

ENVIRONMENTAL EVALUATION

BEAR RIVER BAND OF ROHNERVILLE RANCHERIA

BEAR RIVER CASINO HOTEL ADDITION AND EXPANSION



AUGUST 2009

Prepared For:

Bear River Band of Rohnerville Rancheria
32 Bear River Drive
Loleta, CA 95551

ENVIRONMENTAL EVALUATION

BEAR RIVER BAND OF ROHNERVILLE RANCHERIA

Bear River Casino Hotel
Addition And Expansion

AUGUST 2009

Prepared For:

Bear River Band of Rohnerville Rancheria
32 Bear River Drive
Loleta, CA 95551

Prepared By:



Analytical Environmental Services
1801 7th Street, Suite 100
Sacramento, CA 95811
www.analyticalcorp.com

TABLE OF CONTENTS

BEAR RIVER CASINO HOTEL ADDITION AND EXPANSION ENVIRONMENTAL EVALUATION

1.0	INTRODUCTION	
1.1	Introduction	1-1
1.2	Background	1-2
1.3	Purpose and Need.....	1-2
2.0	PROJECT DESCRIPTION	
2.1	Project Setting and Existing Facilities	2-1
2.2	Proposed Project Facilities	2-5
2.2.1	Project Construction	2-12
2.2.2	Water Supply	2-13
2.2.3	Wastewater Treatment and Disposal	2-13
2.2.4	Power Supply	2-14
3.0	ENVIRONMENTAL ANALYSIS	
3.1	Introduction	3-1
3.2	Aesthetics	3-2
3.2.1	Existing Environment.....	3-2
3.2.2	Environmental Consequences	3-2
3.2.3	Mitigation	3-3
3.3	Air Quality	3-3
3.3.1	Existing Environment.....	3-3
3.3.2	Environmental Consequences	3-6
3.3.3	Mitigation	3-8
3.4	Geology and Soils	3-8
3.4.1	Existing Environment.....	3-8
3.4.2	Environmental Consequences	3-9
3.4.3	Mitigation	3-9
3.5	Water Resources.....	3-10
3.5.1	Existing Environment.....	3-10
3.5.2	Environmental Consequences	3-15
3.5.3	Mitigation	3-17
3.6	Land Use.....	3-18
3.6.1	Existing Environment.....	3-18

3.6.2 Environmental Consequences	3-18
3.6.3 Mitigation	3-18
3.7 Noise	3-18
3.7.1 Existing Environment.....	3-18
3.7.2 Environmental Consequences	3-19
3.7.3 Mitigation.....	3-21
3.8 Population and Housing.....	3-21
3.8.1 Existing Environment.....	3-21
3.8.2 Environmental Consequences	3-22
3.8.3 Mitigation	3-22
3.9 Public Services and Utilities	3-22
3.9.1 Existing Environment.....	3-22
3.9.2 Environmental Consequences	3-25
3.9.3 Mitigation	3-26
3.10 Transportation and Circulation.....	3-27
3.10.1 Existing Environment.....	3-27
3.10.2 Environmental Consequences	3-31
3.10.3 Mitigation	3-35
3.11 Cumulative Effects.....	3-36
3.11.1 Cumulative Setting.....	3-36
3.11.2 Environmental Consequences	3-37
3.11.3 Mitigation	3-41
4.0 REFERENCES.....	4-1

LIST OF TABLES

2-1	Proposed Expansion Program	2-12
3-1	Ambient Air Quality Standards.....	3-4
3-2	California Air Monitoring Data.....	3-6
3-3	Construction and Operational Emissions of Proposed Project.....	3-7
3-4	2006 Clean Water Act Section 303(D) List	3-13
3-5	Water Quality for Rohnerville Rancheria Domestic Well.....	3-14
3-6	Typical Construction Noise Levels	3-20
3-7	Humboldt County Demographics.....	3-21
3-8	Intersection Level of Service Definitions.....	3-28
3-9	Existing and Baseline Intersection Operations.....	3-31
3-10	Bear River Casino Project Trip Generation.....	3-32
3-11	Baseline and Baseline Plus Project Intersection Operations	3-32
3-12	Cumulative and Cumulative Plus Project Intersection Operations	3-39

LIST OF FIGURES

2-1	Regional Location.....	2-2
2-2	Site and Vicinity	2-3
2-3	Aerial Photograph.....	2-4
2-4	Site Plan	2-6
2-5a	Floor Plan (Parking Level)	2-7
2-5b	Floor Plan (First Level).....	2-8
2-5c	Floor Plan (Second & Third Level)	2-9
2-5d	Floor Plan (Fourth Level)	2-10
2-6	Architectural Rendering.....	2-11
3-1	Flood Zone Map.....	3-12
3-2	Existing Lane Configurations	3-29
3-3	Existing Peak-Hour Volumes	3-30
3-4	Project Trips Peak Hour Volumes	3-33
3-5	Baseline Plus Project Volumes	3-34
3-6	Cumulative Plus Project	3-40

APPENDICES

- Appendix A Impact Analysis Checklist
- Appendix B Water and Wastewater Feasibility Study
- Appendix C Air Quality Analysis
- Appendix D Traffic Impact Study

SECTION 1.0

INTRODUCTION

SECTION 1.0

INTRODUCTION

1.1 INTRODUCTION

The Bear River Band of Rohnerville Rancheria (Tribe) proposes to construct a hotel to complement the existing Bear River Casino on federally designated Tribal trust land in Humboldt County, California. Interior space would also be rearranged in the casino to enhance guest amenities; however, no new gaming positions will be created.

The following Environmental Evaluation (EE) has been prepared consistent with Section 10.8 of the Tribal-State Class III Gaming Compact between the Tribe and the State of California (Compact), and the Tribal Environmental Off-Reservation Impact Code Ordinance (No. 02-04) enacted pursuant to the Compact. This EE assesses the potential for off-Reservation environmental impacts to occur as a result of the project. This EE has been conducted pursuant to an Environmental Impact Analysis Checklist (**Appendix A**). The checklist provides an initial assessment of potentially significant off-Reservation environmental impacts, and determines which, if any, environmental issues merit further analysis. Potentially significant impacts identified in the checklist have been evaluated in detail in **Section 3.0** of this EE.

Section 10.8 of the Tribal-State Gaming Compact requires the Tribe to adopt an environmental ordinance and prepare an environmental study prior to “any expansion or any significant renovation or modification of an existing Gaming Facility, or any significant excavation, construction, or development associated with the Tribe’s Gaming Facility or proposed Gaming Facility.” According to the Tribal-State Gaming Compact, the Tribe shall:

- “Make a good faith effort to incorporate the policies and purposes of the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA) consistent with the Tribe’s governmental interests.”
- “Consult” with local jurisdictions (cities and counties), and if requested, “meet with them to discuss mitigation of significant adverse off-Reservation environmental impacts.”
- Make “good faith” efforts to mitigate off-Reservation impacts consistent with the Tribe’s governmental interests.

This EE fulfills the requirements of the Tribal Environmental Off-Reservation Impact Code Ordinance and the Tribal-State Gaming Compact.

1.2 BACKGROUND

The Bear River Band of Rohnerville Rancheria is a federally recognized Indian Tribe. Pursuant to its Constitution and By-Laws, the Tribe is governed by a five-member elected Tribal Council. The Tribe currently has approximately 300 members, mostly living on the Rohnerville Rancheria and in surrounding communities. The Rancheria is located approximately 15 miles south of the City of Eureka and approximately 2 miles southeast of the town of Loleta on Singley Road in Humboldt County, California. The Rancheria consists of approximately 60 acres, legal title to which is held in trust by the United States for the benefit of the Tribe. This land was acquired in 1991 and taken into trust in 1994 as a restoration of lands lost through the termination of the Rancheria during the 1960s. On the Rancheria, the Tribe has constructed the Bear River Casino as well as a new Pump & Play gas station/ convenience store/ smoke-free mini-casino; 13 single-family homes; Tribal governmental offices, a community building and child care center; and associated infrastructure and facilities. Regional access is provided by Highway 101 and local access is provided by Singley Road, which is a two-lane Humboldt County Road adjacent to the west side of the Rancheria. Bear River Drive provides on-site access to the facilities on the Rancheria.

1.3 PURPOSE AND NEED

Implementation of the hotel addition and expansion project would assist in meeting the following objectives:

- Improve the socioeconomic status of the Tribe by providing an augmented revenue source that could be used to:
 - 1) strengthen the Tribal government,
 - 2) provide new Tribal housing,
 - 3) fund a variety of social, governmental, administrative, educational, health and welfare services to improve the quality of life of Tribal members, and
 - 4) provide capital for other economic development and investment opportunities.
- Improve infrastructure and support facilities at the Rancheria.
- Provide additional recreational amenities to the community and out-of-town guests.
- Provide employment opportunities to Tribal and non-Tribal members of the community.
- Allow Tribal members to maintain their economic self-sufficiency.

SECTION 2.0

PROJECT DESCRIPTION

SECTION 2.0

PROJECT DESCRIPTION

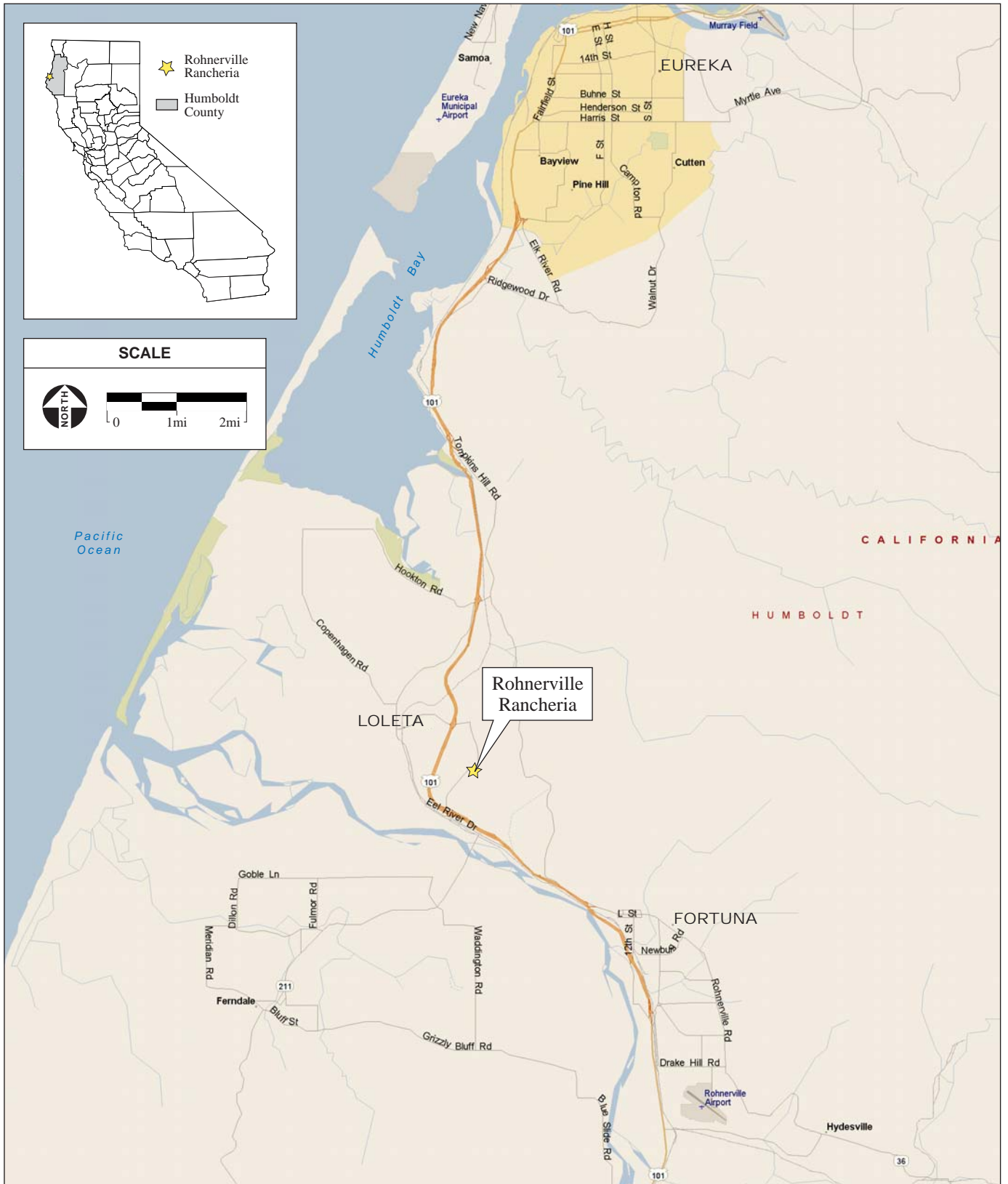
2.1 PROJECT SETTING AND EXISTING FACILITIES

The project would be constructed on the Rohnerville Rancheria, which consists of approximately 60 acres in Humboldt County, California. The Rancheria is situated roughly 15 miles south of Eureka, California and 2 miles southeast of the town of Loleta. The Rancheria land is held in trust for the Tribe by the United States (U.S.) government. The project is located in Section 20 of the Fields Landing and Fortuna U.S. Geological Survey (USGS) quadrangles within Township 3 North and Range 1 West. The regional location of the Rancheria is shown in **Figure 2-1**, and a topographic map showing the development area is shown in **Figure 2-2**. **Figure 2-3** shows an aerial photograph of the Rancheria.

Regional access is provided by Highway 101, which travels in a general north-south direction and is located to the west of the Rancheria. Local access to the proposed project site from Highway 101 is provided by Singley Road, which is a two-lane road adjacent to the west side of the Rancheria. Bear River Drive provides access on the Rancheria to housing, Tribal offices, and the casino.

The Rancheria vicinity is primarily open space and agricultural land with scattered rural-residential housing. The terrain consists of hilly grasslands with large stands of mixed conifers and other trees. The predominant geographical feature of the area is the Eel River, which is approximately one mile south of the Rancheria.

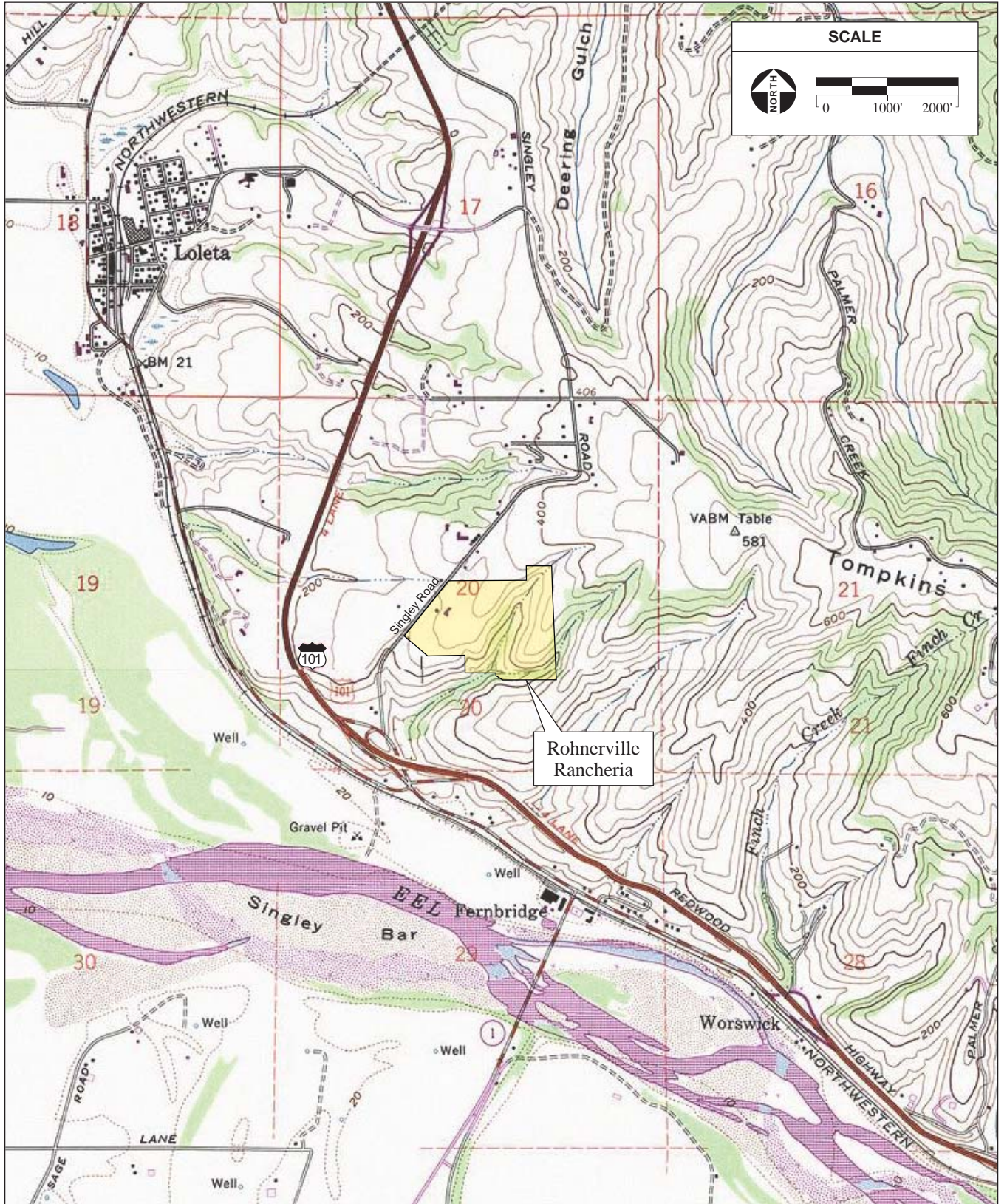
The Rancheria contains the Bear River Casino, the Pump & Play gas station/ convenience store/ smoke-free mini-casino, 13 single-family homes (12 occupied, one vacant), Tribal government and community facilities, and related infrastructure. Water is supplied to the casino and residences from an on-site groundwater well and treatment system operated by the Tribe. An on-site wastewater treatment plant (WWTP) treats wastewater from the casino, community/governmental offices, and some Tribal residences. The remaining Tribal residences utilize individual septic tanks. Tertiary treated effluent from the WWTP is disinfected and used on site for approved recycled water uses, or is disposed via onsite leach fields. Electricity is supplied to the existing casino, residences, and other buildings by Pacific Gas and Electric Company (PG&E). Local suppliers deliver propane to residences. Solid waste disposal services are provided by Eel River Disposal. Both commercial and residential uses on the Rancheria utilize the Loleta Fire Department for fire/emergency medical services and the Humboldt County Sheriff's Department for law enforcement services.



