous materials that would be stored, used, and generated during operation of Alternative C are the same as those described under Alternative B. **Refer to Section 4.10.2** above. Groundwater pumping would be lessened as a result of the smaller development area proposed for Alternative C; nevertheless, groundwater pumping could potentially cause migration of contaminated groundwater from the adjacent LUST sites. This downward migration of contaminants into the deep aquifer could result in a potentially significant impact. Mitigation is included in **Section 5.2.2** and **Section 5.2.9** to reduce potentially significant impacts from hazardous materials during operation of Alternative C to a less-than-significant level.

VISUAL RESOURCES

Impacts Related to Regulatory Setting

The Sonoma County General Plan defines Use Areas to guide community-centered growth as a part of the County's goals. The Land Use Element of the Plan identifies the importance of preserving open space between the County's cities and communities and maintaining them in a largely open or natural character with low intensities of development. The Open Space element identifies the need to preserve the visual identities of communities by maintaining open space areas between cities and

communities. As detailed in **Section 3.8** and noted in **Section 3.10**, the Stony Point site is located in a classified Open Space – Agriculture and Resource Management area, overlapped with the Rohnert Park/Santa Rosa Community Separator. Alternative C proposes to construct a regional commercial enterprise within a community separator, impactively encroaching upon the visual partition between communities as envisioned in the Sonoma County General Plan. Therefore, a significant visual impact to open space and community separators as envisioned in the Sonoma County General Plan would result from the construction of Alternative C. Since this impact cannot be mitigated, it would qualify as a significant and unavoidable impact.

The Sonoma County Zoning Regulations incorporate the designation of Community Separator in order to preserve such open space from development is support of the County's General Plan. The Zoning districts on the Stony Point site that apply to aesthetic values are "B Combining District 6" and "Scenic Resources Combining District." These districts are defined and explained in **Section 3.8**. The immediate area around the Stony Point site includes the following zone designations: Agriculture and Residential District, Manufactured Home Exclusion Combining District, Rural Residential District and Community Separator. Alternative C proposes construction of a regional commercial activity within a zoned community separator. Thus, a significant visual impact would occur to community separators as envisioned in the Sonoma County Zoning Regulations. Since this impact cannot be mitigated, it would qualify as a significant and unavoidable impact.

Regional Impacts

The Stony Point site is located adjacent to the western boundary of the City of Rohnert Park in southern Sonoma County. The community of Cotati abuts the southern boundary of Rohnert Park as well and is in the vicinity of the southern boundary of the Stony Point site. The construction of the Alternative C developments would occur in an area where existing development is limited to scattered rural residential development and agricultural uses. The Alternative C developments on the northeast corner of the Stony Point site would be visually inconsistent with the land uses immediately surrounding the development area. This would be a significant impact considering the considerable scope of the proposed developments. Since this impact could not be mitigated, it would qualify as a significant and unavoidable impact.

Impacts to Stony Point Site Viewshed

Impacts to the Stony Point site's viewshed resulting from Alternative C are discussed below in terms of impacts within specific vistas. The view of the proposed facilities from public viewpoints would generally be intermittent and limited to views from surrounding roadways, which are not scenic roadways (except for US-101 which, although designated as a scenic corridor, offers largely urban views in the vicinity of the site). Thus, the visual impact of Alternative C within the below delineated viewsheds would be less than significant.

Southeast View

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-18

Alternative C Massing: Bellevue-Wilfred Channel Looking Southeast (RP03)

Vista A – Wilfred Avenue: Residential and Commuter Vista

The portion of the Stony Point site located east of the Bellevue-Wilfred Channel in Vista A is shown on **Figure 3.10-11**. **Figure 4.10-18** shows the massing of the proposed construction under Alternative C within the same view. The visual exposure times for residents, westbound commuters and eastbound commuters are similar under this alternative, although the facilities proposed under Alternative C would be in stark visual contrast with surrounding extant and planned land uses.

Vista B – Stony Point Road: Commuter Vista

Figure 3.10-12 shows the Stony Point site as seen from the corner of Stony Point Road and Wilfred Avenue. **Figure 4.10-19** shows the massing of the proposed construction under Alternative C from within the same view. **Figure 3.10-13** shows the Stony Point site as seen from Stony Point Road near the Rohnert Park Expressway. **Figure 4.10-20** shows the proposed construction under Alternative C from within the same view. The visual exposure times for northbound and southbound commuters are similar under this alternative, although the facilities proposed under Alternative C would be in stark visual contrast with surrounding extant and planned land uses.

Vista C – Rohnert Park Expressway: Commuter Vista

As discussed in **Section 3.10**, only intermittent views of the construction planned under Alternative C would be afforded to commuters on the Rohnert Park Expressway. As with the alternatives above, the placement of the planned construction would be distanced from view relative to near-ground objects, while the impacts of foreshortening would continue to result in near-ground trees and topographical features dominating the view.

Vista D – Southeast Quadrant: Residential and Business Park Vista

Figure 3.10-14, above, shows this perspective to the Stony Point site, but was taken at the apex of the berm and parallel to the tree line that normally obstruct views from the street. **Figure 4.10-21** shows the proposed construction under Alternative C from within the same view. While the view from Business Park drive would be more pronounced under Alternative C than under Alternative B, and a greater number of residences in the trailer park southeast of the Stony Point site would be exposed to view than would be the case under Alternative A. The view itself would be that of a regional commercial development surrounded by open space, residential and agricultural land.

Vista E – US-101 and Interchange Businesses: Regional Commercial and Commuter Vista

Regional commuters on US-101 would observe the top of the Alternative C hotel, which would be consistent with the clustered regional commercial developments already in place along US-101 in the vicinity of Wilfred Avenue.

Figures 3.10-16 – 3.10-19 show the view of the Stony Point site from US-101 under existing conditions. As noted in **Section 3.10.3**, the southern portion of the Stony Point site only momentarily comes into view for southbound commuters on the elevated portion of US-101 over Commerce Blvd.

Figures 4.10-22 – 4.10-25 show the massing of the proposed development under Alternative C within the same views. For all of the views from US-101, the proposed development under Alternative C is mostly obstructed due to existing development and vegetation. Generally only the top of the hotel and a small portion of the parking garage is clearly visible from the roadway (and the parking garage view shown in **Figure 4.10-25** would likely not be visible from US-101 given that the RP10 photo was taken from the Rohnert Park Expressway overcrossing at an elevation from the roadway). Alternative C development is completely obstructed by trees and commercial development from viewpoint RP09.

Lighting and Glare

Development of commercial facilities would introduce a new source of potential lighting and glare. If escaping light were to trespass upon adjacent properties, this would be considered a significant impact. Mitigation is identified in **Section 5.2.9** that reduces lighting and glare impacts to a less-than-significant level.

Southeast View

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-19

Alternative C Massing: Corner of Wilfred Avenue and Stony Point Road Looking Southeast (RP04)

Northeast View

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-20

Alternative C Massing: Stony Point Road and Rohnert Park Expressway Looking Northeast (RP05)

Northwest View

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-21

Alternative C Massing: Northwest View from Business Park Drive (RP06)

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-22
Alternative C Massing: RP07

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-23
Alternative C Massing: RP08

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-24
Alternative C Massing: RP09

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-25
Alternative C Massing: RP10

4.10.4 ALTERNATIVE D – REDUCED INTENSITY (STONY POINT SITE)

NOISE

Construction Noise

Construction activities associated with Alternative D would be similar to those described under the previous alternatives. Mechanical equipment used for construction and construction-related traffic would generate noise levels as indicated in **Table 4.10-1**. Maximum noise levels from different types of equipment and under different operating conditions could range from 70 dBA to 90 dBA at a distance of 50 feet. This could result in annoyance or sleep disruption for nearby rural residences along Wilfred Avenue (including connecting streets) and, to a lesser extent, construction-related traffic would impact sensitive receptors along Stony Point Road and Rohnert Park Expressway. However, the temporary nature of construction noise would result in a less-Than-significant impact. Mitigation measures are identified in **Section 5.2.9** that would result in further reductions in construction noise impacts.

Operational Noise Impacts

On-Site Operations Noise

Operational activities associated with Alternative D would be similar to those described under the previous alternatives. Noise sources such as on-site traffic and parking-related activities in parking lots, use of fans for HVAC systems, truck loading or unloading areas, tour bus idling, wastewater treatment plant operation, and central plant operation may result in an annoyance to nearby sensitive receptors located along Wilfred Avenue.

Alternative D includes parking areas that surround the proposed casino. The nearest noise-sensitive land uses would be the houses located north of the Stony Point site along Wilfred Avenue approximately 100 feet away (see **Figure 3.10-1**). As shown in **Table 4.10-2**, the noise level from passing on-site cars and buses would be 59 dBA at the nearest sensitive receptors. This level is lesser than the acceptable noise level of 60 dBA for a short-term on-site noise event, and would therefore be a less than significant impact.

Parking structure surfaces can cause reflections of sound, so that noise from traffic and human activities could seem magnified, with potential adverse impacts to nearby residents. The proposed parking structure under Alternative D would be located adjacent to the casino along the eastern side. This would be greater than a 700-foot distance from the nearest sensitive receptors to the north. Maximum noise levels from cars moving within or near the parking structure would be approximately 37 dBA to 42 dBA at the property line, which would be lower than acceptable levels and therefore a less than significant impact.

The casino buildings would likely be equipped with roof mounted HVAC fans. These fans would be located approximately 625 feet from the nearest sensitive receptors, resulting in a noise level at the nearest sensitive receptor of 32 dBA, well below the acceptable noise level of 45 dBA for a continuous on-site noise event. Therefore, a less than significant impact would result.
Loading docks would be located on the opposite side of the building away from Wilfred Avenue, approximately 1,200 feet from the nearest sensitive receptors. Maximum noise levels at the nearest sensitive receptors due to truck movements at the loading docks would be approximately 47 dBA, well below the acceptable noise level of 60 dBA for a short-term on-site noise event. Therefore, a less than significant impact would result. Nonetheless, mitigation measures in **Section 5.2.9** have been added to further reduce this impact.

Noise from the WWTP and the central plant machinery could be significant if these facilities were to be located adjacent to noise-sensitive uses, and if noise levels were to exceed acceptable limits. Note that most noise generating operations of the wastewater treatment plant and central plant would be enclosed except for exterior pumps,. In Alternative D, these facilities would be located far from the nearest sensitive uses, near the southeastern boundary of the site, and would be shielded by landscaping, the casino building, and the parking structure to the north. Noise levels at the nearest sensitive receptors would be 47 dbA, greater than the acceptable noise level of 45 dBA for a continuous on-site noise event. Thus, a significant impact would result. Mitigation measures proposed in **Section 5.2.9** would reduce impacts to sensitive receptors from on-site wastewater treatment plant noise to a less-than-significant level.

Off-site Traffic Noise

The traffic noise impact analysis for Alternative D used the same modeling assumptions as described under the previous alternatives. **Table 4.10-3** compares the near-term traffic noise levels (at a reference distance of 50 feet from roadway centerline) with anticipated traffic noise levels after the implementation of Alternative D. **Table 4.10-4** shows the predicted changes in traffic noise levels, as compared with near-term conditions for alternatives located on the Stony Point site. As shown in **Section 3.10.1**, changes in traffic noise levels could be potentially significant when resulting in ambient noise levels greater than 65 dB Ldn or resulting in significant changes to ambient noise levels as shown in **Table 3.10-3**.

Road segments that are either currently above the 65 dB L_{dn} land use compatibility criterion or those that would rise above this level with the introduction of project traffic are shown in **Table 4.10-4**. It is assumed that noise sensitive development is present or proposed immediately adjacent to all of the segments that would be above this level, and is considered to be a significant impact. Mitigation measures are proposed in **Section 5.2.9** that would reduce traffic related noise impacts to a less-than-significant level.

Changes in traffic noise levels would exceed off-site traffic significance criteria (see **Table 3.10-3**) at several road segments, as shown in **Table 4.10-4**, resulting in a significant impact. A mobile home park is located along Rohnert Park Expressway and is considered to be a sensitive receptor for noise impacts. The mobile home park has been designed with a large buffer zone and a sound barrier between the park and Rohnert Park Expressway. Traffic noise from Rohnert Park Expressway is therefore not expected to significantly affect this sensitive receptor. Mitigation measures are provided in **Section 5.2.9** that would traffic related noise impacts to a less-than-significant level.

HAZARDOUS MATERIALS

Construction

Potentially significant impacts are similar to those described under Alternative B; although on a smaller scale due to the reduced intensity of Alternative D. Refer to the hazardous materials discussion under Alternative B above. Mitigation has been included within **Section 5.2.9** to reduce hazardous materials impacts to less than significant.

Operation

The amount and type of hazardous materials that would be stored, used, and generated during operation of Alternative D would be similar to those described under Alternative B. **Refer to Section 4.10.2** above. Groundwater pumping would be lessened as a result of the smaller development area proposed for Alternative D; nevertheless, groundwater pumping could potentially cause migration of contaminated groundwater from the adjacent LUST sites. This downward migration of contaminants into the deep aquifer could result in a potentially significant impact. Mitigation is included in the **Section 5.2.2** and **Section 5.2.9** to reduce potentially significant impacts from hazardous materials during operation of Alternative D to a less-than-significant level.

VISUAL RESOURCES

Impacts Related to Regulatory Setting

The Sonoma County General Plan defines Use Areas to guide community-centered growth as a part of the County's goals. The Land Use Element of the Plan identifies the importance of preserving open space between the County's cities and communities and maintaining them in a largely open or natural character with low intensities of development. The Open Space element identifies the need to preserve the visual identities of communities. As detailed in **Section 3.8** and noted in **Section 3.10**, the Stony Point site is located in a classified Open Space – Agriculture and Resource Management area, overlapped with the Rohnert Park/Santa Rosa Community Separator. Alternative D proposes to construct a regional commercial enterprise within a community separator, impactively encroaching upon the visual partition between communities as envisioned in the Sonoma County General Plan. Therefore, a significant visual impact to open space and community separators as envisioned in the

Sonoma County General Plan would result from the construction of Alternative D. Since this impact cannot be mitigated, it would qualify as a significant and unavoidable impact.

The Sonoma County Zoning Regulations incorporate the designation of Community Separator in order to preserve such open space from development in support of the County's General Plan. The Zoning districts on the Stony Point site that apply to aesthetic values are "B Combining District 6" and "Scenic Resources Combining District." These districts are defined and explained in **Section 3.8**. The immediate area around the Stony Point site includes the following zone designations: Agriculture and Residential District, Manufactured Home Exclusion Combining District, Rural Residential District and Community Separator. Alternative D proposes construction of a regional commercial activity within a zoned community separator. Thus, a significant visual impact would occur to community separators as envisioned in the Sonoma County Zoning Regulations. Since this impact cannot be mitigated, it would qualify as a significant and unavoidable impact.

Regional Impacts

The Stony Point site is located adjacent to the western boundary of the City of Rohnert Park in southern Sonoma County. The community of Cotati abuts the southern boundary of Rohnert Park as well and is in the vicinity of the southern boundary of the Stony Point site. The construction of the Alternative D developments would occur in an area where existing development is limited to scattered rural residential development and agricultural uses. The Alternative D developments on the northwest corner of the Stony Point site would be visually inconsistent with the land uses immediately surrounding the development area. This would be a significant impact considering the considerable scope of the proposed developments. Since this impact could not be mitigated, it would qualify as a significant and unavoidable impact.

Impacts to Stony Point Site Viewshed

Impacts to the Stony Point site's viewshed resulting from Alternative D are discussed below in terms of impacts within specific vistas. The view of the proposed facilities from public viewpoints would generally be intermittent and limited to views from surrounding roadways, which are not scenic roadways (except for US-101 which, although designated as a scenic corridor, offers largely urban views in the vicinity of the site). Thus, the visual impact of Alternative D within the below delineated viewsheds would be less than significant.

Vista A – Wilfred Avenue: Residential and Commuter Vista

The portion of the Stony Point site located west of the Bellevue-Wilfred Channel in Vista A is shown on **Figure 3.10-15** as it appears under existing conditions. **Figure 4.10-26** shows the massing of the proposed construction under Alternative D within the same view. The visual exposure times for residents, westbound commuters and eastbound commuters are similar under this alternative,

Southwest View

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-26

Alternative D Massing: Bellevue-Wilfred Channel Looking Southwest (RP02)

although the facilities proposed under Alternative D would be in stark visual contrast with surrounding extant and planned land uses.

Vista B – Stony Point Road: Commuter Vista

Figure 3.10-12 shows the Stony Point site as seen from the corner of Stony Point Road and Wilfred Avenue. **Figure 4.10-27** shows the massing of the proposed construction under Alternative D from within the same view. **Figure 3.10-13** shows the Stony Point site as seen from Stony Point Road near the Rohnert Park Expressway. **Figure 4.10-28** shows the proposed construction under Alternative D from within the same view. The visual exposure times for northbound and southbound commuters are similar under this alternative, although the facilities proposed under Alternative B would be in stark visual contrast with surrounding extant and planned land uses.

Vista C – Rohnert Park Expressway: Commuter Vista

As discussed in **Section 3.10**, only intermittent views of the construction planned under Alternative D would be afforded to commuters on the Rohnert Park Expressway, although the relative placement of the development would grant significantly more clarity in line of sight to passing commuters. As with the alternatives above, the placement of the planned construction would be distanced from view relative to near-ground objects, while the impacts of foreshortening would continue to result in near-ground trees and topographical features dominating the view.

Vista D – Southeast Quadrant: Residential and Business Park Vista

Figure 3.10-14, above, shows this perspective to the Stony Point site, but was taken at the apex of the berm and parallel to the tree line that normally obstruct views from the street. **Figure 4.10-29** shows the proposed construction under Alternative D from within the same view. While the view from Business Park drive would be less pronounced under Alternative D than under Alternatives A and C, a greater number of residences in the trailer park southeast of the Stony Point site would be exposed to view. The view itself would be that of a business park development surrounded by open space, residential and agricultural land.

Vista E – US-101 and Interchange Businesses: Regional Commercial and Commuter Vista

Regional commuters on US-101 would observe the top of the Alternative D hotel, which would be consistent with the clustered regional commercial developments already in place along US-101 in the vicinity of Wilfred Avenue.

Figures 3.10-16 – 3.10-19 show the view of the Stony Point site from US-101 under existing conditions. As noted in **Section 3.10.3**, the southern portion of the Stony Point site only momentarily comes into view for southbound commuters on the elevated portion of US-101 over Commerce Blvd.

Figures 4.10-30 – 4.10-33 show the massing of the proposed development under Alternative D within the same views. For all of the views from US-101, the proposed development under Alternative D is mostly obstructed due to existing development and vegetation. Generally only the top of the hotel and in some cases a small portion of the parking garage is clearly visible from the roadway. Alternative D development is completely obstructed by trees and commercial development from viewpoint RP09.

Lighting and Glare

Development of commercial facilities would introduce a new source of potential lighting and glare. If escaping light were to trespass upon adjacent properties, this would be considered a significant impact. Mitigation is identified in **Section 5.2.9** that reduces lighting and glare impacts to a less than significant level.

4.10.5 ALTERNATIVE E – BUSINESS PARK

NOISE

Construction Noise

Construction activities associated with Alternative E would be similar to those described under the previous alternatives. Mechanical equipment used for construction and construction related traffic would generate noise levels as indicated in **Table 4.10-1**. Maximum noise levels from different types of equipment and under different operating conditions could range from 70 dBA to 90 dBA at a distance of 50-feet which could result in annoyance or sleep disruption for nearby rural residences along Wilfred Avenue (including connecting streets) and, to a lesser extent, sensitive receptors along Stony Point Road and Rohnert Park Expressway. However, the temporary nature of construction noise would result in a less-than-significant impact.

Impacts from construction noise would be less than significant. Mitigation measures are identified in **Section 5.2.9** that would further result in reductions in construction noise impacts.

Operational Noise Impacts

On-Site Operations Noise

On-site operational activities associated with Alternative E would be similar to those described under the previous alternatives. Noise sources such as on-site traffic and parking-related activities in parking lots, use of HVAC systems, truck loading or unloading areas, WWTP operation, and central plant operation could result in an annoyance to nearby sensitive receptors located along Wilfred Avenue.

Southeast View

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-27

Alternative D Massing: Corner of Wilfred Avenue and Stony Point Road Looking Southeast (RP04)

Northeast View

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-28

Alternative D Massing: Stony Point Road and Rohnert Park Expressway Looking Northeast (RP05)

Northwest View

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-29

Alternative D Massing: Northwest View from Business Park Drive (RP06)

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-30
Alternative D Massing: RP07

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-31
Alternative D Massing: RP08

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-32
Alternative D Massing: RP09

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-33
Alternative D Massing: RP10

The parking area for Alternative E is situated along Wilfred Avenue, with a large portion of the parking area located south of the proposed business park. The nearest noise-sensitive land uses would be the houses located north of the Stony Point site on Wilfred Avenue. These houses would be as close as 100 feet to the proposed parking lots. As shown in **Table 4.10-2**, the noise level from passing on-site cars and buses would be 59 dBA at the nearest sensitive receptors. This level is lesser than the acceptable noise level of 60 dBA for a short-term on-site noise event, and would therefore be a less than significant impact.

The greatest potential for significant noise impacts would occur if HVAC fans or similar equipment were located near sensitive receptors. The buildings within the business park would be equipped with roof mounted HVAC fans. These fans would be located approximately 200 feet from the nearest sensitive receptors, resulting in a noise level at the nearest sensitive receptor of 42 dBA, below the acceptable noise level of 45 dBA for a continuous on-site noise event. Therefore, a less than significant impact would result.

Loading dock activity can result in noise levels in the range of 70 dBA to 75 dBA at a distance of 50 feet. Loading docks would be located on the opposite side of the building away from Wilfred Avenue and would be located more than 500 feet from the nearest noise-sensitive use to the north. Maximum noise levels at the nearest sensitive receptors due to truck movements at the loading docks would be approximately 55 dBA, well below the acceptable noise level of 60 dBA for a short-term on-site noise event. Therefore, a less than significant impact would result. Nonetheless, mitigation measures in **Section 5.2.9** have been added to further reduce this impact.

Noise from the WWTP and the central plant machinery could be significant if these facilities were to be located adjacent to noise-sensitive uses, and if noise levels were to exceed acceptable limits. Note that most noise generating operations of the wastewater treatment plant and central plant would be enclosed except for exterior pumps,. In Alternative E, these facilities would be located far from the nearest sensitive uses near the southeastern boundary of the site, and would be shielded by the landscaping and the on-site buildings to the north. Noise levels at the nearest sensitive receptors would be 44 dbA, just within the acceptable noise level of 45 dBA for a continuous on-site noise event. Thus, a less-than-significant impact would result.

Off-site Traffic Noise

The traffic noise impact analysis for Alternative E used the same modeling assumptions as described under the previous alternatives. **Table 4.10-3** compares the near-term traffic noise levels (at a reference distance of 50 feet from roadway centerline) with anticipated traffic noise levels after the implementation of Alternative E. **Table 4.10-4** shows the predicted changes in traffic noise levels, as compared with near-term conditions for Alternative E. As shown in **Section 3.10.1**, changes in

traffic noise levels could be potentially significant when resulting in ambient noise levels greater than 65 dB Ldn or resulting in significant changes to ambient noise levels as shown in **Table 3.10-3**.

Road segments that are either currently above the 65 dB L_{dn} land use compatibility criterion or those that would rise above this level with the introduction of project traffic are shown in **Table 4.10-3**. It is assumed that noise sensitive development is present or proposed immediately adjacent to all of the segments that would be above this level and is considered to be a significant impact. Mitigation measures are proposed in **Section 5.2.9** that would reduce traffic related noise impacts to a less-than-significant level.

Changes in traffic noise levels would exceed off-site traffic significance criteria (see **Table 3.10-3**) at several road segments, as shown in **Table 4.10-4**, resulting in a significant impact. Along Rohnert Park Expressway is a mobile home park, which is considered to be a sensitive receptor for noise impacts. The mobile home park has been designed with a large buffer zone and a sound barrier between the park and Rohnert Park Expressway. Traffic noise from Rohnert Park Expressway is therefore not expected to significantly affect this sensitive receptor. Mitigation measures are provided in **Section 5.2.9** that would traffic related noise impacts to a less-than-significant level.

HAZARDOUS MATERIALS

Construction

Potentially significant impacts are similar to those described under Alternative B; please refer to the hazardous materials discussion in **Section 4.10.2**. Under Alternative E, substantially less construction would take place, thus potential for impacts would be slightly lessened. Mitigation has been included within **Section 5.2.9** to reduce the significance of the hazardous materials impacts.

Operation

The amount and type of hazardous materials that would be stored, used, and generated during operation of Alternative E are similar to those described under Alternative B. Groundwater pumping would be lessened as a result of the smaller development area proposed for Alternative E; nevertheless, groundwater pumping could potentially cause migration of contaminated groundwater from adjacent LUST sites. This downward migration of contaminants into the deep aquifer could result in a potentially significant impact. Mitigation is included in the **Section 5.2.2** and **Section 5.2.9** to reduce potentially significant impacts from hazardous materials during operation of Alternative E to a less-than-significant level.

VISUAL RESOURCES

Impacts Related to Regulatory Setting

The Sonoma County General Plan defines Use Areas to guide community-centered growth as a part of the County's goals. The Land Use Element of the Plan identifies the importance of preserving open space between the County's cities and communities and maintaining them in a largely open or natural character with low intensities of development. The Open Space element identifies the need to preserve the visual identities of communities. As detailed in **Section 3.8** and noted in **Section 3.10**, the Stony Point site is located in a classified Open Space – Agriculture and Resource Management area, overlapped with the Rohnert Park/Santa Rosa Community Separator. Alternative E proposes to construct a business park within a community separator, impactively encroaching upon the visual partition between communities as envisioned in the Sonoma County General Plan. Therefore, a significant visual impact to open space and community separators as envisioned in the Sonoma County General Plan would result from the construction of Alternative E. Since this impact cannot be mitigated, it would qualify as a significant and unavoidable impact.

The Sonoma County Zoning Regulations incorporate the designation of Community Separators in order to preserve such open space from development in support of the County's General Plan. The Zoning districts on the Stony Point site that apply to aesthetic values are "B Combining District 6" and "Scenic Resources Combining District." These districts are defined and explained in **Section 3.8**. The immediate area around the Stony Point site includes the following zone designations: Agriculture and Residential District, Manufactured Home Exclusion Combining District, Rural Residential District and Community Separator. Alternative E proposes construction of a business park within a zoned community separator. Thus, a significant visual impact would occur to community separators as envisioned in the Sonoma County Zoning Regulations. Since this impact cannot be mitigated, it would qualify as a significant and unavoidable impact.

Regional Impacts

The Stony Point site is located adjacent to the western boundary of the City of Rohnert Park in southern Sonoma County. The community of Cotati abuts the southern boundary of Rohnert Park as well and is in the vicinity of the southern boundary of the Stony Point site. The construction of the Alternative E developments would occur in an area where existing development is limited to scattered rural residential development and agricultural uses. The Alternative E developments on the northwest corner of the Stony Point site would be visually inconsistent with the land uses immediately surrounding the development area. This would be a significant impact considering the considerable scope of the proposed developments. Since this impact could not be mitigated, it would qualify as a significant and unavoidable impact.

Impacts to Stony Point Site Viewshed

Impacts to the Stony Point site's viewshed resulting from Alternative E are discussed below in terms of impacts within specific vistas. The view of the proposed facilities from public viewpoints would generally be intermittent and limited to views from surrounding roadways, which are not scenic roadways (except for US-101 which, although designated as a scenic corridor, offers largely urban views in the vicinity of the site). Thus, the visual impact of Alternative E within the below delineated viewsheds would be less than significant.

Vista A – Wilfred Avenue: Residential and Commuter Vista

The portion of the Stony Point site located west of the Bellevue-Wilfred Channel in Vista A is shown on **Figure 3.10-15** as it appears under existing conditions. **Figure 4.10-34** shows the massing of the proposed construction under Alternative E within the same view.

Vista B – Stony Point Road: Commuter Vista

Figure 3.10-12 shows the Stony Point site as seen from the corner of Stony Point Road and Wilfred Avenue. **Figure 4.10-35** shows the massing of the proposed construction under Alternative E from within the same view. **Figure 3.10-13** shows the Stony Point site as seen from Stony Point Road near the Rohnert Park Expressway. **Figure 4.10-36** shows the proposed construction under Alternative E from within the same view.

Southwest View

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-34

Alternative E Massing: Bellevue-Wilfred Channel Looking Southwest (RP02)

Southeast View

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-35

Alternative E Massing: Corner of Wilfred Avenue and Stony Point Road Looking Southeast (RP04)

Vista C – Rohnert Park Expressway: Commuter Vista

As discussed in **Section 3.10**, only intermittent views of the construction planned under Alternative E would be afforded to commuters on the Rohnert Park Expressway, although the relative placement of the development would grant significantly more clarity in line of sight to passing commuters. As with the alternatives above, the placement of the planned construction would be distanced from view relative to near-ground objects, while the impacts of foreshortening would continue to result in near-ground trees and topographical features dominating the view.

Vista D – Southeast Quadrant: Residential and Business Park Vista

Figure 3.10-14, above, shows this perspective to the Stony Point site, but was taken at the apex of the berm and parallel to the tree line that normally obstruct views from the street. **Figure 4.10-37** shows the proposed construction under Alternative E from within the same view.

Vista E – US-101 and Interchange Businesses: Regional Commercial and Commuter Vista

Regional commuters on US-101 would not observe the Alternative D development from any of the US-101 viewpoints.

Figures 3.10-16 – 3.10-19 show the view of the Stony Point site from US-101 under existing conditions. As noted in **Section 3.10.3**, the southern portion of the Stony Point site only momentarily comes into view for southbound commuters on the elevated portion of US-101 over Commerce Blvd.

Figures 4.10-38 – 4.10-41 show the massing of the proposed development under Alternative E within the same views. For all of the views from US-101, the proposed development under Alternative E is completely obstructed due to existing development and vegetation.

Lighting and Glare

Development of commercial facilities would introduce a new source of potential lighting and glare. If escaping light were to trespass upon adjacent properties, this would be considered a significant impact. Mitigation is identified in **Section 5.2.9** that reduces lighting and glare impacts to a less-than-significant level.

Northeast View

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-36

Alternative E Massing: Stony Point Road and Rohnert Park Expressway Looking Northeast (RP05)

Northwest View

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-37

Alternative E Massing: Northwest View from Business Park Drive (RP06)

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-38
Alternative E Massing: RP07

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-39
Alternative E Massing: RP08

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-40
Alternative E Massing: RP09

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-41
Alternative E Massing: RP10

4.10.6 ALTERNATIVE F – LAKEVILLE CASINO

Construction Noise

During the construction phase of Alternative F, noise from construction would dominate the noise environment in the immediate area. Equipment used for construction would generate noise levels as indicated in **Table 4.10-1**. Maximum noise levels from different types of equipment and under different operating conditions could range from 70 dBA to 90 dBA at a distance of 50 feet. The most important project-generated construction traffic noise source would be truck traffic associated with transport of heavy materials and equipment. Construction activities would be temporary in nature, typically occurring during normal working hours. Construction noise impacts could be significant, as extensive nighttime operations or use of unusually noisy equipment could result in annoyance or sleep disruption for nearby rural residences along State Highway 37 and Lakeville Road. However, the temporary nature of construction noise would result in a less-than-significant impact. Nonetheless, mitigation measures are identified in **Section 5.2.9** that would result in reductions in construction noise impacts.

Operational Noise Impacts

On-Site Operations Noise

Alternative F would result in on-site operational noise sources, primarily traffic and parking-related activities in parking lots, the use of fans for HVAC systems, truck loading or unloading areas, tour bus parking, wastewater treatment plant operation, and central plant operation.

Noise due to traffic in parking lots would be limited by low speed limits, so that the noise from this source is not usually expected to represent a substantial source of noise. Human activity in parking lots that can produce noise that includes talking, yelling, and opening and closing of car doors and trunk lids. The noise levels associated with these activities cannot be precisely defined because of variables such as number of parking movements and the time of day. It is typical for a passing car in a parking lot to produce a maximum noise level of 60 dBA to 65 dBA at a distance of 50 feet, which is comparable to the level of a raised voice. The noise level associated with the idling of a modern diesel bus can be as high as 65 dBA at 50 feet.

Alternative F includes parking areas situated primarily adjacent to Lakeville Highway and a parking structure located adjacent to the proposed casino building, and setback from Lakeville Highway by approximately 800 feet. The nearest noise-sensitive land uses would be the houses located north of the site boundary approximately 1,600 feet away. As shown in **Table 4.10-2**, the noise level from passing on-site cars or buses would be 35 dBA at the nearest sensitive receptors. This level is lesser than the acceptable noise level of 60 dBA for a short-term on-site noise event, and would therefore be a less than significant impact.

The greatest potential for significant noise impacts would occur if fans or similar equipment were located near sensitive receivers. The casino would be equipped with HVAC fans, which could be significant noise sources. These would be located near the casino, which is situated approximately 2,300 feet from the nearest sensitive receptor, resulting in a noise level at the nearest sensitive receptor of 21 dBA, well below the acceptable noise level of 45 dBA for a continuous on-site noise event. Therefore, a less than significant impact would result.

Loading dock activity can be a significant noise source primarily as a result of the noise produced by passing trucks. Although the trucks would be moving at low speeds, the engine noise could be significant (typically 70 dBA to 75 dBA at 50 feet), and the number of and the time of day of the truck deliveries could affect the nearby noise-sensitive receivers. Loading docks would be at the rear of the casino building, and would be located approximately 2,500 feet from the nearest sensitive receptors. Maximum noise levels at the nearest sensitive receptors due to truck movements at the loading docks would be approximately 41 dBA, well below the acceptable noise level of 60 dBA for a short-term on-site noise event. Therefore, a less than significant impact would result. Nonetheless, mitigation measures in **Section 5.2.9** have been added to further reduce this impact.

Noise from the WWTP and central plant machinery could be significant if theses facilities were to be located adjacent to noise-sensitive uses, and if noise levels were to exceed acceptable limits. Note that most noise generating operations of the wastewater treatment plant and central plant would be enclosed except for exterior pumps,. In Alternative F, these facilities would be located behind the proposed casino, which would shield the nearest sensitive receptor to the north. As show in **Table 4.10-2**, unenclosed wastewater treatment pumps could result in noise levels of 43 dBA at the nearest sensitive receptors along Wilfred Avenue. This is lesser than the acceptable noise level of 45 dBA for a continuous on-site noise event and would represent a less than significant impact.

Off-site Traffic Noise

For the traffic noise impact analysis, it was assumed that worst-case noise exposures would occur at reference distances of 50 feet from the centerlines of the roadways. Truck mix was estimated from the short-term traffic counts and from Caltrans data. Day-night distribution of traffic noise was estimated as 87 percent, and 13 percent, respectively. Based upon the traffic analysis prepared for this project (**Appendix O**), the FHWA model was run to predict traffic noise levels for the roadways included in the traffic analysis. As shown in **Section 3.10.1**, changes in traffic noise levels could be potentially significant when resulting in ambient noise levels greater than 65 dB Ldn or resulting in significant changes to ambient noise levels as shown in **Table 3.10-3**.

Road segments that are either currently above the 65 dB L_{dn} land use compatibility criterion or those that would rise above this level with the introduction of project traffic are shown in **Table 4.10-5**. It is assumed that noise sensitive development is present or proposed immediately adjacent to all of the

segments that would be above this level and considered a significant impact. Mitigation measures are proposed in **Section 5.2.9** that would reduce traffic related noise impacts to a less-than-significant level.

Changes in traffic noise levels would exceed off-site traffic significance criteria (see **Table 3.10-3**) at one road segment, as shown in **Table 4.10-6**, resulting in a significant impact. Mitigation measures are provided in **Section 5.2.9** that would traffic related noise impacts to a less-than-significant level.

TABLE 4.10-5
PREDICTED TRAFFIC NOISE LEVELS AT
REFERENCE DISTANCE – ALTERNATIVE F

Roadway	Segment	Predicted L_{dn}, dB	
		Near-Term	Alt. F plus Near-Term
SR 37	At Lakeville Highway	**78.0**	**79.1**
SR 37	At SR 121	**76.2**	**77.2**
Lakeville Highway	At SR 37	**74.9**	**78.3**
SR 121	At SR 37	**71.8**	**72.1**

NOTE: **Bold** text indicates a potentially significant noise level.
SOURCE: BBA, 2004, 2007, 2008b.

TABLE 4.10-6
CHANGES IN PREDICTED TRAFFIC NOISE LEVELS
AT REFERENCE DISTANCES – ALTERNATIVE F

Roadway	Segments	Predicted L_{dn}, dB
		Alt. F minus Near-Term
SR 37	At Lakeville Highway	1.1
SR 37	At SR 121	1.0
Lakeville Highway	At SR 37	**3.5**
SR 121	At SR 37	0.3

NOTE: **Bold** text indicates a potentially significant increase in noise levels.
SOURCE: BBA, 2004, 2007, 2008b.

HAZARDOUS MATERIALS

Construction

Potentially significant impacts are similar to those described under Alternative B; please refer to the hazardous materials discussion under Alternative B above. Mitigation has been included within **Section 5.2.9** to reduce the significance of the hazardous materials impacts.

Operation

The amount and type of hazardous materials that would be stored, used, and generated during operation of Alternative F are similar to those described under Alternative B. Refer to **Section 4.10.2** for a discussion of the potentially significant impacts. Mitigation is included in **Section 5.2.9** to reduce any significant impacts from the operation of Alternative F to a less than significant level.

VISUAL RESOURCES

Impacts Related to Regulatory Setting

The Lakeville site is located within a Sonoma County General Plan designated "Scenic Landscape Unit." SR-37 is designated by the State of California as a scenic corridor in the vicinity of the Lakeville site. The Lakeville site's parcels are within an Open Space-Agriculture and Resource Management areas. Alternative F proposes to construct a regional commercial activity within a Scenic Landscape Unit and an Open Space area as designated by Sonoma County. The five parcels, which make up the Lakeville site are zoned as Land Extensive Agriculture and Scenic Resource. The Lakeville site is located in a visually sensitive area, as evidenced by the land use designations. Alternative F proposes to construct a regional commercial activity within these areas. Construction of Alternative F would therefore result in a significant and unavoidable visual impact.

Regional Impacts

The Lakeville site is located in a rural, agricultural area in unincorporated Sonoma County near the intersection of Lakeville Highway (a County Scenic Corridor) and State Route 37 (SR-37), a California Scenic Highway and a County Scenic Corridor. The Lakeville Highway is the main thoroughfare characterizing the region, and begins on its south at SR-37, running northward until it turns west and joins the US-101 at the City of Petaluma. Alternative F proposes to construct a regional commercial activity along the main thoroughfare of the region, which would abruptly contrast with the rural and agricultural character of the region and vicinity. The construction of Alternative F would result in a significant and unavoidable visual impact with regard to the visual character of the region.

Impacts to Lakeville Site Viewshed

Impacts to the Lakeville site viewshed are discussed below in terms of impacts within specific vistas. Sustained views from two scenic corridors (see below description of specific viewpoints) would be significantly impacted by intensive development on the Lakeville site. Since this impact cannot be mitigated, it would qualify as a significant and unavoidable impact.

Vista A – Lakeville Highway Residential, Commercial and Commuter Vista

The Lakeville Highway residential, commercial, and commuter vista would be impaired from the proposed development of Alternative F: **Figure 3.10-21** shows the Lakeville site as seen from the

southbound approach along the Lakeville Highway. **Figure 4.10-42** shows the proposed construction under Alternative F within the same view. **Figure 3.10-22** shows the Lakeville site as seen from a northbound approach along the Lakeville Highway. **Figure 4.10-43** shows the proposed construction under Alternative F within the same view. The construction of Alternative F would dominate the visual frame within this vista, obstructing the view to the open character of the region.

Vista B – SR-37 Scenic and Commuter Vista

The Lakeville site as seen from the SR-37 and Lakeville Highway intersection is shown on **Figure 3.10-23**. **Figure 4.10-44** shows the proposed construction of Alternative F within the same view. **Figure 3.10-24** shows the view to the Lakeville site from the SR-37 bridge over the Petaluma River. **Figure 4.10-45** shows the proposed construction of Alternative F within the same view. The construction of Alternative F would intrude the visual frame within this vista, encroaching upon the view to the open character of the region.

Vista C – Regional Residential and Commercial Vista

The construction of Alternative F would dominate the visual frame within this vista, obstructing the view to the open character of the region. A visible contrast in land uses would be observed by numerous residents, commuters and regional agricultural workers.

Lighting and Glare

Development of commercial facilities would introduce a new source of potential lighting and glare. If escaping light were to trespass upon adjacent properties, this would be considered a significant impact. Mitigation is identified in **Section 5.2.9** that reduces lighting and glare impacts to a less-than-significant level.

Southward View

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-42

Alternative F Massing: Southward View from Lakeville Highway (LV01)

Northward View

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-43

Alternative F Massing: Northward View from Lakeville Highway (LV02)

Northward View

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-44

Alternative F Massing: Northward View from Hwy 37 at Lakeville Highway (LV03)

Northeast View

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-45

Alternative F Massing: Northeast View from Hwy 37 at Petaluma River (LV04)

4.10.7 ALTERNATIVE G – NO ACTION

NOISE

The City of Rohnert Park identified the potential for the generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards. If noise levels exceed 45 L_{dn}/Community Noise Equivalent Level (CNEL) in habitable rooms, a significant impact would result. Development in conjunction with cumulative traffic could result in potentially significant traffic noise impacts on the existing land uses in the area. Alternative G is expected to result in development on the Wilfred Site consistent with the Northwest Specific Plan. This development would result in noise impacts resulting from on-site construction, on-site operation of businesses and residences, and increased traffic volumes. Construction and on-site noise levels would be similar to those noted for Alternatives A-E, although an on-site wastewater treatment plant would not be included for Alternative G.

Alternative G noise levels are assumed to be equal to the difference between the noise levels for Alternative C and those for Alternative A, given that Alternative C is located close to Alternative A, has access from Wilfred Avenue, and would not displace Alternative G development (unlike Alternative A). **Table 4.10-7** shows that there are road segments that are either currently above the 65 dB L_{dn} land use compatibility criterion or would rise above this level with the introduction of project traffic. It is assumed that noise sensitive development is present or proposed immediately adjacent to all of the segments that would be above this level. Therefore, this is considered a significant impact.

Changes in traffic noise levels would exceed off-site traffic significance criteria (see **Table 3.10-3**) at one road segment, as shown in **Table 4.10-8**, resulting in a significant impact.

Note that noise-sensitive development is present along Rohnert Park Expressway in the form of the mobile home park. The mobile home park has been designed with a large buffer zone and a sound barrier between the park and Rohnert Park Expressway. Thus traffic noise from Rohnert Park Expressway is not expected to significantly affect any sensitive receptors within the mobile home park.

The City of Rohnert Park identified the potential for the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels. The General Plan EIR analyzed potentially significant impacts related to temporary construction noise that may include excessive ground vibration. The EIR for the Northwest Specific Plan development would contain further mitigation measures to reduce noise impacts.

TABLE 4.10-7
PREDICTED TRAFFIC NOISE LEVELS AT REFERENCE DISTANCES – ALTERNATIVE G

Roadway	Segment	Predicted L_{dn}, dB	
		Near-Term	Alternative G plus Near-Term
Rohnert Park Expressway	Labath to Stony Point	**69.8**	**69.8**
Stony Point Road	Rohnert Park Expressway to Wilfred	**73.2**	**73.6**
Redwood Drive	Rohnert Park Expressway to Wilfred Avenue	**67.4**	**67.4**
Commerce	Rohnert Park Expressway to Golf Course	64.7	64.7
Wilfred	Stony Point to Whistler	62.1	64.4
Wilfred	Whistler to Labath	62.1	**67.1**
Wilfred	Labath to Dowdell	**65.3**	**66.5**
Wilfred	Dowdell to Redwood	**66.4**	**67.9**
Wilfred	Redwood to SR101	**69.1**	**69.9**
Business Park	Labath to Redwood	61.6	61.6
Roberts Lake	Commerce to Golf Course	63.8	63.8
Millbrae	Stony Point to Primrose	61.7	61.9

NOTE: Bold values indicate potentially significant noise levels.
SOURCE: BBA, 2004, 2007, 2008b.

TABLE 4.10-8
CHANGES IN PREDICTED TRAFFIC NOISE LEVELS AT REFERENCE DISTANCES – ALTERNATIVE G

Roadway	Segments	Predicted L_{dn}, dB
		Alternative G minus Near-Term
Rohnert Park Expressway	Labath to Stony Point	0.0
Stony Point Road	Rohnert Park Expressway to Wilfred	0.4
Redwood Drive	Rohnert Park Expressway to Wilfred Avenue	0.0
Commerce	Rohnert Park Expressway to Golf Course	0.0
Wilfred	Stony Point to Whistler	2.3
Wilfred	Whistler to Labath	**5.0**
Wilfred	Labath to Dowdell	1.2
Wilfred	Dowdell to Redwood	1.5
Wilfred	Redwood to SR101	0.8
Business Park	Labath to Redwood	0.0
Roberts Lake	Commerce to Golf Course	0.0
Millbrae	Stony Point to Primrose	0.2

NOTE: Bold values indicate a potentially significant increase in noise levels.
SOURCE: BBA, 2004, 2007, 2008b.

Alternative G would be developed under the authority of the Rohnert Park General Plan EIR, which specifies locally required mitigation measures to reduce the construction impacts above to a less than significant level. Mitigation measures in the Northwest Specific Plan EIR would reduce other noise impacts to a less than significant level.

HAZARDOUS MATERIALS

Under Alternative G, a large residential development would occur on the northwest corner of the Wilfred Site.

Construction

Potentially significant impacts during construction of Alternative G are similar to those described under Alternative A; refer to the hazardous materials discussion in **Section 4.10.2**. Under Alternative G, less construction would occur and the potential for impacts would be considerably lessened. Mitigation has been included within **Section 5.2.9** to reduce the significance of the hazardous materials impacts during construction.

Operation

The amount and type of hazardous materials that would be stored, used, and generated during operation of Alternative F would include household chemicals such as cleansers, detergents, paints, fertilizers, motors oils, etc. Chemicals that are intended for household use are generally stored in smaller amounts compared to chemicals that are intended for a commercial facility. Hazardous materials that would be stored or generated would be limited to household chemicals that would be stored in relatively smaller quantities. If a spill were to occur, the impacts would be considered relatively minor and would not be expected to have a significant impact on the environmental quality of the site. No significant impacts are expected.

VISUAL RESOURCES

The City of Rohnert Park has identified visual impacts associated with Alternative G. Urban development is currently planned for in the City of Rohnert Park's Northwest Specific Plan and would blend with existing development to the south and east. Impacts would be similar to Alternative A, except reduced in intensity due to the reduced scale of development planned under the no-action alternative. Potentially significant lighting and glare impacts would occur. Mitigation appears in **Section 5.2.9** that would reduce these impacts to a less-than-significant level.

Lighting and Glare

Development of commercial facilities would introduce a new source of potential lighting and glare. If escaping light were to trespass upon adjacent properties, this would be considered a significant

impact. Mitigation is identified in **Section 5.2.9** that reduces lighting and glare impacts to a less-than-significant level.

4.10.8 ALTERNATIVE H –REDUCED INTENSITY (WILFRED SITE)

NOISE

Construction Noise

Construction activities associated with Alternative H would be similar to those described under Alternative D due to the similarity in construction footprint. Mechanical equipment used for construction and construction-related traffic would generate noise levels as indicated in **Table 4.10-1**. Maximum noise levels from different types of equipment and under different operating conditions could range from 70 dBA to 90 dBA at a distance of 50 feet. This could result in the annoyance or sleep disruption for nearby rural residences along Wilfred Avenue (including connecting streets) and, to a lesser extent, the mobile home park located along Rohnert Park Expressway. However, the temporary nature of construction noise would result in a less-than-significant impact. Mitigation measures are identified in **Section 5.2.9** that would result in further reductions in construction noise impacts.

Operational Noise Impacts

On-Site Operations Noise

Operational activities associated with Alternative H would be similar to those described under the previous alternatives. Noise sources such as on-site traffic and parking-related activities in parking lots, use of fans for HVAC systems, truck loading or unloading areas, tour bus idling, wastewater treatment plant operation, and central plant operation may result in an annoyance to nearby sensitive receptors located along Wilfred Avenue.

