EXHIBIT A

COMMENT LETTERS RECEIVED ON THE EA

EXHIBIT A

COMMENTS ON EA

Comments received on the Environmental Assessment (EA) are listed in **Table A-1**. Copies of the comment letters are provided in their entirety on the following pages, and issues are individually bracketed and numbered in the margins of the representative comment letters. Responses to the numbered comments are provided in **Exhibit B**.

TABLE A-1
LIST OF COMMENTERS

Letter Number	Agency/Organization	Name	Date Received
Federal Agencies (F)			
F1	United States Department of the Interior	(Acting Regional Director)	15-Oct-18
F2	United States Bureau of Land Management	Molly Brown, Arcata Field Manager	26-Oct-18
F3	United States Environmental Protection Agency	Kathleen Martyn Goforth	5-Nov-18
Tribes (T)			
N/A			
State Agencies (S)			
S1	California Coastal Commission	Mark Delaplaine	19-Oct-18
S2	Department of Transportation	Jesse Robertson	22-Oct-18
Local Agencies (L)			
L1	Daniel Berman	City of Trinidad	10-Oct-18
L2	Daniel Berman	City of Trinidad	22-Oct-18
Private Entities/ Organizations (P)			
P1	Humboldt Alliance for Responsible Development	J. Bryce Kenny	1-Oct-18
P2	Humboldt Alliance for Responsible Development	J. Bryce Kenny	3-Oct-18
P3	Private Citizen	Carol Mone	9-Oct-18
P4	Private Citizen	Patty Stearns	9-Oct-18
P5	Private Citizen	Sara March	16-Oct-18
P6	Coalition for Responsible Transportation	Collin Fiske	16-Oct-18
P7	Private Citizen	Sandra Haux	16-Oct-18
P8	Private Citizen	Richard Salzman	17-Oct-18
P9	Private Citizen	Charley Custer	17-Oct-18
P10	Private Citizen	Richard Clompus	18-Oct-18
P11	Private Citizen	Alan Grau	18-Oct-18

Letter Number	Agency/Organization	Name	Date Received
P12	Private Citizen	Larry Goldberg	19-Oct-18
P13	Private Citizen	Gail Kenny	19-Oct-18
P14	Private Citizen	Geoff Proust	19-Oct-18
P15	Private Citizen	Dianne Rowland	19-Oct-18
P16	Private Citizen	Tami and Steen Trump	19-Oct-18
P17	Private Citizen	Jim and Sandra Cuthbertson	19-Oct-18
P18	Private Citizen	Julie Joynt	20-Oct-18
P19	Private Citizen	Joyce King	20-Oct-18
P20	Private Citizen	Erin Rowe	20-Oct-18
P21	Private Citizen	Kathleen Mill	21-Oct-18
P22	Private Citizen	Andrea Bustos	21-Oct-18
P23	Private Citizen	Karin Rosman	21-Oct-18
P24	Private Citizen	Gina M. Rimson	22-Oct-18
P25	Private Citizen	Don Allan	22-Oct-18
P26	Private Citizen	Emelia Berol	22-Oct-18
P27	Private Citizen	J. Bryce Kenny	22-Oct-18
P28	Private Citizen	Jolene Thrash	22-Oct-18
P29	Private Citizen	Charles Netzow	22-Oct-18
P30	Private Citizen	Josiah Raison Cain	22-Oct-18
P31	Northcoast Environmental Center	Larry Glass	22-Oct-18
P32	Private Citizen	Edward E. Pease	22-Oct-18
P33	Private Citizen	Ingrid Bailey	22-Oct-18
P34	Private Citizen	Ken Miller	22-Oct-18
P35	Private Citizen	Kimberly Tays	22-Oct-18
P36	Private Citizen	James Vandegriff	22-Oct-18
P37	Private Citizen	Katrin Homan	22-Oct-18
P38	Private Citizen	Richard Johnson	22-Oct-18
P39	Private Citizen	Sandra Schachter	22-Oct-18
P40	Private Citizen	Patricia Lee Lotus	22-Oct-18
P41	Private Citizen	Andrew Pruter	22-Oct-18
P42	Private Citizen	Annalisa Rush	22-Oct-18
P43	Private Citizen	Holly Vadurro	22-Oct-18
P44	Private Citizen	Clay Johnson	22-Oct-18
P45	Private Citizen	Patrick Harestad	22-Oct-18
P46	Private Citizen	Brenda Cooper	22-Oct-18
P47	Private Citizen	Jennifer Lance	22-Oct-18
P48	Private Citizen	Donna B Ulrich	22-Oct-18
P49	Private Citizen	Melanie and Ron Johnson	22-Oct-18
P50	Private Citizen	Mark Dondero	23-Oct-18
P51	Redwood Region Audubon Society	Chet Ogan	23-Oct-18

Letter Number	Agency/Organization	Name	Date Received
P52	Private Citizen	Sam King	23-Oct-18
P53	Private Citizen	David Hankin	23-Oct-18

FEDERAL AGENCIES (F)

COMMENT LETTERS

Comment Letter F1

United States Department of the Interior

BUREAU OF INDIAN AFFAIRS
Pacific Regional Office
2800 Cottage Way
Sacramento, California 95825

OCT 15 2018

Mr. Dan Berman
City Manager
City of Trinidad
463 Trinity Street
Trinidad, CA 95570

Dear Mr. Berman:

The Bureau of Indian Affairs (BIA), Pacific Regional Office is in receipt of your letter of October 10, 2018 in which you are requesting the City of Trinidad (City) be afforded an additional 30 days to review the Environmental Assessment prepared for the Trinidad Rancheria's proposed hotel project. The BIA appreciates the City's interest in this project, but will not grant an extension to the 30 day review period ending on October 22, 2018.

F1-01

We look forward to receiving the City's comments concerning the National Environmental Policy Act (NEPA) process for this project. Please contact us should you have additional questions.

Sincerely,

Acting Regional Director

United States Department of the Interior

REGIONAL OFFICE
INDIAN AFFAIRS
2018 OCT 26 PM 2:50

BUREAU OF LAND MANAGEMENT
Arcata Field Office
1695 Heindon Road
Arcata, CA 95521
www.ca.blm.gov/arcata

Reg Dir
Dep RD Trust
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Route DETRMS
Response Required
Due Date
Memo Ltr
Fax

October 22, 2018

In reply Refer To:
1711 (CA330)P

Amy Dutschke, Regional Director
Bureau of Indian Affairs
Pacific Region
2800 Cottage Way
Sacramento, California 95825

Dear Director Dutschke:

The Bureau of Land Management (BLM), Arcata Field Office (AFO) has maintained a positive and productive working relationship with the Trinidad Rancheria for over 10 years as a Steward of the California Coastal National Monument Trinidad Gateway. In addition, the Trinidad Rancheria participated as a cooperating agency on the Trinidad Head Lighthouse Management Plan development and is also a key partner in the North Coast Seabird Protection Network.

The California Coastal National Monument (CCNM) Resource Management Plan guides objectives, policies and management actions for over 20,000 rocks and islands which are public lands owned by the U.S. Government, and administered by the Secretary of the Interior through the BLM. In January 2017, a Presidential Proclamation added 13 acres of Trinidad Head to the CCNM.

Trinidad is recognized as the second most important seabird nesting location along the California coastline. The Trinidad Rancheria is a partner in the North Coast Seabird Protection Network (NCSPN) which aims to address human disturbance to breeding seabird colonies and enhance the recovery of seabird populations damaged by oil or other contaminant spills along the North coast with a focus on the Trinidad area. F2-01

The proposed project, as described in the Environmental Assessment (EA), has potential impacts to nesting seabirds. Many studies around the world have been conducted on the connection between nocturnal artificial lighting and seabird mortality, especially with burrow-nesting seabirds that return to land under the protection of darkness. Seabirds don't often crash into the lights directly, but rather hit windows, buildings, wires, and other objects. They become "grounded," either by directly hitting an object and falling to the ground or becoming disoriented and landing to recover. While "grounded," recovery can be slow and birds may fall prey to cats, suffer strikes by vehicles, or succumb to starvation and/or dehydration.

Although Chapter 3 of the EA describes the external lighting as minimal, bi-level dimming motion sensored devices, these descriptions are not included in the proposed action (Chapter 2). Although minimal lighting is a primary component of protecting burrow-nesting seabirds several other measures could be employed to reduce the potential for injury and mortality to these birds: F2-01 (Cont.)

1. Avoid installation of external artificial lighting around the mid/top levels of the building, particularly that face the ocean; F2-02
2. Fit windows with black-out curtains in rooms that face the ocean; F2-03
3. Consider starting outdoor activities during the breeding season (May-September) before dusk to minimize artificial light exposure; F2-04
4. Consider shielding light and directing lighting downward to reduce light emissions visible to birds; F2-05
5. Consider temporal adjustments (e.g. timers) in lighting as nocturnal seabirds are most active in the first few hours after dusk; F2-08
6. Consider using warm-white or amber lighting for prominent external lighting, avoid blue-rich light; and F2-07
7. Have an action plan for the systematic rehabilitation and care of disoriented and/or injured birds. F2-08

We thank you for this opportunity to comment on the proposed project. If you have any questions please contact me at (707) 825-2300.

Sincerely,

Molly Brown

Molly Brown
Arcata Field Manager

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

PACIFIC REGIONAL
BUREAU OF INDIAN A
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Reg Dir all
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October 22, 2018

Amy Dutschke, Regional Director
Bureau of Indian Affairs
Pacific Regional Office
2800 Cottage Way
Sacramento, CA 95825

Subject: EPA comments on the Draft Environmental Assessment for the Trinidad Rancheria Economic Development Corporation Hotel Development Project, Cher-Ae Heights Indian Community of the Trinidad Rancheria, Humboldt County, California

Dear Ms. Dutschke:

The U.S. Environmental Protection Agency (EPA) has reviewed the draft Environmental Assessment (DEA) for the subject project. The following comments are provided pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act.

The proposed project includes the development of a six-story, 100-room hotel and accessory components on approximately 0.4 acres within existing developed/paved areas to the south and east of the existing casino. The project would require an expansion of the existing casino wastewater treatment system to accommodate the additional flows generated by the hotel. According to an appendix to the DEA, the treatment system would be designed with capacity to also serve homes with separate septic systems not connected to the casino's wastewater system to address any failures of these systems in the future, given the marginal soil conditions in the area. EPA recommends that BIA require, and include in the Final EA, confirmation of the availability of adequate additional dispersal capacity on the site before determining whether or not a Finding of No Significant Impact (FONSI) can be supported. Documentation of such capacity is not provided in the DEA. F3-01

According to the DEA, the design capacity of the existing leachfield is 10,000 gallons per day (gpd); however, the Preliminary Wastewater Feasibility Report, found in Appendix A to the DEA, discloses a history of plugging that is attributed to discharges before the treatment plant was completed, and states that the actual long-term capacity of the dispersal field is not known. It recommends that the existing dispersal field be cleaned and the capacity evaluated through field investigations and hydraulic stress testing to determine the actual operational capacity. Appendix A states, and EPA agrees, that it is critical the current leachfield's capacity, as well as additional dispersal capacity on the site, be verified, and a site survey be the first order of work to confirm that the facility has the capacity to support the proposed additional wastewater flows from the hotel. F3-02

The availability of acceptable soils for the dispersal field is identified as the critical factor. A site survey to locate usable soils with "adequate structure to disperse 5 gallons per lineal foot of trench per day, free of seasonal groundwater, and not constrained by setbacks from creeks and streams, bluffs, unstable landforms, or cuts", is recommended (App A, p. 5). The DEA and Appendix A identify two potential areas for the expanded leachfields (Figure 1-3), but do not indicate whether the soils at these sites have been tested for the above F3-03

parameters. Such information is needed to support a determination of whether or not a FONSI is warranted. F3-03 (Cont.)

The DEA presents conflicting information regarding the expansion of the wastewater treatment plant (WWTP), which discharges to the leachfield. The project description in the body of the DEA does not specify the size of the WWTP expansion, but the impact assessment section for Public Services – Wastewater states that the upgrade would allow for the system to handle a total of approximately 50,000 gpd (p. 3-22). The Preliminary Wastewater Feasibility Report assumes an upgrade to a design capacity of 30,000 gpd average daily flow (App A, p. 5). Table 1 of the Report lists the predicted wastewater flows for the project – including from the casino, the proposed 100-room hotel, 50 additional staff, and community flows that may require connection in the future – and estimates a total of 30,060 gallons per day (gpd) (App A, p. 2). The Report states that the existing treatment plant has a capacity of 15,000 gpd average daily flow, but was designed to be expanded to 30,000 gpd average daily flow without requiring extensive retrofitting, adding, "For treatment capacity beyond 30,000 gpd average flow (60,000 gpd peak flow) extensive modifications would be required to potentially create a parallel treatment train to provide the needed capacity" (App A, p.3). EPA recommends that the Final EA clarify the proposed WWTP expansion size and whether it would be accommodated by the existing building, as stated in the DEA (p. 2-5), or would require "extensive modifications", as indicated in Appendix A. F3-04

The DEA estimates that 60% of the current total wastewater flow is currently recycled back into the casino, after treatment, for toilet flushing, and that 20% of the flow from the new hotel addition would also be recycled for toilet flushing. EPA recommends that BIA explain, in the Final EA, why the estimate for recycling the hotel flows is so much lower than for the casino flows and, if feasible, increase the percentage of new flows that would be recycled for toilet flushing. F3-05

EPA appreciates the opportunity to review this Draft EA. When the Final EA is completed, please send us one copy electronically or to the address above (mail code: ENF-4-2). If you have any questions, please contact me at (415) 972-3521, or contact Karen Vitulano, lead reviewer for this project, at (415) 947-4178 or vitulano.karen@epa.gov.

Sincerely,

Kathleen Martyn Goforth, Manager
Environmental Review Section

cc: Garth Sundberg, Chairman, Cher-Ae Heights Indian Community of the Trinidad Rancheria
Jonas Savage, Env. Director, Cher-Ae Heights Indian Community of the Trinidad Rancheria

STATE AGENCIES (S)

COMMENT LETTERS

STATE OF CALIFORNIA—NATURAL RESOURCES AGENCY
EDMUND G. BROWN, GOVERNOR

CALIFORNIA COASTAL COMMISSION
45 FREMONT STREET, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-5200

Rec'd BIA-PRD
OCT 19 2018

October 18, 2018

Reg Dir Old ✓
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Dep RD IS
Route Dan Hall
Response Required
Due Date
Memo Ltr
Fax

Amy Dutschke
Regional Director
Bureau of Indian Affairs
Pacific Regional Office
Attn: Dan Hall
2800 Cottage Way
Sacramento, CA 95825

Re: Coastal Commission Staff Comments, Bureau of Indian Affairs, Environmental Assessment for Trinidad Rancheria Economic Development Corp. Hotel Development Project, Cher-Ae Heights Indian Community of the Trinidad Rancheria, Humboldt County

Dear Ms. Dutschke:

The California Coastal Commission (Commission) staff is commenting on the above-referenced Environmental Assessment (EA) prepared for the Bureau of Indian Affairs (BIA) for the construction of a 100-room hotel adjacent to the existing casino at the Cher-Ae Heights Indian Community of the Trinidad Rancheria (Rancheria). The EA appears to acknowledge the obligation for the BIA to submit a consistency determination to the Commission under the Coastal Zone Management Act (CZMA, Section 307[1]) for the BIA's proposal to issue a loan guarantee for this project. However because the language in the EA was not fully clear on this point and contains a reference to a section of the federal consistency regulations that applies to activities that a federal agency determines will have no effect on any coastal use or resource, we wish to be clear about our position that the BIA's loan guarantee is for an activity that would affect coastal zone resources, thereby triggering the need for submittal by the BIA of a consistency determination to the Commission for its review. The second bullet point under the heading "1.7 Regulatory Requirements and Approvals" (on page 1-6 of the EA) is misleading or incorrect in two respects: the regulation cited, and the standard of review. That passage reads as follows:

S1-01

- Consultation with the California Coastal Commissions concerning consistency of the Proposed Action with the Local Coastal Plan in accordance with 15 CFR Section 930.35(a) of the National Oceanic and Atmospheric Administration, Federal Consistency Regulations.

S1-02

[1] 16 U.S.C. §1456, with implementing regulations at 15 CFR Part 930.

We recommend this language be modified as follows:

- Consultation with the California Coastal Commission~~s~~ concerning consistency of the Proposed Action with the enforceable policies of the California Coastal Management Program (i.e., the Chapter 3 policies of the Coastal Act, Cal. Pub. Res. Code §§ 30200 *et seq.*)~~Local Coastal Plan~~ in accordance with 15 CFR Section 930.36~~5(a)~~ of the National Oceanic and Atmospheric Administration, Federal Consistency Regulations.

These changes are warranted for two reasons:

(1) The Commission's federally approved Coastal Management Program specifies that its enforceable policies are those of Chapter 3 of the Coastal Act. Local Coastal Programs, which are programs that the Commission has certified as being consistent with Chapter 3, can be used as guidance or background, but they are not the formal standard of review for federal consistency reviews.[2]

S1-02 (Cont.)

(2) The regulation cited in the EA (15 CFR § 930.35(a)) is a reference to the section of the federal consistency regulations discussing federal agency negative determinations (i.e., determinations "that there will not be coastal effects"), which is separate from the subsequent section of the regulations (§ 930.36) discussing federal agency consistency determinations. We do not think the BIA intended to comply with the CZMA in this case by following the negative determination process, which, again, is for activities with no effects on coastal resources. We make this statement in part because, once we were able to view EA Appendix D (which was omitted from the copy of the EA we were initially provided, but which we subsequently obtained from the consultant who prepared the EA), that discussion appeared to us to reflect a commitment that BIA will be submitting a consistency determination to the Commission for this activity. If there is any question or ambiguity over this point, or about the previous point regarding the standard of review for any consistency determination, we would request a discussion with your staff at the earliest practicable opportunity.

We also wish to correct what we deem as another incorrect procedural interpretation on page 3-20 of the EA, which states:

> *While the project site is located within a Coastal Zone, the proposed Project is excluded from the Coastal Zone Management Plan (CZMA) as it would be developed on land held in trust by the federal government. Therefore, the Proposed Project is not required to be developed in accordance with the Local Coastal Plan or the CZMA. Furthermore, the development of the proposed Hotel is consistent with the adjacent land use of the existing Casino.*

S1-03

2 When the Commission submits LCPs to the Office for Coastal Management for incorporation into the CCMP, its transmittal letters regularly contain the statement that Chapter 3, and not the LCP, remains the legal standard of review for federal consistency purposes.

We are not expressing concerns over the type of land use proposed on the site, or with the statement that the project is not required to comply with the Local Coastal Plan. Nor are we concerned over the statement that the site itself is considered excluded from the coastal zone as land held in trust by the federal government. Nevertheless, none of these obviates the legal requirement under the CZMA for the BIA to submit a consistency determination for an activity that *affects* the coastal zone, as discussed above. Thus, it is the phrase "or the CZMA" that we believe should be changed in this passage, and we recommend the following changes to it below:

> *While the project site is located within ~~a~~the ~~C~~coastal ~~Z~~zone, the site ~~proposed Project~~ is considered excluded from the Coastal Zone ~~Management Plan~~ as that phrase is defined in the CZMA, as it is ~~would be developed~~ on land held in trust by the federal government. Therefore, the Proposed Project is not required to be developed in accordance with the Local Coastal P~~lan~~rogram. However, for the BIA to issue a loan guarantee for this project, the project is required to be consistent to the maximum extent practicable with the enforceable policies of the California Coastal Management Program (CCMP) under ~~or~~ the CZMA. ~~Furthermore, t~~The type of land use for ~~development of~~ the proposed Hotel is consistent with the adjacent land use of the existing Casino.*

S1-03 (Cont.)

A consistency determination is a finding that a proposed activity is consistent to the maximum extent practicable with the California Coastal Management Program, combined with information necessary to support that conclusion, including an analysis of the activity's consistency with Chapter 3 of the Coastal Act. We provide these comments in part to assist the BIA in preparation of that document, and we are attaching to this letter additional comments outlining what we would expect to see in any consistency determination that analyzes the hotel project under these Chapter 3 policies.

The Trinidad area's scenic values are inextricably linked with the reason visitors are attracted to this area. Virtually all the development in the viewshed is limited to one or two stories, with only a very occasional three-story structure. The proposed six-story hotel would tower above and dominate the viewshed over an extremely large area. Thus, our greatest concern over the proposed hotel is its significant visual impact on a portion of the coast particularly prized for its spectacular scenic public views.

S1-04

We do not believe the EA adequately explains how it arrived at either of the following conclusions (stated in the EA, page 3-27): (1) that the proposed Mitigation 3.13.3 would "allow the proposed Hotel to blend into the scenery … so that the Proposed Project would not result in any adverse effects to scenic resources;" or (2) that "Incorporation of mitigation measures in Section 3.13.1 would reduce effects to visual resources to less than significant." Accordingly, we would request that the BIA re-examine these conclusions and either substantiate them, or, alternatively, consider preparation of an Environmental Impact Statement, rather than an EA, for the activity. In addition, it is our understanding from media reports of local hearings that the Rancheria is considering design alternatives for the proposed hotel. If this is accurate, we believe the EA should, at a minimum, examine less visually damaging alternatives to the

S1-05

proposed design. We would hope that several alternatives are included that involve lower heights and have a less prominent visual appearance. S1-05 (Cont.)

The EA limited its discussion to only two alternatives, the proposed alternative and the "No Project" alternative, rejecting outright all other "build" alternatives, based on the statement that:

> *Other potential alternatives to the Proposed Action, such as a reduction in the size of the area for development or alternative locations, do not meet the definition of "reasonable" under the CEQ's Regulations for Implementing the NEPA and because the purpose and need would not be met. Due to the proposed location of the Hotel, the Tribe has reduced the size to the minimum size that would provide the economic gains that would make the Hotel profitable and thereby viable. Accordingly, a small area for the Proposed Project is not evaluated within this ... EA.*

S1-06

We understand the Rancheria's desire for the hotel to be located very near, if not adjacent to, the existing Casino. This goal appears reasonable on its face. However the EA does not adequately explain its statement that no land is available on the Rancheria's existing holdings that could be used, for example, to lessen the height of the hotel by expanding its footprint, or dividing the hotel into multiple, lower story structures, "without disrupting future plans essential to the Tribe's growth and facilities." The EA should, at a minimum, substantiate this claim. It would also be helpful if the EA would explain why building a hotel with any fewer than 100 rooms would not be feasible for the Rancheria.

Aside from its sheer mass, we have several additional concerns with respect to the visual impacts of the project. Given the extensive degree of glass windows facing public areas, we do not understand how glare can be minimized during the daytime, and the issue is likely of even greater concern during the nighttime, when lighting from hotel room windows could be highly visible over a large area. We understand the external lighting can be minimized by directional controls, but it is less clear how six stories of hotel room lighting on the seaward facing sides of the hotel can be minimized. S1-07

Our final concern with respect to visual impacts stems from the relationship between the hotel itself and related mitigation measures proposed to address traffic impacts. The EA states that Mitigation Measure 3.7.3 will be to "Construct the Cher-Ae Lane interchange off of HWY 101 to provide direct access to the Rancheria and Westhaven Drive." We are concerned by the fact that the environmental analyses that may be forthcoming in a separate, Caltrans, CEQA review will not be available in the timeframe appropriate for review of the proposed hotel. Without being able to understand those impacts it is difficult to fully understand the full visual effects from the proposed project. S1-08

The remainder of our comments will address other, non-visually-related issues potentially raised by the proposed hotel. S1-09

The EA states (p. 3-22), that adequate water supply to serve the hotel is available based on the capacity of the City's water system and commitments between the Rancheria and the City. We would request that the EA include written confirmation from the City documenting the adequacy of availability of such water supply.

S1-09 (Cont.)

EA Appendix A, which examines leachfield capacity for the proposed hotel, indicates that the existing leachfield will need to be expanded, and that while several areas may provide sufficient expansion capacity, they have not been tested to the degree assuring that capacity would be available. (Northstar Design Solutions memo, September 29, 2016, p. 3: Dispersal System Capacity). The EA should, at a minimum, spell out the process and timeline that will be used to assure adequate leachfield capacity is available, as well as identify any public agencies that will be involved in the review of any leachfield expansion.

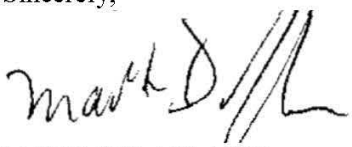
S1-10

The EA indicates an active landslide is located on the proposed hotel site, and that it trends southwest towards Scenic Drive. The EA further indicates that the landslide is shallow and that hazards can be remediated with standard geologic measures. Appendix B of the EA provides additional geologic analysis supporting the EA's conclusions in this regard. This appendix lists six alternative means for stabilizing the site, and recommends implementing one of them (cast-in-drilled hole (CIDH) pile support). The appendix also recommends several other measures and construction techniques, and further indicates some level of additional analysis will need to be performed, along with a final geotechnical design report, prior to construction. We request that the EA include a projection or timetable for when these additional analyses will become available, as well as assurances that they will be implemented.

S1-11

In conclusion, we appreciate this opportunity to comment, and we look forward to working with the BIA and the Rancheria on this locally and regionally important project. If you have any questions about these comments, or about preparation of a consistency determination, please feel free to contact me at (415) 904-5289, or by email at mdelaplaine@coastal.ca.gov. Thank you for your attention to this letter.

Sincerely,



MARK DELAPLAINE
Manager, Energy, Ocean Resources, and
Federal Consistency Division

Attachments:

1. CCC Staff Guidance for preparation of a Consistency Determination

cc: CCC Arcata Office
Jacque Hostler-Carmesin, Chief Executive Officer, Trinidad Rancheria
Garth Sundberg, Tribal Chairman, Trinidad Rancheria
David W. Tyson, Trinidad Rancheria Economic Development Corporation
Caltrans District 1 (Kim Floyd)
City of Trinidad (Dan Berman)
County of Humboldt (Planning and Building Dept., and Board of Supervisors)
HCAOG (Humboldt County Association Council of Governments)(Marcella Clem)

Attachment 1

Commission Staff Consistency Determination Guidance

The Coastal Act places special emphasis on the protection of scenic coastal public views and on special visitor destinations prized for their unique characteristics, and the BIA's consistency determination should analyze the following Coastal Act policies in its analysis of consistency with the enforceable policies of the CCMP.

Section 30251

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal 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. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

Section 30253(e)

New development shall do all of the following:

...

(e) Where appropriate, protect special communities and neighborhoods that, because of their unique characteristics, are popular visitor destination points for recreational uses.

This analysis should include provide visual renderings showing the appearance of the proposed hotel from important public view vantage points. We would recommend, at a minimum, visual simulations from the following locations (which we will also depict, using the numbers from the list below, on an attached map (Exhibit 1)):

1. The public trail on the east side of Trinidad Head
2. The seaward end of Trinidad Pier
3. The parking lot at Trinidad Harbor
4. The intersection of Trinity St. and Edwards St. in Trinidad

5. Scenic Drive

6. The southern point on Baker Beach, located immediately north of Sotsin Pt.

7. Luffenholtz Beach County Park

8. The Vista Point west of Highway 101 at the McKinleyville airport.

Guidance from Humboldt County's certified Local Coastal Program, Trinidad Area Plan (TAP), can be used to support the visual analysis. The TAP calls out this area as "indisputably exceptional" (TAP Page 3-37, Section 2.40 – Visual Resource Protection), and specifies that any development along Scenic Drive under the County's permitting jurisdiction would need to be, as required above under the last requirement of Coastal Act Section 30251, "subordinate to the character of its setting." Re-emphasizing this policy, TAP Page 3-39, Section 3.40.B.3 (Coastal Scenic Areas), states "In Coastal Scenic Areas as designated on the Area Plan Maps, and applied to portions of parcels immediately adjacent to and visible from the designated area, it is the intent of these regulations that all development be subordinate to the character of the designated area, and to the scenic use and enjoyment of public recreational lands within these areas."

The TAP policies would also: (1) prohibit off-premise signs (billboards) that are at all visible from the public roadway; and (2) set building height limitations of a maximum of 30 ft. for any structures along Scenic Drive[3].

While these TAP policies do not provide the legal standard of review for any consistency determination, they nevertheless underscore the spectacularly valuable visual resources in the area and support the Coastal Act requirement that the proposed hotel would need to not only minimize and protect scenic views, and be compatible with the character of the surrounding area, but also to be subordinate to the character of its setting.

We would request that the visual analysis also examine several additional concerns with respect to the visual impacts of the project. As we note in the main body of this letter, the consistency determination should explain glare from extensive glass windows will be minimized during the daytime, and minimized during the nighttime, when lighting from hotel room windows could be highly visible over a large area. In reviewing plans for a Casino near Crescent City for the Elk Valley Rancheria (also on Trust lands), we requested, and received, simulated nighttime views from public vantage points as part of our federal consistency review for that activity. We would be happy to provide you a copy of those simulations if you so request, and we would request

[3] The actual language of the TAP (Page 3-40, Section 3.40.B.3.c.(2)) states this as follows: "The highest point of a structure shall not exceed 30 feet vertically measured from the highest point of the foundation, nor 40 feet from the lowest point of the foundation."

similar simulations for the proposed project to support the visual analysis in the consistency determination.

The visual analysis should also examine the visual impacts which would stem from the related mitigation measures proposed to address traffic impacts. The EA states that Mitigation Measure 3.7.3 will be to "Construct the Cher-Ae Lane interchange off of HWY 101 to provide direct access to the Rancheria and Westhaven Drive." The consistency determination should acknowledge that this portion of Highway 101 is designated as a highly scenic area, and it should examine the visual effect from the grading, paving, and tree removal that would likely be associated with this interchange. It should analyze related visual impacts from any advertising signs contemplated for the hotel that would be placed on Highway 101, along Scenic Drive, or other public streets in the area.

We would request that you use for guidance for your analysis the following County TAP policies concerning highway improvements in this scenic area (TAP Page 3-19, Section 3.23.B.3):

> *3. Public Roadway Projects*
>
> *Public roadway improvement projects shall not, either individually or cumulatively, degrade environmentally sensitive habitats or coastal scenic areas. Improvements (beyond repair and maintenance) shall be consistent with Section 3.41 and 3.42 and shall be limited to the following:*
>
> a. *Reconstruction and restoration of existing roadways, including bridge restoration and replacement, highway planting, construction of protective works such as rock slope protection and slope corrections, reconstruction of roadways following damage by storms and other disasters, and improvement of roadside rests.*
>
> b. *Operational improvements, such as traffic signals, guard rails and curve corrections.*
>
> c. *Roadside enhancements, such as construction or improvement of roadside rests and vista points consistent with Section 3.40, and removal of roadside signs consistent with Section 3.40 B4.*
>
> d. *Minor improvement projects, such as modifying encroachments or ramps, construction turnouts, and channelized intersections.*
>
> e. *Except in coastal scenic areas, climbing and passing lanes.*
>
> f. *Expansion of substandard roadway shoulders.*
>
> g. *Construction of bikeways.*

Interchange improvements may also raise other Coastal Act concerns, and should be analyzed to the degree possible. For example, in reviewing Caltrans' Project Study Report – Project Development Support (December 2017) for the Hwy. 101 interchange, it appears that all of the non-no-project alternatives for such an intersection would have "medium" to "extremely high" environmental impacts (pages 11-12, Table 5: Summary of Project Alternatives). These impacts include visual, sensitive habitat (including wetland impacts), and geologic stability concerns. Accordingly, we believe the consistency determination should analyze the effects of any likely-to-be-proposed interchange alternatives for consistency with the habitat (Section 30240), wetlands (Section 30233), geologic hazards (Section 30253), and public works (Sections 30250 and 30254) policies of the Coastal Act. The above County TAP policies should also be looked at for guidance in these analyses. Exhibit 2 to this attachment contains the applicable Coastal Act policies not otherwise quoted in this Attachment.

The consistency determination should also analyze the project for adequacy of water supply and leachfield capacity, under Section 30250(a) of the Coastal Act, which provides:

> *New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. ...*

According to the EA (p. 3-22), adequate water supply to serve the hotel is available based on the capacity of the City's water system and commitments between the Rancheria and the City. If this is indeed the case, we would request that you submit written documentation from the City attesting to the adequacy of availability of such water supply.

EA Appendix A, which examines leachfield capacity for the proposed hotel, indicates that the existing leachfield will need to be expanded, and that while several areas may provide sufficient expansion capacity, they have not been tested to the degree assuring that capacity would be available. (Northstar Design Solutions memo, September 29, 2016, p. 3: Dispersal System Capacity). The consistency determination should spell out the process and timeline that will be used to assure adequate leachfield capacity is available, as well as identify any public agencies that will be involved in the review of any leachfield expansion.

The EA indicates an active landslide is located on the proposed hotel site, and which trends southwest towards Scenic Drive. The EA further indicates the landslide is shallow and that hazards can be remediated with standard geologic measures. Appendix B of the EA provides additional geologic analysis supporting the EA's conclusions. This appendix lists six alternative means for stabilizing the site, and recommends implementing one of them (cast-in-drilled hole (CIDH) pile support). The appendix also recommends several other measures and construction techniques, and further indicates some level of additional analysis will need to be performed, along with a final geotechnical design report, prior to construction. The BIA's consistency

determination should include an explanation of how the geologic constraints will be addressed and remediated, as part of its analysis of the project's for consistency with the geologic hazards policy of the Coastal Act (Section 30253 (a) and (b)), which provides:

> ***Section 30253(a) and (b)***
>
> *New development shall do all of the following:*
>
> *(a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.*
>
> *(b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.*

Finally, we would like to make you aware of policy guidance the Commission has been involved in concerning the Coastal Act's low and moderate cost visitor-serving policy (Section 30213) and room rates for hotels. This effort has been focused more in southern California than in northern California, and we provide this link for this in-progress policy guidance.

https://documents.coastal.ca.gov/reports/2016/11/th6-11-2016.pdf

We believe at a minimum, discussion with the Rancheria and/or the BIA may be warranted, concerning how the proposed hotel fit on the spectrum of low- to high-cost visitor facilities. If this issue is addressed in the consistency determination, it should be based primarily on Section 30213 of the Coastal Act, which provides:

> ***Section 30213***
>
> *Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred.*
>
> *The commission shall not: (1) require that overnight room rentals be fixed at an amount certain for any privately owned and operated hotel, motel, or other similar visitor-serving facility located on either public or private lands; or (2) establish or approve any method for the identification of low or moderate income persons for the purpose of determining eligibility for overnight room rentals in any such facilities*

(Additional Coastal Act policies may also be applicable; those are listed on page 6 of the document at the above link.)

(Additional Coastal Act policies may also be applicable; those are listed on page 6 of the document at the above link.)

Exhibits:

1. Recommended Coastal Viewpoints
2. Additional Coastal Act Policies

Exhibit 1: Recommended Coastal Viewpoints

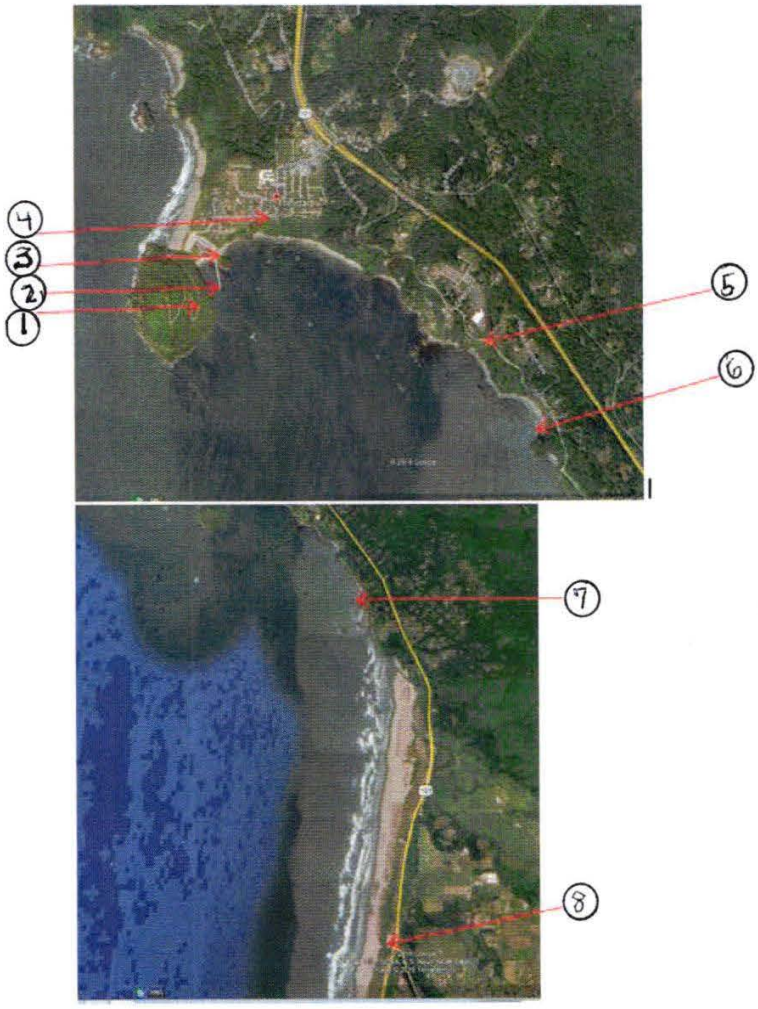


Exhibit 2: Additional Coastal Act policies

Section 30233(a)

(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

(l) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.

(2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.

(3) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.

(4) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.

(5) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.

(6) Restoration purposes.

(7) Nature study, aquaculture, or similar resource dependent activities.

Section 30240

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

Section 30254

New or expanded public works facilities shall be designed and limited to accommodate needs generated by development or uses permitted consistent with the provisions of this division; provided, however, that it is the intent of the Legislature that State Highway Route 1 in rural areas of the coastal zone remain a scenic two-lane road. Special districts shall not be formed or expanded except where assessment for, and provision of, the service would not induce new development inconsistent with this division. Where existing or planned public works facilities can accommodate only a limited amount of new development, services to coastal dependent land use, essential public services and basic industries

vital to the economic health of the region, state, or nation, public recreation, commercial recreation, and visitor-serving land uses shall not be precluded by other development.

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY

DEPARTMENT OF TRANSPORTATION
DISTRICT 1, P.O. BOX 3700
PHONE (707) 441-4693
FAX (707) 445-6314
TTY 711
www.dot.ca.gov

EDMUND G. BROWN Jr., Governor

Making Conservation a California Way of Life.

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October 22, 2018

1-HUM-101-100.72
Trinidad Rancheria Hotel Project
SCH# 2018094002

Mr. Dan Hall
Bureau of Indian Affairs
Department of the Interior
2800 Cottage Way
Sacramento, CA 95825

Dear Mr. Hall:

Thank you for giving us the opportunity to comment on the proposed Hotel Development Project for the Trinidad Rancheria Economic Development Corporation's Environmental Assessment, located at the site of the existing casino and Tribal offices on Scenic Drive in the Trinidad area. The project proposes to construct a one-hundred (100) room hotel attached to the existing Cher-Ae Heights Casino structure. We have the following comments:

The Environmental Assessment for the project and the Trinidad Area Freeway Master Plan Study Report (Study Report), prepared by Omni-Means and SHN, analyzed traffic scenarios as a result of a larger master plan for economic development at the Trinidad Rancheria. The proposed hotel was one of a number of commercial ventures that were analyzed for traffic impacts as a program for economic growth for Tribal members. The Study Report concludes that the traffic impacts associated with the economic development master plan can be mitigated through the construction of a new interchange on US 101 at or near Post Mile 100.2. We concur that a new freeway interchange would provide adequate capacity to serve the hotel and other future development identified in the Master Plan under cumulative cumulative conditions, with the following caveats: S2-01

- The hotel is expected to be constructed prior to the completion of the proposed traffic mitigation measure, the new US 101 interchange. Neither the traffic analysis nor the Environmental Assessment addressed traffic impacts as a result of the hotel project independent of the Master Plan. Without a discussion of the timeframe for either the buildout of the Master Plan or the construction of the proposed traffic mitigation, it is not possible to determine the extent or duration of traffic impacts. S2-02
- An Intersection Control Evaluation (ICE) will need to be conducted either as part of the Project Study Report or the Project Approval and Environmental Document (PA&ED) phase of the interchange development in order to determine whether all-way stop control, signals, or roundabouts will be constructed at the new interchange ramp intersections. S2-03

Construction costs for a new freeway interchange are likely to exceed $15 million. Due to the cost and complexity of building the proposed mitigation, it may be necessary to consider one or S2-04

more alternate mitigation measures for cumulative traffic conditions in the event that the preferred mitigation proves to be unfeasible. Full build-out of the Master Plan is projected to create traffic impacts at three intersections, including the U.S. Route 101 (US 101) northbound ramps at Westhaven Drive and the intersection of Main Street (Trinidad) and Scenic Drive, which is less than one-hundred feet from the intersection of the US 101 southbound ramps at Main Street. The Study Report identified the need for signals, however, any signals proposed for State facilities would need to undergo an Intersection Control Evaluation before approval can be granted.

S2-04 (Cont.)

S2-05

Please contact me with questions or for further assistance regarding the above comments by phone at (707) 441-4693 or by email at: <jesse.robertson@dot.ca.gov>.

Sincerely,

JESSE ROBERTSON
Transportation Planning
District 1 Caltrans

c: State Clearinghouse
Sara Drake, California Department of Justice
Jacque Hostler-Carmesin, Chief Executive Officer, Trinidad Rancheria

LOCAL AGENCIES (L)

COMMENT LETTERS

City of Trinidad

October 10, 2018

Amy Dutschke, Regional Director
Pacific Regional Office
Bureau of Indian Affairs
2800 Cottage Way, Sacramento, CA 95825

RE: Environmental Assessment for the Trinidad Rancheria Economic Development Corporation Hotel Development Project

Dear Ms. Dutschke,

On behalf of the City of Trinidad, I am writing to request that the BIA extend the public comment period for this Environmental Assessment EA for an additional 30 days, to November 22nd 2018.

The proposed project is of great significance to the City of Trinidad and our residents. The EA is a substantial document that warrants a detailed review and analysis. L1-01

Thank you for your consideration of this request. Please let us know your decision so that we can be sure to submit our comments by the original deadline as necessary. I can be reached at citymanager@trinidad.ca.gov or 707-677-3876.

Dan Berman
City Manager

cc: Trinidad City Council
Jacque Hostler - Trinidad Rancheria CEO
Su Corbaley – California Coastal Conservancy
Mark Delaplaine – California Coastal Commission

City of Trinidad

10/22/2018

Amy Dutschke
Regional Director
Bureau of Indian Affairs
Pacific Regional Office
Attn: Dan Hall
2800 Cottage Way
Sacramento, CA 95825

RE: **Comments on the Environmental Assessment for Trinidad Rancheria Economic Development Corp. Hotel Development Project, Cher-Ae Heights Indian Community of the Trinidad Rancheria, Humboldt County**

Dear Regional Director Dutschke,

The City of Trinidad appreciates this opportunity to provide comments to the Bureau of Indian Affairs on the Environmental Assessment for the Hotel Development Project, proposed by the Trinidad Rancheria Economic Development Corporation.

The City of Trinidad is an immediate neighbor to this proposed project, and some of the key impacts of the proposed project directly affect the City, including transportation, views, water supply and water quality. The City respects the Rancheria's longstanding efforts to advance economic development projects for the benefit of Rancheria members. The City and the Rancheria have a mutual respect for the protection and enhancement of our fragile coastal environment. The City offers these comments as part of the NEPA process to ensure that the impacts of the proposed project are fully described, a range of project alternatives and mitigation measures to address these impacts are considered, and that any final project avoids significant environmental impacts. L2-01

The City believes that an Environmental Impact Statement (EIS) is required for this project (1) because the EA identifies significant and potentially significant impacts that are not adequately mitigated, and (2) because the EA lacks the detail and technical data to support a finding of no

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significant impact in many sections. Key issues that the City believes make this draft EA inadequate for a FONSI determination include but are not limited to:

1) the absence of any committed water supply for the project, making it impossible to evaluate the potential impacts of the project to water resources, as well as any mitigation that may be needed to address them;

2) significant impacts to transportation and circulation are identified, but are not adequately analyzed or addressed by the proposed mitigation;

3) significant impacts to visual resources in this state and nationally recognized coastal view area that are not fully analyzed and addressed by the proposed mitigation;

4) inadequate information about the wastewater disposal capacity for the project, which makes it impossible to evaluate potential impacts to and mitigation for bluff stability, ground and surface water quality, and ocean water quality.

L2-01 (Cont.)

More detailed comments on these and other issues are provided below, with a discussion of the project in the context of NEPA guidance and requirements.

Detailed Comments

1.3 – Location and Setting

The City of Trinidad, the Trinidad Rancheria, and the surrounding landscape and ocean are part of an incredibly beautiful, environmentally sensitive, and unique location. Consideration of environmental impacts needs to take this local context into account. The State has recognized the importance and need for protection of the abundant and productive kelp beds and nearshore rocky environment by designating the Trinidad Bay Area of Special Biological Significance (ASBS)[1] and State Water Quality Protection Area just offshore of the proposed project, and by designating this stretch of coastline as the Trinidad Head Critical Coastal Area (CCA)[2]. The Federal government has also recognized this area as a formal Gateway to the California Coastal National Monument (CCNM)[3]. Trinidad Head, with a direct view of the project site, is one of the only onshore portions of the Federal CCNM and was selected in part due to the public accessibility and the scenic visual resources of this area. The State ASBS and CCA designations both identify nutrient and bacteriological pollution as threats to this important ocean environment, and the ASBS includes strict regulations to prohibit any degradation of natural water quality.

L2-02

1. https://www.waterboards.ca.gov/water_issues/programs/ocean/asbs_map.shtml
2. https://www.coastal.ca.gov/nps/Web/cca_pp_ncoast.htm
3. https://www.blm.gov/programs/national-conservation-lands/california/california-coastal

This section of the EA (1.3) should briefly describe these state and national designations. The special setting for this project, perched on the bluff immediately overlooking this state and federally recognized coastal area, should be an important part of evaluating the environmental impacts of the proposed project. Figure 1.2 should be revised, or additional figures added, to identify the Trinidad Head ASBS, Trinidad Head CCA, and the federal CCNM.

L2-02 (Cont.)

Water Supply

Water Supply is discussed in numerous sections of the EA, including 2.2.1, 3.2.4, 3.10.7, and 4.1.7. The following comments are relevant to all of those sections.

Water/wastewater volume: The project description states that the Hotel will generate 8,000 gpd of wastewater, but the water supply section states that the Hotel will use almost 19,000 gpd of potable water. This difference cannot be explained by reuse of treated wastewater. The water coming in and the water going out need to be in balance, and corrected numbers are needed to properly assess both water supply impacts and wastewater impacts. Without consistent and accurate information about the volume of water needed, and wastewater produced, there is no sound basis for evaluating the environmental consequences of the proposed project with regard to water supply or wastewater disposal.

L2-03

Water Source: The City's Water System is described as the preferred supply for the proposed project. The City has not received any application for new or expanded water service for the Hotel, and has made no commitment to provide potable water for the proposed Hotel. The EA does not propose any alternate water source for the project.

The percentages of 'available water supply' cited in the EA appear to be based on the maximum amount allowed to be withdrawn annually under our water rights to Luffenholtz Creek, but this maximum is not the limiting factor for the water system. The limiting factors are the operational capacity of the City's Treatment Plant, and the requirements to maintain minimum flows in the Creek during drought conditions. Current efforts by the City to generate updated information about system capacity and future needs, and to review water priorities and policy, are expected to continue for at least several months. The City's current priorities for any remaining water system capacity are first to ensure adequate supply for existing customers and second to retain capacity to service planned build-out within the City limits

L2-04

Cumulative Effects to Water Resources

The City does not believe there is adequate basis to support the statement in Section 4.1.2 that 'there is adequate supply of surface water from Luffenholtz Creek to serve additional projects in the Region…' A prolonged effort to permit a major subdivision (the Moss Subdivision) in the Luffenholtz Creek watershed concluded that there was not adequate water to support new withdrawals during the dry season and required new development to avoid any new dry season

L2-05

use of Luffenholtz Creek. As described above, the City is going through its own evaluation of the capacity and priorities for our water system before making a decision on providing water service to the Hotel.

L2-05 (Cont.)

In conclusion, the EA's findings that the City's water system can support the Hotel Project needs without significant impacts are premature. There is no basis for that determination in the EA. It is unclear from the EA where the Hotel Project would obtain water if the City decides it cannot provide the water. **Until a potable water source is secured, it is not possible to evaluate the potential impacts to that source, or mitigation measures that may be needed to address them. Therefore the BIA cannot make a 'finding of no significant impact' or FONSI regarding water supply based on this draft EA.**

L2-06

3.7.2 Transportation and Circulation

The City agrees with the EA that the proposed project would have significant traffic impacts to the Main St./Scenic Dr. intersection, the largest and most complex intersection in the City of Trinidad. The proposed mitigation for these impacts is the construction of a Cher-Ae Lane Hwy 101 interchange. The City believes this could only be an acceptable mitigation measure if the the hotel project is began concurrent with or subsequent to this new interchange.

The City understands that the Rancheria is committed to pursuing the Cher-Ae Lane interchange project and continues to work towards that goal. However the interchange is still in the planning stages. Environmental permitting is just starting, no funding is secured for construction, and final approvals for the project have not been completed. This interchange project, unlike the Hotel project, involves both trust lands and non-trust land, and is therefore subject to CEQA and the California Coastal Act among other state and local laws. This substantially increases the timeline, regulatory requirements, and uncertainty about the outcome of this planned project.

Mitigation measures must be timely to the impacts they are intended to address, and they must be tangible measures that the project proponent commits to implementing. The interchange could only be considered acceptable mitigation if the Hotel project was developed concurrent with or after a new interchange is operational. As currently proposed in the EA, the largest intersection in Trinidad would be significantly impacted with no mitigation for many years, and no real guarantee of mitigation at all.

The EA therefore describes significant unavoidable impacts to Transportation and Circulation without acceptable mitigation measures for them. Alternative mitigation measures that address the identified impacts and are timely to those impacts should be developed in consultation with CalTrans and the City of Trinidad, where those impacts will be realized, and where the likely mitigation measures will need to be implemented. Without this analysis included in the EA, the

L2-07

BIA has no basis for determining the environmental consequences of the proposed project. **Until adequate mitigation measures are identified, the BIA cannot make a 'finding of no significant impact' or FONSI regarding transportation and circulation resources.**

L2-07 (Cont.)

Wastewater Treatment

There is inadequate information in the EA to determine whether there is leachfield capacity to serve the project on the Rancheria's property, and there is no information about what regulatory agency would review and approve a leachfield disposal system. Responsible independent agency review and approval of any final wastewater disposal system should be a basic mitigation measure. The federal trust status of the project site makes it unclear what agency would provide that review and approval; this should be clarified in the EA or EIS.

L2-08

The Preliminary Wastewater Feasibility Report (Appendix A) describes significant uncertainty about the current state of the community dispersal field, and about the expansion of that dispersal system which the Hotel project would require, including the following statements:

"The community dispersal field was designed with a capacity of 10,000 gallons per day. However, with plugging believed to have been caused by the discharge of Casino wastewater to the field before the treatment plant was completed, the actual long-term capacity of the dispersal field at this time is not known. The existing dispersal field should be cleaned and then the capacity should be evaluated through field investigations and hydraulic stress testing to determine the actual operations capacity."

"...it is critical that this capacity is verified." (Referring to the existing system capacity)

"A site survey should be the first order of work to confirm the Cher-Ae facility has the capacity to support the proposed hotel."

L2-09

The report also refers to soils on the Rancheria property as "marginal" for septic disposal, and that the existing system lacks the designation of a reserve area, which is a standard requirement for leachfields.

The report concludes with the following statement: "I cannot stress enough the need to determine if there is additional dispersal capacity on the site and where the resource is on the Rancheria. The size and location of these areas will have a significant impact on the design and associated cost with the dispersal component of the system."

Overall, Appendix A shows that (1) the capacity of the existing leachfield is unknown, (2) no onsite testing has been done to verify there is adequate room for expansion of the leach area (and

the amount of expansion area is unknown, since the existing capacity is unknown), and (3) there is no reserve area in a location with "marginal soils" where a dispersal field is expected to fail eventually. Further, the EA does not explain the discrepancy between the projected water use of almost 19,000 gpd, and the projected wastewater flows of 10,000 gpd. L2-09 (Cont.) L2-10

Without additional information about the capacity of the site to accept the project wastewater, and clarity on the actual volume of wastewater to be disposed of, it is not possible to adequately evaluate the potential impacts of wastewater disposal to bluff stability, ground water, or surface and ocean waters, or the mitigation measures that may be needed to address those impacts. This is especially true considering the proximity of the project site to the Trinidad Bay ASBS, SWQPA, and CCA and the CA Coastal National Monument. L2-11

Therefore the BIA cannot make a 'finding of no significant impact' or FONSI regarding wastewater disposal based on this draft EA.

Visual Resources

The City agrees with the EA that the proposed Hotel would impact the visual resources of this incredibly scenic area and would be clearly visible from Trinidad Head, nearshore waters and the California Coastal National Monument. The most obvious mitigation measures to address these impacts are to consider alternative locations on the Rancheria, alternative sizes and heights for the hotel, and to consider a less 'boxy' design. The failure of the EA to identify any alternative locations, configurations, or sizes for the proposed Hotel make it difficult to consider effective mitigation measures for visual resource impacts. These should be addressed in the alternatives section of an EIS. L2-12

Furthermore, Section 3.13.3 describes mitigation measures that "shall be incorporated" in the design. Comments from members of the Rancheria development team at the October 15, 2018 City Council meeting indicate that alternative designs are available that incorporate said measures. No such design considerations are found in the environmental assessment.

Community residents have expressed significant concerns about visual resource impacts, and about the lack of clarity in the EA regarding the final appearance. The City encourages the Rancheria to consider a significant reworking of the design, and to include the mitigation efforts outlined in Section 3.13.3 L2-13

In order to better consider the impacts, and mitigation options for those impacts, an EIS or revised EA should include simulated views of the proposed Hotel from key prominent locations, like the Trinidad Pier, Trinidad Head Trails, and Edwards St. Furthermore, the City believes that L2-14

the United Indian Health Services Potawat Health Village is an excellent example of a local facility that clearly values a design that is both culturally significant and "fits" in with the surrounding environment.

The Rancheria improved the harbor when they took it over, putting in a state-of-the art pier and wastewater treatment facility, thus respecting the surrounding area of significant biological significance. The current EA does not reflect their demonstrated commitment to sound design principles. The EA has not delivered a satisfactory description of what the visual impacts will be nor the ways that mitigation measures might address those impacts.

L2-14 (Cont.)

Other Issues

Law Enforcement

The hotel will increase the law enforcement needs for the Rancheria. The number or hours of deputy service to be provided by the Rancheria through the described contract should be included in this section and analyzed for adequacy. In addition, a "will serve" letter or equivalent document needs to be included to document that the Sheriff's Department has been adequately consulted and the EA includes a factual basis for determining the environmental consequences of the proposed project with regard to law enforcement.

L2-15

Fire Protection

The Trinidad Volunteer Fire Department (TVFD) has only one station, with approximately six volunteer fire fighters. The 'second station' referred to in this section is an independent entity – the Westhaven Volunteer Fire Department (WVFD).

The maps referenced in this section seem to indicate that neither Calfire or TVFD have been delegated responsibility for firefighting on the Rancheria. The Calfire Fire Marshal should be contacted to provide clarity about their responsibilities on the Rancheria. If a contract or agreement is already in place between the Rancheria and Calfire it should be described and analyzed in the NEPA document.

L2-16

To assess potential impacts and possible mitigation measures, this analysis should be based on the results of a qualified professional assessment of firefighting response needs, including access, water availability, and equipment. This assessment should include consultation with both Calfire and Humboldt Bay Fire. The local Calfire Fire Marshal conducts assessments like this. In addition, a "will serve" letter or equivalent document needs to be included to document that adequate capacity, staff, and equipment exists to serve the Project. Without this analysis included in the EA, the BIA has no basis for determining the environmental consequences of the proposed project with respect to Fire Protection.

Air Quality

Air quality and greenhouse gas emissions will result in impacts off of the Rancheria property. Therefore, those impacts should be evaluated in terms of State laws and standards. Humboldt County does not meet the state standard for PM10, and so that should be analyzed and dust control measures included. A construction project of the proposed duration is also likely to have public health affects that are not analyzed in the EA. L2-17

Noise

The noise section is unclear, with one standard being used in the criteria, and a different, higher standard used in the analysis. In addition, the size of the construction project, including the foundation that will be required, the range of construction equipment listed is not adequate. The number of truck trips, timing and sequence of different construction equipment is not adequately described. L2-18

Other Notes

Even impacts that are clearly not significant, that would be simple to document (e.g. flooding) are not adequately analyzed and sometimes based on inappropriate or questionable sources. The EA also contains incorrect and incomplete information. For example, since no natural gas lines serve Humboldt County, it does not seem likely that the Rancheria is served by natural gas as described in Section 2.2.1. Also, the Draft Geotechnical Feasible and Preliminary Design Report describes a new service access road along the slope southwest of the existing casino, which would cause significant cuts and grading, but that road and associated impacts are not described or considered as part of the project. L2-19

NEPA Guidance regarding impact significance:

In determining the significance of an impact, the Council on Environmental Quality's NEPA regulations §1508.27 requires consideration of both context and intensity. In considering context, it must be recognized that "significance varies with setting of the proposed action." What is not significant in one locale, may be significant in another locale. As described in more detail below, the project site is a particularly sensitive location, and the project is out of scale with the surrounding rural community setting and environment. The City's General Plan includes the following description of community preferences: L2-20

> *Property owners strongly preferred that new development be consistent with the present character of the community. Everyone agreed that the city has unique characteristics. When asked to describe Trinidad, they mentioned these terms: rural, uncrowded, quaint, rustic, peaceful, unsophisticated, small, casual, a feeling of openness, no tract houses, not commercialized. Sometimes they put it in terms of what they didn't want: no high-density*

housing, no mobilehomes and trailer parks, no buildings greater than two stories, no motel-hotel-condominium complexes, no commercial exploitation and garish signs.

Trinidad's Design Review Guidelines suggest a maximum square footage of 2,000 for residences and 4,000 for commercial structures. The maximum height limit throughout the City is 25 ft. While the Rancheria is not subject to the City's land use standards, this information is presented to give the BIA a realistic idea of the scale and context of the surrounding community. The City's current draft Vision Statement developed for a comprehensive General Plan update includes the following language:

L2-20 (Cont.)

Trinidad intends to maintain the existing small town atmosphere. Scenic and environmental protections are essential to Trinidad's quality of life and economy. ... Sustainability is a keystone for all development and a hallmark for daily life and City functions in Trinidad. New environmental technologies are embraced that further protect Trinidad's scenic, natural and cultural resources. Trinidad's water resources, including the Bay and streams are unpolluted.

In determining intensity, the Council on Environmental Quality's NEPA regulations §1508.27 also require lead agencies to consider a number of factors several of which apply to this project, including:

(2) The degree to which the action would affect public health and safety. For example, evaluation should include hazardous and solid wastes, air and water quality, and their relation to public health.

L2-21

According to the Office of Environmental Health Hazard Assessment, an eight to twelve month construction project is likely to have public health impacts related to airborne emissions, including dust. In addition, for sensitive receptors within 500 ft. of Highway 101, cumulative impacts to public health from vehicle and construction emissions need to be evaluated.

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

The coastal waters around Trinidad have been designated as an Area of Special Biological Significance and a State Water Quality Protection Area by the State Water Resources Control Board and as a Critical Coastal Area by the California Coastal Commission. In addition, Trinidad has been designated by BLM as the Northern Gateway to the California Coastal National Monument. Several parks, recreational areas and other public access exist in and around the project area. See attached excerpts from the various designations and legal programs managing these unique resources for further information.

L2-22

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

Two public meetings, one sponsored by a local group known as Humboldt Alliance for Responsible Planning (HARP) and one by the City, attracted more than 100 attendees each. This is a very large number considering the rural nature of the affected environment. The City of Trinidad has a population of only 365 residents and the greater Trinidad-Westhaven area has a population of 1,205 (2010 Census). Most of the meeting attendees expressed concerns about the project as presented, making this project highly controversial. L2-23

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

The EA, including the appendices, lacks adequate detail to accurately determine what the impacts are going to be. As described above, a primary example is water service and wastewater disposal. The water source for this project is uncertain, and the capacity of the site to dispose of wastewater is uncertain. L2-24

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

The Rancheria has plans for several additional large projects that are mentioned in the EA and appendices, including a casino expansion and a highway 101 interchange, all of which have the potential to impact the surrounding community.

(7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts. L2-25

The EA includes a Highway 101 interchange as mitigation for significant traffic impacts. In addition, Phase 2 of the Rancheria's Community plan includes a number of other projects, including an R.V. park, gas station, market, etc. However, the potential for cumulative impact is not adequately addressed in the EA.

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

There are potential offsite air and water quality impacts that have the potential to violate state environmental laws that have not been analyzed in the EA. L2-26

NEPA requires an EIS to be prepared when a Federal action may significantly affect the quality of the human environment (42 USC 4332). The EA determined that traffic impacts resulting L2-27

from the project would be significant. The mitigation proposed is to construct a new interchange on Highway 101. That mitigation is not valid for several reasons.

Section 6.4.6 of the BIA NEPA Guidebook (59 IAM 3-H) specifies that "Any mitigation measure must be enforceable and it is important for BIA Regional and Agency Offices to establish monitoring programs to ensure that mitigation is carried out." BIA has no authority to enforce this mitigation measure or ensure it is carried out nor does the Rancheria. In addition, the EA does not adequately show that this mitigation would reduce impacts to less than significant. Construction of the interchange is speculative at this point; it is still in the design phase, it has not been funded, the environmental review has not been completed, and it has not been permitted. If it is constructed, it will not be for many years, as that process is takes time. Therefore, there will be significant traffic impacts from the project for an unknown length of time. Finally, the impacts of the interchange are not analyzed at all in the EA, contrary to Section 46.130 of the Department of Interior NEPA regulations, which states that "the effects of any mitigation measures… included in the applicant's proposal must be analyzed." L2-27 (Cont.)

Section 6.4.5 of the BIA NEPA Guidebook (59 IAM 3-H) requires the effects analysis of an EA to demonstrate that the BIA took a "hard look" at the impacts of the action and that the analysis concentrate on those components of the affected environment that will truly be affected. Without this analysis included in the EA, the BIA has no basis for determining the environmental consequences of the proposed project, and an EIS should be prepared. L2-28

Courts review EAs and FONSIs under a deferential arbitrary and capricious standard. Courts will consider whether the analysis is superficial or manipulated, if the agency based its decision on presumptions or conclusions rather than facts, lack of documentation, internal inconsistencies, and failure to consider cumulative impacts and secondary impacts. The Hotel Development Project EA suffers from all of these deficiencies.

In the specific example of *Sierra Club v. Peterson* (717 F.2d 1409), the D.C. Circuit employed a four-part test to examine an agency's decision not to prepare an EIS. The four factors were (1) whether the agency took a "hard look" at the problem, (2) whether the agency identified the relevant areas of environmental concern, (3) whether the agency made a convincing case that the environmental impacts of the problems identified were insignificant, and (4) whether the agency established convincingly that any significant impacts were minimized. L2-29

Section 46.310 (g) of the Department of Interior NEPA regulations states: "An environmental assessment must contain objective analyses that support conclusions concerning environmental impacts." Many of the conclusions in the EA are not supported by appropriate and factual documentation. Water supply is a good examples of this. The EA presumes that the City of Trinidad will supply potable water for the project. As discussed above, the numbers presented in the EA are based on the City's entire permitted water right to flows on Luffenholtz Creek without consideration of actual treatment capacity of the City's water plant, low flow conditions

on the Creek or impacts from climate change and drought. The City has not made a commitment to provide water, and is not clear at this time whether they have the capacity to do so. Based on the available information, the EA cannot make a determination that impacts to water supply are less-than-significant.

L2-29 (Cont.)

Conclusion:

The City believes the environmental impacts of this project must be addressed through an EIS. The EA identifies significant and potentially significant impacts that are not adequately mitigated. In addition, the EA lacks the detail and technical data to support a finding of no significant impact in many sections, including water supply, transportation, visual resources, and wastewater.

Preparation of an EIS will serve several purposes that the EA currently does not address. It will provide the opportunity for the in-depth analysis and consideration of impacts that are not adequately documented in the EA. It will provide for further consideration of alternatives that could reduce impacts from the project. And it would allow further involvement from the public and interested agencies.

L2-30

Thank you for your consideration of these comments. Please don't hesitate to contact the City with any questions or for additional information.

Thank you



Daniel Berman

City Manager

Cc:

Trinidad City Council
Trinidad Planning Commission
Jacque Hostler, Trinidad Rancheria
Humboldt County Planning Department
California Coastal Commission, Federal Consistency Department
State Water Resources Control Board, Ocean Protection Division
Bureau of Land Management, CCNM Manager
Environmental Protection Agency – Region 9 Wastewater Division

PRIVATE CITIZENS AND COMMERCIAL ENTITIES (P)

COMMENT LETTERS

Comment Letter P1

PACIFIC REGIONAL OFFICE
BUREAU OF INDIAN AFFAIRS
2018 OCT -1 PM 2:55

J. Bryce Kenny
Attorney at Law
P.O. Box 361
Trinidad, California 95570
Telephone: (707) 442-4431
Email: jbrycekenny@gmail.com

Reg Dir aed
Dep RD Trust
Dep RD IS
Route Regms Chad B
Response Required
Due Date
Memo Ltr
Fax

September 28, 2018

Chad Broussard
Bureau of Indian Affairs
2800 Cottage Way
Sacramento, CA 95825

Re: Environmental Assessment for Trinidad Rancheria Hotel Project

Dear Mr. Broussard:

Enclosed please find Petitions with 61 signatures requesting an extension of time for the submission of comments on the above-referenced EA.

Please note that HARP hereby amends its previously mailed request to extend the deadline for comments up to and including January 31, 2019.

Also, as additional justification for an extension of time, we note that there are two different versions of the EA being circulated. We do not know which one is the official version. Accordingly, our position is that the 30-day clock has not yet commenced. You may want to republish the notice in the local paper to clarify this issue. P1-01

Thank you in advance for your anticipated cooperation, and please do not hesitate to contact me with any questions or concerns.

Very Truly Yours,

J. Bryce Kenny
Attorney for HARP

PETITION FOR EXTENSION OF TIME TO SUBMIT PUBLIC COMMENT

We, the undersigned, hereby request the Bureau of Indian Affairs to extend the public comment period on the Environmental Analysis document for the Trinidad Rancheria Hotel Project up to and including January 31, 2019.

Printed name	Date	Signature	Address
Annalisa Rush	9/27/18	[signature]	951 Westhaven Dr, So. Trinidad, CA 95570
Lynda Maru	9/27/18	[signature]	890 Underwood Dr Trinidad 95570
Maira Dizgolvis	9/27/18	[signature]	470 Patricks Point Dr, Trinidad
Bridget Bartlett	07-27-18	[signature]	406 Ocean Ave Trinidad, CA 95570
Ellen Golly	9/27/18	[signature]	461 Westhaven Dr N
Melanie Johnson	" "	[signature]	23 OKEGA LN. TRIN.
Ron Johnson	9/27/18	[signature]	" "
Karen Dixon	9/27/18	[signature]	575 N. Westhaven, TRIN
Sam Kim	9/27/18	[signature]	797 Edwards St Trin.
Peter Jain	9/27/18	[signature]	47 Rayipa Ln. Trin.
Tom Davies	9/27/18	[signature]	435 Ocean Ave Trinidad
Alan Grau	9/27/18	[signature]	433 Ewing ST Trinidad
Kathleen Lake	9/27/18	[signature]	435 Ocean Ave
Pat Morales	9-27-18	[signature]	864 Edwards St 95570
Susan Walter	9-27-18	[signature]	540 Westhaven Dr North
Richard Walter	9/27/18	[signature]	PO Box 432 Trinidad CA 95570

PETITION FOR EXTENSION OF TIME TO SUBMIT PUBLIC COMMENT

We, the undersigned, hereby request the Bureau of Indian Affairs to extend the public comment period on the Environmental Analysis document for the Trinidad Rancheria Hotel Project up to and including January 31, 2019.