SOURCE: Microsoft Streets & Trips, 2004; AES, 2007

Bear River Casino Hotel Addition and Expansion EE / 206511 ■

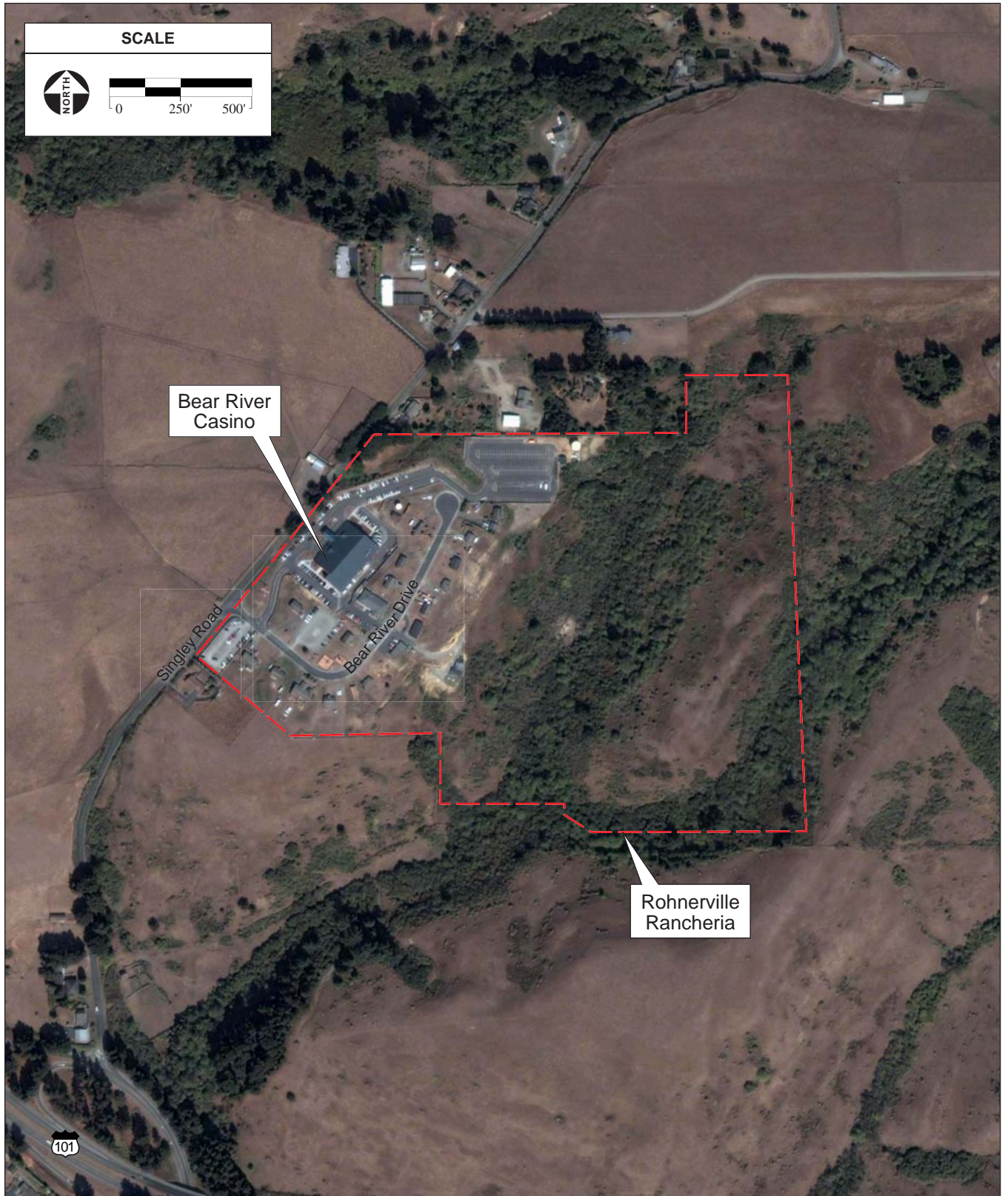
Figure 2-1
Regional Location



SOURCE: "Fields Landing, CA" USGS 7.5 Minute Topographic Quadrangle, Section 20, Township 3N, Range 1W, Humboldt Baseline & Meridian; AES, 2007

Bear River Casino Hotel Addition and Expansion EE / 206511 ■

Figure 2-2
Site and Vicinity



SOURCE: Digital Globe Aerial Photograph, 9/25/2006; AES, 2009

Bear River Casino Hotel Addition and Expansion EE / 206511 ■

Figure 2-3
Aerial Photograph

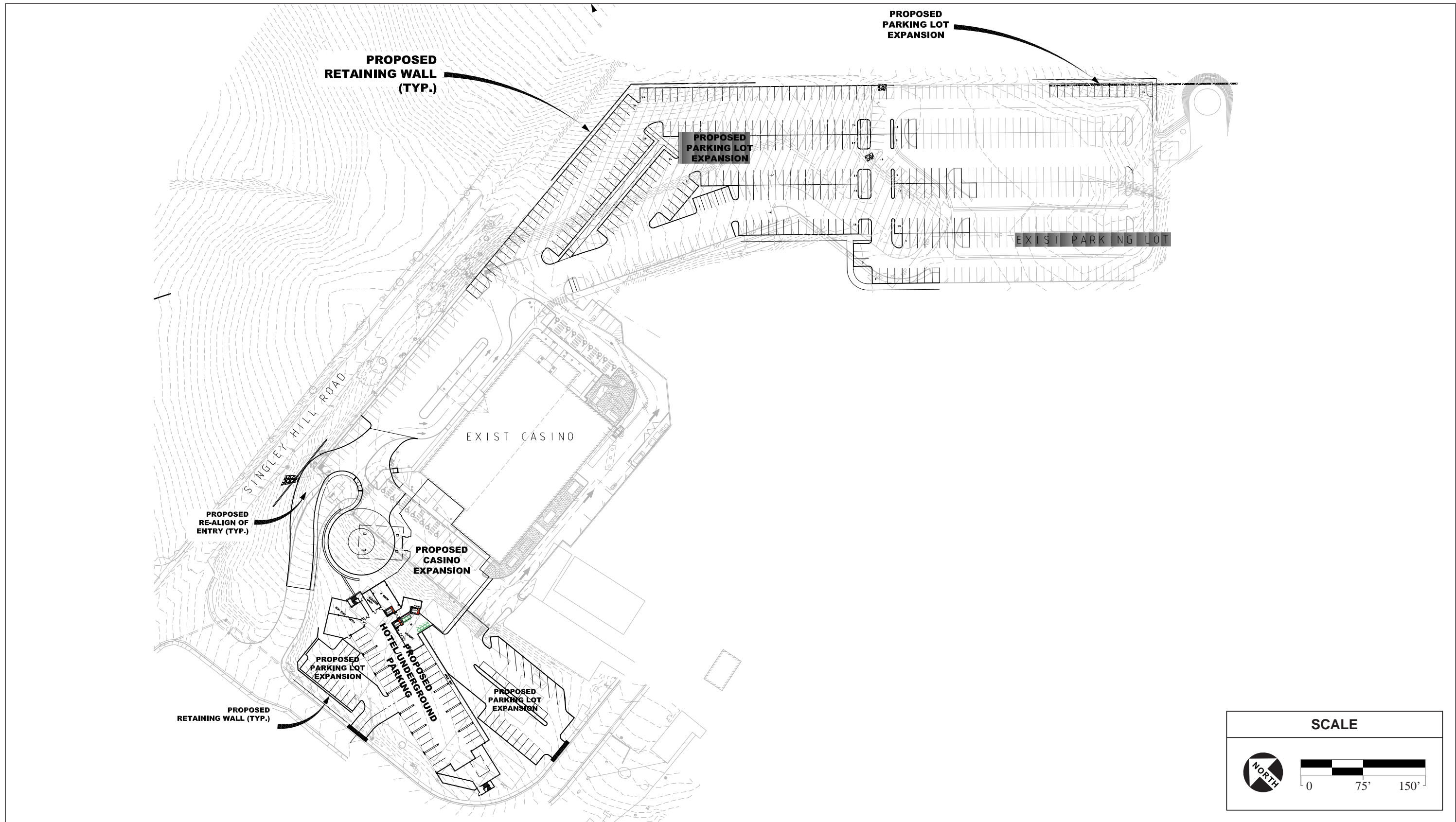
The existing Bear River Casino is approximately 35,000 square feet (sf), including gaming floor, other guest amenities, and all back-of-house office and support space. Gaming facilities in the main casino include 324 slot machines, 9 gaming tables, and 4 poker tables. An additional 25 slot machines and two gaming tables are located in the smoke-free Pump & Play mini-casino. The Bear River Casino currently includes a sports bar, a full-service restaurant, and a private dining area. Currently, there are 458 parking spaces associated with the casino, of which 354 paved and 56 gravel spaces are for guests (including valet parking). An additional 48 gravel spaces are designated for employee parking.

2.2 PROPOSED PROJECT FACILITIES

The Tribe proposes to add a hotel on the south side of the existing casino building, with new construction linking the two buildings and providing additional space for guest amenities and support services. No new gaming positions are proposed. **Figure 2-4** provides a site plan of the proposed facilities. **Figures 2-5a** through **2-5d** show the floor plans for the proposed additions. An architectural rendering is depicted in **Figure 2-6**.

Table 2-1 provides a summary of the approximate square footage for each area of the existing and proposed facilities including remodeled areas. The proposed project would include the following elements:

- Construction of a hotel building with 105 guest rooms located in four above-grade stories, with a sub-grade parking level for 33 vehicles.
- Construction of a new fine dining restaurant and kitchen.
- Addition of approximately 7,300 sf of new guest amenity spaces, including meeting room and ballroom spaces.
- Remodeling of approximately 1,500 sf within the existing casino.
- Reconfiguration and expansion of the parking lot to improve entry access and provide approximately 209 net new paved surface parking spaces.
- Upgrades to the existing water supply system, including additional recycled water storage capacity.
- Development of infrastructure to treat and dispose of additional wastewater generated by the project.



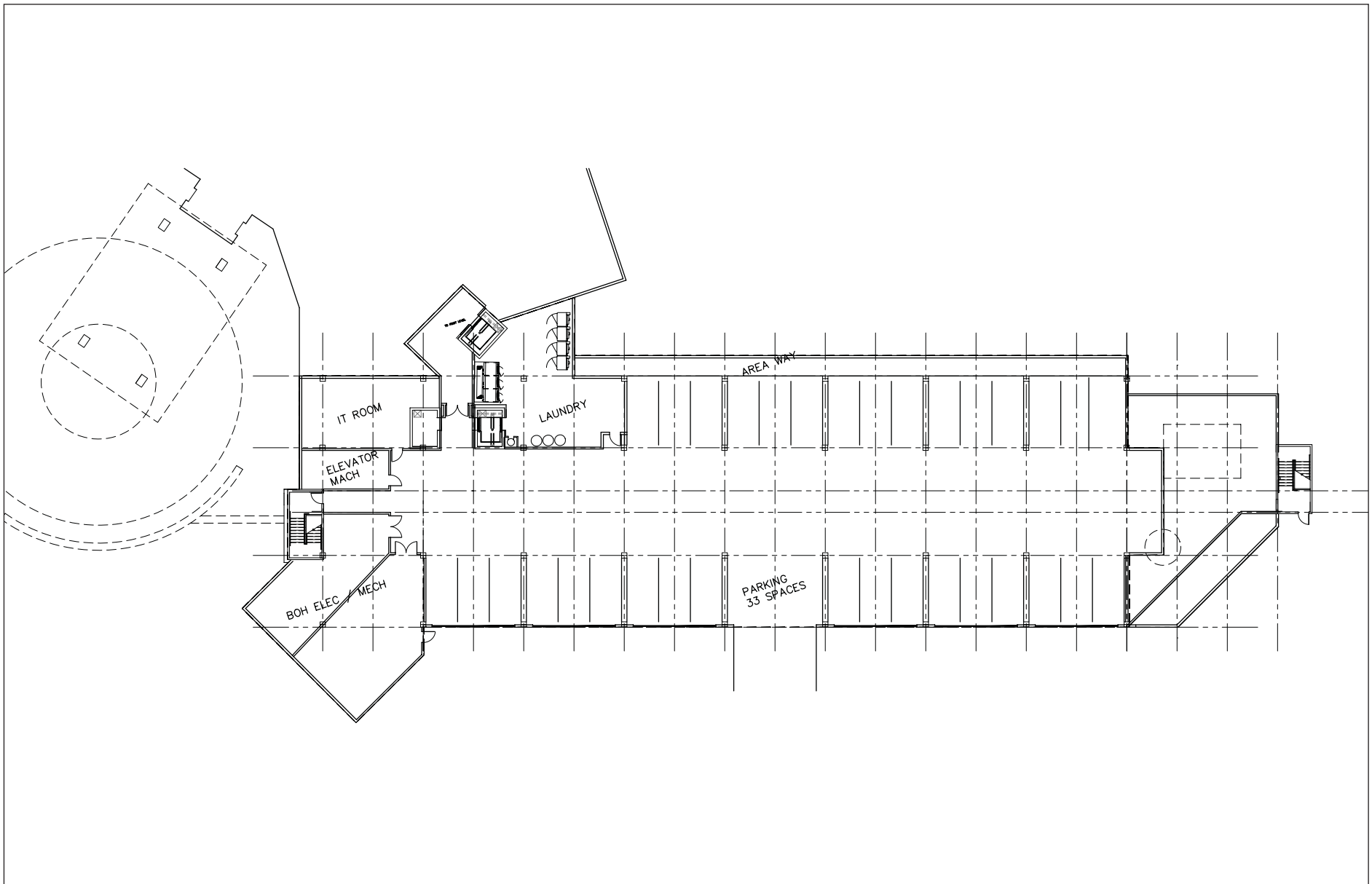


Figure 2-5a
Floor Plan (Parking Level)

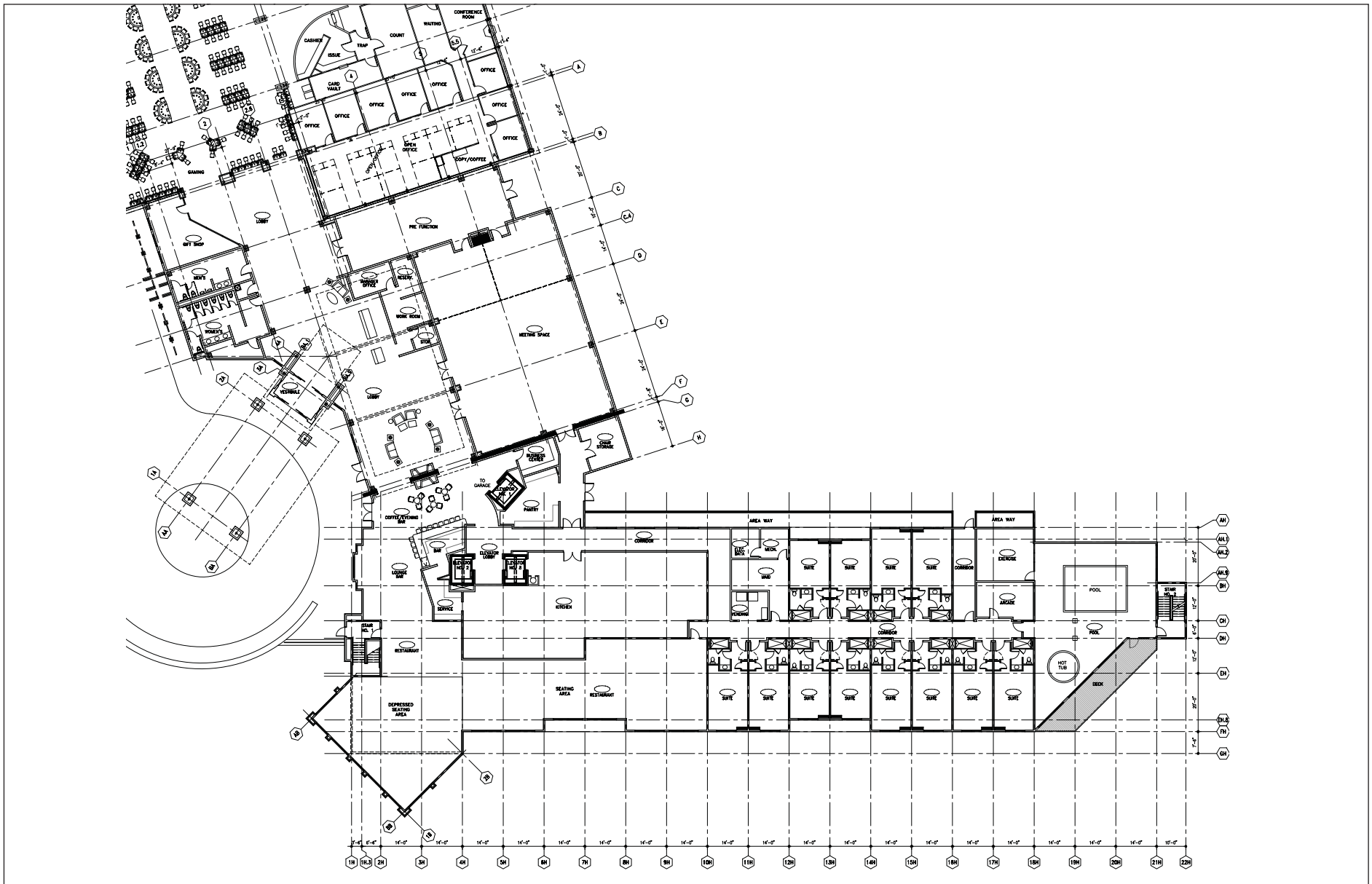


Figure 2-5b
Floor Plan (First Level)