Given that Alternative H's facilities would be similar to Alternative A and similarly situated on the Wilfred site when compared to Alternative A, impacts to the nearest sensitive receptors are expected to be similar as well (see **Table 4.10-2**). As with Alternative A, Alternative H would result in significant impacts to sensitive receptors due to on-site traffic circulation and on-site operation of unenclosed WWTP pumps. Mitigation measures proposed in **Section 5.2.9** would reduce impacts to a less-than-significant level.

Traffic Noise

The traffic noise impact analysis for Alternative H used the same modeling assumptions as described under the previous alternatives. **Table 4.10-3** compares the near-term traffic noise levels (at a reference distance of 50 feet from roadway centerline) with anticipated traffic noise levels after the implementation of Alternative H. **Table 4.10-4** shows the predicted changes in traffic noise levels, as compared with near-term conditions for alternatives located on the Stony Point site. As shown in

Section 3.10.1, changes in traffic noise levels could be potentially significant when resulting in ambient noise levels greater than 65 dB Ldn or resulting in significant changes to ambient noise levels as shown in **Table 3.10-3**.

Road segments that are either currently above the 65 dB L_{dn} land use compatibility criterion or those that would rise above this level with the introduction of project traffic are shown in **Table 4.10-3**. It is assumed that noise sensitive development is present or proposed immediately adjacent to all of the segments that would be above this level. This is considered to be a significant impact. Mitigation measures are proposed in **Section 5.2.9** that would reduce traffic related noise impacts to a less than significant level.

Changes in traffic noise levels would exceed FICON significance criteria at several road segments, as shown in **Table 4.10-4**, resulting in a significant impact. Located along Rohnert Park Expressway is a mobile home park that is considered to be a sensitive receptor for noise impacts. The mobile home park has been designed with a large buffer zone and a sound barrier between the park and Rohnert Park Expressway. Traffic noise from Rohnert Park Expressway is not expected to significantly affect this sensitive receptor. Mitigation measures are provided in **Section 5.2.9** that would reduce traffic related noise impacts to a less-than-significant level.

HAZARDOUS MATERIALS

Construction

Hazardous materials impacts resulting from construction of Alternative H will be identical to the impacts that were identified for the reduced intensity Alternative D. Alternative H includes identical square footages and components of Alternative D, therefore potential impacts as a result of construction activities would be the same as Alternative D.

Operation

The amount and type of hazardous materials that would be stored, used, and generated during operation of Alternative H would be similar to those described under Alternative D. Refer to **Section 4.10.4**. Compared to Alternative A, groundwater pumping would be lessened as a result of the smaller development area proposed for Alternative H; nevertheless, groundwater pumping could potentially cause migration of contaminated groundwater from the adjacent LUST sites. This downward migration of contaminants into the deep aquifer could result in a potentially significant impact. Mitigation is included in the **Section 5.2.2** and **Section 5.2.9** to reduce potentially significant impacts from hazardous materials during operation of Alternative H to a less-than-significant level.

VISUAL RESOURCES

Impacts to Related Regulatory Setting

As detailed in **Section 3.8** and noted in **Section 3.10**, the majority of the Wilfred site is located within the Rohnert Park/Santa Rosa Community Separator, including the northeast corner of the site that is proposed for intensive development under Alternative H. The Land Use Element of the Sonoma County General Plan identifies the importance of preserving open space between the County's cities and communities and maintaining them in a largely open or natural character with low intensities of development. The Open Space element identifies the need to preserve the visual identities of communities. Alternative H would encroach development within the Community Separator in seeming contradiction of this need. However, the Alternative H development area is also located within the City of Rohnert Park's Northwest Specific Plan area, within the City of Rohnert Park's sphere of influence, and is currently planned by the City for intensive development. In addition, the visual appearance of a regional commercial activity would be consistent with the regional commercial activities just east of the Wilfred site, along Redwood Drive and US-101. Therefore, visual impacts in terms of the land use planning would be less than significant.

Regional Impacts

The Wilfred site is located adjacent to a regional commercial area along the US-101. Construction of Alternative H would incorporate open space that partitions the sphere of influence for the City of Rohnert Park from agricultural and open space areas under County jurisdiction, and would further serve to partition the area from the community of Cotati, south of the Wilfred site. Regional commuters on US-101 would observe new construction consistent with the clustered regional commerce already in place along the US-101 at and in the vicinity of Wilfred Avenue and Business Park Drive. Thus, the regional visual impacts under Alternative H would be less than significant.

Impacts to Wilfred Site Viewshed

Impacts to the Wilfred site viewshed are discussed in terms of impacts within the constituent vistas of the viewshed. While the size of Alternative H is substantially reduced when compared to Alternative A, the visual mass associated with the reduced intensity casino/hotel resort is only slightly reduced when compared to the proposed project. While the proposed facilities would be visible, this alone does not constitute an impact. In that a regional commercial element is generally envisioned for the Northwest Specific Plan Area, the proposed facilities would be generally consistent with this vision. In addition, the view to the proposed facilities from public viewpoints would generally be intermittent. Thus, the visual impact of Alternative H within the below delineated viewsheds would be less than significant.

Vista A- Wilfred Avenue

Figure 3.10-10 shows the view to the Wilfred site under existing conditions, from the northeast corner of Wilfred Avenue and Dowdell Avenue, northeast of the proposed construction area. **Figure 4.10-46** shows the massing of the proposed construction under Alternative H within the same view. The residences identified in **Section 3.10** within this vista would experience a sustained view of the buildings against a backdrop of commercial development as planned within the guidelines of the City's General Plan and any construction consistent with the Northwest Specific Plan. Westbound commuters on Wilfred Avenue would be offered a dominant view of the proposed facilities upon entering the vista, and would continue observing this view for approximately half a minute until the facilities fall from view at the commuter's left flank. **Figure 3.10-11** provides a view of the existing conditions from the Bellevue-Wilfred Channel, northwest of the proposed construction area. **Figure 4.10-47** shows the massing of the proposed construction under Alternative H within the same view. Residents west of the Bellevue-Wilfred Channel would experience a view to the facilities as described above, though the view would be considerably more distanced from the viewer. Upon entering the vista, eastbound commuters would observe the facilities against a backdrop of mountains, trees and commercial development, with the foreground dominating the view. The viewing time on this approach would be approximately one minute, during which the proposed facilities would come to dominate the southward view briefly before it passes out of view to the commuter's right flank.

Vista B- Stony Point Road: Commuter Vista

Figure 3.10-12 shows the Wilfred site as seen from the corner of Stony Point Road and Wilfred Avenue under existing conditions. **Figure 4.10-48** shows the massing of the proposed construction under Alternative H within the same view. The proposed facilities would be observed at an appreciable distance, against a backdrop of mountains, trees and commercial development, with the foreground dominating the view. As noted in **Section 3.10**, the southbound Stony Point Road commuter vista is approximately 0.34 miles. While the duration of visibility is dependent upon traffic conditions, deceleration and acceleration time where stoppage is required, an average speed of 50 mph offers approximately half a minute of view to southbound commuters on Stony Point Road, until the proposed construction site falls back from view to the commuter's left flank.

Figure 3.10-13 shows the Wilfred site as seen from Stony Point Road near the Rohnert Park Expressway under existing conditions. Figure 4.10-49 shows the proposed massing of the proposed construction under Alternative H within the same view. The distance of visibility on the northbound passing is approximately 0.7 miles. While the duration of visibility is dependent upon traffic conditions, deceleration and acceleration where stoppage is required, an average speed of 50 mph would offer approximately a one minute view to the proposed construction area before the commuter passes Wilfred Avenue, and the proposed construction area passes from forward-oriented view at the commuter's right flank.

Southwest View

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-46

Alternative H Massing: Southwest View of Wilfred Site (RP01)

Southeast View

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-47

Alternative H Massing: Bellevue-Wilfred Channel Looking Southeast (RP03)

Southeast View

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-48

Alternative H Massing: Corner of Wilfred Avenue and Stony Point Road Looking Southeast (RP04)

Northeast View

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-49

Alternative H Massing: Stony Point Road and Rohnert Park Expressway Looking Northeast (RP05)

Vista C- Rohnert Park Expressway: Commuter Vista

As discussed in **Section 3.10**, only intermittent views of the construction planned under Alternative A would be afforded to commuters on the Rohnert Park Expressway. The placement of the planned construction would be distanced from view relative to near-ground objects, while the impacts of foreshortening would continue to result in near-ground trees and topographical features dominating the view.

Vista D- Southeast Quadrant: Residential and Business Park Vista

Figure 3.10-14 shows the perspective to the construction portion of the Wilfred site under existing conditions, but was taken at the apex of the berm and parallel to the tree line that normally obstruct views from the street. **Figure 4.10-50** shows the massing of the proposed construction under Alternative A within the same view. As noted in **Section 3.10**, Vista D provides a limited view northward for the trailer park at Rancho Verde Circle off Rohnert Park Expressway and the business park on Business Park Drive, southeast of the Wilfred site. Within this vista, a view of the proposed construction portion of the Wilfred site is afforded to westbound commuters on Business Park Drive, although it is largely obstructed by landscaping and trees along the northern side of the street.

Vista E – US-101 and Interchange Businesses: Regional Commercial and Commuter Vista

Regional commuters on US-101 would momentarily observe a portion of the Alternative H development, which would be consistent with the clustered regional commercial developments already in place along US-101 in the vicinity of Wilfred Avenue.

Figures 3.10-16 – 3.10-19 show the view of the Wilfred site from US-101 under existing conditions. As noted in **Section 3.10.3**, the Wilfred site only momentarily comes into view for southbound commuters on the elevated portion of US-101 over Commerce Blvd.

Figures 4.10-51 – 4.10-54 show the massing of the development under Alternative H within the same views. For much of the view from US-101, the Alternative H development is mostly obstructed due to existing development and vegetation. With the exception of viewpoint RP08, which was taken from a short, elevated section of US-101 in the vicinity of Wilfred Avenue, generally only the top of the hotel is clearly visible from the roadway. The parking structure is also partially visible from RP09 and RP10 (which is actually elevated above US-101), but note that these viewpoints were chosen in part for their ability to provide partially unobstructed views of the proposed development as well as their spacing in the viewshed. Only RP08 offers a momentary view of a large portion of the parking structure and the hotel from an elevated position.

Northwest View

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-50

Alternative H Massing: Northwest View from Business Park Drive (RP06)

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-51
Alternative H Massing: RP07

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-52
Alternative H Massing: RP08

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-53
Alternative H Massing: RP09

SOURCE: Friedmutter Group, 2008; AES, 2008

Figure 4.10-54
Alternative H Massing: RP10

Lighting and Glare

Development of commercial facilities would introduce a new source of potential lighting and glare. If escaping light were to trespass upon adjacent properties, this would be considered a significant impact. Mitigation is identified in **Section 5.2.9** that reduces lighting and glare impacts to a less-than-significant level.

4.11 INDIRECT AND GROWTH INDUCING EFFECTS

The National Environmental Policy Act (NEPA) Council on Environmental Quality (CEQ) Regulations requires the analysis of indirect effects (40 C.F.R § 1502.16). The CEQ Regulations define indirect effects as effects that "are caused by the action and are later in time or farther removed in distance, but still reasonably foreseeable" (40 C.F.R. §1508.8(b)). Growth inducing effects are a subset of indirect effects that are typically defined as effects that foster economic or population growth, or the construction of additional housing. **Section 4.11.1** assesses the potential for growth inducing effects caused by the alternatives. **Section 4.11.2** assesses indirect effects caused by the recommended off-site traffic mitigation. **Section 4.11.3** assesses indirect effects caused by the off-site construction of pipelines, proposed for Alternative A. Other indirect effects are analyzed in previous sections by issue area (air quality, noise, etc.). The indirect effects of off-site traffic mitigation and pipeline construction are discussed separately in this section because they are separate projects (indirectly resulting at least in part from a development alternative) that affect most issue areas. Therefore, in an attempt to improve clarity these effects have been analyzed below (including all affected issue areas) rather than throughout the EIS within each issue area.

4.11.1 GROWTH INDUCING EFFECTS

NEPA requires that an Environmental Impact Statement (EIS) analyze "growth inducing effects" (40 C.F.R. §1502.16 (b), 40 C.F.R. §1508.8 (b)). A growth inducing effect is defined as an effect that fosters economic or population growth, or the construction of additional housing. Growth inducement could result if a project established substantial new permanent employment opportunities (e.g., new commercial, industrial, or governmental enterprises) or if it would remove obstacles to population growth (e.g., expansion of a wastewater treatment plant (WWTP) that could allow more construction in the service area).

Note that direct growth inducement is possible if a project contains a component that by definition would lead to "growth," such as the construction of new housing. None of the alternatives, except for the No Action Alternative (see planned residential and commercial growth discussed in **Section 2.8**), would result in direct growth inducement. Therefore, this section exclusively assesses the potential for indirect growth inducement for each development alternative.

During operation, the development alternatives would employ a minimum of 2,000 (Alternative E) and a maximum of 2,600 employees (Alternatives A, B, C, and F – high range), depending on

the alternative. This will potentially result in additional housing and commercial demand from new project employees.

During operation, the development alternatives would also result in additional jobs and revenues that are induced or indirectly a result of the implementation of the development alternative (indirect/induced economic impacts). Indirect employment and revenues would result from inter-industry trade which the casino/hotel or business park engages in with other businesses (e.g., janitorial supply services). Induced employment and revenues would result from economic activity spawned by the household trade that occurs when direct project employees act as consumers. During operation, the development alternatives would result in indirect and induced employment in Sonoma County ranging from 336 (Alternative E) to 3,402 (Alternatives A, B, C, and F – high range) (see **Table 4.7.4**). Indirect and induced economic impacts are analyzed in more detail below in **Section 4.7**.

Indirect and induced economic impacts may also create growth. However, any growth is expected to be diffused and distributed among many different businesses in many different sectors located throughout Sonoma County, the greater Bay Area, and beyond.

POTENTIAL HOUSING GROWTH

To determine potential reasonably foreseeable housing growth, the likely residence location of new project employees must first be determined. The 2000 Census provides Journey to Work data. This data was used to determine the residence of employees that currently work in the City of Rohnert Park. Since the Wilfred site and Stony Point site are located adjacent to the City of Rohnert Park, employee residence distribution is expected to mirror the employee residence distribution for employees that work in the City of Rohnert Park. According to the Census data, approximately 31-percent of all Rohnert Park employees live within Rohnert Park, and 26-percent of employees live within Santa Rosa, with the remainder living elsewhere in the Bay Area (see **Appendix N** for detailed worker distribution data). This implies that 31-percent of new casino employees will seek housing in Rohnert Park, and 26-percent of new employees will demand housing in Santa Rosa. The other communities near the Wilfred site and Stony Point site are Petaluma, Sebastopol, and Cotati. Rohnert Park worker distribution in Petaluma, Sebastopol, and Cotati is currently 5.0, 1.4, and 2.1 percent, respectively. Worker distribution in Marin County is expected to be approximately 1.6 percent. Thus, the residence location for employees from the Wilfred site and the Stony Point site alternatives would be relatively insignificant in these communities when compared to Santa Rosa and Rohnert Park (Bay Area Economics, 2008).

Before new residents move into the area, unemployed workers and some people who were previously in the labor force are expected to take the new jobs created by the alternatives. In 2003, Sonoma County had a 70-percent labor force participation (LFP) rate. That is, 70-percent

of the population who were over the age of 16 was either employed, or actively looking for work (unemployed). During the same time, Rohnert Park had an 80-percent LFP rate. Historical data shows that the maximum LFP rates for Sonoma County occurred in 2001 and 2002, with a 72-percent LFP rate. Rohnert Park's maximum LFP rate was 82 percent in 2002. Likewise, historical data shows the historic minimum unemployment rates for the areas occurring in 2000, with a 2.6-percent unemployment rate in Sonoma County, and a 2.6-percent unemployment rate in Rohnert Park. It is assumed that the current labor force can expand to the historic recent high labor force and to the historic recent low unemployment rates, given the introduction of new jobs. **Table 4.11-1** shows the worker absorption capacity per area in comparison to the jobs per area that would be created for each alternative. For each alternative the existing labor pool would be able to absorb the new jobs created by the alternative. Thus, the existing housing stock would continue to serve the existing labor pool, resulting in no housing growth caused by the alternatives.

TABLE 4.11-1
WORKER ABSORBTION CAPACITY BY AREA

	Sonoma County	Rohnert Park	Santa Rosa	Petaluma	Marin County	Novato
Total Population Over 16[1]	366,732	32,288	120,536	43,724	205,988	38,047
Historic Peak Labor Force[2]	264,764	26,364	81,241	31,743	143,574	28,650
Historic Low Unemployment Rate[3]	2.6%	2.6%	2.6%	2.1%	1.6%	1.5%
Number of Potential Workers[4]	257,880	25,678	79,129	31,077	141,276	28,220
Current Labor Force	257,544	25,791	73,671	29,934	129,749	25,836
Current Unemployment Rate	4.9%	5.5%	4.7%	4.0%	3.9%	3.5%
Current Number of Workers[5]	244,924	24,372	70,208	28,737	124,689	24,932
Number of Jobs the Current Areas Can Absorb[6]	*12,956*	*1,306*	*8,921*	*2,340*	*16,588*	*3,288*
Direct Jobs Created, Alternatives A, B, and C[7]	2,256	814	615	120	38	16
Direct Jobs Created, Alternative D[7]	1,974	712	538	105	33	14
Direct Jobs Created, Alternative E[7]	1,880	678	512	100	32	13
Direct Jobs Created, Alternative F[7]	529	106	73	182	1,131	718

NOTES: [1] Assumes that the age distribution is not changing for the percent of the population over age 16.
[2] Assumes historic high labor force participation rate (see **Table 3.7-4** for year of historic high and percentage per area).
[3] See **Table 3.7-4** for year of historic low per area.
[4] Historic peak labor force minus historic low number of unemployed.
[5] Current labor force minus current number of unemployed.
[6] Number of potential workers minus current number of workers.
[7] Assumes average number of employees (see **Table 4.7-2**). Jobs per area estimated using Journey to Work data (see **Appendix N** for more detail).
SOURCE: U.S. Bureau of Labor Statistics, 2004; U.S. Census Bureau, 1990, 2000; Bay Area Economics, 2008.

As noted above, it would be speculative to attempt to determine the place of residence for indirect and induced employees. These employees would not be working at the Wilfred site or Stony Point site, but would be working at different locations scattered throughout the vicinity, meeting

the additional demand for services and goods created by project employees and the Wilfred site or Stony Point site alternatives.

POTENTIAL COMMERCIAL GROWTH

Development under the alternatives would draw additional traffic through area roadways. Additional area traffic could create demand for growth of commercial facilities to serve the new traffic. In this case, demand for new restaurants or hotels to serve Wilfred or Stony Point site visitors is not expected for Alternatives A, B, C, D, or H due to the planned development of restaurants and a hotel on-site that would serve this additional demand. Alternative E would include space for commercial development. At least one restaurant would be expected to be located within the business park to serve employees at the business park. Demand for a hotel is not expected to increase under Alternative E, given that most visitors to the site would be local residents or employees. A gas station is not planned under any of the alternatives; however, gas stations are currently present at both main highway interchanges that would serve the Wilfred and Stony Point sites (Wilfred Avenue and Rohnert Park Expressway). Thus, gas station growth is not expected to occur.

Development would also create new jobs in the region, as discussed previously. These new jobs would lead to induced employment and revenues, as noted above. These induced economic effects could lead to demand for commercial growth. According to the California State Board of Equalization, Rohnert Park residents spent approximately $11,000 per capita in taxable sales in 2002. However, if the labor force participation increases from its current level to its peak, and the unemployment rate decreases, certain residents may have additional disposable income. Then, the amount of taxable sales spent per capita should increase slightly for the area, making the local retail market stronger. It is expected that the increased local expenditures due to increased personal income would be absorbed by existing retail facilities, which would benefit from increased sales volume.

Indirect and induced economic impacts within the local economy (see **Section 4.11.2**) may also create demand for growth; however, such demand is expected to be diffuse and distributed among many different businesses in many different sectors located throughout Sonoma County and the greater Bay Area. Thus, it would be speculative to attempt to predict where and how these impacts would be felt and whether they would lead to physical growth or simply increased profits for existing businesses.

POTENTIAL GROWTH FROM INFRASTRUCTURE/UTILITIES IMPROVEMENTS

Improvements to area roadways and intersections would serve to mitigate the impacts of the project alternatives on area roadway networks, not to increase capacity of roadways to accommodate future unplanned growth. Note that the recommended funding of Wilfred Avenue

widening, would serve to extend a widening project already planned by the City of Rohnert Park to the City's sphere of influence. It would also not create any new access points along the roadway that might encourage growth. Nor would the widening affect the restrictive zoning (including the presence of a community separator) which would remain under the control of Sonoma County.

Should the Tribe construct on-site water/wastewater facilities, they would be sized solely to serve the project alternative and off-site connection would not be permitted. Should the Tribe decide to connect to local water and wastewater services, any water/wastewater pipeline extensions would be sized solely to serve the development proposed by the Tribe and no other connections would be permitted. Any other utilities improvements, such as improvements to electrical facilities, would be minor and tailored specifically for the project alternative. Thus, no growth would be induced by the extension of infrastructure or the expansion of utilities resulting from the project alternatives.

4.11.2 INDIRECT EFFECTS FROM OFF-SITE TRAFFIC MITIGATION

This section analyzes the effects resulting from the construction of traffic improvements, as described in **Section 5.2.7**. These improvements have been identified for effects discussed in **Sections 4.8** and **4.12**.

IMPROVEMENTS

Funding of roadway segment and intersection improvements recommended under each alternative are listed in **Table 5-7** and **Table 5-8** in **Section 5.2.7** of this EIS. Improvements for each roadway segment and intersection are identified in the first year of need. Contributions to various roadway segment and intersection improvements have also been identified in the Memorandum of Understanding (MOU) with the City of Rohnert Park (see **Section 2.2.10** and **Appendix E**).

The location of intersection mitigation measures for Alternatives A, B, C, D, E, and H are identified in **Table 5-9** and shown in **Figure 5.2.7-1**. A close-up view of these intersections is shown in **Figures 5.2.7-2** through **5.2.7-7.** The location of mitigation measures for Alternative F at each intersection identified in **Table 5-11** and shown in **Figure 5.2.7-8.** A close-up view of each intersection is shown in **Figures 5.2.7-9** and **5.2.7-11**.

As noted in **Section 5.2.7**, the mitigation recommended in this EIS is the full or partial funding of various roadway segment and intersection improvements, rather than the construction of the improvements, which cannot be controlled by the Tribe or the NIGC. Note also that most recommended improvements have either specifically been planned to accommodate for existing

development and development planned by local governments; or are anticipated to be required for planned development.

ENVIRONMENTAL CONSEQUENCES

The following section identifies the potential indirect environmental effects of construction of the intersection improvements. Because most of the identified improvements are common to all the alternatives and because the nature and scope of effects are expected to be similar, the following analysis is generally provided for all the alternatives, thereby avoiding redundant discussion under each alternative.

Land Resources

The construction of roadway improvements would require grading and the introduction of fill material to extend the existing shoulders and road bed. The increase of impervious surfaces and additional earthwork could result in erosion of soils. Local jurisdictions would require the use of stable fill material, engineered embankments, and erosion control features to reduce the potential for slope instability, subsidence and erosion. In accordance with the federal Clean Water Act, construction of roadway improvements over one acre in area would be required to comply with National Pollution Discharge Elimination System (NPDES) General Construction Permit Program. To comply with the program, a Stormwater Pollution Prevention Plan (SWPPP) would be developed that would include soil erosion and sediment control practices to reduce the amount of exposed soil, prevent runoff from flowing across disturbed areas, slow runoff from the site, and remove sediment from the runoff. With standard construction practices and specifications required by the NPDES permit program, the roadway improvements identified under the project alternatives are expected to result in less-than-significant indirect effects to land resources. The roadway improvements would not significantly affect the ability to extract minerals.

Water Resources

The development of roadway improvements at the locations identified could affect water resources due to grading and construction activities and an increase in impervious surfaces. Potential effects include an increase of surface runoff and increased erosion that could adversely affect surface water quality due to increases in sediment and roadway pollutants such as grease and oil.

As discussed under Land Resources (above), a SWPPP would be developed to comply with the NPDES General Construction Permit Program, which includes soil erosion and sediment control practices. The effects to runoff volumes resulting from the increase in impervious roadways are expected to be minimal due to the limited extent of the improvements in comparison to the existing roadways. Some existing curb and gutters and stormwater drain inlets would be

demolished and relocated along portions of the roadways to provide space for improvements. Curb and gutters, inlets, and other drainage facilities would be reconstructed to provide adequate facilities to direct stormwater runoff. With incorporation of these drainage features and compliance with the soil erosion and sediment control practices identified in the SWPPP, effects to water resources would be less than significant.

Air Quality

Development of the roadway improvements would result in short-term, construction-related air pollution emissions. The construction phase would produce two types of air contaminants: exhaust emissions from construction equipment and fugitive dust generated as a result of demolition and soil movement. Exhaust emissions from construction activities include those associated with the transport of workers and machinery to the site, as well as those produced on-site as the equipment is used. Construction of improvements would be limited in scope and duration. Thus a less-than-significant indirect effect would result. In addition, mitigation measures are required by local jurisdictions to reduce construction emissions. These include watering the exposed soil to reduce dust, reducing speeds on all unpaved roads to 15 miles per hour, and maintaining equipment properly.

Long-term effects could result if the roadway improvements resulted in localized increases in carbon monoxide (CO) concentrations and/or if the improvements contributed to traffic congestion at large intersections. The construction of improvements would not result in adverse changes or redistribution in traffic volumes and vehicle trips. Conversely, it is expected that the improvements would reduce congestion and improve traffic flow. This would reduce emissions from idling vehicles at these intersections. Long-term adverse effects would therefore be less than significant.

Biological Resources

Introduction

Most of the habitat that exists in the area of roadway/intersection improvements is highly disturbed roadside. Due to the degraded condition of the roadside area, habitat quality is generally low and it is unlikely that expansion of the existing facilities would result in a significant effect to sensitive species.

Each near-term road improvement was analyzed in detail for its potential to result in impacts to waters of the U.S. or other sensitive biological resources. Some roadside ditches that could be impacted by road improvements may provide breeding habitat to the federally endangered California Tiger Salamander (CTS) during years experiencing above average precipitation. Whenever federal funding is involved or a U.S. Army Corps of Engineers (USACE) Department

of the Army or other federal agency permit is required for any road or pipeline construction project with a potential to affect federally-listed species, a separate Endangered Species Act (ESA) Section 7 consultation is required. Separate environmental documentation will be required for each road improvement project. Any road improvement project that would impact CTS breeding habitat, would also impact wetlands or other waters of the U.S.; therefore, separate Section 7 consultation will be required for any road improvement project impacting potential CTS breeding habitat. Specific mitigation measures covering CTS would be developed as part of the separate Section 7 consultation and would be consistent with the Santa Rosa Plain Conservation Strategy (USFWS, 2005).

The assessment of impacts to waters of the U.S. was conducted using four sources of information: National Wetlands Inventory (NWI) data, aerial photograph interpretation, previous delineations, and on-the-ground surveys. Previous delineations were available for the Wilfred, Stony Point, and Lakeville Sites, but not available for locations outside of these areas. New delineations were not performed for this assessment. Shapes, sizes, and jurisdictional status of waters of the U.S. are approximated. A U.S. Department of Army Corps of Engineers (USACE)-verified delineation would be required to determine precise shapes and sizes of waters of the U.S.

There are no precise plans in existence for these road improvements. Plans and construction would be completed by the appropriate City, State or County jurisdiction. The applicable lead agency is required to obtain a jurisdictional determination and permits at the time of decision for building each roadway improvement. Wetland mitigation will be in accordance with the USACE guidelines at a ratio of at least 1:1 replacement of impacted wetland acreage, and in the case of impacts to roadside ditches will usually be through construction of additional roadside ditches. Mitigation will be developed by the lead agencies for each individual road improvement project and submitted to the USACE for final approval and acceptance consistent with the guidelines.

Methods

In order to evaluate impacts to potential waters of the U.S. from proposed road improvements, locations of proposed road improvements through 2008 were identified and mapped. Potential waters of the U.S. were then mapped. Maps overlaying proposed road improvements onto potential waters of the U.S. were created (**Appendix HH**). All road improvements are presumed workable within an area 50 feet from edge of existing pavement. A 50-foot buffer from edge of pavement was drawn at each road improvement location to create an area of potential impact to waters of the U.S. from road improvements. All potential waters of the U.S. within the areas of potential impact were identified. Acreages of potentially affected waters of the U.S. were calculated for each intersection and each section of road. Given that roadway improvement recommendations for Alternatives A-E and H are similar and given that the specific design of

improvements has not been developed, potential impacts from these improvements have been grouped together.

Potential waters of the U.S. were identified using four sources of information: National Wetlands Inventory (NWI) data, aerial photograph interpretation, previous delineations, and on-the-ground surveys. The sources of information conducted their assessments within study areas of differing scales. NWI assessed broad regions. The previous delineations assessed the Wilfred, Stony Point, and Lakeville Sites. Aerial photograph interpretation and on-the-ground surveys assessed areas within approximately 50 feet of intersections and stretches of road that were proposed for improvement. Figures in **Appendix HH** display all data collected from each source of information. Accordingly, the figures display data from each source of information at the scale of its own respective study area.

Digital NWI data within the regions surrounding the Wilfred, Stony Point, and Lakeville Sites, and all associated proposed road improvements were downloaded from the NWI website (http://www.fws.gov/nwi/). All areas indicated as wetland, except for farmed wetland, were included in the maps in **Appendix HH**. Areas indicated as upland (U), farmed wetlands (Pf), or farmed wetlands/ upland (Pf/U) were not included. Digital data from previous USACE-verified delineations of the Wilfred, Stony Point, and Lakeville Sites were available, and was included in the maps in **Appendix HH**. Data from these two sources of information was collected prior to on-the-ground surveys.

On-the-ground surveys were performed at all intersections, sections of roadway, and freeway on-ramps and off-ramps proposed for improvements. Surveyors walked around each intersection, photographing each corner of the intersection. Surveyors drove each stretch of road to be improved. To identify wetlands, surveyors looked for hydrophytic vegetation and indicators of wetland hydrology, including surface ponding or saturation, dry cracked soil, and sediment deposits. To identify other waters of the U.S., surveyors looked for evidence of an ordinary high water mark. Following on-the-ground surveys, aerial photographs were analyzed to identify additional wetlands or other waters of the U.S. at all intersections, sections of roadway, and freeway on-ramps and off-ramps proposed for improvements. Wetlands and other waters of the U.S. identified during on-the-ground surveys and aerial photograph interpretation were drawn onto aerial photographs. The drawings were transferred onto digital copies of the aerials.

Results

Maps identifying potential jurisdictional features are presented as **Appendix HH.** Shapes, sizes, and jurisdictional status of waters identified using on-the-ground surveys are estimated. Features that were observed included emergent wetlands, roadside ditches, and drainages. Roadside ditches were man-made laterals adjacent to roadways, sometimes containing hydrophytic

vegetation and generally not exhibiting an ordinary high water mark. Drainages were features that showed evidence of flow and exhibited an ordinary high water mark.

Alternatives A-E and H Improvements

The on-the-ground survey for the Rohnert Park area improvements was performed on May 16, 2007 by AES Biologists Sean Marquis and Jeb Bjerke. No significant rain event had occurred within one month prior to the survey. Surface ponding in seasonal wetlands was not present. Approximately 3.87 acres of potential waters of the U.S. could be impacted by the intersection improvements for Alternatives A-E and H. Improvements with possible impacts are summarized in **Table 4.11-2**. The potentially impacted waters of the U.S. are categorized as emergent wetlands or roadside ditches. Representative photographs of potential waters of the U.S. can be seen in **Appendix HH**.

TABLE 4.11-2
AREA OF POTENTIAL IMPACT OT WETLANDS AND WATERS OF THE U.S. FROM ALTERNATIVE A-E AND H IMPROVEMENTS

Location	Types of Potentially Impacted Features	Area of Potential Impact (Acres)	Photograph Number (Appendix HH)
Numbered Intersections			
1 Wilfred/Stony Point	Emergent wetland, roadside ditch	0.494	1, 2, 3, 4
2 Wilfred/Primrose	Emergent wetland, roadside ditch	0.48	5, 6, 7, 8
3 Wilfred/Whistler	Emergent wetland, roadside ditch	0.696	9, 10
4 Wilfred/Langer	Roadside ditch	0.185	11, 12, 51
5 Wilfred/Labath	Roadside ditch	0.194	13, 14
6,7 Wilfred/Dowdell Wilfred/Redwood	Roadside ditch	0.248	15, 16, 17, 18
8 Redwood/Commerce	None	0	19, 20
9,10,11,12, 15 Wilfred/ US -101 SB Golf Course/Commerce Golf Course/Roberts Lake Commerce/US-101 NB Business Park/State Farm Overcrossing	Emergent wetland, roadside ditch	0.508	21, 22, 23, 24, 25, 26,27,33
13 Driveway/Stony Point	Emergent wetland, roadside ditch	0.121	28, 29, 30, 31
14 Business Park/Labath	None	0.22	32
16 Stony Point/Rohnert Park	roadside ditch	0	34, 35, 36, 37
17 Labath/Rohnert Park	None	0	38
18 Rohnert Park/Redwood	None	0	39
19 Rohnert Park/US-100 SB	None	0	40, 41, 42, 43
20 US-101 NB/Rohnert Park	None	0	44
21 Rohnert Park/Commerce	None	0	45, 46
22 Stony Point/SR-116	None	0	47, 48, 49, 50
23 Rohnert Park/Redwood	None	0	
Other Improvements			
Wilfred, US-101 to Stony Point (not shown in listed intersections)	Emergent wetland, roadside ditch	0.616	11, 13, 18, 51
Rohnert Park Expressway near Rancho Verde Circle	Emergent wetland, roadside ditch	0.113	54, 55
Labath/Business Park	None	0	52
Rohnert Park/Rancho Verde	None	0	53
			TOTAL: 3.87 acres

SOURCE: AES, 2008.

Alternative F Improvements

The on-the-ground survey of the Alternative F improvements was performed on June 4, 2007 by AES Biologists Sean Marquis and Jeb Bjerke. No significant rain event had occurred within one month prior to the survey. Surface ponding in seasonal wetlands was not present.

Approximately 9.37 acres of potential waters of the U.S. could be impacted by the Alternative F improvements. Improvements with possible impacts are summarized in **Table 4.11-3**. The potentially impacted waters of the U.S. are categorized as emergent wetlands, ephemeral drainages, or roadside ditches. Representative photographs of potential waters of the U.S. can be seen in **Appendix HH**.

TABLE 4.11-3
AREA OF POTENTIAL IMPACT TO WETLANDS AND WATERS OF THE U.S. FROM ALTERNATIVE F IMPROVEMENTS

Location	Types of Potentially Impacted Features	Area of Potential Impact (Acres)	Photograph Number (Appendix HH)
Numbered Intersections			
1 Lakeville/SR-37	Emergent wetland, drainage	4.34	57
2 SR-29/SR-37 EB off ramp	None	0	58, 59
3 SR-29/SR-37 WB off ramp	None	0	60
4 Walnut/SR-37 EB ramps	None	0	61
5 Wilson/SR-37 EB ramps	None	0	62
6 Wilson/SR-37 WB off ramp	None	0	63
7 Lakeville/SR-116	None	0	64, 65
8 SR-116/SR-121	None	0	66, 67
9 Lakeville/Project Access	Emergent wetland	0.04	68
Other Improvements			
Lakeville, SR-37 to SR-116	Emergent wetland, roadside ditch	1.13	65
SR-37, Atherton to Lakeville Hwy	None	3.05	57
SR-121, SR-37 to SR-116	Emergent wetland, roadside ditch	0.81	67, 68
			TOTAL: 9.37 acres

SOURCE: AES, 2007.

Cultural Resources

The construction of the roadway improvements has the potential to disturb or destroy historical features and archaeological resources. Grading roadsides to add traffic lanes may disturb previously unknown sites. Due to prior grading of the existing roadways and occasional traffic on roadsides, it is likely that resources remaining in these areas are highly disturbed and lack integrity, thus diminishing the significance of the remaining resources.

To address potential impacts to cultural resources, cultural resource surveys may be required to comply with the California Environmental Quality Act (CEQA). The lead agency under CEQA

would be required to mitigate potential impacts to a less-than-significant level or to issue a finding of fact and statement of overriding considerations if significant impacts could not be mitigated. Mitigation may include the avoidance of resources, the preservation of key historical features, or the removal, documentation, and curation of cultural resources. Therefore, a less-than-significant indirect effect to cultural resources would result.

Socioeconomic Conditions

Construction of roadway improvements would result in short-term inconveniences and minor delays due to constricted traffic movements and possible temporarily detouring of traffic. The intersection improvements are not expected to result in long-term disruption of access to surrounding land uses or to minority or low-income populations.

The realignment and expansion of roadways would result in impacts to surrounding properties. In order to implement some improvements, land acquisition may be required. In most cases, no additional property acquisition would be required (e.g. intersection signalization); however, should it be required it would be minimal. Should land acquisition be required, the owner of the property acquired is entitled to be compensated for the fair market value of the property, as required by the Fifth Amendment of the U.S. Constitution; article I, section 19 of the California Constitution; and Sections 1263.010 – 1263.330 of the California Code of Civil Procedure. According to mitigation described in **Section 5.2.7**, the Tribe would pay the fair-share cost of traffic mitigation, including the cost of any required land acquisition. Therefore, a less than significant indirect socioeconomic impact would occur.

Public Services

Construction of the roadway improvements may require the relocation of utilities located within and near the existing roadways. These utilities include overhead electricity and telecommunication lines and underground water, stormwater, wastewater and other utility lines. Relocation of these lines could result in a temporary break in service to some homes and businesses in the area. However, because these effects are common when upgrading and maintaining utility services, and because potential service breaks would be temporary, these effects would be less than significant. No effects to fire or emergency medical services are expected as access to adjacent homes and businesses would be maintained during construction of the improvements.

Other Values

Construction of the proposed improvements could potentially result in noise, hazardous materials, and visual effects. Construction activities would result in short-term increases in the local ambient noise environments. However, because construction activities would be temporary in

nature and are expected to occur during normal daytime hours, a less-than-significant effect is expected.

The accidental release of hazardous materials used during grading and construction activities could pose a hazard to construction employees and the environment. Additionally, equipment used during grading and construction activities could ignite dry grasses and weeds in construction areas. However, these hazards, which are common to construction activities, would be minimized with adherence to standard operating procedures, such as refueling in designated areas, storing hazardous materials in approved containers, and clearing dried vegetation. These potential hazards are therefore considered to be less than significant.

Visual effects would occur as the result of modification and expansion of existing roadways. However, because the intersections are expected to conform to modern design standards and are expected to be landscaped to suit the settings, a less-than-significant effect would occur.

4.11. 3 INDIRECT EFFECTS FROM OFF-SITE PIPELINE CONSTRUCTION

This section analyzes the effects resulting from the construction of off-site water and wastewater pipelines, as described in **Section 2.0**, and summarized below.

IMPROVEMENTS

Under Alternatives A and H, water and wastewater pipelines may be constructed to connect the Wilfred site to local water/wastewater facilities under Alternatives A and H. As noted in **Section 2.0**, local water/wastewater hookup is one of the options for water/wastewater service. The pipeline options are described in **Section 2.2**.

ENVIRONMENTAL CONSEQUENCES

Land Resources

The construction of off-site pipelines would occur primarily along existing roadways and would require an encroachment permit prior to construction. Activities would include trenching, and backfilling and re-paving to install the pipelines within the roadway. Therefore, effects to land resources would be similar to those discussed under off-site roadway improvements, except the effects would be somewhat lessened because the roadways/intersections would not require extension. Instead, disturbances would occur largely within already disturbed roadways. A less-than-significant indirect effect to land resources would result.

Water Resources

Effects to water resources would be similar to those discussed under off-site roadway improvements, except the effects would be lessened because the roadways/intersections would

not be extended. Instead, disturbances would occur largely within currently disturbed roadways. New impervious surfaces and therefore additional pollutant runoff would not occur. Thus, a less-than-significant indirect effect to water resources would result.

Air Quality

Installation of water and wastewater pipelines would result in short-term, construction-related air pollution emissions. The construction phase would produce two types of air contaminants: exhaust emissions from construction equipment and fugitive dust generated as a result of demolition and soil movement. Exhaust emissions from construction activities include those associated with the transport of workers and machinery to the site, as well as those produced on-site as the equipment is used. Construction would be limited in scope and duration. Thus a less-than-significant indirect effect would result. In addition, mitigation measures are typically required by local jurisdictions to reduce construction emissions, often in conjunction with required CEQA review. These include watering the exposed soil to reduce dust, reducing speeds on unpaved roads to 15 miles per hour, and properly maintaining equipment.

Biological Resources

Pipeline construction would be conducted adjacent to a new pipeline constructed by the City of Rohnert Park. Impacts to biological resources from off-site pipeline construction would be similar to those described in the City of Rohnert Park's Mitigated Negative Declaration (MND; Winzler and Kelley, 2004) for the City's new pipeline. Pipeline construction could result in temporary impacts to wetlands, which could impact CTS breeding habitat if conducted during the wet season of an above-normal rainfall year.

Whenever Federal funding is involved or a USACE or other federal agency permit is required for any road or pipeline construction project with a potential to affect federally-listed species, a separate Section 7 consultation is required. Impacts to wetlands from pipeline construction would require a USACE permit. A separate Section 7 consultation will, therefore, be required for pipeline installation. Mitigation will be developed in coordination with USFWS during the Section 7 consultation for the pipeline construction project.

Cultural Resources

The pipeline construction has the potential to disturb or destroy historical features and archaeological resources. Previously unknown sites may be disturbed due to grading and trenching activities. It is unlikely that any remaining unknown resources of a high quality exist in the project area due to previous grading activities and the occasional roadside traffic in the region.

To address potential impacts to cultural resources, cultural resource surveys may be required to comply with CEQA. The lead agency under CEQA would be required to mitigate potential impacts to a less-than-significant level or to issue a finding of fact and statement of overriding considerations if significant impacts could not be mitigated. Mitigation may include the avoidance of resources, the preservation of key historical features, or the removal, documentation, and curation of cultural resources. Therefore, a less than significant indirect effect to cultural resources would result.

Socioeconomic Conditions

Effects to socioeconomic conditions from construction of pipelines would be very similar to the effects noted above to construction of roadway improvements. These effects are primarily limited to temporary inconvenience due to construction and would not result in a significant indirect effect to socioeconomic conditions.

Land Use

Construction of the pipelines would require utility easements which would limit future construction. An easement is defined as a legal right, privilege or interest limited to a specific purpose which one party has in the land of another. Underground utility easements are typically laid out as corridors of sufficient width to give some latitude in locating the actual utility line, and to permit sufficient room for periodic inspection, repair and maintenance. Underground utility easements typically prohibit the construction of building improvements, but may permit the construction of non-structural improvements, such as paved surface parking or landscaping. The pipelines would be constructed to follow public roads and would not be in an area where a building would normally be built or where an agricultural field would be plowed. Therefore, less than significant indirect impacts to land uses would occur.

Agriculture

Agricultural fields usually include a buffer between the crops and public throughways. As previously discussed under Section 4.2 *Land Use,* the pipelines would be located underneath or within close proximity to public roads. The pipelines are not expected to extend past this buffer area, and would therefore not affect agricultural practices. Therefore, no significant indirect impact to agriculture would occur.

Public Services

As with traffic improvements, the extension of water and wastewater lines could result in a temporary break of public services to some homes and businesses in the area. However, because these effects are common when upgrading and maintaining utility services, and because potential service breaks would be temporary, these effects are considered to be less than significant. No

significant effects to police, fire, or emergency medical services are expected as access to homes and businesses would be maintained during the construction period. Therefore, no significant indirect impacts would occur to public services

Other Values

As with off-site traffic improvements, construction of the proposed pipelines could potentially result in noise and hazardous materials impacts. Construction activities would result in short-term increases to the local ambient noise environments. However, because construction activities would be temporary in nature and are expected to occur during normal daytime hours, a less-than-significant effect would occur.

The accidental release of hazardous materials used during construction activities could pose a hazard to construction employees and the environment. Equipment used during construction activities could ignite dry grasses and weeds in construction areas. However, these hazards, which are common to construction activities, would be minimized with adherence to Best Management Practices (BMPs) that would be contained within a SWPPP that would be filed with the EPA or RWQCB. These BMPs include refueling in designated areas, storing hazardous materials in approved containers, and clearing dried vegetation. With adherence to the SWPPP, potential hazards are considered to be less than significant.

Because the proposed water and wastewater lines would be constructed below ground, visual indirect effects would be less than significant.

4.12 CUMULATIVE EFFECTS

4.12.1 INTRODUCTION

Cumulative effects analysis broadens the scope of analysis to include effects beyond those solely attributable to the direct effects of the alternatives. Cumulative effects are defined as the effects:

> "On the environment which result from the incremental effect of the action when added to other past, present, and reasonably foreseeable future actions regardless what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time" (40 CFR Sec. 1508.7).

The analysis in this section expands the geographic and temporal borders to include the effects on specific resources, ecosystems, and human communities that occur incrementally in conjunction with other actions, projects and trends. The purpose of cumulative effects analysis, as stated by the Council on Environmental Quality (CEQ) "is to ensure that federal decisions consider the full range of consequences" (CEQ, 1997a).

The cumulative analysis begins with: 1) identifying past, present, and future actions and projects in association with the status of the resources, ecosystems, and human communities that may be affected, and 2) defining geographic borders and time frame of the analysis. The status of affected resources is based upon the information provided in **Section 3.0** of this document, specific resource studies that have been undertaken for the alternatives, and additional review and analysis.

The geographic boundaries of the cumulative effects zone have been determined by the nature of the resources affected and the distance that effects may travel. As an example, increased sedimentation of waterways that result from a project is limited to the watershed in which they occur. As a result, it is only necessary to examine incremental effects within that watershed. Air quality emissions from a project, however, travel over far greater distances and therefore necessitate analysis on a county, air basin, or regional level. For this analysis, the geographic boundary of the cumulative effects zone is generally that of Sonoma County, although with many resources (water, biological, etc.) smaller natural or cultural boundaries are used.

The time frame of the cumulative effects analysis generally extends to 2020, which corresponds to the future planning period analyzed in the most recent Sonoma County and the City of Rohnert Park (City) General Plans. For many resources, information is unavailable to extend meaningful analysis to 2020; however attempts have been made to provide all relevant information.

As recommended by the CEQ, not all potential cumulative effects issues have been included in this EIS; only those that are considered to be relevant or consequential have been discussed in depth (CEQ, 1997a).

4.12.2 OTHER ACTIONS AND PROJECTS

In order to address cumulative effects that may occur in the region, actions and projects have been identified that have the potential to affect the status of environmental resources in the region. Planned transportation and development projects expected to occur through 2020 are discussed below.

CITY OF ROHNERT PARK WATER SUPPLY ASSESSMENT

The City of Rohnert Park has approved a Water Supply Assessment (WSA) that describes the relationship between projected demands on the City's water supply and the availability of that supply under normal and dry years. Senate Bill 610 and the City Resolution No. 2004-95 led to the study. The WSA is a comprehensive document intended to assist the City in making land use and planning decisions up to the year 2025. Both the Graton Rancheria's proposed hotel and casino project and proposed expansion of Sonoma State University were included in the WSA (City of Rohnert Park, 2004; **Appendix H**).

WATER SUPPLY AND TRANSMISSION SYSTEM PROJECT

The Water Supply and Transmission System Project (WSTSP) was proposed in 1998 by the Sonoma County Water Agency (SCWA) to expand its Russian River water supply. The WSTSP would augment groundwater supplies to the region. In 2003 the SCWA suffered a significant setback in litigation but has since prepared a supplemental Environmental Impact Report (EIR). Implementation of WSTSP has been delayed by this litigation and by regulatory constraints (Komex, 2007a; **Appendix G**).

SONOMA COUNTY WATER AGENCY/UNITED STATES GEOLOGICAL SURVEY GROUNDWATER STUDY

The SCWA is working with scientists from the U.S. Geological Survey (USGS) to develop a cooperative study to evaluate groundwater resources in the major groundwater basins within Sonoma County. The primary purpose of the study is to develop a detailed understanding of the groundwater/surface water system in the Alexander, Santa Rosa, and Sonoma valleys and the interaction between them. This study will assist the SCWA and other end users to better understand the potential impacts from increased groundwater demands on water levels and water quality and to develop countywide strategies for efficient surface water/groundwater management. The USGS will address significant issues of stream-aquifer interaction and develop

new, transferable tools for analyzing multi-basin water management. Specific tasks will be: (1) development of a geographic information system (GIS) to compile relevant data for the groundwater basins; (2) data collection, including water quality sampling from the Russian River and wells; (3) simulation modeling of the upper Russian River groundwater/surface water system and Sonoma Valley groundwater basin; and (4) evaluation of the linked water management of the two systems. A report describing the results of the study will be completed in the fourth year of the study and the simulation models and the GIS will be documented and released to the public.