Printed name	Date	Signature	Address
Leslie Zonderman-Droz	27 Sept 18	Leslie Zonderman-Droz	73 Lanford Rd, Trinidad
Katherine Long	9/27/18	Katherine A. Long	171 Langford Rd Trinidad
Allie Lindgren	9/27/18	Allie Lindgren	130 Langford Rd. Trinidad
Tami Trump	9/27/18	Tami Trump	305 Osvrg Ln. Trinidad
Steen Trump	9-27-18	Steen Trump	305 Osvrg Ln. Trinidad
Tom Mitchell	9/27/18	Tom Mitchell	19 Trinima Rd, Trinidad
Paul Hassdorf	9/27/18	[illegible]	1320 N Westhaven Dr
Richard H Kieselhorst	9/27/18	[illegible]	673 N. Westhaven Dr Trinidad
LESLIE FARRAR	9.27.2018	Leslie A. Farrar	433 Ewing Street, Trinidad CA
Sandra Haux	9-27-18	Sandra Haux	441 Gipson Ln. Trinidad CA.
LARRY GOLDBERG	9-27-18	[illegible]	1225 Stagecoach Rd., Trinidad
Edward Pease	9/27/18	[illegible]	446 Mill Creek Ln. Trinidad.
Brenda Cooper	9/27/18	[illegible]	446 Mill Creek Trinidad

PETITION FOR EXTENSION OF TIME TO SUBMIT PUBLIC COMMENT

We, the undersigned, hereby request the Bureau of Indian Affairs to extend the public comment period on the Environmental Analysis document for the Trinidad Rancheria Hotel Project up to and including January 31, 2019.

Printed name	Date	Signature	Address
DONALD BREMM	9/27/18	Donald J Bremm	1000 Moonstone Cross Rd Trinidad, CA 95570
Jason Self	9/27/18	Jason Self	385 Stagtown Rd 95570
Nola Cole	9/27/18	Nola Cole	415 6th Ave Trinidad 95570
JOHN MCCLELLAND	9/27/18	John McClelland	300 6TH AVE TRINIDAD 95570
Marjie Kieselhorst	9/27/18	M. Kieselhorst Eckart	673 N. Westhaven Dr 95570
Richard Kieselhorst	9/27/18		673 N. Westhaven Dr 95570
Gina Rimson	9/27	Gina Rimson	1850 Archer Rd Mck 95519
Virginia Waters	9/27/18	Virginia L Waters	1033 Stagecoach Rd, Trinidad
Don Allan	9/27/18	D Allan	821 2nd Ave Westhaven

PETITION FOR EXTENSION OF TIME TO SUBMIT PUBLIC COMMENT

We, the undersigned, hereby request the Bureau of Indian Affairs to extend the public comment period on the Environmental Analysis document for the Trinidad Rancheria Hotel Project up to and including January 31, 2019.

Printed name	Date	Signature	Address
J. Bryce Kenny	9-27-18		Box 361 Trinidad CA 95570
Jennifer Knight	9/27/18		P.O. Box 283 Arcata, CA 95518
KEN MILLER	9/27/18		1658 Ocean Vw Mck CA 95562
PATRICK HARESTAD	8/27/18		655 FERNCREST AVE 95570 TRINIDAD CA
ERIN ROWE	9/27/18		Box 845 Trinidad
Brenda Cooper	9/27/18		6446 Mill Creek Dr. Trinidad
Chris Donnelly	9/27/18		783 Underwood Dr Trinidad
JATIE Wax	9/27/18		225 Frontage Rd Trinidad
ELLIOT LEVIN	9/27/18		PO Box 997 Rnd CA 95570
Dana Stevens	9/27/18		PO Box 403, Trinidad 95570
Richard Johnson	9/27/18		PO Box 802 95570

J. Bryce Kenny
Attorney at Law
P.O. Box 361
Trinidad, California 95570
Telephone: (707) 442-4431
Email: jbrycekenny@gmail.com

September 24, 2018

Chad Broussard
Bureau of Indian Affairs
2800 Cottage Way
Sacramento, CA 95825

Re: Environmental Assessment for Trinidad Rancheria Hotel Project

Dear Mr. Broussard:

This office represents the Humboldt Alliance for Responsible Development (HARP) a group of local residents who are very much interested in, and affected by, the above-named project.

We have just obtained a copy of the Environmental Assessment (EA), and note that the public comment period is only 30 days. We respectfully request an extension of time to submit comments for the following reasons:

P2-01

•The extra time is necessary for us to publicize the existence of the EA,
• to consult with our experts on its various components,
• **to** discuss the issues among the membership, and

P2-01 (Cont.)

• to decide on and draft written comments.

General Concerns regarding significance and complexities in the EA

P2-02

This EA describes not just a single Hotel Project, but refers, without elaboration, to a suite of interrelated development projects that the Rancheria has been planning since at least 2004 with no serious attempts to educate or involve the broader communities affected by these projects.[1] Expecting an uninformed but concerned public to weigh in on projects that could and should have been publicized and discussed over the past fourteen years in just 30 days is unreasonable.

P2-03

The proposed Rancheria development is taking place in one of the most visually spectacular and environmentally sensitive places in California, or anywhere. Trinidad is California's smallest coastal city, a quaint fishing village in the midst of oceanic splendor enjoyed by thousands of tourists, fishermen, surfers, and local residents. Biologically sensitive receptors abound, and the visual aesthetics are unmatched, although these assets are downplayed in the EA.

The "Preliminary Environmental Analysis Report" (PEAR) of the CalTrans Project Study Report (PSR) for US 101/Trinidad Area Access Improvements emphasizes the specialness of this entire area:[2]

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[1] Winzler and Kelly Assessment attached to Appendix A of EA.

[2] Appendix H Visual/Aesthetics: 8.5 Visual/Aesthetics: "Coastal scenic views, scenic areas, and coastal access points occur along Scenic Drive. Aesthetics are generally a substantial concern with any development in the Coastal Zone." *** 30251 & pg 9, Attachment H, Preliminary Environmental Analysis Report (PEAR, pg 55)

"The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural landforms, **to be visually compatible with the character of surrounding areas**, and, where feasible, to restore and enhance visual quality in visually degraded areas (Trinidad Area Plan Section 3.40 Visual Resource Protection, 2007 [emphasis provided])."

P2-03 (Cont.)

This EA describes a project that itself dramatically affects multiple local communities, with an extraordinary regional impact, yet despite these consequences, none of the affected communities has had any opportunity to evaluate, comment, or influence the proposal(s). Furthermore, this Project anticipates substantial related projects, including major federal and local highway endeavors, but does not consider the cumulative impacts of these interrelated projects.

P2-04

P2-05

Among many concerns requiring more time for our competent attention, we include the following partial list:

A. Consistency with Rancheria State Compact and the California Environmental Quality Act (CEQA)[3]

The Tribal-State Compact Between the State of California and the Trinidad Rancheria that was ratified in 1999 provides for informing the public of any off-reservation impacts from casino/gaming-related project. The EA makes the relation between the Hotel project and gaming clear: "Furthermore, the

P2-06

[3] http://www.cgcc.ca.gov/documents/compacts/original_compacts/Cher-Ae-Heights_Compact.pdf

Tribe's purpose for the development of a 100-room Hotel is to support the existing Casino." (pg 2-1,EA). Section 10.8 of the Compact requires that the Rancheria, among other actions, make "…a good faith effort to incorporate the policies and purposes of the National Environmental Policy Act *and the California Environmental Quality Act…"(10.8.1)*

However, reference to CEQA or its equivalent environmental process is not included in this EA.[4]

P2-06 (Cont.)

It should be noted that AES, the contractor who prepared the EA, has previously acknowledged that an EA must be consistent with a tribe's environmental ordinances developed as required by their gaming compact. (See attachment 1 hereto.)

B. Traffic:

Of major concern is the failure of this EA to evaluate the relationship of the Hotel, the proposed full Rancheria build-out, and the proposed new US Hwy 101 interchange and overpass to service the development.[5] This EA acknowledges that the Hwy 101 interchange and overpass are essential to service the Project (3.7.2), yet the Rancheria and CalTrans are currently supposed to be considering twelve options plus no-build to address "the

P2-07

[4] "Consistent with the requirements of NEPA, the BIA will review and analyze the environmental consequences associated with the Proposed Action and Project Alternatives and either determine that a Finding of No Significant Impact (FONSI) is appropriate, request additional analysis, or request that an Environmental Impact Statement (EIS) be prepared." (1-1, EA) "1.5 Overview Of The Environmental Review Process "This EA is intended to satisfy the environmental review process of 59 IAM 3-H, 40 CFR § 1501.3 and 40 CFR § 1508.9."

[5] Alternatives 2 and 3a, PSR

transportation needs of the Trinidad Rancheria and the surrounding community."[6]

This raises important questions about piece-mealing multiple interrelated projects to avoid revealing growth-inducing and cumulative impacts, as well as whether the Hwy 101 interchange and overpass have already been determined to be essential to the Hotel Project, as "assumed" in the EA (3.7.2), essentially designating Options 2 and 3a, the overpass and interchange, as *fait accompli*.[7] (E-18, EA)

The traffic analysis employs Level of Service (LOS) to gauge traffic needs, rather than Vehicle Miles Travelled. LOS has been censured under California's EQA because it fails to adequately consider non-motorized options and exaggerates road expansion needs.[8] Unfortunately, the EA released on 9/18 fails to include Appendix G, which allegedly elaborates on LOS.

P2-07
(Cont.)

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[6] (pg 1, 2017 US-101 / Trinidad Area Access Improvements, 1. INTRODUCTION The Trinidad Rancheria and Caltrans District 1 are working in partnership to identify alternatives to meet the transportation needs of the Trinidad Rancheria and the surrounding community. This PSRPDS identifies 12 alternatives to address the transportation deficiencies between the unincorporated community of Westhaven and the City of Trinidad.

[7] "The BIA understands that the Tribe is currently undergoing consultation with Caltrans to complete this interchange. This new interchange may be located approximately 0.7 miles south of the Main Street interchange. "For the purposes of the analysis a tight diamond interchange is assumed at the new interchange, which is referred to as the Cher-Ae Lane interchange. A two-lane overcrossing is assumed with all-way stops at the two ramp locations. Easterly extension of Cher-Ae Lane past the interchange to intersect at a "T" intersection with Westhaven Drive is also assumed." (E-18, EA)

[8] Governor's Office of Planning and Research, Transportation Impacts (SB 743) CEQA Guidelines Update and Technical Advisory http://www.opr.ca.gov/ceqa/updates/sb-743/

The Project simply ignores south Scenic Drive as does the CalTrans PSR, despite the fact that an improved South Scenic Drive offers the potential for another access to the Rancheria complex, thereby potentially obviating the need for, and expense of, additional Hwy 101 interchange.[9]

P2-07 (Cont.)

Complicating matters further, Humboldt County's LCP prohibits construction of "new roadways, highway overcrossings, or interchanges in the project area."[10]

Community and expert review of these contingent aspects of the Hotel Project will obviously require considerably more time than the allotted 30 days.

P2-08

C. Water Supply:

Conflicting data from multiple historic surveys regarding the availability of potable water must be reconciled. An independent expert assessment of water supply capacities that accounts for needs during extreme drought and emergency conditions is necessary. Such a study has been funded by the Coastal

P2-09

[9] (Appendix E-1: "Scenic Drive is a north-south two lane secondary collector street that extends south of Main Street and provides access to the Rancheria.

[10] "Land Use and Community Impacts: The project is located entirely within the Coastal Zone. The project conflicts with the Humboldt County General Plan-Volume II:Trinidad Area Plan of the Humboldt County Local Coastal Program, which does not allow for construction of new roadways, highway overcrossings, or interchanges in the project area. If necessary, Local Coastal Program amendment would require certification by the California Coastal Commission, which also has appeal jurisdiction over County and City coastal development permits. Local Coastal Program amendment could add approximately 18-24 months to the coastal development permit processes. Public controversy regarding the project may be considerable. A community impact assessment is anticipated." (pg 15, "Further Environmental Effort" Attachment H Preliminary Environmental Analysis Report (PEAR)

Commission and is in progress by the City Planner. Its release date is unknown.

P2-09 (Cont.)

D. The Public:

HARP has scheduled the very first public meeting dedicated to this Project on September 27, 2018, leaving only 25 days for an uninformed public to understand the scope of these massive interrelated projects and express its concerns.

P2-10

Without more robust community engagement, projects of this scale, that are unprecedented in this area, threaten to disrupt our community equanimity.

E. GROWTH:

Data regarding anticipated growth are critical in determining needs and impacts of the various projects within this EA. However, the data are confusing, requiring more time to sort out. The EA relies on 1.3% annual growth rate for the Project area, based on The Rancheria's "Trinidad Area Freeway Master Plan Study Report, Revised 2/13/14" pg 7, despite CalTrans' referencing a 0.5-0.6% range.[11]/[12] The Humboldt

P2-11

[11] The cumulative impact analysis within this EA considered the construction of the projects described above and conservatively assumes an approximately 1.3 percent annual growth rate (Appendix G), along with the full implementation of the Tribe's Master Plan. (4-1, EA)

[12] Trinidad Area Freeway Master Plan Study Report 2/13/14, pg 7 "Year 2040 Traffic Volumes
The following sources of data were reviewed to establish background annual growth rate that will be applied to the study area facilities to derive Year 2040 Base traffic volumes:
1) Humboldt County Travel Demand Model Roadway volumes for Year 2010 and Year 2040 were compared on US 101. In the vicinity of the study area, the model projects approximately 6,100 ADT for Year 2010 and 7,000 ADT for Year 2040. This yields an annual growth rate of approximately 0.5% per year.
2) Historic ADT data available from Caltrans was reviewed for the Year 1992 and Year 2012. In

County General Plan estimates the current annual growth rate at "about 0.7 percent, declining to 0.36% by 2030. (HC GP, 4.2, Table 1-1)

P2-11 (Cont.)

Unfortunately, Appendix G is not included with the released EA.

F. Other:

The "RANCHERIA MASTER PLAN DEVELOPMENT" (pg 11, EA) refers to a plan to expand the casino from its current 50,000 sq ft to 150,000, the RV park from 22 spaces to 50, and office space from "minimal" to 100,000 sq ft, with retail and community space adding another 75,000 sq ft, not including a 6-pump gas station. The surrounding community is unaware of the extent and scale of these developments, some of which are reasonably foreseeable, connected to the Hotel, and casino-related, and therefore subject to CEQA.

P2-12

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the vicinity of the study area, the 1992 ADT was found to be 8,000 and the peak ADT was found to be 11,300. In 2012, the ADT was found to be 8,900 and the peak ADT was found to be 12,300. This yields an annual growth rate of approximately 0.6% per year.
3) California Department of Finance (DOF) projections for population in Humboldt County were reviewed for Year 2010 and Year 2040 conditions. The DOF estimate for population in Year 2010 was 134,663 and Year 2040 is 147,873. This yields an annual growth rate of approximately 0.6% per year.
Per direction from Caltrans District 1 Long Range Planning, a background growth rate of 1.3% per year has been utilized to derive Year 2040 Base traffic volumes.
Year 2020 Traffic Forecasts
Based on the planned development of the Rancheria and input from Caltrans, Year 2020 was established as the interim analysis year. A background growth rate of 1.3% per year has been utilized to derive Year 2020 Base traffic volumes" (pg 7)

Requested comment period to end January 2, 2019

All of this, and more will take more than 30 days. We propose a due date of January 2, 2019.

Please notify me at your earliest convenience as to whether our request for an extension has been granted. P2-13

Thank you in advance for your anticipated cooperation, and please do not hesitate to contact me with any questions or concerns.

Very Truly Yours,

J. Bryce Kenny
Attorney for Humboldt Alliance for Responsible Planning

Comment Letter P3

PACIFIC REGIONAL OFFICE
BUREAU OF INDIAN AFFAIRS
2018 OCT -9 PM 2:49

Reg Dir
Dep RD Trust
Dep RD IS
Route DECRMS Chad B
Response Required
Due Date
Memo Ltr
Fax

5 October, 2018

Bureau of Indian Affairs

2800 Cottage Way

Sacramento, CA 95825

Dear Mr. Broussard and Mr. Hall,

Thank you for the opportunity to comment on the TRINIDAD RANCHERIA ECONOMIC DEVELOPMENT CORPORATION'S September, 2018, ENVIRONMENTAL ASSESSMENT for hotel development at the Cher-Ae Heights Casino.

As a neighbor living on Langford Road, approximately half a mile from the casino, I am concerned about a number of aspects of the Environmental Assessment. With that in mind, I strongly support Alternative B until these concerns are mitigated. P3-01

We are all reliant on water to live, therefore this sentence strikes me as problematic: "Currently, the City's [Trinidad] water supply system serves approximately 315 connections, including connections to Tribal enterprises. The City has a permitted water use rate of 355,392 gallons per day (gpd), of which the City is using approximately 23 percent (Buckman, 2017)." That appears superficially sufficient, but no consideration is given for water availability. Permitted use requires availability. Luffenholtz Creek, where the City of Trinidad draws their water, is a surface stream completely dependent upon rainfall for sufficient water. In the 30-plus years I have lived on Langford road, there have been numerous times that the city has requested that we curtail water use due to drought conditions. How would this affect the hotel, especially if an RV park were also added to the mix? Would I be relegated to taking showers on alternate Thursdays in order for casino guests to take 15 minute showers in their hotel rooms? I have been to hotels where I am asked to re-use my towel to save on laundry, but never to a hotel where I am told to truncate my shower time. P3-02

But this is just the tip of the iceberg. It appears that Analytical Environmental Services did a shoddy job in some areas, but I can only comment on the ones I personally know about.

For example, I was shocked to read that four species of birds had been observed at the site. What time of year was this observation made? What were the qualifications of the person who observed these four species? In my yard, just over McConnahas Mill Creek from the casino complex, and equally nearby to the south, I have casually observed many of the following species of birds: Cooper's hawk, Red-shouldered hawk, Red-tailed hawk, Kestrel, Peregrine falcon, Wild turkey, Band-tailed pigeon, Mourning dove, owls, including Western screech owl and Great horned owl, Allen's and Anna's hummingbirds, Red-breasted sapsucker, Downy and Hairy woodpeckers, Northern flicker, Pileated woodpecker [heard last year], Black phoebe, various seasonal vireos and flycatchers, Stellar's jay [abundant!], crows and P3-03

ravens [mega-abundant], seasonal Martins and Swallows, Chestnut-backed chickadee, Red-breasted nuthatch, Brown creeper, Gold-crowned kinglet, Swainson's thrush [abundant seasonally], Hermit thrush, Varied thrush, Wrentit, Cedar waxwing, Orange-crowned warbler, Yellow-rumped warbler, Townsend's warbler, Wilson's warbler, Spotted towhee, Fox sparrow, Song sparrow, White-crowned sparrow, Golden-crowned sparrow, Dark-eyed junco, Black-headed grosbeak, American goldfinch, just to name a few birds seen within less than a mile of the proposed site. This does not include sea birds blown in during storms. And yes, I have also seen the four species listed: Turkey vulture (Cathartes aura), mourning dove (Zenaida macroura), California gull (Larus californicus), and American robin (Turdus migratorius). To say that "No wildlife occurs on or within the project site due to the high level of foot and vehicle traffic associated with the operation of the existing Casino back of the house." Shows little understanding of how wildlife has adapted to human presence. I have observed foxes, raccoons, and squirrels, all of whom apparently can adapt to high foot traffic. Were wildlife observations made in day or evening? By whom? And what were the qualifications of the observer?

P3-03 (Cont.)

P3-04

These discrepancies are red flags if other portions of the report are as lax as the wildlife portion. The report on the flora was equally lackluster. Granted there is just a big parking lot there now with a few trees from Miller Farms Nursery which are decorative, not native, but still provide wildlife habitat.

"The active landslide that currently extends from the southwest corner of the proposed Hotel southwest towards Scenic Drive has the potential to affect the foundation of the proposed Hotel. However, the active landslide is relatively shallow in nature and may be readily stabilized utilizing measures such as retaining wall systems, slope reconstruction, and sub-drainage elements (Section 3.1.6)."
If this is, indeed, true, why is Scenic Drive sliding continually and hopelessly into the sea? This is a large, heavy building, and I believe more analysis of the site stability would be a good idea.

P3-05

"While the No-Action Alternative would not result in any of the environmental effects identified for Alternative A, this alternative would not meet the Tribe's objectives of exercising tribal sovereign self-reliance and enhance the well-being of tribal resources; further, this alternative would not meet the Tribe's goal to fulfill self-reliance and promote the future of economic stability and development for the Tribe."

To this I say, the Tribe is full of very smart people who are fully capable of considering alternatives rather than just "do or die." This project could easily be made viable by modification of various aspects. The height of the building would be the first to consider. There are no buildings of this size anywhere north of Eureka, and only a couple there. Water capture might be another area to explore. And providing a transportation aspect which is realistic would help out, too.

P3-06

P3-07

Sincerely,

Carol E Moné

Carol E Moné
PO Box 223
Trinidad, CA 95570

Hall, Harold <harold.hall@bia.gov>

[EXTERNAL] Regarding the massive Hotel project in a town of 400 people

1 message

Patty Stearns <patty@pattystearns.com> Fri, Oct 5, 2018 at 10:39 AM
To: chad.broussard@bia.gov, harold.hall@bia.gov

Dear Sirs,

I am writing to protest the planned huge hotel project by the Cher-Ae Rancheria in the tiny little and very pristine town of Trinidad, California. http://trinidad.ca.gov
Surely, you cannot look at this project with any kind of critical eye and go forward. They have planned (and the planning itself is hastily and poorly formulated)
a 100 room hotel , 6 stories high, overlooking Trinidad Bay. In the entire Humboldt County, pop. 100,000, there are NO other 6 story buildings. The Humboldt State University in Arcata has a five story building housing their Behavioral Sciences , and that is it. There are some four story buildings in various places, but really, in a town of 400?? Overlooking arguably the most Scenic area in the country? A protected Marine Reserve? The light pollution alone would be enough to disrupt wildlife, let alone all the
residents.

P4-01

I am not protesting a hotel, small, shorter, without the Las Vegas glitz and Hyatt hype (the tribe has been sold a bill of goods). A small hotel , beautifully and carefully crafted
such as the UIHS Potatwat building in Arcata (see attached photos) would be much more in keeping with the spirit of the Native Americans and would be a huge draw.

P4-02

I beg you to look at this as an opportunity, not a rubber stamp.

Patty Stearns
Concerned Trinidad Resident

My return email may show pattystearns99@gmail.com. Either address will come to me directly.

4 attachments



potawat4.jpg
10K



potawat2.jpg
9K

potawot.jpg
12K





potawat3.jpg
12K

Regional Director Amy Dutschke
Bureau of Indian Affairs
Pacific Regional Office
2800 Cottage Way, Sacramento, CA 95825

PACIFIC REGIONAL OFFICE
BUREAU OF INDIAN AFFAIRS
2018 SEP 16 AM 11:11

Reg Dir
Dep RD Trust
Dep RD IS
Route
Response Required
Due Date
Memo Ltr
Fax

Re: Environmental Assessment (EA) for Trinidad Rancheria Hotel

Dear Ms. Dutschke,

I am writing to express my concerns about the environmental and community impacts of the proposed Trinidad Rancheria Hotel. The area of where this project is proposed is very near and dear to our family. My family spends a considerable amount of time in Trinidad and on the beaches adjacent to the town. Our most frequent outing is to Trinidad State Beach. It is also the first place we take visitors when we have guest from out of town.

First and foremost, I think it is necessary for more environmental review of this project and much more community input. As a nearby Humboldt County resident, I only became aware of this proposed project about two weeks ago. Most people I have spoken to locally had never heard a word about it until an article came out locally on the 4th of October of this year. I understand that the comment period closes on the 22nd of this month, and the only way to submit comments if via physical mail. Very few people who have concerns about this project will have ample time to made their concerns heard. P5-01

My greatest concern is that this proposed large hotel would have serious environmental impacts on the local environment. There is already great concern about our local beaches receiving too much effluent from septic systems and subsequent pollution from this. The proposed six-story hotel would generate a huge amount of wastewater on cliffs right above the ocean. Constant erosion of the area would mean that even if this doesn't cause an immediate issue, it likely will in the future. If the leach field fails, the bluff on which it rests could become destablized, adding to frequent landslides in the area. Additionally, the EA incorrectly asserts that, "the tribe currently uses city sewer connections as well as its own WWTF..." This is incorrect as the Trinidad has no sewer connections. Serious errors in information such as this contained in the EA certainly cast doubt on its accuracy and highlight the need for further environmental review. P5-02

The town of Trinidad is also known for water shortages, and further taxing the limited water supply with such a high volume of visitors would certainly increase the impact on the local water infrastructure. In addition to current shortages, the state of California is predicted to face evermore frequent and lengthly droughts due to climate change. Committing even more water in an already water-stressed community seems highly imprudent. P5-03

Being a tiny, quaint town, Trinidad doesn't have the infrustructure to handle a large increase in traffic due to the proposed hotel. The EA itself estimates that traffic would be jammed unacceptably at the main intersection in Trinidad. The plan proposes a new freeway interchange be built to accomodate increased traffic, but there is no assurance if a new interchange will even be built, and when this would happen, if it actually comes to fruition. P5-04

Further, there will be great visual impacts to the town of Trinidad and surrounding areas. Currently the proposal of such a large building will drastically alter the skyline of the area. P5-05

Due to all of these concerns and many more, I urge you to require a full Environmental Impact Statement (EIS), and hope that the Trinidad Rancheria considers alternatives to such a large, highly impactful project.

P5-05
(Cont.)

Thank you,

Sara March
707-834-5114
PO Box 385 Bayside, CA
95524

CRTP
Coalition for Responsible Transportation Priorities

October 16, 2018

Chad Broussard
Harold Hall
Bureau of Indian Affairs
2800 Cottage Way
Sacramento, CA 95825

via email: chard.broussard@bia.gov; harold.hall@bia.gov

RE: Environmental Assessment for Trinidad Rancheria Economic Development Corporation Hotel Development Project

Mr. Broussard and Mr. Hall:

Thank you for the opportunity to comment on the Environmental Assessment (EA) for the Trinidad Rancheria Economic Development Corporation hotel development project ("project"). The mission of the Coalition for Responsible Transportation Priorities (CRTP) is to promote transportation solutions which protect and support a healthy environment, healthy people, healthy communities and a healthy economy on the North Coast of California. Therefore, we address our comments on the EA to the project's transportation-related impacts.

Relationship of the Project to the Proposed Highway 101 Interchange

The EA identifies a proposed new interchange on Highway 101 as a mitigation measure for the project's traffic impacts. In fact, building the proposed interchange has been an objective of the Cher-Ae Heights Indian Community of the Trinidad Rancheria (Tribe) for many years, in order to "support the future growth" of the area, in the words of the Trinidad Area Freeway Master Plan Study Report (Report). In other words, the Tribe views the interchange as a prerequisite for and necessary corollary to the hotel, not a mitigation measure. The two planned developments, hotel and interchange, are inextricably bound and must be considered as a single project under NEPA.

P6-01

The importance of including the interchange in the definition of the project is highlighted by the fact that it appears likely on its face that the interchange will occupy a bigger footprint and have more impacts than the hotel in many areas of analysis, including land resources, air quality and greenhouse gas, biological resources, transportation and circulation, land use, noise, and growth induction. Identifying the interchange as mitigation for the project and then failing to analyze its impacts is both inaccurate and insufficient under NEPA.

Furthermore, the identification of a potentially significant traffic impact and of the proposed interchange as mitigation for that impact is based on a deeply flawed underlying analysis. The EA cites the Humboldt County General Plan as its source for the metric (vehicular level of service, or LOS) and the significance threshold (LOS C) for traffic impacts. However, the project is not subject to the Humboldt County General Plan and the use of LOS as a measure of transportation impacts is flawed and outdated. Use of LOS leads to mitigation measures which add automobile capacity to the road system; however, there is now a consensus in transportation planning that adding capacity induces new travel and does not effectively reduce congestion. We highly recommend that the literature on induced travel be carefully reviewed and considered. A recent policy brief for the National Center for Sustainable Transportation, appropriately titled "Increasing Highway Capacity Unlikely to Relieve Traffic Congestion," contains a concise summary.[1] The California Governor's Office of Planning and Research also offers a significant set of resources explaining the state's abandonment of LOS in favor of vehicle miles traveled (VMT).[2] In short, using LOS as the basis for measuring transportation impacts is not supported by the best available research, and the project's traffic impact should be measured in terms of VMT instead.

P6-02

Even assuming *arguendo* that LOS is an appropriate tool for measuring the project's transportation impacts, the Report upon which the EA relies to identify those impacts and subsequent mitigation measures is also flawed and unreliable for that purpose. Although presenting itself as an analysis of transportation infrastructure options for supporting "future growth" in and around the Tribe's lands, the Report admits that the actual "objective of this study is to analyze transportation operations associated with the new interchange" (p.18). In other words, the Report does not identify the interchange as the best mitigation for the transportation impacts associated with the hotel and other planned development, but rather assumes from the outset that the interchange is needed and sets out to justify that conclusion.

P6-03

This bias is clear throughout the Report. The only intersections projected to drop below LOS C in the Report are those immediately at and adjacent to the existing Trinidad interchange, yet no serious consideration is given to redesigning these interchanges—such as through the use of roundabouts—in ways which could address the perceived traffic problem with much lower costs and impacts than a new interchange. Furthermore, no consideration at all is given to the possibility of eliminating the perceived impact by lowering the number of vehicular trips through transportation demand management (TDM) strategies, through construction of bicycle and pedestrian amenities, or through provision of shuttles for hotel and casino patrons.

P6-04

[1] Handy, Susan. October 2015. "Increasing Highway Capacity Unlikely to Relieve Traffic Congestion." National Center for Sustainable Transportation. Available online at http://www.dot.ca.gov/newtech/researchreports/reports/2015/10-12-2015-NCST_Brief_InducedTravel_CS6_v3.pdf.

[2] See "Transportation Metrics: Disadvantages of LOS and Auto Delay" at http://www.opr.ca.gov/ceqa/updates/sb-743/.

Projection of Vehicular Traffic Impacts

There are many problematic methods and assumptions in the EA's projections of future vehicular traffic and its impacts. The EA claims at p.1-2 that the project will "reduce visitor trips on local roadways by providing additional overnight accommodations." There is no attempt to justify this assertion, which flies in the face of the logical conclusion that, in the absence of effective mitigation, a major new hotel is almost certain to increase trips. In fact, the EA itself goes on to predict at p.3-25 that the project will increase traffic on Highway 101 by over 600 cars per day (a greater than 6% increase).

Effective mitigation of this traffic increase and related impacts would require better bicycle and pedestrian amenities—such as the proposed extension of the Hammond Trail over the Little River to the south of the project—and better transit, such as the provision of a cheap or free shuttle between the new hotel and local transportation centers and other destinations. (Such shuttles are already provided by other local hotels and casinos.) Instead, the EA states at p.3-19 that since there is no public transportation stop at the casino now, there will never be one in the future. This assumption is inaccurate and self-defeating.

P6-05

Finally, the EA's assessment of the air quality impacts of traffic generated by the project is based on the use of "default assumptions for trip generation rates...for residential land uses" in the CalEEMod software program. A hotel is not a residential land use, and traffic projections based on residential trip generation rates are unlikely to be accurate.

P6-06

Cumulative Impacts

The EA claims that the project's contribution to transportation-related greenhouse gas (GHG) and other emissions is not significant because "technology advancements resulting in an increase in fuel efficiency will, on average, result in a decrease of mobile source emissions" (p.4-2). This is entirely speculative. Future technological advances cannot be accurately predicted. Indeed, at this moment, the U.S. Department of Transportation and Environmental Protection Agency are taking comments on a proposal to roll back previously approved increases in national fuel economy standards.[3] Furthermore, the way that future technological changes will affect driving patterns is unknown, but there is a real chance that driving could increase. For all of these reasons, the most reasonable conclusion is that any project such as this one which will measurably increase driving in the short term may also have a significant cumulative effect on emissions in the long term.

P6-07

Additionally, the EA's assessment of growth-inducing impacts does not account for the impacts of the proposed Highway 101 interchange. As Cervero (2003) summed up the research, "real estate development gravitates to improved freeways."[4] Therefore, any freeway development which increases speed or access must be analyzed for growth-inducing effects. And as noted above, the proposed interchange must be considered part of the project for purposes of the EA.

P6-08

[3] See https://www.nhtsa.gov/corporate-average-fuel-economy/safe.

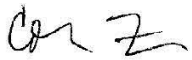
[4] Cervero, Robert. 2003. Road expansion, urban growth and induced travel: A path analysis. Journal of the American Planning Association 69(2): 145-163.

Finally, the cumulative impact analysis cites a 2012 Humboldt County document as justification for its planning horizon year of 2032. This is unsupportable. The EA cannot adopt a 14-year planning horizon on the basis of a 20-year planning horizon which is now six years old. The planning horizon for the cumulative impact analysis should extend to at least 2038.

In sum, the EA uses the wrong tool to measure transportation impacts, and the proposed interchange is not a necessary mitigation measure for the project. However, if the interchange is to be constructed, it must be considered part of the project and its many impacts analyzed. Additionally, methodological flaws related to the projection of future traffic and the cumulative impacts of the project must be addressed, and mitigation measures including TDM and encouragement of alternative modes of transportation should be adopted. In light of the substantial additional assessment required, we strongly encourage you to prepare an Environmental Impact Statement for the project. P6-09

Thank you for your consideration of our comments.

Sincerely,



Colin Fiske
Executive Director
Coalition for Responsible Transportation Priorities
colin@transportationpriorities.org

Comment Letter P7

PACIFIC REGIONAL OFFICE
BUREAU OF INDIAN AFFAIRS
2018 OCT 16 AM 11:17

Sandra Haux
P.O. Box 997
Trinidad, CA 95570

Reg Dir
Dep RD Trust
Dep RD IS
Route Realty
Response Required
Due Date
Memo Ltr
Fax

October 11, 2018

Bureau of Indian Affairs
2800 Cottage Way
Sacramento, CA 95825

RE: Environmental Assessment
Trinidad Rancheria Economic Development Corporation
Hotel Development Project

Dear Sirs/Madams;

The town of Trinidad California is a small seaside community (population 311) within the California Coastal Zone. It serves as one of the gateways to the California Coastal National Monument and includes Trinidad Head, a rocky promontory that is designated as California Historical Landmark #146. Due to the outstanding beauty of the harbor and views from Trinidad Head, the mainstay of its economy is tourism.

The Trinidad Rancheria Economic Development Corporation, with a loan from the Division of Capital Investment, proposes to build a 100 room hotel adjacent to its casino on a bluff overlooking Trinidad harbor and within the viewshed of Trinidad Head. Hyatt Place, a non-Indian Corporation, is to be the operator of the hotel. P7-01

Thorough review of the Environmental Assessment dated September 2018, reveals many issues that make the Proposed Project untenable. Those issues shall be addressed herein.

Geologic Setting and Seismicity

The Environmental Assessment notes that the Proposed Project lies within a very seismically active area and is within only 500 feet from the McKinleyville Fault. It is also noted that there is a 10% probability for a seismic event within 50 years. Noted is the fact that the project site is not currently mapped for landslides and that landslides are common in the area. An active landslide currently exists below the southwest corner of the proposed Hotel. These factors alone indicate the need for a complete Environmental Impact Statement; the probability of the Hotel collapsing or sliding downslope into the ocean must be addressed. P7-02

Soils

Referenced is the fact that the highly erodible soils have already been disturbed due to the prior Casino construction and that liquifaction could occur during periods of sustained high groundwater levels. P7-03

Water Resources

City Water Supply – The proposed Hotel anticipates utilizing approximately 18,860 gallons of water per day to be supplied by the City of Trinidad. The personal communication from Buckman, 2017, is insufficient evidence that adequate water supply is available. As noted in P7-04

the Staff Report: City of Trinidad dated July 6, 2017 by Trever Parker, the City's water supply is limited and the limitations have been made more apparent by recent droughts. Therefore, it is imperative to complete an in depth water supply and demand analysis prior to implementation of the Proposed Project. The analysis should be included in a complete Environmental Impact Statement. P7-04 (Cont.)

Impacts to Transportation and Circulation

The Environmental Assessment Appendix G demonstrates that, with the additional trips generated by the Hotel and ancillary facilities, intersections on the Main Street corridor and the project entrance on Scenic Drive are forecast to operate at an unacceptable Level of Service (LOS). As indicated in Table 3A of, "Trinidad Area Freeway Master Plan Study Report Year 2040 Base Traffic Operations", all of the study intersections are found to be operating at acceptable LOS under Year 2040 Base Conditions, based on the intersection delay and the corresponding LOS. These findings indicate that the current freeway offramp system is acceptable for the Humboldt County traffic through year 2040 including accommodation of anticipated Hotel traffic, but that the existing intersections on the Main Street corridor and Scenic Drive are unacceptable. Therefore, new offramps must be built to accommodate the Hotel traffic, a costly proposition for California taxpayers that will not serve to benefit the taxpayers, but only the Trinidad Rancheria's financial interests. The Hotel project cannot be separated from the Trinidad Area Freeway Master Plan; the proposed interchanges would definitely require an Environmental Impact Statement. P7-05

Land Use

Impacts to Land Use – Although land use would not be adversely affected by the Proposed Project, construction of freeway interchanges would adversely affect land use. Eminent domain would need to be exercised to take possession of privately held parcels in order to construct the interchanges. Again, and Environmental Impact Statement is necessary. P7-06

Wastewater Service

The Rancheria is to be commended for its recycling of approximately 60% of its wastewater. However, it is unknown if the estimated 8,000 gallons of wastewater generated daily by the Hotel and sent to the proposed leach fields would produce saturated soils resulting in contaminated water flowing into the Pacific Ocean or destabilization of the land upon which the Hotel would be located. Also unknown is whether or not the proposed leach fields have suitable soils and are sufficient in size to accommodate the daily wastewater generation. Additionally, development in Humboldt County that necessitates use of leach fields requires alternative leach fields should the primary ones fail. There does not appear to be any proposed alternative leach fields, nor does the site appear to have adequate space for alternative leach fields. A complete Environmental Impact Statement is necessary in order to assess this issue. P7-07

Electricity, Natural Gas, and Telecommunications

Natural Gas – It is noted that there are existing services for the provision of electricity and telecommunications. However, there is no existing service for natural gas. The natural gas lines end in McKinleyville, a town 7 miles away. New lines would need to be dug for natural gas to supply the hotel. Omission of this detail in the Environmental Assessment is negligent. P7-08

Hall, Harold <harold.hall@bia.gov>

[EXTERNAL] Please don't, RE: Rancheria Hotel C

1 message

Richard Salzman <richard.w.salzman@gmail.com> Wed, Oct 17, 2018 at 9:51 AM
To: Amy Dutschke <amy.dutschke@bia.gov>, Chad Broussard <chad.broussard@bia.gov>, "\"and Harold "Dan" Hall .\"" <harold.hall@bia.gov>

Please don't do this to our beautiful bay.

Once built this damage can not be undone.

P8-01

Richard Salzman
1751 Charles Ave
Arcata CA 95521

707.822.5500 voice
707.845.3700 text
707.825.6600 fax

richard.w.salzman@gmail.com

RichardSalzman.com

Comment Letter P9

Hall, Harold <harold.hall@bia.gov>

[EXTERNAL] Trinidad Rancheria Hotel Development Project

1 message

Charley Custer <charley@asis.com>
To: harold.hall@bia.gov

Wed, Oct 17, 2018 at 11:57 AM

PO Box 1003
Redway CA 05560

Dear Mr Hall:

I'm writing to express my concerns with regard to the proposed hotel for the Trinidad Rancheria. The sovereign nations of Humboldt County have been inspirational guiding lights in natural resource management, which I hope will always be true. I am an occasional patron of the Cher-Ae Heights Casino, and my interest in responsible and innovative waste processing has familiarized me with the unique challenges to septic management that local geology has long posed to the community of Trinidad. This beautiful area has not yet developed means to protect itself from waste pollution that is sealed from ground absorption by impermeable clays close to the surface. An Environmental Impact Study is essential for this site, with particular emphasis on the impermeable and tectonically pulverized geology that the Rancheria proposes to build on. The current road to the casino frequently washes out. Develpment will not improve the geology of this biologically protected sensitive zone. P9-01

Waste management is especially difficult because water for the development would come from a creek already over-subscribed, whose levels drop to critically low levels in the fall when fire danger is greatest. This freshwater contribution to Trinidad Bay obviously figures in the health of many species including endangered salmon living in and dependent on the Bay that defines Trinidad Head, our adjoining National Coastal Monument. P9-02

This said, I feel the casino itself is surprisingly well integrated into its surroundings, with its restaurant taking beautiful advantage of ocean and coastal views. Yet the casino does not blight views from our magnificent natural features close by, and this too should be a critical consideration in all development planning. Coastal California is uniquely well protected from reckless development across almost all of the state, which increases the value and vulnerability of the Rancheria property. It should continue to be managed with the far-sighted wisdom that generally characterizes tribal sovereignty in Humboldt County. I look forward to this proposal becoming another coastal jewel for us all to be proud of. P9-03

Meanwhile, I support either a no-build decision, or a comprehensive Environmental Impact Study.

Thank you for your consideration.

Sincerely yours,

Charley Custer

Comment Letter P10

Hall, Harold <harold.hall@bia.gov>

[EXTERNAL] Trinidad Rancheria assistance

1 message

Richard Clompus <rclompus@mac.com> Thu, Oct 18, 2018 at 11:36 AM
To: amy.dutschke@bia.gov, chad.broussard@bia.gov, harold.hall@bia.gov

Amy, Chad & Harold,

As a resident of Trinidad, I would like to see members of the Rancheria be happy, healthy and successful with their business endeavors. I am thankful for the wonderful restoration of the local fishing pier and improvements made to the area funded by the Rancheria. Respectfully, I need to share my concerns with details about the proposed 100 room hotel/casino project presented by the Rancheria.

- Trinidad Bay has been classified as an area of special biological significance (ASBS) by the California State Water Resources Control board. This special marine environment supports an unusual variety of aquatic life and often hosts unique individual species. I've attached a few photographs of this unique coastline that brings thousands of tourists each year to the area. P10-01

- Water supply for Trinidad comes from Luffenholz Creek. During some months of the year, the water flow is barely sustainable for the residents of Trinidad and the Rancheria's current properties. The increased demand of 20,000 gallons of water per day to support the proposed 100 room hotel may not be sustainable. P10-02 The environmental assessment report prepared by consultants for the Rancheria incorrectly states the hotel will use the septic system of the town of Trinidad. Unfortunately, Trinidad does not have a septic system. An expanded wastewater system and run off may create stability problems along the coastline and the bay. P10-03

- Fire protection is very limited in Trinidad. In case of emergency, fire protection in the capacity needed for the proposed 6 story hotel is over 30 miles away in Eureka, CA. It would take 45 minutes to provide services needed in case of a fire emergency that could put lives at risk in the casino and proposed hotel.

The Rancheria has shared that the hotel must be 100 rooms. I hope the management of the Rancheria is not being coerced into building such a large capacity airport style hotel that may not be sustainable with local resources. A hotel that was sized more appropriately for the available resources and designed to complement the redwoods and coast line would help fill it year round with visitors. P10-04

As a recent retiree, I'd like to help the Rancheria be successful with their project. I practiced for 20 years as an eye doctor and then worked with major global companies in professional affairs. The Rancheria could use some assistance in their communication strategy. Here are some views of theTrinidad coastline. It's an honor to be living in such a beautiful area. Thank you for your time and attention. Please let me know you received this email.

Be well,
Richard

Richard Clompus
m 904-501-5309 California







Bureau of Indian Affairs
2800 Cottage Way
Sacramento, CA 95825

Attention: Chad Broussard and Harold Hall

Comments regarding the Environmental Assessment (EA)
Trinidad Rancheria Economic Development Corporation
Hotel Development Project

Dear Mr. Broussard and Mr. Hall,

Thank you for reviewing my comments on this project.
I have resided in Trinidad for 35 years. I regularly run on Scenic Drive past the Trinidad Rancheria. I have concerns about this project. Here are my 4 main concerns.

1. Traffic
   Appendix G in the EA report cites traffic studies and grades intersections. The intersection of Main Street and Scenic Drive is my main concern. At AM and PM peak time it currently receives a C and a B grade respectively. It is already a complex, challenging and sometimes confusing intersection. With a hotel added and no Cher-Ae Lane/101 interchange in place it plummets to F and F in 2020. Without the hotel it would be C and C in 2020. With the hotel and the Cher-Ae Lane interchange it would be C and B in 2020. If the intersection is changed with "improvements" it would be a C and C in 2020 with the hotel and without the Cher-Ae Lane interchange. However, this already challenging intersection would become considerably harder to navigate and potentially dangerous.
   The study concludes:

P11-1

Although improvements to Main Street corridor (as noted within the Main Street Interchange Improvements Without Cher-Ae Lane Interchange section) provide acceptable operations with the buildout of the area including the Rancheria Master Plan, we recommend the implementation of the Cher-Ae Lane interchange improvements for the following reasons:
(1) Improving the Main Street Interchange will require significant right of way acquisition and change the character of the gateway to the coastal community of Trinidad
(2) Geometry (Close spacing) of intersections on Main Street is undesirable
(3) Cher-Ae Lane interchange improvements provide superior operations when compared to the Main Street Interchange Improvements
(4) A new Cher-Ae Lane interchange will reduce travel times by providing a more efficient connection between the Trinidad Rancheria and the US101 corridor

My biggest concern is that the hotel goes in, the Main Street/Scenic Drive intersection is "improved", and then the Cher-Ae Lane interchange is completed. Now Trinidad has an "improved" intersection that it no longer needs. The ease of entry into Trinidad and the coastal village feeling of Trinidad have changed for the worse, forever: needlessly and at great expense.
The Cher-Ae Lane interchange needs to be completed before a hotel is built. It is the only responsible thing to do.

P11-01 (Cont.)

It is also important to consider the fragile condition of Scenic Drive and the impact the greatly increased traffic a new hotel will have on its condition.
The Cher-Ae interchange will keep much of the increased traffic off of Scenic Drive.

P11-02

2. Water
   2017-2018 rainfall was a bit below average. However, flow in Luffenholtz Creek, the City of Trinidad's only source of water, is very low. A resident by the creek stated it is the lowest she has seen in over 20 years. One can only assume if 2017-2018 had been a drought year the flow would even be less. There is currently not enough water to provide the additional water for a 100 room hotel. A water line is planned to run north to CalFire from the city's water supply. Others have unused water rights to Luffenholtz Creek. There are a few undeveloped lots in Trinidad. There is no known reason why the water level is so low this year. Many rivers are experiencing lower flows in the summer and fall in recent years.
   There simply will not be enough water available all of the time to add a 100 room hotel.
   The Rancheria has stated it has no back up plan for water.

P11-03

3. Wastewater
   I am quoting two parts of the Northstar Preliminary Feasibility Report in Appendix A:

"The Assessment accurately points out a concern regarding dispersal field reserve capacity. It states, "An important issue to consider in planning leachfields is potential reserve capacity. Typical leachfield plumbing includes siting 100% reserve capacity so that there is a new leachfield location designated if the initial leachfield fails. This planning is done because leachfields are expected to eventually fail, which means their ability to receive wastewater diminishes.
The effluent from the Zenon plant is much cleaner than septic tank effluent, but all leachfields are expected to diminish in performance over time. Figure 5.1 does not account for any reserve capacity. Someday the Rancheria may need replacement disposal capacity which may have to be provided by replacement leachfields or other disposal means."

P11-04

"I cannot stress enough the need to determine if there is additional dispersal capacity on the site and where this resource is on the Rancheria."

It appears there may be no reserve field available. I asked the Rancheria if there was space for a reserve field at the Rancheria presentation on October 15. Their answer was yes. This needs to be investigated.

The Winzler and Kelly report from 2004 states numerous problems of the septic system. I witnessed one of these firsthand in 2002 on a few of my Scenic Drive runs. The stench was noticeable and concerning. Untreated, or only partially trated water appeared to be going straight into the Pacific Ocean. I notified the Public Health Department.
What will be the operational state of a new, larger wastewater system with the addition of a 100 room hotel, and potentially no reserve field?

P11-04 (Cont.)

4. View
   The Rancheria has stated numerous times that the image of the hotel in the EA is inaccurate. However, they have not given *any* description of what it will actually look like. At 6 floors, plus an apparent viewing area on top, plus a possible ground floor, it would be one of the tallest structures in Humboldt County. And it would be in Trinidad, a community of 360!
   With no information from the Rancheria it is difficult to address the design or lack thereof. There needs to be design review with input from the communities of Trinidad and Westhaven, and especially the neighbors of the Rancheria. There is the possibility of designing something beautiful, unique, and even extraordinary. Since the hotel is going to be large and very visible, make it enhance the natural landscape and be something to be proud of.
   However, Hyatt would need to buy in on this. What are their standards?

P11-05

"As part of the lease agreement, Hyatt would provide the design standards for the Hotel to ensure development is commensurate with Hyatt standards and the Tribe's culture"

I respect the right of the Trinidad Rancheria to self-determination. Respecting the land, water, neighbors and neighboring communities will preserve what we all want: a beautiful natural landscape that can be shared and enjoyed by all.

Sincerely,

Alan Grau
PO Box 80
Trinidad, CA 95570
trinidadrunner@suddenlink.net

Larry Goldberg
1225 Stagecoach Rd.
Trinidad, Ca. 95570
larry@northcoastca.org

October 18, 2018

Amy Dutschke
Pacific Regional Director
Bureau of Indian Affairs
2800 Cottage Way
Sacramento, CA

Re: Proposed Trinidad Rancheria Hotel Dear Ms. Dutschke:

My comments below address the conerns I have with the proposed Trinidad Rancheria Casino Hotel project as currently proposed:

1. As currently proposed in the Environmental Assessment (EA) for the Trinidad Rancheria Hotel Development Project, I support either a no-build decision or the ordering of an Environmental Impact Study. As submitted, the EA does not describe adequately mitigation measures for various impacts of the proposed hotel development, and thus fails to provide an adequate basis for a finding of non-significant impacts (FONSI) or of non-significant environmental impacts. P12-01

2. I have lived in Trinidad for 36 years now and am active in this rural community. I work in the renewable energy industry and have been an environmentalist for the entire time I've lived in Humboldt (40 years now). I am very concerned about what this proposed project is going to do to our community in visual, environmental and infrastructure impacts. P12-02

3. I fully support Rancheria self-sufficiency and local economic opportunity, and I could support a smaller scale hotel that is designed appropriately to fit in with the coastal environment. Surely there are more feasible options/alternatives than this concept and design. The EA includes no alternatives to the 6-story, 100-room structure without adequate rationale. P12-03

4. A 6-story, 100-room hotel that requires a new interchange from Highway 101 to meet traffic needs, plus tripling the size of the casino, doubling that of the RV park, adding a minimart and gas station in addition to office space and other structures, will convert a quaint and quiet rural coastal fishing village into something less desirable (and certainly something I left behind in the Bay Area). P12-04

5. My concerns include: unique and pristine scenic vistas, fragile coastal environment (Trinidad Harbor is a protected biologically sensitive zone), visual impacts from Trinidad, from Trinidad Head (a National Coastal Monument), and from the ocean; light and noise pollution; danger to dozens of species of birds; effect of 19,000 gallons/day in wastewater processing on a sandy bluff already in constant process of slumping; intrusive signage. P12-05

6. Water: The project proposes to draw nearly 19,000 gallons/day — the equivalent of 45 single-family homes — from Trinidad's water supply. The source of Trinidad's water is Luffenholtz P12-06

Creek. During summer and early fall, and especially during drought periods, water levels in Luffenholtz Creek already fall to danger levels. Concerns about adequate water for current residential users, projected future residential growth, and for fire suppression via CalFire.

P12-06 (Cont.)

7. Wastewater: The Cher-ai Heights Casino, which is already the biggest single water user on the Trinidad system, claims to recycle up to 40 percent of the water it uses. This is admirable and a positive aspect of any further development atop the bluff. But even at that recycle rate, the hotel would still send some 11,400 gallons per day through leach fields and into aquifers. Excessive groundwater risks cliff erosion/slumping.

P12-07

8. Traffic: Until an interchange is approved and constructed (completion no sooner than 2026, according to the EA), Scenic Drive will carry all traffic to the casino, the hotel and other new development, as well as to existing residences and popular beaches (Baker Beach, Luffenholtz Beach, Houda Point and Houda Beach). Scenic Drive, parts of which slide downhill every winter, is not designed for that kind of traffic, as the EA acknowledges.

P12-08

A comprehensive and careful Environmental Impact Study is needed to engage the public, flesh out expert opinions regarding water, wastewater, and septic systems, and to evaluate the relationship of the interchange to the hotel project.

P12-09

Sincerely,

Larry Goldberg

Larry Goldberg
Trinidad resident

Comment Letter P13

PACIFIC REGIONAL OFFICE
BUREAU OF INDIAN AFFAIRS
2018 OCT 19 PM 4:59

Gail Kenny
P. O. Box 361
Trinidad, CA 95570
gailgkenny@gmail.coom

Reg Dir
Dep RD Trust
Dep RD IS
Route DECRMS
Response Required
Due Date
Memo Ltr
Fax

October 14, 2018

Amy Dutschke, Regional Director
Bureau of Indian Affairs
2800 Cottage Way
Sacramento, CA 95825

Re: Trinidad Rancheria Economic Development Corporation Hotel Development Project Public Comment

Dear Ms. Ditschke:

Based on what I read in the Environmental Assessment for the Trinidad Rancheria Economic Development Corporation Hotel Development Project the environmental impact on the area has not been sufficiently reviewed. The Bureau of Indian Affairs. should do a full environmental review of the Trinidad Rancheria's plan for a 6-story, 100-room hotel for the following reasons:

- The city of Trinidad's water system can't support the increased water needs of an additional 19,000 gallons of water a day for a 100-room hotel. The ability of the City of Trinidad to supply additional water for the hotel project needs to be studied in full detail. Luffenholtz Creek water rights, average water levels during dry periods, and the effect on the Luffenholtz creek smelt and trout fisheries and wildlife habitat needs to be fully studied before this project goes forward. P13-01
- It's questionable whether a septic sewage system on an ocean bluff that is susceptible to sliding would be effective for the increased amount of water and sewage for the 100-room hotel. With climate change the Trinidad area has seen years with increased rainfall with the result of increased slides in the ocean bluff areas. There's also potential for the septic system to fail and pollute the watershed. P13-02
- Increased traffic would have a great negative impact on the current roads and intersections to access the hotel. This could make an already problematic 6-road intersection of Highway 101, Westhaven Drive, Patrick's Point Drive, Frontage Road, Main Street, and Scenic Drive even more dangerous and confusing in terms of public safety and road maintenance. If a hotel this size is built, it should be built after the planned freeway interchange for the Trinidad Rancheria. P13-03

- The visual impact of a 100-room 6-story hotel on the ocean bluff, which would be the largest building in Humboldt County, is incompatible with our rural community and would mar our scenic coastline. The size of the hotel should be scaled down significantly. P13-04
- The large number of windows on a 6-story 100-room hotel will have a significant negative impact on migrating and resident birds. Window strikes are the second greatest human-cause of bird deaths. Many birds, including migratory birds, follow the coastline when they travel. Having this large of a building on the bluff could confuse birds who try to fly into the reflections they see in the windows. Nighttime lighted windows can confuse to birds resulting in collisions that harm them. If the hotel is built, it needs to be built with lighting safe for birds and windows birds can see so they don't fly into them. P13-05
- The report only addresses about 6 bird species. The Trinidad area typically sees many more species than that. Ebird hotspots show between 79-143 bird species reported between Luffenholtz Beach and Trinidad Head. The bluff area below the hotel site could be suitable habitat for mountain beaver which little is known about in the Trinidad area. The Point Arena mountain beaver in Mendocino is a federally listed endangered species. I live in the City of Trinidad and had a mountain beaver in my backyard in 1994. P13-06

Again, this preliminary Environmental Assessment does not sufficiently prove that there won't be any negative environmental impact for this hotel project. A full Environmental Impact Assessment should be made before any decisions allowing the Trinidad Rancheria hotel project to go forward.

Sincerely,

Gail Kenny

Comment Letter P14

Reg Dir ad
Dep RD Trust
Dep RD IS
Route 77 DECRMS
Response Required
Due Date
Memo Ltr
Fax

October 16, 2018

PACIFIC REGIONAL OFFICE
BUREAU OF INDIAN AFFAIRS
2018 OCT 19 PM 1:17

Bureau of Indian Affairs
2800 Cottage Way
Sacramento, CA 95825

Re: Environmental Assessment
Trinidad Rancheria Economic Development Corporation
Hotel Development Project

To Whom It May Concern:

The Hotel Development Project promises to have a substantial impact on community water supply, waste management, traffic control and safety, ecological integrity, as well as visual impacts inconsistent with a truly gorgeous and largely unspoiled coastline.

The Rancheria has presented a comprehensive development plan whose many aspects create a maximum footprint for a hotel site. In order to reach their 100 room goal, the project must push toward at least six stories high, and since other Rancheria needs utilize limited space on the site, the footprint cannot be expanded to reduce the height of the proposed project. Clever architectural forms and "natural" paint colors will not disguise the inappropriately huge presence of the proposed structure. The 100 room goal also presents an extremely high level of usage of very limited local water resources, as well as a sizeable impact on traffic control and safety, and waste disposal. P14-01

The issue, therefore, that creates a substantial environmental impact on this geographic area and community is the 100 room goal. It is this goal specifically which pushes the visual height of the project beyond an environmentally acceptable limit, and which will place considerable strain on community water, traffic and other resources.

The 100 room standard will sound impressive in a brochure or an online advertisement, but is it consistent with local environmental and economic reality? Trinidad is far from hi-use state traffic corridors such as Interstate 5; air traffic is limited and unreasonably expensive; Highway 101 is bottlenecked in southern Humboldt County; annual fires and mudslides regularly close access roads such as Highways 199 and 299; winding roads with logging trucks limit travel on access roads such as Highway 36; and unpleasant weather keeps tourists at a distance for much of the year. This suggests that for many months each year the Rancheria will not come close to filling its proposed 100 rooms, but for this lovely and unique setting the negative visual impact of this massive structure will remain. And during those limited periods when maximum occupancy is achieved, the stated impacts are likely to be at unacceptable levels. P14-02

It is clear from public meetings that the Trinidad community supports the economic wellbeing of the Trinidad Rancheria and appreciates its contributions to the economy and infrastructure of Trinidad. Public resistance to the project is not to a hotel concept per se, but to the scope of the project. Please consider a finding which approves a project of a more limited scope – 50 rooms and three stories, for instance. This would reduce construction and maintenance costs, allow Rancheria economic growth, further their contributions to the Trinidad community, and eliminate public resistance. Such a limited scope would reduce potential environmental impacts including visibility, and especially the impact on water usage during drought years. With a more limited scope the Rancheria actually would gain greater benefits from this proposal.

P14-03

Thank you for your time and consideration.

Sincerely,

Geoff Proust

Geoff Proust
712 Westhaven Dr. S.
Trinidad, CA 95570

CC: City of Trinidad, City Counsel

Comment Letter P15

PACIFIC REGIONAL OFFICE
BUREAU OF INDIAN AFFAIRS
2018 OCT 19 PM 1:17

10-15-18

Reg Dir aud
Dep RD Trust
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Route DECEMS
Response Required
Due Date
Memo Ltr
Fax

Bureau of Indian Affairs
2800 Cottage Way
Sacramento, Ca. 95825

Re: Trinidad Rancheria

To Whom it May Concern,

I am a resident of Trinidad, Ca. and though I respect the Rancheria's right to build a hotel & the need for income; I am extremely concerned about the impact on our meager water source that such a large 100 room hotel would have on Luffenholtz Creek which on low rain years has been barely adequate for the community. P15-01

The 2nd concern is the impact of perhaps 100 more cars entering & exiting the freeway. This area has 2 on ramps & 2 exits plus a 3-way intersection all in the same vicinity. Should Cal Trans approve a new exit off the freeway it would help however impact on the village would be still significant as lodgers from the hotel would surely drive into this tiny town impacting traffic. P15-02

Thank you for your consideration.

Respectfully,
Dianne I. Rowland
324 Mill Creek Ln.
Trinidad, Ca. 95570

RE: Trinidad Rancheria Hotel Development Project

Dear Ms Dutschke,

We live on Scenic Drive, south of the Casino. We both grew up in Trinidad and are now in our 50's. We have seen a lot of changes happen in our lifetime here in Trinidad.

We are on the board of the Trinidad Coastal Land Trust and we care deeply for the environment and local matters.

We appreciate the Rancheria and everything it does to help our local economy. P16-01

We are very concerned about the impact the proposed hotel development project would have on our environment. Trinidad and the surrounding coastline is one of the most beautiful places in the world. We are concerned about what this hotel would do to the visual impacts from Trinidad, from Trinidad Head and from the ocean. The light and noise pollution that a 6 story 100 room hotel would create are also something that worries us. P16-02

Scenic Drive is already so busy and unsafe in many places. We ride our bikes on Scenic regularly and once we are north of the Casino cars tend to speed much more. What will happen to the traffic if the Casino triples in size, as well as all of the other "improvements" proposed. P16-03

Comment Letter P16

We are also concerned about the water that would be needed to support all of this, not to mention the waste water. P16-04

We support either a no-build decision or the ordering of an Environmental Impact Study. As submitted, the Environmental Assessment does not describe adequately mitigation measures for various impacts of the proposed hotel development and thus fails to provide an adequate basis for a finding of nonsignificant impacts (FONSI) or of non-significant environmental impacts. P16-05

A comprehensive and careful Environmental Impact Study is needed to engage the public, flesh out expert opinions regarding water, waste water, and septic systems, and to evaluate the relationship of the interchange to the hotel project.

Thank you for your consideration,

Tami Trump

Steen Trump

Steen and Tami Trump
305 Osurg Lane
Trinidad CA 95570

PACIFIC REGIONAL OFFICE
BUREAU OF INDIAN AFFAIRS
2018 OCT 19 PM 1:04

October 15, 2018

Reg Dir ad
Dep RD Trust
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Due Date
Memo Ltr
Fax
FYI provide a copy to DECRMS

Ms. Amy Dutschke

Bureau of Indian Affairs, Pacific Region

2800 Cottage Way

Sacramento, CA 95825

Subject: Trinidad Rancheria Proposed Hotel Project

Dear Ms Dutschke,

My name is Jim Cuthbertson, former city councilman and water commissioner. My wife, Sandra, and I live at 840 Van Wycke Street, in Trinidad, California. We are writing to express our concerns around the proposed hotel on the Trinidad Rancheria.

The hotel design as currently proposed is too large in scale, dwarfing the small fishing village of 310 residents. We have no quarrel with the Rancheria building a smaller, more aesthetically pleasing structure that would blend in with the natural beauty of the area. There are many local architectural examples of structures built in harmony with their surroundings. P17-01

Trinidad's water supply comes from Luffenholtz Creek which typically slows during the dry season. Water levels in dry summers often fall to dangerously low levels, prompting water rationing for residents. Our limited water supply simply will not be able to sustain the additional 14,000 to 18,000 gallons per day required by the proposed hotel. P17-02

We live in a uniquely beautiful area and we must preserve our pristine and fragile coastline. Wastewater is a huge issue, threatening the fragile bluffs and cliff erosion.

We respectfully request that an extensive Environmental Impact Study be conducted to address the issues of fresh water consumption and wastewater treatment on the Rancheria property. P17-03

Sincerely,

Jim Cuthbertson Sandra Cuthbertson

Jim & Sandra Cuthbertson

P.O. Box 1201

Trinidad, CA 95570

Cc: Trinidad City Council

Comment Letter P18

Rcvd BIA-PRO
OCT 19 2018
Reg Dir
Dep RD Trust
Dep RD IS
Route FIT - 1
Response Required
Due Date
Memo Ltr
Fax
FIT Please make copy for Pacific

Bureau of Indian Affairs
2800 Cottage Way
Sacramento, CA 95825
Oct. 16th, 2018

To whom it may concern,

I am writing to provide public comment on the proposed Trinidad Rancheria Economic Development Corporation Hotel Development Project in Trinidad, California.

First and foremost, I support my neighbors at the Trinidad Rancheria in their endeavor, developing a hotel that I hope will greatly enhance their prosperity and lives for generations to come. P18-01

Like other local residents, I have concerns about the traffic load on Scenic Drive, the water supply and the waste-water capabilities of this location for a large development, but I hope these can be worked out with thoughtful design and consideration.

My main focus here regard the building design, both the physical structure and appearance of the hotel, and that the hotel is energy self-reliant and sustainable.

Trinidad is a place of rare beauty. Most people in the area love and appreciate the wildness and pristine nature – every day I give thanks for my good fortune to live here. Likewise, most of the visitors come because the Trinidad coastline and surrounds are of great natural interest, where you may see whales, elk, osprey and hummingbirds within the same day. The Redwood National and State Parks partnership (our four local parks) attract more than 1.5 million people annually.

I believe this hotel development project could be an opportunity to design an inspirational building that is a tribute to the indigenous tribes of the Rancheria, reflecting their ecological sensibilities, aesthetics, collective experience and outlook on life. An energy self-sufficient building with solar, wind and geo-thermal technologies, incorporated into a design that compliments and reflects this unique and beautiful environment.

A hotel in this location could be designed as something extraordinary, giving visitors an experience of awe and wonder - it would become a destination hotel, drawing people from all over the world. A gateway hotel to the Redwoods that also serves as a heritage site, honoring the rich cultural traditions of the Yurok, Wiyot, Tolowa, Chetco, Karuk and Hupa peoples of the Rancheria. P18-02

I am very concerned about the proposed 100-room hotel as put forward thus far, which appears to be intended to primarily service people interested in the Casino facilities. I encourage all involved to think bigger and to create the kind of hotel facility sorely lacking in our region, as suggested here. I believe that there may be much more (financial as well as community) support for such an enterprise if undertaken.

Tourism has not yet spoiled Trinidad, unlike many places in the world and even parts of Ireland, my home country. These are relatively early days for the tourism economy here, and the members of the Rancheria are ideally placed to influence and benefit from future regional tourism and economic development. I think the local community would eagerly participate in and support such a venture – all of us would have somewhere beautiful to encourage friends and family to stay.

My optimistic hope is that the finished hotel development be of a high quality and site-appropriate design, that members of the Rancheria and local residents alike are proud of, that is an asset to the region. A hotel that because of its structural beauty and integrity, becomes known as one of the Wonders of the World, fitting to the natural wonder of the Trinidad coastline itself, and inspiring all who come to visit.

Attached are photos of local buildings that reflect the architectural sensibilities of some of the Tribes in our area, as visual reference.

P18-02
(Cont.)