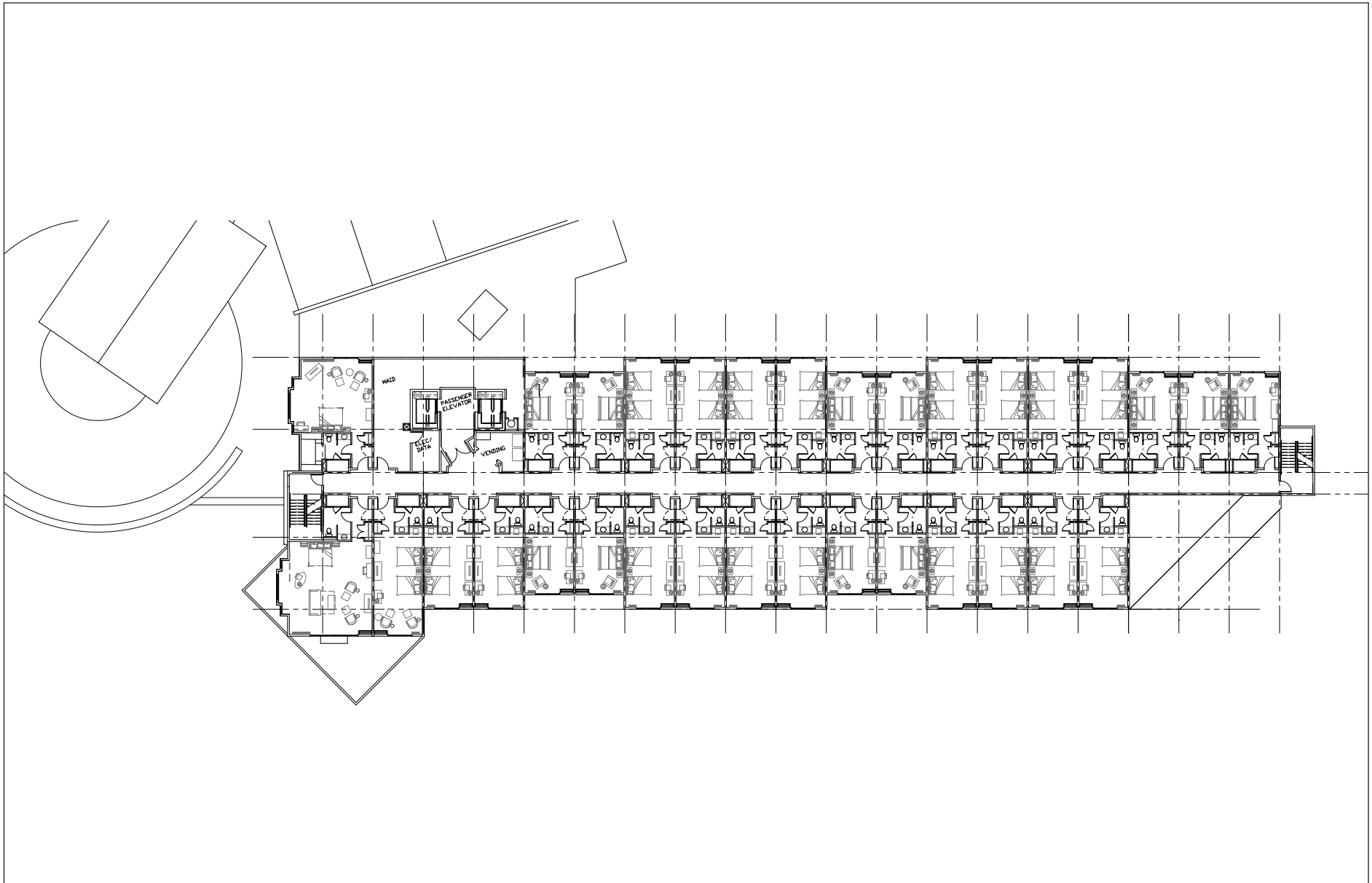


Figure 2-5c
Floor Plan (Second & Thrid Level)

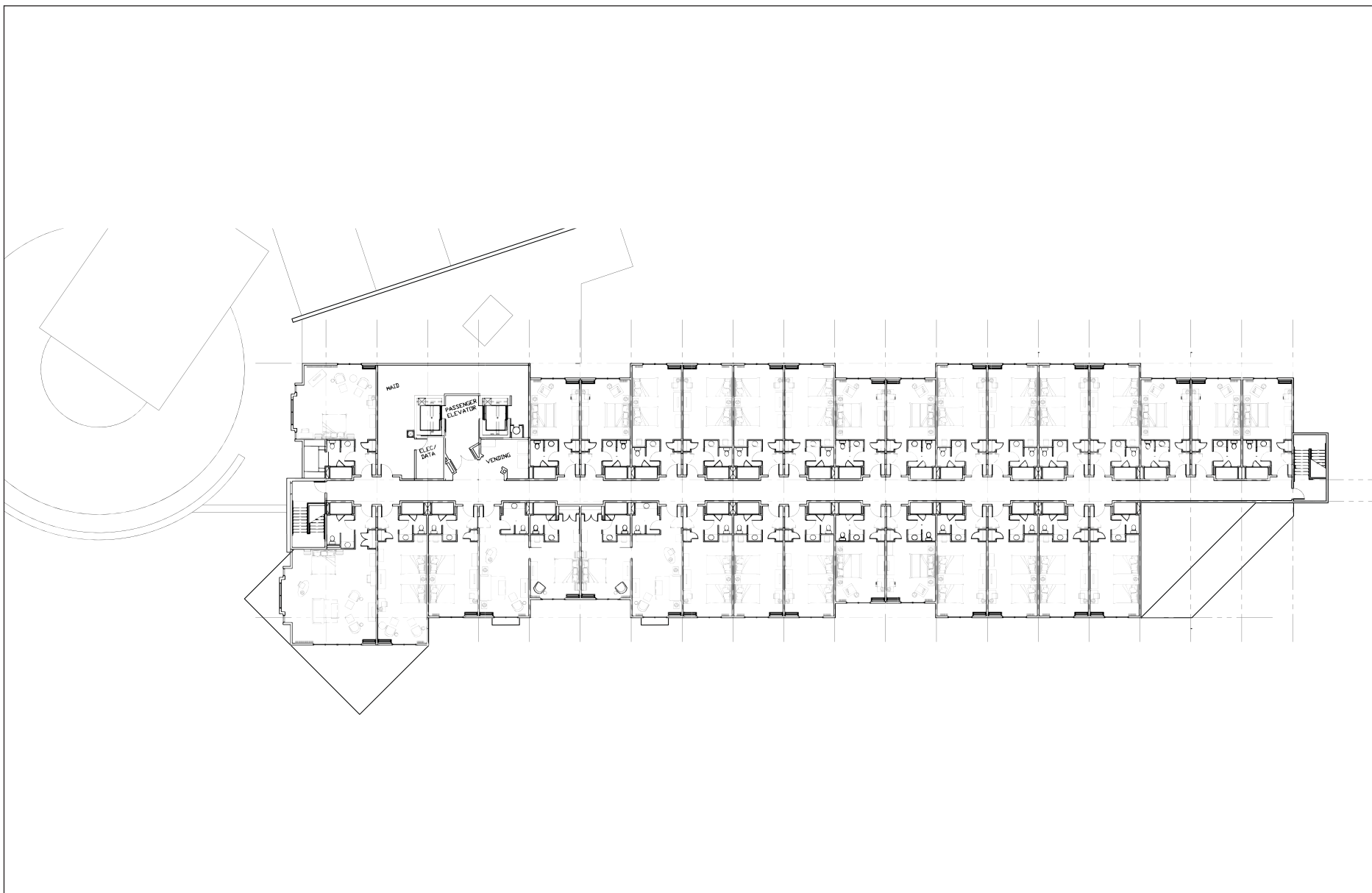




TABLE 2-1
PROPOSED EXPANSION PROGRAM

Component	Approximate Net Gain
Hotel Guest Rooms and Suites ¹	58,500 sf
Sports Bar/Deli Remodel ²	-1,500 sf
New 130-Seat Fine Dining Restaurant	3,250 sf
New Kitchen	2,000 sf
Meeting/Ballroom/Pre-Function Space	3,200 sf
Ballroom Pantry/Foyer/ Storage	1,055 sf
Hotel Guest Amenities (Business Center, Fitness Center, Outdoor Pool Deck, Gift Shop, Arcade)	1,939 sf
Hotel Vestibule/Lobby/Lounge	1,975 sf
Administrative/Hotel BOH	2,262 sf
Guest Circulation/Restrooms	3,607 sf
Parking Spaces (surface and underground) ³	242 spaces
Total Project Square Footage	76,288 sf

Notes: ¹ Hotel includes 96 standard guest rooms, 6 standard suites, and 3 deluxe suites.

²The existing full-service restaurant will be converted to a “Grab ‘N Go” deli and an expansion of the existing sports bar.

³ Not included in square footage total.

Source: ROI, 2009

As shown in **Figure 2-4**, the hotel facilities and new restaurant will be located on the southern side of the existing casino. The existing casino building and the new hotel will be linked by new construction to allow for additional guest services and reconfiguration of various existing amenities, including the remodeling of areas within the existing Bear River Casino. This will include the conversion of the existing full-service restaurant and private dining area into a “Grab ‘n Go” deli and an expansion of the existing sports bar.

2.2.1 PROJECT CONSTRUCTION

The proposed project would be constructed in compliance with the Uniform Building Codes, including all fire, plumbing, electrical, mechanical, and related codes. The design and construction would be in compliance with Zone 4 standards of the California Building Code. In addition, construction would comply with the Americans with Disabilities Act, P.L. 101-336, as amended, 42 U.S.C. Section 1201 et seq. The proposed project would also comply with the following provisions:

- Prior to occupancy, the development would be issued a certificate of occupancy by the Tribal Gaming Agency;
- The Tribal government would adopt and comply with standards no less stringent than State of California public health standards for food and beverage handling;
- The Tribal government would adopt and comply with standards no less stringent than Federal water quality and safe drinking water regulations that are applicable in California;

- The Tribal government would adopt and comply with standards no less stringent than Federal workplace and occupational health and safety standards;
- The Tribal government would comply with Tribal codes and other applicable Federal law regarding public health and safety; and,
- The Tribe would make reasonable provisions for emergency, fire, medical, and related relief and disaster services for patrons and employees of the gaming facility.

Construction would involve typical activities including excavation and grading, foundation building, framing, electrical and mechanical work, finishing and paving. Infrastructure upgrades would occur simultaneously with building construction. The development would include indoor sprinklers for fire safety. The proposed project will also entail the removal of the one vacant residence currently on the Rancheria, and a relocation of the Tribal child care center to an existing building east of Bear River Drive. The building that currently houses the child care center would also be removed to allow for construction of the hotel.

2.2.2 WATER SUPPLY

The Tribal government currently operates an on-site production well with a capacity of 78 gallons per minute (gpm). The well is equipped with a 25-gpm pump, which directs water to a treatment facility equipped with a manganese greensand filter. An existing potable water storage tank has a 40,000-gallon capacity. A water and wastewater feasibility study has been completed for the hotel and expansion project, and is attached as **Appendix B**. This study concludes that the well pump and water treatment facilities would need to be upgraded to ensure adequate water availability for the hotel and expansion. The existing well pump would be replaced with a 62-gpm model, and a second manganese greensand water filter, similar to the existing filter, would be installed in the water treatment facility to increase treatment capacity. With the use of recycled water as described below, the existing 40,000-gallon potable water tank would provide sufficient storage capacity for the project.

The existing facility is dual-plumbed for the use of recycled water. A tank with capacity for 200,000 gallons of recycled water is located at the northeast corner of the casino development area to provide water for fire protection, landscape irrigation, and toilet/urinal flushing. Recycled water would continue to be used for these non-potable uses following the expansion. A new 120,000-gallon recycled water storage tank would be constructed adjacent to the existing 200,000-gallon tank to ensure adequate fire flows for the proposed hotel and other additional facilities. Water supply is further discussed in **Section 3.5**.

2.2.3 WASTEWATER TREATMENT AND DISPOSAL

The existing casino utilizes an on-site wastewater treatment plant (WWTP) with effluent disposal to 0.9 acres of leachfields located on the Rancheria. The treatment plant process includes a sequencing batch reactor (SBR) with direct filtration and ultraviolet disinfection, resulting in tertiary treated effluent

suitable for recycled water uses under Title 22 regulations. The water and wastewater feasibility study provided in **Appendix B** describes the estimated wastewater flows from the proposed hotel and expansion, and recommends improvements to ensure adequate wastewater service for the project.

Prior to completion of the hotel a 10,000-gallon aerated influent equalization basin would be added to the wastewater treatment system. Additionally, a parallel SBR system with a capacity of 10,000 gallons per day would be constructed on the east side of the existing WWTP. Effluent would be disposed through onsite use of recycled water as described above, as well as continued use of existing leach fields and construction of 1.2 acres of new leach fields. New and existing leach fields would be equipped with remote flow control and isolation valves to ensure maximum efficiency. Wastewater treatment and disposal is further discussed in **Section 3.5**.

2.2.4 POWER SUPPLY

Pacific Gas & Electric Company (PG&E), which currently supplies electricity to the Rancheria, would also provide service to the proposed new and expanded facilities. The Tribe has recently contracted with PG&E to connect to a natural gas pipeline located approximately 0.25 miles northwest of the Rancheria, along Singley Road. This connection will serve the proposed hotel and casino facilities, as well as the existing residential and Tribal uses on the Rancheria. Propane gas suppliers in the Loleta area currently provide propane gas service to Tribal housing and the existing casino, and will continue to do so until the completion of the new PG&E natural gas pipeline.

SECTION 3.0

ENVIRONMENTAL ANALYSIS

SECTION 3.0

ENVIRONMENTAL ANALYSIS

3.1 INTRODUCTION

An Off-Reservation Environmental Impact Analysis Checklist (**Appendix A**) was used to determine the level of impact that the proposed project would have on the off-Reservation environment. The checklist allowed for a brief analysis and dismissal of less-than-significant environmental issues. The following factors were determined to have no off-Reservation impacts and therefore no further discussion or mitigation is warranted:

- Agricultural Resources
- Biological Resources
- Cultural Resources
- Hazards and Hazardous Materials
- Mineral Resources
- Recreation

Several aspects of the project have the potential to cause off-Reservation impacts and are evaluated in greater detail in the following sections. These topics include:

- Aesthetics
- Air Quality
- Geology and Soils
- Water Resources
- Land Use
- Noise
- Population and Housing
- Public Services and Utilities
- Traffic
- Cumulative Effects

3.2 AESTHETICS

3.2.1 EXISTING ENVIRONMENT

Humboldt County is predominantly rural and scenic views typically consist of agricultural areas, foothills, and mountains. The immediate vicinity of the Rancheria includes rural residential housing and grazing land. The Rancheria contains the Bear River Casino, Tribal housing and governmental offices, and related infrastructure. Two occupied off-reservation residences have relatively clear views of the existing casino, while an additional three residences may have partial or screened views through trees. The Rancheria is not visible from Highway 101 due to topography and screening from trees along the highway. The Rancheria is visible from parts of Singley Road. Topography and curves of the road limit views to the north and south. Nighttime lighting includes lighting from the casino and parking lot, streetlights, and Tribal housing porch lights.

The Humboldt County General Plan adopted in 1984 states that it is important *“to give careful consideration to the protection of natural scenic resources and environmental assets in all future major public and private development planning.”* The draft of the General Plan update (2008) furthers this goal by specifying that development should be designed *“to protect views to and along scenic areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas.”* While Tribal lands are not under County jurisdiction, the Tribe intends to develop the proposed project in an aesthetically pleasing and consistent manner, in keeping with the intent of County policies designed to protect the scenic beauty of the area while encouraging economic development.

3.2.2 ENVIRONMENTAL CONSEQUENCES

Project construction activities lasting several months will be visible from at least two offsite homes and to travelers on Singley Road. Upon completion of construction, all construction equipment and debris will be removed. This short-term impact would not be significant.

The design of the expanded facilities would be consistent with the existing facility. The project would not affect an identified scenic vista or off-reservation trees, rock outcroppings or historic properties. The hotel would be four stories above the present ground level in height (with a sub-grade parking level below) and may make the commercial development more visible to at least one residence to the north. Residences to the north are higher in elevation than the Rancheria and thus it is more difficult to screen these views. Trees along Singley Road and at the northern property line provide some screening. As shown in the perspective sketch (**Figure 2-6**), the height of the hotel will be somewhat higher than the height of the existing facility, which has a sloping roof and is approximately equivalent to two stories in height at its peak.

Nighttime lighting on the north side of the casino would be similar to existing lighting, although additional security lighting would be needed for the expanded parking lot. Nighttime lighting on the

south side of casino would increase due to light from hotel windows. Additionally, the hotel windows would contribute to more daytime glare on the southern side of the project site. Few residences to the south would be affected by this increase, although it could be noticed by northbound travelers on Singley Road. The house directly south of the Rancheria is owned by the Tribe, and is occupied by a Tribal member. The residences at the southern end of Singley Road have limited views of the facilities due to topography and vegetation. The following mitigation is recommended to ensure off-reservation visual impacts are less than significant.

3.2.3 MITIGATION

The Tribe shall incorporate the following mitigation measures into the project design:

- Trees along the northern Rancheria boundary and along Singley Road shall be preserved to the extent feasible during the parking lot expansion.
- External lighting should be down cast, and should be minimized to that which is adequate for public safety and security.
- Hotel rooms should be furnished with light-blocking drapes to minimize nighttime illumination, and tinted or polarized window glass to reduce daytime glare.

This would reduce aesthetic impacts to a less-than-significant level.

3.3 AIR QUALITY

3.3.1 EXISTING ENVIRONMENT

The project site is located in Humboldt County, which lies within the North Coast Air Basin (NCAB). The NCAB extends for 250 miles from Sonoma County in the south to the Oregon border in the north, and east through Trinity County.

Two major topographic units influence the climate of the NCAB: the Klamath Mountains and the Coast Range provinces. Large areas of rugged, mountainous terrain mark both provinces. The coastal plains, which are part of the Coast Range province, constitute less than 10 percent of the area of the NCAB but contain the major industrial and population centers. The project site is located on the edge of the coastal plain in the foothills of the Klamath Mountains.

Regulation of air pollution is achieved through both national and state ambient air quality standards and emissions limits for individual sources of air pollutants. The Federal Clean Air Act requires the U.S. Environmental Protection Agency (EPA) to identify National Ambient Air Quality Standards (NAAQS) to protect public health and welfare. National standards have been established for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, PM₁₀, PM_{2.5}, and lead. These pollutants are called criteria air pollutants because standards have been established for each of them to meet specific public health and

welfare criteria. California has adopted more stringent ambient air quality standards for most of the criteria air pollutants (referred to as State Ambient Air Quality Standards or SAAQS) and has adopted air quality standards for some pollutants for which there is no corresponding national standard.

Under amendments to the federal Clean Air Act, EPA has classified air basins, or portions thereof, as either “attainment” or “non-attainment” for each criteria air pollutant, based on whether or not the national standards have been achieved. In 1988, the State Legislature passed the California Clean Air Act, which is patterned after the Federal Clean Air Act to the extent that areas are required to be designated as “attainment” or “non-attainment” for the state standards, rather than the national standards. Thus, areas in California have two sets of designations: one set with respect to the national standards and one set with respect to the state standards. NAAQS and SAAQS for criteria air pollutants are listed in **Table 3-1**.