SANTA ROSA SUB-REGIONAL INCREMENTAL RECYCLED WATER PROGRAM

The City of Santa Rosa, the managing partner of the sub-regional water reclamation system, has spearheaded efforts to plan and execute strategies to dispose of wastewater generated by the anticipated growth projected in the new General Plans for the Cities of Cotati, Rohnert Park, Santa Rosa, and Sebastopol.

The purpose of the Incremental Recycled Water Program (IRWP) is to provide for reliable wastewater treatment (principally through upgrades to the Laguna Plant) and disposal, including implementation of the Geysers Recharge Project and other disposal options such as sprayfields and direct outfall to the Russian River, bypassing the Laguna de Santa Rosa. The cumulative projects of the IRWP currently under evaluation include seven alternatives:

1) Indoor Water Conservation (including Laguna Plant upgrade and indoor water conservation components).
2) Infiltration and Inflow (I & I) Reduction (including Laguna Plant upgrade and I & I reduction).
3) Urban Reuse (including Laguna Plant upgrade, urban irrigation, pipelines, storage, created wetlands, and pump stations and tanks components).
4) Agricultural Reuse: North County and east of Rohnert Park agricultural reuse options (including Laguna Plant upgrade, agricultural irrigation, pipelines, storage, created wetlands, and pump stations and tanks components).
5) Geysers Expansion (including Laguna Plant upgrade, pipelines, storage, created wetlands, pump stations and tanks, and Geysers steam field expansion components).
6) Discharge: discharge from Delta Pond to the Laguna, discharge to the Russian River, indirect discharge into the Russian River or Dry Creek via percolation ponds, indirect discharge into the Russian River or Dry Creek via infiltration basins, and indirect discharge into the Russian River or Dry Creek via injection wells options (including Laguna Plant upgrade, pipelines, storage, created wetlands, pump stations and tanks, Geysers steam field expansion, direct discharge, indirect discharge, and advanced membrane treatment components).

7) No Project: The No Project Alternative evaluated what would happen if the IRWP were +not implemented, i.e. with a 21.34 mgd Laguna Plant, existing spray fields, and completion of the Geysers project; leading to a growth moratorium imposed by the RWQCB.

TRANSPORTATION PROJECTS

See **Section 4.8.1** for a discussion of major transportation projects that are planned in the vicinity of the Wilfred and Stony Point sites around the time of project opening. All of the projects mentioned, including the completion of the High Occupancy Vehicle (HOV) lane project on SR-101, the Business Park Drive to State Farm Drive overpass, and the Wilfred Avenue widening, would be completed prior to 2020. The following major transportation projects are planned in the vicinity of the Lakeville site prior to 2020: widening Lakeville Highway to four lanes between SR-37 and SR-116 and the signalization of the SR-116/SR-121 intersection.

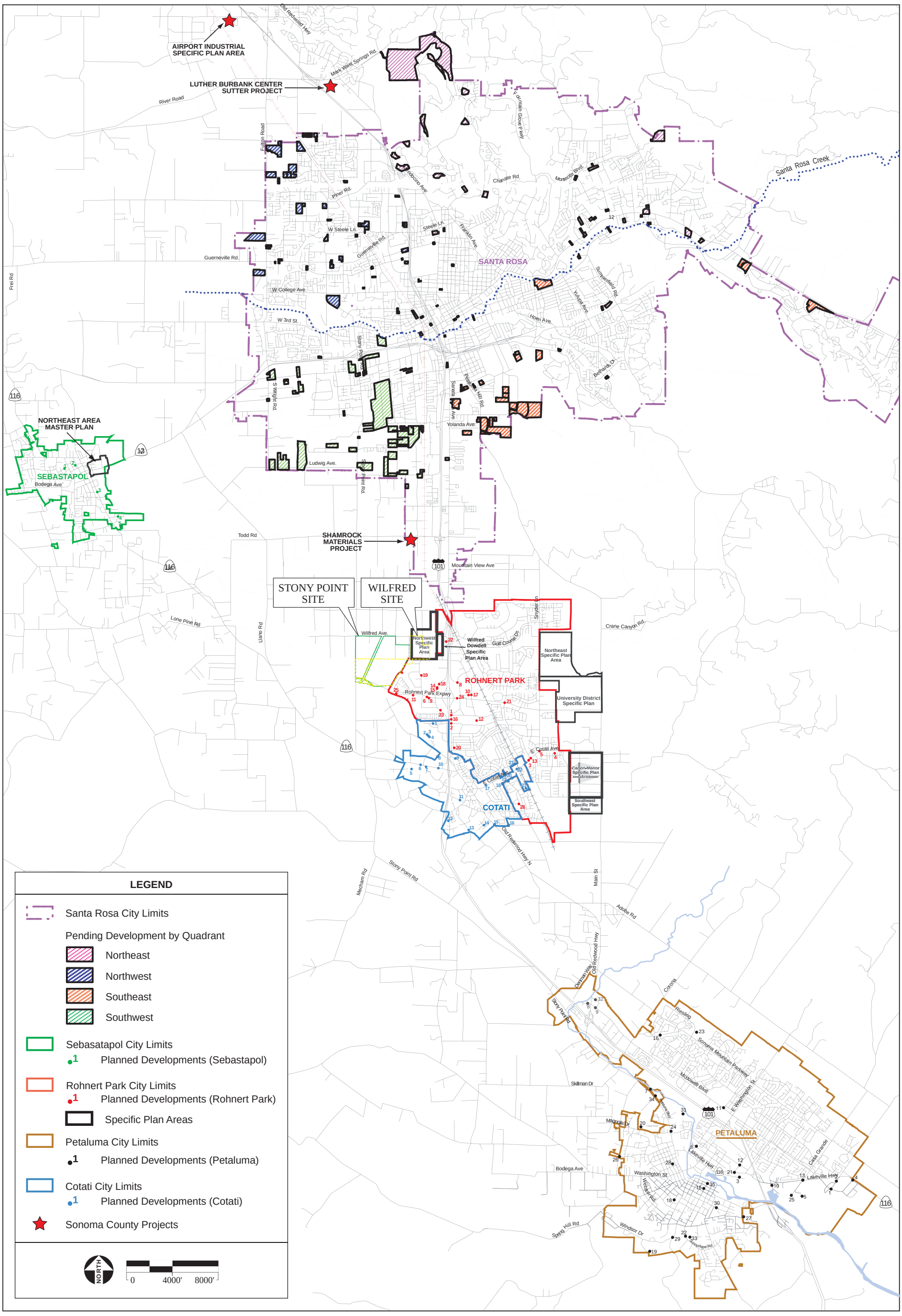
Proposed improvements to the area's transit system include the Sonoma-Marin Area Rail Transit (SMART), with a service area providing connections from the San Francisco Bay ferry service terminals to Cloverdale (north of Santa Rosa). If implemented, en route to Cloverdale, the rail service would have a Rohnert Park station adjacent to the Wilfred Avenue interchange.

DEVELOPMENT PROJECTS

Numerous development projects have been proposed within the region (**Figures 4.12-1** and **4.12-2**). Planned developments for local cities are listed in **Table 4.12-1**. Proposed development in the immediate vicinity of the Wilfred and Stony Point sites is shown in **Figure 4.12-3**. Various major planned regional development projects are detailed below. Note that the development projects included in **Table 4.12-1** encompass all of the development projects that have been considered in the cumulative analysis presented herein. The table includes development areas in the city of Santa Rosa and lists specific projects in the cities of Rohnert Park, Sebastopol, Cotati, Petaluma, Novato, and Marin County (within Novato). The larger development projects are discussed in more detail below. Those included in the below discussion but not identified in the table are development projects either within Santa Rosa or the unincorporated areas of the County.

Luther Burbank Center and Sutter Hospital Project

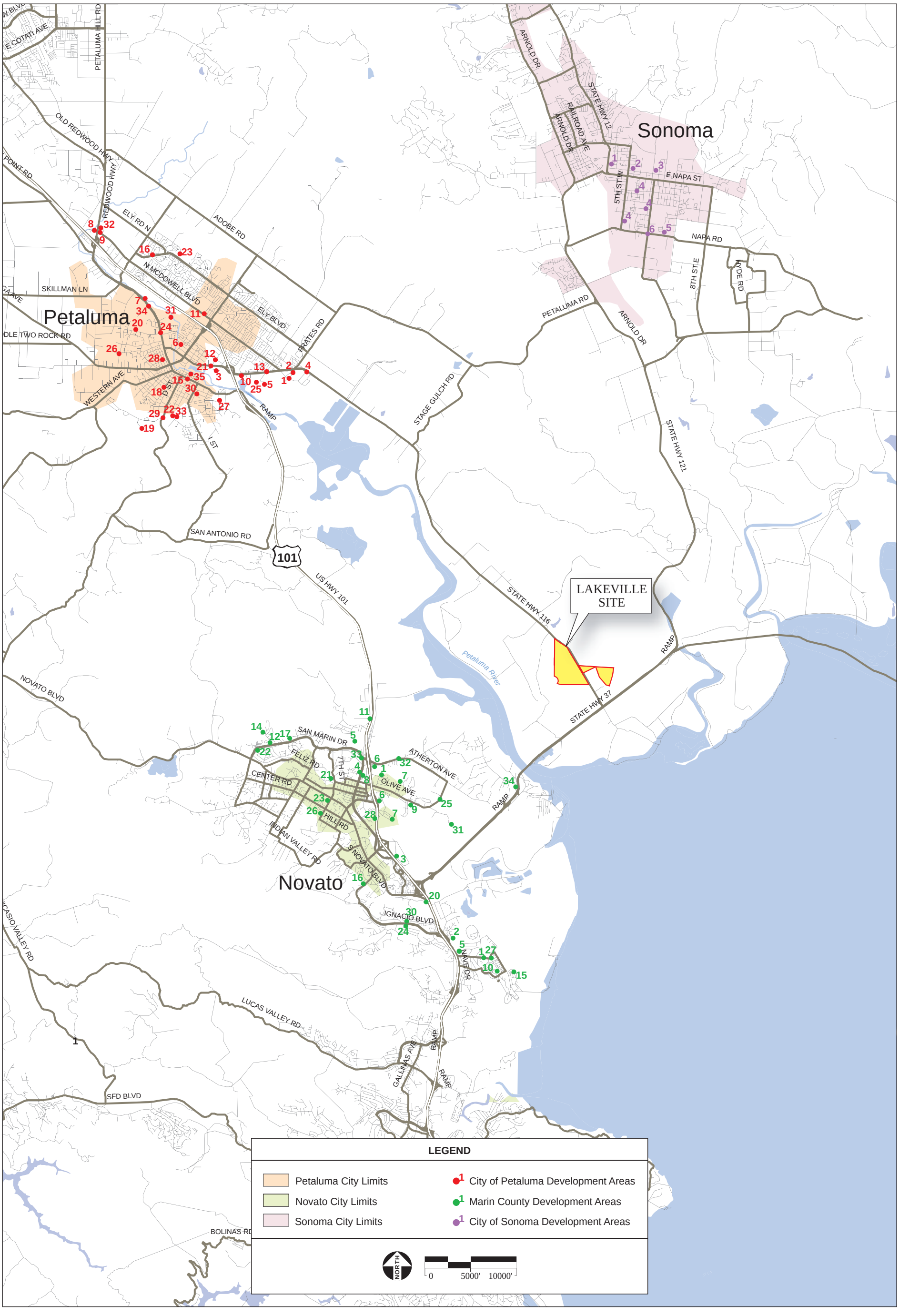
Roughly three-quarters of the planning decisions within Sonoma County are made by the governing bodies of incorporated cities throughout the County. The County's main focus, from a development perspective, is to prevent the conversion of land from agricultural uses into urban uses (Latta, pers. comm., 2005). However, Sonoma County is the lead agency for the approval of new development at the Luther Burbank Center. The Luther Burbank Center and Sutter Hospital



SOURCE: ESRI Data; AES, 2007

Figure 4.12-1

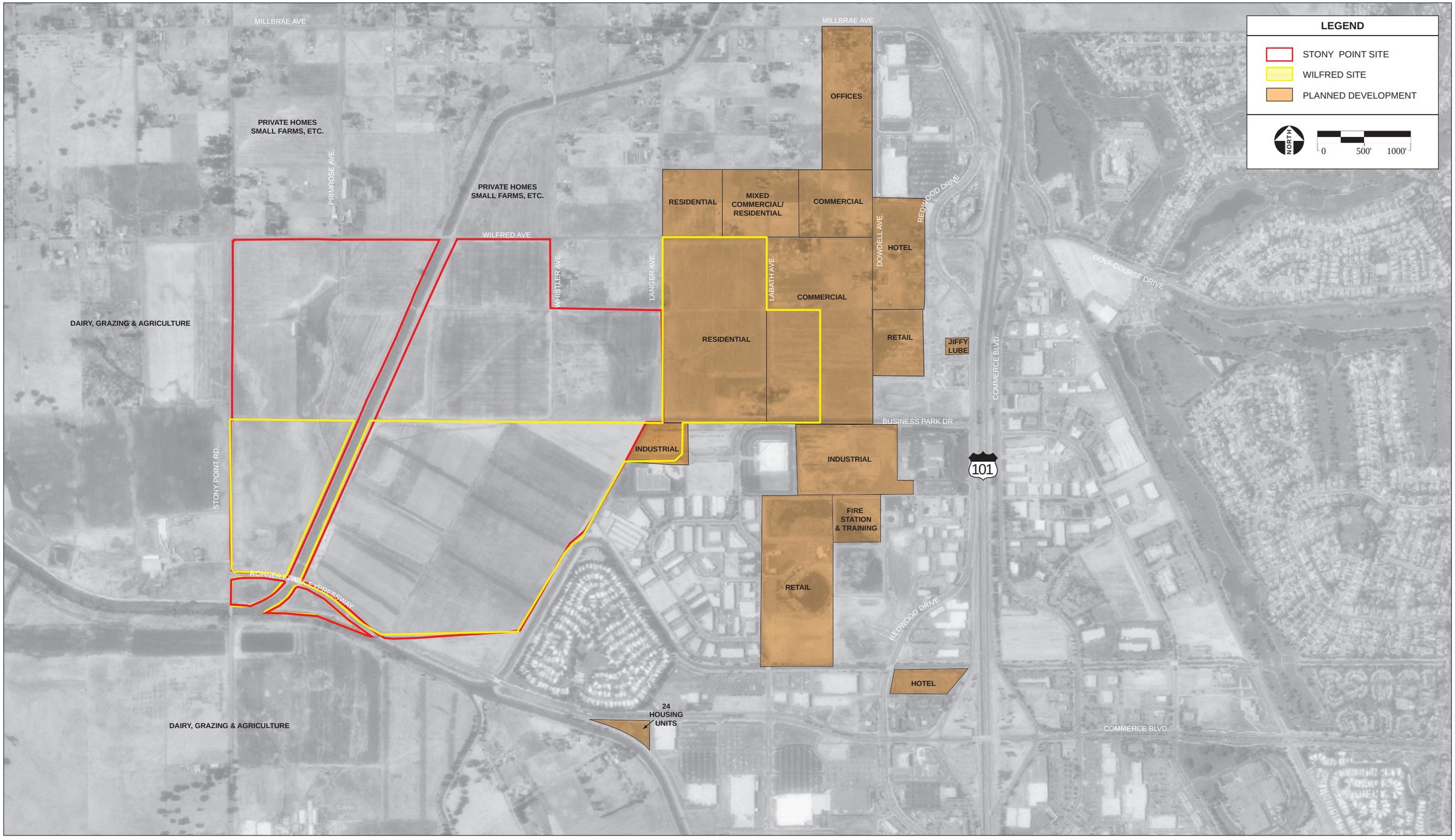
Planned Regional Cumulative Development - Rohnert Park Area



SOURCE: ESRI Data, 2004; AES, 2006

Figure 4.12-2

Planned Regional Cumulative Development - City of Petaluma, Novato, and Sonoma



SOURCE: Aerial Photograph dated August 2002; AES, 2007

Figure 4.12-3
Planned Development Surrounding the Wilfred and Stony Point Sites

TABLE 4.12-1
PLANNED DEVELOPMENT PROJECTS

ROHNERT PARK Project Status as of 8/01/07 (Specific plan areas phased for 2020 build-out with 225 allotment citywide per year)		
Northeast Area Specific Plan (Draft EIR hearings planned for late 2007)		
Total residential	197.4 acres	1,063 units
Total park lands	17.65 acres	
Open Space-Creeks and Wetland Mitigation area	56.87 acres	
Northwest Area Specific Plan (finalizing Draft Specific Plan, no EIR prepared at this time)		
Northern Area		
High Density Residential	15.4 acres	277-308 units
Commercial	15 acres	144,000 -167,000 sq ft[a]
Option 1: High Density Residential OR	14.3 acres	257-286 units
Option 2: Commercial	14.3 acres	204-239,000 sq ft
Office	21.2 acres	220,000-325,000 sq ft
Parks	2 acres	
Southern Area (Note: contains plan 1 or plan 2, undecided on land use)		
High Density Residential	39 acres	
Commercial	39 acres	495 units
Option 1 Commercial OR	Then 12 acres	
Option 2 Industrial	Then 12 acres	
Option 3 Residential OR	Then 12 acres	
Option 4 Industrial OR	Then 12 acres	
Option 5 both Industrial	Then 24 acres	
Southeast Specific Plan (Draft Specific Plan under review, Administrative DEIR in preparation. Projected public hearings summer/fall 2007)		
Total Residential	79.6 acres	499 units
Mixed Use Commercial/Retail		Up to 20,000 sq ft
Parks	5.8 acres	
University District Specific Plan (Specific Plan approved in May 2006, Annexation approved by LAFCO in April 2007)		
Residential		1,610 units
Commercial	297.20 acres	250,000 sq ft
Wilfred/Dowdell Village Specific Plan (Draft Specific Plan rewritten and Supplemental EIR is being prepared, projected public hearings in summer/fall 2007)		
Village North and Village South	24.77 acres	

ROHNERT PARK Project Status as of 8/01/07 (Specific plan areas phased for 2020 build-out with 225 allotment citywide per year)		
Canon Manor Specific Plan		
Residential-Low Density	210 acres	
Stadium Area PD Zoning District (scoping hearing for the DEIR was held in June 2005, due to changes, the DEIR will be available to the public in summer/fall of 2007)		
Total commercial and industrial	55 acres	
Sonoma Mountain Village Project (DEIR is being prepared, public scoping hearing held in June of 2007)		
Sub Urban – Low-Density Residential	17.8 acres	52 units
General Urban - Mixed Use (Primarily Residential)	74.2 acres	892 units
Office		6,250 square feet
Retail		18,750 square feet
Urban Center – High Density Mixed Use	42.1 acres	
Housing		601 units
Office		289,000 square feet
Retail		82,500 square feet
Grocery		40,000 square feet
Urban Core – High Density Mixed Use	9.4 acres	
Housing		347
Retail		100,000 square feet
Entertainment Venues		25,000 square feet
Civic Space Reserve - Permanent Public Space	29.1 acres	
Office		5,000 square feet
Retail		10,000 square feet
Civic Parking Reserve – Parking and/or Transit	1.3 acres	
Civic Building Reserve – Operated by non-profit entities	1.3 acres	35,000 square feet
Recently Completed Projects		
1 KFC Restaurant Remodel (6700 Commerce Blvd.)		
2 Office to Apartment Conversion (6920 Commerce Blvd.)		20 MF[b] units
3 Masma Apartments (E. Cotati Ave, Camino Collegio)		16 MF units
4 Wolf's Den (E. Cotati Ave/Bodway Pkway)		Four multi-tenant commercial buildings
5 Oak View Senior Apts (Rohnert Park Expway and Synder Ln.)		207 MF units
6 Office Depot (Redwood Dr and Labath Ave.)		
7 Pacific Plaza (RPX and Labath Ave.)		3 Multi-tenant commercial buildings
8 Redwood Creek Apts. (RPX and Labath Ave.)		232 MF units
9 Target Store remodel (475 RPX)		Remodel
Approved Projects (Under or Soon to Be Under Construction)		
10 City Center Townhomes (Northwest corner of State Farm Drive/ Padre Parkway		76 MF units and commercial – nearing completion

ROHNERT PARK Project Status as of 8/01/07 (Specific plan areas phased for 2020 build-out with 225 allotment citywide per year)		
11 Creekwood Apartments/Self storage (Commerce and Professional Center Dr.)		96 MF units and commercial – awaiting application for building permits
12 Mountain Shadows Plaza		Permit issues 6/1/06 for addition to retail space - under construction
13 Park Garden Apartments Addition (1400 E. Cotati Ave.)		20 MF units – under construction
14 Expressway Marketplace		4,704 sq ft – building permits issued, project under construction
15 Hampton Inn & Suites (6258 Redwood Drive)		60,201 sq ft/ 102 rooms – building permit issued, project under construction
16 Rohnert Park Mall (6595 Commerce Boulevard)		50,000 sq ft – remodel
17 The Arbors Mixed Use Project (City Hall Dr.)		56 MF units and commercial space-completed
24 Radius Development Group Project (Northwest corner of Commerce Boulevard and Rohnert Park Expressway)		26,302 sq ft commercial – currently under construction
26 Agilent Facility Retrofit (aka Sonoma Mountain Village) (1400 Valley House Drive)		13,000 sq ft Retrofit of Agilent Building 1 – building permit issued
Projects Approved but Awaiting Building Permits		
18 Circuit City (6258 Redwood Drive)		33,450 sq ft – project withdrawn
19 Cotati RP School District Warehouse (5860 Labath Avenue)		1 Warehouse/Storage building – project no longer being pursued
20 Radius Development Group Project (Commerce and Rohnert Park Expressway)		26,302 sq ft
21 Vineyards Live/Work Project (Country Club Dr.)		7 MU[c] units
22 Jiffy Lube (5195 Redwood Drive)		3,450 sq ft retail, 2,090 auto repair - permit awaiting to be issued
23 Kokalis Retail Building (6603 Redwood Drive)		5,500 sq ft retail – approved in November of 2006 awaiting application for building permits
25 Vida Nueva (705 Rohnert Park Expressway)		24 affordable housing units - awaiting approval of re-zoning ordinance

Notes: [a] sq ft = square feet
[b] MF = multi-family
[c] MU = mixed use
SOURCE: Rich, pers. comm., 2007; AES, 2007

SANTA ROSA Pending and Approved Projects dated July 2007		
Northeast Quadrant		
Residential (pending and approved)		886 units
Non-residential (pending and approved)		519,634 sq ft

Northwest Quadrant		
Residential (pending and approved)		1,344 units
Non-residential (pending and approved)		185, 622 sq ft
Southeast Quadrant		
Residential (pending and approved)		1,531 units
Non-residential (pending and approved)		354,431 sq ft
Southwest Quadrant		
Residential (pending and approved)		2,814 units
Non-residential (pending and approved)		265,440 sq ft

SOURCE: Santa Rosa, 2007c; AES, 2007

SEBASTOPOL Development Projects as of October 2004		
Approved Projects		
2 Mixed use (MU) 13-lot subdivision at corner of Healdsburg and Florence		13 lots MU
Pending Projects		
1 Mixed use residential/commercial 6-8 lots		6-8 lots MU
3 Mixed use 10-lot subdivision at 501 S. Main Street		10 lot MU
4 Single family residential 13-lot at 840 Litchfield		13 lot SF[a]
5 Mixed use 4-lot residential with 2,000 sq. ft. commercial use at Gravenstein South		4 lot MU/2,000 sq ft commercial
Northeast Area Specific Plan (66 acres)		
Residential		348 units
City of Sebastopol General Plan		
Potential residential	44.08 acres	419 units
Potential development (incl. non-residential permits housing)		896 units

Notes: [a] SF = single family
SOURCE: Metz, pers. comm., 2004; AES, 2007

COTATI Development Project Status (pending and approved) as of July 2004		
Residential Single Family		
5 8028 Gravenstein Hwy.		6 SF units
7 850 W. Cotati Ave.		8 SF units
11 343 East School Street		5 SF units
12 8691 Water Rd.		9 SF units

13 8780 Cypress Ave.		8 SF units
14 65 Lasker Lane		8 SF units
15 8770 Old Redwood Highway		14 SF units
16 193 Eucalyptus Ave.	0.92 acres	4 SF units
17 251 and 203 E. Cotati Ave.	4.1 acres	15 SF units
18 690 East Cotati Ave.		47 SF units
21 East Cotati Avenue at Ryan Lane		6 SF units
22 910 East Cotati Avenue		15 SF units
Residential Multifamily		
8 7510 Alder Ave.	3.2 acres	46 MF units
9 7582 Commerce Avenue		24 MF units
17 251 and 203 E. Cotati Ave.		14 MF units
20 789 East Cotati Ave.		18 MF units
23 Santero Way (east side)		30 MF units
23 Santero Way		70 MF units
Commercial		
5 8028 Gravenstein Hwy.	2.5 acres	
9 7582 Commerce Avenue		4,680 sq ft
10 Gravenstein Highway at Redwood Drive	31 acres	165,382 sq ft
19 E. Cotati Ave.		14,272 sq ft
Industrial		
2 369 Blodgett Street		45,000 sq ft
3 373 Blogett Street		22,705 sq ft
Office		
1 526 Portal Street		6,832 sq ft warehouse/office
4 321 Blodgett Street		7,716 sq ft office/warehouse
6 Gravenstein Hwy. and Alder Ave.		40 MU units/3 office units
10 Gravenstein Hwy. at Redwood Dr.		75,100 sq ft retail

SOURCE: Brisbane, pers. comm., 2004; AES, 2004

PETALUMA Major Development Projects (pending and approved) updated 8/04		
Commercial Projects		
1 Office – RNM South McDowell		140,000 sq ft
2 Commercial – Sola		354,404 sq ft
3 Commercial – G&C Auto Body Expansion		15,520 sq ft
4 Commercial – Adobe Creek Center		15,000 sq ft

5 Commercial/Retail – Technology Lane Commercial Center		40,000 sq ft
6 Office/Warehouse – Clover-Storenetta Farms Expansion		23,000/25,000 sq ft
7 Commercial – Petaluma Village Marketplace		Modification
8 Commercial – Redwood Technology Center		rezone
9 Commercial – Redwood Gateway		166,713 sq ft
10 Office/Retail – Marina Office Building		32,000 sq ft
11 Office – Water Field Office		1 office building
12 Light Industrial – Northbay Construction Shop Building		16,000 sq ft
Mixed Use Projects		
13 Park Square		249 MF units/22,500 sq ft
14 Downtown River Apartments		81 MF units
15 Petaluma Theatre District		52,002 sq ft
Residential approved		
16 Traditions – 78 single family homes		78 SF units
17 Washington Creek Village – 37 single family homes		37 SF units
18 Douglas Street PEP – 23 senior apartments		23 MF units
19 Rockridge Pointe – 62 single family homes		62 SF units
20 Magnolia Park – 47 single family homes		47 SF units
21 Mary Isaac Center – homeless shelter		One shelter
22 Ridgeview Heights – 9 single family homes		9 SF units
23 Stratford Place/Gatti Subdivision – 46 Single family and 46 townhomes		46 SF units/46 MF units
24 Boulevard Apartments – 14 apartments for mentally ill adults		14 MF units
Residential pending		
25 Park Square – 249 multifamily units and 22,500 commercial		249 MF units/comm 22,500 sq ft
26 Paula Lane Subdivision – 21 single family homes		21 SF units
27 Riverview – 63 single family (18 acres)	18 acres	63 SF units
28 Sweed School – 15 lot subdivision		15 SF units
29 Davidon Homes – 99 single family homes		99 SF units
30 Woodbridge Subdivision – 5-lot subdivision		5 SF units
31 Sid Commons – 312 apts		312 MF units
32 Southgate 3 – 221 single family		221 SF units
33 Sunnyslope II – 22 parcels		22 SF units
34 Petaluma Boulevard North Annexation (Jessie Lane) – 70 single family 86 apartments		70 SF units/86 MF units
35 1st Street Townhomes – 48 condos		48 MF units

SOURCE: Rob, pers. comm., 2004; AES, 2004.

Novato[a] Major Development Projects[b]		
1 727 Cherry Street		6 residential units
2 695 DeLong Avenue		2,500 sq ft commercial restaurant
3 1129 First Street		2 residential units, 500 sq ft mixed use office/ residential unit
4 Novato Senior Living and residential – 1625 Hill Road		34 units residential, 237,845 sq ft, 244 residential
5 Oak View – Meadow Crest Court		57,900 sq ft
6 Hamilton Palms – 600 Palm Drive		15,125 sq ft commercial
7 Rudnick Estates – Zandra and Sherman Place		24 SF residential

Notes:[a] See **Figure 4.12-2**

[b] Other development in Novato is included below in the Marin County list. Projects that are on both development lists are indicated.

SOURCE: Bickner, pers. comm., 2005; AES, 2005

Marin County (within Novato)[a] Major Development Projects		
1 Hamilton Field Affordable Senior Housing by Mercy – Hamilton Parkway[b]		60+ housing units
2 Hanna Ranch – South end of Rowland Blvd.		25,000 sq ft neighborhood commercial, 95 residential units
3 Costco Expansion – 300 Vintage Way[b]		35,000 warehouse addition
4 Atherton Place – 7533 Redwood Blvd.		60 SF residential units and 10,000 sq ft retail
5 New Beginnings – 1455 North Hamilton Parkway		32 MF residential and 23,096 sq ft office
6 Novato Gateway – East De Long and Adrienne[b]		10,250 sq ft office
7 Oleander Lane Design Review – 1 Oleander Lane		4 SF residential units
8 Village at Novato – 7506 and 7530 Redwood Blvd.		55 SF residential and 70,000 retail
9 Olive Court – 469 Olive Avenue		9 SF residential
10 San Pablo – San Pablo Avenue		19 SF residential
11 Buck Center Housing – Buck Center Road		128 MF residential
12 San Marin Cottages – 200 San Marin Drive[b]		6 SF residential
13 Novato Fair Shopping Center/Safeway – 900 Diablo Avenue		8,500 sq ft retail
14 San Marin Plaza – 199 San Marin Drive[b]		3,000 sq ft retail
15 Hamilton Landing Phase III – 350 Hangar Avenue		89,500 office sq ft
16 Sunset Ridge Subdivision – Shevelin Road[b]		16 SF residential units

17 Woodview Subdivision – San Marin Drive[b]		20 SF units
20 Woodside Office Development – 7250 Redwood Blvd.		89,031 sq ft office
21 Virginia Oaks – 1827 Virginia Ave.		5 SF residential
22 Somerston Park – Marion Ave./Anna Ct./Bryan Drive		8 SF residential
23 Creekside Office – 1744-1748 Novato Blvd.		12,413 office
24 Point Marin (Rafael Village) – Ignacio Blvd.		344 SF residential, 100 MF residential
25 Olive Ridge Subdivision – 301 Olive Avenue		18 SF residential
26 Tamalpais Hill Subdivision – 699 Tamalpais Avenue		23 SF residential
27 Hamilton Meadows – North Hamilton Pkwy./Palm		235 SF residential
28 Novato Creek Landing – 200 Landing Court[b]		47,246 office
29 Marion Heights – 1750 Marion Avenue		12 SF residential
30 Anderson Rowe Ranch – Palmer Drive		68 SF residential
31 Deer Island Self Storage – Deer Island Lane		39,891 industrial
32 Atherton Ranch – 7533 Redwood Blvd.		92 SF and 23 MF residential, 37,900 office and 32,650 retail
33 Nave – Atherton Ave.		19 SF residential
34 San Marin Business Park – Redwood Blvd.[a]		510,000 office
35 Renaissance at Stonetree – Highway 37 at Blackpoint		53 SF residential

Notes:[a] See **Figure 4.12-2**
[b] Also listed on March 30, 2005 *Current Planning Division Projects* for the City of Novato.
SOURCE: Drumm, pers. comm., 2005; Bickner, per. comm.; AES, 2005

have proposed a large project north of Santa Rosa. Sutter Hospital has attained a 25-acre parcel from the Luther Burbank Center, now known as the Wells Fargo Center for the Arts, for the development of a new acute care hospital, ambulatory care center, and medical office building (Sutter, 2005). The Wells Fargo Center for the Arts will retain 28 acres with enough space for a new, 2,500-seat performing arts venue, as well as a contemporary arts gallery (LBC, 2005).

Airport Business Center

Other large regional development projects in Sonoma County include the Airport Business Center, located approximately three miles northwest of the City of Santa Rosa and west of U.S. Highway 101, which is the major north/south freeway through Sonoma County. The Center is within the Sonoma

County Airport Industrial Area Specific Plan, and will ultimately accommodate 603 acres of industrial development (412 acres of industrial park and 191 acres of heavy industrial), five acres of retail commercial, and 140 acres of agricultural and open space. Approximately 220 acres are presently divided into industrial parks (Sonoma County, 2005). Other development in the same area includes the construction of a 232-unit apartment building near Airport Boulevard and Highway 101 (Ellison, pers. comm., 2005).

Shamrock Materials Project

In south Santa Rosa, Shamrock Materials will be developing the Rail Importation for Aggregate Project, which will allow the transport of aggregate into the facility by rail and then transport by truck to construction sites throughout the County. The facility will potentially increase truck traffic along Todd Road (Ellison, pers. comm., 2005).

Wilfred-Dowdell Specific Plan Area

The Wilfred-Dowdell Specific Plan area is near the Proposed Project at the junction of Wilfred Avenue and Dowdell Avenue. The 24.77-acre site is divided into Village North (4.58 acres), the area north of Wilfred Avenue, and Village South (20.19 acres), the area south of Wilfred Avenue. In Village North, the specific plan allows for region-serving businesses similar to those that have been developed nearby, including home improvement and department stores and a motel or hotel. A drive-through restaurant and commercial recreation or entertainment could potentially be developed as conditional uses. Access to Village North would be provided from the existing parking lot to the north and from Wilfred Avenue. The Village South development would consist of a shopping center with a few large retailers or many retail and restaurant uses and other services. The center could include "big box" uses and/or be designed as a pedestrian complex with a mix of businesses. A Draft Specific Plan was completed in February of 2004. The City of Rohnert Park is currently in the early stages of preparing an Environmental Impact Report (EIR) for the specific plan area. The build-out schedule of the specific plan area has not yet been defined (Rohnert Park, 2005).

Northwest Specific Plan Area (NWSPA)

The Northwest Specific Plan Area includes 170 acres located to the north and west of the existing Rohnert Park city limits. A Draft Specific Plan for the portion of the area south of Wilfred Avenue is currently being reviewed. The Specific Plan area is bounded by Wilfred Avenue to the north, Business Park Avenue to the south, Langner Avenue to the west, and Dowdell Avenue to the east. The Specific Plan is intended to include regulations and design criteria for the development of 800 to900 high-density residential units on 40 to50 acres, 450,000 to 480,000 square feet of commercial space on 40 to50 acres, 520,000 to 560,000 square feet of industrial uses on 55 to65 acres, and 230,000 to 260,000 square feet of office uses on 15 to25 acres in a mixed-use center environment. The NWSPA also includes the development of a two to four acre park. The total maximum, non-residential building area would be between 1.2 and 1.3 million square feet. The City was in the process of preparing an EIR for the

development of the Northwest Specific Plan when a portion of the land contained within the Specific Plan was purchased for the potential development of Alternative A. The City has since been in discussions with developers regarding the future development of the remainder of the Specific Plan area.

Santa Rosa Kaiser Expansion Project

The expansion of the Kaiser facility located at 401 Bicentennial Way will increase Kaiser's hospital services square footage from 159,400 square feet to 305,800 square feet. In early March 2005, the hospital's plans received unanimous Santa Rosa city council support. The expansion is part of a plan that includes expansion of the adjoining four-story parking garage, increase the size of the generator plant, and the addition of other support buildings to the 23-acre site. This would be the first expansion of the hospital since it opened in 1990, when Kaiser's Sonoma County clientele totaled about 60,000 people. The health plan membership is roughly twice that amount of clienteles at around 148,000 people. Kaiser's goal is to have construction of the new five-story hospital wing completed by 2009, when it is estimated that enrollment will have reached 187,000. The expansion is expected to generate almost 1,000 daily traffic trips through the Bicentennial Way corridor (Santa Rosa Press Democrat, 2005).

City of Sonoma Development

The City of Sonoma is located 11 miles north of the Lakeville site and consists of eight potential development areas, as outlined in the *City of Sonoma 2005 General Plan Land Use and Design Options* (City of Sonoma, 2004). The Land Use and Design Options document will be revised and incorporated into the final text of the General Plan by the middle of 2005. The development areas include (**Figure 4.12-2**): Sonoma Highway, Fifth Street West, Southwest Neighborhoods, Four Corners, First Street East, South Broadway and Southeast Edge. The Sonoma Highway area could potentially accommodate 45 additional multifamily residential units, as well as office and retail space. The Fifth Street West area consists of three sites with a total of 7 acres that could accommodate housing. The Southwest Neighborhoods area consists of three areas that could potentially be developed: a 3.5-acre hospital site, 19 acres along Malet Street with the potential for 46 medium-density residential and 25 low-density residential units, and 48 acres at the southwest edge of the city with the potential for either 169 low-density residential or 146 low- density residential and 79 high-density residential units. The Four Corners area consists of 20 acres located at the southern entry to the City identified as an area with the potential for development of 165 residential units, commercial and office space. The First Street East area consists of 2.6 acres that is currently zoned for 19 multifamily units and could be updated to accommodate an additional 25 multifamily units. The South Broadway area is a streetscape program that would increase pedestrian and bicycle orientated improvements along South Broadway. The Southeast Edge area includes 3 acres that would potentially be developed with 28 or more single-family and multifamily residential units (City of Sonoma, 2004).

4.12.3 CUMULATIVE ENVIRONMENTAL EFFECTS

ALTERNATIVE A – PROPOSED PROJECT

Land Resources

The geographic area for the analysis of cumulative impacts to Land Resources is the Santa Rosa Plain in Sonoma County, which is relatively flat in topography. Neither Alternative A nor cumulative development would significantly alter topography in the region. The principal effects to land resources associated with Countywide development (see **Section 4.12.2**) would be localized topographical changes and soil attrition, both of which are evaluated in terms of runoff characteristics, sedimentation and flow under permitting authorities and criteria relevant to Water Resources, below. Local permitting requirements for construction, such as the required preparation of a Stormwater Pollution Prevention Plan under the Clean Water Act, adherence to local building codes, and adherence to local planning/zoning requirements, would address regional stormwater, geotechnical, seismic and mining hazards. It is assumed that cumulative developments will follow appropriate permitting procedures; therefore, no cumulative impacts related to land resources would occur as a result of Alternative A.

Water Resources

For the purpose of analyzing cumulative impacts to water resources, the Proposed Project and known planned development in the vicinity are considered. For Treated Effluent Discharge, projects within the Laguna de Santa Rosa drainage basin are considered. For Groundwater, projects within the Santa Rosa groundwater sub-basin are considered.

Treated Effluent Discharge

The City of Santa Rosa, the managing partner of the sub-regional water reclamation system, has spearheaded efforts to plan and execute strategies to dispose of wastewater generated by growth anticipated for the cities of Cotati, Rohnert Park, Santa Rosa, and Sebastopol as projected in their General Plans. The plan would explore ways to reduce mass loading as treated wastewater flows increase from population growth in the region. Options being implemented include an extensive recycled water irrigation program (IRWP) and the Geysers Recharge Project, which will deliver treated effluent to the Geysers geothermal fields for steam generation. Thus, if the proposed project is hooked up to the sub-regional water reclamation system, impacts would be addressed through that sub-regional system's program, and would therefore be less than significant. If the proposed project uses on-site treatment, the result would still be less than significant, as demonstrated below.

In the IRWP Addendum to the EIR (Santa Rosa, 2004e) the City of Santa Rosa analyzed a cumulative impact that questions: "Will the Program (Santa Rosa's) plus cumulative projects (the Tribe's) result in non-attainment of established Total Maximum Daily Loads (TMDLs)?" The City's 2004 IRWP EIR Addendum is relevant to the proposed project as it (the casino project) is specifically addressed in the

City of Santa Rosa's analysis in the IRWP. The analysis of cumulative impacts of the IRWP and the casino/hotel project states:

> "The TMDL for the Laguna de Santa Rosa for nitrogen and ammonia already in place is designed to prevent cumulative impacts of projects on that constituent. With appropriate mitigation, the IRWP will meet the established TMDL for nitrogen and ammonia. It is presumed that the Rohnert Park cumulative project will be allocated loads by the USEPA in a manner similar to the RWQCB as appropriate to prevent environmental degradation due to nitrogen and ammonia. Therefore the cumulative impact on established TMDLs will be less than significant and no further mitigation is required."

Page 4.6-19 of Santa Rosa's EIR Addendum states:

> "She (Suesan Saucerman – USEPA Region 9 Regional Liason) stated that a USEPA issued permit for the Casino will be very similar to the one issued by the Regional Board including a seasonal discharge prohibition, a limitation of discharge to one percent of the receiving water (Laguna) flow, and no dilution allowed for determining reasonable potential and permit compliance."

Based on the above discussion, the treated wastewater discharge from the casino would have a less-than-significant cumulative impact on water quality in the Laguna de Santa Rosa.

Groundwater

The Santa Rosa Plain groundwater basin experienced historical declines in the 1970s and 1980s, which most parties agree were caused to some extent by increased pumping by the City of Rohnert Park. The City of Rohnert Park has recently decreased groundwater pumping and basin-wide groundwater levels appear to be rising or at least stabilizing (see **Appendix G** for a detailed discussion of various studies that have been conducted on the groundwater basin). The City of Rohnert Park's Water Supply Assessment (WSA) maintains that "there is no indication that overdraft has occurred"; whereas, the O.W.L. Foundation and others have consistently argued that the declining groundwater levels of the 1970s and 1980s indicate the basin has been in a state of overdraft. The California Department of Water Resources (DWR) has not made an official finding in regards to the basin's overdraft status, and its most recent description of the Santa Rosa Plain sub-basin indicates that "[t]he Santa Rosa Plain ground water basin as a whole is about in balance, with increased ground water levels in the northeast contrasting with decreased ground water levels in the south." Correspondence with USGS staff regarding its ongoing cooperative study of the Santa Rosa Plain groundwater basin indicate that the question of whether the basin is in overdraft will be addressed in its final report and based on the well hydrograph analysis and the numerical groundwater flow model that will be constructed.

In its ruling on *O.W.L. Foundation v. City of Rohnert Park,* the California Superior Court found (this decision was later overturned by the California Court of Appeals - *O.W.L. Foundation v. City of Rohnert Park,* 168 Cal.App.4th 568 (2008)) that the WSA had wrongly used the DWR's definition of "critical overdraft" in its assessment and that the WSA should instead use the DWR's definition of "overdraft." The DWR's definition of overdraft is contained in Bulletin 118 as follows:

> *Groundwater overdraft is defined as the condition of a groundwater basin or subbasin in which the amount of water withdrawn by pumping exceeds the amount of water that recharges the basin over a period of years, during which the water supply conditions approximate average conditions. Overdraft can be characterized by groundwater levels that decline over a period of years and never fully recover, even in wet years.*

The document goes on to state:

> *The word "overdraft" has been used to designate two unrelated types of water shortages. The first is "historical overdraft" similar to the type illustrated in Figure 18, which shows that groundwater levels began to decline in the mid 1950s and then leveled off in the mid 1980s, indicating less groundwater extraction or more recharge.*

The pumping history and well hydrographs in the southern Santa Rosa Plain sub-basin are consistent with the DWR's definition of a "historical overdraft" condition. Whether the overdraft condition is continuing, even in the face of very low recent Rohnert Park pumping rates, depends on whether or not recovering groundwater is being caused in part from inflow from neighboring basins.

Based on the available data, the stabilization of water levels in the vicinity of Rohnert Park in the late 1980's represents a readjustment in a region's water budget that can only be explained by decreased extraction, increased recharge or increased groundwater inflow from adjacent areas. As discussed in **Appendix G**, groundwater levels near Rohnert Park stabilized about 10 years before the City of Rohnert decreased its rate of groundwater extraction. Therefore, the remaining explanations for the readjustment in the local water budget are increased recharge or groundwater inflow. There is no clear correlation between groundwater levels and historical precipitation after 1970 (City of Rohnert Park, 2005); therefore, a likely explanation is that the cone of depression associated with City of Rohnert Park pumping expanded until it intercepted sufficient recharge or groundwater inflow to stabilize.

The source of this additional recharge or inflow has not been evaluated; however, one plausible explanation would be the possible migration of the groundwater divide between the Santa Rosa Plain groundwater sub-basin and Petaluma Valley groundwater basin that was described in the 2004 Todd Engineers Study (see **Appendix G**). **Appendix G** includes a summary of the various studies and opinions on whether, and to what extent, migration of the groundwater divide has occurred or is

occurring. At this point, groundwater level data in the vicinity of the watershed divide are relatively sparse. In addition, both the hydraulic and topographic gradients are relatively gentle. The location of the groundwater divide is therefore subject to differing interpretations. However, because the alluvial deposits along the valley axis are likely to be more continuous and permeable than the adjacent alluvial fan deposits to the east and the deposits of the Petaluma Formation and Sonoma Volcanics that underlie the adjacent highlands, the groundwater divide crossing the alluvial valley may not necessarily be contiguous with the location of the divide in the adjacent highlands. In addition, in alluvial valley areas with gentle topographic and hydraulic gradients, a groundwater divide will not necessarily coincide with a watershed divide, but may be affected by other factors influencing groundwater inflows and outflows in the groundwater basins. Thus, the available data is inconclusive as to whether or not the groundwater divide has migrated or groundwater inflow is occurring from Petaluma Valley basin. The possible migration of the groundwater divide would be consistent with the formation and expansion of a cone of depression in the southern Santa Rosa Plain sub-basin that occurred during the 1970s and 1980s. Data to address this issue will be gathered and evaluated as part of the USGS – SCWA cooperative study, which is currently in progress.

The 2020 estimated future groundwater usage in the Santa Rosa Plain groundwater basin is between 19,000 and 33,200 acre-feet per year (afy) (approximately 17,000 afy from municipal and industrial uses, 500-14,000 from agricultural uses, and 1,500-2,200 from rural domestic uses). Detailed calculations can be found in **Appendix G**. Future groundwater use in the basin is therefore expected to decline when compared to present uses (the amount of decline is dependent primarily on uncertain changes in agricultural groundwater use).

The groundwater demand for the project is 200 gpm or approximately 323 afy (note that this is a conservative figure that is higher than the average demand and does not consider the displacement of development that would otherwise occur on the Wilfred Site but for Alternative A). This represents an increase of approximately 0.8 to 1 percent of current groundwater pumping and 1 to 1.7 percent in future groundwater pumping in the Santa Rosa Valley groundwater basin. Rohnert Park's WSA provides several estimates of historical, recent and future total pumping in that report's study area – the upper Laguna de Santa Rosa watershed. In 2003, the total groundwater pumping in the area was estimated to be 7,078 afy. The report estimates that by 2025, the projected total area pumping will be 7,350 afy (note that this figure includes 100 afy attributed to the Graton Rancheria hotel and casino project). Based on these estimates, the project will increase current and future groundwater pumping in the upper Laguna de Santa Rosa watershed by approximately 4.5 percent.

The implementation of Alternative A would result in a relatively modest increase in regional groundwater pumping. Basin-wide groundwater pumping is expected to remain relatively stable over the next several decades. In the upper Laguna de Santa Rosa watershed (the southern Santa Rosa Plain), groundwater demand is expected to stay below historical levels that were associated with regional

groundwater level declines in the 1980's. Groundwater levels in the southern Santa Rosa Plain have been relatively stable through the 1990s and recently have shown signs of rebounding (**Appendix G**). The project's contribution to regional pumping levels could decrease or slow this rebound in proportion to the amount of increase in pumping represented by the project. However, given the relatively modest level of proposed pumping and the stable projected future groundwater levels, the project would not contribute to a further decline in regional groundwater levels, resulting in a less-than-significant cumulative impact to basin-wide groundwater levels. Nonetheless, mitigation measures are included in **Section 5.2.2** that would further reduce potential cumulative impacts to groundwater.