Also attached are photos of other interesting building designs, by architect Brian Hemingway whom I contacted recently. He would be quite willing to work as design consultant on a hotel project such as this and his contact information is below. Regardless, I hope the photos of his designs serve as a reminder of what is possible.

I believe that buildings can be extraordinary, so this is my sincere wish for the Trinidad Rancheria Hotel Development Project.

Thank you for your consideration,

Respectfully,

Julie Joynt

Julie Joynt
(business woman, designer and 20-year resident on Scenic Drive, Trinidad)
170 Scenic Drive,
Trinidad, CA 95570
Phone: 707-677-9007
jujoynt@gmail.com

Contact information for Brian Hemingway (Architect) for your reference:

Brian Hemingway Design Ltd.
395 Burnham Road
Qualicum Beach, BC V9K 1G5
Phone: 604-250-1206
hemingwaybrian@shaw.ca
www.brianhemingway.com

Hall, Harold <harold.hall@bia.gov>

[EXTERNAL] Trinidad Rancheria Hotel Development

1 message

Joyce King <samonely@gmail.com> Sat, Oct 20, 2018 at 1:52 PM
To: amy.dutschke@bia.gov, chad.broussard@bia.gov, harold.hall@bia.gov

As a 19-yr homeowner in McKinleyville and frequent visitor to Trinidad, I will be astonished if an Environmental Impact Statement is not required for the Trinidad Rancheria Hotel Development project. I am also surprised at the lack of public notice and the short public comment period currently being allowed. P19-01

As you are well aware, this project is being seen locally as a potential threat to the health of important watersheds, local ocean conditions, and wildlife habitat, and to the stability of the steep geology in the project area. P19-02

On the spectacular coastline from McKinleyville north to the Redwood Parks, Trinidad is a prime destination because of its picturesque harbor, low-impact development, small-town charm, and relatively unspoiled natural environment.

But, its greatest importance, especially to you at the BIA should be its historical significance as the site of one of the first human settlements on California's north coast, the Yurok village of Tsurai, which was inhabited for well over 1000 years and one of the last original Native American communities on the Redwood Coast to be occupied. The village is a listed historic site and one of the largest and best-documented coastal Yurok villages.

In contrast, the Trinidad Rancheria, according to its website, was originally composed of homeless members of several different tribes, who were given the 60-ac Trinidad parcel in an early 1900s Federal resettlement program.

While remaining Tsurai make visible efforts to maintain and protect what is left of their ancestral land and culture, the Trinidad Rancheria's business and gambling enterprises appear primarily to serve prevailing Euro-centric values and assimilation.

Because of BIA's checkered history, I have to hope that preservation and restoration of Native American culture is a high priority for you. If so, I ask that you seriously evaluate this project's impact on the Native American values and identity which honor their past, and future generations.

It would be a great contribution to our community and travelers from all over the world, to redesign this project to reflect traditional Yurok wisdom and aesthetic, harmonizing with the natural environment, and including a strong educational component to promote respect for the original and longest enduring residents of this land. P19-03

Joyce King
685 School Road
McKinleyville, CA 95519

https://mail.google.com/mail/u/0?ik=d5ca9d554c&view=pt&search=all&permthid=thread-f%3A1614879121399291749%7Cmsg-f%3A1614879121399291749%7Cmsg-f%3A1614879121399291749%7Cmsg

Hall, Harold <harold.hall@bia.gov>

[EXTERNAL] Trinidad

1 message

erin <babeonblades@gmail.com> Sat, Oct 20, 2018 at 11:18 AM
To: harold.hall@bia.gov

I am concerned about the Las Vegas lighting that will blight the bay. The pier is already practices carnival style lighting from dusk to dawn. P20-01

Erin Rowe
Trinidad



Hall, Harold <harold.hall@bia.gov>

Fwd: [EXTERNAL] Trinidad Rancheria Hotel...

1 message

Broussard, Chad <chad.broussard@bia.gov> Mon, Oct 22, 2018 at 9:40 AM
To: Dan Hall <dan.hall@bia.gov>

Chad A. Broussard
Environmental Protection Specialist
U.S. Department of Interior, Bureau of Indian Affairs, Pacific Region
Division of Environmental and Cultural Resources Management, and Safety
Office Phone: (916) 978-6165
Cell Phone: (916) 261-6160

---------- Forwarded message ---------
From: **Kat Mill** <kat@katland.com>
Date: Sat, Oct 20, 2018 at 8:46 AM
Subject: [EXTERNAL] Trinidad Rancheria Hotel...
To: <chad.broussard@bia.gov>

Dear Chad,

JUST SAY NO to the Trinidad Rancheria Hotel!

Every time I visit Humboldt, I head straight to the head, Trinidad Head, that is. Please don't ruin it for me, and everyone else who love beauty. P21-01

Warmly,
Kathleen

Hall, Harold <harold.hall@bia.gov>

[EXTERNAL] Proposed Rancheria Hotel in Trinidad, CA

1 message

Andrea Bustos <andreabustos28@yahoo.com> Sun, Oct 21, 2018 at 11:23 AM
To: "amy.dutschke@bia.gov" <amy.dutschke@bia.gov>, "chad.broussard@bia.gov" <chad.broussard@bia.gov>, "harold.hall@bia.gov" <harold.hall@bia.gov>

To Whom it May Concern:

My name is Andrea Bustos and I have been a resident of Trinidad for almost 20 years. I have chosen to raise my daughter here because of the unique childhood she can experience living in a small town amidst natural beauty.

Our drive to school is about 6 minutes to the town of Trinidad. The influx of cars during morning drop off and afternoon pick up create a potential for problems in the small town that doesn't have a stop light. During the summertime, the traffic situation is already affected the number of cars from tourism. Our main intersection once exiting or entering the freeway poses many potential problems for those not used to who has the right of way. I am concerned about the proposed hotel project as it stands at this time. The entire area will change because of it, yes. But most importantly, any traffic improvements (including the new interchange from Hwy 101) should be required prior/simultaneous to the construction of any hotel. I fear for the lives of our local children should an influx of drivers overrun the small town infrastructure as it exists today. We recently had a walk/bike to school day at our school. I would be hesitant to ever let my daughter participate in such an event in the future should there be a rise in the number of motorists from a project such as this. Many tourists that seek a casino destination will be drinking and driving. To ignore or downplay this reality is to turn a blind eye. P22-01

In addition, I do not see the current Environmental Assessment addressing the needs of water and wastewater adequately. Do we seek to harm the pristine beauty of the area that is precisely the draw of much of our current and future tourism? There needs to be an assurance that our local resources and watershed will not be negatively affected.

I respect the Rancheria's sovereign rights. I would applaud an environmentally sound project that would celebrate and uphold the unique attributes and culture of this area that we all call home. Why not draw inspiration from projects like the UIHS Potawot Health Village in Arcata? This was a project that seemed holistic and responsible in its planning. P22-02

Thank you for listening to my comments.

Sincerely,

Andrea Bustos
andreabustos28@yahoo.com

Hall, Harold <harold.hall@bia.gov>

[EXTERNAL] Proposed Hotel at Trinidad

1 message

Karin Rosman <karinrosman@gmail.com> Sun, Oct 21, 2018 at 7:42 PM
To: amy.dutschke@bia.gov, chad.broussard@bia.gov, harold.hall@bia.gov

Dear Ms. Dutschke, Mr. Broussard, and Mr. Hall,

I'm writing to express my deep concern over plans as currently proposed to build a multi-story hotel on the cliffs overlooking Trinidad.

I live, work, and raise my family in the SF Bay Area but my children and I spend significant time every year visiting friends and enjoying the beauty in Humboldt County, always including Trinidad. We would be dismayed to see the incomparable beauty of the area marred by an out-of-scale hotel, traffic, tour buses, and the like. The result would likely be that we would avoid Trinidad, instead of spending regular tourist dollars there. My children's grandparents rent a vacation home in Trinidad every year; I'm quite sure they too would take their business elsewhere. P23-01

Additionally, I'm concerned about traffic, water availability, delicate sewer system, and erosion of the cliff. The project as proposed seems a bad fit for the location in nearly every way. P23-02

I urge you to either abandon this ill-conceived plan or go back to the drawing board completely.

Thank you.

Respectfully,

Karin Rosman
El Cerrito, CA

Karin Rosman

Comment Letter P24

Gina M. Rimson
1850 Archer Rd
McKinleyville, CA 95519
Email: ginarimson@gmail.com

Ms. Amy Dutschke
Bureau of Indian Affairs - Pacific Region
2800 Cottage Way
Sacramento, CA 95825

---via email on October 21, 2018 to
amy.dutschke@bia.gov
chad.broussard@bia.gov
harold.hall@bia.gov

RE: Environmental Assessment
Trinidad Rancheria Economic Development Corporation
Hotel Development Project

Dear Ms. Dutschke,

I am writing to you to participate in the public comment on the EA for the proposed 100-room hotel on the Trinidad Rancheria in Trinidad, CA.

I have been a resident of McKinleyville since 1983 and have enjoyed living near Trinidad all that time. Before moving to Humboldt County, I studied biology and completed a master's in journalism at UC Berkeley. During my time in college, I worked for the California Coastal Commission in San Francisco and became very familiar with land use planning concepts and our state's environmental review process. Upon moving north, I worked as a reporter for the Eureka Times-Standard, covering environmental issues, including timber harvesting, commercial fishing, development, and planning. More recently I have served 10 years on my local McKinleyville Land Trust board of directors. Land use is very important to me.

P24-01

The Rancheria has proposed building a 100-room, six-story hotel on a steep bluff above an eroding road that is just above a rocky beach. In turn, the BIA is considering financial support to the project. Both actions – funding the project/leasing the hotel – as well as building the project require further study.

I feel the EA is inadequate on several issues, and should be replaced with a full Environmental Impact Statement as required under the National Environmental Protection Act (NEPA). One cannot make a Finding of No Significant Impact based upon this EA.

The EA does a poor job of reflecting the fact that this hotel's feasibility is completely reliant on routing traffic over a non-existent highway overpass/off-ramp. The increase in traffic from the hotel and its employees will cause irreparable harm to the existing inadequate road. The EA fails to adequately address traffic and ingress/egress from the hotel. What if the overpass is not built? How will the hotel's traffic impact the Rancheria residents if the overpass is not built? What will traffic impacts of the hotel be if the Trinidad Rancheria's Master Plan is considered in its entirety? The document fails to address cumulative traffic impacts or any alternatives, or what could happen if the overpass is not built. P24-02

The EA fails to grasp the severity of the water and wastewater issues that have yet to be studied or resolved, and fails to contemplate any alternative other than "no action." As an environmental document for a project this size, it is insufficient to evaluate the impacts of this proposed hotel.

The document falsely states that Luffenholtz Creek has adequate supply of water to meet the 19,000 gallons a day needed to supply the proposed hotel. The City of Trinidad has not determined there are adequate supplies to meet the needs of the hotel and the City's other residents. In fact, during times of drought, forbearance is recommended. In a 2004 study for the Trinidad Rancheria by Winzler & Kelly, their own study found…"Due to the known difficulty in locating land on site for a leach field **and a shortage of potable water from the City of Trinidad**, a water recycling treatment plant manufactured by Zenon was chosen" for the Rancheria at the time of the casino expansion. They knew there was inadequate water and they planned this very large hotel anyway. P24-03

The options for disposal of treated wastewater are examined in depth in Appendix A "Preliminary Wastewater Feasibility Report" prepared by North Star Design Solutions on September 29, 2016. This study finds several significant issues relating to the leach fields, but the EA fails to inadequately address those issues or to suggest alternatives.

As for the EA's addressing visual impacts:

4.1.13 VISUAL RESOURCES Cumulative development that takes place would be consistent with local land use regulations, including associated design guidelines and the Tribe's Master Plan. Cumulative effects would include a shift from undeveloped lots to views of developed areas, as well as an increase in the density of urban uses within the City and the Reservation. However, the development of the Proposed Project would be generally consistent with the visual goals of County and City land use regulations and implements the Tribe's Master Plan. Substantial development is located directly to the north of the project site, and the Proposed Project would be consistent with that development. Therefore, there are no cumulatively considerable visual resources impacts associated with the Proposed Project. P24-04

The proposed six-story hotel is not in keeping with the county or city's land us regulations. The whole north end of our county has only two other buildings as large as the proposed hotel and they are miles away! The city of Trinidad's land use regulations do not support a project of this size using city water and a leach field (on a steep slope) to dispose of wastewater from a 100-room hotel.

P24-04 (Cont.)

Most neighbors and area residents support the Tribe's proposal to develop its trust land adjacent to its casino. However a 100-room hotel is too large for the proposed site and location. The Rancheria needs to consider an alternative that would be suitable for the project location. A 100-room hotel, bigger than any for miles, would have significant environmental impacts, including visual blight along a part of the California coast that cannot sustain such impacts from oversized development.

The size of the hotel is most of the problem. It is not the BIA's fault that the Rancheria has found only one partner – Hyatt Hotels – to join in planning and building a hotel. The problem rests with the financial issues associated with the project. The Rancheria must overbuild on the site, it says, to make the project feasible. We contend the Rancheria is being told what to do by Hyatt. It is Hyatt's profits that are driving the size of the hotel because the Rancheria has failed to find another suitable partner willing to consider a sustainable design that is sized appropriately for the delicate rocky coastline it will overlook. A more suitable partner would take a long-term financial view, as well as take into account the unique and rural setting the Rancheria and surrounding areas enjoy.

P24-05

Lastly, the EA has not shown how the Rancheria's Master Plan would add to the cumulative impacts of the proposed hotel, mini-mart, gas station, and doubling in size of the casino in the future. These are real plans outlined in the Rancheria's Master Plan. That Master Plan relies on a Highway 101 onramp/overpass that is not anywhere close to being planned or approved by CalTrans. The Rancheria and the EA are overly optimistic that this project will be approved and funded by the State of California. Many residents will be impacted by such a highway project and it faces stiff opposition. The EA must address alternative traffic impacts if the highway project is not approved or financed.

P24-06

As proposed, this hotel project demands a full Environmental Impact Statement. and not the prepared EA, which barely addresses the serious issues, and offers no viable alternatives.

Sincerely,
Gina M. Rimson

Email: ginarimson@gmail.com

PACIFIC REGIONAL OFFICE
BUREAU OF INDIAN AFFAIRS
2018 OCT 22 PM 1:40

821 2nd Ave., Trinidad, CA, 95570

Oct. 19, 2018

Route DECRMS
Ltr

Ms. Amy Dutschke, Regional Director
Bureau of Indian Affairs - Pacific Region
2800 Cottage Way
Sacramento, CA 95825

RE: Trinidad Rancheria Casino-Hotel Proposal

Dear Ms. Dutschke:

I am writing to express my concern over the proposed hotel at the Trinidad Rancheria and the inadequacy of the Environmental Assessment (EA) prepared for the project. There are many shortcomings in the analysis and the proposed project has created controversy within the community and among experts in geology, wildlife, biology, traffic, water supply, and engineering. The assessment presented in the EA is cursory and inadequate. It glosses over major issues, fails to provide a range of alternatives (only 2 are offered, 6-story hotel or no project), and as presented by Rancheria representatives at 2 public meetings in September and October of 2018, the hotel described in the EA and depicted on the Cher'ae Heights Casino web site is only a placeholder and may not represent what is actually built. While it is comforting to know that the hideous and out-of-place design may be modified, it is troubling to think that the BIA is considering approval of the project with a thoroughly inadequate EA. It is clear that an Environmental Impact Statement (EIS) is needed to adequately assess potential impacts and to consider alternatives to the proposed hotel.

P25-01

Among my concerns for the proposed hotel, possibly the biggest one is the siting of the hotel in geologically unstable terrain. The Trinidad area and the site of the hotel are characterized by the Franciscan formation, a geologic type that includes metamorphic and weakly consolidated sedimentary rock. Locally it is often called "blue goo", an apt description of the soil type frequently associated with the Franciscan formation. Geologists frequently describe this formation as akin to rice pudding - a bunch of raisins floating in a gelatinous mass. The raisins represent large rocks which may be mistaken for bedrock but which are large masses of harder metamorphic rock floating in the mélange (the pudding) of uplifted marine terraces composed of sand, clay, and weakly consolidated rock (sandstone). This formation is characterized by numerous landslides, soil creep, and unstable landforms. A drive or walk down Scenic Drive, over which the proposed hotel would sit, reveals many dips, humps, and slumps in the road, many of which extend all the way from Scenic Drive down to the ocean and in some cases cross Scenic Drive, affecting the bluffs and terraces above. The EA for the project reports that there is a shallow landslide on the southwest corner of the proposed hotel location. The report glosses this over by stating that piles will be drilled into "bedrock". However that bedrock is a floating chunk of metamorphic rock (i.e., a raisin in the pudding) that is mischaracterized as bedrock. In addition to the unstable geology and numerous incidence of landslides in the project area, the project fails to analyze the impact of sea level rise on slope stability and the potential for translation of that instability upslope. With minimum sea level rise predicted to be 18 inches by 2050 and up to 60 inches or more by 2100, we can expect an exacerbation of slope instability,

P25-02

including the landslide that reaches the southwest corner of the proposed hotel, as waves erode higher up the slope and cause slope adjustments to the over-steepening caused by wave erosion. Placing a hotel at the proposed location is ill advised. The EA does not adequately assess slope stability and because of the differing opinions of experts, an EIS must be prepared to more thoroughly assess the proposed hotel location in regards to geologic stability.

P25-02 (Cont.)

The EA is also inadequate in assessing the ability of the City of Trinidad to provide the estimated 19,000 gallons per day of water the hotel will require. The City is currently conducting testing to determine the maximum volume of water that the plant can produce. The City has had many problems with its drinking water treatment facility and there are times during the rainy season when turbidity in the creek and in the City's raw water intake (intake pipes buried in a gravel journal within the bed of Luffenholtz Creek) exceeds the level of turbidity that the system can treat, meaning the City has to rely on the reserves in its water tanks until it can process water to refill the tanks. While a member of the Trinidad Volunteer Fire Department I witnessed an event where a City water line broke during a hard freeze, draining the water tanks and creating a water emergency. Such an event left the City extremely vulnerable for a fire emergency. Adding a 100-room hotel to the system would put many people in peril in such a situation. If it happened once, it can happen again. The project does not adequately address worst case scenarios yet common sense dictates that planning must consider the worst case, which the EA does not.

P25-03

The project should be planning for the driest possible water year, such as the drought of 1976-77. A drought of similar proportion today would require the City to use all of its allocation to supply existing customers. The City also has an obligation to provide water to un-built lots within the City and to customers within its service area. The assumption that the City can provide the 19,000 gallons per day at all times of year and in all types of water years is speculative and not supported by the data. In fact the data suggests that the City may not be able to provide the 19,000 gallons per day during summer low flow periods, and definitely not during extreme drought conditions. With global warming it is predicted that our weather will become warmer and dryer and more frequent and severe droughts should be anticipated. The EA does not address the worst case scenario and is inadequate in its assessment of the City's ability to provide the required water. A more thorough analysis, which the City is currently conducting, needs to be completed before approving the proposed hotel. A better analysis of alternatives, including rain water collection, water storage, and reducing demand needs to be conducted. The EA is woefully inadequate in this regard and indicates the need for an EIS.

P25-04

The EA contains misleading and contradictory information about how waste water will be treated. At one pint the EA states that the proposed hotel will connect to the City's sewer system, which does not exist. A 2004 wastewater investigation conducted by Winzler & Kelly, consulting engineers, notes that there have been problems with the existing leach fields serving the casino, including construction of decks, a driveway, and a large above ground swimming pool over septic tanks. Only 7 of 25 septic tanks have access ports, meaning they cannot be inspected nor pumped out as is required for regular maintenance of a septic system. Other problems identified in the report include high ground water levels, inadequate setbacks from steep slopes and bluffs, inadequate stream setback, unstable landforms, and shallow depth to

P25-05

bedrock. Adding another 19,000 gallons per day into leach fields will overwhelm the ability of the leach fields and result in polluted water being discharged into waters of the United States. Even if the hotel achieves 20% recycling as stated, the approximately 15,000 gallons per day released into leach lines will add a significant volume of water into the groundwater, potentially further destabilizing slopes, contaminating ground water, and potentially releasing contaminated water into Trinidad Bay. A more thorough analysis and consideration of alternatives needs to be conducted. Again, this points to the need for an EIS.

P25-05 (Cont.)

The visual impacts of the 6 story hotel are significant and cannot be mitigated. The Trinidad Coast is popular because of its scenic beauty. Trinidad Head and the offshore rocks in Trinidad Bay have been designated the California Coastal National Monument (CCNM) because of its scenic values, the wildlife supported within the CCNM, and the unique attributes of the coast line. There is no mitigation for the visual impacts of a 6-story hotel in the proposed location. Since no alternatives are provided other than the no project alternative, the no project alternative has to be selected, or an EIS needs to be conducted to consider other alternatives, such as siting the hotel on the east side of the Rancheria (near the freeway), reducing it from 6 stories to a maximum of 3, developing a more aesthetically pleasing design, and or planting a vegetative screen. The proposed hotel is totally out of character for the scenic and lightly developed setting in which it is proposed. A hotel design based on traditional Native American style construction, such as seen at Potawot Village in Arcata, could be developed to blend in with the landscape and not present an eyesore such as the proposed design does. Rancheria representatives have stated at public meetings that the depiction on the Casino's web site is just a place holder and not necessarily what the final design will be. Given the outstanding visual characteristics of the surroundings, this is not adequate for assessing visual impacts and the logical conclusion is to reject what is proposed, submit an architectural plan that represents what is proposed to be built, develop a suite of alternative designs to consider, and prepare an EIS that adequately addresses the visual and aesthetic impacts – or reject the project outright due to the unmitigatable impacts.

P25-06

Impacts to wildlife are not adequately assessed in the EA. There are numerous studies that indicate glass windows are a major hazard to birds because of the reflective nature of windows that hides the glass from the birds, making it appear that there is open sky rather than a glass window. Up to 100 million birds per year die due to collisions with windows. The proposed location of the hotel is in an area of many roosting and nesting trees and in a location where birds migrate on a daily basis to and from the ocean. The proposed hotel would have a significant negative effect on birds but the EA does not assess the effect. Again, an EIS is needed to address the impacts to birds and wildlife.

P25-07

The EA also states that no water of the US are located on the project site, yet there is a perennial stream less than 100 feet north of the proposed hotel location. The creek was routed into a pipe and filled over to build the parking lot, perhaps that is why it was not recognized as a creek. After the creek was filled in and the parking area was built over it, sinkholes developed in the parking lot because the Rancheria did not have to follow California Fish & Game code, and did not follow standard engineering criteria for clean fill and compaction, nor obtain a streambed alteration agreement (SAA). Had a SAA and preparation of a CEQA document (need to obtain a

SAA) been required, the California Department of Fish & Wildlife, the State Water Quality Control Board, the Coastal Commission, and the Army Corps of Engineers, all entities normally consulted and commenting on projects, would not have approved the project. Although the creek does not provide habitat for salmon, it has the potential to provide habitat for the torrent salamander and other aquatic species and amphibians. The EA does not address impacts to aquatic habitat and this deficiency needs to be corrected in an EIS.

P25-07 (Cont.)

The EA does not adequately address the impacts on traffic. The addition of a 100 room hotel will add a significant volume of traffic to Scenic Drive from both clients and staff. The Rancheria has obtained a grant from the California Transportation Commission to prepare designs and analysis for a freeway interchange to service the casino and proposed hotel yet that project is not addressed in the EA, even though the two are inextricably linked. The interchange will have significant impacts yet it is supposed to mitigate traffic impacts of the proposed hotel. The Rancheria's plans include future additions of a gas station, RV park, convenience store, and other facilities that are not addressed in the EA. This is splitting the project into smaller components to avoid analysis of the cumulative effects of all the proposed actions and would not be permissible under State law. This points to the need for an EIS to consider all related projects so the cumulative impacts are identified, considered, and mitigated.

P25-08

To summarize, the EA insufficiently assesses water supply, waste water treatment, visual impacts, geologic issues, traffic, impacts to biological resources, and alternatives. An EIS is required to address these deficiencies or the no project alternative needs to be selected.

Thank you for considering my comments.

Sincerely,

Don Allan



Hall, Harold <harold.hall@bia.gov>

[EXTERNAL] Comments re Cher-ae Heights Hotel and expansion project

1 message

emelia berol <emeliabee@yahoo.com.sg> Mon, Oct 22, 2018 at 3:58 PM
To: amy.dutschke@bia.gov
Cc: chad.broussard@bia.gov, harold.hall@bia.gov

Ms. Amy Dutschke
Bureau of Indian Affairs - Pacific Region,
2800 Cottage Way
Sacramento, CA 95825
(916) 978-6041

October 22, 2018

Re: Trinidad Rancheria Casino Project

I have a number of concerns regarding the proposed Cher-ai Heights Casino expansion and hotel project that have not been adequately addressed, in my view.
I lived in Westhaven from 1981 through 1991, and my children attended Trinidad Elementary school. I walked, ran, and drove Scenic Road hundreds of times. I still live in the area (McKinleyville) and continue to hike the trails around Trinidad to this day.
I rarely drive on Scenic Drive, however, as it is one of the worst roads I have ever encountered. I have traveled mountain roads in Mexico, northern India and Bhutan, the famed Hana Road on the island of Maui, and countless backroads throughout the U.S. — but truly, nothing compares in fragility to Scenic Drive. Out of respect for the residents of Scenic Drive, I avoid adding any further impact.
So my first objection to the hotel project is that there would be any further impact to Scenic Drive, any at all. The hotel should not be constructed until the proposed highway access is completed and functioning. Anything short of this is unfair to the residents of Scenic Drive, for whom Scenic Drive is the only access to their homes. P26-01

Secondly, I am concerned about the increase of water use by the casino, and the increase of wastewater on those bluffs. I understand that the casino recycles a significant amount of the water it uses, but it is currently the biggest water user in Trinidad's limited water system. I do not believe this is a wise use of a limited resource, as it is one which would potentially exclude current and potential future residents from a sufficient water supply. The oddly scarce water supply in the area has had the effect of limiting growth for decades, so I found it hard to believe that this project has the approval of all the regulating agencies. P26-02

Additionally, without increasing the current recycling rate the hotel would add thousands of gallons daily into the fragile leach fields and bluffs above a protected area. Trinidad Harbor is a protected biologically sensitive zone. The recycling rate would need to be doubled, or even better, increased to 100%. The creeks which flow into the bay and ocean along the Trinidad coastline are already impaired by pollution.

There needs to be an Environmental Impact Study. The EA failed to provide an adequate basis for a finding of non-significant environmental impacts. The described Mitigation measures are not sufficient. Not only should impacts to the extraordinary fishing off Trinidad be considered, but as a birder I am very concerned about what the impacts of wastewater from a hotel this size might do to shorebird populations. I believe the hotel project that is currently proposed could do serious damage to the hundreds of species of shorebirds that occur throughout the year. P26-03

My third objection to the proposed hotel is the design itself. I am not opposed to the idea of a hotel, that is accessed from the highway, but a super urban looking six story hotel that stands out like a vertical glass vault is totally unacceptable. It is completely out of touch with its environment, and with the 21st century. With all the glass it is perhaps a new modern take on the same old ugly, antiquated, visually offensive, environmentally and aesthetically insensitive construction model that has been ruining beautiful coastlines all over the world since the 1960's. Seriously, I expect more from my fellow local citizens. P26-04

My son, Josiah R. Cain, is a landscape architect, green designer, and hydrology engineer with the firm, Sherwood Engineering, in San Francisco. He has the skills, knowledge and vision to help with some better design ideas. He grew up P26-05

in Trinidad, and is interested in what is going on here. I highly recommend that the tribe contact Sherwood Engineering for a consultation.

In conclusion, I wish the tribe well with their project, but strongly urge an environmental impact study, a more innovative and integrated structure design, and no hotel until the highway access is completed.

P26-05
(Cont.)

Thank you for considering my comments,

Sincerely,
Emelia Berol
4133 Central Ave.
McKinleyville, CA 95519
(707) 499-4233
emeliabee@yahoo.com.sg

Amy Dutschke <amy.dutschke@bia.gov>;
Chad Broussard <chad.broussard@bia.gov>;
Harold "Dan" Hall <harold.hall@bia.gov>.

PACIFIC REGIONAL OFFICE
BUREAU OF INDIAN AFFAIRS
2018 OCT 22 PM 1:39

J. Bryce Kenny
Attorney at Law
P.O. Box 361
Trinidad, California 95570
Telephone: (707) 442-4431
Email: jbrycekenny@gmail.com

Reg Dir ✓
Dep RD Trust
Dep RD IS
Route DECRMS
Response Required
Due Date
Memo Ltr
Fax

October 18, 2018

Amy Dutschke
Pacific Regional Director
Bureau of Indian Affairs
2800 Cottage Way
Sacramento, CA 95825

Re: Proposed Trinidad Rancheria Hotel

Dear Ms. Dutschke:

The Humboldt Alliance for Responsible Planning (HARP) is an unincorporated association of Humboldt County residents who are interested in sound governmental planning that preserves the rural, unhurried, uncrowded lifestyle available to Humboldt residents, which includes unspoiled scenic views, abundant wildlife, clean air and water, lack of traffic jams, and the responsible expenditure of taxpayer's money in ways that do not compromise those values. It has approximately 200 members.

HARP appreciates the opportunity to comment upon the Environmental Assessment (EA) for the proposed project. P27-01

These comments will focus on the ways in which the EA recently prepared for the Trinidad Rancheria Hotel Project is deficient, in HARP's opinion. A recommendation will be made that either the subject project should not be built, or a joint Environmental Impact Report (EIR) and Environmental Impact Statement (EIS) should be required.

The subject EA describes both the "proposed actions," loan guarantee and lease approval, and "proposed project," the construction of a six-story 100 room hotel to

be owned by the Trinidad Rancheria, and leased to the Hyatt Regency for operation.

P27-01 (Cont.)

In summary, these comments establish that:

- The Bureau of Indian Affairs (BIA) should be preparing an Environmental Impact Statement in compliance with CEQA, because the Rancheria agreed in its Gaming Compact to do that;
- The EA is not complete until it has been independently verified that the project is financially viable and thus eligible for a federal loan guarantee and lease approval;
- The EA is Defective Because it Fails to Consider the Cumulative Impacts of the Proposed Hotel Along With the Construction of a new Freeway Interchange and Foreseeable "Buildout;"
- The EA is Defective in That it Does not Consider Reasonable Alternatives;
- The EA is Defective in That it Does not Adequately Consider Waste Water Disposal Issues;
- Visual and Scenic Impacts Cannot be Mitigated;
- The EA is Defective Because it Erroneously Assumes That the City of Trinidad has Enough Water to Supply the Proposed Hotel;

P27-02

- The Hotel Should not be Built on Geologically Unstable Land;
- The EA is Defective in That it Does not Adequately Consider Biological Impacts.

BIA's NEPA Guidebook Procedures do not comply with the Code of Federal Regulations (CFR) by explaining the criteria for and identification of those typical classes of action which normally do require Environmental Impact Statements.

P27-03

The CFR's that implement the National Environmental Protection Act (NEPA), require each federal agency to promulgate its own regulations about how to

conduct environmental review of proposed and qualifying federal actions or projects. The Bureau of Indian Affairs (BIA) has done that with its Indian Affairs National Environmental Policy Act Guidebook, but it does not live up to its name. (hereinafter Guidebook).

> 40 CFR Sec. 1507.3 states in pertinent part, and with emphasis added:
>
> Agency procedures. (a) Not later than eight months after publication of these regulations as finally adopted in the Federal Register, or five months after the establishment of an agency, whichever shall come later, each agency shall as necessary adopt procedures to supplement these regulations.
>
> ***
>
> **(b) Agency procedures shall comply with these regulations except where compliance would be inconsistent with statutory requirements and shall include: (1) Those procedures required by Secs. 1501.2(d), 1502.9(c)(3), 1505.1, 1506.6(e), and 1508.4. (2) Specific criteria for and identification of those typical classes of action: (i) Which normally do require environmental impact statements. (ii) Which normally do not require either an environmental impact statement or an environmental assessment (categorical exclusions (Sec. 1508.4)). (iii) Which normally require environmental assessments but not necessarily environmental impact statements.**

P27-03
(Cont.)

Despite a thorough search, we have not been able to locate anywhere in the BIA Guidebook where clearly stated are the "[s]pecific criteria for and identification of those typical classes of action: (i) Which normally do require environmental impact statements." But the Guidebook does provide general guidance on when an environmental impact should be considered "significant," and these comments use those criteria to argue that the proposed action here is in fact within the class of actions that normally do require an Environmental Impact Statement (EIS). We believe that any reasonable person would find that conclusion to be self-evident. The criteria are stated in the Guidebook at Sec. 7.5 as follows, in pertinent part and with emphasis added:

> 7.5 SIGNIFICANCE OF EFFECTS An action must be analyzed in an EA to determine if an action will have a significant effect. **The evaluation of significance is critical because it determines if**

further NEPA analysis will be required in an EIS. Significance has specific meaning in NEPA analyses and requires the consideration of two key elements: context and intensity (40 CFR 1508.27). (1) Context. This means the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. **Significance varies with the setting of the proposed action. For instance, for a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole.** Both short-term and long-term effects are relevant. (2) Intensity. This refers to the severity of effect. The CEQ regulations (40 CFR 1508.27(b)) include the following ten considerations for evaluating intensity: Impacts that may be both beneficial and adverse. The consideration of intensity must include analysis of both beneficial and adverse effects, not just a description of the net effects. Only a significant adverse effect triggers the need to prepare an EIS. The degree to which the action would affect public health and safety**. For example, evaluation should include hazardous and solid wastes, air and water quality; and their relation to public health and safety. Unique characteristics of the geographic area. These generally include historic or cultural resources, parklands, prime farm lands, wetlands, wild and scenic rivers and ecologically critical areas. Degree to which effects are likely to be highly controversial. Controversy in this context means disagreement about the nature of the effects, not expressions of opposition to the proposed action or preference among the alternatives. Substantial dispute within the scientific community about the effects of the proposed action would indicate that the effects are likely to be highly controversial.** Degree to which effects are highly uncertain or involve unique or unknown risks. The Responsible Official must exercise some judgment in evaluating the degree to which the effects are likely to be highly uncertain and whether the risks are unique or unknown. Degree to which the action may establish a precedent for future actions with significant impacts. The decision may allow future actions to take place or implies approval of a future action. Whether the action is related to other actions with cumulatively significant impacts. Analyze the effect of past, present, and reasonably foreseeable future actions**. Degree to which properties eligible or listed on the National Register of Historic Places are adversely affected. Significance may arise from the loss or destruction of**

P27-03
(Cont.)

significant scientific, cultural, or historical resources. For resources listed in or eligible for listing in the National Register of Historic Places, significance depends on the degree to which the action would adversely affect these resources. Degree to which threatened or endangered species and their critical habitat are adversely affected. Significance depends on the degree to which the action would adversely affect species listed under the Endangered Species Act or their designated critical habitat. A determination under the Endangered Species Act that an action would adversely affect a listed species or critical habitat does not necessarily equate to a significant effect in the NEPA context. However, any "jeopardy opinion" must be considered significant. **Threaten violation of Federal, State, or local law or requirements imposed for the protection of the environment. This factor will often overlap with other factors: for example, violations of the Clean Water Act or Clean Air Act would usually involve effects that would adversely affect public health and safety**

P27-03 (Cont.)

When these highlighted criteria are applied to the information in the EA, it is clear that the proposed construction of a massive hotel on the edge of pristine Trinidad Bay is within the class of projects that typically require the preparation of an EIS. These comments will argue that first, the hotel should not be built at all, and second, a joint EIR/EIS should be done that covers both the proposed freeway interchange and the proposed hotel.

A. The EA is Inadequate Because it Measures the Project Against the Wrong Standard

The BIA uses the National Environmental Protection Act (NEPA) as the standard against which to measure the proposed hotel. That is incorrect, because the Rancheria was required by its own Gaming Compact, signed by it on September 10, 1999, to either adopt its own environmental law that was at least the equivalent of NEPA *and* CEQA, or CEQA would become its law by default. Because the Rancheria did not adopt its own environmental law, CEQA, as interpreted by the California courts, is the standard against which this project must be measured.

P27-04

The Compact, pertinent portions of which are attached as Exhibit 1, states in Sec. 10.8.1, in relevant part:

> On or before the effective date of this Compact, or not less than 90 days prior to the commencement of a Project, as defined herein, the Tribe shall adopt an ordinance providing for the preparation, circulation, and consideration by the Tribe of environmental impact reports concerning potential off-reservation environmental impacts of any and all Projects to be commenced on or after the effective date of this Compact. In fashioning the environmental protection ordinance, the Tribe shall make a good faith effort to incorporate the policies and purposes of the National Environmental Protection Act *and* the California Environmental Quality Act consistent with the Tribe's governmental interests.

The term "project" means any significant renovation or modification of an existing Gaming Facility or any significant excavation, construction, or development associated with the Tribe's Gaming Facility…. Sec. 10.8.1(c).

The term "Gaming Facility" includes "all rooms, buildings, and areas, including parking lots and walkways, a principal purpose of which is to serve the activities of the Gaming Operation…." Sec. 2.8.

P27-04
(Cont.)

Thus, there can be no doubt that the proposed hotel is a "project" for the purposes of the environmental law that the Rancheria was supposed to adopt.

Sec. 10.2.1 of the Compact provides as follows:

> The Tribe shall adopt, and not later than 30 days after the effective date of this Compact, and shall make available upon request the standards described in subdivisions (a)-(c) and (e)-(k) of Section 10.2 to which the Gaming Operation is held. In the absence of a promulgated tribal standard in respect to the matter identified in those subdivisions, or the express adoption of an applicable federal statute or regulation in lieu of a tribal standard in respect to any such matter, the applicable state statute or regulation shall be deemed to have been adopted by the Tribe as the applicable standard.

Sec. 10.2 (f) requires the compliance with all tribal codes regarding "health and safety." Environmental regulations are an exercise of a government's police power to legislate for the general health, safety and welfare of the people. Its scope properly includes the ordinances that were supposed to have been adopted under Sec. 10.8 to protect the environment. Sec. 10.2.1 gave the Rancheria the option of

adopting its own environmental ordinances, adopting federal regulations that cover the same subject, or accepting the applicable state statute or regulation. Because it did nothing to adopt an environmental protection ordinance to promote public health and safety, it is deemed to have adopted CEQA, the applicable state statute.

We know that tribal gaming expansion requires compliance with the requirements of Tribal/State Gaming Compacts. AES, the consultant that prepared the subject EA, has prepared many of EA's for tribal projects. For example, AES prepared the EA when the Pasqual Band of Mission Indians did their Valley View Casino Expansion Project in January 2018. In the Notice of Availability of the environmental document, obtained from AES's web site, it is specifically stated that "An Environmental Evaluation that assesses the potential for off-reservation environmental impacts from the expansion project has been prepared consistent with the Tribe's Environmental Impacts Ordinance and the Tribal-State Gaming Compact." (Exhibit 2)

P27-04 (Cont.)

Like the Pasqual Band, the Trinidad Rancheria is bound by the terms of its Compact to adopt an environmental impacts ordinance and measure gaming expansion projects, like the subject one, against it. If it does not pass its own ordinance, the applicable state statutes applies, in this case CEQA. The subject EA is defective in that it does not recognize that, by default, CEQA is the standard against which the proposed project is to be measured.

While NEPA and CEQA have many similarities, they are not the same. This is illustrated in the case of Nelson v County of Kern (2010) 190 Cal.App.4th 252, 283, where the federal Bureau of Land Management had conducted an EA for a proposed surface mining operation on federal land and then issued a Finding of No Significant Environmental Impact (FONSI). Despite that, the Court of Appeal ordered the preparation of an Environmental Impact Report (EIR) under CEQA, noting that for many projects, both NEPA and CEQA apply. If CEQA did not impose a higher standard than NEPA, it would make no sense to order an EIR after a FONSI had already been issued.

P27-05

A respected treatise on planning has noted: "Unlike CEQA, NEPA does not require federal agencies to implement feasible mitigation measures or adopt environmentally superior alternatives identified in an EIS. Accordingly, NEPA has been interpreted by the federal judiciary as being an 'essentially procedural' statute." California Land Use, Environmental Review and Mitigation Sec. 13.61 (CEB 2015) citing Vermont Yankee Nuclear Power Corp. v Natural Resources Defense Council (1978) 435 U.S. 519.

The subject project is actually at a good juncture to conduct review under both NEPA and CEQA, because the construction of a hotel is only one component of the Rancheria's master buildout plan, which, as discussed in detail below, includes the construction of a freeway interchange that would allow interstate traffic to exit directly from the freeway to the casino and hotel, a result expected to boost patronage at the casino. (EA at 2.1)

P27-05 (Cont.)

CEQA has a provision for joint review under NEPA and CEQA. Nelson v County of Kern , supra, 190 Cal.App.4th at 282-283. The BIA should contact the California Department of Transportation (CalTrans) about coordinating their review of the hotel and the freeway interchange together as one project.

B. The Proposed Federal Action is Unwarranted Under the Circumstances Present Here

The first proposed federal action is the issuance of a loan guarantee to the bank that is loaning the Rancheria the money to build the hotel. The loan guarantee is essentially a bail out promise. The loan guarantee program is implemented by the BIA's Office of Indian Energy and Economic Development (IEED) through its Division of Capital Investment (DCI). A November of 2017, Report by the Office of the Inspector General found that the loan guarantee program was not under effective controls to ensure that the government's largess was not abused. (Pertinent excerpts at Exhibit 3.)

P27-06

It is hard to believe that the DCI has taken a serious look at the viability of the subject loan, because if it had, it would know that the region in which the subject hotel is proposed for is already saturated with Indian casinos with hotels. As shown in Exhibit 4, approximately 18 miles southeast of the Trinidad Rancheria is the Blue Lake Rancheria's casino and hotel. Approximately 22 miles south of the proposed hotel is the Bear River Rancheria casino and hotel. Approximately 40 miles east of the proposed hotel is the Hoopa Valley Tribe's casino.

P27-07

Approximately 8 miles north of the proposed hotel, the Big Lagoon Rancheria has been struggling mightily to build a casino and hotel. Further north and just across the Klamath River, is the Yurok Tribe's casino and hotel. Further north still is the Smith River Rancheria casino and hotel. How may casino hotel resorts can a region of less than 160,000 people support? Not as many as it already has, and that is evidenced by the fierce competition that is taking place between the rival tribes and rancherias.

A thorough feasibility study of the proposed hotel would reveal that the collapse of the marijuana market taking place with legalization is hitting the gambling industry hard. Since the casinos first appeared in Humboldt County in the mid-nineties, their best customers were pot growers who had lots of cash and were ready to party and spend it. Those days are gone now, and the gambling industry is feeling it. The Rancheria wants to "double down" using someone else's money to finance their dream project in a no-lose scheme secured by taxpayer dollars. P27-08

The loan guarantee program is supposed to be governed by 25 CFR Sec. 103 *et seq*. Under Sec. 103.17(d), the lender is required to have copies of all environmental studies for construction required under NEPA and any *tribal laws*. As mentioned previously, the Rancheria is supposed to have its own ordinance that is the equivalent of CEQA, which it does not have. P27-09

Sec. 103.26 requires the BIA, among other things, to ensure that the borrower (Rancheria) has a business plan, including resumes of all principals, market factors, the borrower's market strategy, a detailed list of the collateral for the loan, and the methods of valuation. Where are these documents? P27-10

The 2017 Report by the Solicitor General was precipitated by a scandal involving a loan guaranteed for the Lower Brulte Sioux Tribe which borrowed at least $20 million to purchase a Wall Street firm that eventually failed, becoming worthless. (Exhibit 5.) The loan was guaranteed by the BIA. Regional Director Dutschke must be absolutely certain that the concept of moral hazard has been rooted completely out of the DCI, as the Solicitor General doubtlessly intended, before she approves this questionable loan. The temptation to act recklessly is strong when it is known that there is a bailout at the end of the tunnel if things go bad.

The preparation of an EIR and an EIS for the hotel project will ensure that there is adequate time to take a careful ("hard") look at the financial feasibility of it before federal action occurs approving it. P27-11

It should also be noted that providing a loan guarantee is inimical to the modern federal governmental philosophy of tribal "self-determination." In a free market world of self-determination, a project that cannot attract capital without the lender receiving a loan guarantee from the federal government shows that there is something wrong with the project. If the Rancheria were truly engaging in "self-determination," it would not need the federal government to guarantee repayment of its loan. It would be able to rely on itself, and so would a lender. The EA states

that without the guarantee, "…it is highly unlikely that the Tribe could secure the loan necessary to develop the [h]otel." (EA 2.3)

P27-11 (Cont.)

The approval of a lease between the Rancheria and Hyatt is also a federal action that triggers NEPA review. This is another area where it must be asked whether the BIA has taken a close look at the potential financial risks. What is going to be the term of the lease? If it is only in the vicinity of five years, then it can be seen that Hyatt is setting itself up to be able back out of the project if it is not as successful as its optimistic proponents claim it will be. What will then become of this behemoth of a building? What else could it be used for?

P27-12

This is another issue that can be closely examined with an EIR/EIS.

C. The EA is Defective Because it Fails to Consider the Cumulative Impacts of the Proposed Hotel Along With the Construction of a new Freeway Interchange and Foreseeable "Buildout."

Section 7.5 of the Guidebook states in relevant part:

> The CEQ regulations define cumulative effects as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such actions" (40 CFR 1508.7). The purpose of cumulative effects analysis is to ensure Federal Responsible Official considers the full range of consequences of the proposed action and alternatives, including the No Action alternative.

P27-13

Of major concern is the failure of this EA to evaluate the relationship of the Hotel, the proposed full Rancheria build-out, and the proposed new US Hwy 101 interchange and overpass to service the development.[1] This EA acknowledges that the Hwy 101 interchange and overpass are essential to service the Project (EA 3.7.2), yet the Rancheria and CalTrans are currently supposed to be considering twelve options plus no-build to address "the transportation needs of the Trinidad Rancheria and the surrounding community."[2]

[1] Alternatives 2 and 3a, PSR

[2] (pg 1, 2017 US-101 / Trinidad Area Access Improvements. The Trinidad Rancheria and Caltrans District 1 are working in partnership to identify alternatives to meet the transportation needs of the Trinidad Rancheria and the surrounding community. This PSRPDS identifies 12 alternatives to address

The proposed new freeway interchange is "reasonably foreseeable" within the meaning of the Guidebook and the CFR because it has already advanced to the stage of a Project Study Report-Project Development Report (PSR-PDR) issued by CalTrans in December of 2017. In fact, an interchange as a component of this project is more than "foreseeable" it is inevitable, because, as the EA concludes at E-18, it is required if the traffic consequences of the hotel are to be legal.

P27-13 (Cont.)

The hotel and interchange will be within ¼ mile of each other. Each will have the effect of drastically changing the look and feel of the area around the Rancheria. And together, their impact becomes greater than the sum of their parts. Currently, when driving on Highway 101 between Westhaven and Trinidad, there is the pleasant illusion that one is driving through a temperate rainforest. The effect of this is soothing and a wonderful foil for all the other assaults upon the senses that can occur when one is in more urbanized districts.

P27-14

And the feature that is most prominent Scenic Drive, the north-south road that the hotel will be built right above, is the breathtaking scenery provided by the rocky coastline of "sea-stacks," part of the California Coastal National Monument, and views of Trinidad Head, a popular destination which rises 350 feet with direct views of the proposed Project. A boxy high-rise building looming above such splendor will be incongruent and jarring to the senses.

P27-15

Taken together, the Project as currently configured telegraphs the message that this area too, despite its uniqueness compared to California in general, is subject to the ravages of human greed. There is no way that a rational decision maker could consider that such impacts can be mitigated to the level of insignificance.

P27-16

This raises important questions about piece-mealing multiple interrelated projects to avoid revealing growth-inducing and cumulative impacts, as well as whether the Hwy 101 interchange and overpass have already been determined to be essential to the Hotel Project, as "assumed" in the EA (3.7.2), essentially designating Options 2 and 3a, the overpass and interchange, as fait accompli.[3] (EA 3-18).

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the transportation deficiencies between the unincorporated community of Westhaven and the City of Trinidad.

[3] "The BIA understands that the Tribe is currently undergoing consultation with Caltrans to complete this interchange. This new interchange may be located approximately 0.7 miles south of the Main Street interchange. "For the purposes of the analysis a tight diamond interchange is assumed at the new interchange, which is referred to as the Cher-Ae Lane interchange. A two-lane overcrossing is assumed

A review of this EA by the Executive Director of a local transportation coalition observes: "[t]he importance of including the interchange in the definition of the project is highlighted by the fact that it appears likely on its face that the interchange will occupy a bigger footprint and have more impacts than the hotel in many areas of analysis, including land resources, air quality and greenhouse gas, biological resources, transportation and circulation, land use, noise, and growth induction. Identifying the interchange as mitigation for the project and then failing to analyze its impacts is both inaccurate and insufficient under NEPA."[4]

P27-17

Although the EA predicts a 6% increase in Highway 101 traffic related to the Hotel Project, it claims, without justification, that the project will "reduce visitor trips on local roadways by providing additional overnight accommodations."[5] Absent intentional management of vehicle circulation with shuttles and non-motorized options, hotels invariably increase traffic.

P27-18

HARP incorporates by reference the comments by the Coalition for Responsible Transportation Priorities on the topic of Transportation and Circulation. A true copy is attached hereto as Exhibit 6.

It is worth noting that several of the Alternatives in the PSR, including the preferred Alternative 3, require acquisition of private property for rights of way, with a cost range up to $5.5 million.[6]

P27-19

The traffic analysis employs Level of Service (LOS) to gauge traffic needs, rather than Vehicle Miles Travelled (VMT). LOS has been censured under California's EQA because it fails to adequately consider non-motorized options and exaggerates road expansion needs.[7]

Complicating matters further, Humboldt County's LCP prohibits construction of

P27-20

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with all-way stops at the two ramp locations. Easterly extension of Cher-Ae Lane past the interchange to intersect at a "T" intersection with Westhaven Drive is also assumed." (E-18, EA)

[4] Fiske, Colin, CRTP Review of the Trinidad Rancheria Hotel EA, 10/18

[5] EA pg 1-2 and 3-25

[6] Project Study Report, US 101 / Trinidad Area Access Improvements 01-HUM-101 PM 98.4/100.7 PSR-PDS, December, 2017, pp 19 & 24 for example. Right of Way costs on page 1.

[7] Governor's Office of Planning and Research, Transportation Impacts (SB 743) CEQA Guidelines Update and Technical Advisory http://www.opr.ca.gov/ceqa/updates/sb-743/

"new roadways, highway overcrossings, or interchanges in the project area."[8]

Community and expert review of these contingent aspects of the Hotel Project will obviously require considerable expertise.

Failure to properly consider cumulative impacts is grounds for remanding a decision for further consideration. One recent IBIA case states: "Because the cumulative impacts of operating dual clinics and daycare centers apparently were never considered, we conclude that the FONSI is not supported by the record." County of San Diego and Viejas Band of Kumeyaay Indians v Pacific Regional Director Bureau of Indian Affairs, 58 IBIA 11, 34 (2013).

P27-20 (Cont.)

The "rule of reason" governs the agency's discretion in preparing environmental documents, such as an EA. Dept. of Transportation v. Public Citizen, 541 U.S. 752, 767 (2004) ("[I]nherent in NEPA and its implementing regulations is a 'rule of reason,' which ensures that agencies determine whether and to what extent to prepare an EIS").

The EA attempts "bootstrap logic" when it reasons that the construction of the freeway interchange will mitigate the traffic impacts caused by the construction of the hotel. (EA 3.7.2) The interchange purportedly is justified to "[r]elieve projected traffic congestion associated with planned future development." (No. 3, Purpose and Need, CalTrans PSR-PDS) This circular logic does not meet the "rule of reason" that must be utilized in an EA.

P27-21

The area that the hotel will adversely affect with additional traffic is the intersection of Scenic Drive and Main Street in Trinidad. (EA 3.7.2) That area is not on the Rancheria property. Recall that the Rancheria is required by its Gaming Compact to have passed its own environmental ordinances at least as stringent as

P27-22

[8] "Land Use and Community Impacts: The project is located entirely within the Coastal Zone. The project conflicts with the Humboldt County General Plan-Volume II:Trinidad Area Plan of the Humboldt County Local Coastal Program, which does not allow for construction of new roadways, highway overcrossings, or interchanges in the project area. If necessary, Local Coastal Program amendment would require certification by the California Coastal Commission, which also has appeal jurisdiction over County and City coastal development permits. Local Coastal Program amendment could add approximately 18-24 months to the coastal development permit processes. Public controversy regarding the project may be considerable. A community impact assessment is anticipated." (pg 15, "Further Environmental Effort" Attachment H Preliminary Environmental Analysis Report (PEAR)

CEQA to prevent "off-reservation" impacts. This points out the need for an EIR/EIS that considers both the hotel and the interchange together. An EIR is being prepared by CalTrans. It can and should be expanded to become an EIR/EIS.

P27-22 (Cont.)

The "Rancheria Master Plan Development" (EA 11) refers to the plans to expand the casino from its current 50,000 sq. ft to 150,000, the RV park from 22 spaces to 50, and office space from "minimal" to 100,000 sq. ft, with retail and community space adding another 75,000 sq. ft, not including a 6-pump gas station. A new interchange and overpass along Highway 101 are integral components of this announced "build-out." Thus, this "build out" is definitely foreseeable, connected to the hotel, is casino-related, and therefore subject to a cumulative impacts analysis with an appropriate planning horizon at least to 2038.

P27-23

D. The EA is Defective in That it Does not Consider Reasonable Alternatives

"BIA not only must analyze the reasonably foreseeable environmental consequences of the proposed action, but must also examine reasonable alternatives to the proposed action and their environmental consequences." Neighbors for Rational Development, Inc. v. Albuquerque Area Director, 33 IBIA 36, 43 (1998).

In that case, the EA discussed five alternative projects which included different sites, reduced project size, larger development size, other site use alternatives, and no action. Id. at 38. The same should be done here.

P27-24

The subject EA only considers the hotel as proposed and the "no project alternative." It attempts to justify this unreasonable approach by declaring that "[o]ther potential alternatives to the Proposed Action, such as reduction in the size of the area for development or alternative locations, do not meet the definition of "reasonable" under the CEQ's Regulations for Implementing the NEPA because the purpose and need [of the proposed project] would not be met." With no substantial evidence to support it, the EA concludes that downsizing the project would render it unprofitable. (EA 2.1)

Common sense dictates, and thus the "rule of reason" requires, an examination of smaller hotels in place of the proposal. If the numbers in fact confirm that a smaller hotel is not feasible, then the alternative can be rejected. But to completely

leave out the step of examining such an alternative cannot be squared with the "rule of reason."

P27-24 (Cont.)

Therefore, a joint EIR/EIS is warranted.

E. The EA is Defective in That it Does not Adequately Consider Waste Water Disposal Issues

In Voices for Rural Living v Acting Pacific Regional Director Bureau of Indian Affairs, 49 IBIA 222 (2009) the issuance of an EA and mitigated FONSI on the action to take land into trust for the Shingle Springs Band of Miwok Indians was appealed to the Board. Once the land was in trust status, the Tribe had plans to build a new health clinic and six units of housing on the land.

Like the instant hotel project, the health clinic proposed to use onsite sewage disposal by way of septic tanks and leach fields. For some curious reason, the EA in Voices was much more comprehensive than the one here.

P27-25

For example, the sewage disposal system proposed in the Voices EA would be designed and built to local county standards. Id. at 229. The administrative decision actually discussed the technical aspects of the disposal system, pointing out that "the maximum loading rate for the project site is 0.02 gallons per day (gpd)/square foot (ft), which is less than the lowest US EPA prescribed loading 2 rate." FONSI at 5. The Regional Director also explained that the combined use of septic tanks with the conservative loading rate assures that "a significant effect to water quality does not occur." Id. at 230.

By contrast, the subject EA is silent about where new leach fields to support the hotel would be located, and does not discuss the "maximum loading rate" at all. The EA relies upon a 2004 study attached to the EA as Appendix A, much of which is restated in a Preliminary Feasibility Report (PFR) by Northstar, of Chico, California, dated September 29, 2016. Of particular interest, is that the existing "community dispersal field," which currently serves the casino, the tribal offices, and some of the houses on the Rancheria, has a long-term capacity which is unknown. (PFR at 3.) Without explanation, the report simply assumes that "…the Rancheria completed the cleaning and evaluation of the existing dispersal field [and that it] still has the capacity to disperse 10,000gpd as designed. (PFR at 4.) Thus, this important finding is supported by no evidence at all, substantial or otherwise.

P27-26

Adding to the pollution and over-wetting risks is the fact the 10,000 gpd discharge falls short of the approximately 15,090gpd calculated discharge based on the 18,860gpd water intake for the Hotel, minus the estimated 20% recycle rate. (EA 2.2.1)

P27-26 (Cont.)

The Report further states, confusingly, that the 2004 Assessment identified two potential areas that may be feasible for dispersal, the "…mounded ridge to the south of Ter Ker Coo Lane and the hillside south of the Tribal Office where the existing dispersal field was installed." (PFR at 5) Doesn't the fact that the existing dispersal field was installed on one of the sites mean that there is actually only one potential site left?

P27-27

No areas are designated in the EA, but the report estimates "an additional 40,000 to 60,000 square feet of land would be required to install additional dispersal fields. This does not include full replacement area for dispersal field replacement."[9]

P27-28

Rainwater will be diverted into swales, but the combined effects of leach field and rainwater is inadequately addressed, a substantial omission in light of the correlation between groundwater and landslides: "[t]hese studies show that groundwater is a primary initiator of landslides in the area."[10] Independent geotechnical investigation of the active landslide extending from the southwest corner of the proposed Hotel southwest towards Scenic Drive is therefore appropriate, because "[G]roundwater, a major contributor to the slope's instability, moves through the terrace deposits and emerges where the shale bedrock is exposed."[11]

P27-29

The PFR at p. 7 recommends a long list of things to be done before it can be fully understood whether the plans for wastewater disposal are actually going to work, and concludes at p. 8 with the statement "[i] cannot stress enough the need to determine if there is additional dispersal capacity on the site and where this

P27-30

[9] Preliminary Feasibility Report for Trinidad Rancheria Cher-Ae Heights Facility, Nick Weigel P.E. 9/16, Appendix A, EA, 9/18

[10] 4.2 Scenic Drive Slope Stability Explorations , pg 3, Draft Geotechnical Feasibility And Preliminary Design Report, November 8, 2016 , Appendix B

[11] EA 3.1.2, pg 3-3

resource is located on the Rancheria. The size and location of these areas will have a significant impact on the design and associated costs with the dispersal component in the system."

The lack of fundamental knowledge about the current functioning of the "community dispersal field" and whether additional suitable areas even exist points to the existence of the need for a combined EIR/EIS before it can be known whether the hotel wastewater will have a substantial effect on the human environment, and whether and how such impacts can be mitigated. P27-30 (Cont.)

Somewhat shockingly, in the 2004 Assessment it is stated that an "ocean outfall" pipe may be the solution if leach field capacity proves to be inadequate. (EA, Appendix A, E-5) This would be giant step backward to the days when coastal industries, like the Eureka pulp mills, just piped their waste offshore where it was out of sight and out of mind.

If an ocean outfall pipe is still being considered, implications to the federal Clean Water Act must be considered in a joint EIR/EIS. P27-31

When compared to the EA done in Voices it is clear that the subject EA is woefully inadequate in its treatment of the wastewater issue. For that reason, a joint EIR/EIS should be done and Humboldt County's Department of Environmental Health should be consulted and asked to certify the Rancheria's waste water disposal system, to create parity with the measures taken in the Voices case, supra.

F. Impacts to Visual and Scenic Resources Cannot be Mitigated

F.1. A six-story hotel is incompatible with the natural scenic values of the coastline near Trinidad, CA, and there is no way to mitigate this project so as to produce less than significant effects on visual resources. P27-32

The proposed Rancheria hotel development would take place in one of the most scenic coastal locations in California. Trinidad is California's smallest coastal city, a quaint fishing village in the midst of oceanic splendor enjoyed by thousands of tourists, surfers, kayakers, and local residents. The visual aesthetics of Trinidad Head, the Trinidad Bay environment and the Scenic Drive coastline along which the proposed hotel would be constructed are unmatched in California, although these assets are downplayed in the EA. The Trinidad Bay kelp beds is a California Area of Special Biological Significance (ASBS), which carries with it strict P27-33 P27-34

requirements to minimize runoff of toxic materials into the Bay. As noted in Section 3.13.1 of the EA, Trinidad Head is a California historic landmark. Not noted in the EA is that the federally-owned portion of Trinidad Head was recently added to the California Coastal National Monument (administered by the Bureau of Land Management), in recognition of its nationally significant scenic values. The Trinidad Head trail is used by many thousands of tourists each year. Many vistas of the coastline viewed from the Trinidad Head trail include the location of the existing casino and would, if built, include views of the proposed hotel.

P27-34 (Cont.)

It is difficult to imagine visual resources or possible adverse impacts on visual resources from proposed developments from written descriptions, so we instead provide a few illustrative photos. Figure 1 displays a kayaker's view of the Trinidad Bay setting, facing south east and looking toward the site of the proposed 6 story hotel. Figure 2 provides a view of Trinidad Harbor and the coastline along Scenic Drive looking south southeast from a location just above the beach boat launch site in Trinidad Bay. Figure 3 provides a view of Trinidad dock, Trinidad Bay with fishing boats, and of the coastline along Scenic Drive. Notice that there is a modest level of private home development around and to the north of the Rancheria property, but that the coastline is moderately pristine and undeveloped south of this location. When viewed from upper elevations on the Trinidad Head trail (Figure 4 panorama shot), the Rancheria casino facility, as it exists today, is a prominent disruption of the natural landscape.

P27-35

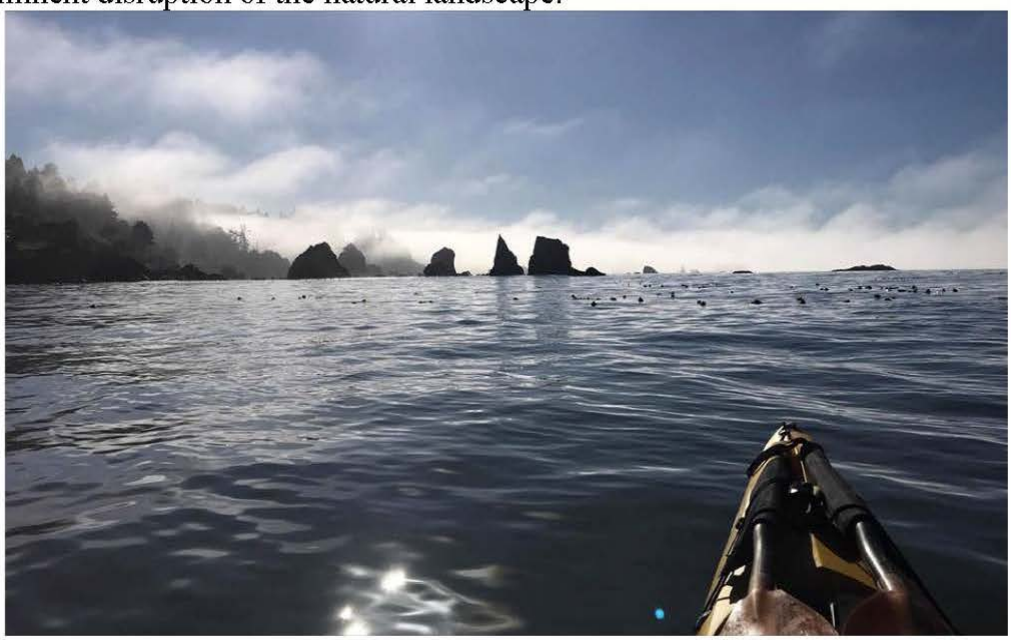

Figure 1. View from kayak in Trinidad Bay, facing southeast toward the location of the proposed six story hotel. Photo credit Jeff Self.



Figure 2. Photo of Trinidad Bay, coastal rocks, and coastline along Scenic Drive. Existing casino complex is visible above Scenic Drive. Photo taken just above beach launch site on Trinidad Bay. Photo credit: Richard Clompus.

P27-35
(Cont.)



Figure 3. View of Trinidad dock, Trinidad Bay, during summer fishing season, and the coastline along Scenic Drive. Photo taken from the lower elevation of Trinidad Head, facing southeast. Existing casino complex is visible above Scenic Drive. Photo credit: Ted Pease.



Figure 4. Coastal panorama shot of landscape along Scenic Drive, looking east-southeast from higher elevation of Scenic Drive. Note that the existing Rancheria casino facility is highly visible from Trinidad Head. Photo Credit: David Hankin

P27-35 (Cont.)

Although federal buildings and those built on tribal trust lands do not fall under the direct jurisdiction of California state land use regulations, it is important to note that the California Coastal Act requires coastal development to "fit in" with the

P27-36

natural landscape: "The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal 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. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting."[12] Generally, structures in excess of 30 feet in height are considered to be incompatible with highly scenic areas.[13]

P27-36 (Cont.)

The EA proposes a six-story 100 room hotel in a highly scenic coastal location and the "illustrative" structure that is provided in the EA is reproduced as Figure 5, to serve as a dramatic visual contrast with the scenic natural landscapes displayed in Figures 1 through 4.

P27-37



Figure 5. "Placeholder" illustration of a six-story Hyatt Place hotel from EA.

[12] Sec. 30251 (chapter 3, Coastal Act), (https://archive.org/details/CaliforniaCoastlinePreservationAndRecreationPlan/page/n0)
[13] ibid;, 3.40 B3c2

A structure like the one displayed in Figure 5 is clearly incompatible with the scenic natural coastal landscape. At the 27 September 2018 informational meeting held at the Trinidad Town Hall and hosted by HARP[14], and also at the 15 October special meeting of the Trinidad City Council, at which Rancheria members provided further background on the proposed hotel project[15], numerous heartfelt and mutually reinforcing public comments were made concerning the adverse impacts that a six-story hotel would have on visual resources. All such comments, without exception, were to the effect that a six-story structure was completely incompatible with the scenic landscape illustrated in Figures 1 through 4.

At Section 3.13.1, the EA recognizes that the proposed six-story hotel would be viewed from Trinidad Head, and would have significant adverse effects on visual resources, but in Section 3.13.2 the EA concludes that mitigation measures would reduce these effects to less than significant:

P27-37 (Cont.)

> "The proposed Hotel would impact the overall coastal aesthetics of the project site. Mitigation measures would require features to soften the visual impact and allow the proposed Hotel to blend into the scenery and adjacent existing Casino so that the Proposed Project would not result in any adverse effects to scenic resources. Residences to the east, west, and south may have views of the Proposed Project, but the Proposed Project would be adjacent to the existing Casino. Incorporation of mitigation measures in Section 3.13.1 would reduce effects to visual resources to less than significant."

The proposed mitigation measures in Section 3.13.3 include:

P27-38

> "Design elements shall be incorporated into the Proposed Project to minimize visual impacts of buildings and associated structures, including landscaping that compliments buildings and parking areas, with setbacks and vegetation consistent with existing landscaping. Earth-toned paints and coatings shall be used, all exterior glass shall be non-reflective and low-glare, and signs and facades shall be designed with a non-reflective backing to decrease reflectivity."

[14] Casino hotel project concerns neighbors. NorthCoast Journal. 04 October 2018. https://www.northcoastjournal.com/humboldt/casino-hotel-project-concerns-neighbors/Content?oid=11296234

[15] Hotel project sparks debate. Times Standard. 16 October 2018. https://www.times-standard.com/2018/10/15/ets-l-rancheria-1016/

HARP believes that the proposed mitigation measures could not possibly mitigate the visual impacts of a six-story structure on the visual landscape to a "less than significant" level, and it was clear from public comments that HARP's opinion is shared by many other members of the local community (see footnotes 3 and 4 above). One rhetorical expression comes to mind (with a Wikipedia explanation):

P27-38 (Cont.)