TABLE 3-1
AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	Standard (parts per million)		Standard (micrograms per cubic meter)		Violation Criteria	
		SAAQS	NAAQS	SAAQS	NAAQS	SAAQS	NAAQS
Ozone	1 hour	0.09	-	180	-	If exceeded	N/A
	8 hours	0.07	0.08	137	157	N/A	If exceeded on more than 3 days in 3 years
CO	8 hours	9	9	10,000	10,000	If exceeded	If exceeded on more than 1 day per year
	1 hour	20	35	23,000	40,000	If exceeded	If exceeded on more than 1 day per year
NO _x	Annual average	N/A	0.053	N/A	100	N/A	If exceeded
	1 hour	0.25	N/A	470	N/A	If exceeded	N/A
SO _x	Annual average	N/A	0.03	N/A	80	N/A	If exceeded
	24 hours	0.04	0.14	105	365	If exceeded	If exceeded on more than 1 day per year
	1 hour	0.25	N/A	665	N/A	N/A	N/A
PM ₁₀	Annual arithmetic mean	N/A	N/A	20	N/A	N/A	If exceeded
	24 hours	N/A	N/A	50	150	N/A	If exceeded on more than 1 day per year
PM _{2.5}	Annual arithmetic mean	N/A	N/A	12	15	N/A	If exceeded
	24 hours	N/A	N/A	N/A	35	N/A	If exceeded on more than 1 day per year

SOURCE: California Air Resources Board (CARB), 2009.

The Federal Clean Air Act also requires non-attainment areas to prepare air quality plans that include strategies for achieving attainment. Air quality plans developed to meet Federal requirements are referred to as State Implementation Plans (SIPs). The California Clean Air Act also requires non-attainment areas, except for state PM₁₀ non-attainment areas, to prepare plans that include strategies that demonstrate

attainment, or alternatively, that implement all feasible control measures. Thus, just as regions in California have two sets of designations, many regions in California also have two sets of air quality plans: one to meet Federal requirements and another to meet state requirements.

At the state level, the California Air Resources Board (CARB) regulates mobile emissions sources such as construction equipment, trucks, and automobiles, and oversees the activities of regional and county air districts. The regional and county air districts are primarily responsible for regulating stationary emissions sources and facilities. The project site lies within the North Coast Unified Air Quality Management District (NCUAQMD). NCUAQMD is the regional agency empowered to regulate air pollutant emissions from stationary sources in Humboldt County. NCUAQMD regulates air quality through its permit authority over most types of stationary emissions sources and through its planning and review activities. However, the EPA has jurisdiction on Tribal lands and is the agency responsible for protecting public health and welfare on tribal lands.

POLLUTANTS OF CONCERN

Particulate Matter

The NCAB, particularly Humboldt County, is primarily affected by particulate matter. Currently Humboldt County is designated attainment for Federal PM₁₀, non-attainment for State PM₁₀ and attainment for state and Federal PM_{2.5}. “Respirable” particulate matter (PM₁₀) and “fine” particulate matter (PM_{2.5}) consist of particulate matter that is 10 microns or less in diameter and 2.5 microns or less in diameter, respectively (a micron is one-millionth of a meter).

Ozone and Ozone Precursors

Ozone is frequently impacted by development within an area. Ozone is a reactive pollutant, which is not emitted directly into the atmosphere, but is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving volatile organic compounds (VOC) and oxides of nitrogen (NO_x). VOCs and NO_x are known as precursor compounds for ozone. Ozone is a regional air pollutant because it is not emitted directly by sources, but is formed downwind of sources of VOC and NO_x under the influence of wind and sunlight.

MONITORING DATA

Ambient air quality data is collected through a network of air monitoring stations located throughout the NCAB. **Table 3-2** provides a three-year summary listing the highest annual concentration observed in the site area for PM₁₀ for the years 2006-2008. The data was collected from the Eureka - Jacobs monitoring station. This station was selected because of its relative proximity to the Rancheria. Humboldt County is designated a non-attainment area with respect to State PM₁₀ standards only. It is either designated attainment or unclassified for all other regulated Federal and State constituents.

TABLE 3-2
CALIFORNIA AIR MONITORING DATA

Pollutant	Standard	2006	2007	2008
PM₁₀ California 24-hour:				
Highest	50 ug/m3	43.0	46.3	48.6
Days Exceeded		0	0	0

SOURCE: CARB, 2009.

SENSITIVE RECEPTORS

Sensitive receptors are facilities that house or attract children, the elderly, and people with illnesses or others who are especially sensitive to the effects of air pollutants. Hospitals, schools, convalescent facilities, and residential areas are examples of sensitive receptors. Typical of rural areas, the project vicinity is characterized by very low-density residential uses; most of these uses are located to the north and northeast of the project area. The nearest Tribal residences are located immediately east and south of the casino, on the Rancheria. The nearest occupied off-Reservation residences are located approximately 100 feet north of the north parking lot and approximately 250 feet southwest of Bear River Drive along Singley Road. The nearest hospital (Saint Josephs Hospital: Community Resource Center) and school (Loleta Grammar School) are both located approximately one mile northwest of the project site.

3.3.2 ENVIRONMENTAL CONSEQUENCES

CONSTRUCTION

Construction emissions from the casino project would generate criteria air pollutants through the use of construction machinery (primarily diesel-operated), construction worker automobiles (primarily gasoline-operated), and physical land disturbance. Construction will occur for a short time and will not overlap with operation of the expansion. Construction typically proceeds in two distinct phases. The first phase includes excavation, grading and re-contouring. The second phase includes erection and finishing of structures. The two phases are considered not overlapping and therefore the URBEMIS 2007 (Version 9.2.4) air model evaluates the phases separately. Modeling assumed construction of the project over a one-year period between August 2009 and August 2010. Construction emissions are summarized in **Table 3-3** and provided in detail in **Appendix C**. It is expected that these and construction-related emissions would not be significant at the regional or local levels and would not create a violations of NAAQS.

TABLE 3-3
CONSTRUCTION AND OPERATIONAL EMISSIONS OF PROPOSED PROJECT

Emissions	Criteria Pollutant (tons per year)					
	ROG	NOx	CO	SOx	PM ₁₀	PM _{2.5}
Construction	1.11	3.85	4.70	0.00	0.86	0.85
Operation	1.49	3.37	22.62	0.01	1.93	1.91

NOTES: Includes emissions from motor vehicles and area emissions. Operation and construction emissions were estimated using USEPA and CARB approved URBEMIS air model. PM_{2.5} is estimated to be 99 percent of PM₁₀.

SOURCE: URBEMIS, 2007

OPERATION

Potential sources of air pollutants associated with the project would be expected due to increased vehicle emissions from patrons, employees, and vendors.

Operational emissions from the expansion project would be comprised of indirect vehicular emissions associated with the facility's character as a vehicle trip attractor. Direct criteria air pollutant emissions would be generated from heaters, water heating devices and/or back-up generators. Operational emissions were modeled using URBEMIS 2007 (Version 9.2.4). Results are summarized in **Table 3-3** and provided in detail in **Appendix C**.

Emissions from construction and operational activities of the casino and hotel are below the Federal *de minimis* levels of 100 tons per year. The NCAB is in attainment for all federal criteria pollutants; therefore, the air pollution impacts are less than significant. Best management practices (BMPs) for construction activities are recommended in **Section 3.3.3** and would further minimize air pollution impacts.

CLIMATE CHANGE

The Earth's temperature is influenced by a system known as the "greenhouse effect." Greenhouse gases (GHGs) are primarily water vapor (H₂O), carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O) that trap the heat of the sun, preventing radiation from dissipating into space. Water vapor is the most abundant GHG and CO₂ is a distant second. Without the effect of these GHGs, which are both naturally occurring and anthropogenic, the average temperature on the Earth would be approximately -18° C (-64.4° F), instead of the current average of 15° C (59° F).

IPCC modeling estimates that anthropogenic CO₂ in the lower atmosphere has increased by approximately 31 percent since 1750. At the same time, average temperature in the lower atmosphere has increased from approximately 0.6° to 0.8° C (from 33.0° to 33.4° F). Due to the challenges inherent in modeling the complexities of the Earth's climate, the proportional importance of anthropogenic activities as opposed to natural feedback systems is exceptionally difficult to establish. Nonetheless, the IPCC

concludes that “Most of the observed increase in globally-averaged temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic GHG concentrations.”

GHG Emissions

The proposed project would emit GHGs from construction equipment, construction worker vehicle trips, patron vehicle trips, indirect energy use, and casino and hotel sources such as boilers. GHG emissions from construction of the proposed project would be 232.64 CO₂ tons. Once construction is completed, operational GHG emissions would be 3,040.60 CO₂ tons per years, primarily from patron vehicle trips.

3.3.3 MITIGATION

The Tribe should implement the following dust control measures during construction:

- Frequent watering of the construction site;
- Limiting grading activities to 5 acres or less per day;
- Cover haul trucks for off-site transport of loose materials;
- Limiting truck speeds on unpaved surfaces to 15 mph or less;
- To the extent feasible, requiring the use of construction equipment that meets the new emission standards for diesel engine-powered equipment; and
- Properly maintaining and operating construction vehicles and equipment to reduce construction-related NO_x emissions.

These BMPs will ensure a less-than-significant off-Reservation impact related to air quality.

3.4 GEOLOGY AND SOILS

3.4.1 EXISTING ENVIRONMENT

A geotechnical report was prepared for the project by LACO Associates (2007), which provides a preliminary analysis of soil, geological, and seismic concerns.

SOILS

The development area includes previously cut ground, engineered fill, and undisturbed native ground. Native soils include lean clay, silty sands, and poorly graded sands (LACO, 2007). The development area is gently to moderately sloping with gradients of approximately 5- 10 percent. Outside of the proposed development area, slopes on the Rancheria range up to approximately 15 percent. The project is in an area of moderate potential for slope instability; however, no active or dormant slope failure features were observed near the project footprint (LACO, 2007).

GEOLOGY AND SEISMICITY

The Rohnerville Rancheria is located in the northern Coast Ranges Geologic Province, which is a seismically active region in which strong earthquake ground shaking is expected in the next 50 years. The site is underlain by Quaternary non-marine terrace deposits of the Hookton Formation which includes poorly to moderately consolidated silts, sands, and gravels (LACO, 2007).

The site is not located in an Alquist-Priolo fault zone. The closest fault is the Little Salmon fault which is located approximately 2 miles to the northeast. Another seismic source is the Cascadia subduction zone which is located offshore of Cape Mendocino in Humboldt County, California marks the boundary between the North American plate and the subducting Gorda and Juan De Fuca plates. This subduction zone is capable of producing an earthquake which would lead to ground shaking on the project site (LACO, 2007).

3.4.2 ENVIRONMENTAL CONSEQUENCES

SOILS

Soils on the Rohnerville Rancheria and in the region are susceptible to erosion. During construction, the exposure of soil increases the risk of erosion. Both slope instability and erosion would be reduced by properly placed drainage controls. Erosion and drainage control measures are listed as mitigation under **Section 3.5.3**, Water Resources. Soils appear suitable for use as load-bearing material for the foundations of the expansion and hotel (LACO, 2007). In order to prevent differential settlement impacts, mitigation is recommended below in **Section 3.4.3**.

GEOLOGY AND SEISMICITY

Seismic concerns include fault rupture, ground shaking, liquefaction, and landslides. As discussed in **Section 3.4.1**, the project is not located within an Alquist-Priolo fault zone and no active or dormant slope failure is present near the project footprint. Slope instability as discussed above will be reduced by proper drainage and erosion controls. The estimated probability of liquefaction is low due to the age, type, and density of soils on the site (LACO, 2007). Ground shaking from seismic events is expected during the life of the facility. As stated in the project description, the design and construction of buildings would occur in accordance with California Building Code, Zone 4 standards. Following these standards would decrease the risks to human life and property from seismic events. No additional mitigation is required.

3.4.3 MITIGATION

The Tribe shall incorporate the following mitigation measures:

- Fill materials should be well-graded, imported granular material, such as river-run gravels or crushed quarry rock.
- Native clay soils may be used for structural fill if tested for moisture conditioning.

- Structural fills should be compacted as recommended in the geotechnical report.

These measures would reduce geology, seismicity and soil impacts to less-than-significant levels. See **Section 3.5.3**, Water Resources for additional mitigation to prevent soil erosion.

3.5 WATER RESOURCES

3.5.1 EXISTING ENVIRONMENT

SURFACE WATER, DRAINAGE, AND FLOODING

Surface Water

The Eel River, which is located less than a mile from the project site, is the third largest river system in California. The project site is located north of the Lower Eel River, which begins at the confluence of the Middle Main Eel and South Fork Eel and continues to the Eel River Delta and Pacific Ocean. The project site is located within the Lower Eel River watershed, which includes 191,052 acres within Humboldt County (County of Humboldt, 2008). It is a part of the larger Eel River Basin, which includes the Van Duzen, Lower Eel, Middle Main Eel, and South Fork Eel watersheds. Of the four watersheds, the Lower Eel watershed is the only watershed located entirely in Humboldt County.

Rainfall in the area averages 30-45 inches per year. Rainfall is the primary contributor to surface runoff flows. Due to unstable soils and high seasonal rainfall, the Eel River contains large amounts of sediments, which are deposited throughout the lower gradient reaches of the river system (County of Humboldt, 2008).

The mean annual discharge for the Eel River is approximately six million acre-feet with 93 percent of the discharge occurring between November and April. Typically discharge ranges from 145 cubic feet per second (cfs) in September to 19,450 cfs in February (County of Humboldt, 2008).

Drainage

The proposed development is located in a drainage area of approximately 207 acres which flows southwest to the Eel River. Stormwater from the proposed development area enters a storm drain which crosses under Bear River Drive to the recently upgraded drainage facilities within the Singley Road right of way. The runoff is directed to a buried storm drain pipe in the shoulder of Singley Road, then it outlets across a new energy dissipation swale onto a parcel south of the Rancheria. There is a buried headwall on this parcel, which has created a seasonal wetland. The seasonal wetland drains south to a Caltrans 18-inch diameter smooth bore high-density polyethylene culvert through a series of drop inlets and drain pipes. From here, drainage flows to a Caltrans 48-inch diameter reinforced concrete pipe that crosses under Highway 101. Under the 100-year precipitation event, the contributing runoff to the 48-inch diameter culvert is 121 cfs. The capacity of the culvert is approximately 170 cfs. From here, stormwater continues to a 36-inch diameter corrugated metal pipe, which crosses under Eel River Drive and the

Northwest Pacific Railroad. The culvert is owned by the County in partnership with the railroad company. Under the 100-year precipitation event, contributing runoff to the 36-inch diameter culvert is 128 cfs, which is above the capacity of 70 cfs. There is a frequent occurrence of the undersized culvert being overtopped, resulting in localized flooding. From this culvert, drainage continues to the Eel River (Winzler & Kelly, 2006).

Flooding

The Federal Emergency Management Agency (FEMA) is responsible for predicting the potential for flooding in most areas. FEMA routinely performs this function through the update and issuance of Flood Insurance Rate Maps (FIRMs), which depict various levels of predicted inundation. The project site is located outside of the FEMA 100-year flood zone (**Figure 3-1**). In the vicinity of the project site the nearest areas in the 100-year flood zone are immediately southwest of Highway 101, approximately 0.3 miles from the development area.

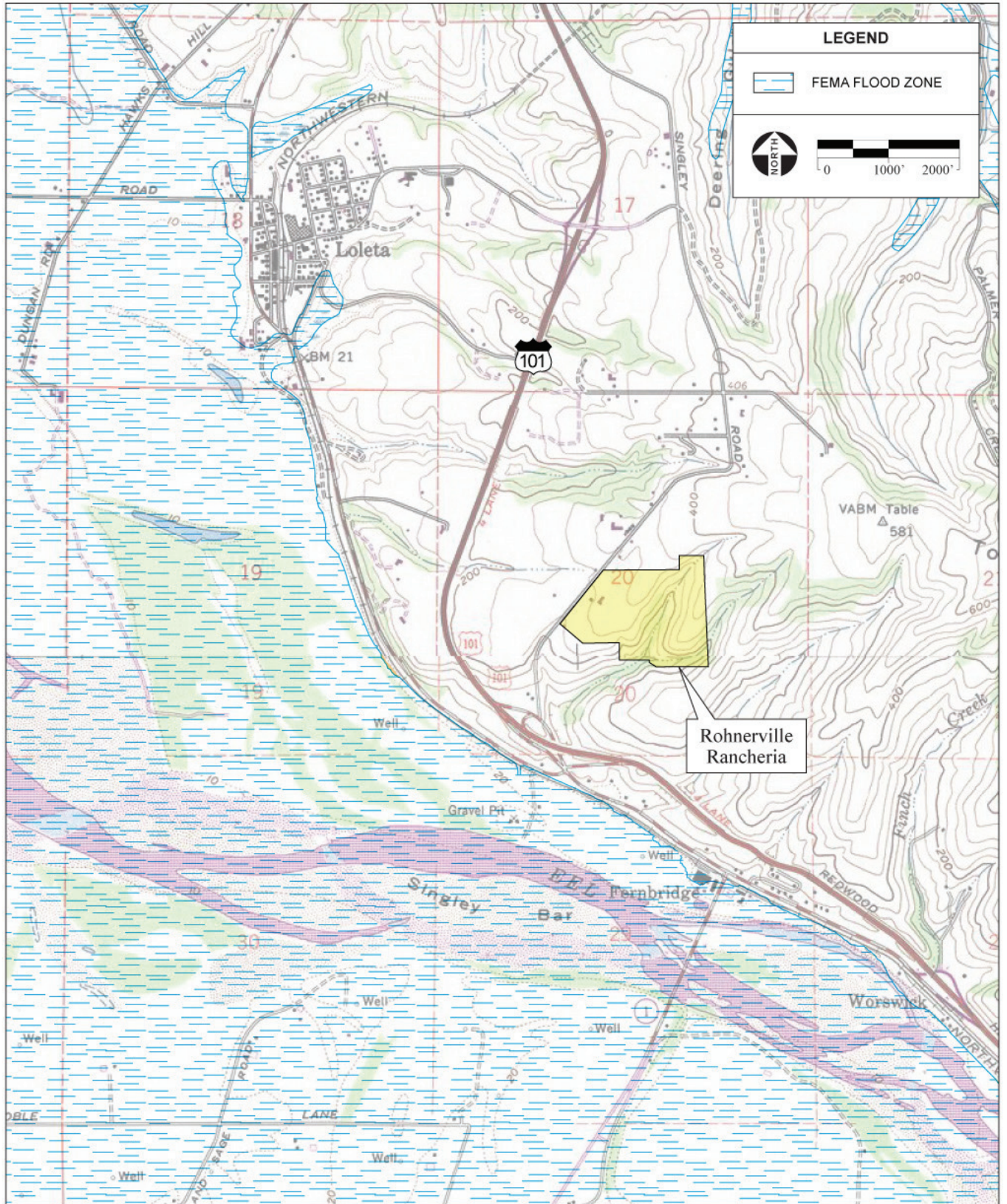
WATER SUPPLY AND GROUNDWATER

Humboldt County has four main groundwater basins: Hoopa Valley, Mad River Valley, Eureka Plain, and Eel River Valley. These basins are a part of the larger California Coastal Basin Aquifer, which is recharged by runoff from the hills (County of Humboldt, 2008). The Eel River Valley Basin is approximately 120 square miles and a storage capacity of 136,000 acre-feet. The average well yield is 400 gallons per minute (gpm) and the maximum well yield is 1,200 gpm (County of Humboldt, 2008). The Humboldt County General Plan lists this area as one of the prime sources for groundwater supplies in Humboldt County (County of Humboldt, 2008).