Air Quality

Ozone Precursor, PM_{10}, and $PM_{2.5}$ Emissions

Ozone, PM_{10}, and $PM_{2.5}$ are pollutants that affect the region as a whole, in particular the Cotati and Petaluma valleys of Sonoma County (see **Section 3.4.1**). Therefore, cumulative air quality effects are assessed by comparing the incremental emissions associated with Alternative A to countywide emissions forecasted by the California Air Resources Board (CARB) for current cumulative conditions (2005) and long-term cumulative conditions (2020 – the farthest planning horizon for countywide emission forecasts). **Table 4.12-2** provides Southern Sonoma County's and the San Francisco Bay Area Air Basin's (SFBAAB) emissions trends from 1975 to 2020. As shown, ozone

TABLE 4.12-2
REGIONAL EMISSIONS TRENDS

	1975	1980	1985	1990	1995	2000	2005	2010	2015	2020
NO_x										
Southern Sonoma County	29.1	31.4	32.5	37.1	33.2	27.8	23.3	18	13	9.9
San Francisco Bay Area Air Basin	976	969	906	878	743	634	537	448	365	318
ROG										
Southern Sonoma County	78	72.8	64.7	53.4	46.6	38.6	33	29	26.9	25.7
San Francisco Bay Area Air Basin	1,533	1,466	1,211	897	744	619	499	446	413	396
PM_{10}										
Southern Sonoma County	9.7	9.8	11.3	11.9	10.6	11.6	11.5	11.4	11.5	11.8
San Francisco Bay Area Air Basin	174	174	187	187	177	188	196	198	201	205
$PM_{2.5}$										
Southern Sonoma County	9.6	9.7	11.2	11.8	10.5	11.5	11.4	11.3	11.4	11.7
San Francisco Bay Area Air Basin	172.6	172.6	185.5	185.5	175.6	186.5	194.4	196.4	199.4	203.4

NOTES: Amounts of emissions are in tons per day. $PM_{2.5}$ estimated using 99.2% of PM_{10} emissions.
SOURCE: California Air Resources Board, 2005; AES, 2005.

precursor emissions have decreased dramatically from 1975 to 2005, and are projected to decrease further in the future. PM_{10} emissions have increased slightly since 1975 and are projected to continue to increase slightly in the future (CARB, 2005).

Sonoma County trends mirror those of the SFBAAB. In general, ozone precursor emissions from mobile sources tend to decrease over time because emissions standards are expected to become stricter and engine technologies are expected to improve. For instance, the percentage of hybrid vehicles on the road is increasing every year, and this trend is expected to continue. As newer vehicles, which meet stricter Corporate Average Fuel Emission (CAFÉ) standards and are built with the latest technology are introduced into the vehicle fleet, they replace older, higher polluting vehicles. The decrease in emissions per vehicle is substantial enough to more than compensate for anticipated future increases in the amount of travel. From 1980 to 2020, the population of the SFBAAB is expected to increase 60%, vehicle population increase 127 percent, and daily vehicle miles traveled increase 137 percent (CARB, 2005a), while the emissions from NOx decreased 67 percent and ROG decreased 73 percent (CARB, 2005).

The Bay Area has a substantial motor vehicle population, and the implementation of stricter motor vehicle emissions controls has resulted in large emissions reductions for ozone precursors (ROG and NO_X), indicating possible long-term trends towards improving ozone levels. , Since 1994 the peak ozone indicators have been somewhat elevated, and it is not yet clear whether these data represent a change in the overall trend. Stationary source emissions of ROG in the Bay Area have declined over the last 20 years due to new controls for oil refinery fugitive emissions and new rules for the control of ROG from various industrial coatings and solvent operations.

Direct emissions of PM_{10} increased in the SFBAAB between 1975 and 2000 and are projected to continue increasing through 2020. This increase is primarily due to the growth in emissions from area-wide sources, primarily fugitive dust sources. Emissions of directly emitted PM_{10} from diesel motor vehicles have been decreasing since 1990 (83 percent reduction in NOx emissions) even though population and vehicle miles traveled are growing (5 percent increase in diesel vehicle miles traveled), due to adoption of more stringent emissions standards (CARB 2005 and CARB 2005a).

The 2010 emissions estimates are expected to include the effects of current cumulative development in Sonoma County from both mobile and stationary sources. 2010 County estimates are compared to 2008 "near-term" project-generated emissions, since CARB projections are in 5-year increments and 2010 is just past the expected opening date of 2008. The 2020 emissions estimates include the effects of projected growth in the County associated with an increase in population and construction of new residential/commercial/industrial developments. Thus, it is assumed that the 2020 regional inventory emission levels include the effects from the related projects discussed above in **Section 4.12.2**.

For 2020, in addition to countywide emissions, incremental generated emissions of Alternative A are also compared with the Bay Area Air Quality Management District (BAAQMD) significance thresholds discussed in **Section 4.4.2**. The BAAQMD's thresholds are:

- 80 pounds per day (ppd) and 15 tpy of ROG,
- 80 ppd and 15 tpy of NO_x, and
- 80 ppd and 15 tpy of PM_{10} emissions.

As noted in **Section 4.4.2**, these thresholds are meant to assure compliance with the state and federal Clean Air Acts. The SFBAAB is projecting improved ozone levels in 2020 (BAAQMD, 2001). Whereas the 2005 Bay Area Ozone Strategy[1] is described as for the purpose of "addressing the planning requirements for the State one-hour ozone standard" and therefore not pertinent to this analysis, a plan to attain the federal 8-hour ozone standard has not yet been adopted. Thus, it is assumed that the SFBAAB will remain in nonattainment for the federal 8-hour ozone standard and that similar emissions thresholds for ROG and NOx will continue to indicate a significant air quality effect in 2020. Similar PM_{10} emissions thresholds are also assumed to continue to apply in 2020, given that PM_{10} emissions are projected to increase through the cumulative time period.

In **Tables 4.12-3** and **4.12-4** operational emissions associated with Alternative A, and the other alternatives for ease of comparison, are compared to countywide emissions forecasts for 2008 and 2020, respectively. In the near-term (2008), operation of Alternative A is estimated to result in:

- 378 ppsd and 77 tpy of ROG,
- 730 ppsd and 156 tpy of NOx,
- 773 ppd and 141 tpy of $PM_{2.5}$, and
- 779 ppd and 142 tpy of PM_{10} emissions.

In 2020, operation of Alternative A is estimated to result in:

- 149 ppsd and 30 tpy of ROG,
- 252 ppsd and 54 tpy of NOx,
- 771 ppd and 141 tpy of $PM_{2.5}$, and
- 777 ppd and 142 tpy of PM_{10} emissions.

As shown in **Tables 4.12-3** and **4.12-4**, Alternative A generated 2.37 percent of the southern portion of Sonoma County total NOx in near term and only 1.27 percent in 2020. For ROG, Alternative A only generated 0.3 percent in the near term and 0.287 percent in 2020. The PM_{10} contribution for Alternative A is a little more with 3.41% in the near term and 3.30 percent in 2020. The $PM_{2.5}$ contribution to southern

[1] Bay Area 2005 Ozone Strategy - Final Adopted, BAAQMD, January 4, 2006

Sonoma County is similar to PM_{10} with 3.30 percent for the near term and 3.30 percent for the year 2020.

TABLE 4.12-3
EMISSIONS AS A PERCENT OF COUNTY TOTAL (NEAR TERM)

	NOx			ROG			PM_{10}			$PM_{2.5}$		
Project Alternative	**Project-Related Emissions**	**Southern Sonoma Co Total**	**% of Total**	**Project-Related Emissions**	**Southern Sonoma Co Total**	**% of Total**	**Project-Related Emissions**	**Southern Sonoma Co Total**	**% of Total**	**Project-Related Emissions**	**Southern Sonoma Co Total**	**% of Total**
Alternative A	0.43	18	2.37	0.21	29	0.73	0.39	11.4	3.41	0.39	11.7	3.30
Alternative B	0.43	18	2.37	0.21	29	0.74	0.39	11.4	3.41	0.39	11.7	3.30
Alternative C	0.43	18	2.37	0.21	29	0.74	0.39	11.4	3.41	0.39	11.7	3.30
Alternative D	0.30	18	1.66	0.07	29	0.26	0.27	11.4	2.38	0.27	11.7	2.29
Alternative E	0.04	18	0.23	0.21	29	0.74	0.04	11.4	0.31	0.04	11.7	0.30
Alternative F	0.43	18	2.37	0.15	29	0.51	0.39	11.4	3.41	0.39	11.7	3.30
Alternative G	0.08	18	0.43	0.03	29	0.11	0.06	11.4	0.50	0.06	11.7	0.49
Alternative H	0.30	18	1.66	0.07	29	0.26	0.27	11.4	2.38	0.27	11.7	2.29

NOTES: Amounts of emissions are in tons per day. Project-related emissions are based on 2008 "near term" emissions. Since the alternatives will be operational, 2010 estimates are shown for total county emissions, since CARB projections are in 5-year increments.
SOURCE: California Air Resources Board, 2005; AES, 2006; KDA, 2004.

TABLE 4.12-4
EMISSIONS AS A PERCENT OF COUNTY TOTAL (2020)

	NOx			ROG			PM_{10}			$PM_{2.5}$		
Project Alternative	**Project-Related Emissions**	**Southern Sonoma Co Total**	**% of Total**	**Project-Related Emissions**	**Southern Sonoma Co Total**	**% of Total**	**Project-Related Emissions**	**Southern Sonoma Co Total**	**% of Total**	**Project-Related Emissions**	**Southern Sonoma Co Total**	**% of Total**
Alternative A	0.126	9.9	1.27	0.074	25.7	0.287	0.389	11.8	3.30	0.386	11.7	3.30
Alternative B	0.126	9.9	1.27	0.075	25.7	0.287	0.389	11.8	3.30	0.386	11.7	3.30
Alternative C	0.126	9.9	1.27	0.075	25.7	0.287	0.389	11.8	3.30	0.386	11.7	3.30
Alternative D	0.088	9.9	0.88	0.051	25.7	0.52	0.272	11.8	2.31	0.268	11.7	2.29
Alternative E	0.013	9.9	0.13	0.0125	25.7	0.004	0.0345	11.8	0.29	0.0356	11.7	0.30
Alternative F	0.126	9.9	1.27	0.0755	25.7	0.293	0.389	11.8	3.30	0.386	11.7	3.30
Alternative G	0.026	9.9	0.26	0.031	25.7	0.121	0.059	11.8	0.5	0.0575	11.7	0.49
Alternative H	0.088	9.9	0.88	0.051	25.7	0.52	0.272	11.8	2.31	0.268	11.7	2.29

NOTES: Amounts of emissions are in tons per day.
SOURCE: California Air Resources Board, 2005; AES, 2006; KDA, 2004.

Table 4.12-5 presents a comparison of operational emissions for Alternative A (and the other alternatives for ease of comparison) to BAAQMD emissions criteria. In 2020, ROG emissions generated

by casino traffic would exceed the 80 ppd and 15 tpy significance thresholds, NOx emissions would exceed the 80 ppd and 15 tpy significance thresholds, and PM_{10} emissions would exceed the 80 ppd and 15 tpy significance thresholds; significant effects would result. Mitigation measures in Section 5.2.3 would reduce these impacts to a less than significant level.

TABLE 4.12-5
2020 EMISSIONS COMPARED TO BAAQMD THRESHOLDS

	ROG		NOx		PM_{10}		$PM_{2.5}$	
Project Alternative	**ppsd**	**tpy**	**ppsd**	**tpy**	**ppd**	**tpy**	**ppd**	**tpy**
Alternative A – Wilfred Site								
Amount of Emissions	149	30	252	54	777	142	771	141
Significant Effect?	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*N/A*	*Yes*
Alternative B – Northwest Stony Point Site								
Amount of Emissions	151	31	252	54	777	142	771	141
Significant Effect?	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*N/A*	*Yes*
Alternative C – Northeast Stony Point Site								
Amount of Emissions	151	31	252	54	777	142	771	141
Significant Effect?	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*N/A*	*Yes*
Alternative D – Reduced Intensity								
Amount of Emissions	103	21	175	37	543	99	539	98
Significant Effect?	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*N/A*	*No*
Alternative E – Business Park								
Amount of Emissions	25	5	26	5	69	13	68	13
Significant Effect?	*No*	*No*	*No*	*No*	*No*	*No*	*N/A*	*No*
Alternative F – Lakeville Site								
Amount of Emissions	151	31	252	54	777	142	771	141
Significant Effect?	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*N/A*	*Yes*
Alternative G – No Action								
Amount of Emissions	62	12	52	11	118	21	117	21
Significant Effect?	*No*	*No*	*No*	*No*	*Yes*	*Yes*	*N/A*	*No*
Alternative H – Wilfred Site Reduced Intensity								
Amount of Emissions	103	21	175	37	543	99	539	98
Significant Effect?	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*N/A*	*No*

NOTE: Emissions shown are for mobile sources and area sources. Source for significance thresholds is BAAQMD 1999. Significance threshold amount is 15 tpy and 80 ppd for ROG, NO_x, and PM_{10}.
SOURCE: KDA, 2004, AES, 2006

Carbon Monoxide Concentrations

As described in the traffic study of the project alternatives, traffic operations at project-affected signalized study intersections would be at a level of service (LOS) D or better with Alternative A under 2020 long-term future cumulative background conditions and traffic mitigation measures. Based on

criteria presented in the University of California Davis Institute of Transportation Studies document *Transportation Project-Level Carbon Monoxide Protocol* (Garza, et al., 1997), intersections operating at LOS D or better typically do not result in CO concentrations that exceed State or federal standards. Therefore, Alternative A with traffic mitigation measures is considered to have a less-than-significant impact on CO air quality.

Odor Effects

Alternative A would not emit objectionable odors and therefore would not have a cumulative significant impact.

Toxic Air Contaminants

Alternative A would not emit toxic air contaminants and therefore would not have a cumulative significant impact.

Climate Change

Methodology

In general the evolution of GHG analyses and the decision to include GHG analyses in NEPA and CEQA documents by both federal, state, and local agencies and courts has been slow. However, two recent federal court decisions, the passage of Assembly Bill 32 (AB 32), and slowly increasing scientific agreement have resulted in a recent acceleration of interest in GHG analysis (Section 3.4).

Guidance for the content of GHG analyses in NEPA and CEQA documents has not yet been provided by any regulatory agency. The EPA provides on its website, the science of GHG, GHG overview and emission inventories, and health and environmental effects of GHG. The CEQ released an informal memo on the need to include GHG analysis in NEPA documents, while the California's Governor Office of Planning and Research (OPR), is in the process of developing CEQA guidelines for analyses of GHG due out to the general public by January 1, 2010. CARB has provided two Early Action Reports, which provide some project level guidelines for GHG mitigation measures. As of 2008, none of the governmental agency listed above provide specific guidance on GHG analysis of impacts in NEPA or CEQA documents. Therefore, the following method for assessing the impact levels of the project was developed in accordance with several approaches outlined in white papers provided by the California Air Pollution Control Officers Association (CAPCOA), the consulting firm of Jones and Stokes, and the Association of Environmental Professionals (AEP). The approach used herein involves a combination of quantitative and qualitative analysis focusing on project impacts on California's efforts to reduce cumulative statewide GHG emissions in the future. GHG mitigation measures are included as part of this analyses and are provided by the Attorney General Office, CAPCOA, Jones and Stokes, and CARB.

As noted in **Section 3.4**, global warming is a global issue that is not being caused by any one development project, but by global increases in atmospheric GHG concentrations. Thus, solutions to the global warming problem have tended to be on the global or regional level. California's global warming policies and legislation (most notably Executive Order S-3-05 and AB 32) are intended to be regional solutions to ensure that statewide emissions are reduced substantially in the future (to levels much lower than existing levels), doing California's part to ensure that future global emissions are reduced and ultimately to reverse the global warming trend. California's policies are also expected to encourage other countries and regions to adopt similar policies, which would further the global effort to reduce emissions (CAT, 2006).

California's Air Resources Board (CARB) and Climate Action Team (CAT) have recently identified approximately 126 strategies and measures that will be utilized for the state to meet its emissions reduction targets in 2010, 2020, and 2050 (see **Appendix KK**). Most of these measures focus on statewide action meant to curb emissions by changes in statewide planning or policies rather than changes to individual development projects. However, some of the measures may be directly applicable to specific industries or individual commercial developments. Should a development alternative comply with all directly applicable measures, the alternative will be supporting the state's efforts to significantly reduce its cumulative contribution to global climate change (to levels recommended by the IPCC) and the associated impacts. Thus, for the purposes of this analysis, cumulative contributions associated with a development alternative are considered less than significant if the project complies with all strategies and measures currently identified by CARB or CAT to comply with Executive Order S-3-05 or AB 32 that directly apply to an individual commercial project similar to that proposed by the development alternative.

Carbon Dioxide Equivalent

Carbon dioxide equivalent (CO_2e) is a method by which GHG values other than CO_2 are converted to a CO_2-like emissions value based on a heat-capturing ratio. As shown in **Table 4.12-6**, CO_2 is used as the base and is given a value of one. CH_4 has the ability to capture 21 times more heat than CO_2; therefore, CH_4 is given a CO_2e value of 21. Emissions are multiplied by the CO_2e value to achieve one GHG emission value. By providing a common measurement, CO_2e provides a means for presenting the relative overall effectiveness of emission reduction measures for various GHGs in reducing project contributions to global climate change.

TABLE 4.12-6
GREENHOUSE GAS CO_2 EQUIVALENT

Gas	CO_2	CH_4	N_2O	HFCs/PFCs	SF_6
CO_2e Value	1	21	310	6,500	23,900

Source: BAAQMD, 2006.

Strategies and Emission Estimates

As shown in **Table 4.12-7**, the EPA and CARB approved URBEMIS 2007 emissions modeling software estimates that Alternative A would result in the emission of approximately 4,128 tons per year of CO2 during construction, which is expected to last 27 months. During operation, Alternative A would result in the emission of 85,896 tpy of CO2. Based on emission factors from the Climate Change Action Registry, Alternative A would result in the emission of CH4 and N2O equivalent to 3,275 tpy of CO2. Indirect emissions of CO2, CH4, and N2O would be the equivalent 9,993 tpy of CO2. Total annual emissions during operation would be equivalent to 99,164 tpy of CO2. Annual Alternative A GHG emissions would be approximately 0.016 percent of California's predicted contribution to global GHG emissions in 2020 (see **Table 3.4-6**). Alternative A contributions to the annual global GHG emissions in 2020 would be approximately 0.000012 percent. While Alternative A's contributions to statewide and global emissions is miniscule, a potentially significant contribution to cumulative global emissions cannot be ruled out solely on the basis of a small percentage contribution. This is due to the potentially serious impacts of climate change and the potential for even relatively minimal concentrations to lead to a "tipping point" beyond which impacts will be irreversible.

TABLE 4.12-7
ESTIMATED ALTERNATIVE A OPERATIONAL GHG EMISSIONS

CO_2 Emissions[1]				
Mobile Sources		**Area Sources**		**Total CO_2e**
tons per year		**tons per year**		**tons per year**
84,774		1,122		85,896
CH_4 and N_2O Emission from Mobile Sources[2]				
Emission Factor ($CO_2/CH_4/N_2O$)	**Miles Traveled**	**CH_4**	**N_2O**	**Total CO_2e**
g/mile	**miles/day**	**tons per year**		**tons per year**
552.08/0.05/0.05	491,791	208	3,067	3,275
Indirect GHG emissions[2]				
Emission Factor (Kg of $CO_2/CH_4/N_2O$)	**Estimated kW-h Usage[3]**	**CO_2**	**CH_4**	**N_2O**	**Indirect CO_2e**
lb/MW-h	**MW-h/year**	**tons per year**			
804.54/0.006/0.0037	54	10	0.00007	0.00005	22
		Total Operation CO_2e tons per year			**89,193**

[1] Estimated from EPA and CARB approved URBEMIS air quality program (**Appendix S**)
[2] Emission factors from Climate Change Action Registry
[3] Estimated using 4,500 kilowatts-hours/month of power used.
Source: URBEMIS, 2007; Climate Change Action Registry, 2007.

As discussed above and in **Section 3.4**, California's strategies and measures would result in a reduction of statewide emissions, including emissions resulting from Alternative A, to levels below current background levels. Of the approximately 126 strategies and measures that would ensure a statewide reduction in GHG emissions, only three were determined to apply to Alternative A (see **Table 4.12-8**). The other strategies and measures do not apply because they either apply to state entities, such as CARB and are planning-level measures or they apply to particular industries, such as the auto repair industry. As shown in **Table 4.12-8**, Alternative A would not be in compliance with one of the three applicable state climate change strategies, resulting in a potentially significant cumulative impact based on the methodology explained above. Measures in **Section 5.2.3** would ensure compliance with all applicable strategies, resulting in a less than significant cumulative impact.

TABLE 4.12-8
COMPLIANCE WITH STATE EMISSIONS REDUCTION STRATEGIES

Exec Order S-3-05 / AB 32 Strategy	Project Compliance
Diesel Anti-Idling: In July 2004, the CARB adopted a measure to limit diesel-fueled commercial motor vehicle idling.	Development would be located on trust lands and thus not subject to CARB restrictions on on-site diesel-fueled commercial vehicle idling.
Achieve 50 percent statewide Recycling Goal: Achieving the State's 50 percent waste diversion mandate as established by the Integrated Waste Management Act of 1989, (AB 939, Sher, Chapter 1095, Statutes of 1989), will reduce climate change emissions associated with energy intensive material extraction and production as well as methane emission from landfills. A diversion rate of 48 percent has been achieved on a statewide basis. Therefore, a 2 percent additional reduction is needed.	Solid waste services are expected to be provided by the City of Rohnert Park or County of Sonoma, which are subject to the state's recycling requirements. The development would not affect City or County diversion goals as waste from tribal land is classified as out-of-state waste and is not calculated in local waste diversion statistics.
Water Use Efficiency: Approximately 19 percent of all electricity, 30 percent of all natural gas, and 88 million gallons of diesel are used to convey, treat, distribute and use water and wastewater. Increasing the efficiency of water transport and reducing water use would reduce greenhouse gas emissions	As discussed in Section 2.0, Alternative A would include substantial water conservation, including the extensive use of recycled water, thus complying with the strategy to use water efficiently.

SOURCE: State of California, Environmental Protection Agency, and Climate Action Team, 2006

Biological Resources

The purpose of this section is to analyze potential cumulative effects on biological resources including wildlife and habitats, federally-listed species, migratory birds, and jurisdictional "waters of the U.S."

Development of the Wilfred site is expected to have a less-than-significant impact due to mitigation measures and open space conservation on the adjacent Stony Point site. Cumulative impacts are projected to be less than significant, provided that development scheduled for the area also implements

mitigation and conservation measures for special status species in the area and completes the required environmental review process outlined by the CEQA/NEPA process.

Wildlife and Habitats

After mitigation is implemented, Alternative A is not anticipated to result in significant direct or indirect effects to wildlife and habitats. However, disturbance to habitats and increases in human activity from the casino in combination with other proposed projects in the Rohnert Park area, such as the Santa Rosa Sub-regional Incremental Recycled Water Program, the Hwy 101 High Occupancy Vehicle (HOV) and Lane Widening Project, and local planned development projects, could incrementally contribute to past, present, and future effects to wildlife and habitats. Given the level of disturbance currently existing within the area and the planned preservation of the northern and southwestern portions of the Stony Point site under Alternative A for open space and habitat preservation, Alternative A would not result in significant cumulative effects to wildlife and habitats.

Federally-Listed Species

Disturbance to seasonal wetlands, California tiger salamander habitat (CTS), and increases in human activity resulting from Alternative A and other proposed projects in the Rohnert Park area could cumulatively and adversely affect federally listed species. This is a potentially significant cumulative impact to Threatened and/or Endangered Species. Mitigation is discussed in **Section 5.2.4** to reduce impact levels.

Migratory Birds

Alternative A is not anticipated to result in significant direct or indirect effects to nesting migratory birds. However, disturbance to migratory bird habitats and increases in human activity from other proposed projects in the Rohnert Park area could incrementally contribute to past, present, and future effects to migratory birds. Given the level of disturbance currently existing within the area and the planned preservation of the northern and southwestern portions of the Wilfred site, open space and habitat preservation under Alternative A would not result in significant cumulative effects to migratory birds.

Waters of the U.S.

Alternative A would directly affect approximately two-acres of "waters of the U.S." This loss is anticipated to be permitted under a United States Army Corp of Engineers (USACE) Individual Permit and would require compensatory mitigation and a written plan on how such mitigation would be implemented. Adverse indirect effects to "waters of the U.S." would be avoided by the implementation of project features designed to prevent increased erosion and sedimentation and increase flood storage on the site. After complying with permit conditions, Alternative A would not result in any net loss of waters of the U.S. or wetlands (preliminary permit discussions, including a preapplication meeting and

subsequent meetings have occurred between the Tribe and the USACE). Thus, significant cumulative effects to "waters of the U.S." would not occur.

Cultural Resources

Cumulative effects to cultural resources occur when sites that contain cultural features or artifacts are disturbed by urban development. As these resources are destroyed or displaced, important information is lost and the connection to past events, people and cultures is diminished. Sonoma County contains extensive known and unknown cultural resources including sites associated with well-documented prehistoric and historic human occupation in the area (see **Section 3.6.2**). As Sonoma County continues to grow, resources that include historic buildings and archaeological sites may be lost, damaged or destroyed without appropriate recordation, preservation, or data recovery.

Based on the extensive presence of cultural resources in Sonoma County, it is expected that future development may result in significant losses of cultural resources. Development proposed under this alternative would not affect any known historic properties. However, there is always the possibility that unknown archaeological resources exist buried with no surface manifestation. Mitigation measures are presented in **Section 5.2.5** for the treatment of unanticipated discoveries. Therefore, the development of Alternative A is expected to result in a less-than-significant incremental effect to the cumulative loss of important cultural resources in Sonoma County.

Socioeconomic Conditions

Cumulative socioeconomic effects could occur in the vicinity of the Wilfred site as the result of developments that affect the lifestyle and economic well being of residents. Impacts can be both detrimental and beneficial. Examples of cumulative socioeconomic impacts might include urban blight or redevelopment, increased or decreased crime, changes in a community's tax base, and changes in the ability to access common or private property, increased or decreased regional industry and/or employment opportunities, increased or decreased healthcare for residents.

Future Conditions

Sonoma County's population is projected to increase rapidly by approximately 27.5 percent to 602,783 people by 2020 (California Department of Finance, 2004b) (**Table 4.12-9**). This is greater than the expected state population increase of 21.3 percent in the same time period.

The California Employment Development Department (EDD) projects that by 2008 total non-farm employment will increase to 219,400 jobs in Sonoma County and 123,400 jobs in Marin County (California Economic Development Department, 2005). This would represent an increase of 21.5 percent since 2003 for Sonoma County. According to the Sonoma County Economic Development Board, "the economy of Sonoma County is on a path to recovery." Employment rose at rates of between 3.6 and 5.0 percent a year from 1997 to 2000 in Sonoma County. In 2000, the increase was only 2.0

percent and from 2002 to 2004 a decrease in employment ranging from 0.3 to 3.0 percent a year was recorded. The Sonoma County Economic Development Board reports that employment has been increasing since March 2004 and projects a modest and increasing 2.0 to 2.9 percent a year increase through 2008. Sonoma County's rebound remains narrowly focused in tourism and retail, with a dependence on side trips from San Francisco to boost visitor arrivals (Sonoma County Economic Development Board, 2005). The Association of Bay Area Governments (ABAG) projects that employment in the nine-county Bay Area region will continue to rise through 2030 (ABAG, 2005). Sonoma County employment is expected to follow regional trends and continue to rise through the cumulative time period. This assumption is further supported by the numerous planned developments noted above that would result in the development of local employment (**Section 4.12.2**).

Residential developments constitute the majority of developments planned in the region (**Section 4.12.2**). The Sonoma County Economic Development Board (2005) predicts that permits for single and multi-family housing units will increase from approximately 2,000 in the year 2004 to 2,600 in the year 2005 and then remain steady between 2,500 to 2,600 through the year 2008. This represents substantial growth in housing units that would serve the expected increase in employment.

TABLE 4.12-9
REGIONAL POPULATION TRENDS

Location	Population			
	1990	**2000**	**2004***	**2020***
Sonoma County (total)	388,222	458,614	472,700	602,783
Marin County (total)	230,096	247,289	250,200	251,260
Sonoma and Marin Counties (total)	618,318	705,903	722,900	854,043
State of California (total)	29,758,213	33,871,648	36,144,000	43,851,741

NOTES: * Projected Estimate.
SOURCE: California Department of Finance, 2004a, 2004b, 2004c.

Incremental Cumulative Effect

Alternative A would introduce a substantial new source of economic activity to Sonoma County. Once operational, Alternative A's casino/hotel resort would become Sonoma County's largest employer (approximately 2,400 jobs created). St. Joseph Health System and Sonoma State University would be the County's next largest employers, at 2,370 and 1,799 jobs respectively. The previous top employer in Sonoma County, Agilent Technologies, Inc., has recently relocated most of its 2,500 jobs out of Sonoma County, with former headquarters located in the City of Rohnert Park.

The creation of jobs would numerically replace jobs recently lost from Agilent Technologies, Inc. and would contribute to the local and regional trend of increasing employment. This increase is not expected to result in additional housing growth (see **Section 4.11.1**) and would add to the strength of the local economy.

As the growth in jobs and housing occurs in the region, fiscal demands on local governments will increase for necessary services to new and existing developments. The local governments in the region address increased service demand from new developments by requiring various development fees and assessments. Alternative A would not be subject to development fees. However, as identified in **Sections 2.3.10**, **4.7.1**, and **5.2.6**, although the Tribe would pay fees equivalent to development fees to Rohnert Park (MOU terms assumed to apply), fiscal impacts to Sonoma County could be significant without an agreement for compensation. Mitigation measures are contained in **Section 5.2.6** to reduce the fiscal impact to a less-than-significant level to the County.

Potentially significant social impacts are noted in **Section 4.7.1**, including the suggestion of some recent reports that negative social effects may increase over time. Mitigation measures are included in **Section 5.2.6**.

Although Alternative A would not result in additional housing demand, as analyzed in **Section 4.11.1**, the development may generate additional demand for daycare services in the local community as some workers who were the primary childcare providers in their own families reenter the labor force. According to the Growth Inducing Impacts section of the Socioeconomic Report (**Appendix N**), the future casino/hotel workers would come from within the County, with some workers reentering the labor force. Each worker that reenters the labor force would do so only if the benefits of working (wages and non-pecuniary benefits) outweigh the costs, including any increased need for childcare. That is, casino/hotel workers would take childcare availability into account when making the decision to reenter the labor force.

As of 2004 there was a deficit in the number of childcare slots available to County residents. According to the November 2004 *Sonoma County Child Care Needs Assessment*, there are between 6,000 and 40,000 unmet slots demanded for childcare in the County. The magnitude of the deficit varies depending on how demand is calculated, where the lower demand estimate comes from statewide childcare utilization rates, and the higher estimate of demand comes from counting the number of children in households that either have two working parents, or have a single-parent that works. As the higher demand estimate does not account for relatives or neighbors providing daycare services and the lower demand is based on actual daycare utilization rates, the lower estimate is likely closer to the actual demand for childcare. Applying the lower demand estimate to the number of children in the County shows that County residents require childcare services for 26 percent of all children. In Somona County, there are 0.25 children under the age of 14 per adult resident (U.S. Census Bureau, 2000).

Assuming that the ratio of children to adults remains constant, 2,400 workers would require approximately 158 childcare slots. Given that there are approximately 16,000 childcare slots in the County, and demand for 22,000 childcare slots, the increased demand for childcare accounts for one-percent of supply and less than one-percent of demand. Thus, given the relatively small incremental increase in demand and the ability of potential employees to take child care availability into account before accepting a job at the casino/hotel, the impacts to childcare would not be significant.

Resource Use Patterns

Transportation/Circulation

A detailed traffic study was developed for the proposed alternatives. The study and its associated appendices are presented within **Appendix O** of this EIS.

Methodology

The traffic study was based on planning conditions assumed in the Rohnert Park General Plan (adopted July 2000), the Sonoma County General Plan (adopted 1989), and information provided by Caltrans and Sonoma County Regional Transportation Authority. Because none of the agencies' planning and project programming documents anticipated a casino and hotel development or its potential impacts, this study evaluated the addition of a casino and hotel near the intersection of Stony Point Road and Wilfred Avenue. The scenarios analyzed were:

- 2020 Cumulative Conditions Without Project: The analysis is based on 2020 background traffic volumes without the proposed project.

- 2020 Cumulative Conditions Plus Project: The analysis is based on 2020 background traffic volumes and the traffic generated by the proposed project. Each of the alternatives was analyzed under this condition.

Additional development projects in the vicinity of the site are expected to be completed by the year 2020 and will contribute to a cumulative increase in background traffic regardless of the development alternatives, including Alternative A. These projects include growth in residential, industrial, business park, and commercial land uses located east of the Wilfred and Stony Point sites. Data from these and other projects in the City of Rohnert Park and Sonoma County, as well as year 2020 traffic modeling data prepared for the Rohnert Park General Plan, were used in the long-term cumulative traffic forecast. Cumulative forecast data for roadways in the study area were obtained and converted into PM peak hour turning movement volumes.

Year 2010 and year 2030 freeway forecast information was provided by Caltrans for the study area. The year 2010 forecasts reported volumes for freeway travel lanes operating as mixed-use lanes, whereas the

2030 forecast separated the data for mixed-use and HOV lanes, to reflect the completion of the US-101 HOV lane project. Because the cumulative time period in this EIS is 2020, growth rates were determined from the Caltrans data and then applied to the freeway traffic counts to generate a 2020 freeway forecast. On-ramp volumes were obtained from the Rohnert Park General Plan forecast. Freeway segment analyses were limited to the mix-use travel lanes, which are expected to have significantly more congestion than the future HOV lanes.

Year 2020 analysis is based on traffic forecast data and roadway improvements anticipated to be completed by the year 2020. Year 2020 corresponds to the horizon year and the available traffic forecast from the Rohnert Park General Plan.

Figure 4.12-4 shows the 2020 lane geometry and traffic control common to Alternatives A, B, C, D, and E. **Figure 4.12-5** shows the 2020 no project PM traffic volumes for the project area common to Alternatives A, B, C, D and E.

The project study area is the same as described in **Section 4.8.** The analysis methodologies for Alternatives A, B, C, D, E, F, and H are the same as those described in **Section 4.8**. The analysis of significance for Alternatives A, B, C, D, E, F, and H is the same as described in **Section 4.8**.

Cumulative-Freeway Segments and Ramps

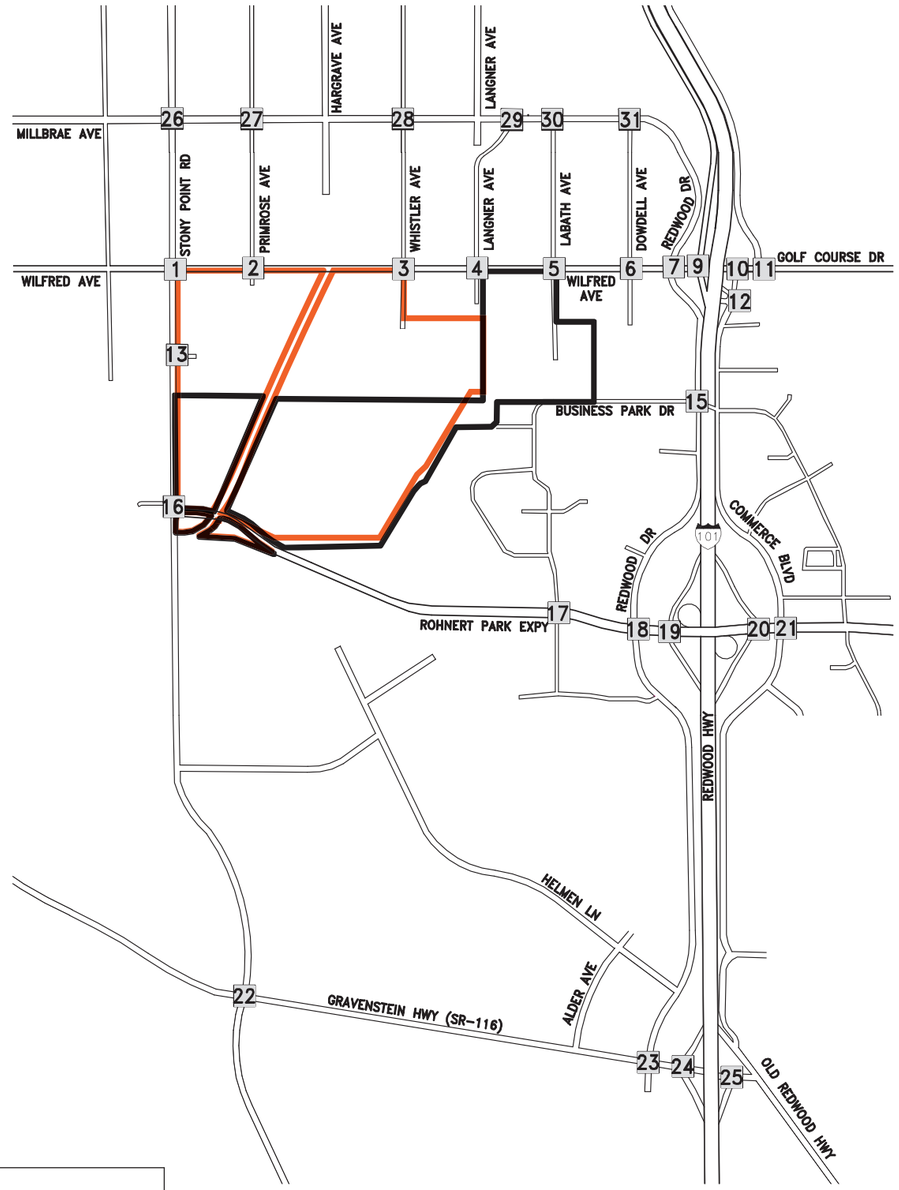
Project trips generated by the proposed casino and hotel were added to the year 2020 forecast freeway volumes to calculate the 2020 and alternatives volumes (**Table 4.12-10**). The Cumulative Without Project is provided as a baseline condition.

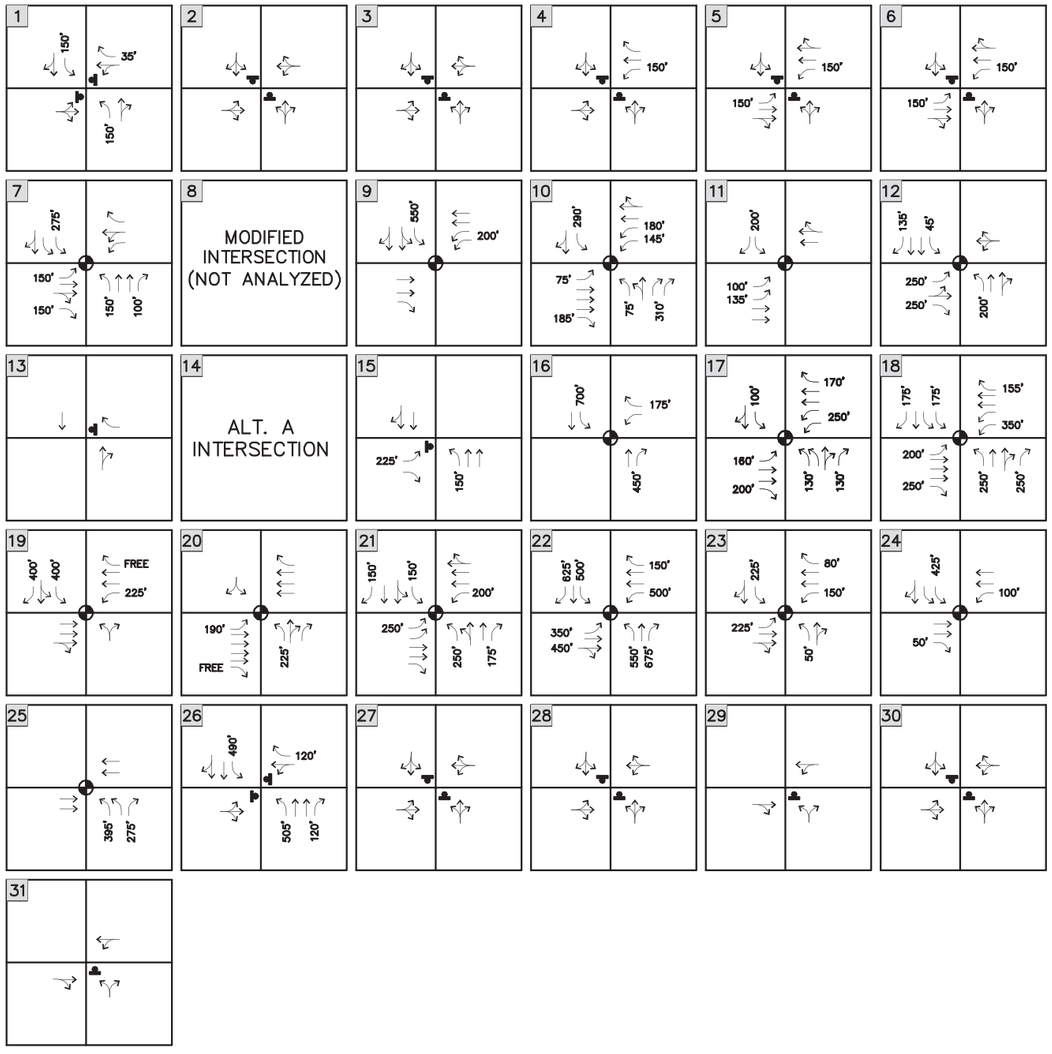
Under the 2020 conditions without the Project the following freeway segments and ramps are forecast to operate at an unacceptable LOS:

- US-101 between Wilfred Ave and Santa Rosa Avenue (SB)
- Wilfred Ave SB Off-Ramp
- Rohnert Park Expressway SB On-Ramp
- SR-116 SB Off-Ramp
- SR-116 SB On-Ramp

The following freeway segments and ramps are forecast to operate at an unacceptable LOS in 2020 with Alternative A:

- SR-116 Off-Ramp (NB)
- SR-116 On-Ramp (NB)
- US-101 between SR-116 and Rohnert Park Expressway (NB)





NOT TO SCALE

STONY POINT SITE

WILFRED SITE

LEGEND

X STUDY AREA INTERSECTIONS

TRAFFIC SIGNAL

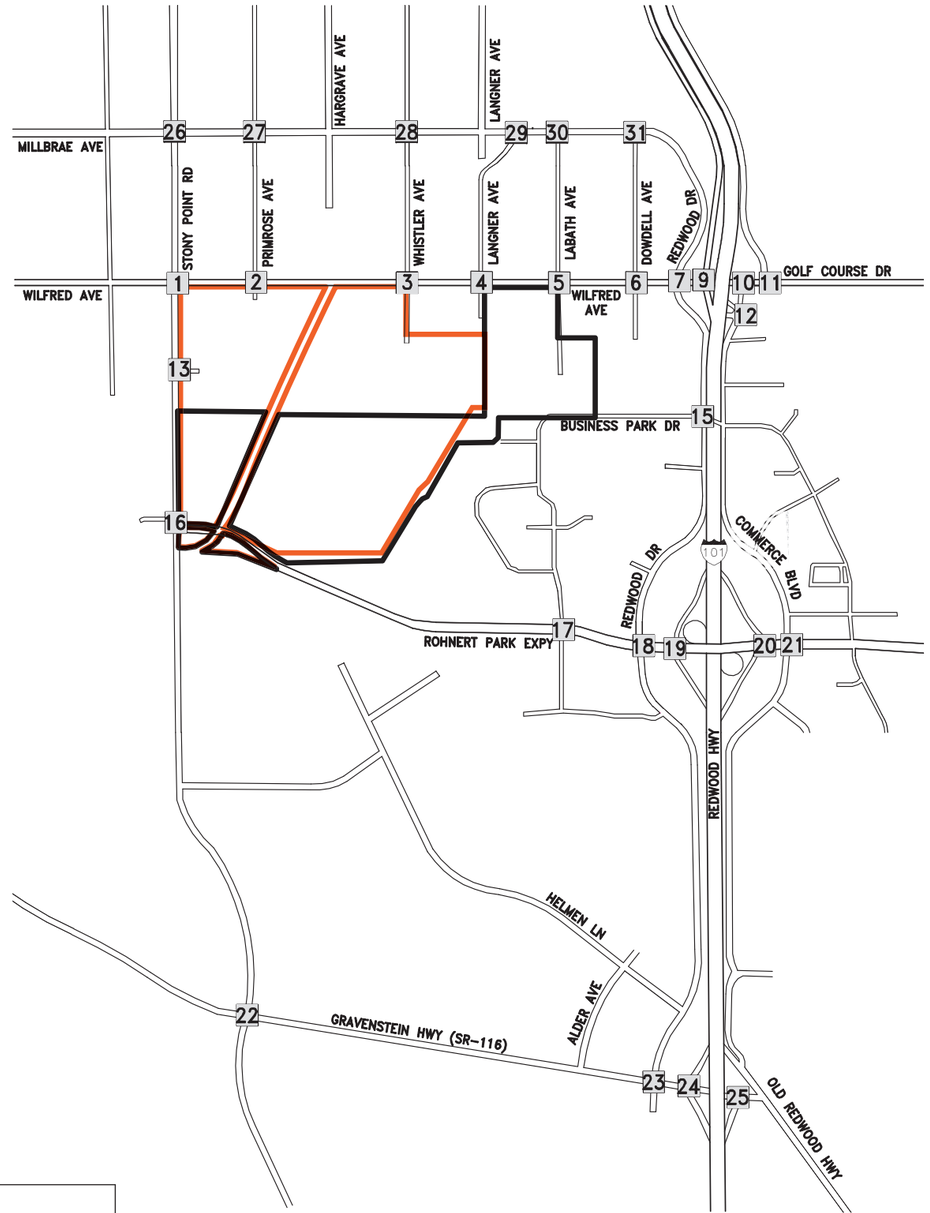
STOP SIGN

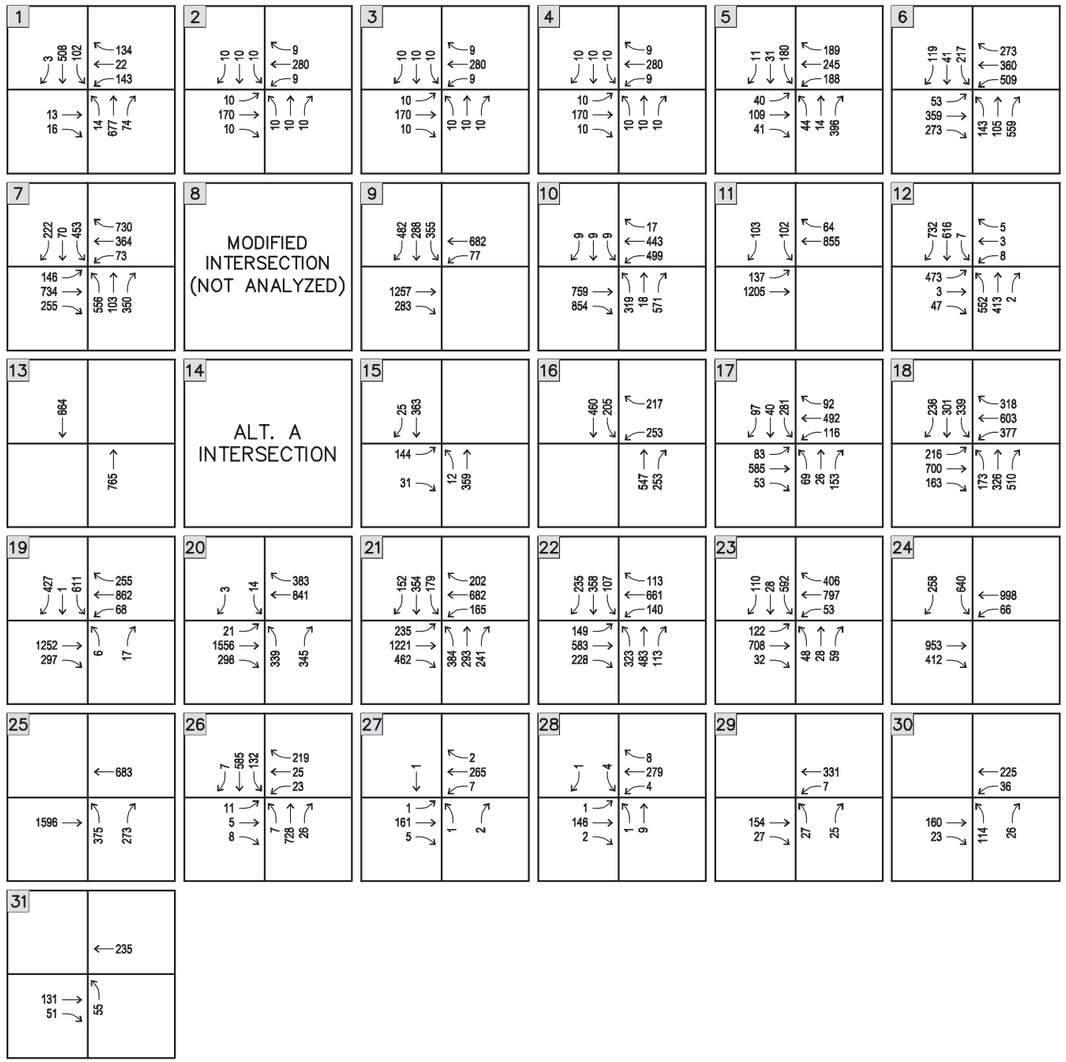
XX' STORAGE LENGTH

SOURCE: Kimley Horn & Associates, 2008; AES, 2008

Figure 4.12-4

2020 Lane Geometry and Traffic Control – Wilfred and Stony Point Site Vicinity





NOT TO SCALE

STONY POINT SITE

WILFRED SITE

LEGEND

X STUDY AREA INTERSECTIONS

SOURCE: Kimley Horn & Associates, 2006; AES, 2007

Figure 4.12-5

2020 No Project PM Traffic Volumes – Wilfred and Stony Point Site Vicinity

- Rohnert Park Expressway NB Off-Ramp
- US-101 between Wilfred Ave and Santa Rosa Avenue (SB)
- Wilfred Ave SB Off-Ramp
- Wilfred Ave SB On-Ramp
- US-101 between Rohnert Park Expressway and Wilfred Ave (SB)
- Rohnert Park Expressway SB Off-Ramp
- Rohnert Park Expressway SB On-Ramp (Loop Ramp)
- Rohnert Park Expressway SB On-Ramp
- US-101 between Rohnert Park Expressway and SR-116 (SB)
- SR-116 SB Off-Ramp
- SR-116 SB On-Ramp
- US-101 South of SR-116

Cumulative Peak Hour Intersection Conditions

Traffic analyses were completed to evaluate the weekday PM peak hour LOS at the study intersections. The Cumulative Without Project is provided as a baseline condition. Project trips generated by the proposed casino and hotel were added to the year 2020 forecast intersection volumes with project Alternatives. **Table 4.12-11** summarizes the Cumulative Peak Hour Intersection Conditions in the year 2020 without the Project and with Alternatives A- E and H.