> To put "**lipstick on a pig**" is a rhetorical expression, used to convey the message that making superficial or cosmetic changes is a futile attempt to disguise the true nature of a product or person.

A six-story structure is simply incompatible with the natural landscape, no matter how it is painted, whether or not its glass windows are reflective, no matter what the color of lipstick that is applied.

Perhaps the most obvious method to illustrate the incompatibility of a six-story structure with the natural coastal landscape is to superimpose such a structure on the panorama displayed in Figure 4. Figure 6 displays such a superimposition.



P27-39

Figure 6. An illustrative 6 story hotel superimposed on the coastal panorama photo at the location of Trinidad Rancheria's existing casino. Pastel paints and non-reflective glass would not mitigate the visual impacts to less than significant. Panorama photo: David Hankin; hotel image superimposed by Tim Sheppard.

If one imagines being in a kayak in Trinidad Bay, paddling across from the existing casino complex, the view with six story hotel imposed would look like that in Figure 7. No words are needed to dramatize the incompatibility of the proposed 6 story structure with the natural landscape.



Figure 7. Photo of the current location of Trinidad Rancheria casino facilities, taken from Trinidad Head, with proposed six story hotel superimposed in front of the existing casino, facing Trinidad Bay and Trinidad Head. Photo credit: Richard Clompus.

P27-39 (Cont.)

Sec. 7.5 of the BIA NEPA Guidebook provides that "[s]ignificance varies with the setting of the proposed action. For instance, for a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole." The setting here is one of the most visually stunning coastlines in California. Thus, it takes less of an intrusion to constitute real significance than it would take in say, Santa Barbara, where development is much denser.
The same section also says that "[u]nique characteristics of the geographic area" should be considered when evaluating "significance." "These generally include historic or cultural resources, parklands, prime farm lands, wetlands, wild and scenic rivers and ecologically critical areas. The Trinidad Bay kelp beds is a California Area of Special Biological Significance (ASBS), which carries with it strict requirements to minimize runoff of toxic materials into the Bay.

P27-40

Likewise for the "[d]egree to which properties eligible or listed on the National Register of Historic Places are adversely affected. Significance may arise from the loss or destruction of significant scientific, cultural, or historical resources. For resources listed in or eligible for listing in the National Register of Historic Places, significance depends on the degree to which the action would adversely affect these resources."

P27-40 (Cont.)

As the attached photographs indicate, the hotel would have a major impact on, among others, the view from Trinidad Head, a completely "unique" place in all of California, which is also a California Historic Landmark. Taken together, these factors compel the conclusion that the EA's declaration that these impacts can be mitigated does not pass the "rule of reason" which every EA must meet under Dept. of Transportation v. Public Citizen, 541 U.S. 752, 767 (2004) ("[I]nherent in NEPA and its implementing regulations is a 'rule of reason,' which ensures that agencies determine whether and to what extent to prepare an EIS").

P27-41

As noted elsewhere in our letter of comment, we reiterate that no alternatives to the proposed action were described or evaluated in the EA with the exception of the "no action" alternative. The proposed action consists only of construction of a six-story 100 room hotel adjacent to the existing casino and facing out on the coastal landscape, fully viewable from the ocean and from Trinidad Head by many thousands of residents, fishermen and tourists every year. If pursued, this proposed action (construction of six story hotel) would clearly have significant negative impacts on visual resources. The contention that proposed mitigation measures could somehow reduce these impacts to less than significant is an unsupported and unsupportable contention.

P27-42

P27-43

We also note that the "No Action" option affords the opportunity for returning to the drawing board to develop a project that is more consistent with Tribal members' visioning during the 2009 and 2011 focus groups, in which there was universal preference for low profile, rural, culturally consistent hotel and build-out designs over multi-story urban motifs, such as this Project proposes. We urge you to review the Comprehensive Community-based Plan of the Cher-Ae Heights Indian Community of the Trinidad Rancheria's "The Community Image Survey" ("A Tool for Public Participation in Planning"), in which participants graded 40 images that depicted pastoral, rural, and urban graphics. (https://www.lgc.org/wordpress/reports/trinidad_rancheria/TR_Comprehensive_Plan_Final-Dec2011_web.pdf).

P27-44

F.2 Other Issues Associated with Visual Resources

HARP also wishes to express concern about two other visual issues that receive little attention in the EA. First, at both of the local public meetings noted in this section of our letter, individuals expressed concern about how the existing casino lighting has already materially changed the night landscape for many Trinidad area residents who reside near the existing casino. The casino apparently exudes a "bright glow" in the evening, in contrast to the near absence of night lighting along our coastline. More attention needs to be given to minimization of any additional contribution to this recognized issue with current casino operation.

P27-45

Second, we wish to express concern about signage for the proposed hotel. Signage does not seem addressed anywhere in the EA, but it certainly ought to be. If a 100 room hotel is indeed developed, then it seems certain that freeway signage as well as signage within the City of Trinidad will be developed by the Trinidad Rancheria. In the EIS that we argue is absolutely needed for this proposed project, we believe that signage must be considered and that public input must be sought to prevent outcomes like Figure 7 which are incompatible with natural landscape values within the coastal zone.



P27-46

Figure 7. Electronic sign advertising Bear River casino-hotel along highway 101 near Loleta, CA. Reproduced from https://www.times-standard.com/2015/08/06/bear-river-caltrans-settle-electronic-billboard-issue/

P27-46 (Cont.)

G. The EA is Defective Because it Erroneously Assumes That the City of Trinidad has Enough Water to Supply the Proposed Hotel

There are two distinct water supply issues raised in the EA. Issue 1 concerns the magnitude of the water need at the proposed 6-story 100 room hotel. Issue 2 concerns the ability of the Trinidad City water system to supply the hotel's water needs without having adverse impacts on other obligations that the City has to provide water to other users.

Based on our reading of the EA and our understanding of the data provided in the EA, we conclude that the water needs of the proposed 6-story, 100 room hotel will be substantial (from 15,088-18,860 gallons per day (gpd). The EA contends that this substantial water need, equivalent to about 45 average residences, could easily be satisfied by the City of Trinidad's Luffenholtz Creek water supply. The logical basis of this contention is seriously flawed, however, and the conclusion that there would be "no adverse effect on municipal water supplies" is unsupported.

P27-47

Below we first summarize our understanding of the probable water needs of the hotel (Issue 1). We then summarize our concerns regarding the availability of water for the proposed hotel and the possible adverse implications of delivery of this water for other entities requesting water service from the City of Trinidad at present and in the future (Issue 2).

G.1 Water Need.

Section 2.2.1 of the EA states that "*Water demands for the Hotel and accessory components would be approximately 18,860 gallons per day (gpd).*" In this same Section it is stated that "*Construction of a 100-room Hotel would result in the need to treat and dispose of approximately 10,000 gallons of wastewater per day*" and that "*Recycled water would be utilized for toilet flushing within the Hotel, accounting for approximately 20 percent (2,000 gpd) of the proposed Hotel wastewater generation rate.*" Figures concerning recycling of treated wastewater are presented for the Rancheria's casino which is stated to recycle 60% of treated wastewater back into casino toilets. Because the casino provides no lodging for its customers, however, it would be unreasonable to expect a 60% recycling rate for

P27-48

the proposed hotel. Indeed, the EA appears to propose a 20% treated wastewater recycling rate for the hotel.

Assuming that water needs of the hotel are indeed 18,860 gpd and that 10,000 gpd will need to be treated and disposed of, it is reasonable to ask "what happened to the missing 18,860 – 10,000 gpd"? If the hotel can effectively recycle 20% of its treated wastewater and recycle it for use in toilets, and the hotel needs are 18,860 gpd, then the daily wastewater treatment need of the hotel would be approximately 18,860 – 0.20*18,860 = 15,088 gpd which would then be equivalent to the **net** daily water need of the hotel. That is, there must be a *balanced daily water budget*, with water supplied to the hotel and disposed from the hotel on a daily basis generally being equal to one another, while accounting for a 20% recycling rate for toilets. The EA's stated need to dispose of only approximately 10,000 gpd of wastewater would require a recycling rate of 47%, a rate that is considerably greater than the 20% recycling rate stated for recycling of treated waste back to hotel toilets.

P27-48 (Cont.)

There is further evidence in the EA that 18,860 gpd is, in fact, the estimated daily water need for the hotel. In Section 3.10.1 of the EA it is stated that "*The City has permits to use approximately 355,392 gpd of water. However, they are currently only using approximately 82,191 gpd (Buckman, 2017).*" And at Section 3.10.7, the EA states that "*The Proposed Project would use approximately seven percent of the City's available water supply, increasing the City's total water usage to approximately 30 percent of available capacity. (Buckman, 2017).*" These statements are consistent with the following calculation: City's current available water supply = 355,392 gpd – 82,191 gpd = 273,201 gpd, and 18,860 gpd/273,201 gpd = 0.069 = 7%. That is, the calculation of the hotel's water need compared to remaining "available water supply" of the City are consistent with the hotel requiring 18,860 gpd. Although we believe that the EA's characterization of available water is misleading and incorrect, we do believe that these calculations suggest a daily water need of 18,860 gallons.

P27-49

To summarize the above:

- The proposed hotel would require from 15,088 – 18,860 gpd of water;
- It is not clear how the EA arrives at a figure of 10,000 gpd of wastewater for which disposal would be required. Given a need of 18,860 gpd, and assuming 20% recycling for toilets, the net water need of the hotel would be 15,088 gpd, roughly equivalent to the supply required to operate the hotel, and an equivalent wastewater flow require disposal.

P27-50

G.2 Water Availability.

The EA (in Sections 3.10.1 and Section 3.10.7, see above) uses calculations based on the City of Trinidad's *permitted* daily extraction rate of 355,392 gpd from Luffenholtz Creek to conclude that "approximately 70 percent of the City's water supply (would be) available after project development", falsely implying that there are no concerns whatsoever regarding ability of Trinidad to supply water to a new 100 room hotel development. A 2017 personal communication with Bryan Buckman, Director, Trinidad Water Department, rather than a rigorous assessment, is cited to support this implication. It is not supported by substantial evidence.

P27-51

A rigorous analysis of the ability of the City of Trinidad to supply water to the proposed hotel agreement should instead be based on a hydrologic assessment of the *actual* available supply, under low flow, drought year conditions that create the *constraints* for the total gpd that can be safely assured to be available to supply customers. Water supply available under these low flow, drought year conditions then needs to be compared with (b) peak water delivery obligations and usage by existing customers during low flow periods, (c) pending or anticipated future delivery obligations to new customers, including assessment of priorities for addition of new customers, as well as (d) needs of fish and amphibians that may place additional constraints on water extraction at low flows.

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(a) Water availability under low flow drought conditions.

The most recent hydrologic studies of Luffenholtz Creek appear to have been carried out as a result of water-related issues raised by the Moss Minor Subdivision project. A letter from Winzler and Kelly (then a local engineering firm), dated 06 April 2009, contained in Exhibit O of the Moss SEIR states the following:

"the City sole raw water supply is Luffenholtz Creek. The City is allowed to extract a maximum of 0.56 cfs from Luffenholtz Creek. The City's water right permit stipulates that when the flow in Luffenholtz Creek is lower than 0.86cfs, the City must leave at least 0.15 cfs in the creek, including enough for the 0.0054cfs worth of water rights downstream from the City, resulting in a total of 0.1554 cfs or approximately 70 gpm that must bypass the City's water intake. During the drought period of 1977, the flow in Luffenholtz Creek was recorded to drop to 0.62 cfs. This is considered the lowest recorded flow conditions for Luffenholtz Creek. At this flow the City could still divert up to 208 gpm or 299,520 gpd, which is slightly less than the City's current peak demand." (underlining added)

P27-53

Due to concerns regarding adequacy of flows in Luffenholtz Creek to serve additional users, the Moss Minor Subdivision (in the headwaters of Luffenholtz Creek) was required to store winter rainwater and forbear from pumping from the creek or from a well from July through October. Such restrictions would not have been placed on the Moss Minor Subdivision had there been no concerns regarding possible impact on the Trinidad Luffenholtz Creek water supply. We also note that more serious droughts than the 1976-77 drought can certainly take place and that long-term planning must also account for possible effects of climate change on water supply.

P27-53 (Cont.)

Assuming the 2009 Winzler and Kelly analysis for the Moss Minor Subdivision is correct, the implication is that available water supply form Luffenholtz Creek during low flow drought year (1977) conditions is marginally greater than flow needed to support peak demand from existing customers. It is unclear whether available water supply under such conditions could support additional build-out within the City limits, much less support additional outstanding requests, as well as the additional water required by the proposed hotel.

P27-54

Because availability of Trinidad's water system to supply additional customers with water is currently unclear, the City of Trinidad has recently received grant funding (Project LCP-17-03) to complete a water supply assessment to allow completion of its Local Coastal Plan for the Trinidad Planning Area. Justification and motivation for the water supply assessment include the following: (a) the recent drought has caused well failures in the area outside the City limits and has generated requests for additional service connections and possibly annexation to expand Trinidad's water service area, and (b) there is need for a water supply assessment to determine the number of additional service connections that could be added. The proposal for funding states that "Data confirm that the Luffenholtz Creek watershed can support build-out within City limits", but that more data is needed to determine the extent to which Trinidad can provide for an expanded service area, including provision of potable water to the CAL-FIRE station approximately 1 mile north of City limits and expanded demand from the Trinidad Rancheria. The objectives of the water assessment study include the following:

P27-55

- Assemble and assess data to complete water supply assessment
- Meet and consult with community stakeholder, coastal commission staff
- Explore and assess service boundary options
- Identify strategies to meet multiple goals across water resource service area
- Explore watershed capacity and provide economically effective policies and regulations to respond to water service connection requests.

Note that the City's first obligation for new service connections is to ensure that adequate water is available to support future buildout *within the City limits*. The water needed to supply the Rancheria's hotel would be roughly equivalent to adding about 45 new service connections to typical homes served by the water system proposed. The water assessment study is expected to be completed in January, 2019, should provide a greatly improved basis from which to judge availability of Trinidad's water supply to support additional users, and should provide a framework for establishing priorities for adding future service connections (see also below).

P27-55 (Cont.)

Obligations to provide service to other customers. As noted above, Trinidad's first obligation is to ensure that adequate water supply is retained to allow full build out within the City limits so that within the City customers can always be guaranteed access to the City's water system. The City has recently made a request to provide potable water to the CAL-FIRE station about 1 mile north of City limits on Patricks Point Drive. This action would require a 1-mile extension of the City's water lines. The local District of the California Coastal Commission has recommended approval of Trinidad's proposal to provide service to the CAL-FIRE station , but with the following relevant modifications:

- prioritize services to visitor-serving commercial recreation lands; and
- allow for extensions of water service to these priority uses as long as the extension would not remove capacity necessary to serve all existing and planned development within the City limits.

P27-56

Thus, these requested modifications would mean that Trinidad would need to treat all visitor-serving commercial properties along the extension 1 mile north of the City as a having priority for service connections, assuming that addition of such connections would not mean that service connections could not also be provided for full buildout within the City limits. A potential maxim demand of 17,269 gpd, comparable to the hotel need, could result from these proposed modifications. (see page 17 of LCP-1-TRN-17-0072-1 (CalFire Water Service Extension), dated 24 August 2018. A decision on the local District's recommendation will be issued by the California Coastal Commission by April 24, 2019.

To summarize:

- A rigorous hydrologic analysis of available water production from Luffenholtz Creek is needed to allow confident assessment of additional water service that can be provided by the City of Trinidad.

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- The City of Trinidad is currently carrying out such a rigorous water supply assessment which should be completed in January, 2019
- The local District of the California Coastal Commission (CCC) has recently recommended approval of Trinidad's request to extend it's water system approximately 1 mile north of City limits, to provide potable water to a CAL-FIRE station
- The recommendation for approval of the CAL-FIRE extension carries with it a recommendation for priority provision of water service to visitor-serving commercial properties along this 1-mile extension, properties which have not previously received water from the City of Trinidad. The CCC's decision is expected by April 24, 2019.

P27-57 (Cont.)

Until the results of the water assessment have been presented, and until the CCC's decision is made known, it is impossible to judge whether adequate water will be available to provide the needs of the proposed hotel, nor is it possible to determine whether or not provision of water to the hotel would adversely affect other users on the City's water system.

H. The Hotel Should not be Built on Geologically Unstable Land

Included in the Environmental Assessment for Trinidad Rancheria is and Appendix that is a Geotechnical report prepared by Crawford and Associates, dated 2016. The Crawford and Assoc document includes the following description for the evaluation of the risk of landsliding:

> An active slide extends upslope of Scenic Drive to near the southwest corner of the proposed hotel. This slide appears to be relatively shallow (perhaps on the order of 10-15 feet deep). The head of the slide is near the edge of the existing casino parking area.

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> The active slide appears to involve primarily the terrace deposits overlying the bedrock. Groundwater is a major contributor to slope instability and appears to move within and through the terrace materials, "daylighting" out-of-slope where the rock is exposed. Areas of surface seepage, springs and water- loving vegetation are evidence of seasonal, shallow groundwater within the slope.
>
> Based on preliminary discussions with the design team, we expect the hotel footprint will be modified to avoid the slide feature. Depending

on the final hotel layout, some level of slope stabilization should be considered to limit headward encroachment of the slide.

The Crawford and Assoc's report does not directly address the risk of landsliding at the location of the proposed building.

The proposed building is located at and maybe slightly over, the edge of a bluff. Risk for top of bluff along Scenic Drive is often described with an average bluff retreat rate (one foot per yr. is sometimes used) and is a function of distance from the edge and presumed economic lifespan of the improvements. The question should be "what is the rate of bluff retreat"?, rather than will there *be* bluff retreat.

P27-58 (Cont.)

For comparison, a geologic report completed for the Baker Ranch subdivision adjacent to the subject site (as close as 300 feet), in 1989 by Busch Geotechnical Consultants, described an area of high risk as extending 65 feet back from the break in slope.

The borings completed by Crawford and Assoc's encountered bedrock in four of the six holes. The depth to bedrock materials in four of the borings was relatively consistent, possibly suggesting they penetrated a large, highly weathered block. Yet, the field descriptions regarding the intensity of shearing, and the recorded blow-counts shows the material varies widely. Use of the term "bedrock" may be misleading. It often implies a hardness, like hearing a ping sound when hitting with a hammer. But that is not the case for these materials. Hitting with a hammer results in a thud. The measured blow-counts attest to these materials more likely to behave as soil than rock

A characteristic of the Franciscan rock structure can be large differences over short areas. Please see boring number one by Crawford and Assoc's and compare with boring number three from Selvage, Huber, and Nelson (SHN) for an example of a large variation over a short area.

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The most economical and prudent way to mitigate the risk of landsliding is to move the building to a different location, away from the buff top.
Some of the proposed mitigation measures for repairing the landslide area involve adding more weight to the top of slope, which could be a poor choice since weight is a principal driving force.

The evaluation of slope stability is incomplete. It is recommended to include a good topographic profile from the head of the slide to the ocean. A main purpose

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is to highlight the height of some of the scarps within the slide complex, which may be greater than 10-15 feet high, and to make observations in the slide mass. We recommend showing the slope directly below the proposed building footprint in more detail.

The depth of the failure plane(s) of the identified active slide are unknown. Assuming the slide is shallow may be a poor judgement. The mitigation proposed is embedment of structural elements into the bedrock. The proposed depth of embedment appears to be the same as the assumed depth of the slide. It is a large risk to assume things for a structure of this magnitude at this location on the bluff.

P27-60 (Cont.)

More work should be completed for a full assessment. We recommend the slope below the proposed building site be described in detail and evaluated for potential failure during the earthquake that has a 10% chance of being exceeded in the next 50 years (this is not the potential Cascadia Subduction zone earthquake, rather it is a Gorda Plate event). We recommend lateral forces, the possibility of soil moving around and possibly with the proposed piers, be included in design elements. We recommend using the lowest recorded strength parameters in design and strongly consider using residual values instead of peak values. We strongly urge reconsideration of the location of this proposed building footprint.

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As is well known by anyone know who travels regularly along Scenic Drive, earth flows and other types of landslides are common and they are not readily fixable. Some of the welded wire walls constructed along Scenic Drive to span some segments of earthflows are beginning to show signs of movement (cracks in the asphalt). These are often explained by settlement of back-fill but an alternative explanation is progressive movement below the wall.

Because significantly more work is required on the geotechnical component of the EA, a joint EIR/EIS should be done to ensure that public safety is not compromised.

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I. The EA is Defective in That it Does not Adequately Consider Biological Impacts

I.1. *Bird and Wildlife Habitat*

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The Trinidad coastline has attained special status because of the high caliber of its many habitats, from under the ocean to the tops of the sea stacks and coastal bluffs.

It has been designated a California Coastal Nation Monument because of the abundance of wildlife in the waters and on the offshore rocks. The Bureau of Land Management (BLM) has designated Trinidad as a Gateway Community to this National Monument. This both recognizes the special beauty and adds protections to ensure proper management of these nationally and internationally significant places. The proposed casino also lies in close proximity to the Trinidad Area of Special Biological Significance, further discussed under section I.2.

Trinidad lies in the Pacific Coast Flyway, a major migration corridor for neotropical birds migrating through Humboldt County on their way to their summer habitats and some of which reside in the area throughout the summer. There are also many sea birds that migrate daily from their nests in the coastal forest to their feeding grounds on the ocean. Bird life is abundant (see Table C-1, Birds Observed in the Trinidad Area) and in addition to a group of avid local birdwatchers, people come to Humboldt County from around the world to observe birds.

P27-63 (Cont.)

A major hazard for birds in flight is accidental strikes on reflective surfaces, especially windows. A six-story glass sided hotel as displayed on the Cher'ae Heights Casino website and as depicted in the Environmental Assessment (EA), would elicit a high rate of bird strikes because of the large reflective surface that looks just like the sky to birds – they don't see the glass. Tuft's Wildlife Clinic reports that windows can be deadly for birds (https://wildlife.tufts.edu/bird-strikes-windows/). Their web site states: "Ornithologists estimate that up to 100 million birds are killed each year by collisions with windows. These collisions usually involve small songbirds, such as finches, that may fall unnoticed to the ground. Sometimes the birds are merely stunned and recover in a few moments. Often, though, window hits lead to severe internal injuries and death."

The EA does not adequately address this hazard nor the expected number of bird deaths and species of birds most likely to be affected. With several special status birds that could be impacted by the project there should be a more thorough assessment. The EA glosses over potential wildlife impacts, stating; "[a]lthough the project site does not contain suitable habitat for nesting birds, there is potential for migratory birds that are accustomed to high levels of human activity to nest adjacent to the project site within the mature trees. The trees are located adjacent to the edge of the asphalt surface." (EA, Section 3.4.1). While admitting that the proposed hotel is close to potential nesting (and roosting) trees, the EA does not assess potential bird mortality form bird strikes on the proposed six-story glass sided hotel.

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Table I-1 Birds Observed in the Trinidad Area (partial list):

1. Cooper's hawk (*Accipiter cooperii)*	2.Red-shouldered hawk (*Buteo lineatus)*	3. Red-tailed hawk (*Buteo jamaicensis)*	4. Peregrine falcon (*Falco peregrinus)*	5. Kestrel (*Falco tinnunculus)*
6.Band-tailed pigeon (*Patagioenas fasciata)*	7.Mourning dove (*Zenaida macroura)*	8.Pygmy owl (*Glaucidium californicum)*	9. Western screech owl (*Megascops kennicottii)*	10.Great horned owl (*Bubo virginianus)*
11. Allen's hummingbird (*Selasphorus sasin)*	12. Anna's hummingbird (*Calypte anna)*	13. Red-breasted sapsucker (*Sphyrapicus ruber)*	14. Downy woodpecker (*Dryobates pubescens)*	15.Hairy woodpecker (*Leuconotopicus villosus)*
16.Northern flicker (*Colaptes auratus)*	17. Pileated woodpecker (*Dryocopus pileatus)*	18. Wild turkey (*Meleagris gallopavo)*	19. Black phoebe (*Sayornis nigricans)*	20. vireo (*disambiguation sp.*)
21. flycatchers (*Erythrocercus sp.)*	22. willow flycatchers (*Empidonax traillii)*	23. Stellar's jay (*Cyanocitta stelleri)*	24. American crow (*Corvus brachyrhynchos*)	25.Common (Northern) raven (*Corvus corax)*
26. Purple Martin (*Progne subis)*	27. American Cliff Swallow (*Petrochelidon pyrrhonota)*	28. Barn Swallow (*Hirundo rustica*)	29.Black-capped Chickadee (*Poecile atricapillus*)	30.Chestnut-backed chickadee (*Poecile rufescens*, formerly *Parus rufescens*)
31. Red-breasted nuthatch (*Sitta canadensis*)	32. Brown creeper (aka American Treecreeper) (*Certhia americana*)	33. Golden-crowned kinglet (*Regulus satrapa)*	34. Swainson's thrush (aka olive-backed thrush)(*Catharus ustulatus*)	35. Hermit thrush (*Catharus guttatus*)
36. Varied thrush (*Ixoreus*	37. Wrentit (*Chamaea fasciata*)	38. Pine siskin (*Spinus*	39. Cedar waxwing (*Bombycilla*	40. Orange-crowned warbler (*Oreot*

P27-64 (Cont.)

naevius)		*pinus*)	*cedrorum*)	*hlypis celata*)
41. Yellow-rumped warbler (*Setophaga coronata*)	42. Townsend's warbler (*Setophaga townsendi*)	43. Wilson's warbler (*Cardellina pusilla*)	44. Spotted towhee (aka rufous-sided towhee) (*Pipilo maculatus*)	45. Fox sparrow (*Passerella iliaca*)
46. Song sparrow (*Melospiza melodia*)	47. White-crowned sparrow (*Zonotrichia leucophrys*)	48. Golden-crowned sparrow (*Zonotrichia atricapilla*)	49. Dark-eyed junco (*Junco hyemalis*)	50. Black-headed grosbeak (*Pheucticus melanocephalus*)
51. American goldfinch (*Spinus tristis*)	52. turkey vulture (*Cathartes aura*)	53. mourning dove (*Zenaida macroura*)	54. California gull (*Larus californicus*)	55. American robin (*Turdus migratorius*)
56. Marble murrelet (*Brachyramphus marmoratu*)	57. Northern Spotted Owl (*Strix occidentalis caurina*)	58.	59.	60.

P27-64 (Cont.)

I.2. Water Resources:

The EA states that "[n]o Waters of the U.S. occur on the project site. No discharge of dredged or fill material, or other disturbance to wetlands or other waters of the U.S. would occur as a result of Alternative A." However there is a perennial stream which flows under the existing casino parking lot and which is subject to Army Corps of Engineers jurisdiction. The creek was put into a pipe and filled over to create the parking lot. Sinkholes developed in the parking lot due to shoddy construction practices (using wood in the fill; improper compaction). The assessment in the EA is inadequate in addressing potential impacts to waters of the U.S and to potential species that may occur in the waterway.

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I.3: Trinidad Area of Special Biological Significance

P27-66

The kelp beds around Trinidad Head are designated as an Area of Special Biological Significance (ASBS) by the State Water Quality Control Board (SWQCB). ASBS status recognizes biologically important areas and prohibits discharges into the designated area. In 2005 the SWQCB sent letters of prohibition to the entities discharging into the ASBS, notifying them that they were violating State Water Quality regulations. The ASBS protected area is confined to the kelp beds around Trinidad Head but any discharges into the ocean near the kelp beds have the potential to negatively impact this environmentally sensitive area. The City of Trinidad, the Trinidad Rancheria, and the Humboldt State University Telonicher Marine Laboratory were required to develop and implement plans to capture, redirect, and infiltrate runoff to prevent the introduction of pollutants into the ASBS. The City has had to develop an on-site wastewater treatment system (OWTS) ordinance to bring septic systems into compliance and to commit to ongoing monitoring of systems. The Trinidad Rancheria, the casino, and the planned hotel are not subject to the City's OWTS ordinance, therefore inspection is not required, nor are corrective actions. Yet the proposed hotel proposes to treat its effluent with an on-site wastewater treatment system, more commonly known as a septic system.

P27-66 (Cont.)

The proposed 100 room hotel on the eastern side of Trinidad Bay poses a significant threat to water resources in Trinidad Bay, discussed elsewhere in this comment letter in regard to water quality impacts, but which have relevance on biological resources also because impaired water quality can have a negative impact on aquatic species and sensitive habitats such as the Trinidad Area of Special Biological Significance. The EA notes that there have been problems in the past with the on-site sewage disposal system. The Winzler & Kelly wastewater investigation (2004), cited in the EA, notes that existing septic tanks are under wooden decks, a driveway, and a large above-ground pool. Only 7 of 25 tanks have access ports. The report notes problems with leach field design, high ground water levels, inadequate setbacks from steep slopes and bluffs, inadequate stream setbacks, unstable landforms, and shallow depth to bedrock. Page 2-3 of the W-K report states "It is expected that some sites did not exhibit surfacing effluent in the summer would have problems in winter when groundwater was at a maximum." On page 2-4 of the W-K report, the authors recommends: "the Rancheria should consider replacing the system with a community system." One of the problems cited in the report was clogging of leach lines from grease. Yet the proposed hotel will rely on a septic system to treat a potential 19,000 gallons per day. The EA is inadequate in its assessment of and consideration of alternatives for waste water disposal. Based on past performance of the Rancheria's septic system, there is no reason for the public to feel reassured that the proposed hotel will not have a

P27-67

significant negative effect on groundwater and discharges into Trinidad Bay, with negative impacts to the significant biological resources in Trinidad Bay.

The proposed water use and volume of waste water associated with the hotel and its facilities (swimming pool, laundry, kitchen) that will need to be treated under the proposed facility will present a significant engineering challenge and will place a huge strain on the local groundwater and soil resources in the leach fields. Monitoring conducted by the City of Trinidad at seeps and springs along the base of the bluffs on local beaches, and water quality monitoring at local beaches by Humboldt Baykeeper and the Humboldt County Environmental Health Department, and as reported by "Heal The Bay; Beach Report Card 2017-18: Banner Year for Water Quality" (06.07.2018 | Matt Kin) show that we currently have poor water quality at our local beaches (Luffenholtz Beach, Clam Beach). Failing septic systems are cited as a likely cause. Noting the previous problems with waste water treatment at Cher'ae Heights Casino, including failure of leach lines, there needs to be a much more thorough analysis of local ground water dynamics and the impact of the proposed water use and introduction of waste water into the local soils and the potential transmission of polluted water into Trinidad Bay and the ASBS. The numbers cited in the EA and claims by Trinidad Rancheria representatives vary on how much water the hotel will use. In order to properly assess the potential impacts of the proposed project, a definitive volume of water use must be provided and analyzed for both its waste water treatment needs and the impact of the waste water discharge on ground water and biological resources.

P27-67 (Cont.)

The EA is inadequate in this regard and a combined EIR/EIS is needed to provide a more thorough analysis of the impacts.

J. The EA is Defective in That it Does not Adequately Consider Solid Waste

The EA fails to account for recent changes in global trade affecting U.S. landfills, instead it assumes sufficient capacities: "Unsuccessful attempts were made to contact both the McKinleyville transfer station and Anderson Landfill to determine daily capacities. However, there is no indication that capacities have been exceeded." (EA 3.10.3, pg. 3-21.) These are issues that can be addressed in a future EIR/EIS.

P27-68

K. Miscellaneous Inaccuracies in the EA

P27-69

At page 2-3 of the EA, it is stated that "[a]s part of the lease agreement, Hyatt would provide the design standards for the Hotel to ensure development is commensurate with Hyatt standards and the Tribe's culture." The final design should not wait for the lease agreement. An effective EA cannot be done, certainly with respect to visual impacts, when it is unknown what the final design will be. How can visual impacts be evaluated when no one knows what the hotel will look like? The graphic provided in the EA clearly shows that Hyatt's standards are being met, but it is difficult to see where the Rancheria's cultural values are being represented. Who's project is this anyway, Hyatt's or the Rancheria? The final design can be evaluated as part of an EIR or an EIS.

P27-69 (Cont.)

Sec. 3.2 states that "[t]he project site and surrounding lands do not directly contribute surface water to Luffenholtz Creek-Frontal Pacific Ocean sub-watershed; rather, overland flow drains via stormwater outlets into the Pacific Ocean." What is not mentioned is that it actually drains into the east portion of Trinidad Bay, right next to the area which is listed by the State of California as an Area of Special Biological Significance because of the kelp beds located there. Parking lots are notorious for contributing oil and grease to drainage water, and also ethylene glycol, a highly toxic component of anti-freeze which routinely leaks from vehicles.

This raises federal Clean Water Act issues that are not addressed anywhere in the EA. These can and should be considered in a combined EIR/EIS.

P27-70

Sec. 3.6.3 states that "the area currently has a shortage of lodging." No source is cited for that pronouncement. There are numerous vacation rental units available in the area, as well as RV parks, cabins and bed and breakfasts for rent. The only shortage is of high-rise hotels, and that is no accident.

P27-71

Sec. 3.10.2 states that the Rancheria "currently utilizes City sewer connections…." It does not say what city, but if the EA means Trinidad, that is impossible because Trinidad has no sewer system.

P27-72

Sec. 3.10.4 states that there are no issues with natural gas that would create impacts because of the new hotel. That might be because there is no natural gas service north of McKinleyville. The Trinidad area is serviced by propane delivered to on-site storage tanks. It will obviously take a very large on-site storage tank to support a 100-room hotel. The presence of such a large tank should be evaluated in an EIR/EIS.

P27-73

Sec. 3.10.6 states that the Trinidad Volunteer Fire Department has two fire stations, one located in Trinidad, and one located in Westhaven. This is wrong. The station in Westhaven is for a completely separate fire department. And, neither department has a truck capable of fighting a fire in a six-story hotel. These are issues that must be fully examined in an EIR/EIS. P27-74

Sec. 3.10.7 incorrectly states that the Rancheria's wastewater treatment system will be upgraded to handle 50,000 gpd. The letter from Northstar Design Solutions attached to the EA just prior to Appendix A states at page 2 that the plan is to upgrade the existing capacity to 30,000 gpd, not 50,000. P27-75

The Section on noise impacts does not acknowledge that the hotel includes a bar with outdoor seating on the top floor. Bars stay open until 2:00 a.m. This clearly creates the probability of drinking, loud talking and laughter, not to mention music, late at night. With all this happening so far off the ground, it must be assumed that this noise will travel to the neighboring residential areas. A future EIR/EIS should include a realistic assessment of this potential affect on the human environment. P27-76

Sec. 3.12.2 mentions something called "Citizens Mortuary" located at 470 Oceans Ave., in Trinidad. There is no such place, and if there ever was, it is long gone now. P27-77

Sec. 4.1.3 states that "…the development of the proposed project would be generally consistent with the visual goals of County and City land use regulations…" Nothing could be further from the truth. A future EIR or EIS could properly evaluate the visual impacts of the proposed project. P27-78

Sec. 4.4.2 states that "[a] project that would include 'disorderly growth' (i.e. would conflict with local land use plans) could indirectly cause adverse environmental or public service impacts." The proposed project itself is an example of "disorderly growth," because it is in total conflict with both Trinidad and County of Humboldt ordinances and General Plans. P27-79

CONCLUSION

The proposed hotel is incompatible with the surrounding area. The area is among an increasingly rare class of unspoiled California coastline. It must be protected and valued so it can be enjoyed by all persons, regardless of their domicile, in perpetuity. Therefore, the Regional Director should reasonably exercise her authority and select option B of the EA, the no project alternative. P27-80

Failing that, for the reasons set forth herein, a joint EIR/EIS should be undertaken with agencies of the State of California, which examines the cumulative impacts of the Rancheria's long-term plans, including a new freeway interchange to serve the hotel, tripling the size of the existing casino, adding a gas station and RV park and other aspects of the Rancheria's General Plan.

P27-80 (Cont.)

Very Truly Yours,

J. Bryce Kenny
Attorney for HARP

Comment Letter P28

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Attn: Bureau of Indian Affairs – Pacific Region
C/O: Amy Dutschke
Chad Broussard
Harold "Dan" Hall

Wednesday, October 17th, 2018

Greetings,

My name is Jolene Thrash and I am a Eureka resident. I am writing with public comment on the Trinidad Rancheria's plans for the casino hotel.

I have lived in Humboldt County my entire life. This is the place I chose to get my education, to buy my home, have a career, and raise my child. I am someone who really appreciates the rural beauty of our area. I am a person who loves to be outdoors.

Trinidad is somewhere where I retreat to enjoy the uninhibited beauty of the coast. I am not opposed to a hotel; I understand the benefits of moving forward on such a project. I support Trinidad Rancheria's self-sufficiency and local economic opportunities. My main concerns with the plans for the hotel are related to aesthetics/design and potential environmental impact. P28-01

I find it unacceptable to move forward with a design that completely undermines the serenity of the surrounding area. I feel strongly that the design must fit more appropriately within the existing coastal surroundings. I think about State and National Park lodging as an example to turn to in this situation. I personally think the current design renderings are a disgrace to the integrity of the aesthetics of our coastal atmosphere.

More importantly though, I also feel strongly that a comprehensive and careful Environmental Impact Study is prudent and should be supported in order to determine potential environmental impacts that could result from such a development. I think mainly about biological concerns, noise, pollution, water usage, waste, and traffic which are only a few examples. I am hopeful that it is the Trinidad Rancheria's goal to set a tone and culture emphasizing the importance of preserving the Trinidad coast. I fear however, that since the premise of proper consultation and consideration is not being sincerely engaged at the onset of the project, a different message is being sent to the community. How can our community be assured that Trinidad Rancheria will protect the environmental interest of this fragile coastal environment which includes us all? Again, I feel this situation must be likened to a process that would take place in the case of a State or National Park, one with the utmost respect and reverence for the environment and with an emphasis on a duty to protect it. P28-02

Thank you for the opportunity to comment.

Sincerely,

Jolene Thrash
Jolene Thrash

Hall, Harold <harold.hall@bia.gov>

[EXTERNAL] Fwd: Trinidad Rancheria Project

1 message

Charles Netzow <netzows@gmail.com> Mon, Oct 22, 2018 at 4:32 PM
To: "chad.broussard@bia.gov" <chad.broussard@bia.gov>, "harold.hall@bia.gov" <harold.hall@bia.gov>

---------- Forwarded message ---------
From: Charles <netzows@gmail.com>
Date: Mon, Oct 22, 2018 at 4:30 PM
Subject: Trinidad Rancheria Project
To: <amy.dutschke@bia.gov>

I am a local property owner, general contractor and designer, and have built about 20 coastal projects.
This project is completely acceptable in my opinion and the owners should be left to their considerable skills to implement it as they see fit.

P29-01

Charles Netzow
1337 Stagecoach Road
Trinidad Ca 95570

707 834 2176

Comment Letter P30

Josiah Raison Cain
58 Maiden Lane | SF, Ca | 94108
jcain@sherwoodengineers.com | (415) 685-4423

Monday, October 22, 2018

Ms. Amy Dutschke
Bureau of Indian Affairs - Pacific Region,
2800 Cottage Way
Sacramento, CA 95825
(916) 978-6041

RE: Trinidad Rancheria Hotel Development Project

Dear Ms. Dutschke:

I am writing with regard to the Environmental Assessment (EA) for the proposed Trinidad Rancheria Hotel in the town of Trinidad, CA. I am a Landscape Architect and an owner/principal at Sherwood Design Engineers, a full service civil engineering firm headquartered in San Francisco. Via 5 offices throughout the USA, our 70+ professionals provide design, engineering, and entitlement services for a variety of development projects including residential, commercial, healthcare, corporate and higher education campus, winery, and hospitality facilities including hotels. Highly regarded as water experts, our team regularly provides stormwater management, sewer treatment and conveyance, roadway alignments, grading packages, and other site engineering services. As such, I am intimately familiar with the development process, and am regularly asked to evaluate project feasibility and merits.

I also lived in Westhaven during formative years of my youth, from age 10 to 17, and returned regularly until well into my 20s. I attended Trinidad Elementary as well as Arcata High School, and had after school and summer jobs at Saunders Market and Trinidad Chevron. I spent many hours riding my bike along Scenic Drive to get to school, to the beach, and to visit friends.

I have strong concerns regarding this EA and associated project as proposed. While I am in support of the project conceptually, what is proposed is wildly out of scale with the infrastructure, resources, and character of the community. Frankly, it is beyond my comprehension how such a proposal could be considered appropriate by any measure in its current form. The impacts described would significantly and negatively impact the community in ways the EA fails to adequately address. My concerns are as follows:

P30-01

• The massing and character of the proposed structure(s) are out of keeping with the scale and character of the community, and make no attempt to integrate with the prevailing vernacular of a town that is highly regarded and visited for its character.

P30-02

• Impacts to traffic and road infrastructure are not sufficiently mitigated for; Scenic Drive is a small, narrow road with perennial problems associated with steep slopes, erosion, and unstable soils. It is in my opinion irresponsible to assume this condition can support a development of this size for any substantial period of time. Impacts to existing

P30-03

Josiah Raison Cain
58 Maiden Lane | SF, Ca | 94108
jcain@sherwoodengineers.com | (415) 685-4423

residents and visitors must be addressed, as well as those of trucks and heavy equipment associated with the construction phase(s) of work.

P30-03 (Cont.)

• Stormwater and wastewater from the project are not adequately addressed. The aforementioned soil instability and erosion are likely to be exacerbated by the concentration and infiltration of significant volumes of water, particularly in winter. Additional hydrological and geotechnical analysis must better demonstrate that water quality and soil stability can be maintained. The assumptions and single visual inspections referenced in the EA are inadequate documentation for a project of this scale.

P30-04

P30-05

• The proposed project would impose a prominent and visually dominant feature into the viewshed of a protected biologically sensitive marine zone and National Coastal Monument. At night, this facility would almost certainly dominate the viewshed from many surrounding areas, creating light pollution that may affect wildlife, and forever changing the ambience of this small fishing town nestled on the bluff in a rural redwood forest.

P30-06

Perhaps of greatest concern is the obvious lack of sensitivity to existing natural assets, and the local residents who value them. There is nothing about the proposed project that suggests any real concern for what appear to be dramatic impacts to viewsheds, road infrastructure, sensitive coastal erosion, and the small town vernacular that exists today in Trinidad. This is an outdated design approach that features materials and forms that in no way respond to the unique setting, topography, scale of either landscape or existing built fabric, or indeed socio-cultural heritage of this unique place. I would hope and expect something much more thoughtful and appropriate, and am likely to support such an effort.

P30-07

Currently I can only support either a no-build decision or the ordering of an Environmental Impact Study. As submitted, the EA does not adequately provide mitigation measures for the significant impacts of the proposed development, and certainly fails by any rigorous standard to provide an adequate basis for a finding of nonsignificant impacts (FONSI).

P30-08

Thank you for the opportunity to share my opinions regarding the proposed development in this very special location.

Sincerely,

Josiah Raison Cain, ASLA

the Northcoast Environmental Center

Mailing:
PO Box 4259
Arcata, CA 95518

Physical:
415 I Street
Arcata, CA 95521

(707) 822-6918
nec@yournec.org
www.yournec.org

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October 18, 2018

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Reg Dir
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Fax

Mr. Chad Broussard
Bureau of Indian Affairs – Pacific Region
2800 Cottage Way
Sacramento, CA 95825

Re: Comments on Trinidad Rancheria Hotel Project Environmental Assessment

Dear Mr. Broussard:

The Northcoast Environmental Center (NEC) submits the following comments in response to the Trinidad Rancheria Hotel Project's Environmental Assessment, on behalf of NEC's members, staff, board of directors, and member groups.

The Northcoast Environmental Center Inc. is a non-profit corporation that has been engaged in conservation and environmental protection in northwestern California since 1971. Our mission includes informing and raising concerns with agencies and the public about actions that may have an effect on our local environment, ecological resources and citizens. We appreciate the opportunity to comment on this EA and wish that you would have granted the customary extension for public comment. We look forward to your in depth response to the issues we have raised.

The full build out of all the Trinidad Rancheria's plans must be analyzed so that all the synergistic and cumulative effects are revealed to the public. It's clear that the Rancheria is involved in some type of master planning process and has been for over a decade. All of the elements envisioned in their master planning process need to be reviewed concurrently and made public, not piecemealed and analyzed one at a time. The National Environmental Policy Act (NEPA) does not allow for piecemealing of projects. The Bureau of Indian Affairs (BIA) needs to do a robust, full and complete Environmental Impact Statement (EIS) for all these contemplated projects. We are certain that most of these projects will have individually significant impacts on the human and ecological environment. The combined effect will be unknown until a thorough Environmental Impact Statement (EIS) is completed where all these many effects are addressed. P31-01

Visual and Scenic Resources:
Trinidad Bay is one of the most visually spectacular places along California's coast. Trinidad is a very small community that has escaped the wave of over development that the rest of California's coast line has been subjected to. It makes Trinidad a visitor destination and a place where locals love to visit. Sticking a large box-type hotel and accompanying development right on the bluff overlooking Trinidad Bay will profoundly blemish the unrivaled beauty of this area.

Federal Consistency Required:
The California Coastal Act requires coastal development to "fit in: "The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural landforms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting."(From Sec. 30251 (chapter 3, Coastal Act)). P31-02

Full Range of Alternatives:
A full and complete NEPA evaluation requires a full range of alternatives. The BIA has failed to offer a full range, only offering basically a "Build" and "No Build" leaving the public unable to properly evaluate other potential ways of accomplishing the purpose and need as envisioned by the Rancheria. The BIA acknowledges the significant impacts that Alternative A would create but then claims that these can somehow be mitigated. That is a false statement. The impacts of just the hotel aspect of the project by itself will be impossible to fully mitigate, not to mention all of the related and connected activities this project will produce. There needs to be a full range of alternatives where other ideas for how to accomplish some type of hotel can be discussed that will not have the dramatic and significant impacts that Alternative A will have. P31-03

CEQA Review:
Section 10.8 of the Tribal-State Compact Between the State of California and the Trinidad Rancheria requires that the Rancheria, among other actions, make "…a good faith effort to incorporate the policies and purposes of the National Environmental Policy Act and the California Environmental Quality Act…"(10.8.1). We have looked throughout the document and can find no reference to CEQA in the document. Is the Rancheria claiming an exemption from its required obligation to do a CEQA review? We do not believe the Rancheria is exempt. P31-04

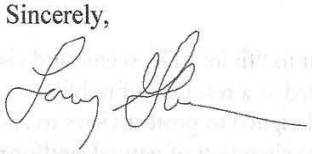
Water:
Alternative A makes the faulty assumption that this project would use 7% of Trinidad's water supply from Luffenholtz Creek. The methodology for this assumption is flawed or non-existent. Climate change is already producing more frequent long lasting dry spells which are already impacting water users in the city of Trinidad. The potential exists for the city of Trinidad to be unable to deliver water to its current users during any given dry summer. We are very concerned about the horrific repercussions this could have during a wildfire event in a dry summer. P31-05

Traffic:
The existing local road network in the project vicinity is failing and is unable to handle the current flow of traffic year round. Adding the traffic that the hotel and its axillary developments will create and is way beyond its existing capacity. The BIA has not included and is averse to including any discussion about the proposed new Highway 101 interchange that is obviously directly connected to the hotel project and the additional developments that the Rancheria plans. P31-06

Wastewater:
This environmental document fails to adequately reveal and explain how all of this additional wastewater will be able to be dealt with without causing great environmental harm through erosion and contamination.

In summary the Northcoast Environmental Center is supportive of the Rancheria being self-sufficient and having more economic opportunity. We would be able to endorse a smaller scale hotel type project that is designed to fit with the scenic coastal environment of Trinidad Bay, but not the multi-storied hotel type that you'd find in Miami Beach. The lack of any alternatives prevents the public from being able to show support for the tribe's endeavors at economic development. P31-07

Sincerely,



Larry Glass
Executive Director
Northcoast Environmental Center

Comment Letter P32

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PO Box 996
Trinidad, California 95570

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Oct. 19, 2018

Ms. Amy Dutschke
Bureau of Indian Affairs - Pacific Region
2800 Cottage Way
Sacramento, CA 95825

RE: Trinidad Rancheria Casino-Hotel Proposal

Dear Ms. Dutschke & the Bureau of Indian Affairs:

Like scores of my neighbors in and around the little North Coast village of Trinidad, I am opposed to the Trinidad Rancheria's casino-hotel project as proposed.

I am a homeowner and fulltime resident who lives just 1-1/2 miles from the Rancheria. My wife and I walk our dogs on the beaches below the Rancheria property. I am a sport fisherman who moors his boat in Trinidad Harbor and fishes/crabs the waters of Trinidad Bay off the Rancheria bluff. I am a retired university professor and work as a local newspaper editor and nature photographer. The addition of a massive 6-story Hyatt hotel on this beautiful bluff would be an affront to me and all of us who love this coastline, and who work and recreate here. P32-01

In shorthand, my concerns include the impact of the project on Trinidad Bay's unique and pristine scenic vistas from the city of Trinidad, from Trinidad Head (a National Coastal Monument), and from the ocean; our fragile coastal environment (Trinidad Harbor is a protected biologically sensitive zone); light and noise pollution; danger to dozens of species of birds from birdstrikes on the 70+-foot facade; effects on a geologically fragile bluff of 19,000 gallons/day in wastewater processing; intrusive signage. P32-02

The most obvious concern shared by the more than 100 citizens — a big crowd for this little town — who turned out at each of two public meetings about the project is its appalling design, completely inappropriate and even destructive on this pristine stretch of coastline. Although the massive Environmental Assessment report is supposed to offer various alternatives to the details of the project it evaluates, there is apparently no alternative being considered to the gross 6-story, 100-room Hyatt box that would tower on the edge of a geologically fragile sandy bluff above beautiful and unsullied Trinidad Bay. P32-03

Many of us would welcome a tasteful structure that would reflect both the natural environment and the native cultural heritage and values of the Trinidad Rancheria's people, a hotel that celebrates and meshes with the landscape and forest. But the proposed Hyatt hotel box looks like any one of thousands that can be found outside airports and along freeways across America. A design that is in harmony with the coastline would be so much more appropriate, and so much

more acceptable both to Humboldt residents who love this coast, and to visitors who travel here for the natural beauty.

Environmental and traffic concerns are a close second to the hotel's awful design in the minds of worried citizens here. The existing Cher-ai Heights Casino, which the hotel is proposed to abut, sits atop the sand and clay bluff formations that are common along hundreds of miles of Northwestern Coast. Scenic Drive, the former Redwood Highway, runs directly below the Rancheria property. The road and the sandy hillside on which it was built are in a constant state of slumping into the Pacific. Surely this is a poor choice for a heavy 6-story building that will use a projected 19,000 gallons of water/day. Even if a large percentage of that water is recycled, pouring even half that much water into a sandy bluff through leachfields will undoubtedly have an adverse effect on groundwater, cliff erosion and bluff stability.

P32-03 (Cont.)

P32-04

Scenic Drive itself, the only access to the construction site and subsequent 100-room hotel and casino, is wholly unsuited to the level of traffic projected for the hotel and an expanded casino, as the EA acknowledges. The "solution" is a proposed interchange exit on Highway 101 to the property's east, a massive project that is opposed by many Trinidad residents, and which could not be in place until 2026 at the soonest, according to the EA and the California Transportation Commission, which will not even decide on the interchange project until 2022.

P32-05

As a Trinidad municipal water system customer, I am doubtful that our water district, which has already been described as fully allocated and in jeopardy during times of drought can support this additional demand, the equivalent of 45 new single-family homes. I will strongly urge the City of Trinidad to reject the Rancheria's request for 19,000 gallons/day from the municipal system. The hotel should seek other water sources.

P32-06

I have many more objections to the various ways this hotel project would adversely affect my life, my town's character and environment, and this entire coastline. I refer you to the detailed comment document submitted by the citizen group Humboldt Alliance for Responsible Planning (HARP), which I would attach to this letter if I could. I urge close review of the HARP comments, and I strongly endorse the HARP criticisms and comments of the substandard EA on this project.

P32-07

One significant measure of public concern is the number of local residents who turned out for special meetings to learn more about what for many was a surprise development project. About 100 residents came to a hastily arranged citizens group meeting, called on Sept. 27 after the 500-page EA was released. Another 100 came to a special meeting between the Trinidad City Council and Rancheria representatives on Oct. 15. During public comment Q&A periods at both meetings, feedback focused on how to improve the design to fit the setting, water concerns, land-taking for the interchange, and environmental impacts.

Under the rules of the Environmental Assessment process, as I understand it, the BIA now has the option to make a finding of no significant impacts (FONSI) for this project. That would be inconceivable, given that the impacts of the proposed hotel would be not just significant but enormous in terms of multiple adverse effects on the area's environment, traffic, bluff stability, unsullied beauty, small-town culture & etc., etc. The EA review of the project and its impacts is

P32-08

insufficient, and the project has been rushed through without adequate consultation with the public and other stakeholders who will be affected. I strongly urge the BIA to order a comprehensive Environmental Impact Study and design review to provide a much more complete evaluation of the true impacts of this project, and to educate the public.

P32-08 (Cont.)

Absent a major revision of the visual, environmental, traffic and related impacts of the project, I strongly recommend that the BIA reject the hotel proposal in its entirety.

Thank you for your attention.

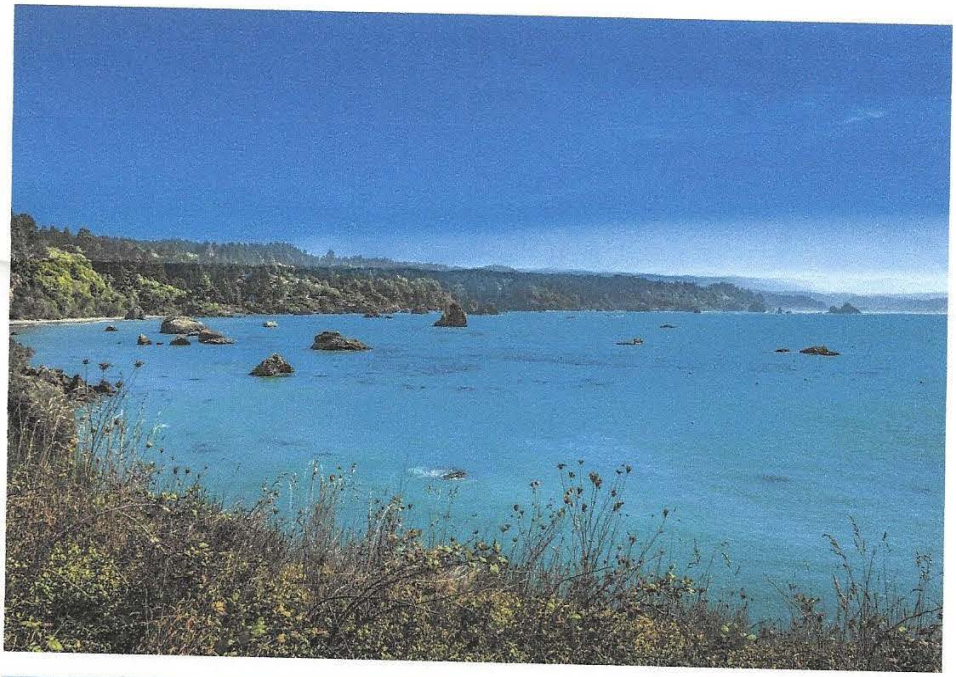
Sincerely,

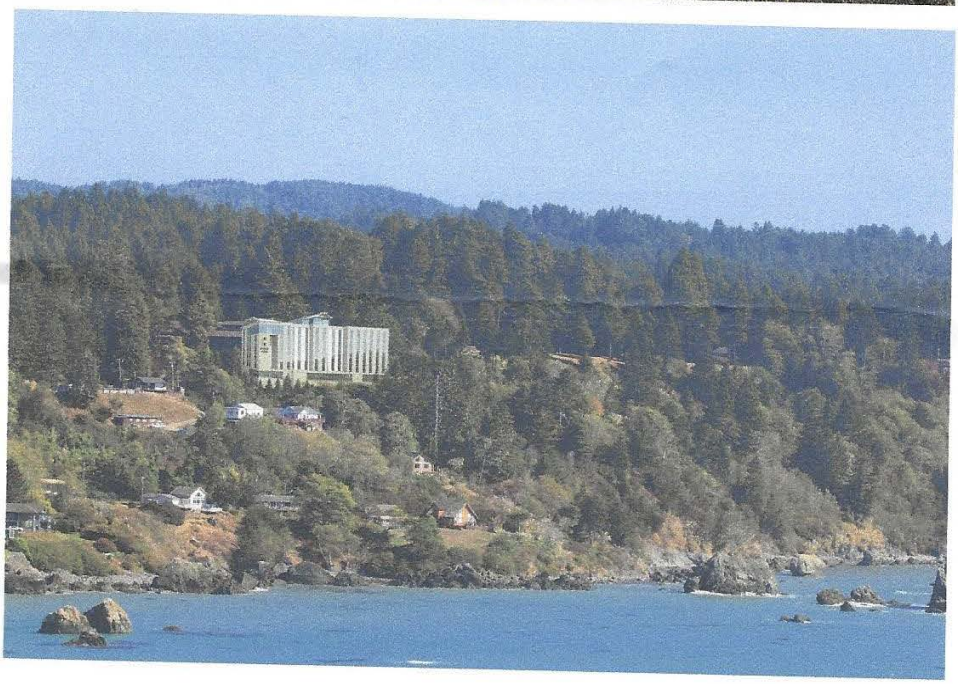
Edward C. Pease, Ph.D.

cc: Gov. Jerry Brown; U.S. Sen. Dianne Feinstein; U.S. Sen. Kamala Harris; U.S. Rep. Jared Huffman; CA Sen. Mike McGuire; Assemblyman Jim Wood; California Coastal Commission; U.S. Park Service; Humboldt Board of Supervisors; Trinidad City Council; Humboldt Alliance for Responsible Planning.

Trinidad Bay, Before & After

Impact of the Trinidad Rancheria's proposed 6-story, 100-room Hyatt hotel on the bluff above Trinidad Bay, California. Top: The Bay today (existing Casino is about one-third of the way along the bluff from the left/north). *Bottom: Photoshopped illustration.*





Comment Letter P33

Hall, Harold <harold.hall@bia.gov>

[EXTERNAL] Trinidad Rancheria Hyatt casino-hotel project

1 message

Ingrid Bailey <ingridhaven@gmail.com> Mon, Oct 22, 2018 at 10:05 AM
To: Amy Dutschke <amy.dutschke@bia.gov>, Chad Broussard <chad.broussard@bia.gov>, "\"and Harold "Dan" Hall .\"" <harold.hall@bia.gov>

Dear BIA Representatives-

We here in the beautiful coastal community of Trinidad both welcome and worry about the tribes plan to build a large hotel on the bluff along Scenic Drive. The bluff here in this extremely earthquake-prone area is highly unstable. Water has long been an issue limiting growth here and the projects reliance on the town of Trinidad's very small water system won't leave much to address drought and fire, which have historically been problems here. We know that the tribe has promised that the design for the hotel will be an improvement on the widely circulated photo of an "airport" style hotel, but to ask for the peoples support without a better idea of what we can expect to see built, is unfair. I have long felt that whatever it takes for Native Americans to not longer be the poorest minority class in this country should be supported. For the long-term success of the project, a full Environmental Impact Report must be required to address the seismic, water and related issues, and the visual impact of this very large project on our very small community. P33-01 P33-02 P33-03 P33-04

Thank you,
Ingrid Bailey
302 Westhaven Dr. S,
Trinidad, California

Comments to Bureau of Indian Affairs RE: Trinidad Rancheria Environmental Assessment

Ken Miller
1658 Ocean Drive
McKinleyville, CA 95519
707-4967444
October 22, 2018

Amy Dutschke
Regional Director
Bureau of Indian Affairs
Pacific Regional Office
Attn: Dan Hall
2800 Cottage Way
Sacramento, CA 95825

Chad Broussard
Bureau of Indian Affairs
2800 Cottage Way
Sacramento, CA 95825

Re: Environmental Assessment (EA) for Trinidad Rancheria Hotel Project

Dear Ms. Dutschke & Mr. Broussard:

I live in McKinleyvile, a small un-incorporated town in Humboldt County about 10 miles from Trinidad. I visit Trinidad very frequently to walk the beaches and trails, and visit museums and local eateries. Whenever out of town guests visit, Trinidad beaches always top the list of places to go. Although small in size, even including Westhaven and scattered neighborhoods nearby, the area is a world-class destination.

So I write this from the perspective of a nature-loving visitor concerned that this Project will despoil a rare treasure loved by all.

When I arrived in California in 1975, I was employed by the Hoopa Tribe as a physician, and developed a respect and admiration for Tribal culture, history and self-sufficiency that I retain to this day. So I also write this from the perspective of someone who is entirely supportive of Tribal sovereignty and opportunity. I also understand that sovereignty, like private property rights, is constrained by impacts to others, and that this Project would usher in a train-wreck to this unique community.

P34-01

Because of my concern for the grave consequences of this Project, I affiliated with the Humboldt Alliance for Responsible Planning (HARP), but these comments are my personal ones. After review of the EA, I conclude that:

•The No Build Option is the only justifiable determination
•The BIA should exercise its discretion to "seek public input" during the decision-making process and involve the Trinidad City Council and representative members of the public to participate.

•If "No Build" is infeasible, for whatever reasons, then an Environmental Impact Statement (EIS) is the only compromise position that could possibly address the myriad concerns of significance under NEPA/CEQA.

P34-01 (Cont.)

The Environmental Assessment (EA), with a public comment period of only 30 days, ending October 22, 2018, is entirely inadequate to address the controversial issues arising from this Project, many of which have un-mitigatable impacts or are inconsistent with local and Coastal Commission plans.

P34-02

The No Build Option:

The "No Build" option affords the opportunity and incentive for returning to the drawing board to develop a project that is more consistent with Tribal members' visioning during the 2009-2011 focus groups, in which there was universal preference for low profile, rural, culturally consistent hotel and build-out designs over urban motifs, such as this Project proposes. I urge you to review the Comprehensive Community-based Plan of the Cher-Ae Heights Indian Community of the Trinidad Rancheria's "The Community Image Survey" ("A Tool for Public Participation in Planning"), in which participants graded 40 images that depicted pastoral, rural, and urban graphics:(https://www.lgc.org/wordpress/reports/trinidad_rancheria/TR_Comprehensive_Plan_Final-Dec2011_web.pdf).

One concern I share with many others is that the current Project does not represent the inclinations of many tribal members, as reflected in the focus group choices, but rather a leadership committed to an expanded casino economy rather than more culturally appropriate development that is sensitive to the overall community and environmental character.

The "No Build" option would open the door to Alternatives that meet Rancheria economic needs, and many tribal members' preferences, without compromising the scenic and socio-economic values of our community. Tourism in Humboldt County last year totaled almost $15 billion, a quarter of our revenues. The Rancheria is perfectly positioned to benefit from many opportunities aside from this 100-room, casino dependent hotel, yet the Alternatives never explore any. Local residents have consistently voiced a preference for tourist-focused development that targets and draws adventurous travelers from around the world interested in Native culture and our world class, unique redwood, mountain, riverine and coastal attractions, not just catering to gambling. The proposed project site is suitable for a lodge that fits in with the hillside topography and has the world-wide appeal of an architecturally magnificent Ahwahnee or "Falling Waters."

P34-03

"No Build" for all of the reasons contained herein, including:

•overwhelming evidence of a substantial public and expert controversy over the impacts of this and related Projects to the human environment, especially visual impacts;

•the remaining unanswered questions and concerns regarding the water supply and wastewater issues;

•geotechnical questions regarding adverse impacts on the unique characteristics of the geographic area which are unmatched anywhere in the world;

•the precedent for inappropriate development in a very rural, highly scenic tourism destination listed in the National Register of Historic Places;

•and finally, because this Project is related to other actions with cumulatively significant impacts on the natural and built environment, notwithstanding that they have been broken down into smaller component parts

P34-03 (Cont.)

EIS

For the following reasons, an EIS is necessary if the No Build option, which is the only justifiable decision, is not possible:

•Public scoping is essential to quell the anxieties of a concerned public, and will foster wider community buy-in and participation of local government entities.
•Public scoping allows for a wider range of alternatives to emerge than proposed in the EA, which includes only one, the "No Build" option, ignoring our vast tourism resource.
• An EIS affords time for ongoing analyses of water supply to reach fruition.
• An EIS introduces independent expert evaluations of water supply, wastewater treatment, slope stability and other pertinent issues.
• An EIS considers the cumulative impacts of strategies designed to accommodate projected traffic needs associated with the Hotel and related projects

P34-04

General Concerns regarding significance and complexities in the EA

This EA describes not just a single Hotel Project, but refers, without elaboration, to a suite of interrelated development projects that the Rancheria has plans for, with no serious attempts to educate or involve the broader communities affected by these projects.[1]

Everyone was blindsided by the July 4, 2018 interview on KINS radio (at 22:50 minutes in, https://www.kins1063.com/talkshop-070418-ryan-sundberg/), in which Dave Tyson, the project manager, stated that "It's definitely a go," and Humboldt County Supervisor Ryan Sundberg, a Tribal member, disclosed that the Project will now be "Funded by a large Native American bank from back east that is funded by casinos," rather than the local Redwood Capital Bank which was originally the proposed funder. He also claimed that they were ready to break ground at or near the beginning of the year (2019).

P34-05

Until three months ago, hardly anyone knew about this, and until publicized by HARP and local concerned residents in September, the public had no meaningful notice or education from the Tribe of the impending project that would adversely affect our lives forever. Expecting an uninformed but concerned public to weigh in on projects that could and should have been publicized and discussed over the past fourteen years in 30 days is unreasonable. Furthermore, only an EIS affords the requisite "hard look" envisioned under NEPA for such impactful, complex Projects.

P34-06

[1] **Winzler and Kelly Assessment attached to Appendix A of EA.**

Loan and Lease Arrangements

This Project is secured by public guarantees of loans from "a Native American bank funded by casino money." (https://www.kins1063.com/talkshop-070418-ryan-sundberg/). In November, 2017, the BIA was criticized for its lax oversight of these loans.

This Project relies on financing from "casino funding." Many in our communities have reasonable fears that the casino-dependent complex envisioned by this leadership will invite and attract anti-social elements into our environs. Aside from feeding gambling addiction, well-known associations with alcohol, drunkenness, prostitution, hard drugs, loud parties, and dangerous traffic are exacerbated by such reliance.

P34-07

Such an arrangement has facilitated consortia of builders, architects and casino money people whom can take advantage of these no-lose propositions to exploit Indian Tribes' needs and desires for self-sufficiency, thereby foreclosing more lucrative, community-friendly and culturally appropriate ventures.

Despite such public legal-financial obligations, no details are provided in the EA. There is no way to gauge the economics involved or the rationale of the "no alternatives," because there is no market data. Similarly, no details of the lease arrangements are provided. A public reasonably alarmed by these obligations in a black box has no ability to evaluate risk or consequences in the event of default, construction problems, or natural disasters affecting the Project. (Public Law 93-262-Apr. 12, 1974, https://www.gpo.gov/fdsys/pkg/STATUTE-88/pdf/STATUTE-88-Pg77.pdf)

Visual and Scenic Resources

The proposed Rancheria development is taking place in one of the most spectacular and environmentally sensitive places in California, or anywhere. Trinidad is California's smallest coastal city, a quaint fishing village in the midst of oceanic splendor enjoyed by thousands of tourists, surfers, and local residents. Biologically sensitive receptors abound, and the visual aesthetics are unmatched. Remarkably, these assets are downplayed in the EA.