The Rohnerville Rancheria utilizes a domestic well that serves 12 occupied Tribal homes, Tribal community and government facilities, and the existing Bear River Casino. Pump tests indicate that the well on the Rohnerville Rancheria can operate at 78 gpm without adversely affecting other wells in the area (HydroScience, 2006). Currently, the production capacity is limited by a 25-gpm pump, which delivers water to a 40,000-gallon storage tank (HydroScience, 2009).

WASTEWATER

The Rohnerville Rancheria currently utilizes a 20,000 gallon per day (gpd) wastewater treatment plant with a sequencing batch reactor (SBR). The surge tank provides initial treatment and equalization. Wastewater then flows to the SBR where wastewater is aerated, allowed to settle, and decanted. Oxygen is supplied to stabilize the Biological Oxygen Demand (BOD). Wastewater is then filtered through a sand filter and disinfected by exposure to ultra-violet light to Title 22 standards for tertiary treated effluent. Tertiary recycled water is pumped to a 200,000-gallon storage tank for landscape irrigation, fire suppression, and toilet flushing. Excess water is disposed through 0.9 acres of on-site subsurface disposal (leach) fields (HydroScience, 2009).



SOURCE: SOURCE: FEMA Q3 Flood Data, 1996; "Fields Landing, CA", USGS 7.5 Minute Topographic Quadrangle, Section 20, Township 3N, Range 1W, Humboldt Baseline & Meridian; AES, 2007

Bear River Casino Hotel Addition and Expansion EE / 206511 ■

Figure 3-1
Flood Zone Map

WATER QUALITY**Surface Water**

The State Water Resources Control Board, in compliance with Clean Water Act Section 303, has prepared a list of impaired water bodies in the State of California. Impaired water bodies occur where industrial and technological waste limits or other legal mechanisms for pollution control are not enough to meet water quality standards. The list includes a priority schedule for the development of total maximum daily loads (TMDLs) for each contaminant or “stressor” impacting the water body. The Lower Eel River is listed on the 303(d) list for impairment of one or more beneficial uses due to four different stressors (**Table 3-4**).

TABLE 3-4
2006 CLEAN WATER ACT SECTION 303(D) LIST

Location	Pollutants/ Stressors	Potential Sources	TMDL Status	TMDL Completion
Eel River Hydrologic Unit, Lower Eel River Hydrologic Area	Sedimentation/ Siltation	<ul style="list-style-type: none"> ▪ Range Grazing – Riparian and/or Upland ▪ Silviculture ▪ Nonpoint Source ▪ Erosion/Siltation 	TMDL has been developed and approved by USEPA (Category 4a)	2007
	Temperature	<ul style="list-style-type: none"> ▪ Removal of Riparian Vegetation ▪ Nonpoint Source 	TMDL has been developed and approved by USEPA (Category 4a)	2007
	Dissolved Oxygen	<ul style="list-style-type: none"> ▪ Source Unknown 	TMDL needs to be developed (Category 5)	Proposed 2021
	Aluminum	<ul style="list-style-type: none"> ▪ Natural Sources 	TMDL needs to be developed (Category 5)	Proposed 2021

SOURCE: North Coast Regional Water Quality Control Board, 2009

The National Pollutant Discharge Elimination System (NPDES) program established pursuant to the Clean Water Act (33 USC §§ 1251 to 1387) is a national program for regulating and administering permits for discharges to receiving waters. Under the Federal Clean Water Act, Indian Tribes can be treated as states for the purposes of the NPDES program (33 USC § 1377[e]). However, the EPA maintains regulatory authority over discharges to surface waters on Tribal lands.

Water Supply and Groundwater

In order to protect drinking water supplies and under the mandate of the Safe Drinking Water Act, the EPA defines National Primary Drinking Water Regulations (primary standards). These are legally enforceable standards that apply to public water systems. These standards are established to protect human health by limiting the levels of contaminants in drinking water. The EPA also defines National Secondary Drinking Water Regulations (secondary standards).

The domestic well water at the Rohnerville Rancheria is treated with a greensand filter to remove iron and manganese prior to entering the 40,000-gallon storage tank. Water quality data is provided for the well by the U.S. Indian Health Service, a part of the U.S. Department of Health and Human Services, and is shown in **Table 3-5**. Secondary standards are related only to aesthetic water quality and are not related to public health issues.

TABLE 3-5
WATER QUALITY FOR ROHNERVILLE RANCHERIA DOMESTIC WELL

	Units	Standard	Sample Results
EPA National Primary Drinking Water Standards			
Nitrate	mg/L	10	ND
EPA National Secondary Drinking Water Standards			
Chloride	mg/L	250	ND
Fluoride	mg/L	2	ND
Iron	mg/L	0.3	ND
Manganese	mg/L	0.05	0.03
pH	pH units	6.5-8.5	8
Silver	mg/L	0.1	ND
Sulfate	mg/L	250	ND
Total Dissolved Solids	mg/L	500	650
California Primary Standards			
Arsenic	mg/L	0.05	ND
Barium	mg/L	1	1.5
Cadmium	mg/L	0.005	ND
Chromium	mg/L	0.05	ND
Fluoride	mg/L	2	ND
Mercury	mg/L	0.002	ND
Nitrate	mg/L	1	ND
Selenium	mg/L	0.05	ND
California Secondary Standards			
Specific Conductance	micromhos	1,600	1,200
Chloride	mg/L	200	25
Copper	mg/L	1	14
Iron	mg/L	0.3	ND
Manganese	mg/L	0.05	0.03
Silver	mg/L	0.1	ND
Sulfate	mg/L	500	ND

SOURCE: HydroScience, 2006.

Wastewater

The EPA also administers the Underground Injection Control (UIC) program. Under the UIC program, subsurface wastewater disposal fields are classified as Class V shallow injection wells. The minimum

Federal requirements for Class V injection wells prohibit any injection activity that may endanger underground sources of drinking water (40 CFR Part 144). Federal regulations require owners and operators of Class V injection wells to provide inventory information, such as location, legal contact, and nature of the injection activity, to the EPA.

3.5.2 ENVIRONMENTAL CONSEQUENCES

SURFACE WATER

The proposed project would increase impervious surfaces on the property through the construction of additional buildings, parking areas, and driveway pavement. Increased impervious surfaces would result in increased peak flows and increased total discharge from the project site during wet weather events, which has the potential to add increased stormwater flows to the area's drainage systems and potentially result in localized flooding.

The Rancheria currently has a stormwater detention basin located southwest of the existing casino. Properly sized detention facilities reduce the amount and velocity of stormwater flowing off site, which will prevent off-site flooding issues. Drainage from the project areas will follow the path of existing drainage along the east side of Singley Road to a seasonal wetland. The wetland drains through a 48-inch diameter pipe, which crosses Highway 101 and has nearly 30 percent capacity remaining during large storm events. This is more than adequate for the proposed project. Drainage continues to the 36-inch diameter pipe, which crosses under Eel River Drive and the Northwest Pacific Railroad and is undersized for large storm events. There is currently localized flooding in this area during storms to which the project would contribute. Mitigation is recommended for this impact.

The proposed facilities are located outside of the FEMA 100-year floodplain; therefore, there will be no significant impacts due to flooding as a result of the proposed project.

WATER SUPPLY

Water demands were estimated in the Water and Wastewater Feasibility Study (**Appendix B**). The minimum recommended firm water supply for the existing Tribal housing and community/government facilities, existing casino, and hotel addition would be 31 gpm or approximately 44,700 gpd. Pump tests indicate that the well on the Rohnerville Rancheria can operate at 78 gpm without adversely affecting other wells in the area (HydroScience, 2006). As discussed in **Section 3.5.1**, the current system meets Federal and State primary standards for safe drinking water.

The system would continue to utilize conventional greensand filters to remove iron and manganese. The Tribe would pay for a new well pump with a capacity of 62 gpm. Recycled water would be used for non-potable uses on site such as toilet flushing and landscape irrigation. An additional recycled water storage tank would be needed as discussed under the wastewater heading below. With the maximum use of recycled water, project demands for potable water would be reduced to approximately 22,000 gpd. The

existing storage tank has enough capacity to provide peak and fire flows. Because the water treatment system meets Federal health standards and there are no anticipated impacts to groundwater wells in the vicinity, the impact would be less than significant.

WASTEWATER

Wastewater flows were estimated in the Water and Wastewater Feasibility Study (**Appendix B**). The existing treatment plant and leach fields (0.9 acres) would be insufficient for existing uses with the addition of the proposed hotel and expansion. Existing uses plus the proposed hotel and expansion would result in an estimated average weekday flow of 17,200 gpd, and an average weekend flow of 29,000 gpd. The existing WWTP has a treatment capacity of approximately 20,000 gpd.

Two parallel SBR system trains with parallel filtration and disinfection, each with a capacity of 10,000 gpd, would be added east of the existing treatment plant, which would increase treatment plant capacity to 30,000 gpd with one train out of service. This extra redundancy would ensure that sufficient capacity would be available to treat peak weekend flows and higher-than-average strength influent. Effluent would be disposed through use of recycled water, use of existing leach fields (upgraded with remote flow control and isolation valves), and construction of 1.2 acres of new leach fields. A 120,000-gallon recycled water storage tank adjacent to the 200,000-gallon tank would be constructed for additional recycled water storage. Because wastewater would be treated on-site there would be no impacts to off-site wastewater service providers.

WATER QUALITY

Construction activities such as site preparation could increase the potential for erosion to occur, which could increase silt loads in the Eel River. Surface water runoff could transport trash, debris, oil, sediments, and grease into adjoining surface waters affecting surface water quality. These are potentially significant impacts.

The Tribe will be required to adhere to the provisions of the Clean Water Act. The Tribe will comply with the terms of the General Construction NPDES Permit and ensure that Best Management Practices (BMPs) are used to reduce the risk of soil erosion and polluted discharge. The Tribe will also prepare and implement a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP shall include measures to prevent sediment and pollutants from impermeable surfaces such as the parking area from entering the drainage system and detention pond. Oil and grease traps/separators shall be installed in all parking lot drainage outlets to reduce the risk of off-site water quality impacts from automobile-associated pollution. BMPs will include the provision that surface water should not be allowed to flow over and fill slopes, in order to significantly reduce erosion. Specific BMPs and other mitigation measures are listed in **Section 3.5.3** to reduce potential surface water quality impacts to a less-than-significant level.

WATER SUPPLY AND WASTEWATER

The project would utilize leach fields, which could potentially contaminate water sources. Groundwater in the vicinity is located less than eight feet below the surface; however, the aquifer used for water supplies is several hundred feet below the surface. Leach fields would be set back from off-reservation groundwater sources. Additionally, locally used groundwater wells are located uphill of the existing and proposed leach fields. The treatment plant at the Rancheria provides tertiary treatment of effluent, which can be reused for Title 22-approved uses including toilet flushing and landscape irrigation. The EPA regulates subsurface discharge through the UIC Program. As required and enforced by the EPA under the Safe Drinking Water Act, the Tribe shall submit an Inventory of Injection Wells form and conduct the EPA approval process. The Tribe would be required to meet Federal standards, which would ensure that there are no adverse impacts to off-site water supply.

3.5.3 MITIGATION

Mitigation measures outlined below would minimize impacts due to the introduction of project-related impervious surfaces.

- The Tribe shall develop and implement a SWPPP that outlines Best Management Practices for erosion and storm water runoff control. Throughout the construction phase, the Tribe shall implement the following measures:
 - Conduct grading and excavation during the dry season to the extent possible;
 - Existing vegetation would be retained where possible;
 - Use temporary erosion control measures for disturbed areas;
 - Protect all disturbed surfaces with appropriate erosion control measures in place during the winter and spring months;
 - Retain sediment on site by a system of sediment basins, traps, or other appropriate measures;
 - Develop and implement a Spill Prevention and Countermeasure Control Plan sufficient to identify proper storage, collection, and disposal measures for potential pollutants used onsite; and
 - Equip all parking lot storm drains with permanent oil/water separators.
- Drainage from the project flows to County-owned culverts, which are currently undersized. The Tribe shall enlarge the existing on-site stormwater detention basin and/or construct additional basins to ensure that downstream flooding conditions are not exacerbated by increased stormwater discharge from the increased impervious surfaces on the Rancheria.

These mitigation measures would reduce impacts to water resources to a less-than-significant level.

3.6 LAND USE

3.6.1 EXISTING ENVIRONMENT

The project site is located near the small communities of Fortuna and Loleta. Fortuna is located approximately 3 miles to the southeast and Loleta is located approximately 2 miles to the northwest.

The area surrounding the Rancheria is characterized by agricultural uses, open space, and rural-residential uses. Land use activities in the unincorporated areas of Humboldt County are regulated by the Humboldt County General Plan, applicable area/specific plans, and the Humboldt County Zoning Ordinance. Surrounding properties have land use designations of Agriculture Exclusive (AE) with zonings of Unclassified (U) and Residential Suburban (RS). The Rancheria is Tribal trust land and therefore is not subject to County land use designations and zonings. Uses on the Rancheria include the existing Bear River Casino, the Pump & Play gas station/ mini-mart/ mini casino, Tribal community and governmental facilities, and Tribal housing. The Tribal government regulates uses on the Rancheria.

3.6.2 ENVIRONMENTAL CONSEQUENCES

The proposed project would not affect the ability of surrounding land to be used for agriculture or rural-residential housing. Commercial facilities already exist on the Reservation and new commercial facilities would be consistent with the existing casino. The hotel and Tribal housing on the Reservation would be sensitive receptors and thus it is in the Tribe's best interest to limit noise, visual, and other environmental impacts on the Rancheria. The project would not result in conversion of surrounding land to commercial uses, as the Humboldt County General Plan and Humboldt County Zoning Ordinance would still guide future development on non-trust property.

3.6.3 MITIGATION

No mitigation would be warranted.

3.7 NOISE

3.7.1 EXISTING ENVIRONMENT

In determining the daily level of environmental noise, it is important to account for the difference in responses of people to daytime and nighttime noises. During the night, exterior background noise levels are generally lower than daytime levels. However, most household noise also decreases at night and exterior noise becomes more noticeable. Further, most people sleep at night and are more sensitive to noise intrusion. To account for heightened sensitivity to nighttime noise levels, a descriptor for day-night average sound level (L_{dn}) was developed, with other descriptors describing the other segments of each day: (L_n) describes the times from 10:00 P.M. to 7:00 A.M., and (L_d) describes the time from 7:00 A.M. to 10:00 P.M.

Some land uses are considered more sensitive to noise than others due to the amount of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities typically involved. A *sensitive receptor* is defined as any living entity or aggregate of entities whose comfort, health, or well-being could be impaired or endangered by the existence of the criteria pollutant, whether it be emissions or noise, in the atmosphere. Sensitive receptors include residences, motels and hotels, schools, libraries, churches, hospitals, nursing homes, auditoriums, parks and other outdoor recreation areas. These uses are generally more sensitive to noise than commercial and industrial land uses. Sensitive receptors could include pedestrians, residences, offices, churches, hospitals, and other public areas.

The area surrounding the project site is mostly rural residential. The noise environment surrounding the project site is influenced primarily by vehicle noise on Singley Road, with some influence from Highway 101. Rural residential noise levels generally range from 20 decibels (dBA) to 40 dBA.

There are a number of existing sensitive receptors, primarily single-family residences, located in proximity to the project site and along roadways providing access to and from the site. The closest off-Reservation sensitive receptors are two residences located on Singley Road north of the casino, and the one Tribally owned residence to the south.

HUMBOLDT COUNTY

Although not directly applicable to the proposed project, the Humboldt County General Plan prescribes limits for operational noise generation from one property to another. Operational noise from a commercial property to a residential property, such as the proposed project, should not exceed 60 dBA on average (County of Humboldt, 1984). Humboldt County has no existing noise ordinance that provides construction noise limitations. Generally, operational noise for a project is limited by surrounding uses and sensitive receptors. The maximum acceptable exterior noise level for residences is 60 dBA (County of Humboldt, 1984).

3.7.2 ENVIRONMENTAL CONSEQUENCES

CONSTRUCTION

Construction activities associated with the hotel construction and expansion project would be intermittent and temporary in nature. The generated noise levels would be above ambient background levels. Construction activity noise levels at and near the proposed project site would fluctuate depending on the particular type, number, and duration of uses of various pieces of construction equipment. Construction-related material haul trips would raise ambient noise levels along haul routes, depending on the number of haul trips made and types of vehicles used. **Table 3-6** below, shows typical noise levels during different construction stages.

TABLE 3-6
TYPICAL CONSTRUCTION NOISE LEVELS

Construction Phase	Noise Level at a Distance of 50 feet (dBA, L_{eq})
Ground Clearing	84
Excavation	89
Foundations	78
Erection	87
Finishing	89

NOTES: The L_{eq} is the constant sound level, which would contain the same acoustic energy as the varying sound level, during the same time period (i.e., the average noise exposure level for the given time period).

SOURCE: Bolt, Baranek, and Newman, Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, 1971

Construction activity noise, especially during grading, can have a noise level measured at 50 feet of up to 89 dBA. However, construction noise is intermittent and short-term, as the distance to the noise source doubles, the noise intensity lessens by a factor of four. As most of the surrounding residences are more than 100 feet from the proposed construct site the ambient construction noise at this distance would be less than 25 dBA, far less than the maximum noise level standard set by Humboldt County. While this impact would be less than significant, mitigation is included in **Section 3.7.3** to limit construction to normal daytime hours.

OPERATION

The primary sources of noise caused by the proposed project would be from additional traffic on Singley Road, and from people and cars in the casino/hotel parking lots. Additional traffic noise would be of a similar nature to the existing noise along Singley Road and Highway 101.

Operational activities in the immediate vicinity of the casino would primarily be related to heating, ventilating and air conditioning systems at the gaming facility, as well as increased parking lot activity (cars starting, doors closing, etc.). In addition, miscellaneous site activities could result in intermittent noise events.

Operational activities (transportation) associated with the casino project could increase ambient noise levels at nearby sensitive receptors, specifically the residences along Singley Road. A “Left turn only” sign upon exiting Bear River Drive limits northbound trips on Singley Road where the majority of residences are located. Traffic along Singley Road would increase by no more than two cars per minute during the peak hour (**Appendix D**). Most trips would be distributed throughout the day.

Peak hour traffic volumes at some intersections would increase by approximately 50 percent with the addition of traffic related to the proposed project. A doubling in traffic volume typically results in an approximate 3-dBA increase in noise exposure, a difference considered just perceptible by most individuals. The existing noise environment is less than 50 dBA and the maximum acceptable level is 60 dBA. Thus, the additional traffic would not cause noise levels to exceed the maximum acceptable level

for outdoor activity. Additionally, a very small percentage of the project traffic generated in the peak hour would travel past the northern residents on Singley Road. The Tribal housing and hotel on the Rancheria would also be sensitive receptors and thus it is in the Tribe's best interest to limit noise impacts.