The Redwood/Commerce intersection was not analyzed in the cumulative condition, as this intersection would no longer remain in place after the US-101/Wilfred Avenue Interchange project is constructed.

The following intersections and approaches are forecast to operate at an unacceptable LOS for the 2020 without project conditions:

- Wilfred Avenue/ Stony Point Road
- Wilfred Avenue /Labath Avenue
- Wilfred Avenue /Dowdell Avenue
- Wilfred Avenue /Redwood Drive
- Golf Course Drive/Commerce Boulevard
- Rohnert Park Expressway/Commerce Boulevard
- Millbrae Avenue/Stony Point Drive

TABLE 4.12-10
FREEWAY SEGMENT AND RAMP PERFORMANCE
CUMULATIVE - 2020

US-101 Section/Ramp	Criteria LOS	2020 no Project	Density (pc/mi/ln)[1]	2020 with Alt. A	Density (pc/mi/ln)[1]	2020 with Alt. B	Density (pc/mi/ln)[1]	2020 with Alt. C	Density (pc/mi/ln)[1]	2020 with Alt. D	Density (pc/mi/ln)[1]	2020 with Alt. E	Density (pc/mi/ln)[1]	2020 with Alt. H	Density (pc/mi/ln)[1]
Northbound															
US-101 South of SR-116	E	C	25.6	E	38.4	E	38.4	E	38.4	D	33.4	D	26.4	D	33.3
SR-116 NB Off-ramp	E	D	34.1	**F**	**41.8**	**F**	**41.8**	**F**	**41.8**	E	39.4	D	34.8	E	39.4
SR-116 NB On-ramp	E	E	36.1	**F**	**43.1**	**F**	**43.1**	**F**	**43.1**	**F**	**40.9**	E	36.7	F	40.6
US-101 between SR-116 and Rohnert Park Expressway (NB)	E	D	32.3	**F**	**-**	**F**	**-**	**F**	**-**	E	40.4	E	37.6	E	41.4
Rohnert Park Expressway NB Off-Ramp	E	E	37.1	**F**	**42.1**	**F**	**43.7**	**F**	**43.7**	**F**	**41.6**	E	37.6	F	42.0
Rohnert Park Expressway NB On-Ramp (Loop Ramp)	E	C	23.2	C	25.9	C	26.7	**F**	**41.8**	**F**	**39.9**	E	36.2	C	24.8
Rohnert Park Expressway NB On-Ramp	E	D	29.0	E	39.1	E	37.4	E	38.6	D	34.7	D	29.5	E	35.2
US-101 between Rohnert Park Expressway and Wilfred Ave (NB)	E	D	29.0	E	39.1	E	37.4	E	38.6	D	34.7	D	29.5	E	35.2
Wilfred Ave NB Off-Ramp	E	D	29.0	E	39.1	E	37.4	E	38.6	D	34.7	D	29.5	E	35.2
Wilfred Ave NB On-Ramp	E	E	40.4	E	41.0	**F**	**44.3**	**F**	**44.3**	**F**	**43.1**	E	42.1	F	43.1
US-101 between Wilfred Ave and Santa Rosa Avenue (NB)	E	E	40.4	E	41.0	**F**	**44.3**	**F**	**44.3**	**F**	**43.1**	E	42.1	F	43.1
Santa Rosa Avenue NB Off-ramp	E	E	40.4	E	41.0	**F**	**44.3**	**F**	**44.3**	**F**	**43.1**	E	42.1	F	43.1
US-101 North of Santa Rosa Avenue (NB)	E	D	29.7	D	32.6	D	32.6	D	32.6	D	31.7	**F**	**47.7**	**D**	**31.7**
Southbound															
US-101 North of Santa Rosa Avenue (SB)	E	D	28.5	D	31.2	D	31.2	D	31.2	D	30.3	D	28.8	D	30.3
Santa Rosa Avenue SB On-ramp	E	//[2]	//[2]	//[2]	//[2]	//[2]	//[2]	//[2]	//[2]	//[2]	//[2]	//[2]	//[2]	//[2]	//[2]
US-101 between Santa Rosa Avenue and Wilfred Ave (SB)	E	**F**	**-**	**F**	**-**	**F**	**-**	**F**	**-**	**F**	**-**	**F**	**-**	**F**	**-**
Wilfred Ave SB Off-Ramp	E	**F**	**44.8**	**F**	**46.8**	**F**	**49.7**	**F**	**46.8**	**F**	**46.2**	**F**	**45.1**	**F**	**46.2**
Wilfred Ave SB On-Ramp	E	E	39.9	**F**	**48.8**	**F**	**54.1**	**F**	**50.7**	**F**	**47.1**	**F**	**43.3**	**F**	**45.4**
US-101 between Rohnert Park Expressway and Wilfred Ave (SB)	E	E	39.9	**F**	**48.8**	**F**	**54.1**	**F**	**50.7**	**F**	**47.1**	**F**	**43.3**	**F**	**45.4**
Rohnert Park Expressway SB Off-Ramp	E	E	39.9	**F**	**48.8**	**F**	**54.1**	**F**	**50.7**	**F**	**47.1**	**F**	**43.3**	**F**	**45.4**
Rohnert Park Expressway SB On-Ramp (Loop Ramp)	E	E	38.5	**F**	**41.3**	**F**	**43.0**	**F**	**43.4**	**F**	**41.6**	**F**	39.9	**F**	**40.7**
Rohnert Park Expressway SB On-Ramp	E	**F**	**37.5**	**F**	**43.0**	**F**	**42.3**	**F**	**43.3**	**F**	**40.8**	**F**	**39.0**	**F**	**41.3**
US-101 between Rohnert Park Expressway and SR-116 (SB)	E	E	36.6	**F**	**-**	**F**	**-**	**F**	**-**	**F**	**-**	**F**	**40.4**	**F**	-
SR-116 SB Off-ramp	E	**F**	**40.3**	**F**	**47.2**	**F**	**46.2**	**F**	**46.2**	**F**	**44.4**	**F**	42.0	**F**	44.7
SR-116 SB On-ramp	E	**F**	**42.3**	**F**	**48.5**	**F**	**48.5**	**F**	**48.4**	**F**	**46.6**	**F**	**44.2**	**F**	**46.6**
US-101 South of SR-116	E	D	32.0	**F**	**-**	**F**	**-**	**F**	**-**	E	41.4	E	35.6	E	41.3

NOTE: 1pc/mi/ln = passenger cars per mile per lane.
2Intersection no longer exists due to planned roadway improvement.

SOURCE: Kimley-Horn and Associates 2008; AES 2007.

TABLE 4.12-11
PEAK HOUR INTERSECTION CONDITIONS - CUMULATIVE 2020

		Criteria LOS	Signal Control	No Project LOS	Delay[1]	Alt.A LOS	Delay[1]	Alt.B LOS	Delay[1]	Alt.C LOS	Delay[1]	Alt.D LOS	Delay[1]	Alt.E LOS	Delay[1]	Alt H LOS	Delay[1]
1	Wilfred Ave./Stony Point Rd.	D	TWSC	**F**	**841.3**	**F**	**OVRFLW**	**F**	**OVRFLW**	**F**	**OVRFLW**	**F**	**OVRFLW**	**F**	**OVRFLW**	**F**	**OVRFLW**
2	Wilfred Ave./Primrose Ave	D	TWSC	B	12.5	C	16.2	**F**	**OVRFLW**	D	29.3	**F**	**OVRFLW**	**E**	**40.5**	B	14.7
3	Wilfred Ave./Whistler Ave	D	TWSC	B	12.5	C	15.8	**F**	**115.2**	**F**	**OVRFLW**	**E**	**42.9**	C	18.3	B	14.4
4	Wilfred Ave./Lagner Dr.	D	TWSC	B	12.5	**F**	**111.1**	**F**	**114.3**	**F**	**192.1**	**E**	**42.7**	C	18.2	D	28.5
5	Wilfred Ave./Labath Ave.	D	TWSC	**F**	**OVRFLW**	**F**	**OVRFLW**	**F**	**OVRFLW**	**F**	**OVRFLW**	**F**	**OVRFLW**	**F**	**OVRFLW**	**F**	**OVRFLW**
6	Wilfred Ave./Dowdell Ave.	D	TWSC	**F**	**OVRFLW**	**F**	**OVRFLW**	**F**	**OVRFLW**	**F**	**OVRFLW**	**F**	**OVRFLW**	**F**	**OVRFLW**	**F**	**OVRFLW**
7	Wilfred Ave./Redwood Ave.	D	TS	**F**	**169.9**	**F**	**182.3**	**F**	**271.4**	**F**	**311.0**	**F**	**215.4**	**F**	**171.1**	**F**	**116.2**
8	Redwood Dr./Commerce Blvd	C	TS	*//*[2]	*//*[2]	*//*[2]	*//*[2]	*//*[2]	*//*[2]	*//*[2]	*//*[2]	*//*[2]	*//*[2]	*//*[2]	*//*[2]	*//*[2]	*//*[2]
9	Wilfred Ave./ US-101 SB Ramps	D	TS	C	26.8	D	45.7	**F**	**142.6**	D	36.5	C	28.9	C	26.2	D	36.0
10	Golf Course Dr./ Commerce Blvd	D	TS	**E**	**74.2**	**F**	**96.2**	**F**	**142.6**	**F**	**154.4**	**F**	**101.1**	**F**	**84.4**	**F**	**87.0**
11	Golf Course Dr./Roberts Lake Rd	C	TS	B	19.0	B	19.7	B	14.0	B	19.3	B	19.1	B	19.3	B	19.6
12	US-101 NB Ramps/Comme	D	TS	D	50.8	**E**	**66.2**	**F**	**163.4**	**F**	**153.7**	**F**	**85.6**	D	48.9	**E**	**55.9**

		Criteria LOS	Signal Control	No Project LOS	Delay[1]	Alt.A LOS	Delay[1]	Alt.B LOS	Delay[1]	Alt.C LOS	Delay[1]	Alt.D LOS	Delay[1]	Alt.E LOS	Delay[1]	Alt H LOS	Delay[1]
	rce Boulevard																
13	Project Driveway /Stony Point Road	D	TWSC	A	0.0	A	0.0	C	24.6	A	0.0	C	19.9	C	16.0	A	0.0
14	Business Park Dr. /Labath Ave.	D	/	/	/	B	10.3	/	/	/	/	/	/	/	/	A	9.6
15	Business Park Dr. /Redwood Dr.	D	TWSC	C	16.7	C	22.2	C	16.7	C	16.7	C	16.7	C	16.7	C	22.2
16	Rohnert Park Exp /Stony Point Road	D	TS	B	18.5	C	21.7	C	32.2	C	37.6	C	23.2	C	25.5	C	21.5
17	Rohnert Park Exp /Labath Avenue	C	TS	C	28.2	**D**	**40.6**	**E**	**59.8**	C	31.6	**D**	**39.4**	C	30.4	C	29.1
18	Rohnert Park Exp /Redwood Drive	C	TS	C	29.1	C	26.4	C	28.1	C	28.0	C	28.2	C	28.5	C	26.9
19	Rohnert Park Exp /US-101 SB Ramps	D	TS	B	16.0	B	16.0	**B**	**16.0**	B	15.7	B	16.0	B	15.9	B	16.1
20	Rohnert Park Exp /US-101 NB Ramps	D	TS	B	12.3	B	17.4	C	23.3	B	15.1	B	18.7	B	13.0	B	14.9
21	Rohnert Park Exp/Commerce Blvd	C	TS	**E**	**63.4**	C	33.0	**E**	**57.6**	**E**	**61.9**	**E**	**58.6**	**E**	**68.8**	C	34.0
22	SR-116/Stony Point Rd.	D	TS	D	45.5	**F**	**118.2**	D	52.8	D	51.6	D	48.1	D	45.6	**F**	**114.9**
23	SR-116/Redwood Dr.	D	TS	D	42.4	**E**	**56.3**	**E**	**63.8**	**E**	**63.3**	**E**	**55.6**	D	45.8	D	52.8
24	SR-116/ SB US-101 Ramps	D	TS	B	18.1	B	19.6	B	18.6	B	18.6	B	18.4	B	18.0	B	19.6
25	SR-116/NB US-101 Off-ramp	D	TS	B	11.5	B	11.4	B	12.6	B	12.6	B	12.2	B	11.6	B	11.2

		Criteria LOS	Signal Control	No Project LOS	Delay[1]	Alt.A LOS	Delay[1]	Alt.B LOS	Delay[1]	Alt.C LOS	Delay[1]	Alt.D LOS	Delay[1]	Alt.E LOS	Delay[1]	Alt H LOS	Delay[1]
26	Millbrae Avenue/Stony Point Road	D	TWSC	**F**	**90.2**	**F**	**156.3**	**F**	**204.7**	**F**	**207.1**	**F**	**153.9**	**F**	**109.6**	**F**	**120.3**
27	Millbrae Ave./Primrose Ave.	D	TWSC	B	12.4	B	12.2	B	12.4	B	12.6	B	12.4	B	12.4	B	12.1
28	Millbrae Ave./Whistler Ave.	D	TWSC	B	12.5	B	12.4	B	12.5	B	12.7	B	12.5	B	12.5	B	12.3
29	Millbrae Ave./Langner Ave.	D	TWSC	B	11.3	B	11.4	B	11.3	B	11.3	B	11.3	B	11.3	B	11.1
30	Millbrae Ave./Labath Ave.	D	TWSC	B	14.7	B	13.7	B	14.7	B	14.7	B	14.7	B	14.7	B	13.5
31	Millbrae Ave./Dowdell Ave.	D	TWSC	B	11.7	B	11.4	B	11.7	B	11.7	B	11.7	B	11.7	B	11.4

NOTE: Bold text denotes unacceptable LOS
1Delay in seconds.
2Intersection no longer exists due to planned roadway improvement.
SOURCE: Kimley-Horn and Associates 2008; AES 2007.

Under the 2020 Plus Project (Alternative A) Conditions, the following study intersections and approaches are forecast to operate at an unacceptable LOS:

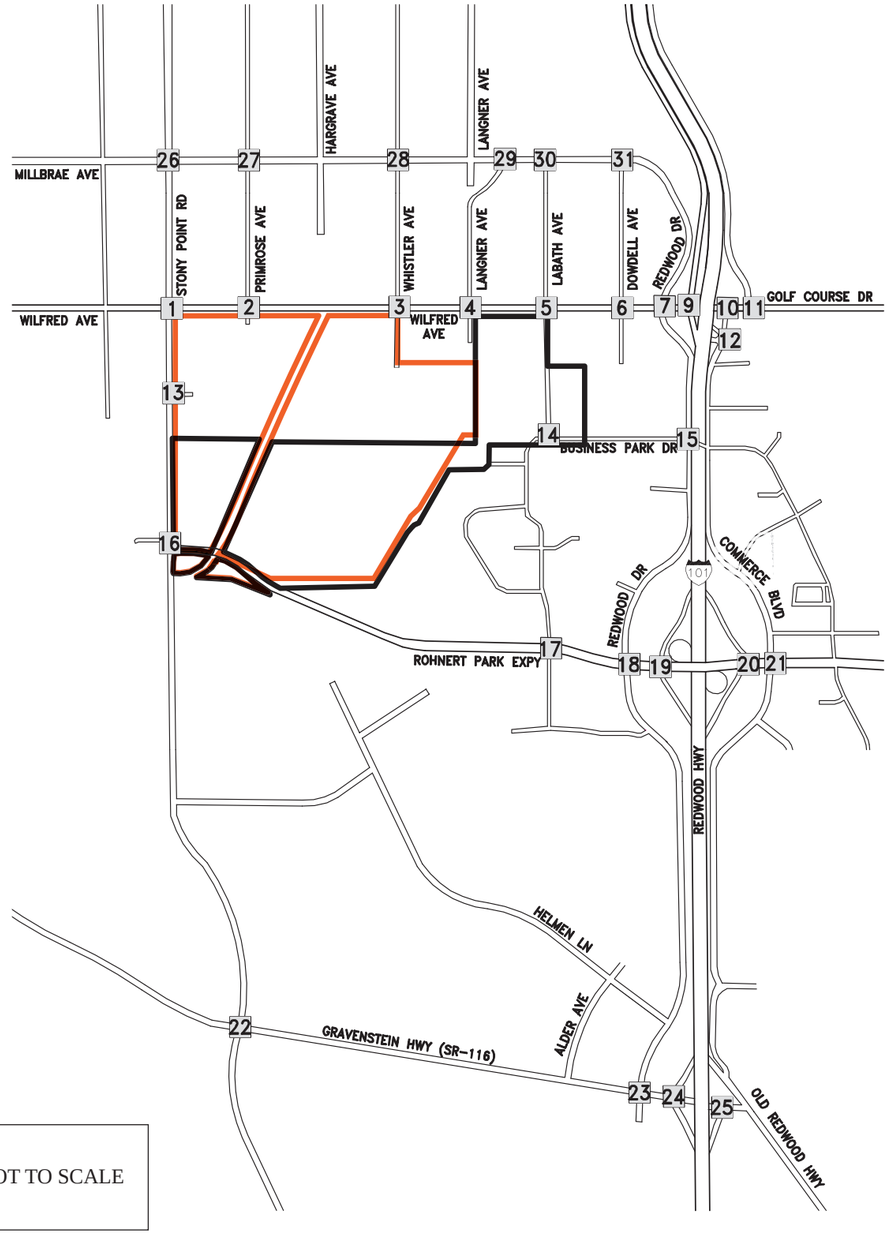
- Wilfred Avenue/ Stony Point Road
- Wilfred Avenue /Langner Avenue
- Wilfred Avenue /Labath Avenue
- Wilfred Avenue /Dowdell Avenue
- Wilfred Avenue /Redwood Drive
- Golf Course Drive/Commerce Boulevard
- Commerce Boulevard/US-101 NB Ramps
- Rohnert Park Expressway/Labath Avenue
- SR-116 /Redwood Drive
- SR-116/ Stony Point Road
- Millbrae Avenue/Stony Point Drive

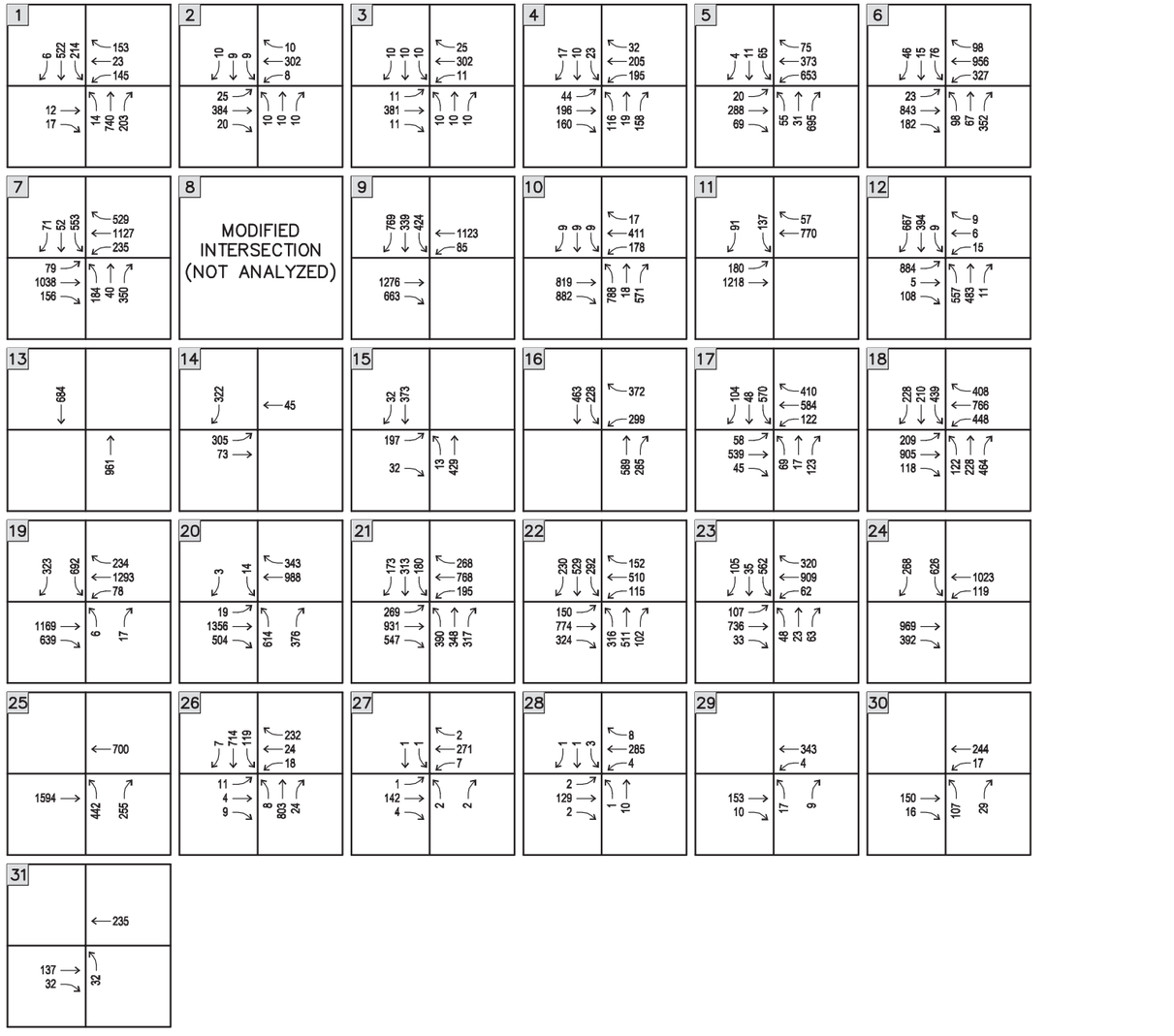
Figure 4.12-6 shows the 2020 Cumulative Plus Project PM traffic volumes for Alternative A.

As shown above, Alternative A would have a significant cumulative impact on intersections and freeway segments and ramps. However, with implementation of mitigation measures described in **Section 5.2.7** a less-than-significant cumulative transportation impact would result.

Agriculture

As growth occurs within the region, cumulative effects to agriculture may occur as the result of the transformation of agricultural lands to other land uses. Cumulative loss of agriculture lands in Sonoma County would primarily result from the outward expansion of cities and unincorporated urban areas. Expansion of urban growth areas and the annexation of agriculture lands into city limits in order to accommodate the proposed development outlined in **Table 4.12-1** would contribute to this trend. However, according to the NRCS, the land proposed for development under Alternative A does not contain prime or unique farmlands or farmlands of statewide importance. Additionally, the four parcels in the southern portion of the Wilfred site that are currently under Williamson Act Contracts and would remain in agricultural use. It is expected that the Intergovernmental Agreement to be negotiated between the County and the Tribe pursuant to the MOU will provide the County with an enforceable right to provide that the four southern parcels are used in a manner consistent with the terms of the Williamson Act contract.





SOURCE: Kimley Horn & Associates, 2006; AES, 2007

Figure 4.12-6

2020 Cumulative Plus Project PM Traffic Volumes – Alternative A

Because a net loss of important or protected farmland would not occur, the effects of Alternative A on agricultural resources are not considered to significantly contribute to past, present and future effects of other projects to agriculture within the project vicinity. Given the extent of agriculturally protected land within the County, the inferior quality of agricultural land present on the project site, and the relatively small area that would be effected when compared to overall development proposed in the County, Alternative A's contribution to the cumulative loss of agricultural land is considered less than significant.

Public Services

New development can increase the demands on local public service providers. Expansion of urban boundaries through annexation and expansion of planning areas can also affect the distribution of services. Growth is anticipated in the respective planning documents, which among others include the Sonoma County General Plan, Rohnert Park General Plan, and Northwest Specific Plan. Typically public service providers coordinate with City/County officials to ensure that services will meet future demands. As growth is expected to occur according to planned land uses in the respective general plans or with City/County approval it is anticipated that the City, County, and private service providers would plan for future development according to these uses. City and County agencies often coordinate with private service providers to ensure that there will be capacity for growth through build-out of the General Plan. Additionally, developments would be charged development impact fees, which would fund foreseeable improvements to utilities. Cumulative impacts to specific public services are discussed below, with an emphasis on the jurisdictions of Sonoma County and the City of Rohnert Park, which would be most affected by the development of Alternative A.

Water Supply

Alternative A would draw its water supply from on-site wells rather than a municipal system. Affected municipal systems include the City of Rohnert Park and surrounding jurisdictions, which currently draw water from the same groundwater basin. Drawdown for private wells is discussed under **Section 4.12.3**, Water Resources.

Planning for urban water supplies is the responsibility of public sector water suppliers and private water companies (Sonoma County, 1989). The City of Rohnert Park currently obtains water from several sources including groundwater wells, the Sonoma County Water Agency (SCWA), and recycled water. The City of Rohnert Park conducted a Water Supply Assessment (WSA) to assess the City's future water demand and supply. The WSA concluded that there were adequate water resources through the year 2025 for build-out of the City, expansion of Sonoma State University, and the Graton Rancheria's casino and hotel project (City of Rohnert Park, 2005, **Appendix H**).

The City plans on decreasing reliance on groundwater resources as discussed in **Section 3.9**; however, litigation has hindered the goal of increasing supplies from SCWA. SCWA has determined in their Urban Water Management Plan that their supplies will exceed projected demand through the year 2020 (SCWA, 2000). The SCWA's latest Urban Water Management Plan has recently been invalidated by the Sonoma County Superior Court (*Sonoma County Water Coalition, et al. v. Sonoma County Water Agency*, SCV 240367, Sonoma County Superior Ct., October 28, 2008). The court has required the SCWA to prepare a revised Urban Water Management Plan that demonstrates sufficient water supplies through 2030. It is assumed that a revised Urban Water Management Plan will be prepared that demonstrates sufficient water supplies for regional water customers (including the City of Rohnert Park), as required by the Urban Water Management Planning Act (Water Code Section 10610 et seq.).

The City of Rohnert Park has demonstrated a decreasing reliance on groundwater in recent years and is constrained by a settlement agreement capping groundwater pumping at 2.3 mgd. This constraint will be in place even should SCWA be unsuccessful in obtaining the water supply requested by the City of Rohnert Park in the future and will force the City to find methods other than increased groundwater pumping (such as increased conservation) to ensure adequate supplies. Thus, due to the City's decreasing reliance on groundwater, and the availability of water supplies through 2025 with planned development and the Proposed Project, the cumulative effect to public water service providers is less than significant. As discussed under **Section 4.12.3**, Water Resources, the overall cumulative effect on the regional groundwater basin from the Tribe's production wells is less than significant.

Wastewater Service

Alternative A would obtain wastewater service through an independent wastewater treatment system or through connection to the Laguna Subregional Treatment Plant (Laguna WWTP). If Alternative A utilized an independent wastewater treatment plant it would not affect the ability of any wastewater service providers to treat wastewater and dispose of effluent. If Alternative A utilized the Laguna WWTP, there could potentially be cumulative impacts when combined with foreseeable development projects through the year 2025 as Alternative A is within the Northwest Specific Plan Area. If the Wilfred Site were built out according to the Northwest Specific Plan, the wastewater flows would be approximately 118,000 gpd, which is based on typical planning estimates (HydroScience, 2008).

The City of Rohnert Park's allocation will increase to 5.15 mgd, the expected flow at build-out, with the Incremental Recycled Water Program (HydroScience, 2008). Additionally, the City currently has authorization to use 0.48 mgd from Santa Rosa's unused allotment. As discussed in **Section 4.9**, the anticipated buildout of the Wilfred Site under the Northwest Specific Plan would consist of high-density residential and commercial development with an average daily flow of

118,000 mgd. Alternative A exceeds these projections by approximately 100,000 mgd on weekdays and 239,000 mgd on weekends (HydroScience, 2008). There are several conveyance options discussed in **Section 4.9**. The conveyance options that would present cumulative effects are options that utilize existing gravity sewers or force mains. As the development of Alternative A exceeds planned wastewater flows for the Wilfred Site, it is unknown whether existing and planned infrastructures would have the capacity to convey wastewater flows with other planned development projects. Additionally, the Laguna WWTP may not have enough capacity, as the City of Rohnert Park's allocation is based on a development with lower flows than Alternative A. This impact would be significant and mitigation is provided in **Section 5.2.8** to reduce impacts to a less-than-significant level.

Solid Waste

Under Alternative A, collection and hauling services would be provided by Rohnert Park Disposal, the County, or an independent collection company. Most County waste is disposed of at the Redwood Landfill, which is permitted to accept up to 2,300 tons per day of non-hazardous municipal solid waste. The landfill has an estimated closure date of 2039. The Sonoma County's County-wide Integrated Waste Management Plan (CoIWMP) identifies the following plans for future solid waste disposal: expansion of the Central Landfill, siting of a new landfill, or contracting with existing landfills (Sonoma County Waste Management Agency, 2003). As discussed in **Section 4.9**, under Alternative A the contribution of solid waste is considered to be less than significant. As the Proposed Project and planned growth would not affect the County's long-term plans for solid waste management, the cumulative impact is less than significant. Mitigation is provided in **Section 5.2.8** to reduce the amount of solid waste disposed. .

Electricity, Natural Gas, and Telecommunications

Pacific Gas and Electric (PG&E) is the provider of electricity and natural gas for Alternative A and the surrounding cumulative projects. AT&T is the main telecommunications provider in Sonoma County and has transmission lines near Alternative A and the cumulative projects. PG&E provides electricity and natural gas distribution services to approximately 14 million people throughout a 70,000-square-mile service area in northern and central California, including an extensive network in Sonoma County. PG&E has confirmed that it can provide electrical and natural gas services for Alternative A (Rivero, pers. comm., 2005; Harris, pers. comm., 2005). The electrical and natural gas demands of the anticipated cumulative projects are unknown. PG&E planning departments would work with the City and County planners to ensure that adequate capacity is available for future development. Individual projects would be responsible to pay for any development or user fees in order to receive electrical, natural gas, cable, and telephone services. Thus, the cumulative effects would be less than significant.

Law Enforcement

Cumulative effects related to law enforcement could occur in the region as the result of an inadequate supply of law enforcement resources and/or increased response times. The Sonoma County Sheriff's Department currently maintains a service ratio of approximately 1.17 officers per 1,000 residents (Sonoma County Board of Supervisors, 2007) and it is anticipated that in 2020 the service ratio will be 1.19 officers per 1,000 residents, which is below the recommended 2.0 officers per 1,000 residents set by the Federal Bureau of Investigation (Nichols Berman, 2006). Even with the lower service level, crime rates for violent crimes per 100,000 people have fallen by 38 percent and property crimes have fallen by 33 percent from 1993 to 2003 (Nichols Berman, 2006). The local governments address increased service demand from new developments, such as law enforcement services, by requiring various development fees and assessments, and property tax increments from new development. Alternative A would generate a need for additional law enforcement resources, and through fiscal mitigation listed in **Section 5.2.6** and the anticipated MOU with the City of Rohnert Park, the Tribe would provide funding to offset law enforcement impacts derived from the Proposed Project. The Tribe would provide compensation to the County for primary services, which would prevent a reliance on mutual/automatic aid services. Additionally, if the Tribe contracts with the Rohnert Park Public Safety Department to provide fire protection and emergency medical services to the site (discussed below) it would enhance regional law enforcement protection as firefighters would be cross-trained as law enforcement officers. The MOU with Sonoma County (**Appendix E**) provides for an intergovernmental agreement no later than 30 days following the publication of the FEIS, to address any significant effects that occur within the County. With the fiscal mitigation listed in **Section 5.2.6**, impacts to County law enforcement would be less than significant. As an alternative to the fiscal mitigation, the Tribe may enter into a law enforcement agreement with the County, City, or both. Mitigation is recommended in **Section 5.2.8** to improve on-site security.

Fire Protection/Emergency Medical

Cumulative effects related to fire protection and emergency medical services could occur in the region as a result of inadequate resources and/or increased response times to existing and planned development. Fire services within Sonoma County are provided largely by volunteer fire companies in the unincorporated areas. The Sonoma County General Plan Update 2020 DEIR notes that there is no single master facilities plan or other comprehensive long range planning document addressing the need for fire or emergency services (Nichols Berman, 2006). The County currently has low levels of staffing (City of Rohnert Park; 18 personnel, RVFD; 6 full-time personnel and numerous volunteers) and average response times of between 20-30 minutes for some departments. It is anticipated that by 2020 that problems with funding and volunteer retention will reduce the number of volunteer fire departments in the County (Nichols Berman, 2006).

The incorporated areas of Sonoma County address increased service demand from new developments, by requiring various development fees and assessments, and through increased property tax increments related to increases in assessed values. Emergency medical services are provided throughout the County by American Medical Response and are primarily funded by individuals receiving service. Alternative A would generate a need for additional fire protection and emergency medical services, and through the anticipated MOU with the City of Rohnert Park, the Tribe would provide funding for impacts to these services. This funding would be beneficial in providing additional resources for expected growth. An agreement for primary services would prevent a reliance on mutual/automatic aid services. The Tribe would funding efforts that will improve fire protection in the region, including a new public safety building (as conditions of the MOU with the City of Rohnert Park). Additionally, the MOU with Sonoma County (**Appendix E**), provides for an intergovernmental agreement no later than 30 days following the publication of the DEIS, which addresses any significant effects that occur within the County. As there is currently no signed agreement for fire protection or emergency medical services, this impact is considered significant. With mitigation measures listed in **Section 5.2.6**, this impact would be reduced to a less-than-significant level.

Schools

The local school districts are responsible for school planning efforts and analysis to forecast the construction of new schools based on projected residential growth. While enrollment is anticipated to decrease in the unincorporated areas, student enrollment is project to increase through 2020 in the Rohnert Park-Cotati area by 18 percent (Nichols Berman, 2006). As discussed in **Section 4.11**, the existing local labor pool would fill the jobs created by Alternative A. Alternative A is not anticipated to increase demands on school services as it is neither creating housing nor creating a significant influx of residents. Thus, cumulative impacts to schools would be less than significant.

Other Values

Noise

Alternative A would contribute to the cumulative increase in traffic in the vicinity of the Wilfred site (see cumulative traffic analysis above). This would also result in a contribution to cumulative traffic noise effects. An environmental noise analysis report was conducted to assess the noise impacts of the Proposed Action and Alternatives (**Appendix R**).

For the traffic noise impact analysis, it was assumed that worst-case noise exposures would occur at reference distances of 50 feet from the centerlines of the roadways. Truck mix was estimated from the short-term traffic counts and from Caltrans data. Day – night distribution of traffic noise was estimated as 87 percent/13 percent. Based upon the traffic analysis prepared for Alternative

A by Kimley-Horn & Associates, Inc. (**Appendix O**), the Federal Highway Administration (FHWA) model was run to predict traffic noise levels for the roadways included in the traffic analysis. **Table 4.12-12** compares the 2020 cumulative traffic noise levels (at a reference distance of 50 feet from roadway centerline) with anticipated traffic noise levels after the implementation of Alternative A. The other EIS alternatives located on the overlapping Stony Point site are included in **Table 4.12-13** for ease of comparison.

Table 4.12-12 shows that there are road segments that either would be above the 65 dB LL_{dn} land use compatibility criterion or would rise above this level with the introduction of project traffic. It is assumed that noise sensitive development is present or proposed immediately adjacent to all of the segments that would be above this level. Therefore, this is considered a significant impact. Mitigation measures are proposed in **Section 5.2.9** that would reduce traffic related noise impacts to a less-than-significant level.

Changes in traffic noise levels would not exceed Federal Interagency Committee on Noise (FICON) significance criteria, as shown in **Table 4.10-13**.

Note that noise-sensitive development is present along Rohnert Park Expressway in the form of the mobile home park. The mobile home park has been designed with a large buffer zone and a sound barrier between the park and Rohnert Park Expressway. Thus traffic noise from Rohnert Park Expressway is not expected to significantly affect any sensitive receptors within the mobile home park.

TABLE 4.12-12
PREDICTED CUMULATIVE TRAFFIC NOISE LEVELS AT REFERENCE DISTANCES – ALTERNATIVES A-E, H

Roadway	Segment	PREDICTED L_{DN}, DB						
		Future Baseline	**Alt. A plus Future Baseline**	**Alt. B plus Future Baseline**	**Alt. C plus Future Baseline**	**Alt. D plus Future Baseline**	**Alt. E plus Future Baseline**	**Alt. H plus Future Baseline**
Rohnert Park Expressway	Labath to Stony Point	**69.5**	**70.5**	**71.1**	**70.5**	**70.7**	**70.0**	**70.5**
Stony Point Road	Rohnert Park Expressway to Wilfred	**73.1**	**73.7**	**74.8**	**74.4**	**74.3**	**73.6**	**73.6**
Redwood Drive	Rohnert Park Expressway to Wilfred Avenue	**67.4**	**67.5**	**67.5**	**67.5**	**67.1**	**67.5**	**67.5**
Commerce	Rohnert Park Expressway to Golf Course	**65.2**	**65.7**	**65.2**	**65.2**	**65.2**	**65.2**	**65.7**
Wilfred	Stony Point to Whistler	63.2	**65.1**	**65.3**	**67.0**	64.7	64.2	64.5
Wilfred	Whistler to Labath	63.2	64.9	**69.1**	**67.0**	**68.0**	**65.7**	64.4
Wilfred	Labath to Dowdell	**67.5**	**69.6**	**70.6**	**70.9**	**69.9**	**68.6**	**68.7**
Wilfred	Dowdell to Redwood	**69.9**	**70.6**	**72.0**	**72.2**	**71.4**	**70.6**	**69.8**
Wilfred	Redwood to SR101	**70.6**	**72.2**	**72.4**	**72.6**	**72.0**	**71.2**	**71.7**
Business Park	Labath to Redwood	59.6	60.7	59.6	59.6	59.6	59.6	60.7
Roberts Lake	Commerce to Golf Course	62.4	63.0	62.4	62.4	62.4	62.4	63.0
Millbrae	Stony Point to Primrose	62.6	62.6	62.9	63.0	62.8	62.7	62.5

Note: Bold cells indicate a potentially significant noise level.
SOURCE: BBA, 2004, 2007.

TABLE 4.12-13

CHANGES IN PREDICTED CUMULATIVE TRAFFIC NOISE LEVELS AT REFERENCE DISTANCES – ALTERNATIVES A-E, H

Roadway	Segments	Predicted L_{dn}, dB						
		Future Baseline minus Existing	Alt. A minus Future Baseline	Alt. B minus Future Baseline	Alt. C minus Future Baseline	Alt. D minus Future Baseline	Alt. E minus Future Baseline	Alt. H minus Future Baseline
Rohnert Park Expressway	Labath to Stony Point	-0.6	1.1	1.6	1.1	1.2	0.5	1.1
Stony Point Road	Rohnert Park Expressway to Wilfred	0.2	0.6	1.6	1.3	1.2	0.5	0.5
Redwood Drive	Rohnert Park Expressway to Wilfred Avenue	0.8	0.1	0.1	0.1	0.0	0.2	0.1
Commerce	Rohnert Park Expressway to Golf Course	0.8	0.4	0.0	0.0	0.0	0.0	0.4
Wilfred	Stony Point to Whistler	3.4	1.9	2.1	**3.8**	1.5	1.0	1.3
Wilfred	Whistler to Labath	6.5	1.7	**5.9**	**3.8**	**4.8**	2.5	1.2
Wilfred	Labath to Dowdell	11.5	2.2	3.2	3.5	2.4	1.1	1.3
Wilfred	Dowdell to Redwood	13.4	0.6	2.1	2.3	1.5	0.7	0.0
Wilfred	Redwood to SR101	4.1	1.5	1.8	2.0	1.3	0.6	1.0
Business Park	Labath to Redwood	-0.1	1.1	0.0	0.0	0.0	0.0	0.0
Roberts Lake	Commerce to Golf Course	-1.1	0.6	0.0	0.0	0.0	0.0	0.6
Millbrae	Stony Point to Primrose	2.9	00	0.2	0.3	0.1	0.1	0.0

Note: Bold values indicate a potentially significant increase in noise levels.
SOURCE: BBA, 2004, 2007.

Visual Resources

Growth is planned within Rohnert Park and Sonoma County. However, cumulative development that takes place would be consistent with local land use regulations, including associated design guidelines. Development of Alternative A would be consistent with the visual goals of local land use regulations. The construction portion of the Wilfred site is not located in a scenic corridor or an area of high aesthetic value, commercial attraction notwithstanding. Substantial development is present to the east of the Wilfred site, with open space to the west. This development includes regional commercial and service centers. The proposed project would be attractively designed as a resort facility and, in combination with other nearby development, would not constitute a significant cumulative visual effect to an already semi-developed environment.

Hazardous Materials

There are no existing known hazardous materials on the Wilfred site. Alternative A would not use significant quantities of hazardous materials and mitigation has been identified to decrease any incidental spills to a less than significant level. There are no significant cumulative hazardous materials issues associated with this alternative.

ALTERNATIVE B – NORTHWEST STONY POINT SITE

Land Resources

The geographic area for the analysis of cumulative impacts to land resources is the Santa Rosa Plain in Sonoma County, which is relatively flat in topography. Neither Alternative B nor cumulative development would significantly alter topography in the region. The principal effects to Land Resources associated with Countywide development (see **Section 4.12.2**) would be localized topographical changes and soil attrition, both of which are evaluated in terms of runoff characteristics, sedimentation and flow under permitting authorities and criteria relevant to Water Resources, below. Local permitting requirements for construction, such as the required preparation of a Stormwater Pollution Prevention Plan under the Clean Water Act, adherence to local building codes, and adherence to local planning/zoning requirements, would address regional stormwater, geotechnical, seismic and mining hazards; therefore, no cumulative impacts related to Land Resources would occur as a result of Alternative B.

Water Resources

As with Alternative A, cumulative impacts are considered to be those from the Proposed Project and known planned development in the vicinity.

Treated Effluent Discharge

Impacts of Alternative B from treated effluent discharge would be slightly greater than those for Alternative A, since the Stony Point site does not overlap the Northwest Specific Plan (South). However impacts would still be considered less than significant. For further discussion, see the discussion on Alternative A (above).

Groundwater

Impacts of Alternative B from treated effluent discharge would be similar to those discussed above under Alternative A, given that the water demand is the same for Alternatives A and B. Like Alternative A, cumulative impacts from Alternative B would be less than significant. Implementation of mitigation measures in **Section 5.2.2** would further reduce potential impacts to groundwater.

Air Quality

Ozone Precursor and PM10 and $PM_{2.5}$ Emissions

Operation of Alternative B is estimated to result in the same emissions as Alternative A. Thus, a significant cumulative effect would result for ROG, $NO_{x,}$ and PM_{10} emissions. ROG, NOx, and PM emissions associated with the operation of Alternative B could be reduced to a less than significant level through mitigation measures in **Section 5.2.3**.

Carbon Monoxide Concentrations

As described in the traffic study of the project alternatives, traffic operations at project-affected signalized study intersections would be at LOS D or better with Alternative B, under 2020 long-term future cumulative background conditions and traffic mitigation measures. Based on criteria presented in the University of California Davis Institute of Transportation Studies document *Transportation Project-Level Carbon Monoxide Protocol* (Garza, et al., 1997), intersections operating at LOS D or better typically do not result in CO concentrations that exceed State or federal standards. Therefore, Alternative B with traffic mitigation measures would have a less-than-significant impact on CO air quality.

Odor Effects

Alternative B and other reasonable foreseeable projects in the area, when considered cumulatively, could result in potentially significant odor impacts. Several commercial centers are planned in the area near the intersection of Wilfred Avenue and US Highway 101. The common types of facilities that have been known to produce odors occur mostly in manufacturing/industrial zones and no manufacturing/industrial areas are projected for the area, although significant commercial development is planned. However, BAAQMD permit process, city/county permitting processes, and future environmental review processes will combine to

ensure that Alternative B in combination with cumulative development would have a less-than-significant effect from odors.

Toxic Air Contaminants

Alternative B and other reasonable foreseeable projects in the area, when considered cumulatively, could result in potentially significant impacts from TAC. Several commercial centers are planned in the area around the intersection of Wilfred Avenue and US Highway 101. Potential TAC sources such as gasoline dispensing facilities and dry cleaners could site in these commercial areas. However, BAAQMD permit process, city/county permitting processes, and future environmental review processes will combine to ensure that Alternative B in combination with cumulative development would have a less-than-significant effect from toxic air contaminants.

Climate Change

Alternative B would have the same GHG emissions as Alterative A (**Table 4.11-7**), because the building square footage and trip generation rates for Alternative B is the same as Alternative A. Cumulative impact from GHGs would be the same as Alternative A; therefore a potentially significant cumulative impact would result. Measures in **Section 5.2.3** would ensure a less than significant cumulative impact.

Biological Resources

The purpose of this section is to analyze potential cumulative effects on biological resources including wildlife and habitats, federally-listed species, migratory birds, and jurisdictional "waters of the U.S."

Development of the Stony Point site is expected to have significant cumulative impact due to the loss of Sonoma sunshine and Burke's goldfields habitat as described in **Section 4.5.2**. Cumulative impacts are projected to be significant if other development projects scheduled for the area also reduce habitat for special status species known to habitat the area. Development of the Stony Point site would also result in significant loss of California tiger salamander habitat.

Wildlife and Habitats

After mitigation is implemented, Alternative B is not anticipated to result in significant direct or indirect effects to wildlife and habitats. However, disturbance to habitats and increases in human activity from the casino in combination with other proposed projects in the Rohnert Park area, such as the Santa Rosa Sub-regional Incremental Recycled Water Program, the Hwy 101 HOV and Lane Widening Project, and local planned development projects, could incrementally contribute to past, present and future effects to wildlife and habitats. Given the level of

disturbance currently existing within the area and the planned preservation of the southern and northeastern portions of the Stony Point site under Alternative B for open space and habitat preservation, Alternative B would not result in significant cumulative effects to wildlife and habitats.

Federally-Listed Species

Disturbance to vernal pools, and CTS habitat, and increases in human activity resulting from Alternative B and other proposed projects in the Rohnert Park area could cumulatively and adversely effect federally listed species. This is a potentially significant cumulative impact to Threatened and/or Endangered Species. Mitigation is discussed in **Section 5.2.4** to reduce cumulative impact levels.