The "Preliminary Environmental Analysis Report" (PEAR) of the CalTrans Project Study Report (PSR) for US 101/Trinidad Area Access Improvements emphasizes the specialness of this entire area:[2]

P34-08

"The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural landforms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas (Trinidad Area Plan Section 3.40 Visual Resource Protection, 2007)."

[2] Appendix H Visual/Aesthetics: 8.5 Visual/Aesthetics: "Coastal scenic views, scenic areas, and coastal access points occur along Scenic Drive. Aesthetics are generally a substantial concern with any development in the Coastal Zone." *** 30251 & pg 9, Attachment H, Preliminary Environmental Analysis Report (PEAR, pg 55)

The Trinidad Area Plan describes the incomparable coast affected by this Project:

"Offshore rocks and intertidal areas within this area are unprecedented anywhere along the County's coast. Rocky intertidal areas along the Trinidad Planning Area, are very productive marine habitats and support lush growths of plants and animals. The offshore rocks provide important resting, roosting, and nesting sites for many resident and migratory birds as well and haul-out areas for harbor seals, Stellar sea lions and California sea lions. Restricted or no public access into these areas is one technique for insuring their protection. In addition, enforcement or current waste water disposal techniques and the policy requirement which prohibits any increased risk of biological or other impacts to these areas will also protect these resources."[3]

The sine qua non of the California Coastal Act is that coastal development "fit in. So far, images of the Hotel have been universally condemned as an eyesore in a sacred site, where the height limit of thirty feet is just one of many prescriptions in the Trinidad Area Plan that is violated.[4]

P34-08 (Cont.)

Simply stated, there is no mitigation that can compensate for the irreparable harm to visual and scenic aesthetics from this Project.

This EA describes a project that itself dramatically affects multiple local communities, with an extraordinary regional impact, yet despite these consequences, none of the affected communities has had any meaningful opportunity to evaluate, comment, or influence the proposal(s). Furthermore, this Project anticipates substantial related projects, including major federal, state and local highway endeavors, but does not consider the cumulative impacts of these interrelated projects.

Among many concerns requiring more time for competent attention, I include the following partial list:

Alternatives

The EA glibly dismisses any alternative to the Proposed Project without any detail sufficient for a reasonable evaluation of incompatibilities with the Purpose and Need, depriving the reader of the ability to assess any alternatives aside from "No Build." Such lack of detail fails to comply with NEPA.[5] Obviously, there are many variations on this Project that would satisfy Rancheria needs without adversely impacting off-site receptors, stirring expert controversy over these impacts, and disrupting the socio-economic characteristics and quality of life of the local communities. In fact, examples abound of Alternatives that would enhance rather than diminish these features.

P34-09

[3] https://humboldtgov.org/DocumentCenter/View/50848/Trinidad-Area-Local-Coastal-Plan 3.30A

[4] ibid;, 3.40 B3c2

[5] "However, these alternatives and the reasons for their elimination must be documented in the EA. http://www.dot.ca.gov/ser/downloads/guidance/alternative_analyfaq.pdf, page 1

Water Supply:

The Trinidad City Planning Commission (PC) is currently considering forming a "Water District" in order to annex additional service areas and water users (page 31 of Trinidad PC agenda for 10/17/2018):

CIRC-12.4: "If capacity and / or storage is adequate, study the feasibility of forming a Water District that includes the area to the east and southeast of the City on either side of the freeway, where some properties are already connected to the system, to allow for additional connections outside the City, as the system allows. Eventual annexation should be considered. An 'annexation agreement' (agreeing not to object to future annexation) with the City is a minimum requirement for providing any new connections City of Trinidad Draft General Plan p. 31 Draft Circulation, Energy and Public Services Element October 2018 outside of City limits. Areas to the north of the City should be part of such a district if services are to be provided there in the future. (LU-8.2)"

and

CIRC-12.5: "The existing commercial area on the west side of Patrick's Point Drive south of Anderson Lane and the area on the east side of Patrick's Point Drive north to the CalFire (CDF) station, should be included in the City service area / water district to allow for future consideration of water service. Annexation, or an annexation agreement, is a requirement for water service expansion, unless it is already part of services;"

The Casino is already the city's largest water customer at 11,000+ gal./day, followed by Hidden Creek RV Park and the Trinidad School.

Additionally, Humboldt County is currently re-zoning parcels within the potential service area of the Trinidad water supply.[6] These unclassified parcels will likely add to the priority water recipients. These additional draws on Luffenholtz Creek are not included in the EA water supply evaluation.

Adding any more users to the system before a comprehensive study of availability, resilience and future needs may create hardships for existing users, and limit prospects for development.

P34-10

The Public:

The very first public meeting dedicated to this Project occurred on 9/27/2018, leaving only 25 days for an uninformed public to understand the scope of these massive interrelated projects and express its concerns. Over one hundred local residents attended. With rare exception, every speaker voiced concerns, predominately about the inappropriate scale and look of the Project on such a sacred coastline, but also specific ones regarding traffic, increasing gambling-related tourism, water and wastewater, and geo-technical issues. Most everyone agreed that more time was needed to comprehend the EA; even the Rancheria representatives acknowledged that the EA was not accurate or complete.

P34-11

[6] http://humboldt.legistar.com/gateway.aspx?M=F&ID=39d7e1b6-aa06-4ecf-b5c6-059650b57583.pdf

A second public meeting was held by the Trinidad City Council on 10/15/2018, again attended by approximately 100 alarmed citizens. Although public comment was cut off after only 15 or so speakers, the sentiments are clear: no one likes the Project as proposed, everyone supports the Rancheria's (and community's) desire for a Hotel *if* it were smaller scale and designed to fit in.

The Rancheria presentation attempts to obscure these impacts, which can be confusing. Without more robust community engagement, projects of this scale, that are unprecedented in this area, threaten to disrupt our community equanimity.

P34-11 (Cont.)

Wastewater:

The Project estimates that 10,000gpd of wastewater will be discharged into leachfields. This amount is bad enough, but adding to the pollution and over-wetting risks is the fact the 10000 gpd discharge falls short of the approximately 15100gpd calculated discharge based on the 18,860gpd water intake for the Hotel, minus the estimated 20% recycle rate. (EA 2.2.1)

P34-12

Piece-mealing

The "Rancheria Master Plan Development" (pg 11, EA) refers to a plan to expand the casino from its current 50,000 sq ft to 150,000, the RV park from 22 spaces to 50, and office space from "minimal" to 100,000 sq ft, with retail and community space adding another 75,000 sq ft, not including a 6-pump gas station. A new interchange and overpass along Highway 101 are integral components of this announced "build-out." The surrounding community is unaware of the extent and scale of these developments, some of which are reasonably foreseeable, connected to the Hotel, and casino-related, and therefore subject to a cumulative effects analysis with an EIS and an EIR, with an appropriate planning horizon at least to 2038.

P34-13

Conclusions:

•The BIA should exercise its discretion to "seek public involvement" during its evaluation of the EA. That involvement should be participatory and influential.

•This Project As Proposed Should Be Rejected With A "No Build" Decision.

•Otherwise An EIS Is More Than Justified By The Unmitigated (And Un-mitigable) Impacts Disclosed And Undisclosed By The Proponent.

P34-14

Respectfully submitted,

Ken Miller

Comments to Bureau of Indian Affairs RE: Trinidad Rancheria Environmental Assessment

Hall, Harold <harold.hall@bia.gov>

[EXTERNAL] Trinidad Rancheria Environmental Assessment

1 message

Kimberly Tays <kimkat067@gmail.com> Mon, Oct 22, 2018 at 3:49 PM
To: "Broussard, Chad" <chad.broussard@bia.gov>, "amy.dutschke@bia.gov" <amy.dutschke@bia.gov>, "harold.hall@bia.gov" <harold.hall@bia.gov>

Dear Mr. Broussard, Mr. Hall and Ms. Dutschke:

I am a 16-year resident of Humboldt County, 12 years of which I lived in Trinidad (2003-2014). I am very familiar with the Trinidad Rancheria's properties on Scenie Drive and at the pier/harbor in the City of Trinidad. I am particularly aware of the visual impacts from the Casino on Scenic Drive, as I frequently hike around Trinidad Head. Years ago, you could barely see the Rancheria's Casino and surrounding development on Scenic Drive. Over the past few years, however, the Rancheria (I presume to enhance views for their Casino restaurant) has cleared many large trees on their Scenic Drive properties. Now, the Casino is very visible from Trinidad Head and from nearby trails and beaches. This now-visible development has degraded the wild, natural aesthetic that many people come here to see and enjoy. In addition to the impact of the Casino on the visual qualities of the Trinidad area, the pier at the Trinidad Harbor contributes significant amounts of light pollution to the area and degrades the night-sky. Sadly, the pier lighting causes the harbor and bay, at night, to look very industrial, and the resulting light pollution is visible to Clam Beach, Little River and beyond. The Rancheria's proposed 6-story hotel will cause further negative impacts to the visual qualities of the Trinidad area, which cannot be mitigated, as it is simply too big and out of character for this rural part of coastal California. Even if the proposed hotel fits in with the Rancheria's Master Plan, it absolutey does not fit in with the surrounding development in the area. In fact, it would be the largest building in the area and would stick out like a sore thumb. P35-01

I have serious doubts about the Trinidad Rancheria's ability to provide adequate water supplies to the hotel or to properly process the sewage generated from such a large development. However, my main concerns are the significant and lasting impacts that this out-of-scale, out-of-character development would have on the visual qualities of this scenic part of California's coastline. In addition, the 6-story hotel would significantly (and cumulatively) increase light pollution in the Trinidad area, because of its prominent location on the bluff. Excessive light pollution (such as can be seen from the pier) will further degrade the nightsky and habitat values for noctural wildlife, due to the distance the light would reflect outwards. The wall of windows from the proposed 6-story hotel will also likely increase bird mortality, because the reflective qualities of the windows will disorient the birds and cause them to fly into the windows. My husband and I own a 2,000 square-foot, single-story home in Arcata with ceiling-to-floor windows, and we have a lot of problems with bird mortality due to our reflective window surfaces. I cannot imagine the number of birds that would die from the hotel, due to the immense number of windows that would face the ocean. It seems unlikely that there would be adequate mitigation measures that could be taken to reduce the impacts that the proposed hotel windows and lighting would have on birds and nocturnal wildlife. P35-02 P35-03

There are certain projects that cannot be mitigated for, due to their excessive, damaging impacts on the natural environment. Due to these significant, unmitigatable, impacts, I am submitting my strong objections to the Environmental Assessment and approval of the Trinidad Rancheria's proposed 6-story hotel. I believe this development must be redesigned to better fit in with the beauty and natural surroundings of the Trinidad area.

Sincerely,
Kimberly Tays
Arcata, CA

Comment Letter P36

PACIFIC R[illegible] OFFICE
BUREAU OF [illegible]AN AFFAIRS

2018 OCT 22 PM 1:39

Reg Dir ad
Dep RD Trust D
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Rec DECRMS
Resp [illegible]
Due Date
Memo Ltr
Fax

Oct. 10, 2018

Bureau of Indian Affairs
2800 Cottage Way
Sacramento, CA 95825

Dear Sir or Ms.,

I am writing to provide public comment on the proposed Trinidad Rancheria Economic Development Corporation Hotel Development Project.

As an enrolled member of the Choctaw Nation of Oklahoma, and as a resident of Trinidad, California, I am certainly in favor of the proposed hotel and the possibilities for economic benefit to the Rancheria. There are a number of issues that have been raised in public meetings in the area that I believe need to be addressed for the project to be the success area residents also envision. I will address three of those issues in this comment, leaving to others the issues involving water, and wastewater treatment. P36-01

The issues I wish to address are 1) Design of the hotel, 2) Electricity use and generation, and 3) Provision for electric car charging infrastructure.

<u>Design of the hotel</u>:

Trinidad Bay is a natural wonder. Not only is it beautiful and relatively untouched, it is part of the California Coastal National Monument. It is the home of a fishing fleet, and is on the West Coast whale migration route. It is not unusual for kayakers and others to have close encounters with whales and other sea life. The main industry in Trinidad (besides the fishing fleet) is tourism. People come here for the coastal beauty, and an experience of nature. P36-02

The "placeholder design" of the proposed hotel as pictured on page 2-4 of the Environmental Assessment is not an acceptable design for this area. If built in the pictured manner, it would be out of place and intrusive to the nature of the area, and to the local environs. It simply does not fit the character and natural beauty of the area.

A more environmentally sensitive design is called for. I once had the pleasure of visiting architect Frank Lloyd Wright's stellar project

"Fallingwater" in Mill Run, PA. This organic design, which seemed to grow out of the rocks, trees, and water of the land on which it was placed, is an inspiration not only to me, but to the 180,000+ visitors yearly who go to rural Pennsylvania to visit it now, over 80 years after it was built. This is the type of design that the Trinidad Rancheria's hotel should emulate. There are numbers of commercial projects (lodges and hotels) in the Pacific Northwest that incorporate such organic design elements. Placing this type of organic design here would draw far more people to the area, and uphold the natural beauty that attracts visitors.

P36-02 (Cont.)

Electricity Use and Generation

Page 2-6 of the EA states that "The Hotel would obtain a normal power supply via a new utility service." Section 3.3.5 suggests no mitigation measures are required for climate change and greenhouse gas emissions. I disagree. I believe the Rancheria should do more to address the environmental impact of hotel operations through electricity generation. The 2018 United Nations report of the Intergovernmental Panel on Climate Change (IPCC) details the importance of creating a changed culture regarding climate change and its impacts. *These can be addressed by incorporating solar, wind, and battery storage elements directly into the design of the hotel.* Immediate neighbors of the Rancheria on Scenic Drive in Trinidad have shown the effectiveness of solar power generation through solar panels, and the newest technology of Solar Smartflowers. Integrated wind energy electricity generation should also be explored, along with large scale battery storage for power.

P36-03

Electric Vehicle Charging Infrastructure

The EA states on page 3-11 that "Operational emissions would primarily be comprised of mobile emissions associated with hotel patron's motor vehicle use..."

One avenue to address these emissions would be to encourage the use of electric vehicles for both hotel patrons and the Rancheria's transportation department. I think that the Rancheria should contact the Tesla Corporation, headquartered in Palo Alto, CA to provide a bank of Tesla destination chargers for patrons of the hotel and casino, and investigate placement of a Tesla Supercharger location (as has been done in Oregon at hotels I have frequented) in the parking lot.

P36-04

The Redwood Coast Energy Authority (RCEA) in Eureka has a division which assists in siting level 2 and higher power level 3 electric vehicle chargers in the Tri-county area. They can assist the Rancheria in grant applications to cover the cost of such chargers.

This charging infrastructure will draw electric vehicle enthusiasts to the site, prepare the Rancheria for the coming rapid decline in fossil fuel powered transportation, and help mitigate the carbon emissions projected in the EA.

P36-04 (Cont.)

In summary, I believe this project can be a boon to the Rancheria and the local community, if this project is approached with an eye firmly on the future of changing energy technologies, and a commitment to world class organic design of the hotel.

P36-05

Respectfully,

James Vandegriff

James Vandegriff
379 Roundhouse Creek Rd.
Trinidad, CA 95570
jimvan@suddenlink.net

cc: dtyson@trinidadrancheria.com
jhostler@trinidadrancheria.com
jujoynt@gmail.com

Comment Letter P37

Katrin Homan
P.O.Box 1261
Trinidad, CA 95570

Bureau of Indian Affairs
2800 Cottage Way
Sacramento, CA 95825

Dear Sir or Madam,

Thank you for the opportunity to provide comment on the Trinidad Cher-AE Heights Rancheria Hotel Project.

My husband and I used to live on Scenic Drive. Now we own property adjacent to Trinidad City limits. This is the fifteenth year that we have one or more of our children enrolled at Trinidad School. On school days we typically make two or more trips to the School to drop off or pick up kids. We shop, dine, and recreate in Trinidad.

The Trinidad Cher-Ae Heights Rancheria is and has been an outstanding neighbor and community member. The tribe assists Trinidad School with traffic control during pick-up and drop-off time. Cher-AE Heights Rancheria supports fundraising events for many local organisations. The Cher-AE Heights Tribe is an exceptional land steward of both, their own land and public land. At own expenses the Rancheria maintains Scenic Drive between its Rancheria Land and the City of Trinidad. Several years ago the tribe purchased the Trinidad Harbor Property and has completed several improvement projects including the much needed reconstruction of the Trinidad Pier, while consistently improving public access to its Harbor property and the adjacent beaches. P37-01

When last winter a different group of Native Americans demanded that the Trinidad Memorial Lighthouse be removed from land that bordered indian burial ground, the Cher-Ae Heights tribe opened their Harbor property as a temporary and ultimately permanent home for the Memorial Lighthouse. By providing this sanctuary for the Lighthouse the tribe immediately defused a precarious situation that had split the community.

I hope you will find an opportunity to visit Trinidad and its surrounding area. You would see that there are not many places from which the Cher-Ae Heights Casino and the Hotel project site are visible. Looking from Trinidad Head, the view across the many miles of stunning coastline is far more overwhelming than the little speck of earth that is proposed to house the hotel. Placing the hotel in front of an existing structure will further curtail the encroachment in the viewer's eyes.

I do not possess the expertise to decipher the Hotel project's Environmental Assessment. However I have more confidence in a report prepared by engineers and scientists that have studied the project site, than I trust the word of any remote "experts" who voice an opinion at the urging of project opponents.

Any suggestions that the proposed Hyatt Hotel will encourage and increase crime are completely unfounded.

Over 100 years ago the Federal Government gave the rancheria land to the Cher-Ae Heights tribe, for them to keep and do with as they please.

If you and all other involved agencies are satisfied by the Environmental Assessment of the Hotel Development Project then please approve the project! IT IS THE TRIBE'S RIGHT!!

P37-01
(Cont.)

Sincerely,

Katrin Homan

Hall, Harold <harold.hall@bia.gov>

[EXTERNAL] Public Comments - Trinidad Rancheria Hotel Project

1 message

Richard Johnson <rfjbrr@gmail.com> Mon, Oct 22, 2018 at 9:43 AM
To: amy.dutschke@bia.gov, chad.broussard@bia.gov, harold.hall@bia.gov

Ms. Amy Dutschke
Bureau of Indian Affairs - Pacific Region,
2800 Cottage Way
Sacramento, CA 95825
(916) 978-6041

Dear Ms. Dutschke,

I am requesting that your agency immediately begin an Environmental Impact Statement for the proposed Trinidad Rancheria hotel project.

I have lived in the Trinidad area for 15 years. During that time, I attended 2 community forums presented by the Trinidad Rancheria describing their economic development plans. The first of these was a presentation titled "Highway 101 Interchange Community Design Fair" in 2009. The second of the presentations was the "Comprehensive Community-Based Plan" in 2011. In both presentations, a proposed hotel was discussed. Pictorial renderings showed the hotel integrated with the existing casino such that the architecture, coloring, size and shape would complement the casino and the existing and proposed surrounding structures.

During the last two months I also attended two additional presentations on the proposed hotel based on the Environmental Assessment issued by your agency. The first, sponsored by the Humboldt Alliance for Responsible Planning on September 27, and the second presentation by the Trinidad Rancheria at a Special Meeting of the Trinidad City Council on October 15. Much to my surprise (and to many in the community), in both of the presentations, renderings of a 6 story, 100 room box like hotel structure were presented that were in no shape or form like the previous hotel designs. While this hotel design was described as a placeholder, the shape and size are clearly out of character with the natural beauty of this area. P38-01

While I am supportive of Rancheria efforts for self-sufficiency and local economic opportunities, and supported the previous hotel designs integrated with the existing casino, I have significant issues that I feel have not been adequately addressed in the current EA.

Availability of Water Supply: While the EA states that sufficient water is available for purchase from the City of Trinidad, it appears that statement is based on the allowable water that Trinidad is allocated to take from the source, Luffenholtz Creek, and not on the amount of water that physically flows in the creek during dry or drought seasons. This issue is so sensitive that recent development projects upstream from the Trinidad pumping point are prohibited from taking water from Luffenholtz during the dry summer months and must pump and store water in the winter months for use during the dry periods of the year. Additionally, the City of Trinidad has publicly expressed doubts if there is sufficient water to supply all their current and future users and has authorized a comprehensive study of the water supply availability and potential consumption that will be completed in 2019. Until the water supplier (City of Trinidad) can confidently state there is adequate water for this project, plus the Rancheria's additional development briefed in 2009 and 2011; or until alternate water sources are identified, it is difficult to see how this issue is mitigated in the EA. P38-02

Wastewater: The Cher-ae Heights Casino, which is already the biggest single water user on the Trinidad system, claims to recycle up to 40% of the water it uses. This is admirable and a positive aspect of future development atop a very sensitive and unstable ocean bluff. It also unclear from the current EA if the 40% recycle rate is achievable with the proposed hotel project. The hotel water uses (showers, linen laundry, swimming pool, etc.) are very different than those in a casino (toilet flushing) and the EA does not adequately demonstrate that the proposed recycle rate is achievable for the hotel.
Additionally, the current EA includes expert concerns regarding the availability of sufficient space to support the required increased size of the septic system needed to process wastewater. Nor does the current EA address the need for reserve leech fields.

P38-03

Traffic and Circulation: The public discussions and EA sections dealing with traffic and circulation are confusing. The public is asked to comment on the hotel as a stand-alone project. However, the EA states that the proposed Highway 101 interchange is required to mitigate traffic issues, but which may not be completed until 2026. In the meantime, all traffic to and from the casino, hotel and other new development utilize Scenic Drive. Logic suggests that the need for an interchange (by its self a significant environmental impact) should be evaluated at the same time as the hotel project and together should be considered as one project.

P38-04

Hotel architecture and aesthetics: In the four meetings that I have attended, the overwhelming majority of public comments supported the Rancheria's proposal for a hotel. On the other hand, the current hotel design is considered by many community members to be totally out of character for this rural area of the California coastline that contains some of the most scenic off shore rock formations anywhere. (Trinidad is a gateway city to the California Coastal National Monument). The Rancheria admits that the hotel design shown in the EA is a "placeholder" and may be changed in the future. However, the community is left with the task of providing public comments on a design that may have no bearing on the final version.

The EA states: "The proposed Hotel would impact the overall coastal aesthetics of the project site. Mitigation measures would require features to soften the visual impact and allow the proposed Hotel to blend into the scenery and adjacent existing Casino so that the Proposed Project would not result in any adverse effects to scenic resources." How is possible to provide public comment when the hotel design is a placeholder and what would be the mitigation measures if the final design is not known? With the present 6 story, 100 room box-like structure, it is difficult to envision how to soften the visual impact and allow the hotel to blend into the scenery.

P38-05

This community is struggling to find a design that meets the needs of the Rancheria and preserves the aesthetic beauty of our local environment. Most of the issues raised during the recent meetings on the hotel revolve around how to fit this project into our community with the least amount of impact; visually, environmentally and socially.
For these reasons alone, an EIS is required to evaluate the final hotel design and environmental impacts.

As currently proposed, the Environmental Assessment does not describe adequately mitigation measures for various impacts, some of which are discussed above, and thus fails to provide an adequate basis for a finding of no significant impacts (FONSI) or of non-significant environmental impacts. A comprehensive and careful Environmental Impact Study is needed to engage the public, resolve issues discussed in this letter and to evaluate the relationship of the interchange to the hotel project

P38-06

Thank you for your attention to this matter,

Richard Johnson
Box 802
Trinidad, California
95570

Hall, Harold <harold.hall@bia.gov>

FW: [EXTERNAL] Trinidad Rancheria Hotel Development project comment

1 message

Amy Dutschke <amy.dutschke@bia.gov> Mon, Oct 22, 2018 at 6:58 AM
To: Harold Hall <harold.hall@bia.gov>, Chad Broussard <chad.broussard@bia.gov>

FYI

From: Sandra Schachter <schachtersj@comcast.net>
Sent: Sunday, October 21, 2018 2:07 PM
To: amy.dutschke@bia.gov
Subject: [EXTERNAL] Trinidad Rancheria Hotel Development project comment

Dear Ms. Dutschke

As a frequent visitor to the Trinidad area, I would like to voice my opposition to the Trinidad Rancheria Hotel Development project, not only on the basis of its potential harm to the environment but also on the basis of its lack of consideration for Native American history. It needs to be carefully reconsidered. P39-01

Sandra Schachter

74 Poppy Road

Carmel Valley, CA 93924

Comment Letter P40

Hall, Harold <harold.hall@bia.gov>

FW: [EXTERNAL] Proposed 6 story hotel at Trinidad Rancheria Trinidad CA 95570

1 message

Amy Dutschke <amy.dutschke@bia.gov> Mon, Oct 22, 2018 at 6:57 AM
To: Harold Hall <harold.hall@bia.gov>, Chad Broussard <chad.broussard@bia.gov>

FYI

From: Trisha Lee <trishale@sonic.net>
Sent: Sunday, October 21, 2018 2:11 PM
To: amy.dutschke@bia.gov
Subject: [EXTERNAL] Proposed 6 story hotel at Trinidad Rancheria Trinidad CA 95570

Dear Amy Dutschke,

I live in Northern California, just south of the beautiful coastal town of Trinidad. I suggest a no build or at the very least a thorough EIS to assess all factors in the building of a 6 story hotel at this Trinidad Rancheria Casino located right on the precarious coast, slightly south of the town of Trinidad, CA 95570. In this area, windy road is already slipping into the ocean, little by little. P40-01

We frequently visit Trinidad for arts night or other gatherings, and I have traveled on that narrow and precarious road to Trinidad Rancheria. This is an area where houses are slipping down with erosion. My friend has a friend who's house has had to be moved up twice due to severe erosion of this cliff where this proposed monstrosity of a project is being proposed. If this was a big city, it would fit in, but it will not fit in to our lovely coastal Trinidad Village. P40-02

This location has unique and pristine scenic vistas; fragile coastal environment (Trinidad Harbor is a protected biologically sensitive zone); visual impacts from Trinidad, from Trinidad Head (a National Coastal Monument), and from the ocean; light and noise pollution; danger to dozens of species of birds; effect of 19,000 gallons/day in wastewater processing on a sandy bluff already in constant process of slumping; intrusive signage. P40-03

There are issues of wastewater, water, light pollution and many other issues to consider. The most comprehensive document I have read so far explains all the details that should be addressed. That document was presented by Humboldt Alliance for Responsible Planning (HARP), Trinidad, CA 95570. P40-04

Perhaps building on a smaller scale might be acceptable, but without the proper studies we will never know. P40-05

Thank you for considering my comments to add to the others who care about the preservation of the scenic surrounds to the tiny fishing village of Trinidad, California.

P40-05 (Cont.)

Sincerely,

Patricia Lee Lotus

Trisha Lee on email

trishale@sonic.net

2425 C Street

Eureka, CA 95501

Comment Letter P41

From: Andrew Pruter trustyourguide@yahoo.com
Subject: BIA
Date: Oct 17, 2018 at 6:15:19 AM
To: Andrew Pruter trustyourguide@yahoo.com

PACIFIC REGIONAL OFFICE
BUREAU OF INDIAN AFFAIRS
2018 OCT 22 PM 1:39
RD Dir
Dep RD Trust
Dep RD IS
Route DECKMS
Response Required
Due Date
Memo Ltr
Fax 2
No address

Sent from my iPad

On Oct 17, 2018, at 5:52 AM, Andrew Pruter <trustyourguide@yahoo.com> wrote:

October 16, 2018 Bureau of Indian Affairs 2800 Cottage Way Sacramento, CA 95825

I am writing to express my concern regarding the planned hotel on Trinidad Rancheria land. The community has many issues with the proposed plan. In particular, I am worried about water usage, visual impacts, unstable roadways, size, wildlife, and wastewater. Please consider these impacts before moving forward on this project. Visual Impact Scenic Drive is one of the most beautiful places on Earth. The California Coastal Commission (CCC) regulations maintain this beauty. Although the rancheria is sovereign land, which I respect, CCC guidelines should be adhered to honoring the compact the tribe has with the state to "follow equivalents of the most stringent regulations in development". These CCC regulations include, "The highest point of a structure shall not exceed 30 feet vertically measured from the highest point of the foundation, nor 40 feet from the lowest point of the foundation." The planned six-story hotel by the tribe will be more than twice the allowable height according to the picture that the BIA issued.

P41-01

P41-02

In addition, according to the ENVIRONMENTAL ASSESSMENT TRINIDAD RANCHERIA ECONOMIC DEVELOPMENT CORPORATION HOTEL DEVELOPMENT PROJECT (EA), the hotel will be visible from Trinidad Head, a California Historical Landmark #146 and a national monument.

Traffic: Roads in Trinidad are narrow and in poor condition in general. Scenic Drive, in particular, south of the Casino, is difficult to traverse and only one lane in many sections. It is unstable and suffers damage every winter often closing for periods of time. If hotel visitors come from the south, this road cannot accommodate the impact. The EA acknowledges this very concern stating, "The project site is not currently mapped for landslides or liquefaction. However, landslides are common

P41-03

along the slopes located in the vicinity of the project site, specifically at and below Scenic Drive, located immediately adjacent to and southwest of the project site." If hotel visitors come from the main Trinidad exit, there is also cause for concern. Locally known as the "dysfunction junction", the intersection of Main Street, Patrick's Point Drive, Westhaven Drive, the frontage road, Scenic Drive two freeway on-ramps and two freeway off-ramps is confusing. Only stop signs control the eight-road intersection, with one direction having no restriction. Given how many children live in Trinidad and walk/bike to school, this is especially concerning for their safety. Should a new off-ramp be built, there is no assurance this would happen in a timely manner before the completion of the hotel project. Furthermore, this project comes with its own environmental concerns.

P41-03 (Cont.)

P41-04

Wastewater: There is no public sewer system in Trinidad. Residents, including the rancheria, rely on septic systems with leach fields. Due to this wastewater system, Humboldt County beaches consistently rank amongst the dirtiest in California, including Luffenholtz. According to the EA, the Rancheria currently has its own wastewater treatment plant which utilizes leach fields and recycles a sizable amount of the casino's wastewater. The EA states, "Construction of a 100-room Hotel would result in the need to treat and dispose of approximately 10,000 gallons of wastewater per day." 20 percent of the wastewater is expected to be recycled for toilet flushing, yet the additional discharge would require upgrades to the current plant and the creation of new leach fields with two potential locations identified in the EA. There is concern that these leach fields could destabilize the bluff and cause further failures to Scenic Drive. Furthermore, the proximity of creeks and beaches is a grave concern for inadvertent contamination from these leach fields during wet winter storms.

P41-05

Water: Drought is the new normal in California. The proposed hotel would require nearly 19,000 gallons/day of water from the Trinidad municipal water system. The primary sources of water are Mill Creek and Luffenholtz Creek. The EA states that the city of Trinidad only uses 23 percent of its permitted water from these sources. What such a statistic fails to include is the use of these creeks by people outside of the city water system that put an additional drain on these resources in drought years. Residents are concerned water rationing may occur given the extra demand of the proposed hotel during severe drought years. It's also important to note that the permitted water rights of the city of Trinidad do not equate to the availability of water which fluctuates year to year. For example, the nearby Little River is running "much below normal" according to the USGS. As of October 16, 2018, the Little River is

P41-06

running 3.37 cubic feet per second yet the mean is 16 cubic feet per second. Furthermore, water needs to be available for CalFire and additional growth to the city itself for long-term residents and tourism.

P41-06 (Cont.)

Wildlife Concerns: According to the American Bird Conservancy, the leading cause of bird death is flying into windows. The image of the proposed hotel highlights large amounts of windows that could cause potential bird deaths in large numbers. Please revise the scope of this project to address the community of Trinidad. We deserve more transparency in the process and to have our concerns addressed adequately if the project should move forward. The only viable option is to scale back the design to be more ecologically sound to the unique geological and environmental aspects of Scenic Drive and the community of Trinidad.

P41-07

Sincerely,
Andy Pruter

Sent from my iPad

Comment Letter P42

PACIFIC REGIONAL OFFICE
BUREAU OF INDIAN AFFAIRS
2018 OCT 22 PM 1:39

Reg Dir
Dep RD Trust
Dep RD IS
Route DECRMS
Response Required
Due Date
Memo Ltr
Fax

October 16, 2018

Amy Dutschke, Regional Director
Bureau of Indian Affairs, Pacific Regional Office
2800 Cottage Way
Sacramento CA 9582

I am writing to express my concern regarding the planned hotel on Trinidad Rancheria land. The community has many issues with the proposed plan. In particular, I am worried about **visual impacts and scale; traffic and unstable roadways; wastewater; water usage and resource integrity; wildlife hazards; and construction materials.** Please consider these impacts before moving forward on this project. P42-01

This project could represent an exemplary model of innovation, beauty and sustainability in design and function. At the end of each issue section, I'll provide suggestions to consider to that end.

Visual Impact

Trinidad is one of only a few Gateway Communities to the federally-managed California Coastal National Monument (CCNM). Considered one of the most beautiful places on Earth, it's rocky undeveloped and protected shores provide a seascape that draws many to experience nature's abundance. The California Coastal Commission (CCC) and Bureau of Land Management (BLM) regulations maintain this beauty. Has the BLM been consulted and included in the planning phase? What effect would this have on the tone of the CCNM objectives, designation and mission?

I respect the sovereignty and economic development of the Rancheria community, but I believe the CCC guidelines should be adhered to, honoring the compact the Rancheria tribal community has with the state to "follow equivalents of the most stringent regulations in development". These CCC regulations include, "The highest point of a structure shall not exceed 30 feet vertically measured from the highest point of the foundation, nor 40 feet from the lowest point of the foundation." The planned six-story hotel will be more than twice the allowable height according to the picture that the BIA issued. The Trinidad Rancheria Economic Development Corporation (TREDC) says that this picture is just a "placeholder", but the public hasn't been provided with any other plans or images. P42-02

In addition, according to the ENVIRONMENTAL ASSESSMENT TRINIDAD RANCHERIA ECONOMIC DEVELOPMENT CORPORATION HOTEL DEVELOPMENT PROJECT (EA), the hotel will be visible from Trinidad Head, a California Historical Landmark #146 and a national monument.

I am an ecotour guide with Kayak Trinidad, which runs wildlife tours in Trinidad Bay. Ecotourism could be a huge boon for the Rancheria and greater Trinidad communities, but a hotel of this size and proposed design wouldn't be consistent with those values; it would impose a significant visual barrier to the forested coastline view from the water and pose a tangible eyesore to the area's undeveloped landscape.

P42-02 (Cont.)

I also work with Hemp-Technologies Global. *Hemp-lime insulated walls can be employed in large, commercial buildings.* I'll discuss this more in the construction materials section. *Hempcrete creates beautiful, structurally-sound, resilient structures that blend very well with the natural environment with decreased impact.*

Traffic

Roads in Trinidad are narrow and in poor condition in general. Scenic Drive, in particular, south of the Casino, is difficult to traverse and is only one lane, collapsing, gravel, and dangerously sloped in many sections. Highly unstable, it suffers damage throughout the year, often closing for periods of time. Traffic from Trinidad town to the casino, on the improved sections of road, is often dangerously fast. Pedestrians, cyclists, and families don't have designated lanes and feel unsafe.

If hotel visitors come from the south, this road cannot accommodate the impact. The EA acknowledges this very concern stating, "The project site is not currently mapped for landslides or liquefaction. However, landslides are common along the slopes located in the vicinity of the project site, specifically at and below Scenic Drive, located immediately adjacent to and southwest of the project site." General Manager of TREDC, David Tyson, said at the latest town council meeting that traffic wouldn't be increased because hotel guests would stay in their rooms and at the casino. This seems extremely short sighted and questionable, given the tourism draw of the area being the many natural sites, parks, events, quaint towns, etc.

P42-03

If hotel visitors come from the main Trinidad exit, there is also cause for concern. Locally known as the "dysfunction junction", the intersection of Main Street, Patrick's Point Drive, Westhaven Drive, the frontage road, Scenic Drive two freeway on-ramps and two freeway off-ramps is confusing. Only stop signs control the eight-road intersection, with one direction having no restriction. Given how many children live in Trinidad and walk/bike to school, this is especially concerning for their safety.

Should a new off-ramp be built, there is no assurance this would happen in a timely manner before the completion of the hotel project. Furthermore, this project comes with its own environmental concerns.

Mitigation should include measures to improve the safety of pedestrians, cyclists, and motorists in the main intersection of Trinidad and along the entire length of Scenic Drive. I also think that if

water will be taken from Luffenholtz Creek, then erosion control infrastructure and road improvement should occur along Scenic Drive to the south of the hotel site as well.

P42-03 (Cont.)

Wastewater

There is no public sewer system in Trinidad. Residents, including the rancheria, rely on septic systems with leach fields. Due to this wastewater system, Humboldt County beaches consistently rank amongst the most polluted in California, including Luffenholtz.

According to the EA, the Rancheria currently has its own wastewater treatment plant which utilizes leach fields and recycles a sizable amount of the casino's wastewater. The EA states, "Construction of a 100-room Hotel would result in the need to treat and dispose of approximately 10,000 gallons of wastewater per day." Twenty percent of the wastewater is expected to be recycled for toilet flushing, yet the additional discharge would require upgrades to the current plant and the creation of new leach fields with two potential locations identified in the EA. There is concern that these leach fields could destabilize the bluff and cause further failures to Scenic Drive. Furthermore, the proximity of creeks and beaches is a grave concern for inadvertent contamination from these leach fields during wet winter storms.

P42-04

I believe that local geology experts should be able to weigh in on the assessment of the proposed plans, as they have the best understanding of the combination of factors involved in the conditions of the site. Also, constructed wetlands should be considered as an exemplary and responsible option for wastewater treatment, wildlife habitat generation, and clean water discharge to protect soils and watersheds.

Water

Drought is the new normal in California. The proposed hotel would require nearly 19,000 gallons/day of water from the Trinidad municipal water system. The primary sources of water are Mill Creek and Luffenholtz Creek. The EA states that the city of Trinidad only uses 23 percent of its permitted water from these sources. What such a statistic fails to include is the use of these creeks by people outside of the city water system that put an additional drain on these resources in drought years.

P42-05

Residents are concerned water rationing may occur given the extra demand of the proposed hotel during severe drought years. It's also important to note that the permitted water rights of the city of Trinidad do not equate to the availability of water which fluctuates year to year. For example, the nearby Little River is running "much below normal" according to the USGS. As of October 16, 2018, the Little River is running 3.37 cubic feet per second yet the mean is 16 cubic feet per second. Furthermore, water needs to be available for CalFire and additional growth to the city itself for long-term residents and tourism.

Catchment systems, low flow fixtures and infrastructure, rationing protocols and permaculture design principles of water and landscape management should be considered as ecologically and socially responsible mitigation measures.

P42-05 (Cont.)

Wildlife Concerns

According to the American Bird Conservancy, the leading cause of bird death is flying into windows. The image of the proposed hotel highlights large amounts of windows that could cause potential bird deaths in large numbers.

Again, as Trinidad is perched adjacent to the CCNM, the protected colonies of nesting sea birds, especially those that use land features for nesting, such as the endangered Marbled Murrelet, could be adversely affected. Also, draining small creeks of its capacity is irresponsible for not only humans who depend on it, but also an abundance of temperate coastal redwood forest wildlife and fisheries.

P42-06

Solutions for this should include no glare, perhaps smaller windows, lower profile structure, and design that integrates regeneratively with surrounding ecosystem.

Construction Materials

Traditional construction generates 50% of landfill waste. "Sick building syndrome" contributes to health crises due to toxic materials and mold issues. The construction industry generates one of the largest shares of greenhouse gasses into the environment, due to forest destruction, mining, cement, landfill waste and petrochemical commodity production.

All new construction should be carbon negative or at least neutral, at best, in this age if climate change.

Hemp masonry systems provide carbon negative buildings. Hotel operation, insurance, and construction labor costs can be reduced if hempcrete is integrated into the construction design. It can be added and permitted seamlessly to the existing plan, as it is considered an infill wall.

P42-07

Benefits and savings:

- *Over 50% insurance reduction*
- *Less foundation material required*
- *Over 50% HVAC savings*
- *Reduced labor costs*
- *Less framing material required*
- *Reduced construction waste expenditure*
- *Fire, mold, pest proof/resistant*
- *Superior thermal performance and R-value*
- *Longevity and resiliency in the hemp-lime matrix*
- *Recyclable & reusable*

- *Hypoallergenic, non toxic and breathable, yet airtight*
- *Carbon sequestering*
- *Comparable cost/sq ft*

P42-07 (Cont.)

Governor Brown just signed SB 1409, authorizing hemp production in California. Along with existing ecotourism draws of the area, a hempcrete hotel would be the first commercial building of a larger size in the nation. Be the first in the hemp boom coming to California.

Please revise the scope of this project to address the concerns of the community of and influx of visitors to Trinidad. We deserve more transparency in the process and to have our comments addressed adequately before the project moves forward.

P42-08

Please scale back the design to be more ecologically sound to the unique geological and environmental aspects of Scenic Drive and the community of Trinidad.

I encourage you to contact me regarding hempcrete incorporation into the plans. I can set up a Skype meeting with the team of experts at Hemp-Technologies upon request. More information can be reviewed here: Hemp-Tech (scroll to view PDF hempcrete attachments)

Thank you for reading this in its entirety. We have confidence you'll act in accordance with community trust, good faith, ecological stewardship, transparency and the spirit of collaboration.

Signed,

Annalisa Rush

- Trinidad Resident, 21 years
- Ecotour Guide, Kayak Trinidad
- Certified Installer, Hempcrete Hemp-Technologies Global

951 Westhaven Dr, So.
Trinidad, CA 95570

Comment Letter P43

Reg Dir
Dep RD Trust
Dep RD IS
Route DECRMS
Response Required
Due Date
Memo Ltr
Fax

PACIFIC REGIONAL OFFICE
BUREAU OF INDIAN AFFAIRS
2018 OCT 22 PM 1:41

Amy Dutschke, Regional Director
Bureau of Indian Affairs, Pacific Regional Office
2800 Cottage Way
Sacramento CA 9582

October 17, 2018

Ms. Dutschke,

I am writing to you regarding the Environmental Assessment (EA) for the Trinidad Rancheria Economic Development Corporation Hotel Project issued in September 2018. I urge you to require an Environmental Impact Statement (EIS); a Finding of no Significant Impact (FONSI) would not be appropriate. The main concerns I would like to see addressed are water, wastewater, fire protection, traffic, and visual aesthetics.

The project proposes to use water from the City of Trinidad via Luffenholz Creek, and is allotted a certain amount. However, the current estimated discharge of Luffenholz on September 23, 2018 was 1.04 cubic feet per second (cfs). This discharge is barely sustainable for the citizens of Trinidad, my concern is that the current amount of water would not be adequate for a hotel with 100 rooms. Also of great concern is the amount of water needed for resident trout and other aquatic life. Further research regarding this issue is pertinent. P43-01

The EA erroneously states that the Rancheria will use the septic system of the town of Trinidad. This is of great concern because Trinidad has no septic system; the people who wrote the report and the people submitting the report have not presented the facts correctly. This inaccuracy leads me to the concern that other facts in the EA are misrepresented. P43-02

The Rancheria currently has a wastewater system but further research and assessment needs to be done as to whether they can provide an adequate wastewater system. The idea that they can recycle waste water is commendable but only so much wastewater can be recycled and that needs to be addressed and presented clearly. Slope stability issues associated with a larger wastewater treatment system should be assessed.

Current fire protection is ok at best for this community. The only adequate fire protection for the proposed hotel is in Eureka, CA. In case of emergency, fire protection in the capacity needed for the proposed project is over 30 miles away. It would take 45 minutes to provide services needed in case of fire emergency. A fire could be devastating; impacts of fire protection need to be further assessed. P43-03

Lastly, traffic congestion and thereby potential for more accidents in the area where I take my children to and from school is of concern. Also the visual impact a large hotel would have on the pristine beauty of Trinidad Bay should be evaluated thoroughly. P43-04

Thank you for your consideration,

Holly Vadurro

Holly Vadurro
hvadurro@gmail.com

Comment Letter P44

Reg Dir AA ✓
Dep RD Trust Ø
Dep RD IS ✓
Route DECRMS
Response Required
Due Date
Memo Ltr
Fax

October 19, 2018

PACIFIC REGION OFFICE
BUREAU OF INDIAN AFFAIRS
2018 OCT 22 PM 1:41

Bureau of Indian Affairs
2800 Cottage Way
Sacramento, CA 95825

Re: Comments on Environmental Assessment of Trinidad Rancheria Hotel Project

Dear Bureau of Indian Affairs,

I have lived a half mile away from the Trinidad Rancheria for 25 years. I support the Rancheria's right to develop their property in the way it works for them.

After reviewing the Environmental Assessment I have two significant concerns that have ramifications beyond their property.

The Environmental Assessment states that the new hotel will use water from the City of Trinidad water system and that "The City has a permitted water use rate of 355,392 gallons per day (gpd), of which the City is using approximately 23 percent (Buckman, 2017)."

P44-01

Permitted use is not actual potential. The City has engaged a firm to provide a analysis of the actual potential of water availability factoring in climate change, drought and other factors. This study will take 3 months to prepare.

Additionally, during the meeting at the Trinidad Town Hall, one of the members of the development team said there was no back up plan for a water source.

Given these facts it is prudent to review the City of Trinidad water report before moving forward with the hotel project.

My other concern relates to sewage capacity. In the Environmental Assessment it states in Table 9.1: Summery of Alternative Costs and Issues regarding sewage capacity that the capacity of upgrading the existing treatment facility is "limited by treatment capacity. In addition, it may be difficult to find sufficient leach field area, if not enough area can be found development needs to be reduced". The ocean outfall option mentioned later is not practical for the sensitive environmental condition of Trinidad Bay.

P44-02

The size and impact of the proposed hotel needs to be within the limitations of water availability and sewage treatment capacity.

Thank you for taking this into consideration,

Clay Johnson
P.O. Box 599
Trinidad, CA 95570

Comment Letter P45

PACIFIC REGIONAL OFFICE
BUREAU OF INDIAN AFFAIRS

2018 OCT 22 PM 1:39

Reg Dir ___ ✓
D RD Trust ___ ✓
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Response Required ___
Due Date ___
Memo ___ Ltr ___
Fax ___

October 16, 2018

Bureau of Indian Affairs
2800 Cottage Way
Sacramento, CA 95825

I am writing to express my concern regarding the planned hotel on Trinidad Rancheria land. The community has many issues with the proposed plan. In particular, I am worried about water usage, visual impacts, unstable roadways, size, wildlife, and wastewater. Please consider these impacts before moving forward on this project.

Visual Impact

Scenic Drive is one of the most beautiful places on Earth. The California Coastal Commission (CCC) regulations maintain this beauty. Although the rancheria is sovereign land, which I respect, CCC guidelines should be adhered to honoring the compact the tribe has with the state to "follow equivalents of the most stringent regulations in development". These CCC regulations include, "The highest point of a structure shall not exceed 30 feet vertically measured from the highest point of the foundation, nor 40 feet from the lowest point of the foundation." The planned six-story hotel by the tribe will be more than twice the allowable height according to the picture that the BIA issued. P45-01

In addition, according to the ENVIRONMENTAL ASSESSMENT TRINIDAD RANCHERIA ECONOMIC DEVELOPMENT CORPORATION HOTEL DEVELOPMENT PROJECT (EA), the hotel will be visible from Trinidad Head, a California Historical Landmark #146 and a national monument.

Traffic

Roads in Trinidad are narrow and in poor condition in general. Scenic Drive, in particular, south of the Casino, is difficult to traverse and only one lane in many sections. It is unstable and suffers damage every winter often closing for periods of time. If hotel visitors come from the south, this road cannot accommodate the impact. The EA acknowledges this very concern stating, "The project site is not currently mapped for landslides or liquefaction. However, landslides are common along the slopes located in the vicinity of the project site, specifically at and below Scenic Drive, located immediately adjacent to and southwest of the project site." P45-02

If hotel visitors come from the main Trinidad exit, there is also cause for concern. Locally known as the "dysfunction junction", the intersection of Main Street, Patrick's Point Drive, Westhaven Drive, the frontage road, Scenic Drive two freeway on-ramps and two freeway off-ramps is confusing. Only stop signs control the eight-road intersection, with one direction having no restriction. Given how many children live in Trinidad and walk/bike to school, this is especially concerning for their safety.

Should a new off-ramp be built, there is no assurance this would happen in a timely manner before the completion of the hotel project. Furthermore, this project comes with its own environmental concerns.

Wastewater:

There is no public sewer system in Trinidad. Residents, including the rancheria, rely on septic systems with leach fields. Due to this wastewater system, Humboldt County beaches consistently rank amongst the dirtiest in California, including Luffenholtz.

According to the EA, the Rancheria currently has its own wastewater treatment plant which utilizes leach fields and recycles a sizable amount of the casino's wastewater. The EA states, "Construction of a 100-room Hotel would result in the need to treat and dispose of approximately 10,000 gallons of wastewater per day." 20 percent of the wastewater is expected to be recycled for toilet flushing, yet the additional discharge would require upgrades to the current plant and the creation of new leach fields with two potential locations identified in the EA. There is concern that these leach fields could destabilize the bluff and cause further failures to Scenic Drive. Furthermore, the proximity of creeks and beaches is a grave concern for inadvertent contamination from these leach fields during wet winter storms.

P45-03

Water:

Drought is the new normal in California. The proposed hotel would require nearly 19,000 gallons/day of water from the Trinidad municipal water system. The primary sources of water are Mill Creek and Luffenholtz Creek. The EA states that the city of Trinidad only uses 23 percent of its permitted water from these sources. What such a statistic fails to include is the use of these creeks by people outside of the city water system that put an additional drain on these resources in drought years.

Residents are concerned water rationing may occur given the extra demand of the proposed hotel during severe drought years. It's also important to note that the permitted water rights of the city of Trinidad do not equate to the availability of water which fluctuates year to year. For example, the nearby Little River is running "much below normal" according to the USGS. As of October 16, 2018, the Little River is running 3.37 cubic feet per second yet the mean is 16 cubic feet per second. Furthermore, water needs to be available for CalFire and additional growth to the city itself for long-term residents and tourism.

P45-04

Wildlife Concerns:

According to the American Bird Conservancy, the leading cause of bird death is flying into windows. The image of the proposed hotel highlights large amounts of windows that could cause potential bird deaths in large numbers.

Please revise the scope of this project to address the community of Trinidad. We deserve more transparency in the process and to have our concerns addressed adequately if the project should move forward. The only viable option is to scale back the design to be more ecologically sound to the unique geological and environmental aspects of Scenic Drive and the community of Trinidad.

P45-05

Patrick Harestad

Patrick Harestad

Long time resident of Trinidad, CA.

Comment Letter P46

PACIFIC REGIONAL OFFICE
BUREAU OF INDIAN AFFAIRS
2018 OCT 22 PM 1:40

BRENDA K. COOPER
PO Box 996
Trinidad, California 95570

Reg Dir
Dep RD Trust
Dep RD IS
Route DECRMS
Response Required
Due Date
Memo Ltr
Fax

Oct. 19, 2018

Ms. Amy Dutschke, Regional Director
Bureau of Indian Affairs - Pacific Region
2800 Cottage Way
Sacramento, CA 95825

RE: Trinidad Rancheria Casino-Hotel Proposal

Dear Ms. Dutschke & the Bureau of Indian Affairs:

Like scores of my neighbors in and around the little North Coast village of Trinidad, I am opposed to the Trinidad Rancheria's casino-hotel project as proposed.

I am a homeowner and fulltime resident who lives just 1-1/2 miles from the Rancheria. My husband and I walk our dogs on the beaches below the Rancheria property, and I walk on Trinidad Bay every day. A huge hotel sprouting from the bluff across the Bay would be more than an eyesore — it would be a scar on the beauty of the coastline, which is what drew us here in the first place 21 years ago, and what brings tourists to Humboldt County. The addition of a massive 6-story Hyatt hotel on this beautiful bluff would be an affront to me and all of us who love this coastline, and who work and recreate here. P46-01

In shorthand, my concerns include the impact of the project on Trinidad Bay's unique and pristine scenic vistas from the city of Trinidad, from Trinidad Head (a National Coastal Monument), and from the ocean; our fragile coastal environment (Trinidad Harbor is a protected biologically sensitive zone); light and noise pollution; danger to dozens of species of birds from birdstrikes on the 70+-foot facade; effects on a geologically fragile bluff of 19,000 gallons/day in wastewater processing; intrusive signage. P46-02

The most obvious concern shared by the more than 100 citizens — a big crowd for this little town — who turned out at each of two public meetings about the project is its appalling design, completely inappropriate and even destructive on this pristine stretch of coastline. Although the massive Environmental Assessment report is supposed to offer various alternatives to the details of the project it evaluates, there is apparently no alternative being considered to the gross 6-story, 100-room Hyatt box that would tower on the edge of a geologically fragile sandy bluff above beautiful and unsullied Trinidad Bay. P46-03

Many of us would welcome a tasteful structure that would reflect both the natural environment and the native cultural heritage and values of the Trinidad Rancheria's people, a hotel that celebrates and meshes with the landscape and forest. But the proposed Hyatt hotel box looks like any one of thousands that can be found outside airports and along freeways across America. A

design that is in harmony with the coastline would be so much more appropriate, and so much more acceptable both to Humboldt residents who love this coast, and to visitors who travel here for the natural beauty.

Environmental and traffic concerns are a close second to the hotel's awful design in the minds of worried citizens here. The existing Cher-ai Heights Casino, which the hotel is proposed to abut, sits atop the sand and clay bluff formations that are common along hundreds of miles of Northwestern Coast. Scenic Drive, the former Redwood Highway, runs directly below the Rancheria property. The road and the sandy hillside on which it was built are in a constant state of slumping into the Pacific. Surely this is a poor choice for a heavy 6-story building that will use a projected 19,000 gallons of water/day. Even if a large percentage of that water is recycled, pouring even half that much water into a sandy bluff through leachfields will undoubtedly have an adverse effect on groundwater, cliff erosion and bluff stability.

Scenic Drive itself, the only access to the construction site and subsequent 100-room hotel and casino, is wholly unsuited to the level of traffic projected for the hotel and an expanded casino, as the EA acknowledges. The "solution" is a proposed interchange exit on Highway 101 to the property's east, a massive project that is opposed by many Trinidad residents, and which could not be in place until 2026 at the soonest, according to the EA and the California Transportation Commission, which will not even decide on the interchange project until 2022.

As a Trinidad municipal water system customer, I am doubtful that our water district, which has already been described as fully allocated and in jeopardy during times of drought can support this additional demand, the equivalent of 45 new single-family homes. I will strongly urge the City of Trinidad to reject the Rancheria's request for 19,000 gallons/day from the municipal system. The hotel should seek other water sources.

I have many more objections to the various ways this hotel project would adversely affect my life, my town's character and environment, and this entire coastline. I refer you to the detailed comment document submitted by the citizen group Humboldt Alliance for Responsible Planning (HARP), which I would attach to this letter if I could. I urge close review of the HARP comments, and I strongly endorse the HARP criticisms and comments of the substandard EA on this project.

One significant measure of public concern is the number of local residents who turned out for special meetings to learn more about what for many was a surprise development project. About 100 residents came to a hastily arranged citizens group meeting, called on Sept. 27 after the 500-page EA was released. Another 100 came to a special meeting between the Trinidad City Council and Rancheria representatives on Oct. 15. During public comment Q&A periods at both meetings, feedback focused on how to improve the design to fit the setting, water concerns, land-taking for the interchange, and environmental impacts.

Under the rules of the Environmental Assessment process, as I understand it, the BIA now has the option to make a finding of no significant impacts (FONSI) for this project. That would be inconceivable, given that the impacts of the proposed hotel would be not just significant but enormous in terms of multiple adverse effects on the area's environment, traffic, bluff stability,

P46-03 (Cont.)

P46-04

P46-05

P46-06

P46-07

P46-08

unsullied beauty, small-town culture & etc., etc. The EA review of the project and its impacts is insufficient, and the project has been rushed through without adequate consultation with the public and other stakeholders who will be affected. I strongly urge the BIA to order a comprehensive Environmental Impact Study and design review to provide a much more complete evaluation of the true impacts of this project, and to educate the public.

P46-08
(Cont.)

Absent a major revision of the visual, environmental, traffic and related impacts of the project, I strongly recommend that the BIA reject the hotel proposal in its entirety.

Thank you for your attention.

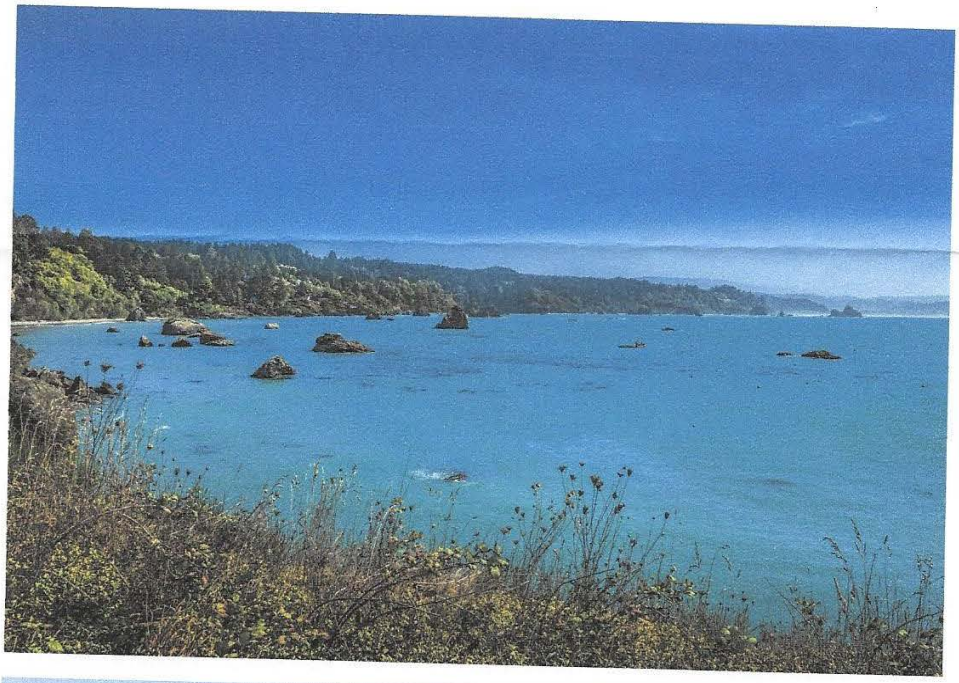
Sincerely,

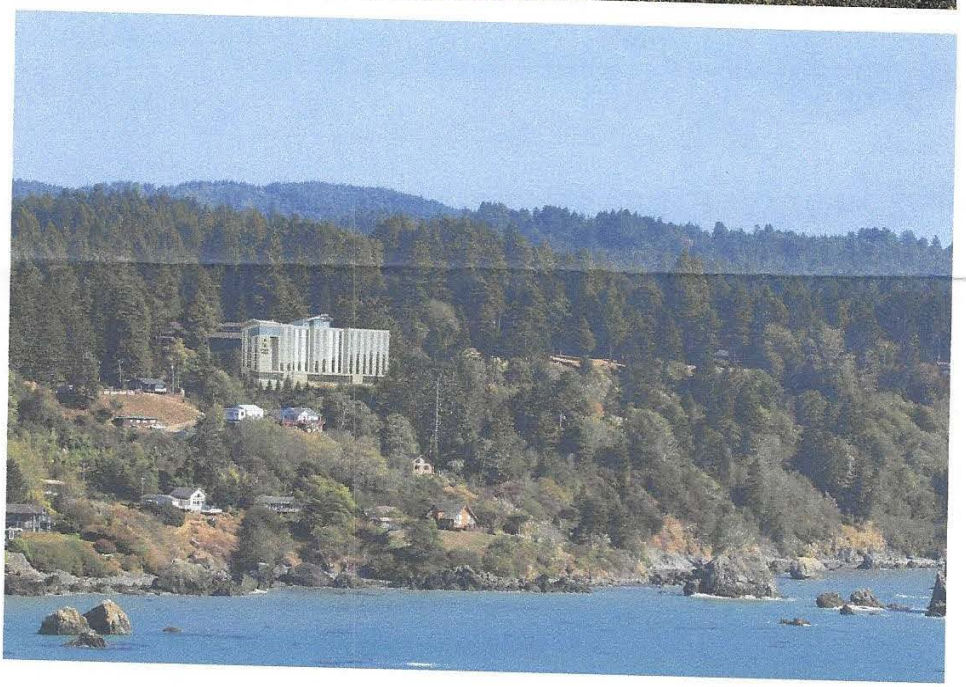
Brenda K. Cooper, Ph.D.

cc: Gov. Jerry Brown; U.S. Sen. Dianne Feinstein; U.S. Sen. Kamala Harris; U.S. Rep. Jared Huffman; CA Sen. Mike McGuire; Assemblyman Jim Wood; California Coastal Commission; U.S. Park Service; Humboldt Board of Supervisors; Trinidad City Council; Humboldt Alliance for Responsible Planning.

Trinidad Bay, Before & After

Impact of the Trinidad Rancheria's proposed 6-story, 100-room Hyatt hotel on the bluff above Trinidad Bay, California. Top: The Bay today (existing Casino is about one-third of the way along the bluff from the left/north). *Bottom: Photoshopped illustration.*





Comment Letter P47

JENNIFER LANCE

PACIFIC REGIONAL OFFICE
BUREAU OF INDIAN AFFAIRS
2018 OCT 22 PM 1:39
Reg Dir aed
Dep RD Trust
DECRMS
Response Required
Due Date
Memo Ltr
Fax

October 16, 2018

Bureau of Indian Affairs
2800 Cottage Way
Sacramento, CA 95825

I am writing to express my concern regarding the planned hotel on Trinidad Rancheria land. The community has many issues with the proposed plan. In particular, I am worried about water usage, visual impacts, unstable roadways, size, wildlife, and wastewater. Please consider these impacts before moving forward on this project. P47-01

Visual Impact

Scenic Drive is one of the most beautiful places on Earth. The California Coastal Commission (CCC) regulations maintain this beauty. Although the rancheria is sovereign land, which I respect, CCC guidelines should be adhered to honoring the compact the tribe has with the state to "follow equivalents of the most stringent regulations in development". These CCC regulations include, "The highest point of a structure shall not exceed 30 feet vertically measured from the highest point of the foundation, nor 40 feet from the lowest point of the foundation." The planned six-story hotel by the tribe will be more than twice the allowable height according to the picture that the BIA issued. P47-02

In addition, according to the ENVIRONMENTAL ASSESSMENT TRINIDAD RANCHERIA ECONOMIC DEVELOPMENT CORPORATION HOTEL DEVELOPMENT PROJECT (EA), the hotel will be visible from Trinidad Head, a California Historical Landmark #146 and a national monument.

250 STUMPTOWN RD TRINIDAD, CA 95570 707.496.7327 JLANCE@HUGHES.NET

Traffic

Roads in Trinidad are narrow and in poor condition in general. Scenic Drive, in particular, south of the Casino, is difficult to traverse and only one lane in many sections. It is unstable and suffers damage every winter often closing for periods of time. If hotel visitors come from the south, this road cannot accommodate the impact. The EA acknowledges this very concern stating, "The project site is not currently mapped for landslides or liquefaction. However, landslides are common along the slopes located in the vicinity of the project site, specifically at and below Scenic Drive, located immediately adjacent to and southwest of the project site."

P47-03

If hotel visitors come from the main Trinidad exit, there is also cause for concern. Locally known as the "dysfunction junction", the intersection of Main Street, Patrick's Point Drive, Westhaven Drive, the frontage road, Scenic Drive two freeway on-ramps and two freeway off-ramps is confusing. Only stop signs control the eight-road intersection, with one direction having no restriction. Given how many children live in Trinidad and walk/bike to school, this is especially concerning for their safety.

P47-04

Should a new off-ramp be built, there is no assurance this would happen in a timely manner before the completion of the hotel project. Furthermore, this project comes with its own environmental concerns.

Wastewater:

There is no public sewer system in Trinidad. Residents, including the rancheria, rely on septic systems with leach fields. Due to this wastewater system, Humboldt County beaches consistently rank amongst the dirtiest in California, including Luffenholtz.

P47-05

According to the EA, the Rancheria currently has its own wastewater treatment plant which utilizes leach fields and recycles a sizable amount of the casino's wastewater. The EA states, "Construction of a 100-room Hotel would result in the need to treat and dispose of approximately 10,000 gallons of wastewater per day." 20 percent of the wastewater is

expected to be recycled for toilet flushing, yet the additional discharge would require upgrades to the current plant and the creation of new leach fields with two potential locations identified in the EA. There is concern that these leach fields could destabilize the bluff and cause further failures to Scenic Drive. Furthermore, the proximity of creeks and beaches is a grave concern for inadvertent contamination from these leach fields during wet winter storms.

P47-05 (Cont.)

Water:

Drought is the new normal in California. The proposed hotel would require nearly 19,000 gallons/day of water from the Trinidad municipal water system. The primary sources of water are Mill Creek and Luffenholtz Creek. The EA states that the city of Trinidad only uses 23 percent of its permitted water from these sources. What such a statistic fails to include is the use of these creeks by people outside of the city water system that put an additional drain on these resources in drought years.

P45-06

Residents are concerned water rationing may occur given the extra demand of the proposed hotel during severe drought years. It's also important to note that the permitted water rights of the city of Trinidad do not equate to the availability of water which fluctuates year to year. For example, the nearby Little River is running "much below normal" according to the USGS. As of October 16, 2018, the Little River is running 3.37 cubic feet per second yet the mean is 16 cubic feet per second. Furthermore, water needs to be available for CalFire and additional growth to the city itself for long-term residents and tourism.

Wildlife Concerns:

According to the American Bird Conservancy, the leading cause of bird death is flying into windows. The image of the proposed hotel highlights large amounts of windows that could cause potential bird deaths in large numbers.

P45-07

Please revise the scope of this project to address the community of Trinidad. We deserve more transparency in the process and to have our

concerns addressed adequately if the project should move forward. The only viable option is to scale back the design to be more ecologically sound to the unique geological and environmental aspects of Scenic Drive and the community of Trinidad.

P47-07 (Cont.)

Sincerely yours,

Jennifer Lance

Comment Letter P48

Reg Dir
Dep RD Trust
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Response Required
Due Date
Memo Ltr
Fax

PACIFIC REGIONAL OFFI
BUREAU OF INDIAN AFFAI
2018 OCT 9 PM 1:40

Ms. Amy Dutschke
Bureau of Indian Affairs—Pacific Region
2800 Cottage Way
Sacramento CA 95825

Dear Ms. Dutschke

I am writing concerning the proposed hotel project adjacent to the Cher-ae Heights Casino in Trinidad. My husband and I have resided in Trinidad since 1972 and came here for the clean air, recreational opportunities and beautiful surroundings. We have been professional landscape photographers since moving up here and often took pictures along Scenic Drive of our awesome shoreline. Our images grace such iconic calendars such as Sierra Club and Audubon; our magazine credits included Sunset and National Geographic. Some of our best sellers to these publications were from Trinidad. Our shoreline, now part of the California Historic Landmark and Marine Sanctuary draws visitors from all over the world.