3.7.3 MITIGATION

The Tribe should implement the following mitigation measure during construction:

- Noise-generating activities during construction will be restricted to normal daytime hours (7 A.M. to 7 P.M.), Monday through Saturday.

3.8 POPULATION AND HOUSING

3.8.1 EXISTING ENVIRONMENT

The Rancheria is located in Humboldt County, which includes unincorporated areas and the following incorporated municipalities: Arcata, Blue Lake, Eureka, Ferndale, Fortuna, Rio Dell, and Trinidad.

POPULATION

As of January 2009, it has been estimated that Humboldt County has a population of approximately 132,755 people (**Table 3-7**). Approximately 54 percent of this population resides in the unincorporated areas of the County. The City of Eureka is the largest city within the County with a population of approximately 26,002 people. In the vicinity of the project site (Fortuna and nearby unincorporated areas) the growth rate from 1990 to 2000 was approximately 2.5 percent. The primary areas of growth are Arcata, Fortuna, and unincorporated portions of the County. Over the next 20 years, Humboldt County is expected to grow at 0.6 percent per year, while the State of California growth rate is projected at 1.4 percent per year (Dyett and Bhatia, 2002).

TABLE 3-7
HUMBOLDT COUNTY DEMOGRAPHICS

	2008	2009
Humboldt County	132,177	132,755
Arcata	17,476	17,610
Blue Lake	1,160	1,169
Eureka	26,006	26,002
Ferndale	1,437	1,441
Fortuna	11,318	11,351
Rio Dell	3,269	3,279
Trinidad	311	311
Unincorporated Areas	71,201	71,592

SOURCE: State of California, Department of Finance, 2009a

HOUSING

In January 2009, there were an estimated 59,687 housing units in Humboldt County. There are 42,671 single family homes, 10,814 units in multiple-family buildings and 6,202 mobile homes in the County. Approximately 8.4 percent of County homes are vacant (State of California, Department of Finance, 2009b).

EMPLOYMENT

As of June 2009, the labor force in Humboldt County is approximately 61,000 people of which 54,100 are employed. Thus, the unemployment rate for Humboldt County is 11.2 percent (State of California, Employment Development Department, 2009). This unemployment rate is higher than the national average, which was 9.5 percent in June 2009, but slightly lower than the State of California average of 11.6 in the same month (Bureau of Labor Statistics, 2009).

3.8.2 ENVIRONMENTAL CONSEQUENCES

The proposed project would result in new employment opportunities. The unemployment rate in Humboldt County is high enough to subsume many, if not all, of the new jobs created by the proposed project. Should some employees relocate to Humboldt County there are approximately 5,011 vacant housing units throughout the County and thus it is anticipated that the existing housing stock would be sufficient. The proposed project would not displace a substantial amount of existing housing. One currently vacant home on the Rancheria would be removed during the project. The Tribe is currently processing a fee-to-trust acquisition for a Tribal housing project on an adjacent property, which would provide homes for any additional Tribal members who wish to reside on Tribal trust lands. No off-Reservation housing would be displaced by the proposed project. Because there is both a sufficient labor force and sufficient available housing in the project vicinity, the impacts of the proposed project on population and housing would be less than significant.

3.8.3 MITIGATION

No mitigation would be warranted.

3.9 PUBLIC SERVICES AND UTILITIES

3.9.1 EXISTING ENVIRONMENT

FIRE PROTECTION AND EMERGENCY MEDICAL SERVICES

The Loleta Fire Department provides fire suppression and emergency medical services to the unincorporated town of Loleta and some surrounding areas. The Department also has mutual aid agreements with the Fortuna and Ferndale Fire Departments. Currently, the Department provides services to the Rohnerville Rancheria and other properties along Singley Road. The County Board of Supervisors governs the Loleta Fire Protection District and funding is provided through taxes, assessments, grants,

and donations. The Department has one fire station located at 311 Park Street in Loleta, California, which is not staffed on a regular basis. It is a volunteer fire department with 24 total staff. Some staff are trained to the Advanced Life Support EMT Level, and the department regularly responds to medical emergency calls. The Department maintains 1 rescue unit, 3 engines, and 2 water tenders. The expected response time to the project vicinity on Singley Road is 6 minutes (Robison, pers. comm., 2005). In 2004, the Department responded to 129 calls for service including: 90 medical aid, 26 structural fires, and 13 calls cleared prior to arrival (Robison, pers. comm., 2005). The Tribe contributes \$500 annually to the Loleta Fire Department (Merson, pers comm., 2006). The Fire Organization Survey conducted throughout Humboldt County surveyed fire departments on needed resources. In the categories of equipment needs, training needs, safety needs, and personnel needs the Loleta Fire Department reported that it was “doing very well” (Humboldt County Fire Safe Council, 2006).

The project site is located in areas of moderate wildland fire threat and the site contains grassland, which is a wildland fire threat in the vicinity (County of Humboldt, 2003). The California Department of Forestry and Fire Protection (Calfire) aids local fire departments in wildland fire situations. They maintain the most resources during the fire season from late May to early October.

Emergency Medical Services are overseen and authorized by the North Coast Emergency Medical Services Authority (North Coast EMS). North Coast EMS is a Joint Powers Authority created to coordinate the regional EMS system and to reduce the occurrence of death and disability on the north coast (County of Humboldt, 2005). Ambulance services or emergency medical services are dispatched through 911 and are provided by several companies on a rotating basis including City Ambulance of Fortuna. The nearest hospital emergency room is Redwood Memorial Hospital located at 3300 Renner Drive in Fortuna, California. Emergency calls are routed through the Sheriff’s Office and CHP to the respective fire department. Response times to the property are approximately 3-6 minutes, although this depends on available resources.

LAW ENFORCEMENT

The Humboldt County Sheriff’s Office provides law enforcement services throughout Humboldt County. The service area includes approximately 800 square miles of area from Arcata south to Redcrest. The Sheriff’s Office includes Administrative, Operations, and Corrections divisions. Within the Operations division are the patrol Units, criminal investigation, and court services. The Sheriff’s Office also includes a Special Enforcement Team, boating unit, SWAT, and a drug enforcement Unit. The Humboldt County Sheriff’s Office provides primary law enforcement, while the California Highway Patrol (CHP) provides traffic and supplemental law enforcement services to the project site. The Humboldt County Correctional Facility is the detention facility for persons arrested in unincorporated areas of the County including the project site. Expected response times throughout the County are estimated at 15-20 minutes, depending on resource availability. In 2004 there were 57,410 calls for service. The Sheriff’s Office is staffed by 65-70 sworn deputies and 225-230 total staff. The total staff includes corrections and support staff

(Downey, pers. comm., 2005). Including patrol vehicles there are approximately 70 vehicles for the Sheriff's Office.

The Humboldt County Sheriff's Office has stations in Eureka, Garberville, McKinleyville, and Hoopa. The Main Station is located in Eureka and serves the project site. The project site is located within the south beat, which includes the cities of Fortuna, Ferndale, and Rio Dell. It also includes the following communities and areas: Humboldt Hill, South Spit/Table Bluff, Loleta, Hydesville, Scotia, and Redcrest. One deputy is currently assigned to patrol the Eel River Valley, which includes the Rohnerville Rancheria.

ELECTRICITY, GAS AND TELECOMMUNICATIONS

Pacific Gas & Electric Company (PG&E) supplies electricity to existing homes and businesses in the project area. Tribal residences and the existing casino currently utilize propane for gas needs; however, a contract was recently signed with PG&E to extend a natural gas supply line to the Rancheria from the nearest main, located approximately one-quarter mile to the northwest at 100 Singley Road. AT&T currently provides telephone service to the Rancheria. Cable television is available to the site from Suddenlink and through various satellite television services.

SOLID WASTE

Eel River Disposal, a private contractor based in Fortuna, provides solid waste disposal services to the Rancheria. Waste is brought to a transfer station in Fortuna where recyclables are sorted. Waste is then transferred to Anderson Landfill in Redding, California and Dry Creek Landfill in Medford, Oregon. Anderson Landfill has a maximum permitted capacity of 1,850 tons per day and has an expected closure date of 2036 (CIWMB, 2009). Dry Creek Landfill, one of Oregon's largest, received 348,447 tons in 2005 or on average 955 tons per day. Approximately 49,447 tons of waste was received at the Dry Creek Landfill in 2005 from locations in northern California (Oregon Department of Environmental Quality, 2006).

OTHER PUBLIC FACILITIES

The closest school to the Rancheria is Loleta Elementary School, which is located approximately one mile northwest of the Rancheria. There are no parks or major recreation facilities located within the immediate project area, other than the existing casino.

3.9.2 ENVIRONMENTAL CONSEQUENCES

FIRE PROTECTION AND EMERGENCY MEDICAL SERVICES

Construction

Construction-related impacts include the potential fire threat associated with equipment and vehicles coming into contact with wild land areas. Construction vehicles and equipment such as welders, torches,

and grinders may accidentally spark and ignite vegetation or building materials. The increased risk of fire during the construction of the proposed facilities would be similar to that found at other construction sites and would be considered potentially significant. Mitigation measures included in **Section 3.9.3** would reduce on-site fire risks and subsequent potential impacts to local fire and medical service providers to a less-than-significant level.

Operation

As discussed in **Section 2.2.1**, the proposed project would be constructed in compliance with the Uniform Building Codes, including fire codes, and would include indoor sprinklers. The Tribe will also cooperate with the local fire district by inviting routine inspections. The Tribe would continue to provide donations to the Loleta Fire Department. As discussed in **Section 3.9.1**, the department has reported that they are doing well with regards to equipment, personnel, training and safety needs. The five-level hotel may create the demand for additional fire equipment due to the height of the facilities. Mitigation includes negotiation with the local fire department for possible equipment and/or training needs related to the construction of the hotel.

Emergency medical services including ambulance transport and emergency room care are provided by private businesses and are paid for by the person requiring these services. Thus, any increased use of emergency medical services would fund the expansion of any services needed.

LAW ENFORCEMENT

Under Public Law 280, 18 U.S.C. §1162, the State of California and other local law enforcement agencies have criminal enforcement authority on Tribal lands. The Tribe would continue to provide surveillance of gaming areas and on-site security for the casino and hotel. Parking areas would be lit for public safety. The in-house security force would reduce the need for assistance by off-Rancheria law enforcement. The proposed project is not anticipated to substantially increase law enforcement demands over those currently provided to the existing casino.

ELECTRICITY, GAS AND TELECOMMUNICATIONS

The proposed project would increase electric, gas, and telecommunications demands. It is anticipated that electricity could be provided through the existing 12-kilovolt line, although specific on-site needs will be coordinated with PG&E and funded by the Tribe. Through the recently signed contract with PG&E for extension of natural gas service to the Rancheria, the Tribe would fund a fair share of any needed improvements. Mitigation is recommended in **Section 3.9.3** to prevent significant impacts to existing off-site electric, natural gas and telecommunications customers.

SOLID WASTE

The expansion project would increase solid waste generation. The Tribe currently uses Eel River Disposal for solid waste disposal. Eel River Disposal Services would continue to transport solid waste

from the Rancheria to Anderson Landfill and Dry Creek Landfill. Recyclables would be sorted at the transfer station in Fortuna, with non-recyclable waste then hauled to Anderson Landfill or Dry Creek Landfill. These two landfills combined have a capacity to receive nearly 3,000 tons per day. The amount of waste would be a small portion of total waste received by the two landfills and thus impacts are expected to be less than significant. Tribal land is not counted in diversion statistics and would not affect local waste diversion goals.

OTHER PUBLIC FACILITIES

The proposed project would not be expected to cause an increase in public school enrollment because the project does not include a residential component and employees would be drawn from the local labor force. No impact to public schools is expected. The proposed project is also not anticipated to result in increased use of local parks or other public recreation facilities.

3.9.3 MITIGATION

The Tribe shall incorporate the following mitigation measures:

FIRE PROTECTION

Construction

- All construction equipment shall include spark arresters in good working order;
- Staging areas, welding areas, or areas slated for development using spark-producing equipment shall be cleared of dried vegetation or other materials that could serve as fire fuel;
- To the extent feasible, the contractor shall keep areas around the building site clear of combustible materials in order to maintain a firebreak; and
- Final project site plans will be reviewed by an International Conference of Building Officials (ICBO) certified plan checker prior to construction.

Operation

- Fire sprinklers and extinguishers should be maintained and inspected;
- Portable fire suppression devices and qualified operators shall be on site at all times;
- An evacuation plan shall be developed for the hotel facility; and
- The Tribe shall negotiate with the Loleta Fire Department regarding the need for additional equipment and/or training to serve the five-level hotel building.

ELECTRICITY, GAS AND TELECOMMUNICATIONS

- The Tribe shall coordinate with PG&E and AT&T to determine any needed improvements to electric, natural gas, and telecommunications facilities and shall fund a fair share of needed improvements to serve the project.

These mitigation measures would reduce public service impacts to a less-than-significant level.

3.10 TRANSPORTATION AND CIRCULATION

3.10.1 EXISTING ENVIRONMENT

TRANSPORTATION NETWORK

The Rancheria is located in a remote and rural area of coastal hills and scenic vistas. U.S. Highway 101 provides the main transportation artery for both local residents and tourists.

The Traffic Impact Study prepared by Abrams Associates (2009) provides a detailed description and analysis of the local transportation network (**Appendix D**).

- Highway 101 is a major highway running generally north-south nearly the entire length of California along or near the Pacific Coast. Within Humboldt County, the highway alternates between a 2-lane undivided highway and a 4-lane divided highway. Within the immediate vicinity of the site the highway is a 4-lane divided highway. The average daily traffic (ADT) along Highway 101 in the vicinity of the project is approximately 23,000 vehicles, with approximately 2,200 vehicles during the peak hours.
- Singley Road is a generally north-south rural 2-lane roadway, which runs along the western edge of the Rohnerville Rancheria and provides access to the Bear River Casino. The roadway has recently been improved to a 24-foot cross-section with shoulders between the freeway and the casino. North of the intersection with Bear River Drive, the roadway width is approximately 20 feet and has little or no shoulders in most areas.
- Fernbridge Drive is a two-lane road, which runs in a general north-south direction parallel to the western side of Highway 101. The primary vehicular access to and from the project site is via the Highway 101 interchange with Fernbridge Drive. To the south, Fernbridge Drive provides a connection to State Highway 1 and the communities of Fernbridge and Worswick.

The traffic impact study evaluated the following intersections:

- Loleta Drive at the Southbound Highway 101 Ramps;
- Loleta Drive at the Northbound Highway 101 Ramps;
- Fernbridge Drive at the Southbound Highway 101 Ramps;
- Singley Road at the Northbound Highway 101 Ramps;
- Singley Road at Bear River Drive (project entrance).

All intersections are controlled by stop signs on the minor approaches as shown in **Figure 3-2**.

The operating conditions experienced by motorists are described in terms of Level of Service (LOS). LOS is a qualitative measure reflecting a number of factors, including speed and travel time, traffic interruptions, freedom to maneuver, and driving comfort and convenience. LOS is designated on a scale from LOS A to LOS F, with LOS A representing the best performance and LOS F the worst. **Table 3-8** describes the operation characteristics associated with each LOS category for both signalized and unsignalized intersections. Humboldt County identifies LOS C as the minimum acceptable operating condition for its roadway system. LOS significance thresholds for state routes such as Highway 101 are identified as LOS C in rural areas, and LOS D in urban areas. In general, a traffic impact at an intersection occurs when the traffic generated by the proposed project would degrade the LOS of the intersection from an acceptable LOS to an unacceptable LOS.

TABLE 3-8
INTERSECTION LEVEL OF SERVICE DEFINITIONS

Level Of Service	Description	Unsignalized (Avg Total Delay In Seconds/Vehicle)	Signalized (Avg Total Delay In Seconds/Vehicle)
A	Little or no traffic delay.	<10	<10
B	Short traffic delay.	10-15	10-20
C	Average traffic delays.	15-25	20-35
D	Long traffic delays.	25-35	35-55
E	Very long traffic delays.	35-50	55-80
F	Extreme delays potentially affecting other traffic movements in the intersection	>50	>80

SOURCE: Highway Capacity Manual, 2000; Transportation Research Board, Washington, D.C., 2000.

Figure 3-3 shows the existing peak hour volumes distributed on the local road network, based on traffic counts taken in June 2009. A “baseline conditions” analysis was also done by accounting for the traffic that will be generated by the planned residential/community project on the Fearrien Property, along with a 15 percent increase in existing casino traffic volumes to account for the continual growth in patronage that the casino has experienced. These baseline conditions are included to provide a more accurate picture of expected peak hour intersection operations at the time the proposed project would be completed. **Table 3-9** summarizes the existing and baseline peak-hour LOS at each study intersection. All intersections operate at an acceptable LOS under both scenarios.