Migratory Birds

Alternative B is not anticipated to result in significant direct or indirect effects to nesting migratory birds. However, disturbance to migratory bird habitats and increases in human activity from other proposed projects in the Rohnert Park area could incrementally contribute to past, present and future effects to migratory birds. Given the level of disturbance currently existing within the area and the planned preservation of the southern and northwestern portions of the Stony Point site for open space and habitat preservation, Alternative B would not result in significant cumulative effects to migratory birds.

Waters of the U.S.

Alternative B would directly affect greater than approximately 21-acres of "waters of the U.S." The loss is anticipated to be permitted under a USACE Individual Permit and would require compensatory mitigation and a written plan on how such mitigation would be implemented. Adverse indirect effects to "waters of the U.S." would be avoided by the implementation of project features designed to prevent increased erosion and sedimentation and increase flood storage on the site. After complying with permit conditions, Alternative B would not result in any net loss of waters of the U.S. or wetlands. Thus, significant cumulative effects to "waters of the U.S." would not occur.

Cultural Resources

Cumulative effects to cultural resources occur when sites that contain cultural features or artifacts are disturbed by urban development. As these resources are destroyed or displaced, important information is lost and the connection to past events, people and cultures is diminished. Sonoma County contains extensive known and unknown cultural resources including sites associated with well-documented prehistoric and historic human occupation in the area (see **Section 3.6.1**). As

Sonoma County continues to grow, resources that include historic buildings and archaeological sites may be lost.

Based on the extensive presence of cultural resources in Sonoma County, it is expected that future development may result in significant losses of cultural resources. Development proposed under this alternative would affect two historic archaeological sites (RPC-1 and -5) that are potentially eligible for the NRHP. Mitigation measures are presented in **Section 5.2.5** for the protection and preservation of known archaeological and historical sites, and for the treatment of unanticipated discoveries. Therefore, the development of Alternative B is expected to result in a less-than-significant incremental effect to the cumulative loss of important cultural resources in Sonoma County.

Socioeconomic Conditions

Cumulative socioeconomic effects of Alternative B would be similar to those of Alternative A, since Alternative B is similar in size and scope to Alternative A. Potentially significant negative incremental social and fiscal effects will be reduced by mitigation measures listed in **Section 5.2.6**.

Resource Use Patterns

Transportation/Circulation

Table 4.12-10 summarizes the Cumulative Plus Alternative B freeway segment and ramp performance conditions. The Cumulative without Project condition is provided as a baseline condition. Under the 2020 plus Alternative B Conditions, the following freeway segments and ramps are forecast to operate at an unacceptable LOS:

- SR-116 Off-Ramp (NB)
- SR-116 On-Ramp (NB)
- US-101 between SR-116 and Rohnert Park Expressway (NB)
- Rohnert Park Expressway NB Off-Ramp
- Wilfred Ave. NB On-Ramp
- US-101 between Wilfred Ave and Santa Rosa Avenue (NB)
- US-101 between Wilfred Ave and Santa Rosa Avenue (SB)
- Santa Rosa Avenue NB Off-Ramp
- Wilfred Ave SB Off-Ramp
- Wilfred Ave SB On-Ramp
- US-101 between Rohnert Park Expressway and Wilfred Ave (SB)
- Rohnert Park Expressway SB Off-Ramp
- Rohnert Park Expressway SB On-Ramp (Loop Ramp)

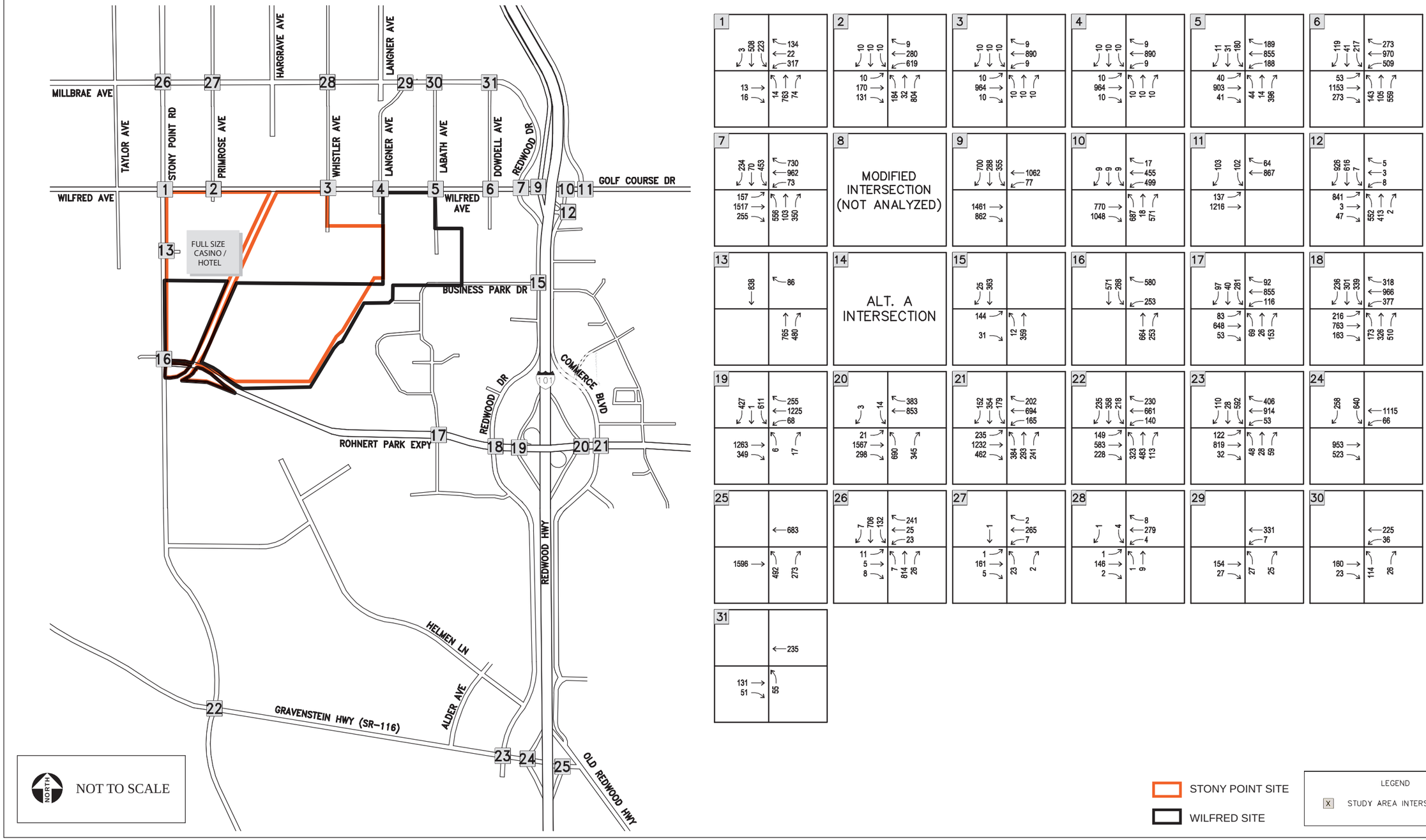
- Rohnert Park Expressway SB On-Ramp
- US-101 between Rohnert Park Expressway and SR-116 (SB)
- SR-116 SB Off-Ramp
- SR-116 SB On-Ramp
- US-101 South of SR-116

Table 4.12-11 summarizes the Cumulative Plus Alternative B Peak Hour Intersection Conditions. The Redwood/Commerce intersection was not analyzed in the cumulative condition, as this intersection would no longer remain in place after the US-101/Wilfred Avenue Interchange project is constructed. Under the 2020 Plus Alternative B conditions, the following study intersections and approaches are forecast to operate at an unacceptable LOS:

- Wilfred Avenue/ Stony Point Road
- Wilfred Avenue /Primrose Avenue
- Wilfred Avenue/Whistler Avenue
- Wilfred Avenue /Langner Avenue
- Wilfred Avenue /Labath Avenue
- Wilfred Avenue /Dowdell Avenue
- Wilfred Avenue /Redwood Drive
- Wilfred Avenue/US-101 SB Ramps
- Golf Course Drive/Commerce Boulevard
- Commerce Boulevard/US-101 NB Ramps
- Rohnert Park Expressway/US-101 SB Ramps
- Rohnert Park Expressway/Redwood Drive
- Millbrae Avenue/Stony Point Road

Figure 4.12-7 shows the 2020 Cumulative plus Project PM traffic volumes for Alternative B.

As shown in the these tables, Alternative B would have a significant cumulative impact on intersections and freeway segments and ramps. Mitigation measures are described in **Section 5.2.7** to reduce levels of these impacts. Even after mitigation, significant impacts would remain at two study intersections.



SOURCE: Kimley Horn & Associates, 2006; AES, 2007

Figure 4.12-7
2020 Cumulative Plus Project PM Traffic Volumes – Alternative B

Agriculture

Cumulative loss of agricultural lands in Sonoma County would result from projected growth within the region and the outward expansion of cities and unincorporated urban areas. Expansion of urban growth areas and the annexation of agriculture lands into city limits, in order to accommodate the proposed development outlined in **Table 4.12-1**, would contribute to this trend. According to the NRCS, up to 48.7-acres of the land proposed for development under Alternative B is considered prime or unique farmlands or farmlands of statewide importance. However the agricultural capability of these lands is considered marginal. The NRCS evaluated the land at a California Storie Index rating of 41, which indicates that the land is suited to a few crops or to special crops and would require special management. The land proposed for development is approximately 0.0078 percent of the farmland in the County. As with Alternative A, the four parcels in the southern portion of the Wilfred site are currently under Williamson Act Contracts and would remain in agricultural use. It is expected that the Intergovernmental Agreement to be negotiated between the County and the Tribe pursuant to the MOU will provide the County with an enforceable right to provide that these parcels are used in a manner consistent with the terms of the Williamson Act contract. Overall, the effects of Alternative B on agricultural resources are not considered to significantly contribute to past, present and future effects of other projects to agriculture within the project vicinity. Given the extent of agriculturally protected land within the County, the inferior quality of agricultural land present on the site, which is evidenced by the Storie Index Rating, and the relatively small area that would be effected when compared to overall development proposed in the County,, Alternative B's contribution to the cumulative loss of agricultural land is considered less than significant.

Public Services

The cumulative impact of Alternative B on public services is substantially similar to Alternative A, given the identical facilities and proximity in location. However, for Alternative B there is currently a signed MOU with the City of Rohnert Park. For water supply, solid waste, electricity, natural gas, telecommunications, and schools the cumulative impact is similar to Alternative A and is considered less than significant. The impact to solid waste facilities is similar to that described under Alternative A. Impacts to wastewater service, solid waste, law enforcement, fire protection and emergency medical services are discussed below.

Wastewater Service

Under Alternative B, the Tribe would not utilize the Laguna WWTP for wastewater service. The Tribe would utilize an independent, on-site WWTP. Operation of the casino and hotel would remove areas on the northern portion of the Stony Point Site (approximately 180 acres) that are currently used as sprayfields by the Santa Rosa Sub-regional WWTP. The EIR for the IRWP –

Recycled Water Master Plan analyzed the potential for increased agricultural reuse of recycled water within Sonoma County. According to the Master Plan, there are 60,000 acres potentially suitable for irrigation within the following areas of the County: North County, East of Rohnert Park, and City-owned Farms (Santa Rosa, 2004b). Given the large potential acreage available for use as an agricultural reuse area, including substantial areas that were utilized prior to the use of the Geysers project, the removal of 180-acres from the system would not represent a significant cumulative effect to wastewater disposal capacity within the cumulative time period.

Law Enforcement

Cumulative impacts would be similar to Alternative A. With the fiscal mitigation listed in **Section 5.2.6**, impacts to County law enforcement would be less than significant. As an alternative to the fiscal mitigation, the Tribe could enter into a law enforcement agreement with the County, City, or both. Mitigation is recommended in **Section 5.2.8** to improve on-site security.

Fire Protection/Emergency Medical

Cumulative impacts would be similar to Alternative A. Given that there is currently no signed agreement for fire protection services, a potentially significant impact would result. Mitigation measures in **Section 5.2.8** would reduce impacts to a less-than-significant impact level.

Other Values

Noise

Alternative B would contribute to the cumulative increase in traffic in the Stony Point vicinity (see cumulative traffic analysis above). This would also result in a contribution to cumulative traffic noise effects. An environmental noise analysis report was conducted to assess the noise impacts of the Proposed Action and Alternatives (**Appendix R**).

For the traffic noise impact analysis, it was assumed that worst-case noise exposures would occur at reference distances of 50 feet from the centerlines of the roadways. Truck mix was estimated from the short-term traffic counts and from Caltrans data. Day – night distribution of traffic noise was estimated as 87 percent/13 percent. Based upon the traffic analysis prepared for the Proposed Project by Kimly-Horn & Associates, Inc. (**Appendix O**), the FHWA model was run to predict traffic noise levels for the roadways included in the traffic analysis.

Table 4.12-12 shows that there are road segments that either would be above the 65 dB L_{dn} land use compatibility criterion or would rise above this level with the introduction of project traffic. It is assumed that noise sensitive development is present or proposed immediately adjacent to all of the segments that would be above this level. Therefore, this is considered a significant impact.

Mitigation measures are proposed in **Section 5.2.9** that would reduce traffic related noise impacts to a less-than-significant level.

Changes in traffic noise levels would exceed FICON significance criteria at one road segment, as shown in **Table 4.12-13**, resulting in a significant impact. Mitigation measures are provided in **Section 5.2.9** that would traffic related noise impacts to a less-than-significant level.

Note that noise-sensitive development is present along Rohnert Park Expressway in the form of the mobile home park. The mobile home park has been designed with a large buffer zone and a sound barrier between the park and Rohnert Park Expressway. Thus traffic noise from Rohnert Park Expressway is not expected to significantly affect any sensitive receptors within the mobile home park.

Visual Resources

As growth occurs within the City of Rohnert Park and Sonoma County, cumulative effects to visual resources may take place as the result of increased development (see **Table 4.12-1** and **Figures 4.12-1** and **4.12-3**). However, cumulative development that takes place within the area would be consistent with local land use regulations. The construction portion of the Stony Point site is not located in a scenic corridor or an area of high aesthetic value, commercial attraction notwithstanding. Substantial development is present to the east of the Stony Point site, with open space to the west. This development includes regional commercial and service centers. The facilities of Alternative B would be attractively designed as a resort facility and, in combination with other nearby development, and would not constitute a significant cumulative visual effect to an already semi-developed environment.

Hazardous Materials

There are no existing known hazardous materials on the Stony Point site. Alternative B would not use significant quantities of hazardous materials and mitigation has been identified to decrease any incidental spills to a less than significant level. There are no significant cumulative hazardous materials issues associated with this alternative.

ALTERNATIVE C – NORTHEAST STONY POINT SITE

Land Resources

The geographic area for the analysis of cumulative impacts to land resources is the Santa Rosa Plain in Sonoma County, which is relatively flat in topography. Neither Alternative C nor cumulative development would significantly alter topography in the region. The principal effects to land resources associated with Countywide development (see **Section 4.12.2**) would be localized topographical changes and soil attrition, both of which are evaluated in terms of runoff

characteristics, sedimentation and flow under permitting authorities and criteria relevant to Water Resources, below. Local permitting requirements for construction, such as the required preparation of a Stormwater Pollution Prevention Plan under the Clean Water Act, adherence to local building codes, and adherence to local planning/zoning requirements, would address regional stormwater, geotechnical, seismic and mining hazards; therefore, no cumulative impacts related to land resources would occur as a result of Alternative C.

Water Resources

As with Alternative A, cumulative impacts are considered to be those from the Proposed Project and known planned development in the vicinity.

Treated Effluent Discharge

Cumulative impacts from treated effluent discharge would be similar for Alternatives B and C. Impacts would be less than significant for further discussion, see Alternative A (above).

Groundwater

under Alternative C, impacts from treated effluent discharge would be similar to those discussed above under Alternative A, given that the water demand is the same for Alternatives A and C. As with Alternative A, cumulative impacts from Alternative C would be less than significant. Implementation of mitigation measures in **Section 5.2.2** would further reduce potential impacts to groundwater.

Air Quality

Ozone Precursor and PM Emissions

Operation of Alternative C is estimated to result in the same emissions as Alternative B. Thus, a significant cumulative effect would result for ROG, $NO_{x,}$ and PM emissions. ROG, NOx, and PM emissions associated with the operation of Alternative C could be reduced to a less than significant level by implementing mitigation measures in **Section 5.2.3**.

Carbon Monoxide Concentrations

As described in the traffic study of the project alternatives, traffic operations at project-affected signalized study intersections would be at LOS D or better with Alternative C, under 2020 long-term future cumulative background conditions and traffic mitigation measures. Based on criteria presented in the University of California Davis Institute of Transportation Studies document *Transportation Project-Level Carbon Monoxide Protocol* (Garza, et al., 1997), intersections operating at LOS D or better typically do not result in CO concentrations that exceed State or federal standards. Therefore, Alternative C with traffic mitigation measures is considered to have a less-than-significant impact on CO air quality.

Odor Effects

When considered cumulatively, Alternative C and other reasonable foreseeable projects in the area could result in potentially significant odor impacts. Several commercial centers are planned in the area near the intersection of Wilfred Avenue and US Highway 101. The common types of facilities that have been known to produce odors occur mostly in manufacturing/industrial zones and no manufacturing/industrial areas are projected for the area, although significant commercial development is planned. However, BAAQMD permit process, city/county permitting processes, and future environmental review processes will combine to ensure that Alternative C in combination with cumulative development would have a less-than-significant effect from odors.

Toxic Air Contaminants

Alternative C and other reasonable foreseeable projects in the area, when considered cumulatively, could result in potentially significant impacts from TACs. Several commercial centers are planned in the area around the intersection of Wilfred Avenue and US Highway 101. Potential TAC sources such as gasoline dispensing facilities and dry cleaners could site in these commercial areas. However, BAAQMD permit process, city/county permitting processes, and future environmental review processes will combine to ensure that Alternative C in combination with cumulative development would have a less-than-significant effect from toxic air contaminants.

Climate Change

Alternative C would have the same GHG emissions as Alterative A (**Table 4.11-7**), because the building square footage and trip generation rates for Alternative C is the same as Alternative A. Cumulative impact from GHGs would be the same as Alternative A; therefore a potentially significant cumulative impact would result. Measures in **Section 5.2.3** would ensure a less than significant cumulative impact.

Biological Resources

The cumulative impacts of Alternative C to biological resources are similar to those under Alternative B, given that Alternative C is similar in size and scope to Alternative B. Less-than-significant cumulative effects to biological resources would result except that a potentially significant cumulative impact to Threatened and/or Endangered Species would result. Mitigation is discussed in **Section 5.2.4** to reduce impact levels.

Cultural Resources

Cumulative effects to cultural resources occur when sites that contain cultural features or artifacts are disturbed by urban development. As these resources are destroyed or displaced, important

information is lost and the connection to past events, people and cultures is diminished. Sonoma County contains extensive known and unknown cultural resources including sites associated with well documented prehistoric and historic human occupation in the area (see **Section 3.6.1**). As Sonoma County continues to grow, resources, including historic buildings and archaeological sites, may be lost.

Based on the extensive presence of cultural resources in Sonoma County, it is expected that future development may result in significant losses of cultural resources. Development proposed under this alternative would affect one historic archaeological site (RPC-5) that is potentially eligible for the National Register of Historic Places. Mitigation measures are presented in **Section 5.2.5** for the protection and preservation of known archaeological and historical sites, and for the treatment of unanticipated discoveries. Therefore, the development of Alternative C is expected to result in a less than significant incremental effect to the cumulative loss of important cultural resources in Sonoma County.

Socioeconomic Conditions

Cumulative socioeconomic effects of Alternative C would be similar to those of Alternative A, since Alternative C is similar in size and scope to Alternative A. Potential significant negative incremental social and fiscal effects will be mitigated to a less-than-significant level by mitigation measures in **Section 5.2.6**.

Resource Use Patterns

Transportation/Circulation

Table 4.12-10 summarizes the Cumulative plus Alternative C freeway segment and ramp performance condition. The 2020 without Project scenario is provided as a baseline condition. Under the 2020 plus Project Alternative C conditions, the following freeway segments and ramps are forecast to operate at an unacceptable LOS:

- SR-116 Off-Ramp (NB)
- SR-116 On-Ramp (NB)
- US-101 between SR-116 and Rohnert Park Expressway (NB)
- Rohnert Park Expressway NB Off-Ramp
- Rohnert Park Expressway NB On-Ramp (Loop Ramp)
- Wilfred Ave. NB On-Ramp
- US-101 between Wilfred Ave and Santa Rosa Avenue (NB)
- US-101 between Wilfred Ave and Santa Rosa Avenue (SB)
- Santa Rosa Avenue NB Off-Ramp
- Wilfred Ave SB Off-Ramp

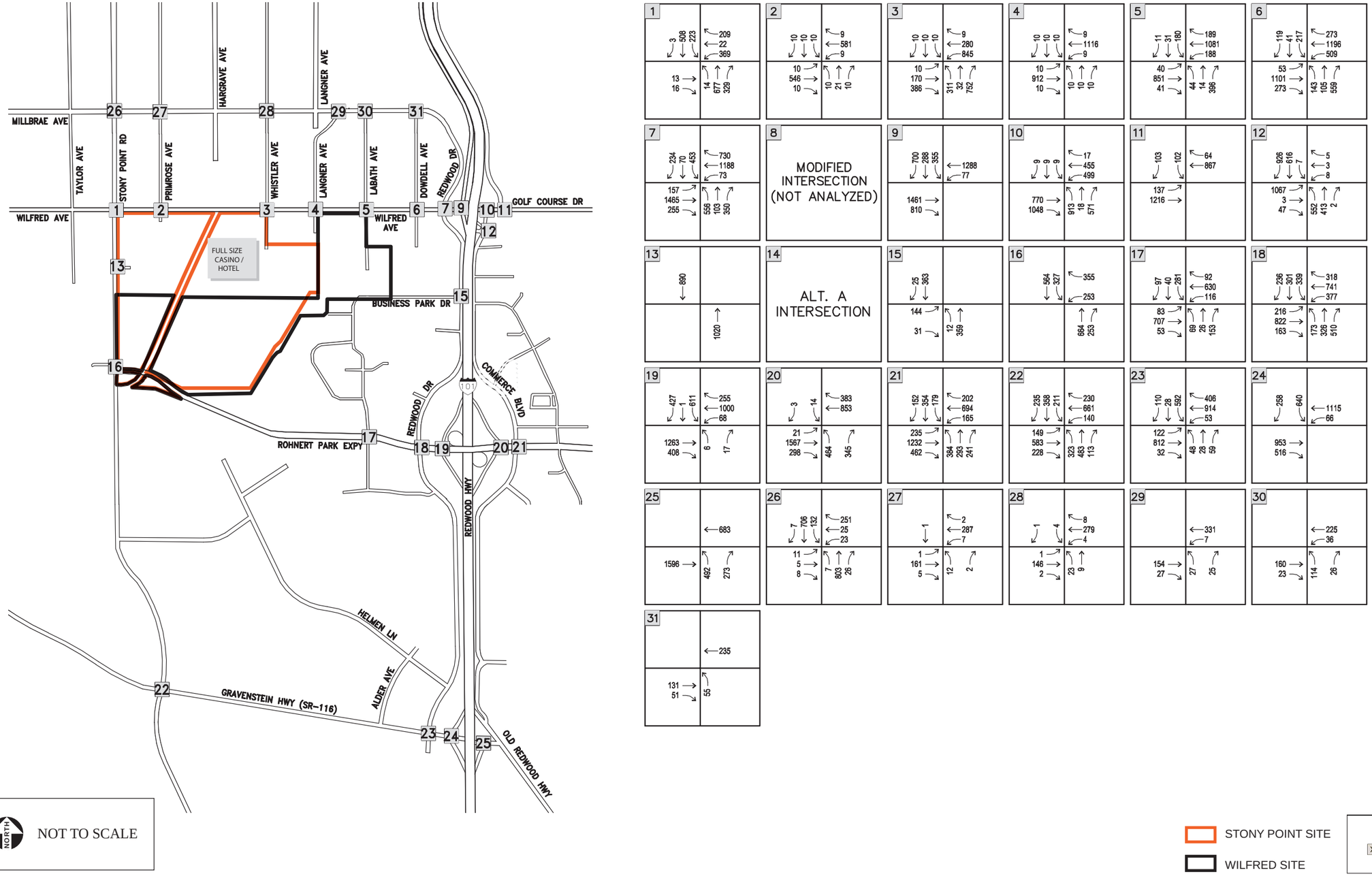
- Wilfred Ave SB On-Ramp
- US-101 between Rohnert Park Expressway and Wilfred Ave (SB)
- Rohnert Park Expressway SB Off-Ramp
- Rohnert Park Expressway SB On-Ramp (Loop Ramp)
- Rohnert Park Expressway SB On-Ramp
- US-101 between Rohnert Park Expressway and SR-116 (SB)
- SR-116 SB Off-Ramp
- SR-116 SB On-Ramp
- US-101 South of SR-116

For analysis of intersection conditions, Cumulative without Project condition traffic volumes were combined with vehicle trips expected to be generated by Alternative C. The Redwood/Commerce intersection was not analyzed in the cumulative condition, as this intersection would no longer remain in place after the US-101/Wilfred Avenue Interchange project is constructed. **Table 4.12-11** summarizes the Cumulative Plus Alternative C Peak Hour Intersection Conditions. Under the 2020 plus Alternative C conditions, the following study intersections and approaches are forecast to operate at an unacceptable LOS:

- Wilfred Avenue/ Stony Point Road
- Wilfred Avenue/Whistler Avenue
- Wilfred Avenue /Langner Avenue
- Wilfred Avenue /Labath Avenue
- Wilfred Avenue /Dowdell Avenue
- Wilfred Avenue /Redwood Drive
- Golf Course Drive/Commerce Boulevard
- Commerce Boulevard/US-101 NB Ramps
- Golf Course Drive/Commerce Boulevard
- Rohnert Park Expressway/Redwood Drive
- Millbrae Avenue/Stony Point Road

Figure 4.12-8 shows the 2020 Cumulative plus Project PM traffic volumes for Alternative C.

As shown above, Alternative C would have a significant cumulative impact on intersections and freeway segments and ramps. With implementation of mitigation measures described in **Section 5.2.7**, a significant cumulative transportation impact would remain at one study intersection.



SOURCE: Kimley Horn & Associates, 2006; AES, 2007

Figure 4.12-8

2020 Cumulative Plus Project PM Traffic Volumes – Alternative C

Agriculture

Cumulative loss of agriculture lands in Sonoma County would result from projected growth within the region and the outward expansion of cities and unincorporated urban areas. Expansion of urban growth areas and the annexation of agriculture lands into city limits, in order to accommodate the proposed development outlined in **Table 4.12-1**, would contribute to this trend. According to the NRCS, up to 75.7-acres of the land proposed for development under Alternative C is considered prime or unique farmlands or farmlands of statewide importance. However the agricultural capability of these lands is considered marginal. The NRCS evaluated the land at a California Storie Index rating of 41, which indicates that the land is suited to a few crops or to special crops and would require special management. The land proposed for development is approximately 0.012 percent of the farmland in the County. As with Alternative A, the four parcels in the southern portion of the Wilfred site are currently under Williamson Act Contracts and would remain in agricultural use. It is expected that the Intergovernmental Agreement to be negotiated between the County and the Tribe pursuant to the MOU will provide the County with an enforceable right to provide that these parcels are used in a manner consistent with the terms of the Williamson Act contract. Overall, the effects of Alternative C on agricultural resources are not considered to significantly contribute to past, present and future effects of other projects to agriculture within the project vicinity. Given the extent of agriculturally protected land within the County, the inferior quality of agricultural land present on the site, which is evidenced by the Storie Index Rating, and the relatively small area that would be effected when compared to overall development proposed in the County, Alternative C's contribution to the cumulative loss of agricultural land is considered less than significant.

Public Services

Effects to public services would not differ from Alternative B. Mitigation measures in **Section 5.2.8** would reduce impacts to less than significant levels.

Other Values

Noise

An environmental noise analysis report was conducted to assess the noise impacts of the Proposed Action and Alternatives (**Appendix R**). Noise effects would be similar to those of Alternative B, given that Alternative C is similar in size and scope to Alternative B. However, noise effects to residences along Wilfred Avenue would be reduced since less traffic would be traveling between the project driveway and Stony Point Road.

Table 4.12-12 shows that there are road segments that either would be above the 65 dB L_{dn} land use compatibility criterion or would rise above this level with the introduction of project traffic. It is assumed that noise sensitive development is present or proposed immediately adjacent to all

of the segments that would be above this level. Therefore, this is considered a significant impact. Mitigation measures are proposed in **Section 5.2.9** that would reduce traffic related noise impacts to a less-than-significant level.

Changes in traffic noise levels would exceed FICON significance criteria at several road segments, as shown in **Table 4.12-13**, resulting in a significant impact. Mitigation measures are provided in **Section 5.2.9** that would traffic related noise impacts to a less-than-significant level.

Note that noise-sensitive development is present along Rohnert Park Expressway in the form of the mobile home park. The mobile home park has been designed with a large buffer zone and a sound barrier between the park and Rohnert Park Expressway. Thus traffic noise from Rohnert Park Expressway is not expected to significantly affect any sensitive receptors within the mobile home park.

Visual Resources

Cumulative impacts to visual resources would be similar to those of Alternative B, given that Alternative C is similar in size and scope to Alternative B. Thus, Alternative B would not constitute a significant cumulative visual effect to an already semi-developed environment.

Hazardous Materials

There are no existing known hazardous materials on the Stony Point site. This alternative would not use significant quantities of hazardous materials and mitigation has been identified to decrease any incidental spills to a less than significant level. There are no significant cumulative hazardous materials issues associated with this alternative.

ALTERNATIVE D – REDUCED INTENSITY (STONY POINT SITE)

Land Resources

The geographic area for the analysis of cumulative impacts to land resources is the Santa Rosa Plain in Sonoma County, which is relatively flat in topography. Neither Alternative D nor cumulative development would significantly alter topography in the region. The principal effects to land resources associated with Countywide development (see **Section 4.12.2**) would be localized topographical changes and soil attrition, both of which are evaluated in terms of runoff characteristics, sedimentation and flow under permitting authorities and criteria relevant to Water Resources, below. Local permitting requirements for construction, such as the required preparation of a Stormwater Pollution Prevention Plan under the Clean Water Act, adherence to local building codes, and adherence to local planning/zoning requirements, would address regional stormwater, geotechnical, seismic and mining hazards; therefore, no cumulative impacts related to land resources would occur as a result of Alternative D.

Water Resources

Treated Effluent Discharge

Under Alternative D, cumulative impacts from treated effluent discharge would be similar to Alternatives B. Impacts would be less than significant.

Groundwater

Cumulative impacts to groundwater would be similar, but slightly reduced when compared to Alternative A, given the smaller water demands of Alternative D. As with Alternative A, cumulative impacts to groundwater would be less than significant. Implementation of mitigation measures in **Section 5.2.2** would further reduce potential impacts to groundwater.

Air Quality

Ozone Precursor and PM_{10} Emissions

In the near term, operation of Alternative D is estimated to result in:

- 284 ppsd and 58 tpy of ROG,
- 571 ppsd and 122 tpy of NOx, and
- 614 ppd and 112 tpy of PM_{10} emissions.

In 2020 operation of Alternative D is estimated to result in:

- 111 ppsd and 23 tpy of ROG,
- 196 ppsd and 42 tpy of NOx, and
- 612 ppd and 112 tpy of PM_{10} emissions.

As shown in **Tables 4.12-3** and **4.12-4**, Alternative D generated 1.6 percent of the southern portion of Sonoma County's total NOx in near term and only 0.88 percent in the year 2020. For ROG, Alternative D only generated 0.5 percent in the near term and 0.2% in 2020. The PM_{10} contribution for Alternative D is a little more with 2.7 percent in the near term and 2.6 percent in 2020. The incremental effect of Alternative D is a relatively large portion of the countywide total for one project. This is especially true regarding PM_{10} emissions, where percentages are over 2.5%. Alternative D would exacerbate the regional trend towards higher PM_{10} emissions.

In 2020, ROG emissions generated by casino traffic would exceed the 80 ppd and 15 tpy significance thresholds, NO_x emissions would exceed the 80 ppd and 15 tpy significance thresholds, and PM_{10} emissions would exceed the 80 ppd and 15 tpy significance thresholds; significant effects would result (see **Table 4.12-5**). ROG, NOx, and PM emissions associated

with operation of Alternative D could be reduced to a less than significant level through implementing mitigation measures in **Section 5.2.3**.

Carbon Monoxide Concentrations

As described in the traffic study of the project alternatives, traffic operations at project-affected signalized study intersections would be at a LOS D or better with Alternative D, under 2020 long-term future cumulative background conditions and traffic mitigation measures. Based on criteria presented in the University of California Davis Institute of Transportation Studies document *Transportation Project-Level Carbon Monoxide Protocol* (Garza, et al., 1997), intersections operating at LOS D or better typically do not result in CO concentrations that exceed State or federal standards. Therefore, Alternative D with traffic mitigation measures is considered to have a less-than-significant impact on CO air quality.

Odor Effects

When considered cumulatively, Alternative D and other reasonable foreseeable projects in the area, could result in potentially significant odor impacts. Several commercial centers are planned in the area near the intersection of Wilfred Avenue and US Highway 101. The common types of facilities that have been known to produce odors occur mostly in manufacturing/industrial zones and no manufacturing/industrial areas are projected for the area, although significant commercial development is planned. However, BAAQMD permit process, city/county permitting processes, and future environmental review processes will combine to ensure that Alternative D in combination with cumulative development would have a less-than-significant effect from odors.

Toxic Air Contaminants

Alternative D and other reasonably foreseeable projects in the area, when considered cumulatively, could result in potentially significant impacts from TACs. Several commercial centers are planned in the area around the intersection of Wilfred Avenue and US Highway 101. Potential TAC sources such as gasoline dispensing facilities and dry cleaners could site in these commercial areas. However, BAAQMD permit process, city/county permitting processes, and future environmental review processes will combine to ensure that Alternative D in combination with cumulative development would have a less-than-significant effect from toxic air contaminants.

Climate Change

The USEPA and CARB approved URBEMIS 2007 emissions modeling software estimates that Alternative D would result in the emission of approximately 2,746 tons per year of CO_2 during construction, which is expected to last 24 months (**Appendix W**). As shown in **Table 4.12-14,** during operation Alternative D would result in the emission CH_4 and N_2O equivalent to 2,398 tpy

of CO_2e. Indirect emissions of CO_2, CH_4, and N_2O are estimated at 9 tpy of CO_2e. Total annual emissions during operation of the Alternative D would be equivalent to 62,315 tpy of CO_2e. Annual Alternative D GHG emissions would be approximately 0.011 percent of California's predicted contribution to global GHG emissions in 2020 (see **Table 3.4-6**). Alternative D contributions to the annual global GHG emissions in 2020 would be approximately 0.0000073 percent.

The same state GHG reduction strategies would apply to Alternative D as Alternative A, given that Alternative D proposes commercial development similar to Alternative A. For the same reasons as Alternative A (see **Table 4.12-8**), Alternative D would not comply with one of the three applicable strategies, resulting in a potentially significant cumulative impact. A less than significant cumulative impact would result after the implementation of mitigation measures in **Section 5.2.3**

TABLE 4.12-14
ESTIMATED ALTERNATIVE D OPERATIONAL GHG EMISSIONS

CO_2 Emissions[1]		
Mobile Sources	**Area Sources**	**Total CO_2e**
tons per year	**tons per year**	**tons per year**
59,305	603	59,908

CH_4 and N_2O Emission from Mobile Sources[2]				
Emission Factor ($CO_2/CH_4/N_2O$)	**Miles Traveled**	**CH_4**	**N_2O**	**Total CO_2e**
g/mile	**miles/day**	**tons per year**		**tons per year**
552.08/0.05/0.05	360,125	152	2,246	2,398

Indirect GHG emissions[2]					
Emission Factor (Kg of $CO_2/CH_4/N_2O$)	**Estimated kW-h Usage[3]**	**CO_2**	**CH_4**	**N_2O**	**Indirect CO_2e**
lb/MW-h	**MW-h/year**	**tons per year**			
804.54/0.006/0.0037	46	9	0.00	0.00	9
		Total Operation CO_2e tons per year			**62,315**

NOTES:
[1] Estimated from USEPA and CARB approved URBEMIS air quality program (**Appendix KK**)
[2] Emission factors from Climate Change Action Registry
[3] Estimated using 4,500 kilowatts-hours/month of power used.
SOURCE: URBEMIS, 2007; Climate Change Action Registry, 2007.

Biological Resources

The cumulative impacts of Alternative D to biological resources are similar, but reduced in intensity, to those of Alternative B, given that Alternative D is reduced in size and scope when compared with Alternative B. Less than significant cumulative effects to biological resources would result except that a potentially significant cumulative impact to Threatened and/or Endangered Species would result. Mitigation is discussed in **Section 5.2.4**.

Cultural Resources

Cumulative effects to cultural resources would be similar to those under Alternative B, given that the development footprint would be similar. Mitigation measures are presented in **Section 5.2.5** for the protection and preservation of known archaeological and historical sites, and for the treatment of unanticipated discoveries. Therefore, the development of Alternative D is expected to result in less-than-significant cumulative effects to cultural resources.

Socioeconomic Conditions

Cumulative socioeconomic effects of Alternative D would be similar, but reduced in intensity, to those of Alternative A, due to the scale of the proposed alternative. Potentially significant fiscal and social impacts would be mitigated to a less-than-significant level by mitigation measures addressed in **Section 5.2.6**.

Resource Use Patterns

Transportation/Circulation

Table 4.12-10 summarizes the Cumulative plus Alternative D freeway segment and ramp performance conditions. The Cumulative without project is provided as a baseline condition. Under the 2020 Plus Alternative D conditions, the following freeway segments and ramps are forecast to operate at an unacceptable LOS:

- SR-116 On-Ramp (NB)
- Rohnert Park Expressway NB Off-Ramp
- Rohnert Park Expressway NB On-Ramp (Loop Ramp)
- Wilfred Ave. NB On-Ramp
- US-101 between Wilfred Ave and Santa Rosa Avenue (NB)
- US-101 between Wilfred Ave and Santa Rosa Avenue (SB)
- Santa Rosa Avenue NB Off-Ramp
- Wilfred Ave SB Off-Ramp
- Wilfred Ave SB On-Ramp
- US-101 between Rohnert Park Expressway and Wilfred Ave (SB)
- Rohnert Park Expressway SB Off-Ramp

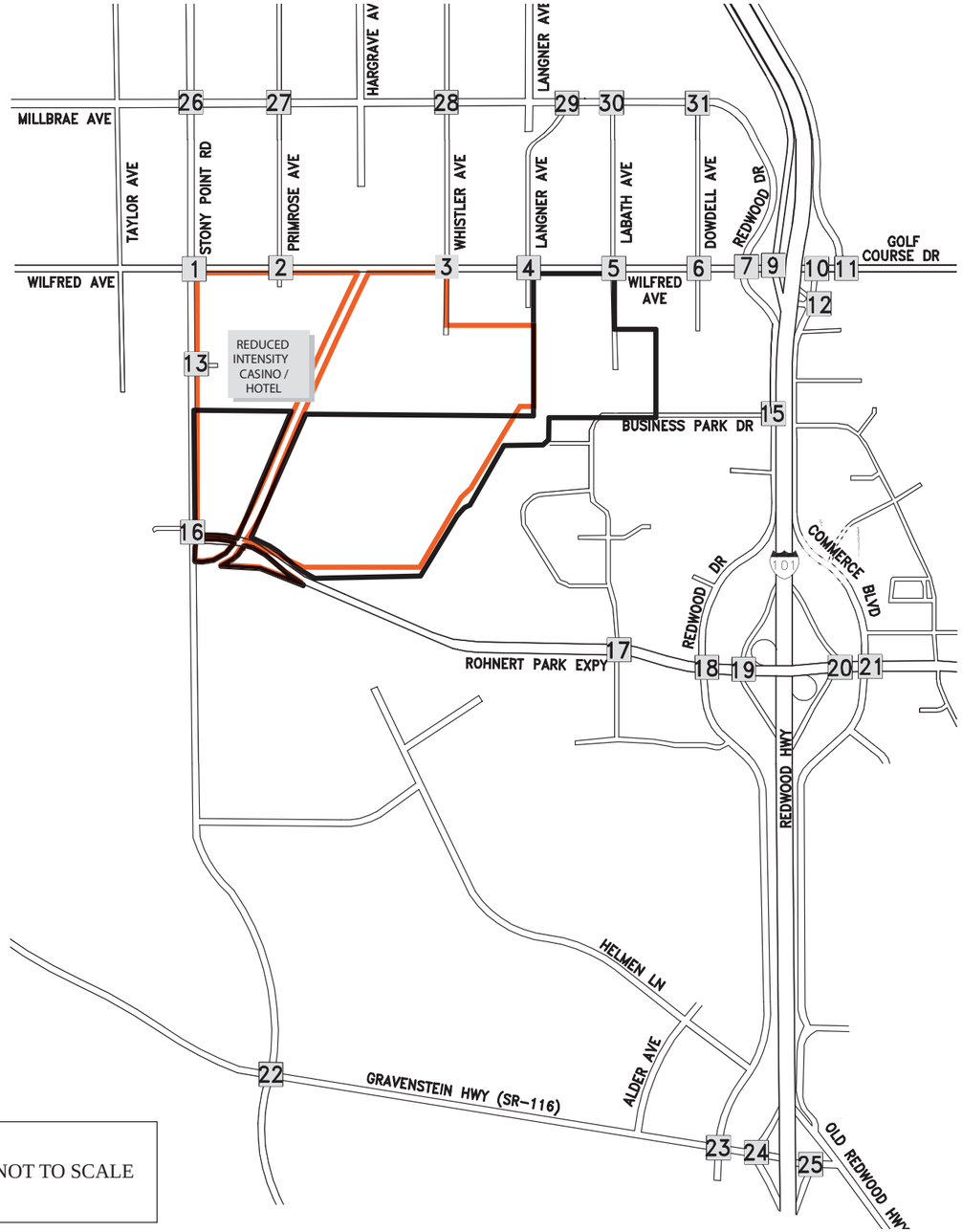
- Rohnert Park Expressway SB On-Ramp (Loop Ramp)
- Rohnert Park Expressway SB On-Ramp
- US-101 between Rohnert Park Expressway and SR-116 (SB)
- SR-116 SB Off-Ramp
- SR-116 SB On-Ramp

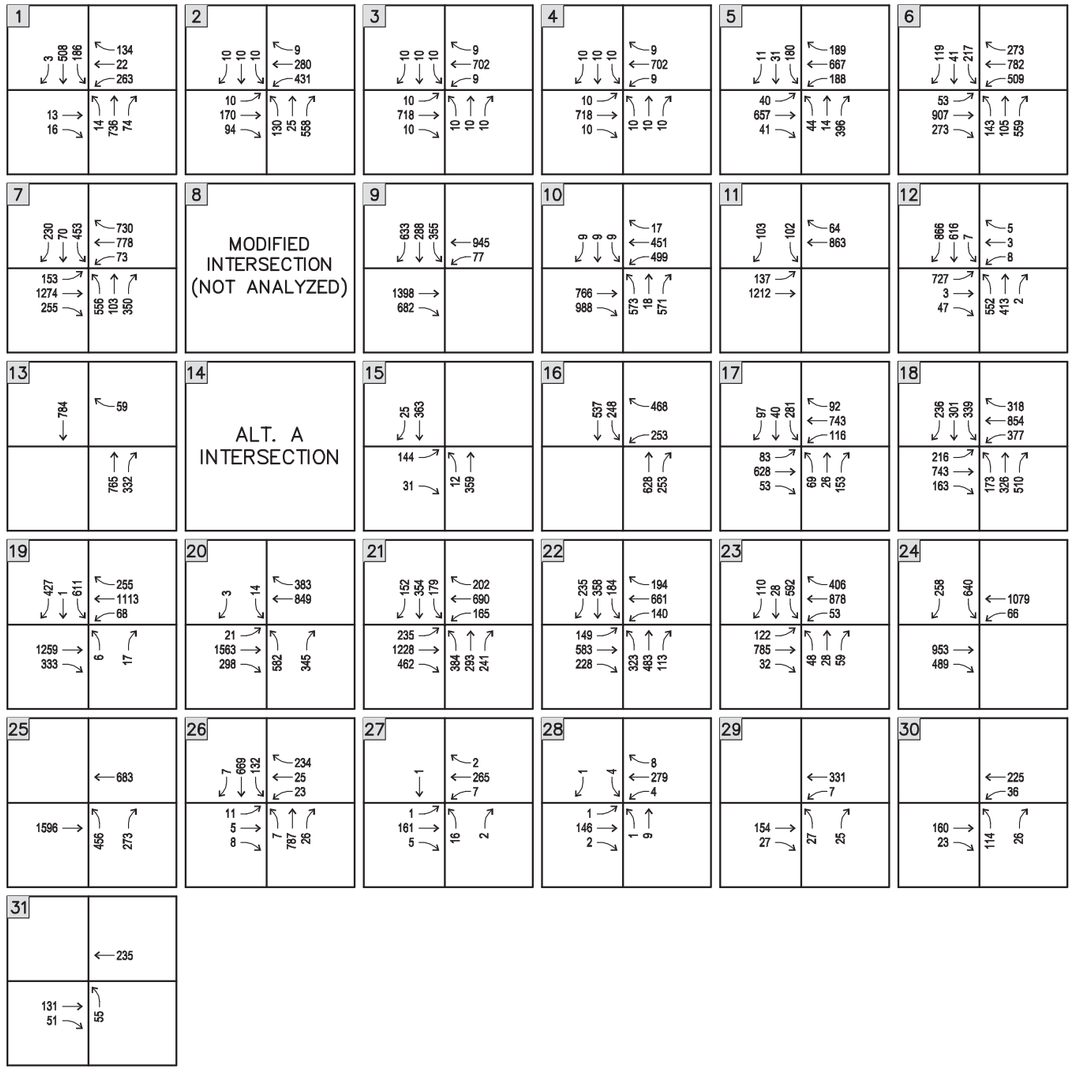
For analysis of intersection conditions, Cumulative without Project condition traffic volumes were combined with vehicle trips expected to be generated by Alternative D. The Redwood/Commerce intersection was not analyzed in the cumulative condition, as this intersection would no longer remain in place after the US-101/Wilfred Avenue Interchange project is constructed. **Table 4.12-11** summarizes the Cumulative Plus Alternative D Peak Hour Intersection Conditions. The Cumulative without Project condition is provided as a baseline condition. Under the 2020 Plus Alternative D Conditions the following study intersections and approaches are forecast to operate at an unacceptable LOS:

- Wilfred Avenue/ Stony Point Road
- Wilfred Avenue/Primrose Avenue
- Wilfred Avenue /Labath Avenue
- Wilfred Avenue /Dowdell Avenue
- Wilfred Avenue /Redwood Drive
- Golf Course Drive/Commerce Boulevard
- Commerce Boulevard/US-101 NB Ramps
- Rohnert Park Expressway/Redwood Drive
- Millbrae Avenue/Stony Point Road

Figure 4.12-9 shows the 2020 Cumulative plus Project PM traffic volumes for Alternative D.

As shown above, Alternative D would have a significant cumulative impact on intersections and freeway segments and ramps. With implementation of mitigation measures described in **Section 5.2.7**, a less-than-significant cumulative transportation impact would result.





LEGEND

X STUDY AREA INTERSECTIONS

STONY POINT SITE

WILFRED SITE

SOURCE: Kimley Horn & Associates, 2006; AES, 2007

Figure 4.12-9

2020 Cumulative Plus Project PM Traffic Volumes – Alternative D

Agriculture

Cumulative loss of agriculture lands in Sonoma County would result from projected growth within the region and the outward expansion of cities and unincorporated urban areas. According to the NRCS, up to 43.6-acres of the land proposed for development under Alternative D is considered prime or unique farmlands or farmlands of statewide importance. However the agricultural capability of these lands is considered marginal. The NRCS evaluated the land at a California Storie Index rating of 41, which indicates that the land is suited to a few crops or to special crops and would require special management. The land proposed for development is approximately 0.007 percent of the farmland in the County. As with Alternative A, B, and C, the four parcels in the southern portion of the Wilfred site are currently under Williamson Act Contracts and would remain in agricultural use. It is expected that the Intergovernmental Agreement to be negotiated between the County and the Tribe pursuant to the MOU will provide the County with an enforceable right to provide that these parcels are used in a manner consistent with the terms of the Williamson Act contract. Overall, the effects of Alternative B on agricultural resources are not considered to significantly contribute to past, present and future effects of other projects to agriculture within the project vicinity. Given the extent of agriculturally protected land within the County, the inferior quality of agricultural land present on the site, which is evidenced by the Storie Index Rating, and the relatively small area that would be effected when compared to overall development proposed in the County, Alternative D's contribution to the cumulative loss of agricultural lands is considered less than significant.