The Casino also draws people from all over the world. I don't believe that the tree-huggers and the gambling enthusiasts are mutually excludable; we have co-existed together since its inception. I understand the sovereignty of the tribes that were here before our arrival and positively support their pursuit of economic opportunity. P48-01

However, the design of the hotel and the impact upon our community are inappropriate. I support either a no-build decision or the ordering of an Environmental Impact Study. I attended a meeting recently hosted by the tribe and Trinidad officials. The proposed hotel is too large, sticks out like a sore thumb. If the tribe wants to introduce and educate visitors to their culture perhaps a structure that nestles into the surroundings rather than thrusting itself in such a glitzy manner would be more appropriate?

My other major concern is water. My husband pursued acquiring Senior Water Rights to the creek (McConnahas Mill Creek) that supplies water to the four residences on our road. It took almost 2 years but it was granted by the State of California this summer. We have the right to draw water from that creek and any other parties' needs will have to be assessed as the need comes up. It may rain 70 inches a year but that water is not available to us who use it. I was not happy with the answer to the question about a Plan B if Trinidad water is not available. The answer was there is no plan B. P48-02

Please consider that a comprehensive Environmental Impact Study is needed to keep the public in the loop and help us understand the impacts on our lives.

Sincerely

Donna B. Ulrich
Larry Ulrich
PO Box 178
Trinidad CA 95570

Ms. Amy Dutschke
Bureao of Indian Affairs – Pacific Region,
2800 Cottage Way
Sacramento, CA 95825

PACIFIC REGIONAL OFFICE
BUREAU OF INDIAN AFFAIRS
2018 OCT 22 PM 1:41

18 October 2018

Dear Ms. Dutschke:

We are writing to express our concerns about the proposed Trinidad Rancheria Hotel Development Project.

We have lived in Humboldt County for 40 years and in our current home on Scenic Drive and Luffenholtz Creek for 30 years. We moved here for the area's natural beauty and quiet setting. We have tried to maintain those qualities on our property and in our lifestyle by respecting the environment and imposing minimal disruption to it.

Our concern is that the development project as currently written does not adequately address significant issues that have the potential to damage and/or destroy the environment we share. Some of those issues and questions include:

- the visual aesthetics and engineering of the hotel at the proposed site,
- how the project will maintain (enhance) the natural beauty in and around the development,
- mitigation of water impacts (groundwater increases, potable water scarcity, road run-off),
- why the highway interchange will not be completed until years *after* the hotel is completed,

P49-01

At a community gathering initiated by the Rancheria eight or ten years ago we learned about the proposed development. Presentations and materials provided by Rancheria personnel elicited many questions, comments, and concerns at that time.

At a September 27, 2018 meeting arranged by the Humboldt Alliance for Responsible Planning, those concerns and the main points of the Environmental Assessment were discussed by local professionals and commented upon by dozens of Rancheria neighbors.

At the October 15, 2018 Trinidad City Council meeting Trinidad Rancheria staff reviewed the sovereign land status of the Trinidad Rancheria and presented information about the project proposal. Many community members asked questions and made comments.

P49-02

The same questions and concerns expressed at the gathering eight or ten years ago remain. A more complete report about the hotel site and design, water resource contingencies, and environmental impacts is needed to seriously review a project of this size and significance to our small town. We hope that a complete assessment, thorough review, and necessary updates will be made and the project will commence. We want future visitors to Trinidad to be greeted by an aesthetically and ecologically inspiring hotel complex reflecting the natural beauty of our area.

Thank you for your consideration.

With Respect,
Melanie and Ron

Melanie and Ron Johnson
23 Oke-Ga Lane
Trinidad, CA 95570

Reg Dir ltd ✓
Dep RD Trust
✓ Dep RD IS
Route DECRMS
Response Required
Due Date
Memo Ltr
Fax

Comment Letter P50

PACIFIC REGIONAL OFFICE
BUREAU OF INDIAN AFFAIRS
2018 OCT 23 PM 1:54

October 20, 2018

Reg Dir
Dep RD Trust
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Route DEERMS
Response Required
Due Date
Memo Ltr
Fax

To: Regional Director Amy Dutschke

Bureau of Indian Affairs, Pacific Regional Office

2800 Cottage Way, Sacramento, California 95825

Dear Ms. Dutschke:

These are my comments regarding the Trinidad Rancheria's Environmental Analysis for a proposed hotel construction.

As you know, the Trinidad Rancheria is moving forward on a planned hotel adjoining the Cher-Ae Heights Casino. They also have a planned RV park and gas station, though are not presently moving on these projects. While the tribe says a widely-circulated artist's conception showing a six-story-tall monolith looming over the coastline like Godzilla towering above Tokyo is only one proposal, I have yet to see another.

Besides the obvious concrete and glass wart upon the viewscape of Baja Trinidad, which by itself is bad enough, there are several environmental concerns which should be a cause for alarm. One is the issue of wastewater. Casino effluent is currently handled by a standard wastewater treatment system, i.e., tanks and leach field. The addition of a hotel will require doubling or tripling the current system. What is the proposal to mitigate the increase in sewage? The current facility has a very effective wastewater reclamation system, but will that be translated to a size to accommodate a 100-room hotel? Currently, the County of Humboldt requires 75' of leach line for every bedroom in a residence. Now, I realize this is a hotel and not a residence and being a tribe they are not obligated to follow county laws. But considering the ongoing, and increasing, failure of aging septic systems in Trinidad and Westhaven and the resulting contamination of groundwater and our beautiful local beaches, this is a matter which needs to be addressed.

P50-01

Speaking of water, the proposed hotel will be drawing additional amounts from it's current source, Luffenholtz Creek, which also supplies water to Trinidad, the Trinidad Fire Department, the CalFire station and many residents surrounding the picturesque seaside village. While the Environmental Analysis says the creek has more than enough water for all the users, current and planned, many current users disagree. They are concerned that

P50-02

additional usage will overtax the creek, which has in the past struggled to supply water in dry and drought years. P50-02 (Cont.)

There is also the issue regarding the construction of a new interchange on 101 near the casino. How will such an interchange affect the residents who live in the vicinity of such an interchange, and who will be displaced as a result? Additionally, what kind of impact will the increased traffic have on the perpetually failing Scenic Drive? P50-03

In the 41-years I have been fortunate enough to live here, I have never failed to be amazed by the beauty of our coast. I would hate to think someone's need for money would override everyone's need for something as intrinsic as beauty. "When the blood in your veins returns to the sea, and the earth in your bones returns to the ground, perhaps then you will remember that this land does not belong to you, it is you who belongs to this land." P50-04

Thanks for your time.

Sincerely,



Mark Dondero

P.O.. Box 84

Orleans, CA 95556

Comment Letter P51

REDWOOD REGION AUDUBON SOCIETY

P.O. BOX 1054, EUREKA, CALIFORNIA 95502

A MEMBER OF THE NATIONAL AUDUBON SOCIETY

PACIFIC REGIONAL OFFICE
BUREAU OF INDIAN AFFAIRS
2018 OCT 23 PM



Reg Dir
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Response Required
Due Date
Memo Ltr
Fax

Bureau of Indian Affairs (BIA)

2800 Cottage Way

Sacramento, CA 95825

To Whom it May Concern:

Date: Oct. 16, 2018

This letter is submitted in response to the Environmental Assessment (EA) prepared by BIA dated September 2018 for the "Trinidad Rancheria Economic Development Corporation Hotel Development Project". Redwood Region Audubon Society (RRAS) is a conservation organization with approximately 600 members in Humboldt and Del Norte counties, including members in nearby Trinidad and Westhaven, who are interested in seeing responsible development conducted in a safe and sustainable manner. Addressed below are concerns RRAS has about the hotel project including visual impacts, water supply, wastewater disposal, as well as traffic congestion. P51-01

The RRAS board believes that an EA is not adequate and that an Environmental Impact Statement (EIS) is needed for the Trinidad Rancheria Economic Development Corporation (TREDC) project for the following reasons:

The **visual design** of the hotel as illustrated in "Figure X" of the EA does not represent the final design may not be what the TREDC intends to construct, according to presentations made by project proponents at a recent public meeting. The September 2018 EA states that the "Hyatt would provide design standards" for the hotel. We feel it is imperative that a final design be provided in an EIS for the hotel building so that we may comment on adverse visual and avian impacts from striking window glass that are likely to occur based on the Architectural Renditions in Figure X. P51-02

Water supply issues discussed at recent public meetings indicate more detailed analysis is needed than was provided in the EA. There is a public controversy regarding the availability of adequate water for this project from current sources. Section 2.2.1 does not ~~seem to~~ adequately address the current source of water supply or the concerns raised at recent public meeting regarding reliable supplies during drought conditions. P51-03

Wastewater treatment and disposal presents a problem in light of documented inadequacies with the current system. The EA indicates landslides are common in the vicinity along Scenic Drive near the proposed project. Will creation of additional leach fields cause additional landslide potential? Would use of additional leach fields in conjunction with winter rainfall have the potential to cause P51-04

"liquefaction" as discussed on page 3-5, in Section 3.1.5? The EA does not provide clear answers to issues posed in the Appendix B, which states:

"Additionally, liquefaction is not anticipated to occur unless sustained high groundwater levels are identified within terrace deposits which overlay the shale bedrock (Appendix B)."

"The active landslide that currently extends from the southwest corner of the proposed Hotel southwest towards Scenic Drive has the potential to affect the foundation of the proposed Hotel. However, the active landslide is relatively shallow in nature and may be readily stabilized utilizing measures such as retaining wall systems, slope reconstruction, and sub-drainage elements" (see Section 3.1.5, page 3-5).

A more detailed engineering evaluation is necessary to address of the site, soils, and precise methods for addressing storm water runoff as well as leach field characteristics. The soils data provided in the EA was not adequate to determine if percolation rates are adequate for the expansion of the leach fields called for on page 2-5. The following quote is from the 2004 assessment included in Appendix A:

" In order to accommodate excess wastewater capacity from the proposed Hotel, a 2004 Wastewater Assessment identified two potential areas, shown in Figure 1-3, feasible for additional leach field dispersal: the mounded ridge to the south of Ter Ker Coo Lane and the hillside south of the Tribal office (Appendix A). Accordingly, both locations are assessed in this EA." In the 2016 letter included in Appendix A Mr. Nick Weigel, P.E., goes on to state that soils in the area are "marginal.

"Given the marginal soil conditions in the area, the Assessment assumed capacity for homes not connected to the wastewater system would be held in the design to address any failures of these systems in the future."

P51-04
(Cont.)

"However, with plugging believed to have been caused by the discharge of Casino wastewater to the field before the treatment plant was completed, the actual long-term capacity of the dispersal field at this time is not known. The existing dispersal field should be cleaned and then the capacity should be evaluated through field investigations and hydraulic stress testing to determine the actual operational capacity"

"We cannot stress enough the need to determine if there is additional dispersal capacity on the site and where this resource is on the Rancheria. The size and location of these areas will have a significant impact on the design and associated cost with the dispersal component of the system and may affect areas below this site. "

It is critically important to note that the 2004 Assessment states that the 10,000 gpd is an "ASSUMPTION" and that it must be verified. Unless this has been verified, the EA makes statements that are seriously flawed.

The following footnote in engineering review conducted for the TREDC addresses wastewater treatment capacity;

We feel that the Trinidad Rancheria, TREDC and entire community should have access to high quality design data that will be necessary for a successful hotel venture. RRAS would like to express our gratitude for the opportunity to provide comments that are intended to support a well-planned project.

This statement is NOT supported by the letter from 2016 by Mr. Nick Weigel, P.E. or by the 2004 Assessment. **Nothing would indicate that there is a possibility to accommodate 50,000 gpd!!!!**

Wastewater Service Section 3.10.2 on page 3-22 states:

"As discussed in Section 2.2.1, Alternative A would utilize the Tribes existing WWTP, requiring upgrades and an additional leach field. This upgrade would be solely on Tribal lands and would allow for the system to handle a total of approximately 50,000 gpd, enough capacity to accommodate operation of the new Hotel. Alternative A would have no impact on municipal wastewater systems."

P51-04
(Cont.)

This statement is NOT supported by the letter from 2016 by Mr. Nick Weigel, P.E. or by the 2004 Assessment. Nothing would indicate that there is a possibility to accommodate 50,000 gpd!!!! In fact the chart contained in the 2004 analysis indicates that an ocean outfall would be necessary for flows in excess of 20,000-30,000 gpd.

We feel that the Trinidad Rancheria, TREDC and entire community should have access to high quality design data that will be necessary for a successful hotel venture. RRAS would like to express our gratitude for the opportunity to provide comments that are intended to support a well-planned project.

Respectfully Submitted,

Chet Ogan
Co-chair

Conservation Committee,

Redwood Region Audubon Society

Comment Letter P52

PACIFIC RE... OFFICE
BUREAU OF... AFFAIRS
2018 OCT 23 PM 1:54

Reg Dir aud
Dep RD Trust
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Route DECRMS
Response Required
Due Date
Memo Ltr
Fax

October 19, 2018

Amy Dutschke, Regional Director
Bureau of Indian Affairs
2800 Cottage Way, Sacramento, CA 95815

Re: Trinidad Rancheria proposed expansion to include an enlarged casino, a new 100-room 6-story hotel, along with a new freeway off-ramp.

My name is Sam King. I live in McKinleyville, just south of Trinidad. I have visited Trinidad numerous times over the last 15 years, either on a bicycle or by car. The quaint town and surroundings should not be exploited for the sake of money.

When I moved to this area in 2002 to build a small house on a 20-acre parcel in McKinleyville, I employed a small construction firm located in Westhaven, which sits next to Trinidad. While my house was being constructed the topic of ground water came up often as I was required to put in a well. Several of the workers lived in Trinidad and mentioned limitations of building there because of limited water availability. This seemed to be a self-limiting growth factor that had been in place for some time, and that probably still applies. P52-01

The proposed expansion sounds like a corporate, money-making venture, without regard to impact of the community. I would imagine our current President would be whole-heartedly behind it.

I urge you to reconsider this project as it would defile one of the finest communities in our area.

Sam King
sking62@suddenlink.net

Comment Letter P53

Reg Dir ___
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Response Required ___
Due Date ___
Memo ___ Ltr ___
Fax ___

PACIFIC REGIONAL OFFICE
BUREAU OF INDIAN AFFAIRS
2018 OCT 23 PM 1:53

Amy Dutschke, Regional Director
Bureau of Indian Affairs
2800 Cottage Way, Sacramento, CA 95825

17 October 2018

Dear Ms. Dutschke –

I have been a resident of Westhaven, CA, immediately south of Trinidad, CA, since 1976, and I am recently retired from the Fisheries Department at Humboldt State University (HSU) in Arcata, CA where I taught from 1978-2016. I occupied an office at the HSU Marine Laboratory in Trinidad from 1982 – 2018, and I served as Director of the Marine Laboratory for perhaps 6 years total during periods of transition between administrators. During my professional career, I have had extensive interactions with the Hoopa and Yurok Tribes, having engaged on their behalf in grant and contract-funded research concerning fisheries and hatcheries for salmon and steelhead. For the past decade or more, I have taken hikes up Trinidad Head on almost every day that I have been unable to put in some quality exercise time in some other capacity. I never tire of these walks because the exercise is good and the scenic vistas are spectacular. I am a member of HARP (Humboldt Alliance for Responsible Planning), a grassroots movement that currently has about 200 supporters/members. I also serve as the President of the Board of Directors of the Westhaven Community Services District, which supplies water to the small rural village just south of Trinidad. P53-01

I am contacting you to relay my comments concerning the recently released "public review draft" of the BIA Environmental Assessment (EA) for the proposed Trinidad Rancheria hotel project. The EA proposes a six story 100 room hotel, to be located above Scenic Drive along the coastline just south of Trinidad Bay, one of the scenic jewels of the CA coast, and would be visible from Trinidad Head, from which the existing casino development can already be viewed. I have reviewed the EA carefully and it is hard not to read the released EA as an implied pre-judgment for a finding of a mitigated FONSI. I believe that such a finding would be completely unsupportable. Only two possible actions seem appropriate: (1) pursue the "no action" alternative (i.e., do not build the proposed 6 story hotel), or (2) engage in a full EIS process to resolve the many unacceptable adverse significant environmental impacts of the proposed 6 story hotel, and to assessment of reasonable alternatives (e.g., down-sized 2-3 story 50 room hotel designs that would not have such unacceptable impact on the natural landscape/visual resaources).

I joined HARP because I love the relatively undeveloped rural character of our area in general and because I love the natural landscape surrounding Trinidad Bay. Construction of a six story hotel along Scenic Drive, overlooking Trinidad Bay, would destroy this natural landscape. My belief is shared by numerous individuals who provided comments at the 27 September 2018 informational meeting on the proposed hotel, hosted by HARP at the Trinidad Town Hall, and at P53-02

the 15 October special meeting of the Trinidad City Council, at which members of the Trinidad Rancheria spoke about the proposed project and members of the local community provided comments about the proposed six story hotel. There were numerous comments made at the two meetings that were entirely consistent with my own belief that construction of a 6 story hotel above Scenic Drive, on the Trinidad Rancheria's property, would have devastating impacts on the very special visual resources that we love and cherish. Not a single comment was made indicating clear support for a six story structure, though there was certainly broad support for possible construction of an attractive hotel design that might "blend in with the landscape". Local newspaper articles from the North Coast Journal (04 October 2018) and the Times Standard (16 October 2018) accurately summarize some of the comments made at these two meetings. It is inconceivable that "pastel paints and non-reflective glass" could possibly mitigate the adverse impacts of a six story hotel on visual resources. Simply put, a six story hotel would be grotesquely "out of place", no matter how it were designed. The "mitigation" proposed of these visual impacts (described in the EA at Sections 3.13.1 and 3.13.2) could not possibly be expected to reduce these visual impacts to "less than significant", as the EA contends. This seems a classic instance of "lipstick on a pig": a six story hotel is still a six story hotel; a pig is still a pig.

P53-02 (Cont.)

There are numerous other reasons to conclude that a mitigated FONSI would not be a supportable finding for the proposed 6 story 100 room hotel project. Among these reasons are at least the following:

- The water needs of the proposed hotel, as stated in the EA, appear to be something like 15,100 gallons per day (gpd), assuming 20% recycling of treated wastewater to toilets, or 18,900 gpd (the stated need). This need is large and would place the Trinidad Rancheria hotel as the single largest user on the Trinidad Water system if it were to provide service to the hotel. Current Rancheria water use is apparently about 11,000 gpd, so the combined draw would be about 26,000 – 30,000 pgd.

P53-03

- It is presently unclear whether the City of Trinidad, given its relatively limited Luffenholtz Creek water supply, will be able to provide the water needed by the proposed hotel. Given the City's obligations to existing customers, to provide for future build-out within the City limits, as well an in-negotiation arrangement to provide water to a CAL-FIRE station approximately 1 mile north of City limits and associated potential obligations that may be imposed by the CA Coastal Commission to also provide priority to commercial recreation businesses along this 1 mile extension, it may be that adequate water will not be available to satisfy a new large need required by the proposed hotel which is outside of the City's normal service area. The City is in the process of completing a water assessment survey to help it develop a better understanding of how many additional service connections can be added and this will not be completed until January 2019 at earliest. (Adding the proposed hotel would be

P53-04

analogous to adding 45 new residential homes to a City system which currently has about 250 service connections within the City limits. There are no other obvious local sources for 15,000 – 19,000 gpd of water that are currently available in the Trinidad area. The EA addresses none of these issues and arrives at a superficial and poorly supported contention that the City of Trinidad would very easily be able to provide the needed water. It seems abundantly clear that many issues concerning availability of water for the hotel are unresolved and it is not possible at this time to conclude that delivery of 15,100-18,000 gpd would have no adverse impacts on other City water customers.

P53-04 (Cont.)

- The EA claims that only 10,000 additional gpd of wastewater would need to be disposed of for the proposed hotel, but there is no clear explanation of how this figure is calculated. A better guess, assuming 20% recycling of water for toilets and the stated need for 18,900 gpd for the hotel, would be 15,100 gpd. As the EA notes, this additional amount of wastewater requiring disposal would require expansion of the existing leach field. Alternative locations for such expansion are indicated, but there is no clear evidence of a reserve area that would be large enough to replace the entire system in the event of failure of the existing/expanded system. There is also no estimate of the lifespan of the current leach field system nor of possible impacts on lower elevation properties of additional flows passing through soils on Rancheria lands. There are no "sewer" lines as Trinidad has no wastewater treatment system and remains dependent on individual septic tank/leach field systems. This topic clearly requires more study before the project can be stated to have no significant adverse environmental impacts.

P53-05

- The EA states that, by 2040, adverse traffic effects from the hotel and associated buildout on Rancheria lands would have unacceptable adverse impacts on traffic UNLESS a freeway interchange were built which would then mitigate these adverse impacts. There are several things wrong with this argument. First, the buildout associated with the hotel suggests that the CUMULATIVE impacts of proposed Rancheria developments, in addition to the hotel, have not been adequately addressed in the EA. The EA instead attempts, incorrectly and probably illegally, to separate the proposed hotel development from other planned developments that will also impact traffic. Second, the proposed mitigation of these adverse traffic impacts by a currently non-existent interchange relies on speculation that such an interchange will indeed be constructed. There is widespread opposition to the freeway interchange idea and it is not a forgone conclusion that an interchange will be constructed. A possible "compromise" might be a freeway *overpass* that would improve connection between the freeway-separated Rancheria land holdings, but this would not mitigate adverse traffic impacts. Finally, over the "short term", the EA claims that construction of the hotel will *reduce* current traffic levels. This makes no sense at all. If the hotel is to have

P53-06

any net economic value to the Rancheria, it is to attract additional customers to the Rancheria's casino operation. Thus, if the hotel is actually financially viable, it would certainly increase the number of individuals wishing to access the casino/hotel complex which would therefore increase traffic beyond the current level with no hotel.

P53-06 (Cont.)

For all of the above reasons, the EA can only have one of two conclusions: (1) The "no action" alternative is the only one which would not have unacceptable adverse environmental impacts, or (2) a full EIS process, with active public scoping, is needed to develop alternatives to the proposed action which might reduce adverse environmental impacts to a level which might be considered, by some, to be "less than significant" or "acceptable". Therefore, I urge the BIA to take one of these two actions.

P53-07

Sincerely,

David Hankin

756 9th Ave

Trinidad, CA 95570

EXHIBIT B

RESPONSES TO COMMENTS

EXHIBIT B
RESPONSES TO COMMENTS

Responses to comments are organized below in four sections based on the agency or individual. The Sections are organized as follows: **Section 1.0** includes comment letters received from Federal agencies, **Section 2.0** includes comments received from States agencies, **Section 3.0** includes comment letters received from local agencies, and **Section 4.0** includes comments received from individual entities and organizations. All of the comments, which have been bracketed and numbered in the margin for ease of reference, are provided in **Exhibit A**. Refer to **Table A-1** of **Appendix A**, which provides an index of all of the comments received on the Environmental Assessment. Once an issue is addressed, subsequent responses to similar comments reference the initial response. This format eliminates redundancy where multiple comments have been submitted on the same issue. In accordance with CEQ and NEPA Regulations, 40 CFR Part 1500, comments that further NEPA's purposes are included and addressed, additionally, comments merely expressing an opinion are also included and noted for consideration purposed. Changes to the EA are included in **Exhibit E** of the FONSI.

1.0 FEDERAL COMMENT LETTERS (F)

Response to Comment Letter F1 – United States Department of the Interior

F1-01 The United States Department of the Interior, Bureau of Indian Affairs (BIA) provided one letter in the record (F1), denying a 30-day extension of the comment period as requested by the City of Trinidad. Refer to **Comment Letter L1** for the letter requesting the extension.

Response to Comment Letter F2 –United States Bureau of Land Management

F2-01-08 Comment noted. The EA assesses impacts to seabirds, including the Marbled Murrelet, in Section 3.4, Biological Resources. As discussed there within, foraging habitat for marbled murrelet exists within approximately 500 feet of the project site on the shoreline west of the development footprint and potential nesting habitat exists within approximately 25 feet of the project site to the west, south, and east. Mitigation Measure 3.4.5 was incorporated into the Proposed Project to ensure construction activities would not adversely impact nesting birds, including seabirds. Regarding operation and potential impacts from bird strikes, according to updated renditions provided by the Tribe, the hotel would be approximately 3.5 stories taller than the existing casino (**Figure 1**). As shown in the figure below, the massing and height of the hotel would not be considered a significant threat to seabirds flying at higher altitudes. For those birds flying lower near the cliffs, the casino area including Scenic Drive, is a

FIGURE 1

EXTERIOR RENDITIONS OF PROPOSED HOTEL



Source: Wright Group: Thalden-Boyd-Emery Architects

heavily traversed area which would deter seabirds from flying near the structure. However, the Tribe understands that the additional stories of the hotel compared to the casino may pose a risk to seabirds and has therefore agreed to incorporate the following design provisions into the hotel development:

1) Windows shall be fit with black out curtains within rooms that face the ocean;
2) Lighting shall be shielded and downcast; and
3) Building maintenance staff shall be trained to call the Humboldt Wildlife Care Center wildlife rehabilitation facility should disoriented or injured seabirds be found on the property.

Response to Comment Letter F3 –United States Environmental Protection Agency

F3-01 through 03

Comment noted. As stated in Section 2.2.1 of the EA, in order to accommodate excess wastewater capacity from the proposed Hotel, a 2004 Wastewater Assessment identified two potential areas, shown in Figure 1-3 of the EA, feasible for additional leach field dispersal: the mounded ridge to the south of Ter Ker Coo Lane and the hillside south of the Tribal office. In response to similar comments the Tribe received from the California Coastal Commission, the Tribe submitted additional information regarding the ability to provide additional wastewater treatment and disposal for the hotel project. As stated in a letter to the Coastal Commission dated May 13, 2019, the Tribe has worked with the developer, engineers, and a technical team, to analyze the operational capacity of the existing leach field, refine the estimate of project wastewater generated by the proposed project, and to conduct a site-specific soils survey in order to verify the necessary size and location of a new leach field and the need for expansion of the existing WWTP.

Based on the updated report submitted by SHN Consulting Engineers and Geologists, the projected peak day flow for the hotel is likely 14,185 gallons per day (gpd). An assessment of soil samples, bores, percolation tests, and observations at groundwater wells conducted by SHN indicated that an approximately 51,500 ft^2 area extending to the north and west around the existing leach field would be suitable for wastewater disposal and would be able to accommodate a maximum of 11,200 gpd of the peak day flow of 14,185 gpd. To make up for the difference in the capacity of the leach field to handle peak flows generated by the hotel, the Trinidad Rancheria is proposing additional storage capacity (storage tanks) to expand the recycled water system in the existing wastewater treatment plant. The Trinidad Rancheria will dispose of excess effluent on adjacent tribal property as land irrigation. The Tribe has agreed to incorporate these recommendation into the Proposed Project. With these final preliminary design components of the wastewater treatment and disposal system, the Tribe has further proven that the hotel would have adequate wastewater treatment and disposal options. The additional information provided by the Tribe substantiate the findings of the EA and no further analysis or revisions to the EA are required. Accordingly, the BIA has determined that a FONSI is the appropriate finding for the Proposed Action.

F3-04 Comment noted. The reference to the expanded capacity in Section 4.1.10 erroneously stated 50,000 gallons per day (GPD) instead of the 30,000 gpd of total capacity the facility was designed for expansion with extensive modifications as mentioned in Appendix A. The table referenced in Appendix A assumes that the existing septic systems used by residential homes, Tribal Office, and former clinic complex fail and therefore these existing community facilities become connected to the WWTP (refer to Row 1, Column 2 versus Column 3). The

engineers concluded that a new wastewater treatment demand of 30,060 would be within the daily flow ceiling of the expanded WWTP without the need for extensive retrofitting. In addition, the Tribe has submitted additional documentation relating to the wastewater treatment system. The installation of equalization and storage tanks would be within the existing wastewater treatment building along with a minor expansion (25% total floor area) of the building within the existing, disturbed property. No new impacts would result from the expansion of the WWTP building and therefore no revisions to the EA are required.

F3-05 Comment noted. As noted in the additional engineering presented to the California Coastal Commission, the recycle rate estimate has increased to 78% by adding the recommended features to the WWTP including the slight expansion. This information represents additional details submitted by the Tribe associated with the design phase of the hotel as requested by the California Coastal Commission. While there may be various alterations to the project description from those presented in the EA, the changes do not result in new adverse environmental impacts. In accordance with the Indian Affairs National Environmental Policy Act Guidebook (59 IAM 3-H), the BIA may direct the preparer of an EA to revise the analyses, consider new alternatives or mitigation measures, seek public involvement, or take other measures to make the EA adequate to determine whether or not an EIS is required. Accordingly, the changes to the proposed wastewater treatment system do not alter the adequacy of the EA to determine whether or not an EIS is required. Based on the entire record, including the EA, response to comments, and supplemental information provided as a result of the California Coastal Commission consistency determination, the BIA has determined that an EIS is not required and a FONSI is applicable.

2.0 STATE AGENCY COMMENT LETTERS (S)

Response to Comment Letter S1 – California Coastal Commission (Waiting for consistency determination)

S1-01 Comment noted. On February 11, 2019 the BIA submitted a Coastal Consistency Determination in compliance with 15 CFR, Section 930.35 (a). Accordingly, it was the BIA's determination that the Proposed Federal Action would be consistent with Chapter 3, Article 2 through 6 of the California Coastal Act of 1976. The February letter detailed the specific provisions of Chapter 3, Articles 2 through 6 of the California Coastal Act of 1976 (CCA) and illustrated how the Proposed Action complies with the CCA, in order to make a Federal Consistency Determination.

Prior to submission of the Coastal Consistency Determination letter, the BIA conducted a teleconference with California Coastal Commission (CCC) staff regarding the consistency determination and Coastal Commission hearing. During the teleconference, CCC staff suggested a March or April hearing date assuming a February submittal and requested

responses to the comments submitted to the BIA on the Environmental Assessment by the CCC that relate to issues outside of the consistency determination process.

On March 11, 2019, Commission staff formally requested that the BIA grant a time extension to enable a public hearing at the Commission's August 2019 meeting in Eureka. The Commission stated that the delay was necessary to provide additional time related to design changes implemented in response to comments on the project and to further develop details regarding water usage, wastewater disposal, water supply, and viewshed impacts. The BIA declined the request due to the resulting five-month time delay that would result. In addition, the letter included summaries of responses to the Coastal Commission main concerns regarding traffic, water demands, wastewater disposal, and slope stability.

Prior to the April Commission hearing, a staff report was published on March 22, 2019, which recommended that the Commission object to the consistency determination. On March 27, 2019, the BIA moved the determination hearing to May 10, 2019 Commission hearing to enable the BIA to provide updated project information. The determination was again moved to the June 14, 2019 Commission hearing to allow further discussion between the Tribe, BIA, and Commission staff.

On April 12th and May 13th, 2019, the Tribe submitted responses to the March 22nd, 2019 Coastal Commission Staff Report. These submittals provide further concurrence with the BIA's findings.

On May 24th, 2019, the staff report for the June 14, 2019 Commission hearing was released. The staff report had the same conclusions as the March 22 regarding impact to the coastal viewshed (Sections 30251 and 30253(e) of the Coastal Act) and available public services (water supply, Section 30250(a) of the Coastal Act). Consistent with the BIA's findings, the May 24th staff report concluded that:

Wastewater

The proposed project would include an expansion of the casino's existing leach field, wastewater recycling, increased storage capacity, and landscaping irrigation. These measures would result in sufficient capacity to appropriately dispose of wastewater, including at times of peak flows, generated by the proposed hotel. Therefore, staff recommends the Commission find the proposed project consistent with Section 30250(a) with respect to wastewater treatment.

Traffic

A traffic assessment for the proposed project finds that the hotel would not result in significant impacts to the existing transportation network and that there is sufficient capacity to handle traffic generated by the proposed hotel. Therefore, staff recommends the Commission find the proposed project consistent with Section 30250(a) with respect to transportation.

Geotechnical

A geotechnical feasibility and design report concludes that the site is suitable for the proposed hotel with below-grade foundation design elements and the use of slope stabilization walls. The Trinidad Rancheria has committed to incorporating landscaping to conceal such walls where they extend above grade. Therefore, staff recommends the Commission find the proposed project consistent with Sections 30253(a) and 30253(b) of the Coastal Act.

On June 7, 2019, the BIA submitted a supplement to the Consistency Determination in response to the Mary 24th staff report. The BIA reiterated that the Proposed Action for which the Consistency Determination is required is the approval of a lease agreement for the Tribe's operation of the hotel and approval of a loan guarantee pursuant to the BIA land guarantee program. As noted in the CZMA, "each Federal agency activity within or outside the coastal zone that affects any land or water use or natural resource of the coastal zone shall be carried out in a manner which is consistent to the maximum extent practicable with the enforceable policies of approved State management programs." (25 U.S.C. *§* 1456(c)(l)(A)) The CZMA regulations define the phrase "consistent to the maximum extent practicable" to mean: "fully consistent with the enforceable policies of management programs unless full consistency is prohibited by existing law applicable to the Federal Agency". The supplement provides a number of federal laws and regulations applicable to the Proposed Action which govern the BIA's authority to carry out its activities consistent with CZMA and CCMP. Furthermore, the BIA summarized the history of the Rancheria and the availability of land to accommodate the Proposed Action (for example, the Tribe does not own all the lands within the Trinidad Rancheria), along with the need for the economic development project. Furthermore, where conditions respecting water delivery to the Tribe's Rancheria are concerned, an issue is whether the conditions intend to regulate use of the Rancheria, or whether the conditions are serving an objective that is not preempted by federal law prescribing how the federal land is to be used. Where federal property is concerned, the Property Clause, Art. IV, § 3, cl. 2, provides that "Congress shall have Power to dispose of and make all needful Rules and Regulations respecting the Territory or other Property belonging to the United States." Thus, the Property Clause allows the United States to take land into trust for the Tribe, and to specify uses for that land. If State law conflicts with the land use specified by the United

States, it may be preempted by federal law pursuant to the Supremacy Clause. Conditions concerning water delivery may not interfere with Congressionally-approved uses of the Rancheria. Accordingly, the Tribe is engaged in discussions with the City that will ensure that water delivery is provided to the hotel.

An addendum to the May 24th, 2019 staff report was released on June 11, 2019 providing an update on comments received on the staff report and a summary of additional information received from the BIA and Tribe. However, there were no changes to the May staff report recommendations regarding the consistency determination.

At the June 12th California Coastal Commission hearing in San Diego, the Commission filed a motion to object to the BIA's determination. Many Commissioners stated that water supply remained an open concern and that the BIA should resubmit a determination to be heard in August at the Eureka hearing to allow time for the BIA, Tribe, and Commission to work on the water supply issue.

The BIA resubmitted the Coastal Consistency Determination on July 10th, 2019 with the intent of working with the Coastal Commission to address the issues from the June hearing. The subsequent Coastal Consistency Determination was schedule for the August Coastal Commission hearing in Eureka. A staff report was submitted on July 26, 2019 with the same recommendations as the June Coastal Commission Hearing. Prior to the hearing, the Tribe announced that groundwater explorations indicated a potential volume adequate to meet the needs of the hotel.

The federal consistency determination was addressed at the August 9th, 2019 Coastal Commission Hearing in Eureka. After deliberation the Coastal Commission concurred with the BIA's consistency determination 8 to 3, with a condition that the Tribe secure a consistent water source.

S1-02 Comment noted. The language in the second bullet of Section 1.7 of the EA is hereby revised as follows:

> Consultation with the California Coastal Commission concerning consistency of the Proposed Action with the enforceable policies of the California Coastal Management Program (i.e., the Chapter 3 policies of the Coastal Act, Cal. Pub. Res. Code §§ 30200 *et seq.*) in accordance with 15 CFR Section 930.36 of the National Oceanic and Atmosphere Administration, Federal Consistency Regulations.

S1-03 Comment noted. The language under *Coastal Zone* in Section 4.1.8 of the final EA is hereby revised as follows:

While the project site is located within the Coastal Zone, the site is considered excluded from the Coastal Zone as that phrase is defined in the CZMA, as it is on land held in trust by the federal government. Therefore, the Proposed Project is not required to be developed in accordance with the Local Coastal Program. However, for the BIA to issue a loan guarantee for this project, the project is required to be consistent to the maximum extent practicable with the enforceable policies of the California Coastal Management Program (CCMP) under the CZMA. The type of land use for the proposed Hotel is consistent with the adjacent land use of the existing Casino.

S1-04 and -05

Comment noted. As provided in the Tribe's July, 2019 response to the Coastal Commission's Staff Report, the design features of the hotel have been modified to alleviate issues with the viewshed. These alterations to the hotel are consistent with Mitigation Measure 3.13.3 of the EA that states:

> Design elements shall be incorporated into the Proposed Project to minimize visual impacts of buildings and associated structures, including landscaping that compliments buildings and parking areas, with setbacks and vegetation consistent with existing landscaping. Earth-toned paints and coatings shall be used, all exterior glass shall be non-reflective and low-glare, and signs and facades shall be designed with a non-reflective backing to decrease reflectivity.

The hotel has been sited to overlap the existing structure as much as possible in part, to minimize the appearance of additional development on the site. The design has also been revised with a smaller grade level building footprint to better fit within the topography. This in turn lowers the perceived height of the building above the adjacent grade by one floor at the South end of the exposed façade. The changing grade results in an overall height of 78.5' vs. 65.5' on the North and South ends respectively. The materials used on the exterior consist of natural stone veneer, lap siding and vertical siding in multiple earth toned colors. Several roof planes have been sloped back from the exposed elevations minimizing the amount of visible roof surface and larger overhangs create greater depth of shadow on the building face. The natural coloration along with offsets in the building face and roofline all help to break up the perceived overall size of the building.

S1-06 Comment noted. The decision to build an approximately 100 room or more upper midscale hotel (3+ star quality) was recommended by a lodging consultant as market justified at the Cher-Ae Heights Casino. It was determined that a hotel of this quality would be attractive to the Casino, leisure/recreational and commercial demand segments, and improve the Casino's attractiveness as a destination. The Tribe considered building a hotel with fewer rooms to

reduce the cost of the hotel, but research revealed that the Tribe would not realize the return on investment with a smaller hotel, which would impair its ability to secure financing for the project.

The proposed location was determined to be the only adequate location for the hotel as the Tribe does not own additional lands within the Trinidad Rancheria on which the hotel can be built. Due to land lost during the construction of Highway 101, the Rancheria Parcel is only 46.5 acres, on which is located the Tribe's Casino, Tribal office buildings, parking facilities, public service facilities, and Tribal member housing. The Casino parking lot is not a viable option as it is not buildable and has destabilization issues related to ground water. Aside from the land within the Rancheria's "urbanized" area, the remaining developable acreage is set aside for Tribal member housing. Due to the size of the existing land base, the Rancheria's only site location for the hotel is directly adjacent to and tucked behind the Casino, which is consistent with the Coastal Act requirement to locate new development contiguous with existing development and public services. Because of limitations related to this site, the only alternative for an economically viable hotel with the necessary 100 rooms is a multi-story hotel at the proposed location.

S1-07 Comment noted. As stated in the prepared EA, **Section 3.13.3**, as a measure to address glare during daytime all exterior glass shall be non-reflective and low-glare. Non-reflective, also known as anti-reflective glass, is intended to reduce the glare as seen from the face of the glass. Additionally, low-glare glass provides low reflection off the surface of the window.

S1-08 Comment noted. After release of the EA, the Tribe had consulted with Caltrans regarding the scheduling of the new offramp would not coincide with the potential opening of the new hotel. Accordingly, a Traffic Impact Analysis (TIA) for the Trinidad Rancheria Hotel was conducted in 2019 to assess the impacts of the hotel on the existing transportation network without the new interchange. As recommended by Caltrans, four scenarios were studied, these include: existing conditions, Forecast 1 – existing conditions with the commencement of hotel operations slated for 2019, Forecast 2 – 20 year projection to 2039 with no development, and Forecast 3 – 20 year projection to 2039 with development. The TIA conclusions were consistent with the findings of the EA. The key findings of the TIA are summarized below:

1. The Trinidad Rancheria Hotel has little to no impact on the existing transportation network and traffic patterns.
    - At the intersection #1 – Main Street/Scenic Drive/Patrick's Point Drive the Level of Service for the intersection is already operating in relatively poor condition with LOS ratings of:
        - "C, A, C, E" from a two-way-stop-control analysis.
        - "C, C, B, B" from an all-way-stop-control analysis.

- At the intersection #1 – Main Street/Scenic Drive/Patrick's Point Drive the Level of Service for the intersection is minimally impacted by the proposed hotel development:
  - Two-way-stop-control analysis identifies the Southbound LOS reduces from an "E" already poor rating, to an "F" poor rating.
  - All-way-stop-control analysis identifies the Southbound LOS reduced from a "C" average but acceptable to a "D" below average rating.
- No other intersections or roadways show any reduced state of operation due to the proposed Hotel development.

2. Area Transportation Improvements not related to the Development project are needed to improve, or at a minimum, maintain the existing functionality of the transportation network.
   - 20-Year Project LOS analysis, assuming a realistic 2 percent per year traffic growth rate and with no significant regional developments identifies the following issues:
     - Intersection #1 – Main Street/Scenic Drive/Patrick's Point Drive will be operating in failing condition in year 2039 regardless of development, if no improvements are made.
     - Intersection #4 – N Westhaven Drive/Trinidad Frontage Road/US101 northbound Off Ramp will be operating in failing condition in year 2039 regardless of development, if no improvements are made.
     - All other intersections and roadways analyzed in this report, if maintained to their current condition, adequately serve the area from a LOS analysis perspective.

S1-09 Comment noted. The draft EA for the hotel project was published in 2018 and indicates that water would be delivered through the City of Trinidad's water system. This has been the Tribe's intention since planning and development of the project began. The Tribe initiated the formal discussion process with the City of Trinidad through Government-to-Government consultation meetings in March and July of 2018. The City was notified that the hotel project would move forward, and of the Tribe's need to increase the amount of water use through the existing Casino connection to service the hotel. As a result of these notifications, the City began discussions regarding water rates, usage, capacity and other related topics.

The BIA agrees with the City's efforts to gather appropriate data and re-evaluate water rates, etc. Doing so will allow them to better determine their water capacity in response to the Tribe's request for service. The City has had numerous discussions at City Council meetings related to the Tribe's request, and has hired and engineering firm to work on the particular

issues. The Tribe shared this information with the Commission to illustrate its commitment to working with the City, and that the Tribe is fully aware and support their need to study the water supply. Again, the Tribe pointed the Rancheria already receives water service from the City of Trinidad, and that the Tribe's request is not for a new service, but the expansion of existing service.

The Tribe has been involved with and provided funding for a number of infrastructure improvement projects related to the City's system from 1989-2015. The Tribe's contributions total $847,693, and include improvements to the City's water main, water tank and water plant.

The Tribe has been consistent in our efforts to be transparent, to continue to work collaboratively, and to contribute funding to the City's water infrastructure. For example, because the City provides water service to the Tribe, the Tribe is eligible for federal funding through Indian Health Service. Those funds can be used to address infrastructure needs as well as water supply needs for all users.

Based on information provided by TBE Architects, via FEA Consulting Engineers, and industry standards, the Tribe's best available information to date is that the hotel will require approximately 14,184 gallons per day. This number reflects 100% occupancy. However, according to Wright, Inc., hotels average between 65% and 70% occupancy on an annual basis. As a result, this brings the average down to approximately 9,000 gallons per day. With off-site laundry, the recycling of water, and additional water saving techniques, the Rancheria can achieve and estimated daily consumption number that is much lower.

Since the publication of the EA, the Tribe has met with the City in two government-to-government meetings related to our water request. During the second meeting the Tribe was able to discuss the results of one of their commissioned water studies. The conclusion of the study indicated that the City does have a surplus of water and therefore could meet the Tribe's need. The report stated initial evaluations would be needed as the study focused specifically on the treatment plant's production capacity and did not address the City's water policy issues. The Tribe has sent the City a letter formally requesting water and will send a follow-up letter requesting an exact amount. In the meantime, the City and the Tribe continue to move forward on the water request and other related projects.

While using the City's water and infrastructure is the preferred alternative, in the event that they are unable to provide the necessary water, the Tribe plans to seek water from on-site groundwater sources. The EA has been revised to include the option to develop groundwater wells on the Reservation to serve the Proposed Project. According to preliminary well explorations, on-site well development could provide approximately 6.8 gallons per minute (gpm) or 9,792 gpd, approximately 99 percent of the average day demand. With trucking of

supplemental water to ensure stored levels can meet max demands, the optional water strategy can meet the proposed water demands for the Proposed Project.

S1-10 Comment noted. Refer to the response to **Comment F3-01-03** concerning the verification of the leachfield capacity and expansion review.

S1-11 Comment noted. Appendix B of the EA includes the Draft Geotechnical Feasibility and Preliminary Design Report which provides geotechnical data, geological hazards assessment, and preliminary geotechnical recommendations for the proposed hotel project. Following the draft report, the Final Geotechnical Report was completed and a Geotechnical Summary Letter was published on April 10, 2019. The Summary Letter summarizes the geotechnical findings from the Final Geotechnical Report. It states that at the time the EA was published, the Proposed Project was a 6-story hotel with complementary facilities located along the southwest side of the existing casino building and that some retaining walls were expected to be incorporated into the final design to account for sloping ground to the southwest of the building. The Draft Geotechnical Report (Appendix B) of the EA concluded that the site is suitable for construction of the proposed hotel and complementary facilities provided that appropriate mitigation of the geologic hazards is incorporated into project design. The Summary Letter indicates that the likelihood of an active fault through the project site to be low and that the risk of fault rupture does not represent a "fatal flaw" to the project. Furthermore, it indicates that, depending on the final hotel layout, some level of slope stabilization should be considered to limit head-ward encroachment of the slide. This slope stabilization may include options such as a soil nail wall, welded wire wall, or cantilevered solider pile wall, with wall height likely on the order of 10-15 feet. The Summary Letter concludes that further geotechnical study is anticipated for final design based on the final structure layout, retaining walls, and site grading. Therefore, it is anticipated that once the final project design is completed, the final geotechnical study would be conducted.

Response to Comment Letter S2 – Department of Transportation

S2-01/2 Comment noted. The Tribe has clarified that the hotel has been a phased component of the existing casino and is therefore independent of the Master Plan and associated interchange. Accordingly, the Tribe has conducted an additional traffic impact study to assess the impacts of the hotel on the existing transportation network as an independent project. The cumulative analysis accurately assesses the implementation of the Master Plan within a 20-year timeframe and associated need for the interchange. The impacts associated with the interchange require review at the local level under the California Environmental Quality and associated mitigation would reduce impacts below adverse levels.

S2-03 Comment noted. All appropriate studies required for the interchange to be developed off the Reservation will completed to meet local, state, and any federal requirements (should federal

funding by used by Caltrans to complete the interchange). The project would comply with Caltrans Standard Environmental Reference (SER) which outlines the procedures and documents required to comply with CEQA and NEPA, if applicable. In addition, the project would be required to comply with Volume 5 of the SER, which outlined the procedures to be incorporated into projects developed within the Coastal Zone.

S2-04/05 Comment noted. The Tribe's Master Plan relies on the new interchange to meet the demands. Should the new interchange become infeasible, the Tribe would revise the Master Plan to incorporate feasible development in accordance with the existing available transportation infrastructure. The Master Plan is a planning level document and can be readily altered by the Tribe to assess conditions at implementation of the various features of the plan. As noted above, the hotel is considered a phase of the casino and is independent of the implementation of the Master Plan and accordingly is assessed separately in the new traffic impacts study.

3.0 LOCAL AGENCY COMMENT LETTERS (L)

Response to Comment Letter L1 – City of Trinidad

L1-01 The City of Trinidad requested an extension to the comment period which was denied by the BIA. Refer to **Comment Letter F1** for the response from the BIA.

Response to Comment Letter L2 – City of Trinidad

L2-01 Comment noted. The response to specific comments provided on the topics presented by the Commenter are provided below. The findings provided in the EA address the commenter's concerns. Section 3.10.1 of the EA addresses the water supply,

L2-02 Comment noted. It is acknowledged that the City of Trinidad, the Trinidad Rancheria, and the surrounding landscape and ocean are part of an incredibly beautiful, environmentally sensitive, and unique location. Section 1.3 of the EA details the location and setting of the project site in a general manner, this response serves as a further addendum to the setting described in Section 1.3 to elaborate in a more specific manner. The proposed project is located just onshore of the Waterboard designated Trinidad Bay Area of Special Biological Significance (ASBS), Coastal Commission designated State Water Quality Protection Area and designated coastline as the Trinidad Head Critical Coastal Area (CCA), and it is recognized by the Bureau of Land Management (BLM) as a formal Gateway to the California Coastal National Monument (CCNM). Trinidad Head is one of the few onshore portions of the Federal CCNM and it provides the public access to scenic views of the area and the project site. The State ASBS and CCA designations strictly prohibit any degradation of natural water quality (BLM 2019, CCC 2014, Waterboard 2017). As noted in the footer, Figure 1-2 was generated using the "Trinidad, CA" United States Geological Survey 7.5 minute topographic quadrangle and accurately depicts the regional topography and associated

features, including Trinidad Head. Section 3.4.4 of the EA accurately assesses the potential impacts of the Proposed Project which would be localized to the area surrounding the existing casino which has been previously disturbed. Implementation of the Proposed Project would not adversely affect Trinidad Head ASBS, Trinidad Head, CCA, or the federal CCNM.

L2-03 Comment noted. Based on information provided by TBE Architects, via FEA Consulting Engineers, and industry standards, the Rancheria's best available information to date is that the hotel will require approximately 14,184 gallons per day. This number reflects 100% occupancy. However, according to Wright, Inc., hotels average between 65% and 70% occupancy on an annual basis. As a result, this brings the average down to approximately 9,000 gallons per day, similar to the estimate provided in the EA. Wastewater recycling and landscape irrigation have been proposed as options to reduce wastewater discharge flow rates from the new hotel. The amount of recycling and irrigation to be implemented may be determined based on potential disposal shortfalls resulting from limited available disposal field capacity. FEA Consulting Engineers estimates that 15% wastewater recycling can be accommodated in the proposed hotel.

Based on monthly water usage rates from similar size and type of hotels in the region provided by Smith Travel Report (STR), projected water use variation on a monthly basis indicates that the proposed hotel will increase during the summer and decrease during the winter, with peak flows occurring in July. The actual recorded water use rates from these similar facilities was compared with the maximum expected flow using the fixture unit method to determine a percent of total capacity for each month. The monthly percent of total capacity was then used to scale the maximum expected flow rate for the hotel to estimate maximum monthly flow rates. The maximum monthly water use of 12,553 gpd occurs in July at 88.5% of the peak daily flow. The average water usage rates over the year 2018 provided by STR indicates that the average flow rate will be 10,130 gpd (71% of the peak daily flow).

According to SHN, excess treated wastewater may be disposed of using onsite landscape irrigation. The Tribe wishes to implement the measures necessary to use landscape irrigation as a means of disposing of excess treated wastewater when necessary. Any excess treated effluent that cannot be disposed of onsite can be transferred to adjacent tribal lands for land application. The Rancheria owns lands sufficient for this purpose.

L2-04/-05 Comment noted. Refer to the response to Comment S1-09 regarding water supply.

L2-06 Comment noted. Refer to the response to **Comment S1-09** regarding water supply. As discussed there within, preliminary studies indicate that there is available capacity for the City to meet the updated demands of the hotel project. Furthermore, the EA has been revised to include the option to develop groundwater wells on the Reservation to serve the Proposed

Project. Based on preliminary drilling investigations, a well may be developed with a capacity of approximately 10,000 gpd; which, when taking into account storage, would be sufficient to meet the water demands of the hotel. Accordingly, based on the EA and response to comments including associated clarifications added to the EA, there are no changes necessary to the findings of the EA in regards to water supply and a FONSI is warranted.

L2-07 Comment noted. Refer to the response to **Comment S1-08** regarding the proposed interchange scheduling and the results of the TIA that was conducted in consultation with Caltrans to address impacts for three scenarios: 2019 hotel operations, 2039 hotel operations without cumulative development, and 2039 with cumulative development. The results indicate that the EA accurately assessed impacts of the hotel which requires development of the interchange as mitigation solely for the 2039 scenarios. Under the 2019 scenario, operation of the hotel would not require mitigation. Accordingly, based on the EA and response to comments, including associated clarifications added to the EA, there are no changes necessary to findings of the EA in regards to traffic impacts and a FONSI is warranted.

L2-08-11 Comment noted. Refer to the response to **Comment F3-01** through **-03** regarding the verification of the leachfield capacity. Refer to response to **Comment L2-03** regarding the water demand and project wastewater flows.

L2-12 Refer to the response to **Comment S1-06** regarding feasible alternatives for the scale of the hotel and location.

L2-13 Comment noted. As shown in the updated rendering provided in the response to **Comment F2-01-08**, the Tribe has already incorporated the mitigation measure that requires design elements to be incorporated into the Proposed Project to minimize visual impacts of buildings and associated structures, including landscaping that compliments buildings and parking areas, with setbacks and vegetation consistent with existing landscaping. Earth-toned paints and coatings were used. Furthermore, the requirements for all exterior glass to be non-reflective and low-glare, and signs and facades to be designed with a non-reflective backing to decrease reflectivity with be required through incorporation in the FONSI. As the Tribe has included the mitigation measures into the updated design, no revisions to the EA are necessary in regards to visual impacts and a FONSI is warranted.

L2-14 Comment noted. The impacts assessment provided in the EA provides adequate analysis and mitigation for visual impacts. In accordance with requests from the Coastal Commission, the Tribe submitted simulated views of the proposed hotel (including the incorporated mitigation for design features). These views are included as **Attachment I** of the response to comments as their inclusion in the EA are not necessary for the BIA to determine a FONSI is warranted.

As shown in the photos, the proposed hotel is hidden by topography and various trees. The elevation of the hotel would rest below the tree line and only 2.5 stories taller than the connecting portion of the casino. Accordingly, the findings of the EA regarding visual resources are accurate and the mitigation appropriately addressing the findings. No further revisions or analysis are required in the EA for visual resources.

L2-15 Comment noted. In relation to impacts under NEPA, an adverse impact would occur if project-related demands on public services would cause an exceedance of system capacities that result in a need for additional facilities, the construction and operation of which would result in adverse effects to the physical environment. The analysis adequately states that compared to the existing setting which states that the County Sheriff would continue to provide law enforcement services to the project site, a will serve is not applicable because, as stated in Section 3.10.7 of the EA, in accordance with Public Law (PL) 280, 18 USC §1162, the State of California and other local law enforcement agencies have criminal enforcement authority on tribal lands. Furthermore, as stated in Section 3.10.6, per an agreement between the County Sheriff's Office and the Tribe, the Tribe provides funding for a deputy to patrol and provide law enforcement services in the vicinity of the Rancheria offsetting impacts from the Rancheria including existing casino. Based on the size of the hotel, calls for service would not be disproportionate to the current number of calls for service at the Casino and no additional law enforcement facilities would be required. Therefore, adverse impacts would be minimal to law enforcement services.

L2-16 Comment noted. As noted in response to Comment L2-15, impacts from the hotel would be significant if new facilities would be required to service the hotel, the construction or expansion of which would result in significant adverse effects to the environment. Fire service is currently provided to the casino and Reservation and, as with law enforcement, the addition of a 100-room hotel would not result in a disproportionate number of calls compared to the current number of calls for service at the Casino. Accordingly, no additional fire protection facilities would be required. Therefore, adverse impacts would be minimal to fire protection services.

L2-17 Comment noted. However, air emissions are generated in relation to a federal action on land held in trust by the federal government; therefore, the General Conformity provisions of the Clean Air Act apply to the project. State and local air quality regulations, including state-established air quality thresholds more stringent than the National Ambient Air Quality Standards (NAAQS), do not apply to tribal trust lands and therefore associated criteria are not applicable. The analysis within the EA accurately assess the impacts on the Proposed Action and Proposed Project on the North Coast Air Basin (NCAB) in relation to General Conformity. Although the NCAB is in conformance with all designated NAAQD, the EA analysis utilized the General Conformity de minimis thresholds to assess impacts. As noted

in Section 3.3.4 of the EA, emissions from the Proposed Project would be below the General Conformity *de minimis* levels and therefore operation of the Proposed Project would not cause an exceedance of NAAQS or conflict with the implementation of California's SIP.

L2-18 As stated in Section 3.11.3 of the prepared EA, a list of typical noise levels produced by construction equipment was provided to assess impacts related to noise. This list included the higher noise-producing equipment that may be utilized on the project site and did not include every piece of equipment that may be used. Additionally, based on **Table 3.11-1**, the maximum projected construction noise level on the project site would be approximately 89 dBA. This is a conservative maximum noise level based on the assumption that louder equipment (pavers) could potentially be used daily. However, not all equipment would be used simultaneously and not all equipment would be used on a daily basis. Thus, the actual noise level would be lower than calculated. Using an attenuation factor of 8.0 dBA Leq per doubling of distance, maximum average sound levels at nearby sensitive receptors (approximately 165 feet east of construction activity) would be approximately 77 dBA Leq, which is less than the FHWA threshold of 78 DBA Leq. As noted in the EA, this level is higher than the County threshold of 50 dBA Leq for commercial land use noise, however construction noise is exempt from County noise requirements. The discussion of the County noise threshold was provided for comparison to the applicable federal threshold.

L2-19 Comment noted. However only a few examples are presented. Propane is a refined natural gas that would be utilized for the gas mentioned in Section 2.2.1 of the EA. The EA has been revised to clarify the use of propane. Minimal grading would be required as the site below the proposed hotel has already been leveled for historic residential land uses. Because of the pre-existing leveling and tree removal, minimal cut will be required to develop a sloped roadway. Appendix B of the EA, the Draft Geotechnical Feasibility and Preliminary Design Report assessed the area for the proposed access roadway and provided recommendations to ensure construction would result in minimal adverse impacts. Because these recommendations are part of the Proposed Project, they are incorporated into the project and adequately addressed in the EA. For example, Mitigation Measure 3.1.6 states that prior to construction of the Hotel foundation, the contractor shall implement one of the slope stabilization options recommended by the soil engineers in the Draft Geotechnical Feasibility and Preliminary Design Report.

L2-20 Comment noted. The considerations into the location of the hotel were considered during the initiation of the hotel design process. Refer to the response to **Comment S1-04 and -05** for further discussion of the design process for the hotel.

L2-21 As stated in Section 3.3.4 of the prepared EA, the impacts to air quality were considered using an estimated eight to twelve month construction period, and the operational emissions were determined to be below *de minimis* levels. Additionally, both constructional and

operational emissions would result in GHG emissions were determined to not have significant impacts. Based on the relatively small footprint of the new hotel, impacts to sensitive receptors would be minimal. A health risk assessment is unwarranted for this type of construction project. A review of the corresponding local documents for comparision (District Rules and Regulations for the North Coast United Air Quality Management District [NCUAQMD]) indicates that should a project like the Proposed Project be built outside of trust land, further air quality analysis for air toxics and associated cancer and non-cancer impacts is unwarranted under CEQA (per the guidance found in CAPCOA's "Health Risk Assessments for Proposed Land Use Project" referenced by the NCUAQMD webpage titled Air Quality Planning & CEQA).

L2-22 Comment noted. Refer to the response to **Comment L2-02** regarding a response concerning the unique habitat in the region.

L2-23 Comment noted. While the public meeting referenced by the commenter were well attended, may of the comments were based purely on requesting updating visual simulations of the design due to concerns regarding visual impacts of the Proposed Hotel. Visual impacts were mitigated in the EA in response to such concerns received prior to release to the EA. However, local controversy alone does not render an impact significant requiring further analysis. Furthermore, the areas of controversy including visual effects, water supply, geotechnical have been addressed through mitigation of further planning activities conducted by the Tribe above the requirements of the environmental review process. Accordingly, the impacts identified, including the context and intensity, do not require further review and a FONSI is warranted.

L2-24 Comment noted. These issues have been addressed in the responses above and the resulting findings are identical to those in the EA that the Proposed Project would not have a significant effect on the environment and a FONSI is warranted.

L2-25 Comment noted. The presence of a master plan does not indicate that the projects will be developed. A master plan is a guidance document but does not indicate that the project will be built as many factors including Tribal citizen growth, financial health and growth of the Tribe, and Tribal Council directives may prevent various or even all of the provisions of the master plan from being developed. Accordingly, cumulative analysis does not cover speculation as there are currently no funding mechanism for any of the developments mentioned by the commenter.

L2-26 Comment noted; however, state and local laws do not apply to trust lands and therefore the project would not violate any local or state environmental law.

L2-27 Comment noted. Refer to the response to **Comment S2-02** and **Comment S2-04** for response to a timeline and alternative mitigation measures, respectively.

L2-28 Comment noted. Refer to the response to **Comment S1-08** regarding additional information provided through a TIA conducted in consultation with Caltrans. The interchange project is in the design phase and is close to commencing the environmental review stage. The mitigation is for the cumulative year which is 2039. The impacts themselves are projections and are as likely as the mitigation measure to become a reality. Accordingly, the project is viable as being considered as mitigation since there are mechanisms already in place to consider the mitigation beyond more than speculation.

L2-29-30 Comment noted. Based on the findings of the EA and responses to comments a FONSI is warranted.

4.0 PRIVATE CITIZENS/COMMERCIAL ENTITIES COMMENT LETTERS (P)

Response to Comment Letter P1 – Bryce Kenny, Humboldt Alliance for Responsible Development (HARP)

P1-01 Comment noted. Refer to the response to **Comment F1-01** concerning a request for an extension to the 30-day commenting period. Petitioners are noted as concerned parties and will be included in mailing lists to received further correspondence related to the Proposed Action.

Response to Comment Letter P2 – Bryce Kenny, HARP

P2-01 The 30-day comment period for the prepared EA was established in accordance with Section 6.2 of the BIA's NEPA Guidebook (59 IAM 3-H). A Notice of Availability (NOA) was released providing the contact information for commenters and copies of the prepared EA. The comment period was open beginning September 19, 2018 and ending on October 22, 2018. A request for an extension to the commenting period was submitted by the City of Trinidad, and was denied by the BIA, refer to the response to **Comment L1-01** and **Comment Letter F1-01**.

P2-02 Comment noted. The EA was prepared on behalf of the Cher-Ae-Heights Indian Community of the Trinidad Rancheria (Tribe), in the interest of an Indian Loan Guarantee and approval of lease for a Hotel development and operation (Proposed Action). As per the BIA NEPA Guidebook, an EA must analyze and described the direct and indirect effects which as "caused by the action and occur in at the same time and place" (40 CFR 1508.8(a)). Additionally, the cumulative effect must also be considered and discussed in the EA. As discussed in **Section 4.0** of the prepared EA, the cumulative and growth-inducing effects as a

result of the proposed action are addressed as a result of the Proposed Action with respect to the affected environment. The commenter notes the mention of "interrelated development", assuming the reference is being made to the Tribe's Comprehensive Economic Development Strategy (Master Plan). Discussion of the potential affects as a result of the Master Plan as it pertains to the Proposed Action includes supporting infrastructure and tribal enterprises, and is discussed in **Section 4.0** of the prepared EA.

P2-03 Comment noted. Refer to the response to **Comment S1-05** concerning impacts to visual resources.

P2-04 Comment noted. Refer to **Comment P2-01** for information concerning the public comment period.

P2-05 Refer to the response to **Comment L2-25**.

P2-06 Comment noted. The EA was prepared in accordance with BIA NEPA Guidebook standards as the project is within Tribal lands. Therefore, CEQA standards are not considered within the prepared EA.

P2-07 Comment noted. Refer to the response to **Comment S2-01** to **-02** concerning traffic related impacts, and **Comment S2-04** to **-05** concerning mitigation alternatives for traffic impact.

P2-08 Refer to the response to **Comment P1-01** concerning extension of 30-day commenting period.

P2-09 Refer to the response to **Comment L2-03** concerning the availability of water to supply the Proposed Project.

P2-10 Refer to response to **Comment F1-01**.

P2-11 Appendix G was accidentally removed from the original public release draft of the EA but was subsequently included in additional copies and was made available to those who received the initial version where the appendix was missing. Nonetheless, a summary of its contents in respect to the proposed project were included in Section 3.7 and 4.1.7 of the EA, in sufficient detail for the public review.

P2-12 As stated in response to **Comment P2-02**, the EA was prepared for the loan and operation of a Hotel. Pertinent impacts relating and resulting from the proposed project were addressed in the EA in accordance with NEPA standards.

P2-13 Refer to the response to **Comment P2-01**.

Response to Comment Letter P3 – Carole Mone

P3-01 Comment noted.

P3-02 Comment noted. Refer to the response to **Comment L2-03** and **Comment S1-09** concerning the capacity of water supply and alternatives to the water supply, respectively.

P3-03 Comment noted. Biological Evaluation techniques are described in Section 3.4 of the EA. As required under NEPA, the EA evaluates impacts to protected species listed under the Endangered Species Act. Accordingly, As stated in Section 3.4.3, there are no habitats delineated by the USFWS as being critical to the survival of a protected species within or immediately adjacent to the project site. It was discovered that seven listed species had the potential to be present in the project area. Specific site conditions were examined in relation to these seven species with the conclusion that two of the seven species are met by the immediate project area, the marbled murrelet and spotted owl. Potential for disturbance during construction could occur as a temporary effect. Mitigation measures relating to these species are outlined in the EA. As noted in Section 3.4.5, a qualified biologist shall conduct a preconstruction nesting bird survey within 100 feet of the project site during nesting seasons. Furthermore, if active nests are found to be within the project site, a no-disturbance buffer zone will be established. Refer to Section 3.4.5 for more details related to mitigation measures to biological resources.

P3-04 As stated in Section 3.4 of the EA, biological resources were evaluated through a review of pertinent literature, consultation of relevant databases, and biological field surveys in order to document habitat types and the potential occurrence for federally listed species. Refer to the response to **Comment P3-03** for additional investigative methods. In accordance, the analysis must be commensurate with the potential for impact. Building on an existing parking lot and paved areas would not adversely impact habitat for federally protected species, therefore the analysis is commensurate to the level of impact. Furthermore, the analysis meets the requirements to identify impacts under NEPA and the Endangered Species Act.

P3-05 Comment noted. As stated in Section 3.1.3 of the EA, the project site is not currently mapped for landslides or liquefaction Section 3.1.5 also notes landslides may be readily stabilized utilizing measures such as retailing wall systems, slope reconstruction, and sub-drainage elements. As a mitigation measure, noted in Section 3.1.6, the contractor shall implement one of the slope stabilization options recommended by the soil engineers. The concern for the "scenic drive sliding continually and hopelessly into the sea" would not be as a result of the proposed project.

P3-06 Comment noted. Design alternatives are outside of the scope of the prepared EA.

P3-07 Comment noted. Concerns relating to water capture and transportation were discussed as a part of the prepared EA. As stated in Section 2.2.1 of the EA, to improve drainage conditions, a storm drainage inlet system would be connected to the existing Casino system to capture runoff from the building.

Response to Comment Letter P4 – Patty Stearns

P4-01 Comment noted. Refer to the response to **Comment S1-05** concerning the alternative design considerations. Section 3.13 of the EA discusses the impacts to visual resources, including the effects of lighting. As discussed in the EA, lighting from the proposed Hotel would be minimal as the Tribe would use downcast, bi-level dimming motion sensor external lighting, which would not alter the visual aesthetics of the area. Furthermore, the mitigation measure discussed in Section 3.13.3 of the EA would minimize the impacts to visual resources to less-than-significant levels.

P4-02 Comment noted.

Response to Comment Letter P5 – Sara March

P5-01 Comment noted. Refer to the response to **Comment P2-01** concerning the commenting period.

P5-02 Comment noted. Refer to the response to **Comment P3-05** concerning the slope stabilization for the Proposed Project. Further, refer the response to **Comment F3-01** and **Comment F3-04** concerning the capacity for wastewater treatment and sizing, respectively.