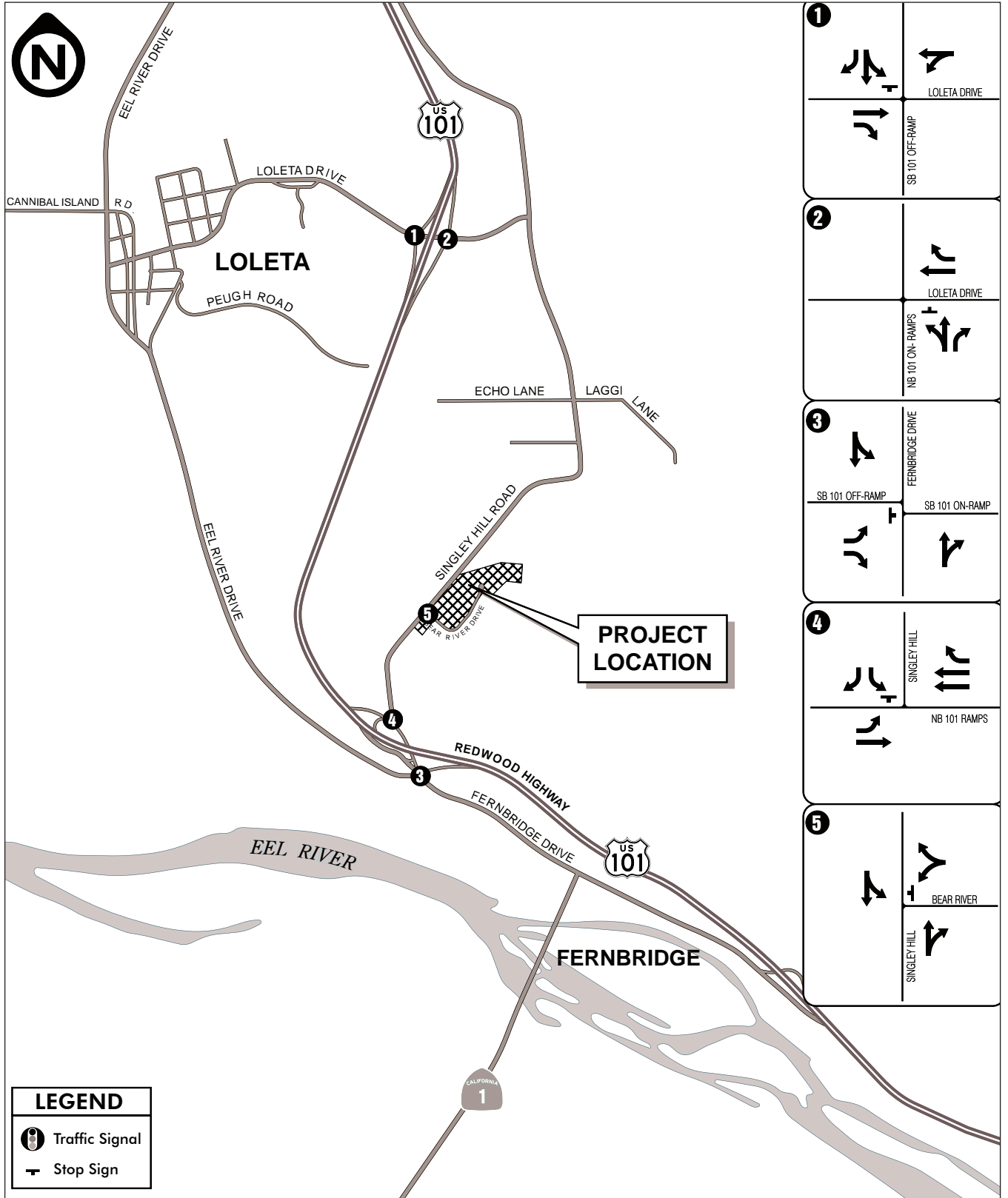
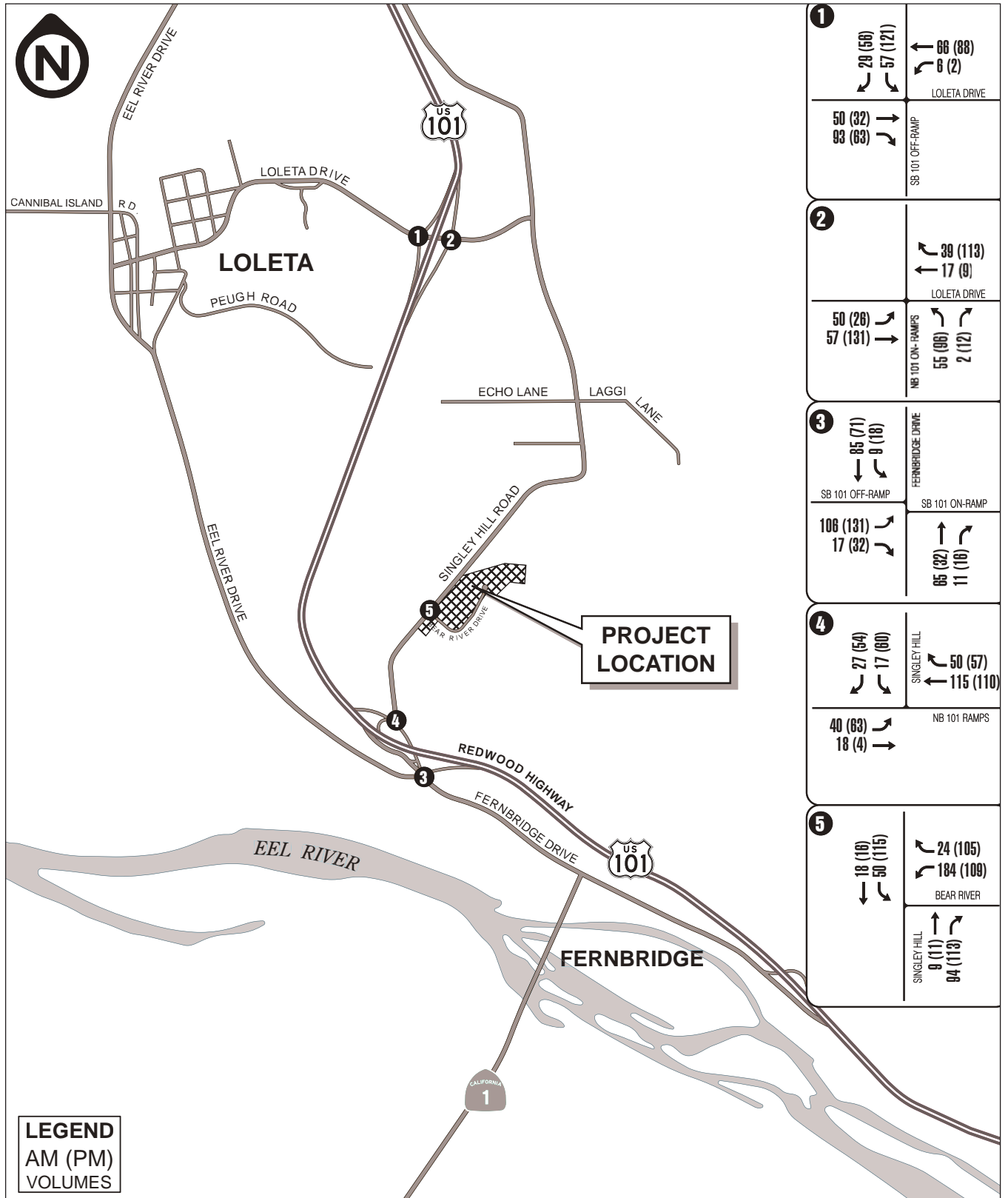


Figure 3-2
Existing Lane Configurations



SOURCE: Abrams Associates, July 2009; AES 2009

Bear River Casino Expansion and Hotel Addition EE / 206511 ■

Figure 3-3
Existing Peak-Hour Volumes

TABLE 3-9
EXISTING AND BASELINE INTERSECTION OPERATIONS

Intersections	Control	AM Peak Hour				PM Peak Hour			
		Existing Conditions		Baseline Conditions		Existing Conditions		Baseline Conditions	
		Delay (sec) ¹	LOS ²	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Loleta Drive at the Southbound Highway 101 Ramps	Stop Sign	9.4	A	9.4	A	9.8	A	9.9	A
Loleta Drive at the Northbound Highway 101 Ramps	Stop Sign	10.2	B	10.2	B	10.5	B	10.6	B
Fernbridge Drive at the Southbound Highway 101 Ramps	Stop Sign	10.3	B	10.4	B	10.2	B	10.4	B
Singley Road at the Northbound Highway 101 Ramps	Stop Sign	9.5	A	9.6	A	10.1	B	10.6	B
Singley Road at Bear River Drive (Project Entrance)	Stop Sign	11.4	B	11.4	B	12.0	B	12.0	B

NOTES: ¹ Average total delay in seconds per vehicle

² LOS = Level of Service

SOURCE: Abrams Associates, 2009; AES, 2009.

PEDESTRIAN AND BICYCLE SYSTEM

Singley Road provides no sidewalks to accommodate pedestrian activity. Further, no bike lanes are provided along this road, which has relatively low traffic volumes. Field observations indicate that the current level of pedestrian and bicycle activity is low in the project vicinity.

TRANSIT SERVICE

The Humboldt Transit Authority (HTA), which is operated by Humboldt County, provides bus transit service to residents throughout the County and provides connections to regional destinations via Greyhound Bus Lines. The nearest HTA bus stop to the project site is located in Fernbridge, approximately 1.1 miles southeast of the Rancheria, with additional stops located in the nearby town of Loleta.

3.10.2 ENVIRONMENTAL CONSEQUENCES

TRANSPORTATION NETWORK

Trip Generation

Increased trip generation from the proposed project was estimated according to multiple studies of traffic generated by casinos with hotels (**Appendix D**). **Table 3-10** summarizes the estimated a.m. and p.m. peak-hour trip generation of the proposed project. The proposed casino expansion and hotel project is estimated to generate a gross total of approximately 55 a.m. peak-hour trips (35 inbound and 21 outbound) and 80 p.m. peak-hour trips (42 inbound and 38 outbound).

TABLE 3-10
BEAR RIVER CASINO PROJECT TRIP GENERATION

Land Use	Size	AM Peak Hour Trips			PM Peak Hour Trips		
		In	Out	Total ²	In	Out	Total ²
Casino Expansion ¹	7,300 sq. ft.	10	5	14	19	17	36
Hotel	105 rooms	25	16	41	23	21	43
Total²		35	21	55	42	38	80

NOTES: ¹ Casino Expansion square footage includes additional restaurant area (including kitchen), ballroom/meeting room space, and the arcade.

² Totals may not add precisely due to rounding of fractional numbers.

SOURCE: Institute of Transportation Engineers, *Trip Generation*, Seventh Edition, 2003; Abrams Associates, 2009; AES, 2009.

Trip Distribution

The distribution of project traffic under the proposed project was determined based on existing casino travel patterns and the nature of the roadway system serving the proposed project site. It is estimated that approximately 95 percent of the project trips would access the project from the Highway 101-Fernbridge Drive/Singley Road interchange and about 5 percent are expected to use the Highway 101-Loleta Drive interchange. The trips generated by the proposed project are shown on **Figure 3-4**. **Figure 3-5** shows the baseline conditions plus project traffic volumes on the local road network. **Table 3-11** summarizes the a.m. and p.m. peak-hour LOS at each study intersection under baseline plus project conditions.

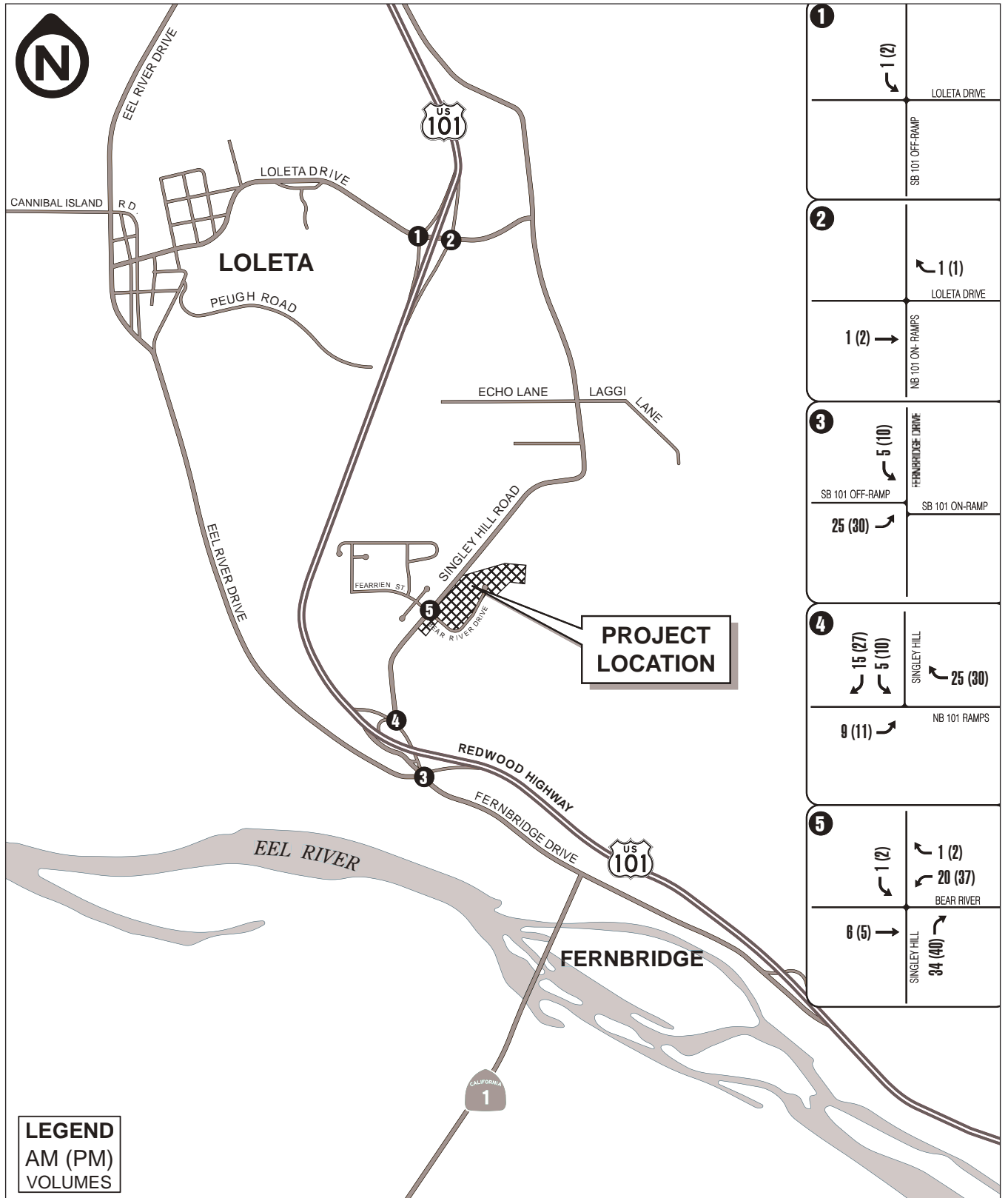
TABLE 3-11
BASELINE AND BASELINE PLUS PROJECT INTERSECTION OPERATIONS

Intersections	Control	AM Peak Hour				PM Peak Hour			
		Baseline Conditions		Baseline Plus Project Conditions		Baseline Conditions		Baseline Plus Project Conditions	
		Delay (sec) ¹	LOS ²	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Loleta Drive at the Southbound Highway 101 Ramps	Stop Sign	9.4	A	9.5	A	9.9	A	9.9	A
Loleta Drive at the Northbound Highway 101 Ramps	Stop Sign	10.2	B	10.2	B	10.6	B	10.7	B
Fernbridge Drive at the Southbound Highway 101 Ramps	Stop Sign	10.4	B	10.8	B	10.4	B	11.0	B
Singley Road at the Northbound Highway 101 Ramps	Stop Sign	9.6	A	9.7	A	10.6	B	10.8	B
Singley Road at Bear River Drive (Project Entrance)	Stop Sign	11.4	B	11.9	B	12.0	B	13.6	B

NOTES: ¹ Average total delay in seconds per vehicle

² LOS = Level of Service

SOURCE: Abrams Associates, 2009; AES, 2009.



SOURCE: Abrams Associates, July 2009; AES 2009

Bear River Casino Hotel Addition and Expansion EE / 206511 ■

Figure 3-4
Project Trips Peak Hour Volumes

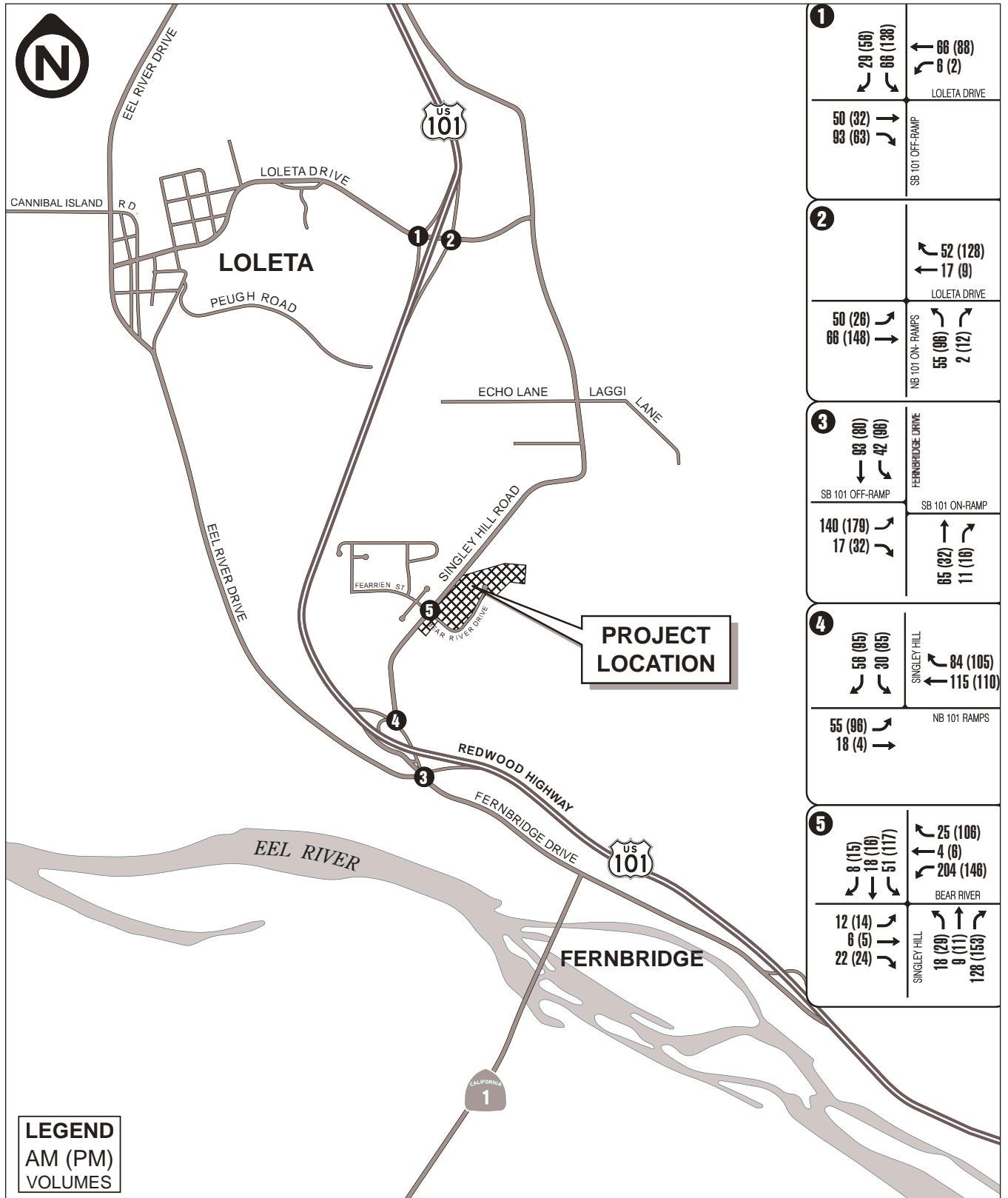


Figure 3-5
Baseline Plus Project Volumes

As shown in **Table 3-11**, all five study intersections are projected to continue operating at acceptable levels of service (LOS A or B) for baseline plus project conditions. Thus, the project's contribution to local traffic volumes would be less than significant.