Public Services

Effects to public services would not differ from those of Alternative B, except that impacts would be slightly lessened due to the reduced intensity of Alternative D. For water supply, wastewater service, solid waste, electricity, natural gas, telecommunications, law enforcement and schools the impact would be less than significant. The impacts to fire protection services would be significant. A less than significant cumulative effect would result after applying mitigation in **Section 5.2.8**.

Other Values

Noise

Noise effects would be similar to Alternative B; however, reduced in intensity, given that Alternative D is reduced in size and scope to Alternative B. **Table 4.12-12** shows that there are road segments that either would be above the 65 dB L_{dn} land use compatibility criterion or would rise above this level with the introduction of project traffic. It is assumed that noise sensitive development is present or proposed immediately adjacent to all of the segments that would be above this level. Therefore, this is considered a significant impact. Mitigation measures are

proposed in **Section 5.2.9** that would reduce traffic related noise impacts to a less-than-significant level.

Changes in traffic noise levels would exceed FICON significance criteria at one road segment, as shown in **Table 4.12-13**, resulting in a significant impact. Mitigation measures are provided in **Section 5.2.9** that would traffic related noise impacts to a less-than-significant level.

Note that noise-sensitive development is present along Rohnert Park Expressway in the form of the mobile home park. The mobile home park has been designed with a large buffer zone and a sound barrier between the park and Rohnert Park Expressway. Thus traffic noise from Rohnert Park Expressway is not expected to significantly affect any sensitive receptors within the mobile home park.

Visual Resources

Cumulative impacts to visual resources would be similar but reduced when compared with those of Alternative B, given that Alternative D is reduced in size and scope to Alternative B. The Alternative D facilities would be attractively designed as a resort facility and, in combination with other nearby development, would not constitute a significant cumulative visual effect to an already semi-developed environment.

Hazardous Materials

There are no existing known hazardous materials on the Stony Point site. This alternative would not use significant quantities of hazardous materials and mitigation has been identified to decrease any incidental spills to a less than significant level. There are no significant cumulative hazardous materials issues associated with this alternative.

ALTERNATIVE E – BUSINESS PARK

Land Resources

The geographic area for the analysis of cumulative impacts to Land Resources is the Santa Rosa Plain in Sonoma County, which is relatively flat in topography. Neither Alternative E nor cumulative development would significantly alter topography in the region. The principal effects to land resources associated with Countywide development (see **Section 4.12.2**) would be localized topographical changes and soil attrition, both of which are evaluated in terms of runoff characteristics, sedimentation and flow under permitting authorities and criteria relevant to Water Resources, below. Local permitting requirements for construction, such as the required preparation of a Stormwater Pollution Prevention Plan under the Clean Water Act, adherence to local building codes, and adherence to local planning/zoning requirements, would address

regional stormwater, geotechnical, seismic and mining hazards; therefore, no cumulative impacts related to land resources would occur as a result of Alternative E.

Water Resources

As with Alternative A, cumulative impacts are considered to be those from the Proposed Project and known planned development in the vicinity.

Treated Effluent Discharge

Under Alternative E, cumulative impacts from treated effluent discharge would be similar for Alternatives B. Impacts would be less than significant.

Groundwater

Under Alternative E, cumulative impacts to groundwater would be similar but reduced when compared to Alternative A, given that the groundwater demand is much lower for Alternative E. As with Alternative A, cumulative impacts to groundwater would be less than significant. Implementation of mitigation measures in **Section 5.2.2** would further reduce potential impacts to groundwater.

Air Quality

In the near term, operation of Alternative E is estimated to result in:

- 61 ppsd and 12 tpy of ROG,
- 70 ppsd and 15 tpy of NO_x, and
- 70 ppd and 13 tpy of PM_{10} emissions.

In 2020, operation of Alternative E is estimated to result in:

- 25 ppsd and 5 tpy of ROG,
- 26 ppsd and 5 tpy of NO_x, and
- 69 ppd and 13 tpy of PM_{10} emissions.

As shown in **Tables 4.12-3** and **4.12-4**, Alternative E generated 0.2 percent of the southern portion of Sonoma County total NOx in near term and only 0.1 percent in the year 2020. For ROG, Alternative E only generated 0.1 percent in the near term and 0.05 percent in 2020. The PM_{10} contribution for Alternative E is a little more but only 0.3 percent in the near term and 0.3 percent in 2020. The incremental effect of Alternative E is a relatively small portion of the countywide total for one project.

In 2020, ROG emissions generated by Alternative E traffic would be less than the 80 ppd and 15 tpy significance thresholds, NO_x emissions would be less than the 80 ppd and 15 tpy significance thresholds, and PM_{10} emissions would be less than the 80 ppd and 15 tpy significance threshold. Alternative E would result in a less than significant cumulative effect to ozone precursor and PM_{10} emissions because the incremental effect of this alternative is a small portion of the countywide total and the BAAQMD emissions thresholds would not be exceeded.

Carbon Monoxide Concentrations

As described in the traffic study of the project alternatives, traffic operations at project-affected signalized study intersections would be at a LOS D or better with Alternative E, under 2020 long-term future cumulative background conditions and traffic mitigation measures. Based on criteria presented in the University of California Davis Institute of Transportation Studies document *Transportation Project-Level Carbon Monoxide Protocol* (Garza, et al., 1997), intersections operating at LOS D or better typically do not result in CO concentrations that exceed State or federal standards. Therefore, Alternative E with traffic mitigation measures is considered to have a less-than-significant impact on CO air quality.

Odor Effects

Alternative E and other reasonable foreseeable projects in the area, when considered cumulatively, could result in potentially significant odor impacts. Several commercial centers are planned in the area near the intersection of Wilfred Avenue and US Highway 101. The common types of facilities that have been known to produce odors occur mostly in manufacturing/industrial zones and no manufacturing/industrial areas are projected for the area, although significant commercial development is planned. However, BAAQMD permit process, city/county permitting processes, and future environmental review processes will combine to ensure that Alternative E in combination with cumulative development would have a less-than-significant effect from odors.

Toxic Air Contaminants

Alternative E and other reasonable foreseeable projects in the area, when considered cumulatively, could result in potentially significant impacts from TACs. Several commercial centers are planned in the area around the intersection of Wilfred Avenue and US Highway 101. Potential TAC sources such as gasoline dispensing facilities and dry cleaners could site in these commercial areas. However, BAAQMD permit process, city/county permitting processes, and future environmental review processes will combine to ensure that Alternative E in combination with cumulative development would have a less-than-significant effect from toxic air contaminants.

Climate Change

The USEPA and CARB approved URBEMIS 2007 emissions modeling software estimates that Alternative E would result in the emission of approximately 8,941 tons per year of CO_2 during construction, which is expected to last 20 months (**Appendix W**). As shown in **Table 4.12-15,** during operation Alternative E would result in the emission CH_4 and N_2O equivalent to 303 tpy of CO_2e. Indirect emissions of CO_2, CH_4, and N_2O are estimated at 7 tpy of CO_2e. Total annual emissions during operation of the Alternative E would be equivalent to 25,832 tpy of CO_2e. Annual Alternative E GHG emissions would be approximately 0.0047 percent of California's predicted contribution to global GHG emissions in 2020 (see **Table 3.4-6**). Alternative E contributions to the annual global GHG emissions in 2020 would be approximately 0.0000030 percent.

The same state GHG reduction strategies would apply to Alternative E as Alternative A, given that Alternative E proposes commercial development similar to Alternative A. For the same reasons as Alternative A (see **Table 4.12-8**), Alternative E would not comply with one of the three applicable strategies, resulting in a potentially significant cumulative impact. A less than significant cumulative impact would result after the implementation of mitigation measures in **Section 5.2.3**

TABLE 4.12-15
ESTIMATED ALTERNATIVE E OPERATIONAL GHG EMISSIONS

CO_2 Emissions[1]					
Mobile Sources		**Area Sources**			**Total CO_2e**
tons per year		**tons per year**			**tons per year**
25,133		389			25,522
CH_4 and N_2O Emission from Mobile Sources[2]					
Emission Factor ($CO_2/CH_4/N_2O$)	**Miles Traveled**	**CH_4**		**N_2O**	**Total CO_2e**
g/mile	**miles/day**	**tons per year**			**tons per year**
552.08/0.05/0.05	45,473	19		284	303
Indirect GHG emissions[2]					
Emission Factor (Kg of $CO_2/CH_4/N_2O$)	**Estimated kW-h Usage[3]**	**CO_2**	**CH_4**	**N_2O**	**Indirect CO_2e**
lb/MW-h	**MW-h/year**	**tons per year**			
804.54/0.006/0.0037	39	7	0.00	0.00	7
		Total Operation CO_2e tons per year			**25,832**

NOTES: [1] Estimated from USEPA and CARB approved URBEMIS air quality program (**Appendix W**)
[2] Emission factors from Climate Change Action Registry
[3] Estimated using 4,500 kilowatts-hours/month of power used.
SOURCE: URBEMIS, 2007; Climate Change Action Registry, 2007.

Biological Resources

The cumulative impacts of Alternative E to biological resources are similar, but reduced in intensity, to those of Alternative B, given that Alternative E is reduced in size and scope when compared with Alternative B. Less than significant cumulative effects to biological resources would result except that a potentially significant cumulative impact to Threatened and/or Endangered Species would result. Mitigation is discussed in **Section 5.2.4**.

Cultural Resources

Cumulative effects to cultural resources would be similar to those of Alternative B, given that the development would affect the same potentially eligible cultural resources as Alternative B. Mitigation measures are presented in **Section 5.2.5** for the protection and preservation of known archaeological and historical sites, and for the treatment of unanticipated discoveries. Therefore, the development of Alternative E is expected to result in less-than-significant cumulative effects to cultural resources.

Socioeconomic Conditions

Impacts would be lower in intensity and would not include the gaming-related impacts described under Alternative A. Potentially significant social and fiscal effects will be offset from the inclusion of mitigation measures addressed in **Section 5.2.6**. Cumulative socioeconomic effects would be less-than-significant after mitigation.

Resource Use Patterns

Transportation/Circulation

Table 4.12-10 summarizes the Cumulative plus Alternative E freeway segment and ramp performance condition. The Cumulative without project is provided as a baseline condition. Under the 2020 plus Alternative E conditions the following freeway segments and ramps are forecast to operate at an unacceptable LOS:

- US-101 North of Santa Rosa Avenue
- US-101 between Wilfred Ave and Santa Rosa Avenue (SB)
- Wilfred Ave SB Off-Ramp
- Wilfred Ave SB On-Ramp
- US-101 between Rohnert Park Expressway and Wilfred Ave (SB)
- Rohnert Park Expressway SB Off-Ramp
- Rohnert Park Expressway SB On-Ramp (Loop Ramp)
- Rohnert Park Expressway SB On-Ramp
- US-101 between Rohnert Park Expressway and SR-116 (SB)

- SR-116 SB Off-Ramp
- SR-116 SB On-Ramp

For analysis of intersection conditions, Cumulative without Project condition traffic volumes were combined with vehicle trips expected to be generated by Alternative E. The Redwood/Commerce intersection was not analyzed in the cumulative condition, as this intersection would no longer remain in place after the US-101/Wilfred Avenue Interchange project is constructed. **Table 4.12-11** summarizes the Cumulative With Alternative E Peak Hour Intersection Conditions. The Cumulative without Project condition is provided as a baseline condition. Under the 2020 plus Alternative E Conditions the following study intersections and approaches are forecast to operate at an unacceptable LOS:

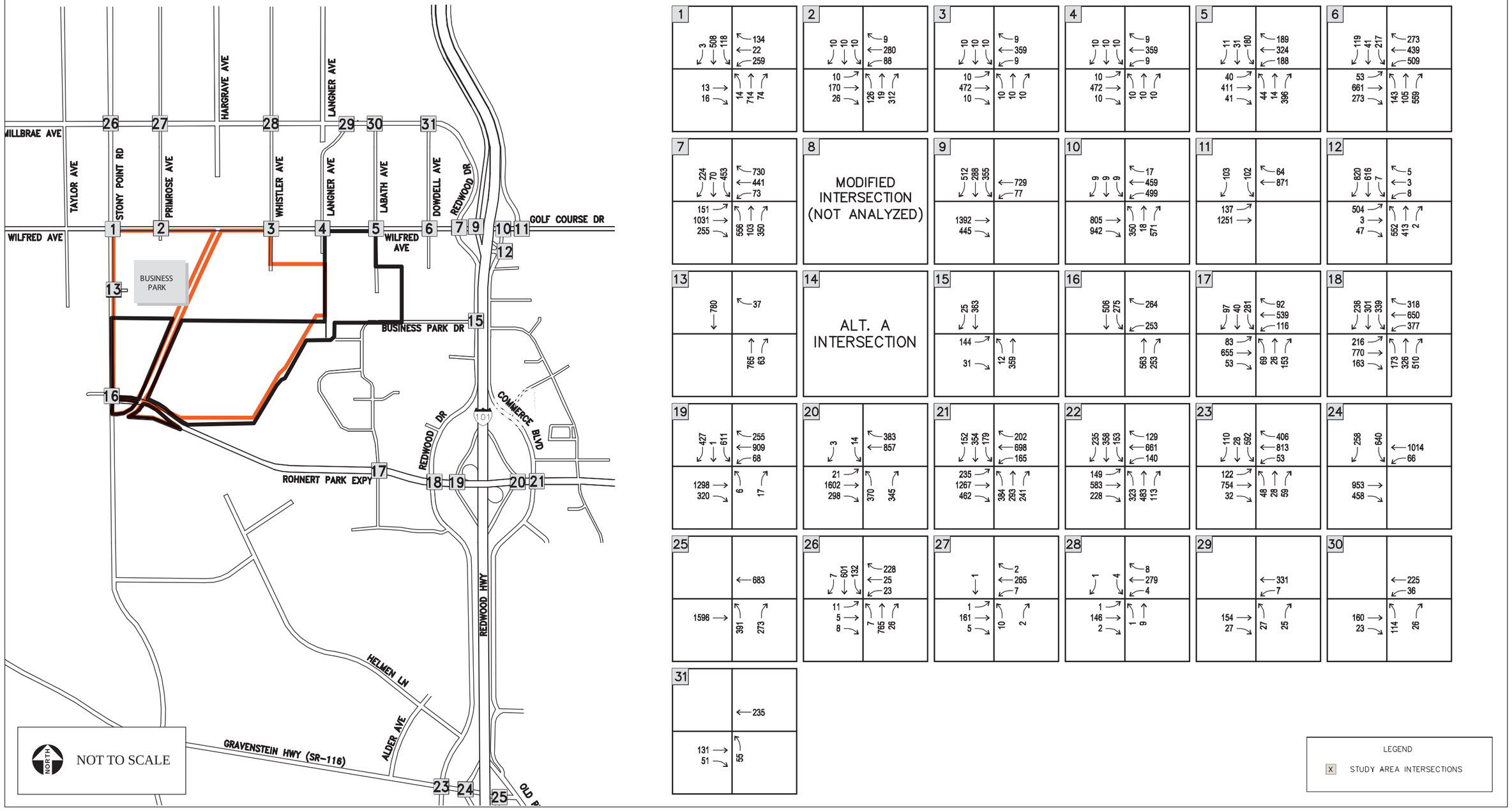
- Wilfred Avenue/ Stony Point Road
- Wilfred Avenue/Primrose Avenue
- Wilfred Avenue /Labath Avenue
- Wilfred Avenue /Dowdell Avenue
- Wilfred Avenue /Redwood Drive
- Golf Course Drive/Commerce Boulevard
- Rohnert Park Expressway/Redwood Drive
- Millbrae Avenue/Stony Point Road
- Rohnert Park Expressway/Commerce Boulevard

Figure 4.12-10 shows the 2020 Cumulative plus Project PM traffic volumes for Alternative E.

As shown above, Alternative E would have a significant cumulative impact on intersections and freeway segments and ramps. With implementation of mitigation measures described in **Section 5.2.7,** a less-than-significant cumulative transportation impact would result.

Agriculture

Cumulative loss of agriculture lands in Sonoma County would result from projected growth within the region and the outward expansion of cities and unincorporated urban areas. According to the NRCS, up to 38.1-acres of the land proposed for development under Alternative E is considered prime or unique farmlands or farmlands of statewide importance. However the agricultural capability of these lands is considered marginal. The NRCS evaluated the land at a California Storie Index rating of 41, which indicates that the land is suited to a few crops or to special crops and would require special management. The land proposed for development is approximately 0.0061 percent of the farmland in the County. As with Alternative A, B, C, and D, the four parcels in the southern portion of the Wilfred site are currently under Williamson Act



SOURCE: Kimley Horn & Associates, 2006; AES, 2007

Figure 4.12-10
2020 Cumulative Plus Project PM Traffic Volumes – Alternative E

Contracts and would remain in agricultural use. It is expected that the Intergovernmental Agreement to be negotiated between the County and the Tribe pursuant to the MOU will provide the County with an enforceable right to provide that these parcels are used in a manner consistent with the terms of the Williamson Act contract. Overall, the effects of Alternative E on agricultural resources are not considered to significantly contribute to past, present and future effects of other projects to agriculture within the project vicinity. Given the extent of agriculturally protected land within the County, the inferior quality of agricultural land present on the site, which is evidenced by the Storie Index Rating, and the relatively small area that would be effected when compared to overall development proposed in the County, Alternative E's contribution to the cumulative loss of agricultural lands is considered less than significant.

Public Services

Effects to public services would not differ from Alternative B, except that impacts would be substantially lessened due to the reduced intensity of Alternative E and because the development is not likely to be open to the public 24-hours a day, like the proposed casino/hotel resort. For water supply, wastewater service, solid waste, electricity, natural gas, telecommunications, law enforcement and schools, the impacts would be less than significant. The impacts to fire protection services would be significant due to the lack of a formal agreement for services. A less-than-significant cumulative effect would result after applying mitigation listed in **Section 5.2.8**.

Other Values

Noise

Noise effects would be similar to those of Alternative B; however, reduced in intensity, given that Alternative E proposes the development of a business park that is reduced in size when compared with Alternative B. **Table 4.12-12** shows that there are road segments that either would be above the 65 dB L_{dn} land use compatibility criterion or would rise above this level with the introduction of project traffic. It is assumed that noise sensitive development is present or proposed immediately adjacent to all of the segments that would be above this level. Therefore, this is considered a significant impact. Mitigation measures are proposed in **Section 5.2.9** that would reduce traffic related noise impacts to a less-than-significant level.

Changes in traffic noise levels would not exceed FICON significance criteria, as shown in **Table 4.12-13**.

Note that noise-sensitive development is present along Rohnert Park Expressway in the form of the mobile home park. The mobile home park has been designed with a large buffer zone and a sound barrier between the park and Rohnert Park Expressway. Thus traffic noise from Rohnert

Park Expressway is not expected to significantly affect any sensitive receptors within the mobile home park.

Visual Resources

As growth occurs within the City of Rohnert Park and Sonoma County, cumulative effects to visual resources may take place as the result of increased development. However, cumulative development that takes place within the area would be consistent with local land use regulations. The construction portion of the Stony Point site is not located in a scenic corridor or an area of high aesthetic value, commercial attraction notwithstanding. Substantial development is present to the east of the Stony Point site, with open space to the west. This development includes regional commercial and service centers. The Alternative E facilities would be attractively designed as a resort facility and, in combination with other nearby development, would not constitute a significant cumulative visual effect to an already semi-developed environment.

Hazardous Materials

There are no existing known hazardous materials on the Stony Point site. This alternative would not use significant quantities of hazardous materials and mitigation has been identified to decrease any incidental spills to a less than significant level. There are no significant cumulative hazardous materials issues associated with this alternative.

ALTERNATIVE F – LAKEVILLE SITE

Land Resources

The geographic area for the analysis of cumulative impacts to land resources is southern Sonoma County, which is relatively flat in topography. Neither Alternative F nor cumulative development would significantly alter topography in the region. The principal effects to land resources associated with Countywide development (see **Section 4.12.2**) would be localized topographical changes and soil attrition, both of which are evaluated in terms of runoff characteristics, sedimentation and flow under permitting authorities and criteria relevant to Water Resources, below. Local permitting requirements for construction, such as the required preparation of a Stormwater Pollution Prevention Plan under the Clean Water Act, adherence to local building codes, and adherence to local planning/zoning requirements, would address regional stormwater, geotechnical, seismic and mining hazards; therefore, no cumulative impacts related to land resources would occur as a result of Alternative F.

Water Resources

The Petaluma Valley Basin has been subject to intensive development for domestic use (mostly in rural areas), and moderate development for stock watering, municipal, irrigation, and industrial use. The lower Petaluma Valley (where the wells under Alternative F would be located) is

characterized by a low density of wells and contains no municipal water supply wells. The closest municipal wells, approximately nine miles north of the Lakeville site serve the City of Petaluma.

Groundwater pumping by the City of Petaluma reduced water levels from the mid-1950s through the early 1960s, which resulted in the intrusion of brackish water. The City subsequently reduced its reliance on groundwater, and by 1980, met 15 percent of its water demand with groundwater. At that time, the total annual groundwater pumpage in the basin was estimated as 7,800 acre-feet, and CDWR indicated that there was no evidence of overdraft in the basin. In the last several decades, Petaluma has used its groundwater wells only for emergency backup purposes and intends to continue doing so through 2023. Beginning in 2024, the City estimates an increase of use up to 186 afy of groundwater for supply during peak demand periods. Information obtained from CDWR indicates that combined municipal, industrial and agricultural groundwater pumping in the South Sonoma Detailed Analysis Unit (DAU) (which includes both Petaluma and Sonoma Valleys) is expected to decrease about 73-percent below 1999 levels by the year 2020 (Komex, Inc., 2007b).

Basinwide, the proposed pumping rate for the project (200 gpm or 323 afy) is about four-percent of the estimated groundwater pumping in 1980, which did not result in observed conditions indicative of overdraft. Based on the available data, it is likely that basinwide groundwater demand will remain substantially below 1980 levels, even with the addition of project pumping. As such, the project is not likely to contribute to a basinwide groundwater decline; however, given the hydrogeologic setting of the Alternative F, it is more likely to result in more localized effects in the southern Petaluma Valley basin, where it will represent a much higher percentage of local groundwater pumping. Thus, seawater intrusion to some degree may result from project pumping (see discussion in **Appendix G**), which could degrade portions of the freshwater aquifer, and result in a significant impact. With mitigation measures listed in **Section 5.2.2** are implemented, impacts would be rendered less than significant.

Air Quality

In the near term, operation of Alternative F is estimated to result in:

- 408 ppsd and 83 tpy of ROG,
- 819 ppsd and 175 tpy of NO_x, and
- 878 ppd and 160 tpy of PM_{10} emissions.

In 2020, operation of Alternative F is estimated to result in:

- 160 ppsd and 32 tpy of ROG,
- 282 ppsd and 60 tpy of NO_x, and

- 875 ppd and 160 tpy of PM_{10} emissions.

As shown in **Tables 4.12-3** and **4.12-4**, Alternative F generated 2.3% of the countywide total NOx in near term and only 1.4% in 2020. For ROG, Alternative F only generated 0.7% in the near term and 0.3% in 2020. The PM_{10} contribution for Alternative F is a little more with 3.9% in the near term and 3.7% in 2020. The incremental effect of Alternative F is a relatively large portion of the countywide total for one project. This is especially true regarding PM_{10} emissions, where percentages are almost 4%. Alternative F would exacerbate the regional trend towards higher PM_{10} emissions.

In 2020, ROG emissions generated by casino traffic would exceed the 80 ppd and 15 tpy significance thresholds, NO_x emissions would exceed the 80 ppd and 15 tpy significance thresholds, and PM_{10} emissions would exceed the 80 ppd and 15 tpy significance thresholds; significant effects would result. ROG, NO_x, and PM emissions associated with operation of Alternative F could be reduced to a less than significant level by implementing mitigation measures in **Section 5.2.3**.

Carbon Monoxide Concentrations

As described in the traffic study of the project alternatives, traffic operations at signalized study intersections would be at LOS D or better with Alternative F, under 2020 long-term future cumulative background conditions and traffic mitigation measures. Based on criteria presented in the University of California Davis Institute of Transportation Studies document *Transportation Project-Level Carbon Monoxide Protocol* (Garza, et al., 1997), intersections operating at LOS D or better typically do not result in CO concentrations that exceed State or federal standards. Therefore, Alternative F with traffic mitigation measures is considered to have a less-than-significant impact on CO air quality.

Odor Effects

When considered cumulatively Alternative F and other reasonable foreseeable projects in the area, , could result in potentially significant odor impacts. The common types of facilities that have been known to produce odors occur mostly in manufacturing/industrial zones and occasionally in commercial areas; however, there are no manufacturing/industrial or commercial areas projected for the area. Therefore Alternative F in combination with any cumulative development would have a less-than-significant odor effect.

Toxic Air Contaminants

Alternative F and other reasonably foreseeable projects in the area, when considered cumulatively, could result in potentially significant impacts from TACs No

manufacturing/industrial or commercial areas projected for the area; therefore, Alternative F in combination with cumulative development would have a less-than-significant effect from TACs.

Climate Change

Alternative F would have the same GHG emissions as Alterative A (**Table 4.11-7**), because the building square footage and trip generation rates for Alternative F is the same as Alternative A. Cumulative impacts from GHGs would be the same as Alternative A; therefore a potentially significant cumulative impact would result. Measures in **Section 5.2.3** would ensure a less than significant cumulative impact.

Biological Resources

Development of the Lakeville site is expected to have significant cumulative impact to biological resources due to the loss of Sonoma sunshine, Myrtle's silverspot, Callippe silverspot, and California red-legged frog habitat. The footprint of development for Alternative F will impact over 20-acres of wetland habitat on the Lakeville site. The area surrounding the proposed development is largely wetlands. Impacts to wetlands will be minimized with preservation of existing or the creation of new wetlands. Cumulative impacts are projected to be significant if other development scheduled for the area also reduces habitat for special-status species. This is a potentially significant cumulative impact.

The impacts of Alternative F to biological resources would be similar to those of the Rohnert Park alternatives, but the potentially affected species and habitats differ owing to the location of the site and adjoining developable land adjacent to San Pablo Bay. Mitigation measures are discussed in **Section 5.2.4**, though the measures will not reduce the cumulative impact to less than significant.

Cultural Resources

Cumulative effects to cultural resources occur when sites that contain cultural features or artifacts are disturbed by urban development. As these resources are destroyed or displaced, important information is lost and the connection to past events, people and cultures is diminished. Sonoma County contains extensive known and unknown cultural resources including sites associated with well documented prehistoric and historic human occupation in the area (see **Section 3.6.1**). As Sonoma County continues to grow, resources, including historic buildings and archaeological sites, may be lost.

Based on the extensive presence of cultural resources in Sonoma County, it is expected that future development may result in significant losses of cultural resources. Development proposed under Alternative F may affect one prehistoric archaeological site (CA-SON-204) that is potentially

eligible for the NRHP. Mitigation measures are presented in **Section 5.2.5** for the protection and preservation of known archaeological and historical sites, and for the treatment of unanticipated discoveries. Therefore, the development of Alternative F is expected to result in a less-than-significant incremental effect to the cumulative loss of important cultural resources in Sonoma County.

Socioeconomic Conditions

Cumulative socioeconomic effects of Alternative F would be similar to those of Alternative A, but the effects would be centered more on southern Sonoma County. The Rohnert Park MOU would not apply to Alternative F, although effects to Rohnert Park would be minimal. Potentially significant social and fiscal effects would be offset from the inclusion of mitigation measures addressed in **Section 5.2.6**. Cumulative socioeconomic effects are expected to be less than significant after mitigation.

Resource Use Patterns

Transportation/Circulation

Figure 4.12-11 illustrates the 2020 lane geometry and traffic control for Alternative F. **Figure 4.12-12** shows the 2020 Cumulative without Project Condition PM traffic volumes for the project area for Alternative F.

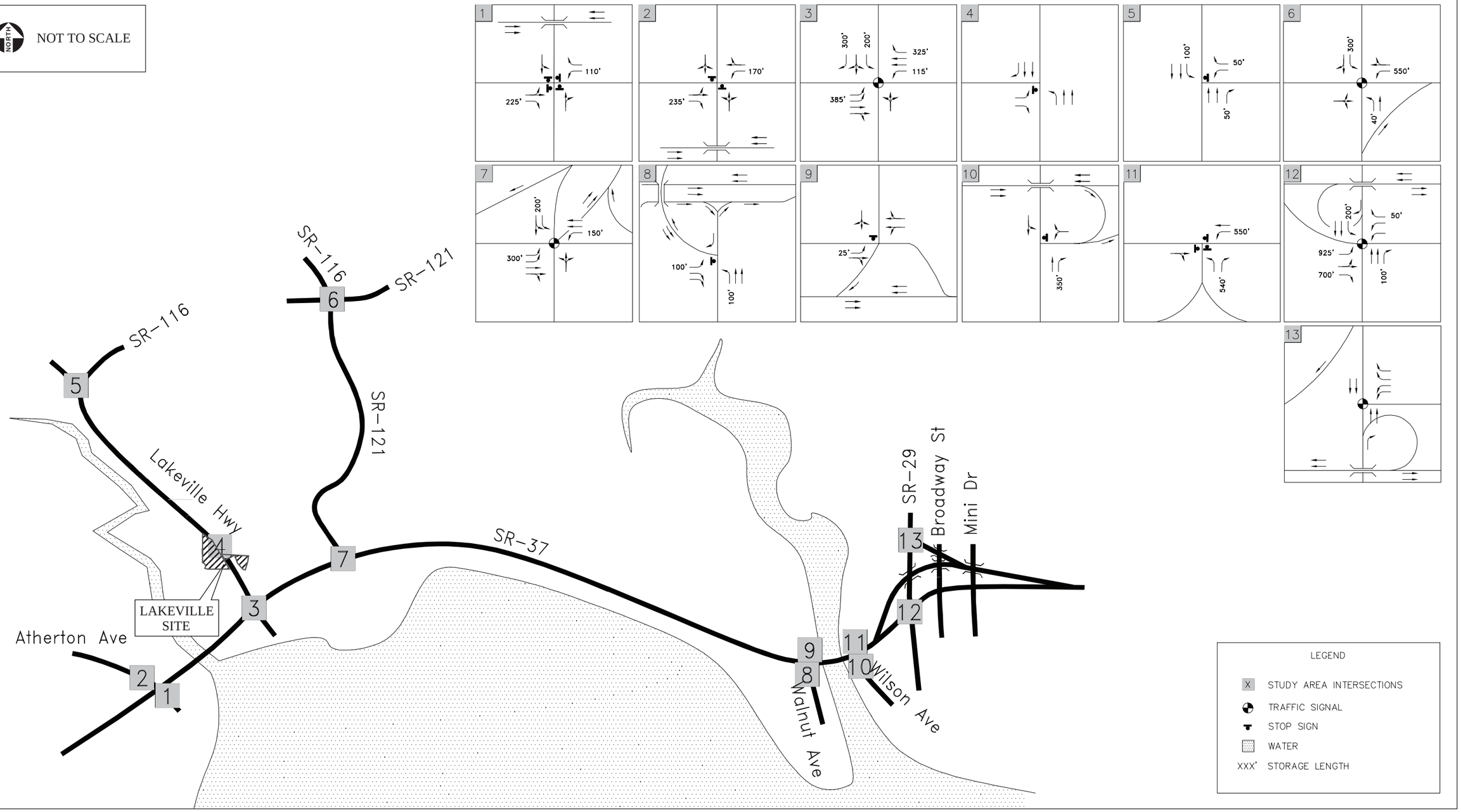
The project study area is the same as described in **Section 4.8** under Alternative F. The project study area is the same as described in **Section 4.8** under Alternative F. The analysis methodologies are the same as described in **Section 4.8** under Alternative F. The analysis of significance is the same as described in **Section 4.8** under Alternative F.

Cumulative-Freeway Segments and Ramps

Traffic analyses completed to evaluate the operation of the freeway segments and ramps, is included in **Table 4.12-12** for the year 2020 without the Project and with Alternative F. Project trips generated by the proposed casino and hotel were added to the year 2020 forecast freeway volumes to calculate the 2020 and Alternative F volumes. Freeway segment analyses were limited to the mix-use travel lanes, which are expected to have significantly more congestion than the future HOV lanes. The Cumulative Without Project is provided as a baseline condition. As shown in **Table 4.12-12**, the following highway segments and ramps would operate unacceptably in 2020 without the addition of Alternative F traffic:

- SR-121 between SR-37 and SR-116 (NB)
- Walnut Avenue EB Off-Ramp
- Wilson Avenue EB Off-Ramp

NOT TO SCALE



SOURCE: Kimley Horn & Associates, 2006; AES, 2007

Figure 4.12-11

2020 Lane Geometry and Traffic Control – Lakeville Site Vicinity

NOT TO SCALE

1
8 ← 247
45 ↖
69 ↗
75 →
11 ↘
42 → 9 ↗

2
1 ← 2
2 ↖
95 ← 59 ↖
2 ↗
248 →
36 ↘
137 → 7 ↗

3
56 ↙ 21 ← 431 ↖
568 ↖
1067 ← 1 ↖
583 ↗
1784 →
29 ↘
6 → 23 → 59 ↗

4
470 ←
1144 →

5
409 ↙ 119 ↙
66 ↖
24 ↖
1058 ↑ 80 ↑

6
13 ↙ 260 ↙ 447 ↙
497 ↖
11 ← 336 ↖
50 ↗
42 →
8 ↘
8 ↑ 441 ↑ 609 ↑

7
476 ↙ 1 ← 199 ↙
102 ↖
1122 ← 1 ↖
878 ↗
1400 →
3 ↘
5 → 3 →

8
9 ←
1779 ↘
381 → 2806 →

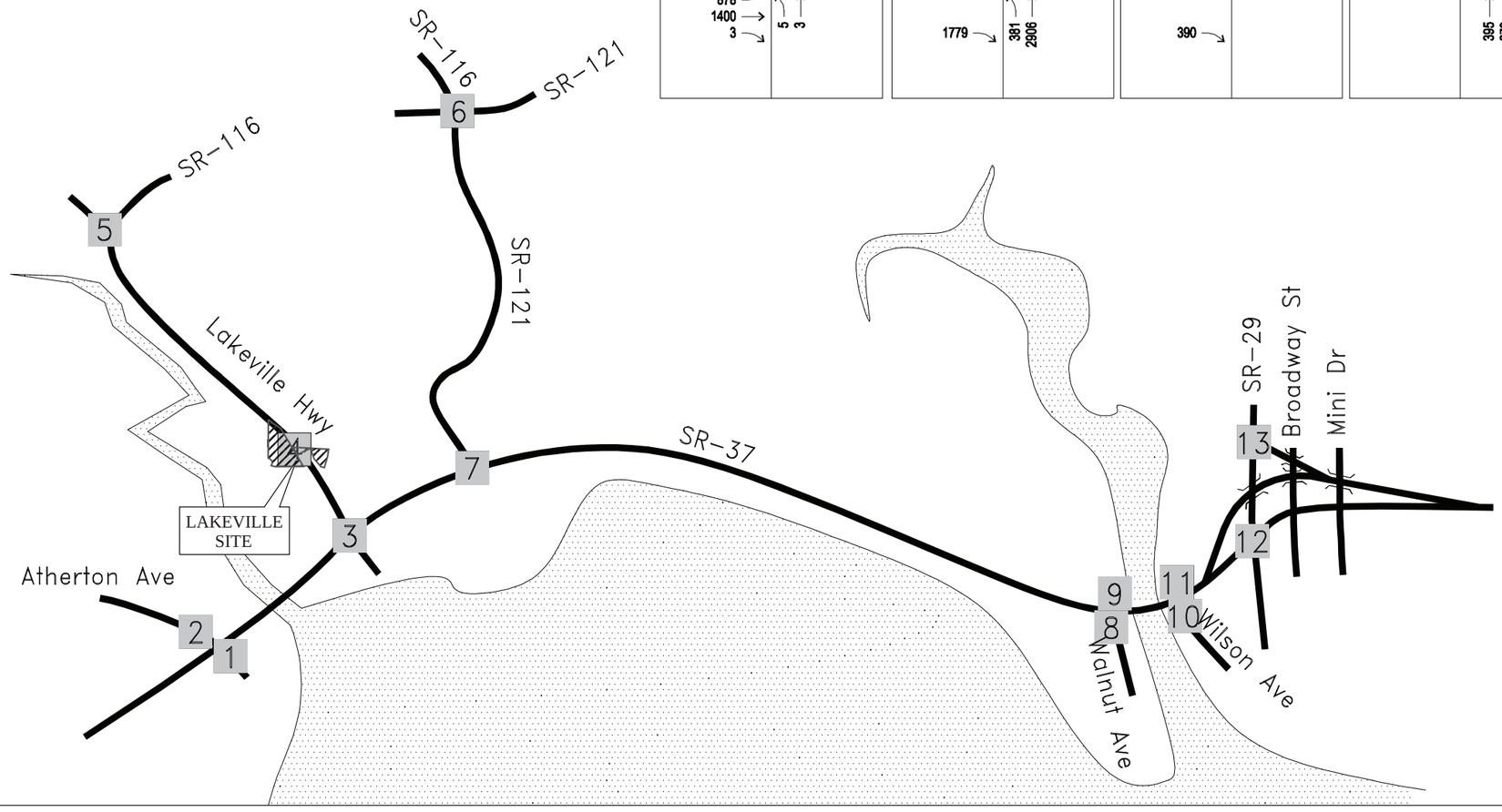
9
1780 ←
390 ↘

10
172 ↙ 47 ↙
560 ↖
628 ← ↖
395 → 279 →

11
53 ← 66 ←
539 →
348 ↘
145 → 169 ↑

12
1053 ↙ 200 ↙
451 ↖
102 ← ↖
597 ↗
96 →
604 ↘
1515 → 151 →

13
676 ↙ 1802 ↙
1499 ↖
460 ← ↖
1707 ↑ 104 ↑



SOURCE: Kimley Horn & Associates, 2006; AES, 2007

Figure 4.12-12
No Project Cumulative PM Traffic Volumes – Lakeville Site Vicinity

- Wilson Avenue EB On-Ramp
- SR-29 EB Off-Ramp
- Wilson Avenue WB On-Ramp
- SR-121 between SR-116 and SR-37 (SB)

As shown in **Table 4.12-16**, the following highway segments and ramps would operate unacceptably in 2020 with the addition of Alternative F traffic:

TABLE 4.12-16
HIGHWAY SECTION/RAMP LOS - ALTERNATIVE F

Highway Section/Ramp	Criteria	2020		2020 + Alt. F	
	LOS	LOS	MOE*	LOS	MOE*
Eastbound / Northbound					
Atherton Avenue EB Off- Ramp	C	C	24.1	**D**	**28.4**
SR-37 between Atherton Avenue and Lakeville Hwy (EB)	C	C	23.2	**D**	**28.1**
Lakeville Highway between SR-37 and SR-116 (NB)	C	B	11.4	-	-
Lakeville Highway between SR-37 and Site (NB)	C	-	-	C	21.4
Lakeville Highway between Site and SR-116 (NB)	C	-	-	B	12.6
Lakeville Highway between SR-116 and Frates Road (NB)	C	A	10.9	**B**	**11.9**
Lakeville Highway between Frates Road and US-101 (NB)	C	C	19.7	**C**	**20.5**
SR-37 between Lakeville Highway and SR-121 (EB)	C	C	22.1	**D**	**27.0**
SR-121 between SR-37 and SR-116 (NB)	C	**E**	**89.1% 39.8**	**E**	**89.3% 39.0**
Walnut Avenue EB Off-Ramp	C	B	16.3	C	20.4
Walnut Avenue EB On- Ramp	C	**F**	**65.2**	**F**	**68.8**
Wilson Avenue EB Off- Ramp	C	**F**	**45.1**	**F**	**49.1**
Wilson Avenue EB On- Ramp	C	**E**	**37.3**	**F**	**40.4**
SR-29 EB Off- Ramp	C	**D**	34.2	**F**	**37.7**
Westbound / Southbound					
SR-29 WB Off- Ramp	C	B	15.5	B	18.3
SR-29 WB On- Ramp (loop)	C	B	18.1	C	21.6
SR-29 WB On- Ramp	C	C	26.7	**D**	**30.7**
Wilson Avenue WB Off- Ramp	C	C	22.1	C	26.0
Wilson Avenue WB On- Ramp	C	**D**	31.2	**E**	**35.7**
Walnut Avenue WB Off- Ramp	C	C	21.2	C	25.7
Walnut Avenue WB On- Ramp	C	B	17.4	C	21.6
Lakeville Highway between US-101 and Pine View Way (SB)	C	B	14.8	B	15.7
Lakeville Highway between Pine View Way and SR-116 (SB)	C	A	5.1	A	6.3
SR-121 between SR-116 and SR-37 (SB)	C	**E**	**87.8% 39.9**	**E**	**88.9% 39.0**
SR-37 between SR-121 and Lakeville Hwy (WB)	C	B	15.9	C	21.3
Lakeville Highway between SR-116 and SR-37 (SB)	C	A	4.9	-	-
Lakeville Highway between SR-37 and Site (SB)	C	-	-	A	6.0
Lakeville Highway between Site and SR-116 (SB)	C	-	-	B	13.8
SR-37 between Lakeville Highway and Atherton (WB)	C	A	10.9	B	15.0
Atherton Avenue WB Off- Ramp	C	B	13.4	B	17.3
Atherton Avenue WB On- Ramp	C	B	12.9	B	16.3

NOTE: Bold text denotes unacceptable LOS.
*Measure of Effectiveness (MOE) for two lane highways = percent time following & average travel speed (mi/hr).
*MOE for multi-lane highways & ramps = density (pc/mi/ln).
SOURCE: Kimley-Horn and Associates, 2008; AES, 2007

- Atherton Avenue EB Off-Ramp
- SR-37 between Atherton Avenue and Lakeville Highway (EB)
- SR-37 between Lakeville Highway and SR-121 (EB)
- SR-121 between SR-37 and SR-116 (NB)
- Walnut Avenue EB Off-Ramp
- Wilson Avenue EB Off-Ramp
- Wilson Avenue EB On-Ramp
- SR-29 EB Off-Ramp
- SR-29 WB On-Ramp
- Wilson Avenue WB On-Ramp
- SR-121 between SR-116 and SR-37 (SB)

Table 4.12-17 summarizes the Cumulative Plus Alternative F Peak Hour intersection conditions. The Cumulative without Project condition is provided as a baseline condition. Under the 2020 without Alternative F conditions, the following study intersections and approaches are forecast to operate at an unacceptable LOS:

- Lakeville Highway/SR-116
- SR-116/SR-121
- Walnut Avenue/SR-37 EB Ramps
- Wilson Avenue/SR-37 EB Ramps
- Wilson Avenue/SR-37 WB Off-Ramp
- SR-121/SR-37 EB Off-Ramp
- SR-29/SR-37 WB Off-Ramp

Under the 2020 Plus Alternative F conditions, the following study intersections and approaches are forecast to operate at an unacceptable LOS:

- Lakeville Highway/SR-37
- Lakeville Highway/SR-116
- SR-116/SR-121
- Walnut Avenue/SR-37 EB Ramps
- Wilson Avenue/SR-37 EB Ramps
- Wilson Avenue/SR-37 WB Off-Ramp
- SR-121/SR-37 EB Off-Ramp
- SR-29/SR-37 WB Off-Ramp
- Lakeville Highway/Main Project Access

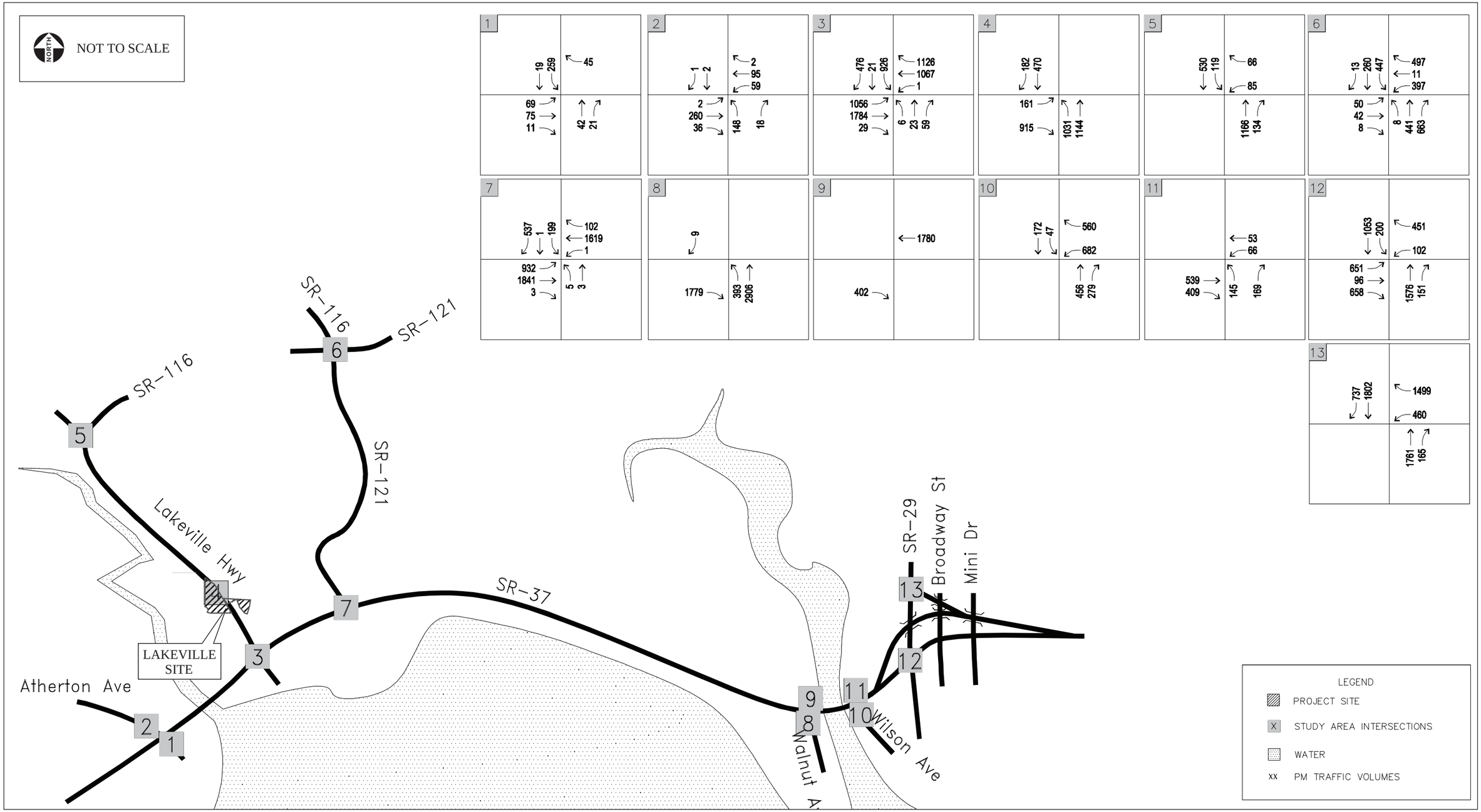
As shown above, Alternative F would have a significant cumulative impact on intersections and freeway segments and ramps. With implementation of mitigation measures described in **Section 5.2.7,** a less-than-significant cumulative transportation impact would result for all intersections and freeway segments/ramps, except for two freeway/ramp segments, where a significant cumulative transportation impact would remain.

Figure 4.12-13 shows the 2020 Cumulative Plus Project PM traffic volumes for Alternative F.