P5-03 Refer to the response to **Comment S1-09**.

P5-04 Refer to the response to **Comment S2-04 to -05** concerning the impacts to existing transportation networks and alternatives.

P5-05 Comment noted. Refer to the response to **Comment S1-04** to **-05.**

Response to Comment Letter P6 – Colin Fiske, Coalition for Responsible Transportation Priorities

P6-01 Comment noted. Refer to the response to **Comment S2-01** to **-02** regarding the Proposed Project as a separate development from the interchange and the traffic impacts from the Proposed Project.

P6-02 Comment noted.

P6-03 Comment noted. Refer to response to **Comment S2-04** to **-05** for alternatives to the interchange traffic mitigation.

P6-04 Comment noted. Refer to the response to **Comment S2-03** concerning the determination of needs associated with the proposed interchange.

P6-05 Comment noted.

P6-06 Comment noted.

P6-07 Comment noted. As stated in the prepared EA Section 3.3.4, the determination for the construction and operational GHG emission was found to be below the *de minimus* levels based on values from the CalEEMod, 2016. The operational use is based on mobile emissions associated with hotel patron's motor vehicle usage.

P6-08 Based on the definition for "Cumulative impact" as described in 40 CFR 1508.7, "the impacts on the environment which results from the incremental impact of the action when added to…reasonably foreseeable future actions". Therefore, speculation of future development related to growth-inducing impacts from the construction of an interchange in not within the scope of the prepared EA.

P6-09 Comment noted.

Response to Comment Letter P7 – Sandra Haux

P7-01 Comment noted.

P7-02 Comment noted. Refer to the Response to **Comment P3-05** concerning the slope stability of the proposed project site.

P7-03 As stated in Section 3.1.2 of the prepared EA, the project site is not currently mapped for liquefaction. Furthermore, as stated earlier in Section 2.2.1, the site is considered stable for Hotel development. Additionally, cast-in-drilled-hold pile foundations at a minimum of 24-inches in diameter would be driven into the bedrock in order to counteract potential for caving soils. Further measures, such as concrete cantilever retaining walls, would be constructed as additional support.

P7-04 Refer to the response to **Comment S1-09** concerning a confirmation for the water supply capability.

P7-05 Refer to the response to **Comment S2-03** and **Comment S2-04 to -05** concerning an evaluation to determine the related needs for an interchange construction and alternative measures, respectively.

P7-06 Comment noted. Refer to the response to **Comment S2-01** to **-03** concerning the interchange in relation to the proposed project and its impacts.

P7-07 Comment noted. Refer to the response to **Comment F3-02** concerning the verification of leachfield capacity, and **Comment F3-03** concerning the determination of suitable soils.

P7-08 Comment noted. Refer to the response to **Comment L2-19** concerning natural gas supply.

Response to Comment Letter P8 – Richard Salzman

P8-01 Comment noted.

Response to Comment Letter P9 – Charley Custer

P9-01 Comment noted. As mentioned in Section 4.1.1 of the EA, the proposed project would be required to implement measures consistent with local permitting requirements for construction in order to address any geotechnical, seismic, or mining hazards. Additionally, construction fill was used during the construction of the existing Casino. As a result, the effects of soil erosion would not result in significant effects.

P9-02 Comment noted. As discussed in Section 3.2.1 of the EA, the project site and surrounding lands do not directly contribute surface water to the Luffenholtz Creek-Frontal Pacific Ocean sub-watershed. Refer to response to **Comment S1-09** for confirmation of water supply capability.

P9-03 Comment noted.

Response to Comment Letter P10 – Richard Clompus

P10-01 Comment noted. Refer to the response to **Comment L2-02** concerning the State designations.

P10-02 Refer to response to **Comment S1-09** for confirmation of water supply capability.

P10-03 Refer to response to **Comment F3-01** concerning the capacity of the proposed wastewater treatment.

P10-04 Comment noted. As stated in Section 3.10.7 of the EA, it is not expected that increased demand for emergency medical services would be created as a result of the proposed project. As concluded in Section 3.10.8, there is no mitigation required for public services.

Response to Comment Letter P11 – Alan Grau

P11-01 Comment noted. Refer to the response to **Comment S2-02** concerning a timeline for the interchange.

P11-02 As stated in Section 3.7.2 of the prepared EA, an increase in traffic on Scenic Drive at the proposed project entrance in forecasted to occur. Construction of a new intersection off Highway 101 would reduce adverse effects and is currently under consultation between the Tribe and Caltrans.

P11-03 Comment noted. Refer to the response to **Comment S1-09** concerning confirmation of the source of water supply to the proposed project.

P11-04 Comment noted. As addressed in the response to **Comment F3-02** concerning the confirmation of leachfield capacity for the Proposed Project and **Comment F3-01** concerning the capacity of wastewater treatment.

P11-05 Refer to the response to **Comment L2-13** concerning the proposed Hotel design.

Response to Comment Letter P12 – Larry Goldberg

P12-01 Comment noted.

P12-02 Refer to Section 3.0 of the prepared EA for discussion of affected environment, impacts, and mitigation for the considered alternatives.

P12-03 Comment noted. As stated in the prepared EA, alternative locations or a reduction of size would not meet purpose and need, and are therefore not defined as "reasonable" under the CEQ's Regulations for Implementing under NEPA.

P12-04 Comment noted.

P12-05 Refer to the response to **Comment S1-05** concerning visual impact mitigation. Additionally, refer to the response to **Comment F2-01 to -08** and **Comment P4-01** regarding the light pollution and its potential impacts to species of birds. Refer to the **Comment L2-18** regarding potential impacts from noise during construction.

P12-06 Refer to the response to the **Comment S1-09** concerning the confirmation of water supply related to the proposed project.

P12-07 Refer to the response to **Comment F3-01** to **-03** concerning the capacity for wastewater treatment.

P12-08 As state in the EA, traffic impacts are anticipated to occur at the intersection of the Main Street corridor and project entrance on Scenic Drive under cumulative conditions. The Tribe and Caltrans are in consultation for the construction of an intersection off Highway 101 as a mitigation measure to alleviate these impacts, further refer to the response to **Comment S2-01** to **-02** for consideration of a timeline for the interchange construction.

P12-09 Comment noted.

Response to Comment Letter P13 – Gail Kenny

P13-01 Comment noted. Refer to the response to **Comment S1-09** for water supply issues.

P13-02 Refer to the response to **Comment F3-01** to **-03** concerning wastewater treatment. As stated in Section 3.3.4 of the EA, the proposed project location is 230 feet above mean sea level and is set back 150 feet from the cliff edge. It is not vulnerable to coastal erosion.

P13-03 Comment noted. Refer to the **Comment S2-01** to **-02** for consideration of a timeline for the interchange construction.

P13-04 Refer to the response to **Comment S104** to **-05** concerning visual impact mitigation. Additionally, refer to the response to **Comment S1-06** concerning the consideration of the Proposed Project size.

P13-05 Comment noted. As stated in the response to **Comment F2-01** to **-08** concerning potential impacts to birds from the Proposed Project.

P13-06 Comment noted. Refer to response to **Comment P3-03** concerning biological impact methodology and species consideration.

Response to Comment Letter P14 – Geoff Proust

P14-01 Comment noted.

P14-02 Comment noted.

P14-03 Comment noted. Refer to the response to **Comment P12-03** and **Comment S1-06** concerning the consideration of design and size alternatives for the proposed project, respectively.

Response to Comment Letter P15 – Dianne Rowland

P15-01 Comment noted. Refer to the response to **Comment S1-09.**

P15-02 Comment noted. Refer to the response to **Comment S2-02** concerning the timing for the traffic impact mitigation.

Response to Comment Letter P16 – Steen and Tami Trump

P16-01 Comment noted. Refer to the response to **Comment S1-04** to **-05** concerning impacts on visual resources.

P16-02 Refer to the response to **Comment P4-01** concerning light impacts. As stated in the EA, a significant impact due to noise would not result as a result of the proposed project as mitigation measures during construction would be implemented, and noise resulting from traffic would be below federal abatement criterion. Additionally, refer to the response to **Comment L2-18** for further potential construction noise impacts.

P16-03 Comment noted.

P16-04 Refer to the response to **Comment S1-09** and **Comment F3-01** to **-03**, respectively, concerning water supply and wastewater capability.

P16-05 Comment noted.

Response to Comment Letter P17 – Jim and Sandra Cuthbertson

P17-01 Comment noted.

P17-02 Refer to the response to **Comment S1-09** addressing water supply for the proposed project.

P17-03 Comment noted. For concerns relating to wastewater, refer to the response to **Comment F3-01** to **-03**.

Response to Comment Letter P18 – Julie Joynt

P18-01 Comment noted.

P18-02 Comment noted. Additional considerations for designs of the proposed project Hotel are not in the scope of the prepared EA. Alternatives consideration can be found in the response to **Comment S1-06**.

Response to Comment Letter P19 – Joyce King

P19-01 Refer to the response to **Comment P2-01**.

P19-02 Comment noted. Impacts and related mitigation measures to the proposed project have been addressed in the prepared EA in accordance to NEPA standards and guidelines.

P19-03 Comment noted. Potential impacts to cultural resources were examined in Section 3.5 of the EA in accordance with Section 106 of the National Historic Preservation Act. No historical resources were found to be present within Area of Potential Effects for the Proposed Project. The BIA has consulted with the appropriate authorities as required under Section 106 of the National Historic Preservation Act whom concurred that no adverse impacts to historical resources would result from the Proposed Action. Refer to Exhibit E of the FONSI. Furthermore, the mitigation in Section 3.5.5 of the EA would reduce potential impacts to undiscovered paleontological resources to less than significant levels.

In regards to hotel design, the visual impacts as a result of the hotel design were considered. However, it is outside of the scope of the prepared EA to prepare and provide alternative designs. Refer to the response to Comment

Response to Comment Letter P20 – Erin Rowe

P20-01 Comment noted.

Response to Comment Letter P21 – Kathleen Mill

P21-01 Comment noted.

Response to Comment Letter P22- Andrea Bustos

P22-01 Refer to the response to **Comment S2-01** to **-02** addressing the impacts to traffic as a result of the proposed project.

P22-02 Comment noted. As discussed above in response to **Comments S1-09** and **Comment F3-01** to **-03,** concerning the water supply and wastewater, respectively, for the proposed project.

Response to Comment Letter P23 – Karin Rosman

P23-01 Comment noted.

P23-02 Refer to the responses to **Comments S2-04** to **-5, S1-09, F3-01** to **-03, and P9-01** address impacts concerning relating to traffic, water supply, wastewater, and coastal erosion, respectively.

Response to Comment Letter P24 – Gina Rimson

P24-01 Comment noted.

P24-02 Comment noted. Refer to the response to **Comment P2-02**, speculation of future projects are outside of the scope of the prepared EA. Furthermore, refer to **Comment S2-04** to **-05** for alternatives to the interchange.

P24-03 Refer to the response to **Comment S1-09** concerning water supply.

P24-04 Comment noted. Refer to response to **Comment F3-01** to **-03** concerning the leach fields, **Comment S1-09** for city water supply, and **Comment L2-14** regarding impacts to visual resources. In terms of the Proposed Project being inconsistent with local land use regulations, the local jurisdiction does not have a designated land use for the project area. Furthermore, the Proposed Project would be compatible with the mixed land use surrounding the project site, including the adjacent Casino. Because of these factors, the EA determined that the impact to land use was less than significant.

P24-05 Comment noted. Refer to the **Comment S1-06** regarding the determination process for the hotel location and size. Furthermore, refer to the Section 3.0 of the EA for the environmental impacts of the Proposed Project.

P24-06 Comment noted. Refer to response to **Comment S2-04** to **-05** concerning the Tribe's Master Plan.

Response to Comment Letter P25 – Don Allen

P25-01 Comment noted.

P25-02 Comment noted. Refer to response to **Comment P3-05** concerning the stability of the slope. Furthermore, stability of the Proposed Project location and mitigation measures are discussed in Section 3.1.6 of the prepared EA. As stated, the contractor shall implement one of the slope stabilization options as recommended by the soil engineers prior to the construction of the Hotel foundation. Options included are soil nail walls, reconstructed embankment, solider pile, and welded wire walls. Additionally, as mentioned in Section 3.1.5, the project location is outside of the 50-foot setback boundary as mandated by the Alquist-Priolo

P25-03 Refer to the response to **Comment S1-09** addressing water supply infrastructure. The commenter is referring to the GHD, 2019 study referenced in the Final EA.

P25-04 Refer to the response to **Comment S1-09** addressing water supply.

P25-05 Refer to the response to **Comment F3-01** to **-03** concerning the capacity for wastewater and the leach fields. Refer to **Comment P3-05** regarding slope stabilization.

P25-06 Comment noted. Alternative designs of the Hotel are out of the scope of work for the prepared EA, refer to the response to **Comment S1-04** to **-05** concerning visual impacts.

P25-07 Concerning the potential impact to birds, refer to the response to **Comment F2-01** to **-08**. Additionally, for biological impact methodology, refer to the response to **Comment P3-03**.

P25-08 Comment noted. Refer to the response to **Comment S2-04** concerning traffic and the Tribe's Master Plan.

Response to Comment Letter P26 – Emelia Berol

P26-01 Comment noted.

P26-02 Refer to the response to **Comment S1-09** concerning the availability of water supply for the proposed project, and **Comment F3-01** to **-03** for wastewater concerns. Refer to the response to **Comment F3-05** regarding the applicability of an EA and associated FONSI.

P26-03 Comment noted. Refer to the responses to **Comments F2-01** to **-08** regarding impacts to birds.

P26-04 Comment noted. Refer to the **Comment S1-04** to **-05** for concerns regarding visual resources.

P26-05 Comment noted

Response to Comment Letter P27 – Bryce Kenny, HARP

P27-01 Comment noted.

P27-02 Comment noted. Individual responses to the comments are addressed as they are presented.

P27-03 Comment noted. As stated within Section 8 of the BIA's NEPA Guidebook, the determination for preparing an EIS is based on the significance of impact, not the scale or "class" of the Proposed Action and thereby the Guidebook meets the CEQ Regulations.

P27-04 In accordance with Section F.1. of the Tribe's Ordinance titled ***Environmental Policy Ordinance for Gaming Facility Development [Tribal State Gaming Compact Section 10.8.1]*** that became effective May 16, 2000, "(i)n the event that the Project requires the approval of a federal agency, and therefore NEPA applies to the Project, compliance with NEPA and the federal process related thereto shall constitute compliance with this Ordinance.

P27-05 Refer to the response to **Comments S2-04** to **-05** concerning the Tribe's Master Plan and the interchange, and refer to the response to **Comment Letter S2** in regards to contacting the Department of Transportation. Refer to the response to Comment P27-04 regarding the Environmental Ordinance.

P27-06 Comment noted.

P27-07 Comment noted.

P27-08 Comment noted.

P27-09 Refer to the response to Comment P27-04 regarding the Environmental Ordinance.

P27-10 The purpose of the prepared EA is to determine whether the Proposed Action would result in significant impact on the quality of human environment. The documents listed do not fall under the scope of word for the prepared document and are therefore not included.

P27-11 Comment noted.

P27-12 Refer to the response to **Comment P27-10**. The considerations presented in the comment do not fall under the scope of the prepared EA.

P27-13 Refer to the response to **Comment S2-01** to **-02** regarding the Proposed Project and the interchange as independent developments.

P27-14 Comment noted.

P27-15 Refer to the response to **Comment S1-05** for impacts to visual resources.

P27-16 Comment noted.

P27-17 Comment noted.

P27-18 Comment noted.

P27-19 Comment noted.

P27-20 Comment noted.

P27-21 Comment noted. Comment Letter S2 in **Appendix XX** states that Caltrans "concur[s] that a new freeway interchange would provide adequate capacity to serve the hotel…". Therefore, approval from a qualified government agency for this EA has been obtained.

P27-22 Comment noted. Refer to the response to **Comment P27-13** regarding the Proposed Project and the interchange as independent developments.

P27-23 Comment noted. The cumulative impact analysis within the EA considered the construction of the projects in the vicinity of the project site along with the full implementation of the Tribe's Master Plan until 2032, which is the County of Humboldt's planning horizon year. The justification for a planning horizon until 2038 is not clearly stated within the comment

and the only readily available planning horizon with information that can be reference is 2032.

P27-24 Comment noted. Refer to the response to **Comment S1-06** concerning the consideration for alternatives presented in the prepared EA**.**

P27-25 Refer to the responses to **Comment F3-01** to **-03** regarding the leach fields.

P27-26 Refer to the responses to **Comment F3-01** to **-03** regarding wastewater discharge.

P27-27 As stated in the prepared EA, the existing leachfield capacity would need to be expanded in order to accommodate the Proposed Project. In summary, an upgrade to the WWTP, expansion of the current leachfield, and an additional leach field are proposed to meet wastewater needs. Refer to the responses to **Comments F3-01** to **-04** pertaining to wastewater.

P27-28 Refer to the response to **Comment P27-27** regarding leach fields.

P27-29 Refer to the response to **Comment P7-03** concerning site stability.

P27-30 Refer to the response to **Comment F3-01** to **-03** regarding leach fields.

P27-31 Comment noted. Refer to the response to **Comment F3-01** to **-03** in determining leachfield capacity.

P27-32 Comment noted.

P27-33 Comment noted.

P27-34 Refer to the response to **Comment L2-02** regarding the natural setting of the Proposed Project.

P27-35 Comment noted.

P27-36 As stated in Section 4.1.13 of the prepared EA, the development of the Proposed Project would generally be consistent with the visual goals of both the County and the City land use regulations.

P27-37 Refer to the response to **Comment S1-04** to **-05** regarding issues with the visual resources.

P27-38 Comment noted.

P27-39 Comment noted.

P27-40 Refer to the response to **Comment L2-02** regarding the natural setting of the Proposed Project.

P27-41 Comment noted.

P27-42 Comment noted. Refer to the response to **Comment S1-06** concerning the consideration for alternatives for the Proposed Action.

P27-43 Comment noted.

P27-44 Comment noted.

P27-45 Comment noted. Refer to the response to **Comment P4-01** regarding impacts from lighting.

P27-46 As signage was not a part of the Proposed Action, it does not fall under the scope of the prepared EA and is therefore not included in the discussion.

P27-47 Refer to the response to **Comment S1-09** regarding water supply.

P27-48 Refer to the response to **Comment L2-03** regarding water usage.

P27-49 Comment noted.

P27-50 Refer to the response to **Comment L2-03** regarding water usage.

P27-51 Refer to the response to **Comment S1-09** and **Comment L2-06**, concerning the confirmation of water supply and the alternative solutions to water supply for the Proposed Project, respectively.

P27-52 Refer to the response to **Comment L2-06**.

P27-53 Comment noted.

P27-54 Comment noted.

P27-55 Refer to the response to **Comment S1-09** concerning the City's effort to generate information on minimum flow and operational capacity.

P27-56 Refer to the response to **Comment S1-09** and **Comment L2-16** concerning the **City's** service priority and fire service, respectively.

P27-57 Comment noted.

P27-58 As stated in Section 3.3.4 of the prepared EA, the Proposed Project site is located 150 feet away from cliff edge. Additionally, as stated in Section 3.1.2, the site is not currently mapped for landslides, however they are common in the vicinity. Measures such as nail walls, welded wire walls, and those mentioned in Section 3.1.6, as recommended by soil engineers, shall be implemented prior to construction of the proposed project.

P27-59 Comment noted.

P27-60 Comment noted.

P27-61 Comment noted. Refer to the response to **Comment P3-05** regarding landslides and **Comment P7-03** for site stabilization.

P27-62 Comment noted.

P27-63 Comment noted. Refer to the response to **Comment L2-02** regarding the setting of the Proposed Project and **Comment F2-01** to **-08** regarding the hotel impacts to birds.

P27-64 Refer to the response to **Comment F2-02** regarding the hotel impacts to birds and **Comment P3-03** regarding the biological surveys and impacts.

P27-65 Comment noted. According to updated data as a result of the construction of the existing casino and parking lot, there are no waters of the U.S. located within the project area.

P27-66 Refer to the response to **Comment F3-01** to **-03** regarding wastewater facilities.

P27-67 Comment noted. Refer to the response to **Comment F3-01** to **-03** concerning the confirmation for the capacity of wastewater treatment for the Proposed Action.

P27-68 Comment noted. An updated review of the CalRecycle website[1] indicates that the Anderson Landfill has a remaining capacity of 10.4 million cubic yards as of 2015, 7 years after the date of the information that was available at the time the EA was developed. Extrapolating out using the capacity loss from 2008 to 2015 (0.6 million tons), the landfill will reach maximum capacity in 2134 (119 years from 2015).

P27-69 Comment noted. Please refer to the response to the **Comments S1-04** and **-05** regarding hotel design and visual impacts.

[1] https://www2.calrecycle.ca.gov/SWFacilities/Directory/45-AA-0020/Detail

P27-70 Comment noted. Refer to the response to **Comment L2-02** concerning the Federal and State designations and associated impacts. Furthermore, as noted in Section 3.2.14, potential impact to water quality would be reduced to less than significant with the incorporation of the BMPS listed in Appendix C of the EA.

P27-71 Comment noted. Prior to the decision to develop a hotel, economic studies are conducted in order to determine if the investment will provide an adequate return in order to fund the project. For a hotel, the determining factor is competition and the number of available units in the region. The Tribe's consultant has indicated that there is a lack of the type of hotel the Tribe would provide and therefore the Tribe decided to move forward with the project. These studies are highly confidential as they outline economic strategies of the Tribe and therefore are not included in the analysis or as an appendix. Whether or not there is an intentional lack of hotel rooms of the type the Tribe is developing is irrelevant.

P27-72 Comment noted. The statement referenced by the Commenter is very general in that some of the Tribal facilities are connected to City municipal systems while the Casino and thereby the hotel are connected to the Tribe's wastewater system. The statement has been revised to remove the general statement and focus on the Proposed Project.

P27-73 Comment noted. Refer to the response to **Comment L2-19** for gas service clarification.

P27-74 Refer to the response to **Comment L2-16**.

P27-75 Refer to the response to **Comment F3-01** to **-03** concerning the capacity for the wastewater treatment system.

P27-76 Noise attenuates as distance increases. Therefore, since the bar would be at the top of the hotel, the noise would attenuate more than if the bar were on the bottom levels since the distance would be greater due to the angle of incidence between the ground level and top level bar.

P27-77 The reports generated in 2015, by Environmental Data Resources indicate the Citizens Mortuary as closed. However, as to 40 CFR Part 312 and ASTM (E 1527-13) standards, the location is listed due to the proximity (0.5 miles) to the project site and listing as Leaking Underground Storage Tank incident.

P27-78 Comment noted.

P27-79 Comment noted.

P27-80 Comment noted.

Response to Comment Letter P28 – Jolene Thrash

P28-01 Comment noted. Refer to the response to **Comment S1-04** to **-05** for impacts to visual resources.

P28-02 Comment noted.

Response to Comment Letter P29 – Charles Netzow

P29-01 Comment noted.

Response to Comment Letter P30 – Josiah Cain

P30-01 Comment noted.

P30-02 Refer to the response to **Comment P27-36**.

P30-03 Refer to the response to **Comment P3-05** and **Comment L2-25,** concerning the slope stability and the cumulative impacts as associated with the intersection project, respectively.

P30-04 As stated in the response to **Comment F3-01 to -03** regarding leach field capacities, and **Comment P9-01** regarding soil erosion.

P30-05 Refer to the response to **Comment P3-05**. Additionally, as included as Appendix B, a Draft Geotechnical Feasibility and Preliminary Design Report was conducted involving laboratory testing, sampling and analyses of the proposed project site.

P30-06 Refer to the response to **Comment S1-04** to **-05** regarding the potential impacts to visual resources, and **Comment F2-01** to **-08** and **Comment P4-01** regarding the light pollution and its potential impacts to species of birds.

P30-07 Comment noted. Refer to the response to **Comment S1-04** to **-05** regarding the potential impacts to visual resources.

P30-08 Comment noted.

Response to Comment Letter P31 – Larry Glass, Northcoast Environmental Center

P31-01 Comment noted. As stated in the response to **Comment P6-08**, speculation concerning future developments is outside the scope of the prepared EA.

P31-02 Refer to the response to **Comment S1-04** to **-05** concerning visual impacts.

P31-03 Comment noted. Refer to the response to **Comment P12-03**.

P31-04 As the proposed project occurs within the Tribe's Reservation, the documentation was prepared in accordance with the Tribe's environmental Ordinance and associated NEPA regulations due to the approval of the BIA of the loan guarantee. CEQA is not required nor does the gaming compact require compliance with CEQA. The intent of the environmental provisions wihtin the gaming compact was to ensure project's that support gaming conduct some level of environmental review even though the project would support gaming on sovereign land. In accordance with the Tribe's Environmental Ordinance, because NEPA is required for the Proposed Project, no additional environmental review is required.

P31-05 Refer to the response to **Comment S1-09** concerning water supply.

P31-06 Refer to the response to **Comment S1-01 to -02 regarding the interchange and traffic.**

P31-07 Refer to the response to **Comment F3-01** to **-03** regarding wastewater, and **Comment P12-03** regarding project alternatives.

Response to Comment Letter P32 – Edward Pease

P32-01 Comment noted.

P32-02 Comment noted. Refer to the responses to **Comments S1-04 to -05** concerning visual impacts. The responses to **Comment P4-01, Comment P16-02, Comment F2-01 to -08,** and **Comment F1-01 to -03** provide discussion for light pollution, noise pollution, impact to bird species, and wastewater respectively. As signage was not included as a part of the Proposed Project, it is not discussed in the prepared EA, and therefore does not require a response.

P32-03 Comment noted. As stated in the response to **Comment P32-02**, the visual impacts as a result of the hotel design were considered. However, it is outside of the scope of the prepared EA to prepare and provide alternative designs. The additional comments presented here are addressed in the responses to **Comment P3-05** addresses the slope stability for the proposed project.

P32-04 Refer to the response **to Comment P3-05** regarding the slope stability for the proposed project, and **Comment S1-09** concerning the water supply for the proposed project.

P32-05 Refer to the responses to **Comment S2-01** to **-02** regarding the interchange timeline.

P32-06 Refer to the response to **Comment S1-09** regarding City water supply.

P32-07 Comment noted.

P32-08 Comment noted.

Response to Comment Letter P33 – Ingrid Bailey

P33-01 Comment noted. Refer to the response to **Comment P3-05** concerning the slope stability for the proposed project site.

P33-02 Refer to the response to **Comment S1-09** concerning water supply.

P33-03 Refer to the response to **Comment P3-06** concerning the proposed Hotel design alternatives.

P33-04 Comment noted.

Response to Comment Letter P34 – Ken Miller

P34-01 Comment noted.

P34-02 Refer to the response to **Comment P2-01**.

P34-03 Comment noted.

P34-04 Comment noted.

P34-05 Comment noted.

P34-06 Refer to the response to **Comment P6-08**, speculation of future developments is outside of the scope of the prepared EA.

P34-07 Comment noted. Refer to the response to **Comment L2-15** regarding law enforcement for the Proposed Project, and **Comment P12-03** and **Comment S1-06** concerning the consideration of design and size alternatives for the proposed project, respectively.

P34-08 Refer to the response to **Comment S1-04** to **-05** concerning the impact to visual resources.

P34-09 Comment noted. Refer to the response to **Comment P34-07** regarding the range of alternatives.

P34-10 Refer to the response to **Comment S1-09** regarding water supply for the proposed project.

P34-11 Comment noted. Comments received are included within the administrative record and will be considered by the BIA in the decision on the project. This will be recorded as a part of the Record of Decision (ROD).

P34-12 Refer to the response to **Comment F3-01 to -03** for wastewater discharge.

P34-13 Refer to the response to **Comment P6-08**, speculation of future projects is outside of the scope for the prepared EA, and **Comment S2-04** to **-05** regarding the Tribe's Master Plan and the interchange.

P34-14 Comment noted.

Response to Comment Letter P35 – Kimberly Tays

P35-01 Comment noted. Refer to the response to **Comment S1-05** to **-04** concerning the visual impacts of the proposed project.

P35-02 Refer to the response to **Comment S1-09** for the water supply for the proposed project.

P35-03 Comment noted. Refer to the responses to **Comment F2-01** to **-08** regarding bird strikes.

Response to Comment Letter P36 – James Vandegriff

P36-01 Comment noted.

P36-02 Comment noted. Refer to the response to Refer to the response to Comment S1-05 to -04 concerning the visual impacts of the proposed project.

P36-03 Comment noted. The EA considers the alternatives presented, and evaluates the associated environmental impacts. Alternative sources of energy and design features are not included in the scope of the prepared EA.

P36-04 Comment noted. As stated above, this is not included in the scope of the prepared EA.

P36-05 Comment noted.

Response to Comment Letter P37 – Katrin Homan

P37-01 Comment noted.

Response to Comment Letter P38 – Richard Johnson

P38-01 Comment noted.

P38-02 Refer to the response to **Comment S1-09** concerning water supply.

P38-03 Refer to the response to **Comment F3-01 and Comment F3-04** concerning wastewater treatment capacity.

P38-04 Refer to the response to **Comment S2-01** to **-02** concerning the development of the interchange.

P38-05 Comment noted. Refer to the response to **Comment S1-04** to **-05** concerning the visual impacts.

P38-06 Comment noted.

Response to Comment Letter P39 – Sandra Schachter

P39-01 Comment noted.

Response to Comment Letter P40 – Patricia Lee Lotus

P40-01 Comment noted.

P40-02 Comment noted. Refer to the response to **Comment P3-05** concerning the slope stability for the proposed project site location.

P40-03 Comment noted.

P40-04 Comment noted.

P40-05 Comment noted.

Response to Comment Letter P41 – Andrew Pruter

P41-01 Comment noted.

P41-02 Comment noted. Refer to the response to **Comment S1-04** to **-05** concerning visual impacts.

P41-03 Refer to the response to **Comment P3-05** concerning the stability of the slope for the proposed project.

P41-04 Refer to the response to **Comment S2-01** to **-03** concerning the interchange. As previously stated, speculation of future projects is outside of the scope of the prepared EA.

P41-05 Refer to the response to **Comment F3-01** to **-03** concerning the leach field capacity.

P41-06 Refer to the response to **Comment S1-09** concerning water supply.

P41-07 Comment noted. Refer to the response to **Comment F2-01** to **-08** concerning bird strikes.

Response to Comment Letter P42 – Annalisa Rush

P42-01 Comment noted.

P42-02 Comment noted. Refer to the response to **Comment S1-04** to **-05** concerning the visual impact of the proposed project.

P42-03 Comment noted. Refer to the response to **Comment S2-01** to **-03** concerning the interchange and traffic impacts.

P42-04 Refer to the response to **Comment F3-01** to **-03** concerning wastewater

P42-05 Refer to the response to **Comment S1-09** concerning water supply.

P42-06 Comment noted. Refer to the response to **Comment F2-01 to -08** concerning bird strikes.

P42-07 Comment noted. As stated in Section 3.3.4 of the prepared EA, construction activities incorporating provided BMP's are anticipated to not result in any adverse air quality effect and therefore require no mitigation measures.

P42-08 Comment noted.

Response to Comment Letter P43 – Holly Vadurro

P43-01 Comment noted. Refer to the response to **Comment S1-09** concerning the water supply for the proposed project.

P43-02 Refer to the response to **Comment L2-03 and F3-01** to **-03** concerning wastewater treatment capacity.

P43-03 Refer to the response to **Comment L2-16** concerning fire protection.

P43-04 Comment noted. Refer to the responses to **Comment S2-01** to **-03** regarding traffic impacts and **Comment S1-04 to -05** concerning traffic impacts and visual impacts, respectively.

Response to Comment Letter P44 – Clay Johnson

P44-01 Comment noted. Refer to the response to **Comment S1-09** concerning water supply.

P44-02 Refer to the response to **Comment F3-01** to **-03** concerning sewage capacity.

Response to Comment Letter P45 – Patrick Harestad

P45-01 Comment noted. Refer to the response to **Comment S1-04** to **-05** concerning the impact to visual resources.

P45-02 Comment noted. Refer to the responses to **Comment S2-01** to **-03** regarding traffic impacts.

P45-03 Comment noted. Refer to the response to **Comment L2-03 and F3-01** to **-03** concerning wastewater treatment capacity.

P45-04 Comment noted. Refer to the response to **Comment S1-09** concerning the water supply for the proposed project.

P45-05 Comment noted. Refer to the response to **Comment F2-01 to -08** concerning bird strikes.

Response to Comment Letter P46 – Brenda Cooper

P46-01-08 Comments noted. Refer to the responses to **Comments P32-01** to **-08** as the comments submitted are identical.

Response to Comment Letter P47 – Jennifer Lance

P47-01-07 Comments noted. Refer to the response to **Comments P41-01** through **P41-07** as the comments submitted are identical.

Response to Comment Letter P48 – Donna Ulrich

P48-01 Comment noted. As previously stated, the design for the hotel as proposed was considered as presented in the prepared EA, however, preparation of design alternatives are outside of the scope of the EA. Refer to the responses to **Comment S1-04** to **-05** for the impact to visual resources.

P48-02 Comment noted. Refer to the response to **Comment S1-09** concerning water supply.

Response to Comment Letter P49 – Melanie and Ron Johnson

P49-01 Comment noted. Refer to the responses to **Comment S1-04 to -05, Comment S1-09,** and **Comment S2-01** to **-03** regarding the visual impact and design of the proposed project, the water supply impact, and the proposed mitigation measure of the interchange, respectively.

P49-02 Comment noted.

Response to Comment Letter P50 – Mark Dondero

P50-01 Refer to the response to **Comment F3-01** to **-03** concerning wastewater.

P50-02 Refer to the response to **Comment S1-09** concerning water supply.

P50-03 Speculation regarding future development is outside of the scope of the prepared EA. Refer to the response to **Comment S2-01 to -03** regarding the proposed mitigation measure of a new interchange.

P50-04 Comment noted.

Response to Comment Letter P51 – Chet Ogan, Redwood Region Audubon Society

P51-01 Comment noted.

P51-02 Comment noted. Refer to the response to **Comment S1-04 to -05** concerning the design of the proposed project Hotel.

P51-03 Comment noted. Refer to the response to **Comment S1-09** concerning water supply.

P51-04 Comment noted. Refer to the response to **Comment F3-01** to **-03** concerning wastewater treatment capacity.

Response to Comment Letter P52 – Sam King

P52-01 Comment noted.

Response to Comment Letter P53 – David Hankin

P53-01 Comment noted.

P53-02 Comment noted.

P53-03 Refer to the response to **Comment L2-03** concerning water needs for the proposed project.

P53-04 Refer to the response to **Comment S1-09** concerning the water supply.

P53-05 Refer to the response to **Comment F3-01 to -03** concerning wastewater.

P53-06 Refer to the response to **Comment S2-01 to -03** concerning traffic and the proposed mitigation measure of an interchange construction.

P53-07 Comment noted.

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ATTACHMENT I

REPRESENTATIVE VIEWSHED SIMULATIONS



SOURCE: AES, 5/9/2019

Baker Beach (Before)



SOURCE: AES, 5/9/2019

Baker Beach (After)



SOURCE: AES, 5/9/2019

Trinidad Harbor Parking Lot (Before)



SOURCE: AES, 5/9/2019

Trinidad Harbor Parking Lot (After)



SOURCE: AES, 4/16/2019

Trinidad Casino Parking Lot (Before)



SOURCE: AES, 4/16/2019

Trinidad Casino Parking Lot (After)



SOURCE: AES, 5/9/2019

Trinidad Harbor Looking East (Before)



SOURCE: AES, 5/9/2019

Trinidad Harbor Looking East (After)



SOURCE: AES, 5/9/2019

Trinidad Harbor Looking Southeast (Before)



SOURCE: AES, 5/9/2019

Trinidad Harbor Looking Southeast (After)

EXHIBIT C

MITIGATION MONITORING AND ENFORCEMENT PROGRAM

EXHIBIT C

MITIGATION MONITORING AND ENFORCMENT PROGRAM

INTRODUCTION

Pursuant to 40 C.F.R. 1508.13, a Finding of No Significant Impact (FONSI) has been prepared. The Council of Environmental Quality (CEQ) recommends that a Mitigation Monitoring and Enforcement Program (MMEP) be adopted and summarized in certain FONSI documents. The Bureau of Indian Affairs (BIA) is the lead agency for National Environmental Policy Act (NEPA) compliance purposes. In order to minimize or avoid potentially significant impacts that could occur as a result of the Proposed Action, mitigation measures have been developed and incorporated into this MMEP.

TRIBAL MITIGATION MONITORING OVERVIEW

This chapter has been created to guide mitigation compliance before, during, and after implementation of the selected alternative, as required by NEPA. The mitigation measures described below were created through the analysis of potential impacts within the Final EA and in response to comment received on the Final EA. As specified in the following table**,** the compliance monitoring and evaluation will be performed by the Tribe as indicated in the description of each measure. In addition, the BIA has the duty to monitor mitigation to ensure all measures are implemented as required. The MMEP is included within the FONSI to provide:

- Requirements for compliance of the mitigation measures specifically created to mitigate impacts;
- List of responsible parties;
- Timing of mitigation measure implementation.

Mitigation measures included within the following table list the responsible party, the compliance standards, implementation timeline, and verification of completion. Where applicable, mitigation measures will be monitored and enforced pursuant to federal law, tribal ordinances, and agreements between the Tribe and appropriate governmental authorities, as well as the FONSI.

Mitigation Measure	Implementing Responsibility	Compliance Standards	Timing	Verification (Date/Initial)
Land Resources				
Prior to construction of the Hotel foundation, the contractors will implement one of the slope stabilization options recommended by the soil engineers in the Draft Geotechnical Feasibility and Preliminary Design Report (Appendix B of the EA). Options include soil nail walls, reconstructed embankment, soldier pile, and welded wire walls.	Tribe General Contractor	Measure shall be included in construction specifications	Site Prep	
Coverage under the General Construction National Pollutant Discharge Elimination System (NPDES) permit shall be obtained from the U.S. Environmental Protection Agency (EPA. As required by the NPDES permit, a Storm Water Pollution Prevention Plan (SWPPP) shall be prepared that addresses potential water quality impacts associated with construction and operation of the Proposed Project. The SWPPP shall make provisions for erosion prevention and sediment control and control of other potential pollutants. The SWPPP shall describe construction practices, stabilization techniques and structural Best Management Practices (BMPs) that are to be implemented to prevent erosion and minimize sediment transport. BMPs shall be inspected, maintained, and repaired to assure continued performance of their intended function. Reports summarizing the scope of these inspections, the personnel conducting the inspection, the dates of the inspections, major observations relating to the implementation of the SWPPP, and actions taken as a result of these inspections shall be prepared and retained as part of the SWPPP. The BMPs shall include, but are not limited to, the following: ▪ Stripped areas shall be stabilized through temporary seeding using dryland grasses. ▪ Exposed stockpiled soils shall be covered to prevent wind and rain erosion. ▪ The construction entrance shall be stabilized by the use of rip-rap, crushed gravel, or other such material to prevent the track-out of dirt and mud. ▪ Construction roadways shall be stabilized through	Tribe General Contractor	NPDES permit shall be obtained from USEPA SWPPPs shall be completed for all construction and excavation activities Measures identified on the SWPPP shall be included in construction plans A copy of the SWPPP shall be current and remain on-site SWPPP practices shall be implemented on-site during construction Measures shall be included in construction specifications	Planning and Construction Phases	

Mitigation Measure	Implementing Responsibility	Compliance Standards	Timing	Verification (Date/Initial)
the use of frequent watering, stabilizing chemical application, or physical covering of gravel or rip-rap. ▪ Filter fences shall be erected at all onsite stormwater exit points and along the edge of graded areas to stabilized non-graded areas and control siltation of onsite stormwater. ▪ Prior to land-disturbing activities, the clearing and grading limits shall be marked clearly, both in the field and on the plans. This can be done using construction fences or by creating buffer zones. ▪ Concentrated flows create high potential for erosion; therefore, any slopes shall be protected from concentration flow. This can be done by using gradient terraces, interceptor dikes, and swales, and by installing pipe slope drains or level spreaders. Inlets need to be protected to provide an initial filtering of stormwater runoff; however, any sediment buildup shall be removed so the inlet does not become blocked. ▪ The SWPPP shall address maintenance and repair of heavy equipment on site to remove the potential for pollution from oil, fuel, hydraulic fluid, or any other potential pollutant. ▪ If construction occurs during wet periods, sub-grade stabilization shall be required. Mulching or netting may be needed for wet-weather construction. ▪ Temporary erosion control measures (such as silt fence, gravel filter berms, straw wattles, sediment/grease traps, mulching of disturbed soil, construction stormwater chemical treatment, and construction stormwater filtration) shall be employed for disturbed areas. ▪ Exposed and unworked soils shall be stabilized by the application of effective BMPs. These include, but are not limited to, temporary or permanent seeding, mulching, nets and blankets, plastic covering, sodding, and gradient terraces.				

Mitigation Measure	Implementing Responsibility	Compliance Standards	Timing	Verification (Date/Initial)
▪ Existing vegetation shall be retained where possible. To the extent feasible, grading activities shall be limited to the immediate area required for construction. ▪ Temporary erosion control measures (such as silt fences, staked straw bales, and temporary revegetation) shall be employed for disturbed areas and stockpiled soil. ▪ Potentially hazardous materials shall be stored away from drainages and containment berms shall be constructed to prevent spilled materials from reaching water bodies. ▪ Vehicles and equipment used during construction shall be provided proper and timely maintenance to reduce potential for mechanical breakdowns leading to a spill of materials into water bodies. Maintenance and fueling shall be conducted in an area that meets the criteria set forth in the spill prevention plan. ▪ Disturbed areas shall be revegetated after completion of construction activities.				
Water Resources				
Construction Activities Refer to Land Resources	Tribe	NPDES permit shall be obtained from USEPA SWPPPs shall be completed for all construction and excavation activities Measures identified on the SWPPP shall be included in construction plans A copy of the SWPPP shall be current and remain on-site SWPPP practices shall be implemented on-site during construction	Construction	

Mitigation Measure	Implementing Responsibility	Compliance Standards	Timing	Verification (Date/Initial)
		Measures shall be included in construction specifications		
Operational Measures The following BMPs would be implemented to reduce water usage at the Hotel: ▪ In order to reduce water consumption and support LEED and sustainability goals of the building, all plumbing would include low-flow and ultra-flow fixtures to reduce water consumption. All fittings are made of brass construction with a high-quality chrome finish, and polished, per the current Hyatt ~~Place~~ hotels plumbing and accessories list. All proposed fixtures would comply with applicable water use reduction requirements of American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Standard 189.1 Section 6.	Tribe General Contractor	Measure shall be included in construction specifications	Construction	
Biological Resources				
The following mitigation measures shall be implemented to minimize impacts to Migratory Birds. ▪ A qualified biologist shall conduct a preconstruction nesting bird survey within 100 feet of the project site during marbled murrelet, northern spotted owl, bird-of-prey, and migratory bird nesting seasons. If any active nests are located within the vicinity of the project site, a no-disturbance buffer zone shall be established to avoid disturbance or destruction of the nest(s). The distance around the no-disturbance buffer shall be determined by the biologist in coordination with USFWS and will depend on the level of noise or construction activity, the level of ambient noise in the vicinity of the nest, and the line-of-sight between the nest and disturbance. The biologist shall delineate the buffer zone with	Tribe	Measures shall be included in construction specifications	Planning and Construction Phases	

Mitigation Measure	Implementing Responsibility	Compliance Standards	Timing	Verification (Date/Initial)
construction tape or pin flags. The no-disturbance buffer will remain in place until after the nesting season or until the biologist determines that the young birds have fledged. A report shall be prepared and submitted to the Tribe and the USFWS following the fledging of the nestlings to document the results.				
Cultural Resources				
The following mitigation measure is required for Alternative A to avoid adverse effects to cultural resources and/or paleontological resources: ▪ Halt work within 50 feet of the find, retain a qualified archaeologist and/or paleontologist to assess significance. If the find is determined to be significant, determine the appropriate course of action, including recovery, analysis, curation, and reporting according to current professional standards.	Tribe General Contractor	Measures shall be included in construction specifications	Planning and Construction Phase	
Transportation (Cumulative Environment)				
For the cumulative setting, the following mitigation measure is required for Alternative A to reduce impacts to transportation and circulation: ▪ Construct the Cher-Ae Lane interchange off of HWY 101 to provide direct access to the Rancheria and Westhaven Drive.	Tribe California Department of Transportation (Caltrans)	Caltrans Requirements for Project Implementation	Planning Phase	
Noise				
The following mitigation measures shall be implemented to minimize impacts from noise during construction: ▪ Construction activities would only occur between the hours of 7:00 am to 6:00 pm Monday through Friday, and 9:00 am to 5:00 pm on Saturday. No construction activities would occur on any Sunday. ▪ Where feasible, the stationary construction equipment shall be located on the southern portion of the project site.	Tribe General Contractor	Measures shall be included in construction specifications Hazardous materials storage and disposal plan shall be developed in accordance with industry practices	Planning and Construction Phases	

Mitigation Measure	Implementing Responsibility	Compliance Standards	Timing	Verification (Date/Initial)
▪ All construction equipment over 50 horsepower shall be equipped with noise reducing mufflers.				
Visual Resources				
The following mitigation measures shall be implemented to minimize visual impacts of buildings and associated structures. These elements include: ▪ Design elements shall be incorporated into the Proposed Project to minimize visual impacts of buildings and associated structures, including landscaping that compliments buildings and parking areas, with setbacks and vegetation consistent with existing landscaping. Earth-toned paints and coatings shall be used, all exterior glass shall be non-reflective and low-glare, and signs and facades shall be designed with a non-reflective backing to decrease reflectivity. ▪ Windows shall be fit with black out curtains within rooms that face the ocean; ▪ Lighting shall be shielded and downcast; and ▪ Building maintenance staff shall be trained to call the Humboldt Wildlife Care Center wildlife rehabilitation facility should disoriented or injured seabirds be found on the property.				

EXHIBIT D

THPO CONCURRENCE

United States Department of the Interior

BUREAU OF INDIAN AFFAIRS
Pacific Regional Office
2800 Cottage Way, Room W-2820
Sacramento, CA 95825

JAN 3 1 2020

IN REPLY REFER TO: Environmental and Cultural Resources Management

Rachel Sundberg, THPO
PO Box 630
Trinidad, CA 95570

Dear Ms. Sundberg,

The Bureau of Indian Affairs (BIA), Pacific Regional Office wishes to initiate consultation under Section 106 of the National Historic Preservation Act, as amended, concerning the Cher-Ae Heights Indian Community of the Trinidad Rancheria's (Tribe) proposed loan guaranty and lease approval in connection with a hotel that is to be constructed on federal trust land adjacent to the Tribe's casino (Undertaking). These two federal actions, pursuant to regulations under 25 CFR 103 (Loan Guaranty, Insurance, and Interest Subsidy) and 25 CFR 162 (Leases and Permits), require that the BIA afford an opportunity for the Tribal Historic Preservation Office (THPO) to comment on the Undertaking and its potential to affect Historic Properties.

The Area of Potential Effects (APE) for this federal Undertaking is located on previously disturbed land of approximately 0.40 acres situated on the south and west sides of the Tribe's casino. The project site for the proposed hotel has previously been graded down to mineral soil or bedrock, and currently serves as paved parking and an access roadway to the existing casino. The legal location is Township 8 North, Range 1 West, the SW ¼ of the NE ¼ of Section 25 HBM.

Several archaeological studies have been conducted either on or nearby the Trinidad Rancheria. A records search and examination of historic maps and land patent records conducted by Analytical Environmental Services (AES) on January 26, 2017 concluded that no cultural resources have been identified within a 0.25 mile buffer of the project site. One land patent from 1870 for 126.9 acres was identified that included what was to become the northern portion of the Trinidad Rancheria. However, AES located no records that would include the APE for the current Undertaking. Additionally, there is no vertical APE, as it has been stated that the hotel will be constructed on bedrock topped with fill. The hotel will be designed so as to not affect the view shed, either from or to a Historic Property. For these reasons, it was determined that no pedestrian archaeological survey was needed to confirm BIA's identification efforts and effects determination.

Therefore, the BIA is forwarding our determination of ***No Historic Properties Affected*** to result from this federal Undertaking. You may indicate THPO concurrence with this determination pursuant to 36 CFR 800.4(d)(1), by executing the signature block below and returning a copy of the signed correspondence to the BIA.

Your concurrence will constitute satisfactory evidence of BIA compliance with Section 106 for this Undertaking. If you do not concur with this determination, further consultation will be necessary. If you have any questions or require additional information, please contact Dan Hall. Regional Archeologist at (916) 978-6041.

Sincerely,

Amy K Dutschke

Regional Director

Concur:

Rachel Sundberg 2/4/2020

Ms. Rachel Sundberg, Date
Tribal Historic Preservation Officer, Cher-Ae Heights Indian Community of the Trinidad Rancheria

EXHIBIT E

FINAL EA



FINAL ENVIRONMENTAL ASSESSMENT

TRINIDAD RANCHERIA ECONOMIC DEVELOPMENT CORPORATION

HOTEL DEVELOPMENT PROJECT

JANUARY 2020

LEAD AGENCY:

Bureau of Indian Affairs
2800 Cottage Way
Sacramento, CA 95825
(916) 978-6000

FINAL ENVIRONMENTAL ASSESSMENT

TRINIDAD RANCHERIA ECONOMIC DEVELOPMENT CORPORATION

HOTEL DEVELOPMENT PROJECT

JANUARY 2020

LEAD AGENCY:

Bureau of Indian Affairs
2800 Cottage Way
Sacramento, CA 95825
(916) 978-6000

PREPARED BY:

Analytical Environmental Services
1801 7th Street, Suite 100
Sacramento, CA 95811
(916) 447-3479
www.analyticalcorp.com

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SECTION 1.0

INTRODUCTION

1.1 INTRODUCTION

Programs administered by the U.S. Bureau of Indian Affairs (BIA) allow tribes to improve tribal government infrastructure, community infrastructure, education, job training, and employment opportunities, along with other components of long-term sustainable development that work to improve the quality of life for their members. To help Indian tribes and individuals establish and expand Indian-owned businesses, and to encourage self-sufficiency, Congress passed the Indian Financing Act of 1974 (Act). The Act was established to reduce the disparity between business capital available to Indian and non-Indian businesses. The Act is administered by the BIA, Office of Indian Energy and Economic Development (IEED): Division of Capital Investment (DCI) that oversees the various implementation programs such as the Indian Loan Guaranty, Insurance, and Interest Subsidy Program. BIA approvals under the program, including Indian Loan Guarantees which result in the physical disturbance of the environment (such as new construction), constitute a Federal Action requiring review under the National Environmental Policy Act (NEPA) of 1969. In addition to the DCI, the BIA Division of Real Estate Services assists tribes in improving the quality of life for its members. The Division of Real Estate Services reviews and approves leases on lands held in Trust by the Department of the Interior.

Accordingly, this Environmental Assessment (EA) has been prepared for the BIA to support the Trinidad Rancheria Economic Development Corporation (TREDC) requests, on behalf of the Cher-Ae Heights Indian Community of the Trinidad Rancheria (Tribe), for an Indian Loan Guarantee by DCI for capital to build a Hotel adjacent to the Tribe's Casino on the Reservation and the approval of a lease by the Division of Real Estate Services between the Tribe and TREDC to operate the Hotel. Combined, these two approvals represent the Proposed Action. The construction and operation of the Hotel constitute the Proposed Project. The BIA will use this EA to determine if the Proposed Action and subsequent Proposed Project would result in adverse effects to the environment.

This document has been prepared in accordance with the requirements set out in NEPA (42 United States Code [USC] §4321 et seq.), the Council on Environmental Quality (CEQ) Guidelines for Implementing NEPA (40 CFR Parts 1500-1508), and the BIA's NEPA Guidebook (59 Indian Affairs Manual [IAM] 3-H). **Section 2.0** of this EA provides a detailed description of the Project Alternatives. **Section 3.0** provides a description of the existing environmental conditions on and in the vicinity of the project site, an analysis of the potential environmental consequences associated with the Project Alternatives, and impact mitigation measures. **Section 4.0** describes cumulative and growth-inducing effects, and **Section 5.0** presents a list of preparers.

Consistent with the requirements of NEPA, the BIA will review and analyze the environmental consequences associated with the Proposed Action and Project Alternatives and either determine that a Finding of No Significant Impact (FONSI) is appropriate, request additional analysis, or request that an Environmental Impact Statement (EIS) be prepared.

1.2 BACKGROUND

The Cher-Ae Heights Indian Community of the Trinidad Rancheria is a federally recognized Indian Tribe with ancestral ties to the Yurok, Wiyot, Tolowa, Chetco, Karuk, and Hupa peoples. The Tribe is located within the ancestral territories of the Yurok, with core land holdings located on a coastal bluff east of U.S. Highway 101 (HWY-101), just south of the town of Trinidad, CA. The Tribe's culture, including but not limited to traditional and customary fishing and gathering, is inextricably tied to the land and marine resources found within the traditional homeland, which is defined as a 20-mile area of interest and concern surrounding the Tribe's lands. The Tribe has made a significant investment to revitalize the local economy and preserve the Tribe's cultural heritage and has developed a model that advances economic development and stewardship.

1.3 LOCATION AND SETTING

The project site is located west of HWY-101, adjacent to the City of Trinidad (approximately 0.75 miles southeast of downtown Trinidad) in Humboldt County, within the existing Reservation on the south and west side adjacent to the existing Casino. The project site is located in Section 25 of the Trinidad, CA U.S. Geological Survey (USGS) quadrangle within the southwest quarter of the northeastern quadrant of Township 8 North and Range 1 West. **Figure 1-1** and **Figure 1-2** show the regional location and vicinity of the project site. **Figure 1-3** shows an aerial photograph of the project site. The project site includes approximately 0.40 acres located on the south and west sides of the existing Casino that is currently developed and paved.

Regional access is provided by HWY-101, which travels in a general north-south direction and is located approximately 0.2 miles east of the project site. Local access to the project site is provided by Scenic Drive and Cher-Ae Lane. Scenic Drive is a two-lane paved road that runs in a general north south direction along the coastline from Trinidad to Westhaven going through the existing Reservation. Cher-Ae Lane is a two lane paved road on the Reservation connecting the Tribal amenities and Casino to Scenic Drive. The project site is composed of developed/paved parking and roadway behind and beside the existing Casino.

1.4 PURPOSE AND NEED FOR THE PROPOSED ACTION

The existing Cher-Ae Heights Casino provides a consistent revenue stream that has improved the socioeconomic status of the Tribe, allowing for development of programs and services that have resulted in reduced poverty and unemployment. Implementation of the Proposed Action would assist the Tribe in meeting the following project objectives:

- Maintain the socioeconomic status of the Tribe by providing an augmented revenue source that could be used to strengthen the tribal government, fund a variety of social, governmental, administrative, educational, health, and welfare services to improve the quality of life of tribal members; and to provide capital for other economic development and investment opportunities.
- Create new jobs for both tribal and non-tribal members.
- Reduce visitor trips on local roadways by providing additional overnight accommodations.
- Provide additional amenities to existing patrons and allow the target market to expand to nonresidential clients.
- Allow tribal members to enhance their economic self-sufficiency.



SOURCE: ESRI, 2018; AES, 9/17/2018

Figure 1-1
Regional Location



SOURCE: "Trinidad, CA" USGS 7.5 Minute Topographic Quadrangle, T8N R1W, Section 25, Humboldt Baseline & Meridian; ESRI, 2018; AES, 9/17/2018

Figure 1-2
Site and Vicinity



SOURCE: DigitalGlobe aerial photograph, 10/12/2017; AES, 9/17/2018

Figure 1-3
Aerial Photograph

The Proposed Action and subsequent Proposed Project would ensure that the Tribe continues to maintain a long-term, viable, and sustainable revenue base and allow the Tribe to continue to compete with other gaming and tourist attraction venues in the region.

1.5 OVERVIEW OF THE ENVIRONMENTAL REVIEW PROCESS

This EA is intended to satisfy the environmental review process of 59 IAM 3-H, 40 CFR § 1501.3 and 40 CFR § 1508.9. The EA has been released for a 30-day comment period. Comments will be considered by the BIA, and either a FONSI will be prepared or additional environmental analysis will be conducted. After the NEPA process is complete, the DCI and Division of Real Estate may issue a determination on the request to approve the Indian Load Guarantee and lease agreement.

1.6 ENVIRONMENTAL ISSUES ADDRESSED

In accordance with NEPA and because the Proposed Project is located within a coastal zone, this EA evaluates the following environmental issue areas outlined within the BIA's NEPA Guidebook:

- Land Resources
- Water Resources
- Air Quality/Greenhouse Gasses
- Biological Resources
- Cultural Resources
- Socioeconomic Conditions / Environmental Justice
- Land Resources
- Land Use and Agriculture
- Public Services
- Noise
- Hazardous Materials
- Visual Resources
- Transportation and Circulation

1.7 REGULATORY REQUIREMENTS AND APPROVALS

The following direct and indirect federal approvals and actions may occur as a result of the Proposed Action:

- Consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) under Section 7 of the Federal Endangered Species Act (ESA), if endangered species may be impacted by the Proposed Action.
- Consultation with the California Coastal Commission concerning consistency of the Proposed Action with the enforceable policies of the California Coastal Management Program (i.e., the Chapter 3 policies of the Coastal Act, Cal. Pub. Res. Code §§ 30200 *et seq.*) in accordance with 15 CFR Section 930.36 of the National Oceanic and Atmosphere Administration, Federal Consistency Regulations was completed and the Proposed Action received conditional concurrence so long as a suitable water source was identified.
- Consultation with the Tribal Historic Preservation Officer under Section 106 of the National Historic Preservation Act (NHPA).

SECTION 2.0

PROPOSED ACTION AND ALTERNATIVES

2.1 SELECTION OF ALTERNATIVES FOR DETAILED EVALUATION

As discussed in **Section 1.4**, the Purpose and Need of the Proposed Action relates to the Tribe's goals of economic self-sufficiency, self-governance, and self-determination. The only reasonable alternative is for the DCI and the Division of Real Estate Services to deny approval of the Indian Loan Guarantee and lease agreement, respectively. Furthermore, the selected location of the Proposed Project provides for a reduced-level of potential environmental impacts compared to alternative locations as the site is previously developed and supports the existing gaming operation. Other potential alternatives to the Proposed Action, such as a reduction in the size of the area for development or alternative locations, do not meet the definition of "reasonable" under the CEQ's Regulations for Implementing the NEPA because the purpose and need would not be met. Due to the proposed location of the Hotel, the Tribe has reduced the size to the minimum size that would provide the economic gains that would make the Hotel profitable and thereby viable. Accordingly, a smaller area for the Proposed Project is not evaluated within this Environmental Assessment (EA).

Being that all the parcels near the existing Casino are designated for parking, tribal facilities, or housing under Tribal land use planning, the surrounding locations owned by the Tribe are not suitable for a Hotel development. There are no other available comparable and affordable lands that would meet the purpose and need of the Proposed Project (in that the funds needed to purchase surrounding lands would result in lack of funding for Hotel development). Furthermore, the Tribe's purpose for the development of a 100-room Hotel is to support the existing Casino (Proposed Project). There is no alternative location that would allow the Tribe to have a Hotel near the existing Casino without disrupting future plans essential to the Tribe's growth and facilities. In addition, developing a Hotel separated from the existing Casino would prevent sharing of operational costs. This increase in operating costs associated with a separated Hotel facility would not be economically feasible for the Tribe. Therefore, alternative locations for the Proposed Project are not evaluated within this EA as none have been evaluated as being a reasonable alternative to the Proposed Project. The Proposed Project would allow the Tribe to better support their existing Casino and patrons visiting the area of Trinidad, thus providing economic benefit to the Tribe and its members. The Proposed Project is detailed below in **Section 2.2**.

2.2 PROPOSED ACTION AND PROPOSED PROJECT

The Proposed Action consists of the guarantee of a loan by DCI to the Tribe's lender in accordance with 25 Code of Federal Regulations (CFR) Part 162 Residential, Business, and Wind and Solar Resource Leases on Indian Lands and approval of a lease agreement between the Tribe and TREDC by the Division of Real Estate Services for the operation of the Hotel.

2.2.1 ALTERNATIVE A – PROPOSED PROJECT

The Tribe proposes to develop a six-story, 100-room Hotel, and accessory components on approximately 0.4 acres within existing developed/paved areas to the south and east of the existing Casino (**Figure 2-1**)



SOURCE: DigitalGlobe aerial photograph, 10/12/2017; AECOM, 1/13/2017; AES, 9/17/2018

Figure 2-1
Proposed Site Plan

south and east of the existing Casino (**Figure 2-2**). The Hotel would include a mix of room types, 1,552 square feet of meeting space divided into two separate areas, a business center, fitness room, café/bar, lounge, rooftop event space, and indoor pool. A porte-cochere along the eastern side of the existing Casino would provide a covered vehicle entrance for arriving guests. As part of the franchise agreement between TREDC and Hyatt Place, Hyatt Place would provide the design standards for the Hotel to ensure development is commensurate with Hyatt standards and the Tribe's culture.

WATER SUPPLY

Under the preferred option, water would be supplied though the existing three-inch diameter metered Casino water line. Maximum water demands for the Hotel and accessory components would be approximately 14,184 gallons per day (gpd) at full capacity (FEA, 2019). Typical capacity of the hotel is expected to be approximately 70 percent, resulting in an expected average water demand of 9,929 gpd. Except for connections from the Hotel to the system serving the existing Casino, no additional water infrastructure is required for Alternative A.

Hot and cold domestic water would be provided via a combination of three separate systems. A 750-gallon water heater and storage tank would provide water to guest rooms and common areas. A 100-gallon water heater would serve water to the laundry area. Lastly, the proposed system would include a second 100-gallon water heater with recirculating hot water for the kitchen. All piping materials would meet the California Plumbing Code standard.

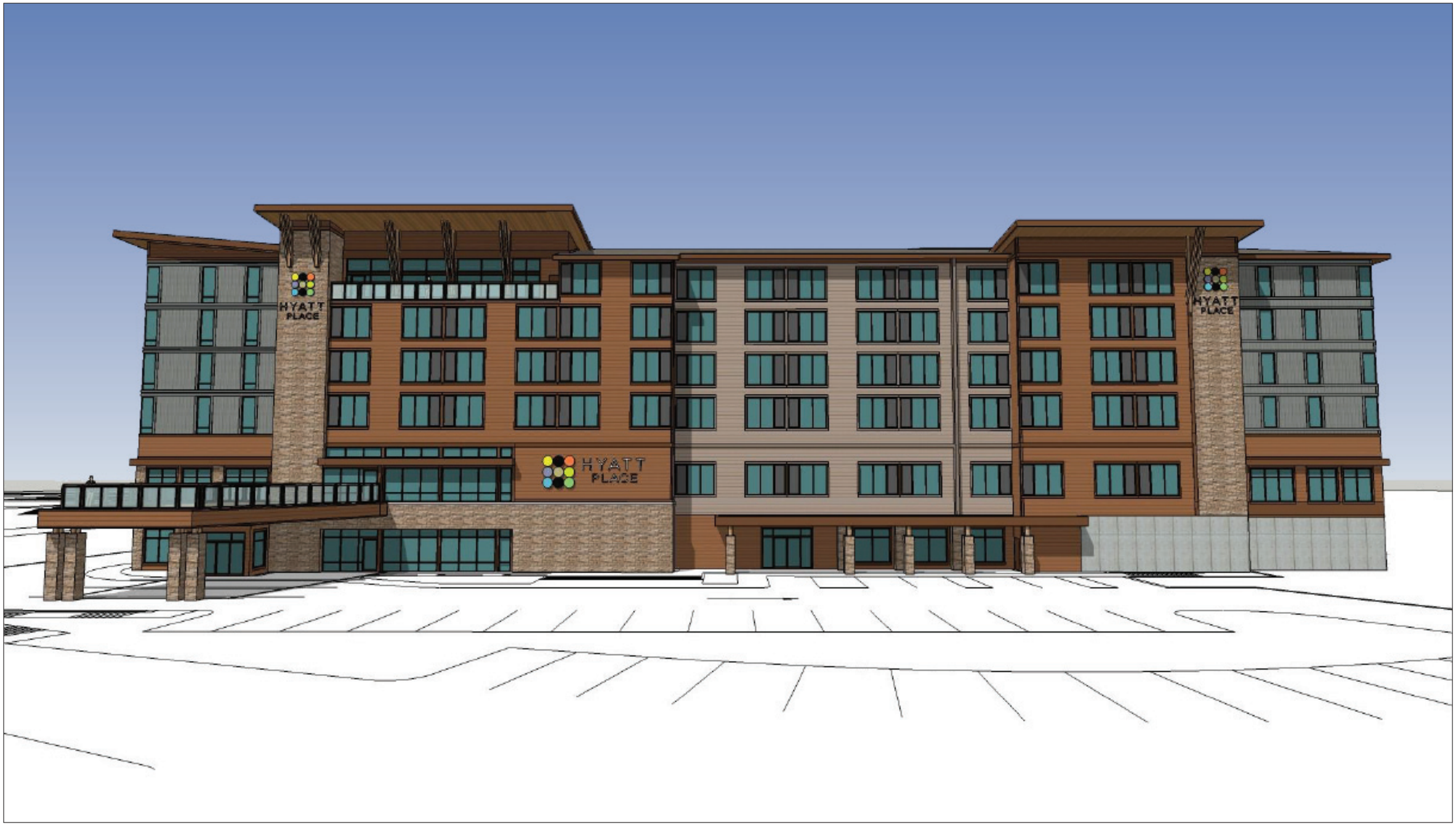
Optional Water Supply

In the event that City water would not be available to meet the demands of the Proposed Project, the Tribe would utilize alternative water sources, primarily including on-site water storage and well development. According to preliminary well explorations, on-site well development could provide approximately 6.8 gallons per minute (gpm) or 9,792 gpd, approximately 99 percent of the average day demand (**Appendix H**). With occasional trucking of supplemental water as needed to ensure stored levels can meet peak demands, the optional water strategy can meet the proposed water demands for the Proposed Project.

WASTEWATER TREATMENT AND DISPOSAL

Wastewater generated by the existing Casino, averaging 7,200 gallons per day (gpd), is currently treated by the Tribe's wastewater treatment plant (WWTP) and leach fields. The existing WWTP utilizes a combination of biological treatment and membrane separation and has an existing capacity of 15,000 gpd. The existing WWTP was designed to double in size with the addition of three filters, without resizing or excessive retrofitting. Wastewater generated by the existing Casino is pumped to a 15,000-gallon holding tank before being transferred to a concrete bioreactor. After organic material is broken down in the bioreactor, the wastewater is filtered through membranes. Once filtered, the wastewater is disinfected with a UV system and chlorinated. Approximately 40 percent (4,000 gpd) of the treated wastewater is dispersed via pumps into a leach field with a capacity of 10,000 gpd located south of the Tribal office. The remaining 60 percent (6,000 gpd) of the treated wastewater is stored in storage tanks to be recycled back into the existing Casino toilets (**Appendix A**).

Construction of a 100-room Hotel would result in the need to treat and dispose of approximately 10,000 gallons of wastewater per day. The proposed Hotel would connect directly to the existing Casino wastewater treatment system, which would be expanded in order to accommodate the additional capacity



SOURCE: TBE, 12/13/2018; AES, 1/4/2019

Figure 2-2
Architectural Rendering

generated by the Hotel. The Hotel sewer collection system would be drained by gravity and multiple exit pipes would be connected to the existing underground sanitary sewer. Sanitary drainage and vent piping materials would meet the California Plumbing Code standard. Recycled water would be utilized for toilet flushing within the Hotel, accounting for approximately 20 percent (2,000 gpd) of the proposed Hotel wastewater generation rate. Accordingly, the Hotel would be dual-plumbed and cross connections would be prohibited to prevent contaminating potable water with recycled water.