Site Access

The proposed site plan is expected to function well and not cause any safety or operational problems. The main issue to be addressed regarding site access involves improvements that may be recommended at the intersection of Singley Road and Bear River Drive. It has been suggested that Singley Road north of Bear River Drive be restricted to local traffic only to minimize the amount of traffic passing by existing residences along Singley Road. There is currently a "No Right Turn" sign at the intersection of Singley Road and Bear River Drive, which is visible to patrons leaving the casino. However, additional improvements may be needed to clearly indicate that traffic exiting from the Bear River Casino must turn left onto Singley Road. Discussions with Humboldt County officials have concluded that a median-type barrier placed within Singley Road north of the intersection with Bear River Drive would discourage drivers from making a right-hand turn when leaving the casino. Although this would not be required based on analysis of traffic operations or safety considerations, it would provide a reasonable solution to the issue of casino traffic on local roads, without actually closing that segment of the public roadway.

Freeway Impacts

Based on the analysis there would not be any freeway improvement required by the project on the mainline or at any of the ramp intersections that were studied. Due to the limited amount of traffic, the project would not add a substantial amount of traffic to any one freeway segment in the area; further analysis was not warranted.

PEDESTRIAN AND BICYCLE IMPACTS

The project would not generate a substantial increase in pedestrian or bicycling activity and would not impact an existing or planned pedestrian or bicycle system in the vicinity of the project site. No significant impacts would result with regard to pedestrian or bicycle networks.

TRANSIT IMPACTS

Implementation of the project is not anticipated to generate a substantial amount of additional transit riders, given the limited transit service in the project area. No adverse transit impacts would occur.

3.10.3 MITIGATION

All five-study intersections are projected to continue operating at acceptable levels of service (LOS A or B) for baseline plus project conditions. All other issues related to the local transportation network would experience less-than-significant impacts due to the proposed project. No mitigation would be warranted, although the Tribe has committed to working with Humboldt County officials to design and implement a

median-type improvement north of the intersection of Singley Road and Bear River Drive, in order to minimize the amount of casino traffic that drives past local residences.

3.11 CUMULATIVE EFFECTS

“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past, current, or probable future projects.

3.11.1 CUMULATIVE SETTING

The following section outlines the relevant past, current, and probable actions, which are considered in the cumulative scenario. Past actions include scattered rural-residential development and use of land for grazing along Singley Road. The development of the Bear River Casino and Tribal housing and community facilities on the Rohnerville Rancheria are also relevant past actions.

COUNTY GROWTH

Future growth in the area would largely be consistent with the land use designations of the Humboldt County General Plan and the zonings of the Humboldt County Zoning Ordinance. The properties along Singley Road are designated and zoned for future agricultural or rural-residential uses. Other than Tribal projects, there are no approved reasonably foreseeable future commercial, industrial, or housing projects in the immediate vicinity of the project site (County of Humboldt, 2009). Several residential, commercial, and mixed-use development projects have been proposed in the Eureka area, approximately 12 miles north of the project site; however, these would be located too far from the Rancheria to have any meaningful cumulative relationship to the proposed project. A growth rate of one-half of one percent per year was assumed for the cumulative scenario, which is generally consistent with the expectations of the County’s General Plan.

TRIBAL PROJECTS

The Tribe has submitted a fee-to-trust application for the Fearrien Property, which consists of approximately 113 acres, for the intended purpose of residential housing (29 residential lots), an RV Park, gas station, mini-mart and associated facilities. The Fearrien Property is adjacent to Singley Road immediately west of the casino. The environmental consequences of development on the Fearrien Property have been analyzed in an Environmental Assessment (EA) prepared for the Bureau of Indian Affairs in accordance with the National Environmental Protection Act (NEPA) and released for public review in December 2006. According to the EA, there are no anticipated significant impacts, after mitigation, from the proposed action on the Fearrien Property.

TRAFFIC IMPROVEMENT PROJECTS

With the recent completion of the improvements to Singley Road south of the casino, and improvements at the Highway 101/SR 36 interchange near Alton, no local roadway improvements are planned for the foreseeable future.

The Tribe has received requests from neighbors to the north to improve the intersection of Singley Road and Bear River Drive to direct traffic leaving the casino to the south. The Tribe is considering the design and implementation of a median-type facility north of this intersection to discourage casino patrons from completing a right-hand turn as they exit the casino. The final design for any such improvements will be developed in coordination with Humboldt County. Completion of the proposed improvements is not a scheduled certainty, but in any case, is not required as the existing roadway and intersections are adequate for both the anticipated casino traffic load and any incremental traffic load resulting from cumulative development.

3.11.2 ENVIRONMENTAL CONSEQUENCES

AESTHETICS

The Tribe has designed the proposed project to complement the existing development on the Rancheria and the rural quality of the surrounding areas. Because the project would take place on Tribal trust lands, the proposed hotel and casino expansion are not under the jurisdiction of Humboldt County with respect to the General Plan or other development and design guidelines; however, the scenic design principles of the General Plan have been followed with the intent of preserving natural scenic resources and environmental assets. Mitigation measures presented in **Section 3.2.3** would ensure that off-Reservation impacts related to light and glare from the proposed project would be less than significant. The EA for the Fearrien Property project states that this development would conform to the County's Rural Design Guidelines. Cumulative effects of these foreseeable developments would be less than significant.

AIR QUALITY

Air quality standards will not be violated due to the proposed project nor will the proposed project contribute to an existing or projected air quality violation. Emissions from project construction and operational activities, when combined with planned development of the Fearrien property, are still below the Federal *de minimis* levels of 100 tons per year and therefore the cumulative air quality impacts would be less than significant.

GEOLOGY AND SOILS

Mitigation is recommended in **Section 3.4.3** to reduce project impacts related to soil suitability for construction. These impact types are generally site-specific, therefore any cumulative projects in the area would develop similar appropriate measures based on their site characteristics. Erosion impacts from the proposed project are addressed by mitigation measures found in **Section 3.5.3**. The construction of other projects within the area increases the risk of erosion. Other cumulative projects (such as the Fearrien

Property development) would also be required to comply with the terms of General Construction NPDES Permits, which would include BMPs to prevent erosion.

WATER RESOURCES

As discussed in **Section 3.5.2**, the proposed project and future developments within the watershed would contribute to increased stormwater drainage impacts. Stormwater could transport pollutants and increased drainage could result in localized flooding. A drainage culvert downstream from the project site crosses under Eel River Drive and a railroad and is currently undersized, resulting in localized flooding during large storm events. Mitigation is recommended in **Section 3.5.3** to reduce the contribution of the project to this impact. Drainage for the Fearrien Property goes to the west, away from Singley Road, and would not cumulatively add to the drainage flowing to the undersized culvert.

As the Tribe would utilize independent on-site water and wastewater systems subject to Federal regulation, there would be no cumulative impacts to off-site water and wastewater systems.

LAND USE

Development of the Rancheria and the cumulative projects would increase development in the project area. Non-Tribal trust land would be developed according to applicable County plans and policies. Tribal trust land is not subject to local general plans or zoning but is subject to Federal law including the National Historic Preservation Act, Endangered Species Act and Clean Water Act. The Tribe should continue to work cooperatively with the County in mitigating local impacts from Tribal development. As analyzed in this EE, there are no impacts from the proposed project which would remain significant after mitigation. It should be noted that Tribal residences and the proposed hotel are sensitive receptors and thus it is in the Tribe's best interest to limit noise, visual, air quality, and other environmental impacts which may affect sensitive receptors.

NOISE

Increased traffic and development would increase noise along Singley Road. As discussed in **Section 3.7.2**, development of the project would remain within acceptable noise standards for rural residential housing. A comparison of baseline conditions plus project traffic and cumulative conditions (year 2030) plus project traffic shows that these scenarios are substantially similar and thus would result in similar noise impacts (**Appendix D**). Traffic noise would also be distributed throughout the day and concentrated on the southern end of Singley Road, where it would affect fewer residences. Noise impacts are anticipated to be less than significant.

POPULATION AND HOUSING

A low rate of population growth is assumed in the cumulative scenario. As discussed in **Section 3.8.1** there are more than 5,000 vacant housing units to subsume anticipated population growth, in addition to

any future new home construction. The cumulative scenario would not result in a housing shortage or displacement of a large population.

PUBLIC SERVICES AND UTILITIES

The cumulative list of projects would increase demands on local public services. New development would be required to pay development fees and fund public services through property tax and sales tax. Tribal trust land would not be subject to local development fees or local taxes. The Tribe has provided compensation to local public service agencies to offset lost property tax revenues, and will continue to do so in the future. Thus, cumulative public service impacts would remain less than significant with continued contributions to local agencies.

TRAFFIC

The cumulative (year 2030) plus project volumes are shown on **Figure 3-6**. Since traffic growth in the region surrounding the project site is forecast to be minimal, cumulative plus project traffic impacts are assumed to be reasonably reflected within the baseline plus project conditions analysis. **Table 3-12** includes existing traffic, a 15 percent increase in casino traffic, development of the Fearrien Property and future County growth anticipated by the year 2030 (cumulative conditions), both with and without the proposed project.

TABLE 3-12
CUMULATIVE AND CUMULATIVE PLUS PROJECT INTERSECTION OPERATIONS

Intersections	Control	AM Peak-Hour				PM Peak-Hour			
		Cumulative Conditions		Cumulative Plus Project		Cumulative Conditions		Cumulative Plus Project	
		Delay (sec) ¹	LOS ²	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Loleta Drive at the Southbound Highway 101 Ramps	Stop Sign	9.6	A	9.6	A	10.1	B	10.1	B
Loleta Drive at the Northbound Highway 101 Ramps	Stop Sign	10.5	B	10.5	B	11.0	B	11.0	B
Fernbridge Drive at the Southbound Highway 101 Ramps	Stop Sign	10.8	B	11.3	B	10.8	B	11.5	B
Singley Road at the Northbound Highway 101 Ramps	Stop Sign	9.8	A	9.9	A	10.9	B	11.2	B
Singley Road at Bear River Drive/Fearrien Street	Stop Sign	12.0	B	12.7	B	12.9	B	15.1	C

NOTES: ¹ Average total delay in seconds per vehicle

² LOS = Level of Service

SOURCE: Abrams Associates, 2009; AES, 2009.

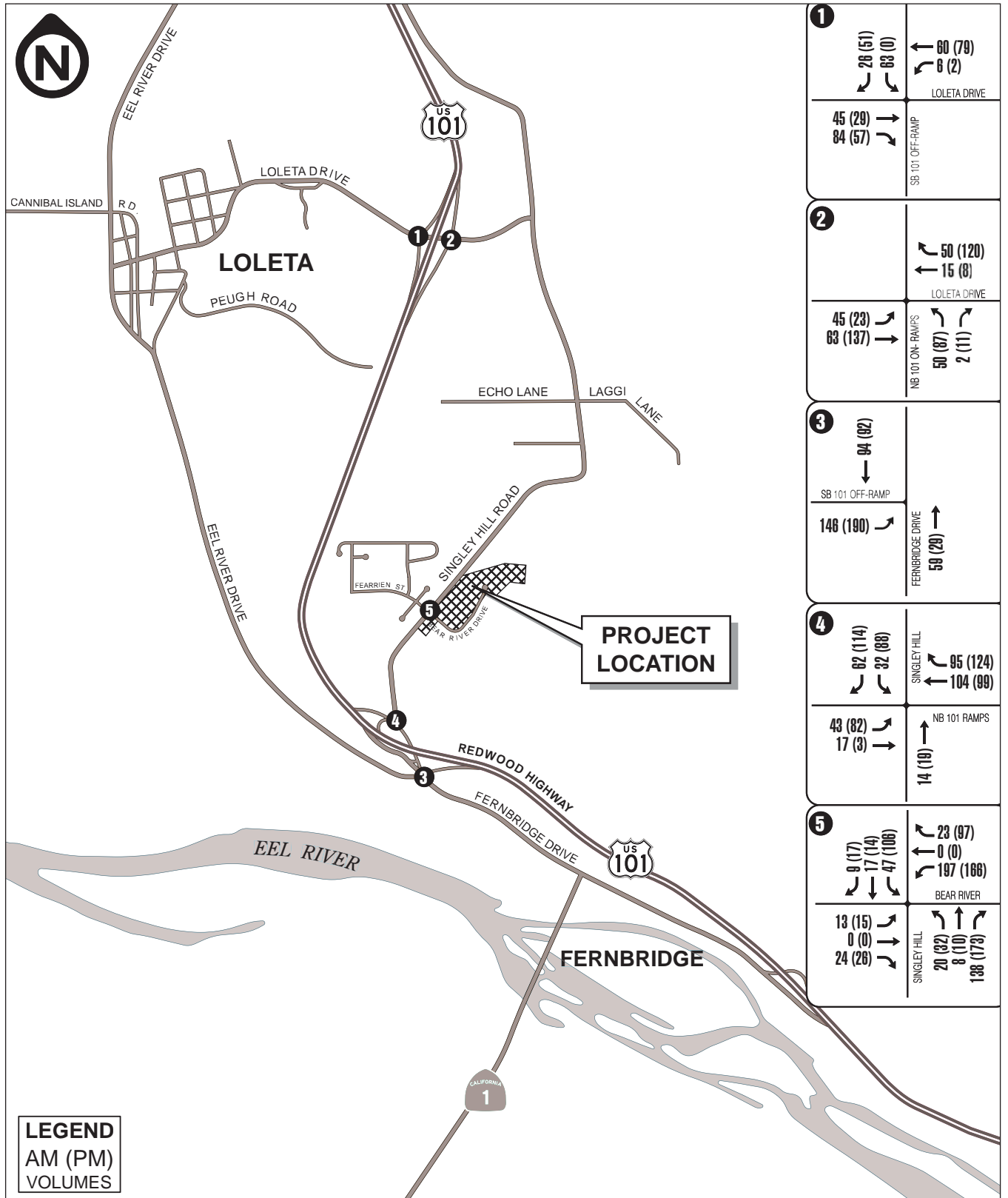


Figure 3-6
Cumulative Plus Project

Under the cumulative plus project scenario, all intersections would continue to operate at an acceptable LOS. No cumulatively significant impacts to local bicycle and pedestrian networks or transit systems are anticipated as a result of the Fearrien Property development or the anticipated local population growth; therefore, all cumulative traffic impacts would be less than significant.

3.11.3 MITIGATION

Cumulative impacts in all issue areas would be less than significant. No additional mitigation would be warranted.

SECTION 4.0

REFERENCES

SECTION 4.0

REFERENCES

Abrams Associates, 2009. Traffic Impact Study - Bear River Casino Expansion in Humboldt County, August, 2009. Walnut Creek, CA.

Bolt, Baranek, and Newman, 1971. Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances. 1971.

Bureau of Labor Statistics, 2009. Labor Force Statistics from the Current Population Survey. Viewed 07/17/2009. Available at: <http://www.bls.gov/cps/home.htm>

California Air Resources Board (CARB), 2009. Air Quality Data. Viewed 07/02/2009. Available at: <http://www.arb.ca.gov/aqd/aqdp.htm>

California Integrated Waste Management Board (CIWMB), 2009. Active Landfills Profile for Anderson Landfill (45-AA-0020). Viewed 06/24/09. Available at: <http://www.ciwmb.ca.gov/Profiles/Facility/Landfill/LFProfile1.asp?COID=31&FACID=45-AA-0020>

County of Humboldt, 1984. Humboldt County General Plan, Volume 1 Framework Plan. Viewed 03/18/2007. Available at: <http://www.co.humboldt.ca.us/planning/Genplan/Framework/index.htm>

County of Humboldt, 2008. Humboldt County General Plan Update Reports. Viewed 07/02/2009. Available at: <http://www.planupdate.org/>

County of Humboldt, 2009. Community Services Development Department list of Current Planning Projects, Frequently Asked Questions. Viewed 06/24/2009. Available at: <http://www.co.humboldt.ca.us/planning/>

Downey, 2005. Lieutenant Mike Downey, Lieutenant Commander in Charge of Patrol Operations, Personal communication between Lt. Downey and AES (Jennifer Wade).

Dyett and Bhatia, 2002. Humboldt 2025 General Plan Update: Building Communities A Discussion Paper for Community Workshops. Viewed 10/04/2005. Available at: <http://www.planupdate.org/meetings/bldgcomm/bcreport.asp>

- Humboldt County Fire Safe Council, 2006. Humboldt County Master Fire Protection Plan. August 2006. Viewed 06/29/2009. Available at:
http://co.humboldt.ca.us/planning/fire_safe_council/fsc_default.asp
- HydroScience Engineers, Inc. (HydroScience), 2006. Bear River Housing Project Water and Wastewater Feasibility Study. March 2006. Sacramento, CA.
- HydroScience, 2009. Bear River Casino Expansion Project Water and Wastewater Feasibility Study. August 2009. Napa, CA.
- LACO Associates, 2007. R-2 Engineering Geologic Report Amendment - Bear River Casino Expansion. Prepared for the Bear River Band of Rohnerville Rancheria. January 2007. Eureka, CA.
- Merson, Bruce, 2006. Bear River Band of Rohnerville Rancheria. Public Service Contributions. Personal communication (e-mail) from Mr. Merson to AES (Jennifer Wade). 3/22/2006.
- North Coast Regional Water Quality Control Board, 2009. Integrated Report of 303(d) Impaired Water Bodies. Viewed 07/07/2009. Available at:
http://www.waterboards.ca.gov/northcoast/water_issues/programs/tmdls/303d/
- Oregon Department of Environmental Quality, 2006. 2005/2006 Solid Waste Report to the Legislature. Viewed 06/29/2009. Available at:
<http://www.deq.state.or.us/lq/pubs/docs/sw/DisposalStatus2006.pdf>
- Robison, Jeff, 2005. Assistant Chief of Loleta Volunteer Fire Department. General Department Information. Personal communication between Asst. Chief Robison and AES (Jennifer Wade). 9/27/2005.
- State of California, Department of Finance, 2009a. E-4 Population Estimates for Cities, Counties and the State, 2001–2009, with 2000 Benchmark. Sacramento, California, May 2009. Viewed 07/06/2009. Available at: <http://www.dof.ca.gov/research/demographic/reports/estimates/e-4/2001-09/>
- State of California, Department of Finance, 2009b. E-5 Population and Housing Estimates for Cities, Counties and the State, 2001-2009, with 2000 Benchmark. Sacramento, California, May 2009. Viewed 07/06/2009. Available at:
<http://www.dof.ca.gov/research/demographic/reports/estimates/e-5/2009/>
- State of California, Employment Development Department, 2009. Industry Employment and Unemployment Rate for Counties. Viewed 07/17/09. Available at:
<http://www.labormarketinfo.edd.ca.gov/?PAGEID=131>

Winzler & Kelly, 2006. Technical Memorandum No. 1 – Hydrology and Hydraulic Analysis for the Singley Road Improvement Project. Prepared for Humboldt County Department of Public Works. May 30, 2006. Winzler & Kelly Consulting Engineers. Eureka, CA.

APPENDICES