TABLE 4.12-17
PEAK HOUR INTERSECTION CONDITIONS – CUMULATIVE PLUS ALTERNATIVE F

	Intersection	Criteria	Signal Controls	2020			
				Base (w/o Project)		With Project	
				LOS	Delay*	LOS	Delay*
1	Atherton Avenue / Harbor Drive & SR-37 EB Off-Ramp	C	AWSC	A	9.4	A	9.7
2	Atherton Avenue / Glen Lane & SR-37 WB Ramps	C	TWSC	C	16.1	C	16.8
3	Lakeville Highway / SR-37	C	TS	C	33.8	**F**	**176.3**
4	Lakeville Highway / Main Project Access	D	TWSC	A	0.0	**F**	**OVRFL**
5	Lakeville Highway / SR-116	C	TWSC	**D**	**29.3**	**F**	**435.7**
6	SR-121 / SR-116	C	AWSC/TS	**D**	**42.8**	**D**	**47.5**
7	SR-121 / SR-37	C	TS	**D**	**50.9**	**F**	**107.6**
8	Walnut Avenue / SR-37 EB Ramps	C	TWSC	C	24.9	C	24.9
9	Mare Island / SR-37 WB Ramps	C	TWSC	A	0.0	A	0.0
10	Wilson Avenue / SR-37 EB Ramps	C	TWSC	**F**	**763.7**	**F**	**OVRFL**
11	Wilson Avenue / SR-37 WB Off-Ramp	C	AWSC	**F**	**134.6**	**F**	**163.1**
12	SR-29 / SR-37 EB Off-Ramp	C	TS	**D**	**35.6**	**D**	**42.0**
13	SR-29 / SR-37 WB Off-Ramp	C	TS	**F**	**94.5**	**F**	**94.5**
14	Lakeville Highway / US-101 SB Ramps	C	TS	C	32.3	**D**	**36.3**
15	Lakeville Highway / US-101 SB Ramps	C	TS	B	14.3	B	18.2

NOTES: *Delay in seconds.
Bold text denotes unacceptable LOS.
SOURCE: Kimley-Horn and Associates 2008; AES 2007



SOURCE: Kimley Horn & Associates, 2006; AES, 2007

Figure 4.12-13

Cumulative Plus Project PM Traffic Volumes – Alternative F

Agriculture

Cumulative loss of agriculture lands in Sonoma County would result from projected growth within the region and the outward expansion of cities and unincorporated urban areas. Under Alternative F, approximately 103.9-acres of rural lands would be directly converted to urban uses. According to the NRCS, the land proposed for development under Alternative F does not contain prime or unique farmlands or farmlands of statewide importance. Additionally, none of the parcels on the Lakeville site are currently protected under Williamson Act contracts. Overall, the effects of Alternative F on agricultural resources are not considered to significantly contribute to past, present and future effects of other projects to agriculture within the project vicinity. Given the extent of agriculturally protected land within the County, the inferior quality of agricultural land present on the site, which is evidenced by the Storie Index Rating, and the relatively small area that would be effected when compared to overall development proposed in the County, Alternative F's contribution to the cumulative loss of agricultural lands is considered less than significant.

Public Services

Effects to public services would not differ from Alternative A, except that impacts would be centered in southern Sonoma County and the existing MOU with Rohnert Park would not apply. The existing MOU with Sonoma County would require concurrence from the County to apply to the Lakeville Site. For water supply, wastewater service, solid waste, electricity, natural gas, telecommunications, law enforcement and schools the impact would be less than significant. The impacts to fire protection, and emergency medical services would be significant as there is no signed agreement to provide services. A less-than-significant cumulative effect would result after applying mitigation measures addressed in **Section 5.2.8**.

Other Values

Noise

Alternative F would contribute to the cumulative increase in traffic in the vicinity of the project site (see cumulative traffic analysis above). This would also result in a contribution to cumulative traffic noise effects. An environmental noise analysis report was conducted to assess the noise impacts of the Proposed Action and Alternatives (**Appendix R**).

For the traffic noise impact analysis, it was assumed that worst-case noise exposures would occur at reference distances of 50 feet from the centerlines of the roadways. Truck mix was estimated from the short-term traffic counts and from Caltrans data. Day – night distribution of traffic noise was estimated as 87 percent/13 percent. Based upon the traffic analysis prepared for Alternative F by Kimly-Horn & Associates, Inc. (**Appendix O**), the FHWA model was run to predict traffic noise levels for the roadways included in the traffic analysis. **Table 4.12-18** compares the 2020

cumulative traffic noise levels (at a reference distance of 50 feet from roadway centerline) with anticipated traffic noise levels after the implementation of Alternative F.

Table 4.12-18 shows that noise associated with existing traffic at the Lakeville site would exceed the 65 dB L_{dn} land use compatibility criterion at all studied road segments and intersections. Noise sensitive development, in the form of rural residences, is present along Lakeville Highway in the vicinity of the Lakeville site. Alternative F would be adding incremental levels of noise to an environment that is already inundated by ambient noise. This represents a significant effect to the nearby sensitive receptors along Lakeville Highway. Mitigation measures are contained in **Section 5.2.9** that would reduce cumulative transportation noise effects to less than significant levels.

Table 4.12-19 shows the predicted changes in traffic noise levels, as compared to existing conditions for the Lakeville site and vicinity. As shown, changes in traffic noise levels would be less than significant, when compared with the FICON criteria noted in **Table 4.10-1**.

TABLE 4.12-18
PREDICTED CUMULATIVE TRAFFIC NOISE LEVELS
AT REFERENCE DISTANCES – LAKEVILLE SITE

Roadway	Segment	Predicted L_{dn}, dB		
		Existing	Future Baseline	Alt. F plus Future Baseline
SR 37	At Lakeville Highway	**77.9**	**78.7**	**79.5**
SR 37	At SR 121	**75.2**	**76.3**	**77.3**
Lakeville Highway	At SR 37	**70.1**	**77.5**	**80.0**
SR 121	At SR 37	**72.2**	**73.1**	**73.3**
Note: Bold cells indicate a potentially significant noise level.				

SOURCE: BBA, 2004, 2007.

TABLE 4.12-19
CHANGES IN PREDICTED CUMULATIVE TRAFFIC NOISE LEVELS
AT REFERENCE DISTANCES – LAKEVILLE SITE

Roadway	Segments	Predicted L_{dn}, dB	
		Future Baseline minus Existing	Alt. F minus Future Baseline
SR 37	At Lakeville Highway	0.8	0.8
SR 37	At SR 121	1.1	1
Lakeville Highway	At SR 37	**7.4**	2.5
SR 121	At SR 37	0.9	0.2
Note: Bold cells indicate a potentially significant increase in noise levels.			

SOURCE: BBA, 2004, 2007.

Visual Resources

As growth occurs within Sonoma County, cumulative effects to visual resources may take place as the result of increased development. However, cumulative development that may take place within the vicinity of the project area would be consistent with local land use regulations. There is little cumulative development expected in the vicinity of the Lakeville site, which is currently used for agriculture. Development of Alternative F would not be consistent with local land use regulations and would not be consistent with the agricultural character of the area. As there is little other expected development projects in the area, there would not be any cumulative impacts related to visual resources under the development of Alternative F.

Hazardous Materials

There are no existing hazardous materials on the Lakeville site. Alternative F would not use significant quantities of hazardous materials and mitigation has been identified to decrease any incidental spills to a less-than-significant level. There are no significant cumulative hazardous materials issues associated with this alternative.

ALTERNATIVE G – NO ACTION

Section 1502.14(d) requires the alternatives analysis of an EIS to "include the alternative of no action". The Council on Environmental Quality (CEQ) has provided guidance (Forty Most Asked Questions Concerning CEQ's NEPA Regulations, March 23, 1981) that the "no action" alternative may be thought of as "no change" from the current management direction. The guidance also says "where the choice of 'no action' by the agency would result in predictable actions by others, this consequence of the 'no action' alternative should be included in the analysis.

Consequently, if this project does not occur on the Wilfred Site, it is reasonable to expect the City of Rohnert Park's Northwest Specific Plan (South) to progress as previously planned for the area and high-density residential and commercial facilities would be developed on the proposed site. Therefore, Alternative G analyzes the environmental effects of the portion of the Northwest Specific Plan (South) that is planned to be developed on the land proposed in the Wilfred Site alternative.

Land Resources

The geographic area for the analysis of cumulative impacts to land resources is the Santa Rosa Plain in Sonoma County, which is relatively flat in topography. Neither Alternative G nor cumulative development would significantly alter topography in the region. The principal effects to land resources associated with Countywide development (see **Section 4.12.2**) would be

localized topographical changes and soil attrition, both of which are evaluated in terms of runoff characteristics, sedimentation and flow under permitting authorities and criteria relevant to Water Resources, below. Local permitting requirements for construction, such as the required preparation of a Stormwater Pollution Prevention Plan under the Clean Water Act, adherence to local building codes, and adherence to local planning/zoning requirements, would address regional stormwater, geotechnical, seismic and mining hazards; therefore, no cumulative impacts related to land resources would occur as a result of Alternative G.

Water Resources

Treated Effluent Discharge

As discussed in **Section 4.3**, the treated effluent generated by the development of the City of Rohnert Park's Northwest Specific Plan (South) would be treated using currently unused allotments held by the Cities of Rohnert Park and Santa Rosa. Treated wastewater would presumably be discharged under an existing NPDES permit held by the wastewater disposal system. Cumulative impacts would be less than significant.

Groundwater

The City of Rohnert Park has conducted a Water Supply Analysis (WSA; City of Rohnert Park, 2005; **Appendix H**), which has projected water use and water supply for the City out to the year 2025. The WSA has, furthermore, considered the projected groundwater needs of other users in the sub-basin. The WSA has found that the City has sufficient water supply to meet its needs through 2025. The Northwest Specific Plan (South) was included in the analysis for this WSA. Impacts to groundwater from the Northwest Specific Plan (South) would be less than significant.

Air Quality

In the near term, operation of Alternative G is estimated to result in:

- 138 ppsd and 27 tpy of ROG,
- 133 ppsd and 28 tpy of NO_x, and
- 117 ppd and 21 tpy of PM_{10} emissions.

In 2020, operation of Alternative E is estimated to result in:

- 62 ppsd and 12 tpy of ROG,
- 51 ppsd and 11 tpy of NO_x, and
- 118 ppd and 21 tpy of PM_{10} emissions.

As shown in **Tables 4.12-3** and **4.12-4**, Alternative G would generate 0.4% of the southern portion of Sonoma County total NO_x in near term and only 0.3 percent in 2020. For ROG,

Alternative G only would generate 0.2 percent in the near-term and 0.1 percent in 2020. The PM_{10} contribution for Alternative G is a little more, but only 0.6 percent in the near term and 0.5 percent also in 2020. The incremental effect of Alternative G is a relatively small portion of the countywide total for one project.

In 2020, ROG emissions generated by Alternative G traffic would be less than the 80 ppd and 15 tpy significance thresholds for ROG and NO_x emissions, but PM_{10} emissions would be more than the 80 ppd and 15 tpy significance thresholds. Alternative G would result in a less-than-significant cumulative effect to ozone precursors and PM_{10} emissions, because the incremental effect of this alternative is a small portion of the Countywide total, but the BAAQMD emissions thresholds would be exceeded for PM_{10}.

Carbon Monoxide Concentrations

As described in the traffic study of the project alternatives, traffic operations at signalized study intersections would be at a LOS D or better with Alternative G, under 2020 long-term future cumulative background conditions and traffic mitigation measures. Based on criteria presented in the University of California Davis Institute of Transportation Studies document *Transportation Project-Level Carbon Monoxide Protocol* (Garza, et al., 1997), intersections operating at LOS D or better typically do not result in CO concentrations that exceed State or Federal standards. Therefore, Alternative G with traffic mitigation measures is considered to have a less-than-significant impact on CO air quality.

Odor Effects

Alternative G and other reasonable foreseeable projects in the area, when considered cumulatively, could result in potentially significant odor impacts. Several commercial centers are planned in the area near the intersection of Wilfred Avenue and US Highway 101. The common types of facilities that have been known to produce odors occur mostly in manufacturing/industrial zones and no manufacturing/industrial areas are projected for the area, although significant commercial development is planned. However, BAAQMD permit process, city/county permitting processes, and future environmental review processes will combine to ensure that Alternative G in combination with cumulative development would have a less-than-significant effect from odors.

Toxic Air Contaminants

Alternative G and other reasonable foreseeable projects in the area, when considered cumulatively, could result in potentially significant impacts from TACs. Several commercial centers are planned in the area around the intersection of Wilfred Avenue and US Highway 101. Potential TAC sources could site in these commercial/industrial areas. However, BAAQMD permit process, city/county permitting processes, and future environmental review processes will

combine to ensure that Alternative G in combination with cumulative development would have a less-than-significant effect from toxic air contaminants.

Climate Change

The USEPA and CARB approved URBEMIS 2007 emissions modeling software estimates that Alternative G would result in the emission of approximately 2,155 tons per year of CO_2 during construction, which is expected to last 12 months (**Appendix W**). As shown in **Table 4.12-20,** during operation Alternative G would result in the emission CH_4 and N_2O equivalent to 509 tpy of CO_2e. Indirect emissions of CO_2, CH_4, and N_2O are estimated at 7 tpy of CO_2e. Total annual emissions during operation of the Alternative G would be equivalent to 15,036 tpy of CO_2e. Annual Alternative G GHG emissions would be approximately 0.0028 percent of California's predicted contribution to global GHG emissions in 2020 (see **Table 3.4-6**). Alternative G contributions to the annual global GHG emissions in 2020 would be approximately 0.0000018 percent.

TABLE 4.12-20
ESTIMATED ALTERNATIVE G OPERATIONAL GHG EMISSIONS

CO_2 Emissions[1]		
Mobile Sources	**Area Sources**	**Total CO_2e**
tons per year	**tons per year**	**tons per year**
13,126	1,394	14,520

CH_4 and N_2O Emission from Mobile Sources[2]				
Emission Factor ($CO_2/CH_4/N_2O$)	**Miles Traveled**	**CH_4**	**N_2O**	**Total CO_2e**
g/mile	**miles/day**	**tons per year**		**tons per year**
552.08/0.05/0.05	76,397	32	476	509

Indirect GHG emissions[2]					
Emission Factor (Kg of $CO_2/CH_4/N_2O$)	**Estimated kW-h Usage[3]**	**CO_2**	**CH_4**	**N_2O**	**Indirect CO_2e**
lb/MW-h	**MW-H/YEAR**	**tons per year**			
804.54/0.006/0.0037	39	7	0.00	0.00	7
		Total Operation CO_2e tons per year			**15,036**

[1] Estimated from EPA and CARB approved URBEMIS air quality program (**Appendix W**)
[2] Emission factors from Climate Change Action Registry
[3] Estimated using 4,500 kilowatts-hours/month of power used.
Source: URBEMIS, 2007; Climate Change Action Registry, 2007.

As discussed above and in **Section 3.4**, California's strategies and measures would result in a reduction of statewide emissions, including emissions resulting from Alternative G, to levels below current background levels. Of the approximately 126 strategies and measures that would ensure a statewide reduction in GHG emissions, only six were determined to apply to Alternative G (see **Table 4.12-21**). The other strategies and measures do not apply because they either apply to state entities, such as CARB, and are planning-level measures or they apply to particular industries, such as the auto repair industry. As shown in **Table 4.12-21**, Alternative G would be assumed to be in compliance with all applicable state climate change strategies, resulting in a less than significant cumulative impact based on the methodology explained above.

TABLE 4.12-21
COMPLIANCE WITH STATE EMISSIONS REDUCTION STRATEGIES

Exec Order S-3-05 / AB 32 Strategy	Project Compliance
Diesel Anti-Idling: In July 2004, the CARB adopted a measure to limit diesel-fueled commercial motor vehicle idling.	The development would be subject to California Code of Regulations, Title 13, Division 3, Article 1, Chapter 10, Section 2485, which only allows diesel vehicles 5 minutes idling time. Therefore the development would be consistent with this strategy.
Achieve 50 percent statewide Recycling Goal: Achieving the State's 50 percent waste diversion mandate as established by the Integrated Waste Management Act of 1989, (AB 939, Sher, Chapter 1095, Statutes of 1989), will reduce climate change emissions associated with energy intensive material extraction and production as well as methane emission from landfills. A diversion rate of 48 percent has been achieved on a statewide basis. Therefore, a 2 percent additional reduction is needed.	Solid waste services are expected to be provided by the City of Rohnert Park or County of Sonoma, which are subject to the state's recycling requirements. Therefore the development would be consistent with this strategy.
Water Use Efficiency: Approximately 19 percent of all electricity, 30 percent of all natural gas, and 88 million gallons of diesel are used to convey, treat, distribute and use water and wastewater. Increasing the efficiency of water transport and reducing water use would reduce greenhouse gas emissions	It is assumed that the City would require water conservation measures for the development (see **Section 2.8**), in order to ensure an adequate supply of water. Therefore the development would be consistent with this strategy.

SOURCE: State of California, Environmental Protection Agency, and Climate Action Team, 2006

Biological Resources

The purpose of this section is to analyze potential cumulative effects on biological resources including wildlife and habitats, federally-listed species, migratory birds, and jurisdictional "waters of the U.S."

Wildlife and Habitats

After mitigation is implemented, Alternative G is not anticipated to result in significant direct or indirect effects to wildlife and habitats. However, disturbance to habitats and increases in human activity from development associated with the Northwest Specific Plan in combination with other proposed projects in the Rohnert Park area such as the Santa Rosa Sub-regional Incremental Recycled Water Program, the Route 101 HOV and Lane Widening Project, and local planned development projects could incrementally contribute to past, present, and future effects to wildlife and habitats. Given the level of disturbance currently existing within the area, and the disturbance associated with development under the Northwest Specific Plan, Alternative G would potentially result in significant cumulative effects to wildlife and habitats.

Federally-Listed Species

Disturbance to seasonal wetlands, CTS habitat, and increases in human activity resulting from Alternative G and other proposed projects in the Rohnert Park area could cumulatively and adversely effect federally listed species. This is a potentially significant cumulative impact to Threatened and/or Endangered Species. Mitigation is discussed in **Section 5.2.4** to reduce impacts.

Migratory Birds

Alternative G is not anticipated to result in significant direct or indirect effects to nesting migratory birds. However, disturbance to migratory bird habitats and increases in human activity from other proposed projects in the Rohnert Park area could incrementally contribute to past, present, and future effects to migratory birds. Alternative G would not result in significant cumulative effects to migratory birds.

Waters of the U.S.

Alternative G would directly affect "waters of the U.S." associated with the development of projects appropriate under the Northwest Specific Plan. This loss of "waters of the U.S." would require an Individual Permit from USACE and would require compensatory mitigation and a written plan on how such mitigation would be implemented. Thus, significant cumulative effects to "waters of the U.S." would not occur.

Cultural Resources

The Rohnert Park General Plan EIR identified potentially significant cultural resource impacts within the Northwest Specific Plan area. Alternative G and other reasonable foreseeable projects in the area, when considered cumulatively, could result in potentially significant impacts to

cultural resources just as in Alternative A. However, implementation of mitigation measures in the General Plan EIR would reduce the cumulative impact to a level below significance.

Socioeconomic Conditions

Under Alternative G, residential and commercial development would occur on the Wilfred site, as noted in **Sections 2.8** and **4.12.2**. This development would contribute to the regional trend of increased housing developments and would add jobs to the regional economy. The number of jobs added would be less than Alternative A; however, the unemployment rates may be marginally higher than under Alternative A. Criminal activity is expected to be increased somewhat due to the congregation of people at residential and commercial developments. This activity would not be enough to result in worsening regional crime rates. A less-than-significant cumulative socioeconomic effect would result. See **Section 4.12.3** for Alternative A for expected future conditions under the No Action Alternative.

Resource Use Patterns

Transportation/Circulation

It is assumed that future development of the Wilfred Site, Stony Point Site, and Lakeville Site would be guided by existing land use plans. For the Stony Point Site and Lakeville Site there are currently no known development plans. According to Northwest Specific Plan (South) the northeastern corner of the Wilfred Site would be developed with residential and commercial uses. (City of Rohnert Park, 2004). The Northwest Specific Plan (NWSP) area east of the Wilfred site proposes high-density residential, industrial, business park, and regional commercial development. The northeastern portion of the Wilfred site would be developed with residential land uses as intended under the Northwest Specific Plan.

The No Action Alternative would result in the traffic conditions described as the 2020 baseline conditions, as described above. The CEQA process for development under the NWSP is expected to require mitigation measures to reduce traffic impacts to a less-than-significant level (similar to many of the measures included in **Section 5.2.7**). Alternative G would therefore result in impacts that are less than significant.

Land Use

Under Alternative G, current land uses would be retained on the Stony Point and Lakeville sites. The northeastern portion of the Wilfred site would be developed with as intended under the Northwest Specific Plan, thereby converting approximately 63acres of undeveloped land on the Wilfred site to commercial/residential uses. Alternative G would result in impacts that are less than significant.

Agriculture

Cumulative loss of agriculture lands in Sonoma County would result from projected growth within the region and the outward expansion of cities and unincorporated urban areas. Under Alternative G, land uses on the Stony Point and Lakeville sites would remain the same. Agricultural uses would not be altered and grazing uses would continue. However, the northeastern portion of the Wilfred site would be developed with residential land uses as intended under the Northwest Specific Plan. This would directly convert approximately 63-acres of rural lands on the Wilfred site to urban uses. According to the NRCS, this area is not considered prime farmland, unique farmland, or farmland of statewide importance. Additionally, the northeastern parcels that would be developed under the Northwest Specific Plan do not contain lands protected under Williamson Act contracts. Therefore, because Alternative G would not result in a net loss of important or protected farmlands, impacts are less than significant.

Public Services

As there are no plans for development on the Stony Point Site or Lakeville Site, there would be no cumulative impacts to public services.

The Wilfred Site would be developed according to the Northwest Specific Plan (Southern Area), which identifies the site as being developed for residential and commercial uses. Development of the site would increase demands on public services, and discussed below. As stated in the Northwest Specific Plan, it is anticipated that developers of the Southern Area will fund the installation of public services and will contribute through City fees to the funding of off-site services. These fees would include, but not be limited to, school mitigation fees and sewer and water connection fees

Water Supply

As indicated in the Northwest Specific Plan, the Wilfred Site would receive water from the City of Rohnert Park water supply system. The City's water system is described in **Section 3.9.1**. Assuming appropriate water conservations measures are implemented and continued utilization of municipal wells and water from the Sonoma County Water Agency (SCWA), the Northwest Specific Plan indicates that adequate water supply would be available. The WSA reported that there were adequate water resources through the year 2025 for buildout of the City, including the Northwest Specific Plan Area (City of Rohnert Park, 2005, **Appendix H**). However, additional storage facilities would be needed on site or at existing SCWA storage facilities (City of Rohnert Park, 2004). It is also anticipated that the development would pay water connection fees (City of Rohnert Park, 2004). Given that there would be adequate water supply through 2025 and the development would likely pay for water storage facilities, the impact is considered less than significant.

Wastewater Service

Under the No Action Alternative, the Wilfred Site would connect to the City of Rohnert Park's sewer system for treatment at the Laguna WWTP. As discussed in **Section 4.9**, the anticipated buildout of the Wilfred Site under the Northwest Specific Plan would consist of high-density residential and commercial development with an average daily flow of 118,000 mgd. The City of Rohnert Park currently owns 3.43 mgd of capacity and uses 0.48 mgd of the City of Santa Rosa's allotment. The City of Rohnert Park's allocation will increase to 5.15 mgd with the Incremental Recycled Water Program, which is the expected flow at buildout and includes the Northwest Specific Plan (HydroScience, 2008). According to the Northwest Specific Plan, new gravity sewer mains and a new interceptor line to the WWTP are planned if the Wilfred site is developed. It is also anticipated that the development would pay sewer connection fees (City of Rohnert Park, 2004). As it is anticipated that there will be treatment capacity in the future for buildout of the City of Rohnert Park, including the Wilfred Site, and the development would pay connection and development fees, the cumulative impact is considered less than significant.

Solid Waste

Under the No Action Alternative, collection and hauling services would most likely be provided by Rohnert Park Disposal. The County is currently outhauling to five landfills of which most is disposed to the Redwood Landfill. The No Action Alternative's contribution to the waste stream as discussed in **Section 4.9** is considered an insignificant contribution. The landfill currently has a closure date of 2039. The CoIWMP identifies the following alternatives upon reaching capacity at the Central Landfill: further expansion of the Central Landfill, siting of a new landfill, or contracting with existing landfills (Sonoma County Waste Management Agency, 2003). As Alternative G would be required to pay development fees and/or taxes to fund new solid waste facilities or improvements the impact is considered less than significant.

Electricity, Natural Gas, and Telecommunications

For the No Action Alternative and the list of cumulative projects the electric and natural gas supplier is PG&E. AT&T is the main telecommunications provider in Sonoma County and has connections near the Wilfred Site and the cumulative projects. PG&E has confirmed that it can provide electrical and natural gas services for Alternative A (Rivero, pers. comm., 2005; Harris, pers. comm., 2005). The electrical, natural gas, and telecommunications demands of the anticipated cumulative projects are unknown. PG&E and AT&T planning departments work with City and County planners to ensure that adequate capacity is available for future development. Individual projects would be responsible for paying development or user fees to receive electrical, natural gas, cable, and telephone services. Thus, the cumulative effects would be less than significant.

Law Enforcement

Development would increase the patrol duties of the Rohnert Park Public Safety Department and increase calls for service to the Department. For the Wilfred Site under the No Action Alternative, it is anticipated that development fees or taxes on the development would fund this increased demand. Similarly the other development projects affecting the Rohnert Park Public Safety Department would fund increased demands through development fees or taxes. Thus, the impacts to law enforcement services would be less than significant.

Fire Protection/Emergency Medical

Development would increase demands on the Rohnert Park Public Safety Department through increased calls for fire protection and emergency medical services. For the Wilfred Site under the No Action Alternative, it is anticipated that development fees or taxes on the development would fund this increased demand. Similarly the other development projects affecting the Rohnert Park Public Safety Department would fund increased demands through development fees or taxes. Thus, the impacts to law enforcement services would be less than significant.

Schools

Planning for schools is left largely to the school districts, which forecast new schools based on projected residential growth. While enrollment is anticipated to decrease in the unincorporated areas, student enrollment is project to increase through 2020 in the Rohnert Park-Cotati area by 18 percent (Nichols Berman, 2006). The development of residential housing would increase demands for school services by potentially increasing the number of school age children in the Cotati-Rohnert Park Unified School District, Bellevue Union School District and/or Santa Rosa High School District. It is anticipated that developments in the Northwest Specific Plan would pay school mitigation fees (City of Rohnert Park, 2004). Other new developments in the school districts would also pay fees contributing to area schools. Thus, the impacts to schools would be less than significant.

Other Values

Noise

The City of Rohnert Park identified the potential for the generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards. If noise levels exceed 45 L_{dn}/CNEL in habitable rooms, a significant impact would result. Development in conjunction with cumulative traffic could result in potentially significant traffic noise impacts on the existing land uses in the area. Alternative G is expected to result in development on the Wilfred Site consistent with the Northwest Specific Plan. This development would result in noise impacts resulting from on-site construction, on-site operation of businesses and residences, and increased traffic volumes. Construction and on-site noise levels would be

similar to those noted for Alternatives A-E, although an on-site wastewater treatment plant would not be included for Alternative G.

Alternative G noise levels would be included with future baseline conditions stated above in **Tables 4.12-12** and **4.12-13**. **Table 4.12-12** shows that there are road segments that either would be above the 65 dB L_{dn} land use compatibility criterion or would rise above this level with the introduction of project traffic. It is assumed that noise sensitive development is present or proposed immediately adjacent to all of the segments that would be above this level. Therefore, this is considered a significant impact.

Note that noise-sensitive development is present along Rohnert Park Expressway in the form of the mobile home park. The mobile home park has been designed with a large buffer zone and a sound barrier between the park and Rohnert Park Expressway. Thus traffic noise from Rohnert Park Expressway is not expected to significantly affect any sensitive receptors within the mobile home park.

The City of Rohnert Park identified the potential for the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels. The General Plan EIR analyzed potentially significant impacts related to temporary construction noise that may include excessive ground vibration. The EIR for the Northwest Specific Plan development would contain further mitigation measures to reduce noise impacts.

Alternative G would be developed under the authority of the Rohnert Park General Plan EIR, which specifies locally required mitigation measures to reduce the construction impacts above to a less than significant level. Mitigation measures in the Northwest Specific Plan EIR would reduce other noise impacts to a less than significant level.

Visual Resources

Growth is planned within Rohnert Park and Sonoma County. However, cumulative development that takes place would be consistent with local land use regulations, including associated design guidelines. Development of Alternative G would be governed by and consistent with the visual goals of local land use regulations. The Northwest Specific Plan(South), is not located in a scenic corridor or an area of high aesthetic value, commercial attraction notwithstanding. Substantial development is present to the east of the Plan Area, with open space to the west. This development includes regional commercial and service centers. Planned commercial and residential development under Alternative G would not constitute a significant cumulative visual effect to an already semi-developed environment.

Hazardous Materials

Under Alternative G, it is likely the City of Rohnert Park's Northwest Specific Plan (South) will progress. As a result high-density residential and commercial facilities would be developed on the Wilfred site. There are no expected cumulative effects related to hazardous materials with this alternative.

ALTERNATIVE H –REDUCED INTENSITY (WILFRED SITE)

Land Resources

As discussed under Alternative A, the primary effects to Land Resources associated with Countywide development (see **Section 4.12.2**) are evaluated in terms of runoff characteristics, sedimentation and flow. These potential effects are subject to permitting requirements and criteria relevant to water resources, discussed below. Local permitting requirements for construction, such as the required preparation of a Stormwater Pollution Prevention Plan under the Clean Water Act, adherence to local building codes, and adherence to local planning/zoning requirements, would address regional stormwater, geotechnical, seismic and mining hazards. It is assumed that cumulative developments will follow appropriate permitting procedures; therefore, no cumulative impacts related to land resources would occur as a result of Alternative H.

Water Resources

Treated Effluent Discharge

Cumulative impacts from treated effluent discharge would be similar for Alternatives A and H. Thus, treated wastewater discharge from the casino would have a less-than-significant cumulative impact on water quality in the Laguna de Santa Rosa.

Groundwater

Cumulative impacts to groundwater would be similar, but slightly reduced when compared to Alternative A, given the smaller water demands of Alternative H. As with Alternative A, cumulative impacts to groundwater would be less than significant. Implementation of mitigation measures in **Section 5.2.2** would further reduce potential impacts to groundwater.

Air Quality

Ozone Precursor and PM Emissions

In the near-term, operation of Alternative H is estimated to result in:

- 284 ppsd and 58 tpy of ROG,
- 571 ppsd and 122 tpy of NOx, and
- 614 ppd and 112 tpy of PM_{10} emissions.

In 2020 operation of Alternative H is estimated to result in:

- 111 ppsd and 23 tpy of ROG,
- 196 ppsd and 42 tpy of NOx, and
- 612 ppd and 112 tpy of PM_{10} emissions.

As shown in **Tables 4.12-3** and **4.12-4**, Alternative H generated 1.6 percent of the southern portion of Sonoma County total NOx in the near term and only 1.0 percent in 2020. For ROG, Alternative H only generated 0.5 percent in the near term and 0.2 percent in 2020. The PM_{10} contribution for Alternative H is a little more with 2.7 percent in the near term and 2.6 percent in 2020. The incremental effect of Alternative H is a relatively large portion of the countywide total for one project. This is especially true regarding PM_{10} emissions, where percentages are over 2.5 percent. Alternative H would exacerbate the regional trend towards higher PM_{10} emissions.

In 2020, ROG emissions generated by casino traffic would exceed the 80 ppd and 15 tpy significance thresholds, NO_x emissions would exceed the 80 ppd and 15 tpy significance thresholds, and PM_{10} emissions would exceed the 80 ppd and 15 tpy significance thresholds; significant effects would result (see **Table 4.12-5**). ROG, NOx, and PM emissions associated with operation of Alternative H could be reduced to a less than significant level by implementing mitigation measures in **Section 5.2.3**.

Carbon Monoxide Concentrations

As described in the traffic study of the project alternatives, traffic operations at project-affected signalized study intersections would be are LOS D or better with Alternative H, under 2020 long-term future cumulative background conditions and traffic mitigation measures. Based on criteria presented in the University of California Davis Institute of Transportation Studies document *Transportation Project-Level Carbon Monoxide Protocol* (Garza, et al., 1997), intersections operating at LOS D or better typically do not result in CO concentrations that exceed State or federal standards. Therefore, Alternative H with traffic mitigation measures is considered to have a less than significant impact on CO air quality.

Odor Effects

Alternative H and other reasonable foreseeable projects in the area, when considered cumulatively, could result in potentially significant odor impacts. Several commercial centers are planned in the area near the intersection of Wilfred Avenue and US Highway 101. The common types of facilities that have been known to produce odors occur mostly in manufacturing/industrial areas. No manufacturing/industrial areas are projected for the area; however, significant commercial development is planned. The BAAQMD permit process, city/county permitting processes, and future environmental review processes will combine to

ensure that Alternative H in combination with cumulative development would have a less-than-significant effect from odors. Alternative H would have less of a cumulative impact than Alternative A. Therefore, there would be a less than significant impact to odor from the implementation of Alternative H.

Climate Change

Alternative H would have the same GHG emissions as Alterative D (**Table 4.11-14**), because the building square footage and trip generation rates for Alternative H are the same as Alternative D. Cumulative impact from GHGs would be the same as Alternative D; therefore, a potentially significant cumulative impact would result. Measures in **Section 5.2.3** would ensure a less than significant cumulative impact.

Biological Resources

The purpose of this section is to analyze potential cumulative effects on biological resources including wildlife and habitats, federally-listed species, migratory birds, and jurisdictional "waters of the U.S."

Development of the Wilfred site is expected to have a less-than-significant impact due to mitigation measures and open space conservation on the adjacent Stony Point site. Cumulative impacts are projected to be less-than-significant provided that development scheduled for the area also implements mitigation and conservation measures for special status species in the area and completes the required environmental review process outlined by the CEQA/NEPA process.

Wildlife and Habitats

After mitigation is implemented, Alternative H is not anticipated to result in significant direct or indirect effects to wildlife and habitats. However, disturbance to habitats and increases in human activity from the casino in combination with other proposed projects in the Rohnert Park area, such as the Santa Rosa Sub-regional Incremental Recycled Water Program, the Route 101 HOV and Lane Widening Project, and local planned development projects, could incrementally contribute to past, present, and future effects to wildlife and habitats. Given the level of disturbance currently existing within the area and the planned preservation of the northern and southwestern portions of the Stony Point site under Alternative H for open space and habitat preservation, Alternative H would not result in significant cumulative effects to wildlife and habitats.

Federally Listed Species

Disturbance to seasonal wetlands, CTS habitat, and increases in human activity resulting from Alternative H and other proposed projects in the Rohnert Park area could cumulatively and

adversely affect federally listed species. This is a potentially significant cumulative impact to Threatened and/or Endangered Species. Mitigation is discussed in **Section 5.2.4** to reduce cumulative impact levels.

Migratory Birds

Alternative H is not anticipated to result in significant direct or indirect effects to nesting migratory birds. However, disturbance to migratory bird habitats and increases in human activity from other proposed projects in the Rohnert Park area could incrementally contribute to past, present, and future effects to migratory birds. Given the level of disturbance currently existing within the area and the planned preservation of the northern and southwestern portions of the Stony Point site for open space and habitat preservation, Alternative H would not result in significant cumulative effects to migratory birds.

Waters of the U.S.

Alternative H would directly affect approximately two-acres of "waters of the U.S." This loss of "waters of the U.S." is anticipated to be permitted under a USACE Individual Permit and would require compensatory mitigation and a written plan on how such mitigation would be implemented. Adverse indirect effects to "waters of the U.S." would be avoided by the implementation of project features designed to prevent increased erosion and sedimentation and increase flood storage on the site. After complying with permit conditions, Alternative H would not result in any net loss of waters of the U.S. or wetlands (preliminary permit discussions, including a preapplication meeting and subsequent meetings have occurred between the Tribe and the USACE). Thus, significant cumulative effects to "waters of the U.S." would not occur.

Cultural Resources

Cumulative effects to cultural resources would be similar to those of Alternative A, given that the project would be developed on the Wilfred site. The development footprint would be similar, but reduced when compared to Alternative A. Mitigation measures for Alternative H are presented in **Section 5.2.5** for the protection and preservation of known archaeological and historical sites, and for the treatment of unanticipated discoveries. The development of Alternative H is expected to result in less-than-significant cumulative effects to cultural resources.

Socioeconomic Conditions

Cumulative socioeconomic effects of Alternative H would be similar, but reduced in intensity, to those of Alternative A. Potentially significant fiscal and social impacts would be mitigated to a less than significant level by measures in **Section 5.2.6**.

Resource Use Patterns

Transportation/Circulation

Table 4.12-10 summarizes the Cumulative plus Alternative H freeway segment and ramp performance conditions. The Cumulative without project is provided as a baseline condition. Under the 2020 Plus Alternative H conditions, the following freeway segments and ramps are forecast to operate at an unacceptable LOS:

- SR-116 On-Ramp (NB)
- Rohnert Park Expressway NB Off-Ramp
- Rohnert Park Expressway NB On-Ramp (Loop Ramp)
- Wilfred Ave. NB On-Ramp
- US-101 between Wilfred Ave and Santa Rosa Avenue (NB)
- US-101 between Wilfred Ave and Santa Rosa Avenue (SB)
- Santa Rosa Avenue NB Off-Ramp
- Wilfred Ave SB Off-Ramp
- Wilfred Ave SB On-Ramp
- US-101 between Rohnert Park Expressway and Wilfred Ave (SB)
- Rohnert Park Expressway SB Off-Ramp
- Rohnert Park Expressway SB On-Ramp (Loop Ramp)
- Rohnert Park Expressway SB On-Ramp
- US-101 between Rohnert Park Expressway and SR-116 (SB)
- SR-116 SB Off-Ramp
- SR-116 SB On-Ramp

For analysis of intersection conditions, Cumulative without Project condition traffic volumes were combined with vehicle trips expected to be generated by Alternative H. The Redwood/Commerce intersection was not analyzed in the cumulative condition, as this intersection would no longer remain in place after the US-101/Wilfred Avenue Interchange project is constructed. **Table 4.12-11** summarizes the Cumulative Plus Alternative H Peak Hour Intersection Conditions.

The Cumulative without Project condition is provided as a baseline condition. Under the 2020 Plus Alternative H Conditions, the following study intersections and approaches are forecast to operate at an unacceptable LOS:

- Wilfred Avenue/ Stony Point Road
- Wilfred Avenue/Primrose Avenue
- Wilfred Avenue /Labath Avenue
- Wilfred Avenue /Dowdell Avenue

- Wilfred Avenue /Redwood Drive
- Golf Course Drive/Commerce Boulevard
- Commerce Boulevard/US-101 NB Ramps
- Rohnert Park Expressway/Redwood Drive
- Millbrae Avenue/Stony Point Road

Figure 4.12-14 shows the 2020 Cumulative Plus Project PM traffic volumes for Alternative H.

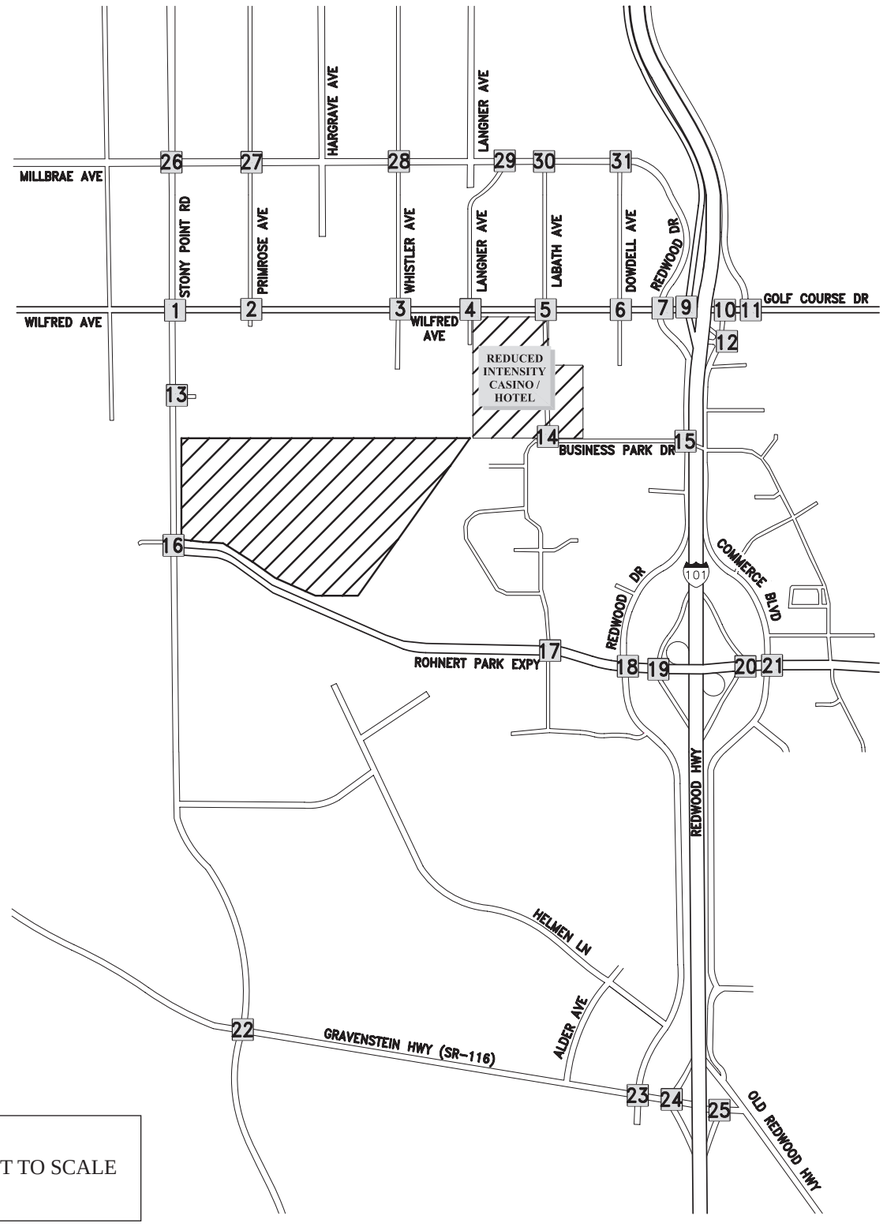
As shown in these tables, Alternative H would have a significant cumulative impact on intersections and freeway segments and ramps. With implementation of mitigation measures described in **Section 5.2.7,** a less-than-significant cumulative transportation impact would result.

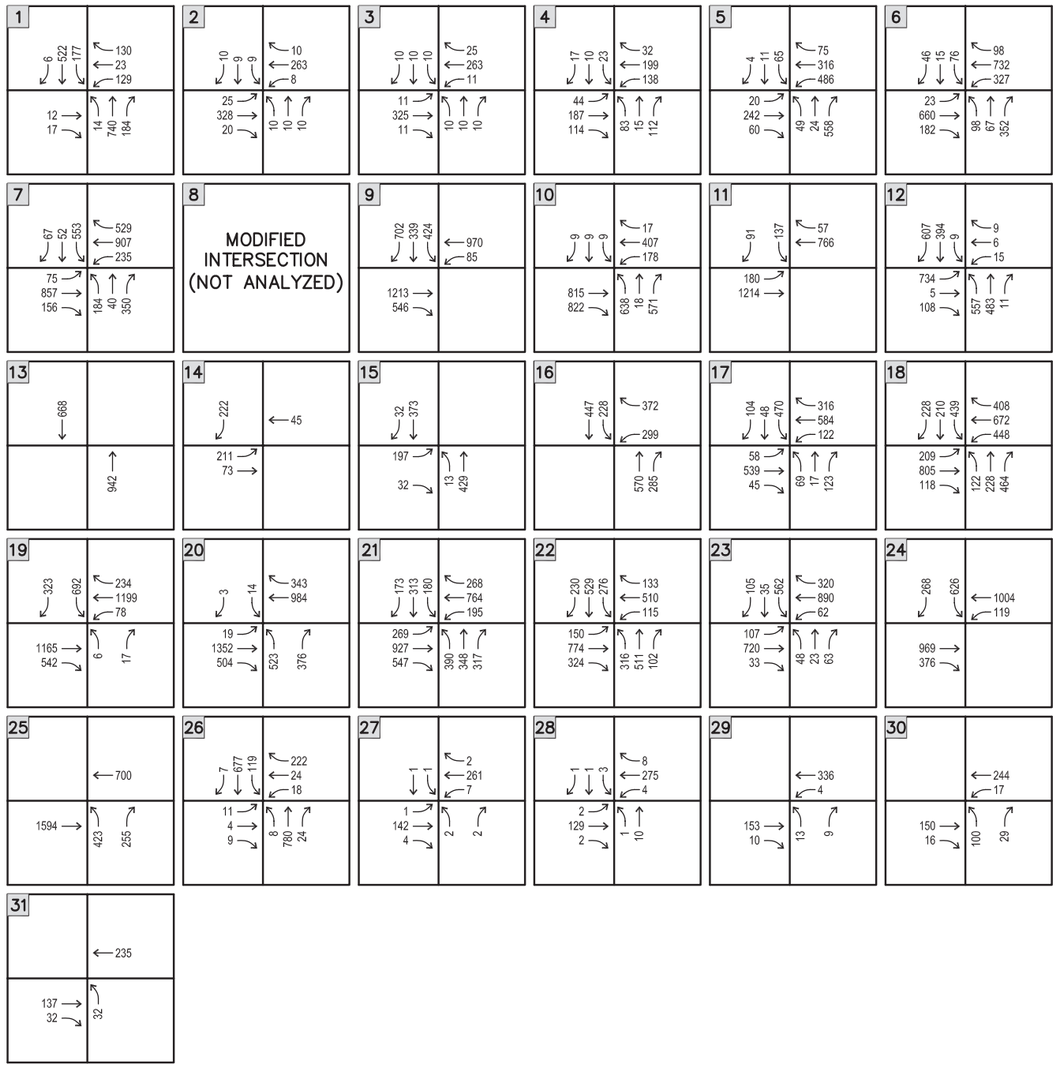
Agriculture

As stated above under Alternative A, cumulative loss of agricultural lands in Sonoma County would primarily result from the outward expansion of cities and unincorporated urban areas. According to the NRCS, the land contained within the Wilfred site boundaries does not contain prime or unique farmlands or farmlands of statewide importance. Additionally, the four parcels in the southern portion of the Wilfred site that are currently under Williamson Act Contracts would remain in agricultural use. It is expected that the Intergovernmental Agreement to be negotiated between the County and the Tribe pursuant to the MOU will provide the County with an enforceable right to provide that the four southern parcels are used in a manner consistent with the terms of the Williamson Act contract. Therefore, Alternative H would not contribute to the cumulative loss of important or protected farmland in the County, resulting in a less than significant impact.

Public Services

Effects to public services would not differ from those of Alternative A, except that impacts would be slightly lessened due to the reduced intensity of development and the Rohnert Park MOU would not apply. For water supply, wastewater service, solid waste, electricity, natural gas, telecommunications, law enforcement, and schools the impact would be less than significant. The impacts to fire protection services would be significant. However, a less-than-significant cumulative effect would result after applying mitigation in **Section 5.2.8**.





LEGEND

X STUDY AREA INTERSECTIONS

XX TRAFFIC VOLUMES

SOURCE: Kimley Horn & Associates, 2006; AES, 2007

Figure 4.12-14

Cumulative Plus Project PM Traffic Volumes – Alternative H

Other Values

Noise

Noise effects would be similar to Alternative A; however, reduced in intensity, given that Alternative H is reduced in size and scope to Alternative A. **Table 4.12-12** shows that there are road segments that either would be above the 65 dB L_{dn} land use compatibility criterion or would rise above this level with the introduction of project traffic. It is assumed that noise sensitive development is present or proposed immediately adjacent to all of the segments that would be above this level. Therefore, this is considered a significant impact. Mitigation measures are proposed in **Section 5.2.9** that would reduce traffic related noise impacts to a less-than-significant level.

Changes in traffic noise levels would not exceed FICON significance criteria, as shown in **Table 4.12-13**.

Note that noise-sensitive development is present along Rohnert Park Expressway in the form of the mobile home park. The mobile home park has been designed with a large buffer zone and a sound barrier between the park and Rohnert Park Expressway. Thus traffic noise from Rohnert Park Expressway is not expected to significantly affect any sensitive receptors within the mobile home park.

Hazardous Materials

There are no existing known hazardous materials on the Wilfred site. Alternative H would not use significant quantities of hazardous materials and mitigation has been identified to decrease any incidental spills to a less-than-significant level. There are no significant cumulative hazardous materials issues associated with this alternative.

Visual Resources

Cumulative impacts to visual resources would be similar, but reduced when compared with those of Alternative A, given that Alternative H is reduced in size and scope to Alternative A. The facilities under Alternative H would be attractively designed as a resort facility, and in combination with other nearby development, would not constitute a significant cumulative visual effect to an already semi-developed environment.