In order to accommodate the increase in wastewater treatment capacity, additional pumps, blowers, and piping and a parallel carbon polishing system would be installed. Upgrades to the electrical system would also be completed. The UV disinfection systems would also require a larger impeller on the existing pump; however, the UV disinfection systems themselves are sufficiently sized to handle the new flow.

All of this equipment would be accommodated by the existing building. Some minor plumbing issues would be corrected at the time of upgrade. Currently, the floor drains and plumbing fixtures in the treatment building are plumbed to the effluent tank. This would be rerouted to the holding tank and processed prior to dispersal. Some upgrades would occur with plumbing in the pump tanks to replace corroded pipes and valves. An additional standalone recycled water tank that is not chlorinated would be installed for use in the backwashing process of the membranes. This tank may affect the space currently dedicated to maintenance staff and activities and additional building space may be required to make sure routine maintenance activities are not impacted.

Wastewater from the septic tanks from the nearby Tribal Office, the clinic complex, and two homes is discharged directly to a community dispersal field without treatment. The community dispersal field was designed with a capacity of 10,000 gallons per day. A comparison of water meter usage records for the existing Casino and the processed wastewater flows from the WWTP indicate that approximately 60 percent of the average daily flow is recycled back into the existing Casino for toilet flushing and does not require disposal at the dispersal field. Therefore, approximately 2,880 gpd of treated wastewater is discharged to the dispersal field. In addition, an estimated 960 gpd are discharged to the dispersal field from the Tribal Offices, the clinic complex and the two houses connected to the community dispersal field. Accordingly, the total estimated flow to the community dispersal field is approximately 4,000 gpd. According to design specifications, there is approximately 6,000 gpd of capacity remaining in the existing community dispersal field. With 8,000 gpd of wastewater generated at the proposed Hotel, the existing leach field would operate over capacity. In order to accommodate excess wastewater capacity from the proposed Hotel, a 2004 Wastewater Assessment identified two potential areas, shown in **Figure 1-3**, feasible for additional leach field dispersal: the mounded ridge to the south of Ter Ker Coo Lane and the hillside south of the Tribal office (**Appendix A**). Accordingly, both locations are assessed in this EA.

GRADING AND DRAINAGE

Minimal grading would be required for a new access roadway, as the site is currently developed with asphalt for circulation for the back of house operations of the existing Casino and an existing Tribal property that has been previously cleared and flattened for historic residential. All cut and fill would be balanced on the site. The building would be constructed in a manner consistent with the 2016 California Building Code (CBC), including seismic design criteria related to the geologic setting of the area. The site is considered stable for hotel foundations, as it is located on undisturbed deposits and bedrock (**Appendix B**). Therefore, cast-in-drilled-hold (CIDH) pile foundations driven into the bedrock would be installed to achieve hotel support. A minimum of 24-inch diameter piles would be driven at least ten feet

into the bedrock to counteract potential for groundwater and caving soils. The CIDH piles require smaller installation equipment and minimize noise/vibrations when compared to driven piles (**Appendix B**). Additionally, concrete cantilever retaining walls up to 10 feet in height would be constructed as soil support. All retaining walls would be drained with at least one-foot thick permeable filter fabric backing.

With the development of the Hotel over existing paved surfaces, development of the Hotel would not introduce additional impervious surfaces. To improve drainage conditions over existing conditions, a storm drainage inlet system would be connected to the existing Casino system to capture runoff from the building. Additionally, roof drains would be installed on all flat roofs of the proposed Hotel. Roof drains would collect water through a system of drains connected to leaders, which would route the water outside of the building into the storm drainage system.

UTILITIES

Propane

Propane fuel would be provided for gas fired water heaters and kitchen equipment. Gas piping materials would meet the California Plumbing Code standards.

Electricity

The Hotel would obtain a normal power supply via a new utility service. The utility service would be terminated at a metered main electrical service switchboard (MSB). The MSB would be 208Y/120V, three phase, rated 2,500 amps and sized to accommodate all hotel features, including, but not limited to, the building guestroom loads, HVAC equipment, Hotel back of house loads, lighting, general-purpose power receptacles, and kitchen loads. Separate panelboards for lighting, receptacles, and HVAC loads are designed in compliance with California Energy Code, Part 6, Title 24 Section 130.5(a) Electrical Distribution Systems. Hotel electrical distributions would meet the California Energy Code, Part 6 Title 24, as they are enabled to receive and act upon demand response signals. Door and exit lighting would be provided with Integral 90-minute battery back up at guest rooms, public areas, and hotel back of house.

LIGHTING

Interior

All guestroom lighting would be locally switched or, if available, integrated with the Building Management/Guest Card Access Entry System. Interior lighting in all public spaces would be controlled via computerized dimming system and would have equivalency with California Energy Code Title 24 lighting control and power allowance requirements. Additionally, all back of house lighting shall meet California Energy Code Title 24 lighting control and power allowance requirements.

Exterior

Parking lot lighting would consist of pole-mounted, LED fixtures equipped with motion activated bi-level dimming. Exterior stairwells would be installed with motion sensors activated lights and an emergency battery. All exterior lights would be on a photocell controlled, centralized astronomical digital clock to ensure lights only turn on at night. Additionally, the Hotel would have 90-minute battery for backup lighting to power all emergency door lighting and LED-type illuminated exit signs. Emergency shunt relays would be provided for all areas with switched exit lights.

PROJECT CONSTRUCTION

The Hotel and accompanying components would be constructed over an eight- to twelve-month period, with an anticipated completion date in the spring to winter of 2020. All staging areas will be located on previously disturbed areas. Construction would involve minimal earthwork, placement of concrete foundations, steel and wood structural framing, masonry, electrical and mechanical work, building finishing, and paving, among other construction trades. Prior to finalization of the grading and development plans for the property, design-level geotechnical specifications addressing the specific grading and development plans would be developed to meet seismic requirements of the IBC.

To minimize the risk of fire, all equipment that normally includes a spark arrester would be equipped with an arrester in good working order; structural fire protection would be provided through compliance with California Fire Code and National Fire Alarm Code requirements for commercial structures similar in size to the proposed Hotel; the Tribe would cooperate with the fire district by allowing routine inspections and would ensure that appropriate water supply and pressure is available for emergency fire flows; and typical fire flow allowances would be confirmed with the local Fire Marshall prior to construction of any water storage tank.

2.3 ALTERNATIVE B – NO-ACTION ALTERNATIVE

Under the No-Action Alternative, DCI and the Division of Real Estate Services would not approve the requested actions. Accordingly, without the guaranteed loan, it is highly unlikely that the Tribe could secure the loan necessary to develop the Hotel. Additionally, without the lease agreement, the costs associated with having to independently design and operate the Hotel would render implementation infeasible for the Tribe. Accordingly, the Hotel and accessory components would not be developed as identified for the benefit of the Tribe under Alternative A. For the purposes of the environmental analysis in this EA, it is assumed that, due to the economic considerations for operating the existing Casino by the Tribe, the property would continue to be utilized in its current state for back of house access to the existing Casino with no additional facilities constructed under this alternative.

2.4 COMPARISON OF THE PROJECT ALTERNATIVES

ALTERNATIVE A

Alternative A would result in significant but mitigable environmental impacts in the following areas:

- Land Resources
- Biological Resources
- Cultural Resources
- Traffic
- Noise
- Visual Resources

Of the project alternatives evaluated, Alternative A would best meet the Tribe's objectives by providing the Tribe with a Hotel for the benefit of the Tribe and visiting patrons and community while minimizing or eliminating adverse environmental impacts.

ALTERNATIVE B

While the No-Action Alternative would not result in any of the environmental effects identified for Alternative A, this alternative would not meet the Tribe's objectives of exercising tribal sovereign self-reliance and enhance the well-being of tribal resources; further, this alternative would not meet the Tribe's goal to fulfill self-reliance and promote the future of economic stability and development for the Tribe.

SECTION 3.0

AFFECTED ENVIRONMENT, IMPACTS, AND MITIGATION FOR THE ALTERNATIVES CONSIDERED

This section presents relevant information concerning existing resources and other values that may be affected by the Project Alternatives. In accordance with the NEPA and the BIA's NEPA Guidebook (59 IAM 3-H), the existing conditions described herein provide the baseline for determining the environmental effects. As used here within, the term "project site" refers to the approximately 0.40 acres being considered for the Proposed Project. Accordingly, the term "proposed development" refers to the proposed Hotel and accessory components.

Following the existing conditions, environmental consequences and mitigation measures are provided for both direct and indirect impacts. Direct impacts are those that are caused by the Proposed Action and occur at the same time and place, while indirect impacts are caused by the Proposed Action and occur later in time or further in distance but are still reasonably foreseeable (Council on Environmental Quality, Regulation 1508.8). Cumulative effects and growth-inducing effects of the project alternatives are also assessed in this section for each of the resource areas. Note that, consistent with the CEQ's NEPA Regulations Section 1508.8, the term "effects" is used synonymously with the term "impacts." **Section 3.0** addresses the resource and issue areas identified in **Section 1.6**.

3.1 LAND RESOURCES

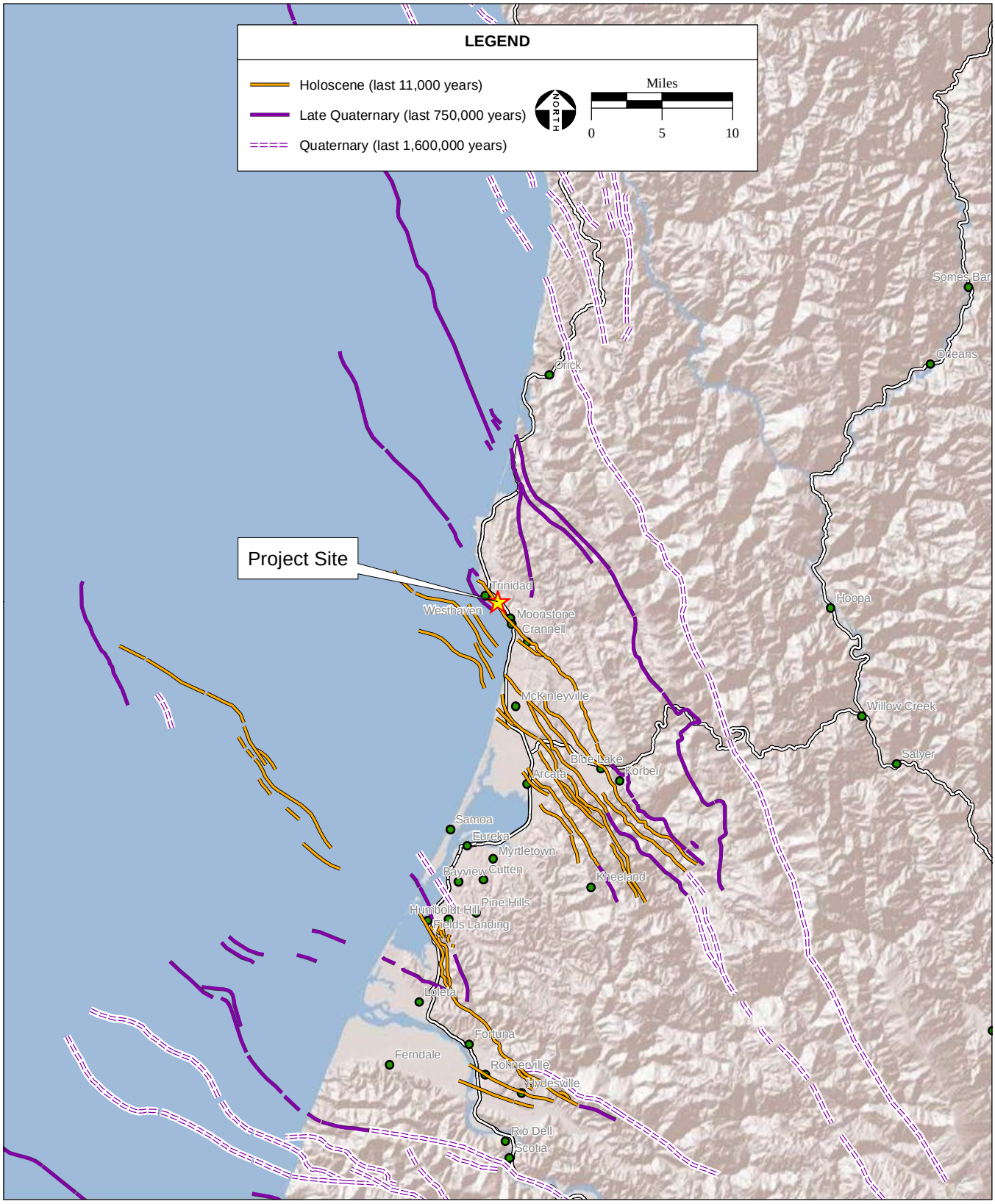
3.1.1 TOPOGRAPHY

Topography in the vicinity of the project site is typical of that of coastal bluffs and Pacific Northwest forests. The project site is located near the top of a coastal bluff, which is approximately 230 feet above mean seal level (amsl) and has an approximately 50 percent slope southwest towards the Pacific Ocean. The project site itself is relatively flat due to previous grading and development of the existing Casino.

3.1.2 GEOLOGIC SETTING AND SEISMICITY

The shale bedrock that underlies the project site is primarily composed of Mesozoic-Paleozoic-Precambrian Sedimentary and Metasedimentary Rocks, specifically that of the Jura-Cretaceous Franciscan Complex. Primary seismic concerns within the County include ground shaking and surface ruptures along existing fault traces. Secondary seismic concerns within the County include liquefaction, settlement, landslides, and tsunamis.

The County is located in a seismically active region. Three major fault traces meet offshore at the "triple junction": the San Andreas Fault, the Mendocino Fracture Zone, and the southern end of the Cascadia Subduction Zone. However, the project site is not located within a designated Alquist-Priolo zone, which is determined by the California Geological Survey (CGS) according to mandates of the Alquist-Priolo Earthquake Fault Zoning Act of 1972 (Alquist-Priolo). Alquist-Priolo zones are well-defined areas located within seismically active zones, typically along active fault zones susceptible to surface fault ruptures. As shown in **Figure 3-1**, several fault lines are located within the vicinity of the project site,



SOURCE: USGS Earthquake Hazards Program, 7/26/2010; California Geological Survey, 2005; AES, 9/17/2018

Figure 3-1
Regional Faults

including the Trinidad Fault and McKinleyville Fault. The Trinidad Fault is located approximately 10 miles southeast of the project site and the McKinleyville Fault is located approximately 500 feet northeast of the project site. Both faults are less than 15,000 years old (USGS, 2016). The project site has as a maximum peak horizontal ground acceleration of 0.52g (or 5.10 meters per squared second (m/s^2) for a seismic event with a ten percent probability for exceedance in 50 years (**Appendix B**).

The project site is not currently mapped for landslides or liquefaction. However, landslides are common along the slopes located in the vicinity of the project site, specifically at and below Scenic Drive, located immediately adjacent to and southwest of the project site. Landslides are initiated by wave erosion that undercuts the toe of such slopes, preferentially undercutting the "weak rock" areas within the shale bedrock. Block failures within the shale bedrock are caused by such wave erosion, which affects upslope and results in landslides due to sandy soils that become unstable during earth-shaking events at horizontal ground accelerations noted above. Landslides in the vicinity of the project site, specifically at and below Scenic Drive, have resulted in soil investigations, which in turn have led Humboldt County (County) to implement stabilization measures such as retaining wall systems, slope reconstruction, and sub-drainage elements.

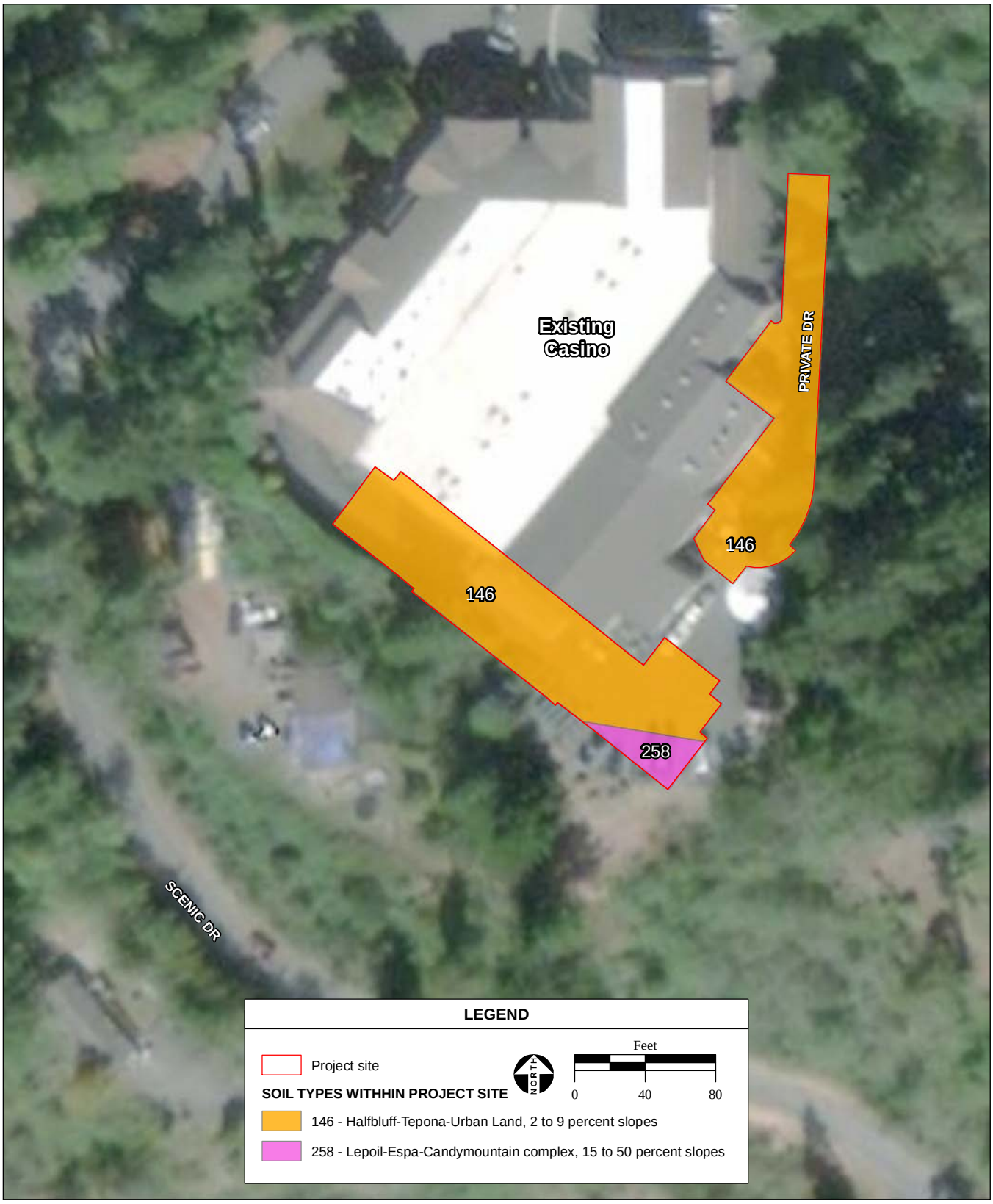
An active landslide currently extends from the southwest corner of the proposed Hotel southwest towards Scenic Drive. The active landslide is relatively shallow in nature and appears to involve the terrace deposits which overly the shale bedrock. Groundwater, a major contributor to the slope's instability, moves through the terrace deposits and emerges where the shale bedrock is exposed. Surface seepage, springs, and hydrophytic vegetation are present in the immediate vicinity of the slope. The active landslide has dropped approximately six vertical inches but has not damaged the existing Casino or surface parking lot.

The project site, being located near the top of a coastal bluff, is located outside of a tsunami inundation zone (DOC, 2009).

3.1.3 SOILS

As shown in **Figure 3-2**, soils within and in the vicinity of the project site are comprised of halfbluff-tepona-urban soils, lepoil-espa-candymountain complex soils, and atwell-ladydid complex soils. Soils within the project site have a low linear extensibility rate, which is related to the susceptibility of the soil to expand, and moderate to high soil erosion rates, which is related to the susceptibility of the soil to erode (NRCS, 2016a; NRCS, 2016b).

Construction fill material within and in the vicinity of the project site was used during the construction of the existing Casino and surface parking lot. The construction fill material, less than approximately five feet in depth, is comprised of stiff sandy clay and medium-dense silty gravel. Dense terrace deposits underlie the construction fill material to a depth of approximately 43 feet below ground surface (bgs). The weathered shale bedrock found below the project site is predominately decomposed to a lesser sandstone layer with mudstone and was drillable to the full depth of approximately 81.4 feet bgs for the test borings provided in **Appendix B**. **Appendix B** presents further analysis of the soil samples obtained during the onsite test borings.



SOURCE: USDA SSURGO Soil Survey of Humboldt County, updated 9/2015;
DigitalGlobe aerial photograph, 10/12/2017; AES, 9/17/2018

Figure 3-2
Soil Types

3.1.4 MINERAL RESOURCES

The County has more than 32 permitted and active hard rock quarries (County of Humboldt, 2007a) and more than 90 extraction sites that produce sand, gravel, metals, stone, and clay. The majority of extraction activities within the County involves sand and gravel extractions along the Mad River, Eel River-Van Duzen River complex, Willow Creek, and Trinity River. Trinidad Quarry, located approximately 2.1 miles northeast of the project site, is the closest extraction site to the project site (USGS, 2003). No known mineral resources exist within the project site.

3.1.5 IMPACTS TO LAND RESOURCES

Alternative A would result in significant effects to land resources if construction or operation causes significant alterations to the site topography, significant soil erosion, or limits access to mineral resources of regional significance. Alternative A would also result in significant effects to land resources if geological/soil hazards associated with the existing setting would pose limitations to the development of Alternative A or pose a significant health hazard to new habitable structures.

TOPOGRAPHY

Alternative A would not result in substantial changes to the topography of the project site. Development within the project site, which is relatively flat in nature due to previous grading and development of the existing Casino, would be limited to the existing surface parking lot (**Figure 2-1**).

GEOLOGIC SETTING AND SEISMICITY

The County is located in a seismically active region (**Figure 3-1**). Alquist-Priolo mandates that human occupancy be set back at a minimum of 50 feet from an active fault; the Proposed Project is located outside the 50-foot setback boundary and there is little chance of an active fault on the project site (**Appendix B)**.

The active landslide that currently extends from the southwest corner of the proposed Hotel southwest towards Scenic Drive has the potential to affect the foundation of the proposed Hotel. However, the active landslide is relatively shallow in nature and may be readily stabilized utilizing measures such as retaining wall systems, slope reconstruction, and sub-drainage elements (**Section 3.1.6**).

In order to reduce damage from tsunamis, the City's Draft General Plan designates all areas less than 20 feet above mean sea level (amsl) as Open Space or Special Environment (City of Trinidad, 2012). The project site, being located near the top of a coastal bluff at approximately 230 feet amsl, is located outside of a tsunami inundation zone and is therefore not designated as a Special Environment.

SOILS

Excavation activities for construction of the proposed Hotel within the project site have the potential to expose soils and increase the susceptibility of such soils to erode. However, construction fill material was used within and in the vicinity of the project site during the construction of the existing Casino and surface parking lot and therefore implementation of Alternative A would not result in significant effects due to soil erosion. Additionally, liquefaction is not anticipated to occur unless sustained high groundwater levels are identified within terrace deposits which overly the shale bedrock (**Appendix B**).

MINERAL RESOURCES

Excavation activities for construction of the proposed Hotel within the project site are not anticipated to result in a loss of economically-viable aggregate rock or to diminish the extraction of important ores or minerals. No known mineral resources exist within the project site and there are no abandoned mines, shafts, or tailings within or in the vicinity of the project site. Therefore development and use of the land would not affect extraction activities of known mineral resources of importance to the surrounding community.

Alternative B

Under the No Action Alternative, the project site would remain undeveloped. No mitigation required.

3.1.6 MITIGATION MEASURES

- Prior to construction of the Hotel foundation, the contractor shall implement one of the slope stabilization options recommended by the soil engineers in the Draft Geotechnical Feasibility and Preliminary Design Report (**Appendix B**). Options include soil nail walls, reconstructed embankment, solider pile, and welded wire walls.

3.2 WATER RESOURCES

The following section describes the existing surface water, drainage, flooding, water supply, groundwater, and water quality conditions at the project site.

3.2.1 SURFACE WATER, DRAINAGE, AND FLOODING

WATERSHEDS AND HYDROLOGY

The project site is located within the Luffenholtz Creek-Frontal Pacific Ocean sub-watershed of the Trinidad Hydrological Unit (HU). Mill Creek, McConnahas Mill Creek, and Luffenholtz Creek are located within the Trinidad HU, flow southwest, and eventually discharge into the Pacific Ocean. Mill Creek is located just north of the City and McConnahas Mill Creek is located immediately adjacent to the northern boundary of the Trinidad Rancheria. Luffenholtz Creek's headwaters are located northeast of the project site and discharge into the Trinidad Bay of the Pacific Ocean located approximately 1.4 miles south of the project site.

CITY WATER SUPPLY

Historically, homes within the City had individual wells or have been served from Mill Creek and Luffenholtz Creek. Currently, the City's water supply system serves approximately 315 connections, including connections to Tribal enterprises. The City has a permitted water use rate of 355,392 gallons per day (gpd), of which the City is using approximately 24 percent (GHD, 2019). .

DRAINAGE

The project site has slopes which range from approximately zero to five percent. Runoff within the surface parking lot occurs as sheet flow and follows the topography southwest towards on-site detention basins and swales constructed during the development of the existing Casino. The project site and surrounding lands do not directly contribute surface water to the Luffenholtz Creek-Frontal Pacific Ocean sub-watershed; rather, overland flow drains via stormwater outlets into the Pacific Ocean.

FLOODING

The Federal Emergency Management Agency (FEMA) is responsible for assessing the potential for flooding by updating and issuing Flood Insurance Rate Maps (FIRM), which depict various levels of predicted inundation. FEMA has not completed an analysis of flood hazards within the City and therefore a FEMA FIRM is not available (FEMA, 2016). However, FEMA is in agreement with the City that due to the City's steep slopes, the potential for flooding within the City is nonexistent and therefore flood mapping is unnecessary (City of Trinidad, 2012).

3.2.2 GROUNDWATER

The project site is located within the minor Mad-Redwood Big Lagoon Area Basin groundwater basin, which is comprised of the Mad River, Redwood Creek, Eureka Plain, and Trinidad planning watersheds totaling approximately 34,000 acres (County of Humboldt, 2002). These planning watersheds are located within the California Coast Ranges and are mainly comprised of highly unstable, easily erodible rocks which contribute to high levels of sediment in its water features (County of Humboldt, 2002). The average annual runoff that percolates into the combined basin is approximately 1,000,000-acre feet (AF).

No groundwater wells supply water within the project site; however, monitoring wells were installed as part of the geotechnical studies investigated in **Appendix B**. Groundwater was originally measured at approximately 16.5 feet bgs, but has since risen to approximately 12.0 feet bgs. On-site groundwater levels are measured weekly and results indicate that groundwater is seasonally present within the terrace deposits near the shale bedrock. A groundwater balance was developed for the Rancheria (**Appendix H**). The inflows were attributed to recharge from precipitation and outflows were attributed to existing Rancheria uses and evapotranspiration by plants. The groundwater balance conservatively assumed that the approximately 20 structures on the Rancheria utilized groundwater resulting in an existing withdrawal from the basin of 20 acre-feet per year. Based on existing data, the annual recharge rate from precipitation (incorporating anticipated losses from evapotranspiration and runoff) is 174 acre-feet per year for the Rancheria. Taking into consideration the conservative assumption of existing use, the anticipated recharge would be approximately 154 acre-feet per year.

3.2.3 WATER QUALITY

Water is supplied to facilities within the project site by the City, and so water quality is assured by existing City systems.

3.2.4 IMPACTS TO WATER RESOURCES

ALTERNATIVE A

Alternative A would result in significant effects to water resources if construction or operation would result in off-site flooding, floodplain management, and/or cause an exceedance of applicable water quality criteria, result in a significant decline in groundwater levels, a significant decline in groundwater recharge rates, and/or cause an exceedance of applicable groundwater quality criteria.

Surface Water, Drainage, and Flooding

Development of the proposed Hotel within the existing surface parking lot would result in no net increase in impervious surfaces. Surface water would continue to follow the topography southwest towards on-site detention basins and swales constructed for the Casino. Roof drains installed on the proposed Hotel would route the water into the storm drainage system. FEMA has determined that the potential for flooding is nonexistent and therefore flood mapping is unnecessary (City of Trinidad, 2012).

Water and Groundwater Supplies
Water supply is described in **Section 2.2.1**. Under the preferred option, the City's water supply system (surface water) would serve the proposed Hotel's water needs through existing connections and no advese impacts to groundwater would result.

Optional Water Supply

The hotel water demand, at approximately 9,800 gpd of average use, would equate to approximately 11 acre-feet per year of water demand. Accordingly, the Rancheria groundwater basin would still receive 143 acre-feet per year of recharge and impacts to groundwater supplies would be minimal. Even at peak use, the hotel would require 15.8 acre-feet per year leaving approximately 138.2 acre-feet per year of recharge within the Rancheria groundwater basin. Furthermore, the immediate impacts of withdrawal within the wells, due to the low pumping rates, would be limited to a maximum radius of 50 feet from the potential wells. There are no wells within 50 feet of the proposed well areas and therefore no nearby wells would be adversely impacted by well pumping (**Appendix I**).

Wastewater Treatment and Disposal
As described in **Section 2.2.1**, primary treatment of wastewater would be provided by the Tribe's existing WWTF and expanded leach fields.

Water Quality
Construction activities may include excavation, which has the potential to result in the erosion of topsoil, potentially increasing sediment discharge into nearby waterbodies and degrading water quality. Construction activities may also include the routine use of potentially hazardous materials such as concrete washings, oil, and grease, which could spill onto the ground and runoff with stormwater. These effects would be reduced to less than significant with the incorporation of Best Management Practices (BMPs) provided in **Appendix C**.

3.2.5 MITIGATION MEASURES

ALTERNATIVE A
With the incorporation of the BMPs provided in **Appendix C**, construction materials would not reach surface waters and effects to water quality as a result of construction activities would be less than significant. No mitigation required.

ALTERNATIVE B
Under the No Action Alternative, the project site would remain undeveloped. No mitigation required.

3.3 AIR QUALITY AND GREENHOUSE GASSES

The Regulatory Context for Air Quality and Greenhouse Gasses is included in **Appendix D.**

3.3.1 EXISTING AIR QUALITY CONDITIONS

The project site is located in the North Coast Air Basin (NCAB), which extends for approximately 250 miles from Sonoma County in the south to the Oregon border in the north and east through Trinity County. The climate of the NCAB is influenced by the Klamath Mountains and the Coast Range 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.

3.3.2 REGIONAL AIR QUALITY

NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS) DESIGNATIONS

The NCAB is in attainment or is unclassified for all criteria air pollutants (CAPs) under the current NAAQS designation (USEPA, 2016). Pollutants of concern are CAPs, or CAP precursors (NOx and ROG), that are present in quantities exceeding the NAAQS in the applicable air basin or region. No CAPs exceed the NAAQS in NCAB (USEPA, 2016), and therefore, pollutants of concern are not present in the NCAB. Major hazardous sources are defined as stationary sources with potential to emit more than 10 tons per year (tpy) of any hazardous air pollutants (HAP) or more than 25 tpy of any combination of HAPs. The current operations at the project site do not meet this threshold.

CLIMATE CHANGE

The impacts of climate change could be both global and regional (IPCC, 2013). Development projects typically result in an increase in GHG emissions due to increases in mobile sources (trips generated), area sources (facility components or operations that directly emit GHGs), and indirect sources related to electrical power consumption. To provide a comparative analysis between sources of GHGs, the carbon dioxide equivalent (CO_2e) of each GHG is assessed. To calculate total GHG emissions for a source, estimated emissions for each GHG are multiplied by the corresponding CO_2e value and the converted values are then summed for a total CO_2e emissions rate.

3.3.3 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. The project site is surrounded by rural residential areas to the south, east and west, with Tribal buildings and the Casino directly adjacent to the northwest. A single-family rural residence, located on-Reservation approximately 75 feet south of the project site, is the nearest sensitive receptor. The nearest off-Reservation sensitive receptor is a single-family rural residence approximately 165 feet east of the project site. The nearest school, Trinidad Elementary School, is located approximately 0.9 miles north of the project site.

3.3.4 IMPACTS TO AIR QUALITY

ALTERNATIVE A

Criteria and Hazardous Air Pollutants

Adverse effects to ambient air quality would result if either construction or operation of the Proposed Project would result in non-conformance to an applicable State Implementation Plan (SIP) for NAAQS compliance or result in emissions of significant levels that would adversely affect the air quality of a federal Class I area. However, the project site is located within an air basin that is classified as attainment/unclassified for all the CAPs and the least stringent *de minimis* thresholds from the General Conformity rule have been selected as impact criteria for project evaluation.

Project-related air quality impacts fall into two categories: short-term impacts due to construction and long-term impacts due to project operation. Short-term construction activities would result in the generation of particulate matter ($\leq$ 10 microns and $\leq$ 2.5 microns in diameter PM_{10} and $PM_{2.5}$) from grading and demolition activities and ROG, NOx, and CO from diesel-fired construction equipment. Long-term operation of the Proposed Project would result in motor vehicle use. Motor vehicle use would contribute to ozone, the significance of which is determined through the generation of ROG, NOx, and CO pollution.

Construction emissions for the Proposed Project were estimated using California Emissions Estimator Model (CalEEMod), which is the latest version of the air quality model approved by the USEPA for use in California. CalEEMod provides default values when site-specific inputs are not available. Construction is assumed to begin in 2019 and continue for eight to 12 months. The following site-specific traffic inputs and assumptions were used for the purposes of air quality modeling:

- Construction will occur an average of 22 days per month.
- Construction will result in a maximum disturbance of 0.40 acres.
- CalEEMod default construction equipment list was used.
- The Proposed Project includes construction of a 100-room Hotel.

Default input values for the model included CalEEMod defaults and site-specific data are provided in **Appendix E**.

Climate Change and Greenhouse Gas Emissions

The County has identified goals and policies in its 2012 Draft CAP that support the State's GHG reduction goals. The USEPA has developed a GHG Reporting Program, which provides a GHG reporting threshold of 25,000 metric tons (MT) per year. In the absence of a federal significance threshold, the 25,000 MT reporting threshold was used to determine if project-related GHG emissions would exacerbate climate change effects. GHG Emissions were estimated using CalEEMod (**Appendix E**).

Federal Class I Area

If any alternative exceeds the Prevention of Significant Deterioration (PSD) threshold of 250 tpy for any one CAP from stationary sources during construction or operation, then further analysis must be conducted, however there are no stationary sources of CAPs included in the Proposed Project with the potential to emit 250 tpy of CAPs.

Construction Emissions

Construction of the Proposed Project would generate CAPs through the utilization of construction machinery (primarily diesel operated), construction worker automobiles (primarily gasoline operated), physical land disturbance, and construction of buildings. Construction typically proceeds in distinct phases: construction is initiated with demolition, site preparation, and paving, which is then followed by erection of structures, and finally the finishing of those structures and infrastructure. Of these phases, demolition can generate fugitive dust and diesel equipment emissions of PM_{10} and $PM_{2.5}$. Construction and finishing of structures typically results in greater ROG and NOx emissions associated with diesel and gasoline combustion stationary equipment, mobile equipment, and employee vehicle trips. The Proposed Project annual construction emissions for each CAP are provided in **Table 3.3-1**.

TABLE 3.3-1
UNMITIGATED CONSTRUCTION EMISSIONS

CONSTRUCTION YEARS	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
	TONS PER YEAR					
2019	0.29	0.84	0.55	0.00	0.10	0.06
De Minimis Levels	100	100	100	100	100	100
Exceeds De Minimis	No	No	No	No	No	No
Source: CalEEMod, 2016						

Project emissions are below the General Conformity *de minimis* levels and therefore construction of the Proposed Project would not cause an exceedance of NAAQS or conflict with the implementation of California's SIP. Construction of the Proposed Project would not produce greater than 250 tpy of a regulated pollutant and therefore the Proposed Project is not classified as a major source under the Prevention of Significant Deterioration (PSD) program and no pre-construction review is required.

Operational Emissions

Operational emissions would primarily be comprised of mobile emissions associated with hotel patron's motor vehicle use, though area and energy source emissions associated with maintenance equipment, space heaters, and water heaters would also contribute to operational emissions. Default assumptions for trip generation rate, trip lengths, average trip speeds, and vehicle fleet for residential land uses in CalEEMod were used to estimate project-related criteria emissions for the build-out year of 2020.

Table 3.3-2 summarizes project-related area, energy, and mobile source emissions. Project emissions are below the General Conformity *de minimis* levels and therefore operation of the Proposed Project would not cause an exceedance of NAAQS or conflict with the implementation of California's SIP. As with construction, operation of the Proposed Project would not be classified as a major source under the PSD program and no further review is required.

TABLE 3.3-2
UNMITIGATED OPERATIONAL EMISSIONS

SOURCES	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
	TONS PER YEAR					
Area	0.09	0.00	0.00	0.00	0.00	0.00
Energy	0.00	0.02	0.02	0.00	0.00	0.00
Mobile	0.59	3.89	8.78	0.02	1.23	0.36
Total Operational Emissions	*0.68*	*3.91*	*8.79*	*0.02*	*1.23*	*0.36*
De Minimis Level	*100*	*100*	*100*	*100*	*100*	*100*
Exceeds De Minimis	**No**	**No**	**No**	**No**	**No**	**No**
Source: CalEEMod, 2016						

Climate Change and Greenhouse Gas Emissions

As shown in **Table 3.3-3**, construction and operation of the Proposed Project will result in GHG emission of approximately 1,656 metric tons (MT) annually. These emissions equate to less than approximately 0.13 percent of total county-wide emissions in the most recent inventory (County of Humboldt, 2012a). As a result, no significant impacts concerning global climate change would occur as a result of implementation of Alternative A.

The 2016 CEQ guidance states that projects subject to NEPA should also analyze the effect of climate change on the project. Average temperature in the City could increase by approximately 2.8° F to 5.1° F by the 2080s, resulting in an increase in projected extreme heat days. Sea level rise is likely to increase by approximately 18 percent in the County and could lead to increased coastal erosion on the cliffs south of the Proposed Project. Additionally, the wildfire risk in the mixed conifer forest adjacent to the

TABLE 3.3-3
PROPOSED PROJECT GHG EMISSIONS

SOURCES	GHG EMISSIONS IN CO_2E (MT/YEAR)
Direct	
Construction	8.58
Area	--
Indirect	
Mobile	1,554.04
Energy	58.40
Water	7.75
Waste	27.53
Total GHG Emissions	**1,656.30**
Source: CaEEMod, 2016	

Proposed Project is projected to increase. The intensity of these effects is uncertain and depends on future GHG emissions world-wide (CEC, 2017).

No characteristics of the Proposed Project are unique or especially vulnerable to the impacts from climate change. The effects of increasing temperatures and frequency of extreme heat days will be damped by the use of on-site air conditioning. The project site is located on a coastal bluff approximately 230 feet amsl and set back approximately 150 feet from the cliff edge; therefore, the project site is not vulnerable to direct inundation or coastal erosion from sea level rise. The project site is located on an existing paved and developed area which is adequately served by emergency services (refer to **Section 3.10**) and therefore is not uniquely sensitive to increased risk from wildfires as a result of climate change.

3.3.5 MITIGATION MEASURES

No adverse air quality effects would result from the Proposed Project with the incorporation of the BMPs listed in **Appendix C**. No mitigation required.

Alternative B
Under the No-Action Alternative, the site would continue to be undisturbed. No mitigation required.

3.4 BIOLOGICAL RESOURCES

The following describes existing biological resource conditions, including habitat conditions, waters of the U.S., and listed species that occur within the project site and general vicinity. Existing biological resources were evaluated through a review of pertinent literature, consultation of relevant databases, and biological field surveys to document habitat types and the potential occurrence for federally listed species.

3.4.1 VEGETATIVE COMMUNITIES
Vegetative communities are assemblages of plant species that occur together in the same area that are defined by species composition and relative abundance. Vegetation communities were classified using the California Department of Fish and Wildlife (CDFW) Terrestrial Natural Communities of California system, or "Holland type." The project site habitat type is considered ruderal/developed with no vegetation within the areas to be disturbed. A habitat map of the project site is presented as **Figure 3-3**. Native vegetation surrounds the project site and borders the project site's impervious surfaces. There are no other habitat types located on the project site.

Habitat
Most of the undeveloped areas surrounding the project site are characterized by northern coastal scrub, consisting of low shrubs in dense patches that usually occur on windy, exposed sites with shallow and rocky soils. No wildlife occurs on or within the project site due to the high level of foot and vehicle traffic associated with the operation of the existing Casino back of the house. Surrounding the project site and on the adjacent properties, the following wildlife have been observed: turkey vulture (*Cathartes aura*), mourning dove (*Zenaida macroura*), California gull (*Larus californicus*), and American robin (*Turdus migratorius*).

Although the project site does not contain suitable habitat for nesting birds, there is potential for migratory birds that are accustomed to high levels of human activity to nest adjacent to the project site within the mature trees. The trees are located adjacent to the edge of the asphalt surface.

Potential Waters of the U.S.
There are no surface water features that are present within the boundaries of the project site that have the potential to be classified as waters of the U.S. or wetlands.

3.4.3 SPECIAL-STATUS SPECIES
For the purposes of this assessment, "special status" is defined to be species that are of management concern to federal resource agencies and include those species that are:

- Listed as endangered, threatened, or candidate for listing under the FESA; or
- Designated as species of concern or species of local concern by USFWS.

A list of special-status plant and animal species that have potential to be affected by the Proposed Project was compiled based on a review of pertinent literature, a reconnaissance-level site assessment, informal consultation with the USFWS, and the results of a California Natural Diversity Data Base (CNDDB)



SOURCE: DigitalGlobe aerial photograph, 10/12/2017; AES, 9/17/2018

Figure 3-3
Habitat Types

query. Both the search results and a summary table of special-status species that have the potential to occur may be found in **Appendix F**. No habitat delineated by the USFWS as being critical to the survival of a protected species occurs within or immediately adjacent to the project site. The seven species listed in **Appendix F** have the potential to be present in the project region. These species were then examined by examining specific site conditions, and it was found that habitat needs for two of the seven species, the marbled murrelet and the northern spotted owl, are met by the immediate project site.

Marbled Murrelet

The marbled murrelet is a small, robin-sized diving seabird that spends the majority of its time on the ocean, resting and feeding, but flies inland to nest in old growth forest stands. Although no suitable habitat is located on the project site, potentially suitable habitat is located adjacent to the project site.

Northern Spotted Owl

The northern spotted owl is a medium-sized owl of slight varying shades of chocolate brown with dark eyes and a round face. Northern spotted owls live primarily in old 150 to 200-year old growth forests characterized by dense canopy closure typical of old forests. Although no suitable habitat is located on the project site, potentially suitable habitat is located adjacent to the project site.

3.4.4 IMPACTS TO BIOLOGICAL RESOURCES

ALTERNATIVE A

Significant effects to biological resources would result if Alternative A would:

- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with local policies or ordinances protecting biological resources;
- Have a substantial significant effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (CWA) through direct removal, filling, hydrological interruption, or other means;
- Have a substantial significant effect on species with special status under the federal Endangered Species Act (FESA);
- Have a substantial significant effect on habitat necessary for the future survival of such species, including areas designated as critical habitat by the U.S. Fish and Wildlife Service (USFWS); or
- Result in take of migratory bird species as defined by the Migratory Bird Treaty Act (MBTA) (16 USC §703-712).

Special-Status Species

Alternative A would not result in a loss of habitat for a protected species, as the project site has been previously disturbed and paved. Although no species have the potential to occur on the project site, the surrounding trees provide potential habitat for marbled murrelet and northern spotted owl.

Foraging habitat for marbled murrelet exists within approximately 500 feet of the project site on the shoreline west of the development footprint and potential nesting habitat exists within approximately 25 feet of the project site to the west, south, and east. Potential foraging and nesting habitat for the northern spotted owl exists directly adjacent to the project site. With the incorporation of the mitigation measures

provided below, neither of these species would be adversely affected by the Proposed Project, and there would be no effect to species in accordance with the Endangered Species Act.

Waters of the United States

No Waters of the U.S. occur on the project site. No discharge of dredged or fill material, or other disturbance to wetlands or other waters of the U.S. would occur as a result of Alternative A.

Migratory Birds

Although the project site does not contain suitable habitat for nesting birds, there is a potential for migratory birds to nest directly adjacent to the project site within the mature trees. However, the birds would have to be accustomed to areas of intense human activity. Construction activities could result in disturbance of nearby nest sites for migratory birds and other birds of prey through temporary increases in ambient noise levels and increased human activity within the Proposed Project area. Such disruptions could result in the abandonment of active nests. This would be a temporary effect and would not result in take of nesting migratory bird species.

Alternative B

Under the No Action Alternative, the project site would remain undeveloped. No mitigation required.

3.4.5 MITIGATION MEASURES

- A qualified biologist shall conduct a preconstruction nesting bird survey within 100 feet of the project site during marbled murrelet, northern spotted owl, bird-of-prey, and migratory bird nesting seasons. If any active nests are located within the vicinity of the project site, a no-disturbance buffer zone shall be established to avoid disturbance or destruction of the nest(s). The distance around the no-disturbance buffer shall be determined by the biologist in coordination with USFWS and will depend on the level of noise or construction activity, the level of ambient noise in the vicinity of the nest, and the line-of-sight between the nest and disturbance. The biologist shall delineate the buffer zone with construction tape or pin flags. The no-disturbance buffer will remain in place until after the nesting season or until the biologist determines that the young birds have fledged. A report shall be prepared and submitted to the Tribe and the USFWS following the fledging of the nestlings to document the results.

3.5 CULTURAL RESOURCES

Archaeological studies of the Trinidad Rancheria, including the Proposed Project footprint, were completed by Benson (1977) and Verwayen and Rohde (2011); neither resulted in the identification of any cultural resources on the Proposed Project site.

3.5.1 AREA OF POTENTIAL EFFECTS

The Area of Potential Effects (APE) for the Proposed Project includes the footprint of the proposed Hotel and any support structures, staging areas, etc.; however, all of these improvement and staging areas lie within already-developed locations. There is no vertical APE, as it has been demonstrated that the Proposed Project will be built on bedrock topped with fill (**Appendix B**).

3.5.2 METHODOLOGY

A record search was conducted at the Northwest Information Center (NWIC) of the California Historical Resources Information System by AES staff on January 26, 2017 (NWIC File No. 16-1090). Sources reviewed included: the National Register of Historic Places; the California Register of Historical Resources; California Points of Historical Interest; California Inventory of Historic Resources; California Historical Landmarks; Directory of Properties in the Historic Property Data Files for Trinidad County; and Archaeological Determinations of Eligibility. No resources have been noted within 0.25 -miles of the Proposed Project in spite of the fact that six cultural resource studies have included the APE and 0.25-mile buffer.

Historic maps and land patent records were also examined, and it was determined that Alfred D. Dannes purchased approximately 126.9 acres in 1870 that would have included the northern portion of what would become the Trinidad Rancheria, however no land patent records could be found that include the project APE (BLM, 2017).

Geotechnical studies have shown that the Proposed Project site is located on Pleistocene marine terrace sediments deposited on a wave-cut bench in rock of the Jura-Cretaceous Franciscan Complex (**Appendix B**). Mollusks found in this formation, like those found near Trinidad Head approximately 2.5 miles to the west of the APE, are among the most common Pleistocene fossils, and frequently belong to species now living (Shimek, 1913). The presence of fossils nearby indicates the potential for fossils to be encountered during construction.

Native American Consultation

It is presumed that the BIA, as Federal Lead Agency, will conduct any necessary consultation.

3.5.4 IMPACTS TO HISTORIC PROPERTIES / PALEONTOLOGICAL RESOURCES

In accordance with Section 106 of the National Historic Preservation Act (NHPA), an adverse effect would result if the Proposed Project causes the physical destruction or alteration to all or part of, removal or change in the character to, or any deterioration or loss of integrity of an existing historic property (i.e. a resource eligible for listing on the National Register of Historic Places.

ALTERNATIVE A

No historic properties are known exist within the project site and there is no potential for historic properties to occur within the APE as it was previously cleared down to bedrock. Paleontological resources may occur within the APE, as Pleistocene fossil deposits have been identified within similar rock formations nearby. However, with implementation of appropriate mitigation measures, adverse effects to paleontological resources would be reduced to less-than-significant.

ALTERNATIVE B

Under the No-Action Alternative the site would remain undeveloped. No mitigation required.

3.5.5 MITIGATION MEASURES

- Halt work within 50 feet of the find, retain a qualified paleontologist to assess significance. If the find is determined to be significant, determine the appropriate course of action, including recovery, analysis, curation, and reporting according to current professional standards.

3.6 SOCIOECONOMIC CONDITIONS / ENVIRONMENTAL JUSTICE

3.6.1 TRINIDAD, HUMBOLDT COUNTY

The City's population is approximately 0.0026 percent of the population of the County and approximately 0.000009 percent of California's population. Over the next 20 years, the County is expected to grow from approximately 135,727 to approximately 140,513 individuals (Caltrans, 2015). The Trinidad unemployment rate is 2.5 percent, as compared to the County and State unemployment rate of 5.3 percent (U.S. Census, 2015; EDD, 2016a; EDD, 2016b; EDD, 2015.

Statistics for the Tribe were obtained from the BIA's American Indian Population and Labor Force Estimate Report (2014). Approximately 68 of the 102 enrolled Tribal members, ages 16 through 64, are classified as the labor work force.

3.6.2 ENVIRONMENTAL JUSTICE FOR MINORITY AND LOW INCOME POPULATIONS

The City is located within the census block group 060230102002 with a population of approximately 650 people. The total population that is reported as "low income" is approximately 30 percent (approximately 195 people), which is approximately 5 percent lower than the State estimation of low-income population (USEPA, 2016).

Approximately 18.4 percent of Humboldt County is classified as minority, including Hispanic, Asian, Black, Pacific Islander and American Indian, who make up approximately 5.74 percent of the population (including members of the Tribe) (California Department of Finance, 2016).

3.6.3 IMPACTS TO SOCIOECONOMICS/ENVIRONMENTAL JUSTICE

Implementation of the Proposed Project would result in significant effects to the socioeconomic and environmental justice settings of the region if it would reduce the ability of the local populace to obtain basic public health and safety services through loss of economic revenues or result in disproportionate and significant effects to an identified minority or low-income community.

ALTERNATIVE A

The Proposed Project would provide important socioeconomic benefits to the Tribe, including an augmented revenue source, new jobs, and would provide the Tribe with additional amenities within its Reservation. The project site is currently held in trust for the Tribe and therefore there would be no loss in property taxes that could affect public services. In addition, the area currently has a shortage of lodging; therefore, the addition of the proposed Hotel would bring additional tax revenue, assuming patrons would also visit nearby amenities. No mitigation required.

No adverse health or environmental impacts to low-income and minority populations would occur as a result of the Proposed Project; instead, the effect on low-income and minority populations would be beneficial. Alternative A would have no adverse effect with regards to environmental justice. No mitigation required.

ALTERNATIVE B

Under the No-Action Alternative the 0.4 acres would remain undeveloped. No mitigation required

3.6.4 MITIGATION MEASURES

No mitigation required.

3.7 TRANSPORTATION AND CIRCULATION

3.7.1 EXISTING TRAFFIC CONDITIONS

Hotel access and internal circulation would be provided by the existing Casino's access and internal roadways. A Traffic Impact Analysis (TIA) was completed to assess the impacts of the hotel on the regional transportation network (**Appendix I**). The TIA assessed 24-hour traffic counts and turning movement counts during the peak hour at the following roads and intersections within the study area:

Roadways:

- Patrick's Point Drive
- Main Street
- US 101 Exit 728 Ramps
- N Westhaven Drive
- S Westhaven Drive
- Trinidad Frontage Road
- Trinidad Scenic Drive
- Cher-Ae Lane

Intersections:

- Site #1 – Patrick's Point Drive / Scenic Drive / Main Street
- Site #2 – US101 Exit 728 Southbound Off-On Ramps / Main Street
- Site #3 - US101 Exit 728 Northbound Off-On Ramps / S Westhaven Drive
- Site #4 – US101 Exit 728 Northbound Off Ramp / Trinidad Frontage Road / N Westhaven Drive
- Site #5 – Scenic Drive / Cher-Ae Lane
- Site #6 – Scenic Drive / S Westhaven Drive
- Site #7 – US101 Exit 726A Northbound Off Ramp / S Westhaven Drive

Per Caltrans recommended analysis procedures this study will analyze and evaluate four (4) scenarios:

- Existing Conditions (current year)
- Forecast 1 - Existing Conditions with Development Slated for 2019.
- Forecast 2 – 20 Year Projection to 2039 with No Development
- Forecast 3 – 20 Year Projection to 2039 with Development

Forecasts 2 and 3 are addressed in **Section 4.0**.

Past traffic analysis, reports, roadway safety audits, and other studies prepared by the Cher-Ae Heights Indian Community of the Trinidad Rancheria demonstrates that Scenic Drive and the overall supporting transportation network is in functional condition. The TIA determined the following turning movement LOS ratings for the intersections:

- Site #1
  - AM Peak Hour 2019: Eastbound, LOS C; Westbound, LOS A; Northbound, LOS C; Southbound, LOS B
  - PM Peak Hour 2019: Eastbound, LOS C; Westbound, LOS A; Northbound, LOS C; Southbound, LOS E
- Site #2
  - AM Peak Hour 2019: Eastbound, LOS A; Westbound, LOS A; Northbound, NA; Southbound, LOS B

  - PM Peak Hour 2019: Eastbound, LOS A; Westbound, LOS A; Northbound, NA; Southbound, LOS B
- Site #3
  - AM Peak Hour 2019: Eastbound, LOS A; Westbound, LOS A; Northbound, NA; Southbound, NA
  - PM Peak Hour 2019: Eastbound, LOS A; Westbound, LOS A; Northbound, NA; Southbound, NA
- Site #4
  - AM Peak Hour 2019: Eastbound, LOS A; Westbound, LOS A; Northbound, LOS B; Southbound, LOS C
  - PM Peak Hour 2019: Eastbound, LOS A; Westbound, LOS A; Northbound, LOS C; Southbound, LOS B
- Site #5
  - AM Peak Hour 2019: Eastbound, NA; Westbound, LOS A; Northbound, LOS A; Southbound, LOS A
  - PM Peak Hour 2019: Eastbound, NA; Westbound, LOS B; Northbound, LOS A; Southbound, LOS A
- Site #6
  - AM Peak Hour 2019: Eastbound, NA; Westbound, LOS A; Northbound, LOS A; Southbound, LOS A
  - PM Peak Hour 2019: Eastbound, NA; Westbound, LOS A; Northbound, LOS A; Southbound, LOS A
- Site #7
  - AM Peak Hour 2019: Eastbound, LOS A; Westbound, LOS A; Northbound, LOS A; Southbound, NA
  - PM Peak Hour 2019: Eastbound, LOS A; Westbound, LOS A; Northbound, LOS A; Southbound, NA

Currently, all sites have a LOS rating of C or better with the exception of Site #1; the PM peak hour LOS rating for southbound traffic is E.

3.7.2 IMPACTS TO TRANSPORTATION AND CIRCULATION

ALTERNATIVE A

Implementation of the Proposed Project would result in significant effects to the transportation and circulation network if daily traffic generated by the Proposed Project would result in an exceedance of LOS C, in accordance with the significance criteria provided in the County General Plan, or result in a substantial increase in the use of public transportation requiring additional infrastructure or vehicles.

Utilizing the Institute of Traffic Engineers (ITE) Trip Generation Manuals, 10th Edition, Volumes 1-3, the TIA concluded that the proposed 100-Room Hotel will generate an estimated 836 trips per day, of which 60 of those trips would occur during the PM Peak Hour of traffic. The detailed analysis and land use break down is provided on the Trip Generation Table. Total Trips Generated is the total number of vehicle trips to and from the new development in a typical weekday. The TIA identified several notable findings in relation to both the existing and the proposed traffic patterns and conditions. Primarily, the Trinidad Rancheria Hotel has little to no impact on the existing transportation network and traffic patterns with the exception of Main Street/Scenic Drive/Patrick's Point Drive (Site #1):

a. The Level of Service for the intersection is already operating in relatively poor condition with LOS ratings: "C, A ,C, E" from a two-way-stop-control analysis, and "C, C, B, B" from an all-way-stop-control analysis
b. The Level of Service for the intersection is minimally impacted by the proposed hotel development: the two-way-stop-control analysis identifies the Southbound LOS reduces from an "E" already poor rating, to an "F" poor rating, and all-way-stop-control analysis identifies the Southbound LOS reduced from a "C" average but acceptable to a "D" below average rating.

No other intersections or roadways show any reduced state of operation due to the proposed Hotel development.

Currently, no public transit systems serve the project site. Due to the lack of nearby bus or train stops, public transportation would not be utilized as a source of transportation for the Proposed Project. Therefore, implementation of Alternative A would not result in a significant effect to public transportation and no new facilities or vehicles would be required to meet the needs of Alternative A.

ALTERNATIVE B

Under the No-Action Alternative, there would be no increase in vehicular traffic from construction or operation on area roadways. No mitigation required.

3.8 LAND USE

The project site and property is characterized by developed paved areas adjacent to the existing Casino and within the existing Reservation. Surrounding land uses vary from recreational trails to the west to residential on the north and southeast/east. HWY-101 is to the north/northeast. Surrounding land use designations are typical of a rural coastal community. The Reservation is not under the jurisdiction of the City's, County's, or State's land use designations.

3.8.1 IMPACTS TO LAND USE

ALTERNATIVE A

Significant effects to land use would occur if Alternative A would be incompatible with land uses of adjacent properties in such a manner that would impede local and regional planning efforts or result in land use conflicts that would impede neighboring land use. However, Alternative A would be compatible with the mixed land use surrounding the project site, including the adjacent Casino. As the property lacks a zoning classification by local jurisdictions but is designated as commercial land use by the Tribe, effects to land use would be less than significant.

While the project site is located within a Coastal Zone, the Proposed Project is excluded from the Coastal Zone Management Plan (CZMA) as it would be developed on land held in trust by the federal government. Therefore, the Proposed Project is not required to be developed in accordance with the Local Coastal Plan or the CZMA. Furthermore, the development of the proposed Hotel is consistent with the adjacent land use of the existing Casino.

ALTERNATIVE B

Under the No-Action Alternative, there would be no change in land use. No mitigation required.

3.8.3 LAND USE MITIGATION MEASURES

No changes to land use would occur as a result of the Proposed Project. No mitigation required.

3.9 AGRICULTURE

The project site is not used for agricultural operations and does not provide adequate acreage for crop development or cattle grazing. The project site is not under an active Williamson Act Contract (CDOC, 2017b), and the Proposed Project will not convert any farmland.

3.8.3 IMPACTS TO AGRICULTURE

ALTERNATIVE A

Significant effects to agriculture would occur if the Proposed Project would result in the conversion of agricultural lands designated as prime farmland, farmland of statewide importance, or farmland of local importance or impede local and regional planning efforts to protect agricultural lands, however no agricultural land conversion will result from implementation of Alternative A.

ALTERNATIVE B

Under the No-Action Alternative, the Hotel would not be built. No mitigation required.

3.9.4 MITIGATION MEASURES

No agriculture occurs on or within the immediate vicinity of the project site. No mitigation required.

3.10 PUBLIC SERVICES

3.10.1 WATER SUPPLY

The City operates the water treatment facility, which serves the City and surrounding unincorporated areas, including the Proposed Project site. This facility is located at 1313 Westhaven Drive North, Trinidad, CA. The City has permits to use approximately 355,392 gpd of water. However, they are currently only using a maximum of 85,289 gpd (averaged between 2013 and 2018;GHD, 2019). According to the 2019 study, the water treatment plant has a maximum production capacity of 113,400 gpd November through April, 126,000 gallons per day May through June, and 138,600 gallons per day July through October. Based on 2013 through 2018 data, the month of June has the smallest surplus production capacity at 48,578 (potential production rate minus average demand).

3.10.2 WASTEWATER SERVICE

As described in **Section 2.2.1**, the existing Casino is served by the Tribe's WWTF and associated leach fields.

3.10.3 SOLID WASTE

Humboldt Sanitation, a private contractor based in McKinleyville, provides solid waste disposal services to the Rancheria and associated properties. Humboldt Sanitation also operates Humboldt Recycling, which serves the City's recycling needs. Waste is collected and stored at the Humboldt Sanitation Company transfer station in McKinleyville and then transferred to the Anderson Landfill in Redding, California. The transfer station has a permitted capacity of 100 tons per day (tpd) and there are no

enforcement actions against the facility operation. Anderson Landfill has a maximum permitted capacity of 1,850 tpd and with a remaining capacity of over 11 million cubic yards (as of March 2008) with an expected closure date of 2055 (CalRecycle, 2016). Unsuccessful attempts were made to contact both the McKinleyville transfer station and Anderson Landfill to determine daily capacities. However, there is no indication that capacities have been exceeded.

3.10.4 ELECTRICITY, NATURAL GAS, AND TELECOMMUNICATIONS

PG&E supplies electricity to existing homes and businesses in the project site. American Telephone and Telegraph (AT&T) provides telephone service and would be responsible for any underground or overhead extensions necessary to serve the project site. Internet and cable TV is available to the project site from Suddenlink Communications and through various satellite television services. There are no known issues with the electricity, natural gas, and telecommunication services that would Hotel construction.

3.10.5 LAW ENFORCEMENT

In 2010, the City transferred law enforcement responsibilities to the County Sheriff. The County Sheriff's Department provides law enforcement services throughout the County and includes Administrative, Operations, and Corrections divisions. The Sheriff's Office also includes a Special Enforcement Team, boating unit, SWAT, and a drug enforcement unit. The County Sheriff's Department provides primary law enforcement, while the California Highway Patrol (CHP) provides traffic and supplemental law enforcement services to the project site. The County Correctional Facility is the detention facility for persons arrested in unincorporated areas, including the project site. The expected response times for this portion of the County are estimated at approximately 1 to 15 minutes. The Sheriff's Office is staffed by 61 sworn deputies, 45 of which are assigned to patrol, and approximately 217 total staff (Cavinta, 2015). There are approximately 38 patrol vehicles, plus specialized vehicles such as 4x4s and other off-road vehicles used in drug enforcement activities.

The County Sheriff's Office has stations in Eureka, Garberville, McKinleyville, and Hoopa. The Main Station is located in Eureka and serves the project site; that station is comprised of two Lieutenants, four Sergeants, six Corporals, and 21 Deputy Sheriffs. Per an agreement between the County Sheriff's Office and the Tribe, the Tribe provides funding for a deputy to patrol and provide law enforcement services in the vicinity of the Rancheria (Cavinta, 2015).

3.10.6 FIRE PROTECTION AND EMERGENCY MEDICAL

The Trinidad Volunteer Fire Department provides fire suppression and emergency medical services to the areas within the City limits with two fire stations located within approximately 9.9 square miles of the Trinidad Planning Area (City of Trinidad, 2012). The closest station is located at 409 Trinity Street in Trinidad, California, which is staffed by 29 volunteers, and therefore is not staffed on a regular basis. The second station is located to south of the project site in Westhaven, at 446 6th Avenue. All staff are trained as first responders or emergency medical technicians and the Trinidad Volunteer Fire Department regularly responds to medical emergency calls. Typically, the Trinidad Volunteer Fire Department responds to approximately 50 calls per year (City of Trinidad, 2015).

The Trinidad Volunteer Fire Department also has mutual aid agreements with the California Department of Forestry and Fire Protection (CalFire). Although CalFire aids local fire departments in wildfire situations, the project site is not located within a State Responsibility Area, as mapped by CalFire

(CalFire, 2013). The project site is located in high fire hazard area within a Local Responsibility Area (CalFire, 2013), where CalFire does not have responsibility to provide wildland fire protection services.

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 (North Coast EMS, 2016). Ambulance and emergency medical services are dispatched through 911 and are provided by several companies on a rotating basis. The nearest hospital emergency room is Mad River Community Hospital located at 3800 Janes Road in Arcata, California. Emergency calls are routed through the Sheriff's Office and CHP to the respective fire departments. Response times to the project site are approximately 3 to 4.5 minutes, although this depends on available resources.

3.10.7 IMPACTS TO PUBLIC SERVICES

ALTERNATIVE A

Water Supply

Under the preferred option, Alternative A would obtain water through existing connections to the City's domestic water supply as described in **Section 2.2.1**. The Proposed Project would use approximately four percent of the City's permitted available water allotment. With a minimum surplus production capacity of 48,578 gpd, the maximum water demand for the Proposed Project would account for 30 percent of this total. Accordingly, 34,349 gpd would be available to meet additional demands in the City. Accordingly, the City has the treatment capacity to meet the Proposed Project water demands and minimal new infrastructure would be required resulting in minimal physical impacts to the environment.

Wastewater Service

As discussed in **Section 2.2.1**, Alternative A would utilize the Tribes existing WWTP, requiring upgrades and an additional leach field. This upgrade would be solely on Tribal lands and would allow for the system to handle a total of approximately 50,000 gpd, enough capacity to accommodate operation of the new Hotel. Alternative A would have no impact on municipal wastewater systems.

Solid Waste

Potential solid waste streams from construction would include paper, wood, glass, aluminum, plastics from packing material, waste lumber, insulation, empty non-hazardous chemical containers, concrete, metal, and electrical wiring. Solid waste and recycling from construction and operation of the proposed Hotel would be collected by Humboldt Sanitation and would be transferred to the Anderson Landfill. Utilizing the most conservative daily solid waste generation rate published by CalRecycle (2016b), each hotel room is anticipated to generate approximately 0.002 tons per day (tpd) of solid waste, resulting in a total daily solid waste generation rate of approximately 0.2 tpd. Based on the maximum capacity at the Anderson Landfill, this small addition of solid waste and would not impact solid waste services or facilities.

Electricity, Natural Gas, and Telecommunications

Electrical and telephone infrastructure is already on the project site, and would not require new facilities or upgrades for the Hotel. If available, natural gas will be provided for gas-fired water heaters and kitchen equipment.

Law Enforcement

In accordance with Public Law (PL) 280, 18 USC §1162, the State of California and other local law enforcement agencies have criminal enforcement authority on tribal lands. The County Sheriff's Department would continue to provide law enforcement services to the project site. The incremental increase in patrons may result in a proportionate increase in crime, potentially requiring response by off-Reservation law enforcement agencies, however due to the relatively small size of the proposed Hotel, calls for service would not be disproportionate to the current number of calls for service at the Casino.

Fire Protection and Emergency Medical Services

Construction-related impacts include potential fire threats associated with equipment and vehicles coming into contact with wildland 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. Standard construction and operational measures have been incorporated into the project description to prevent fire caused by construction (**Appendix C**). With these measures, effects would be less than significant.

Increased emergency calls to 911 as a result of the Proposed Project would not result in delays to response times or the need for ambulances to be dispatched from more distant locations. Several ambulance companies provide services in the vicinity of the City; therefore it is not expected that increased demand for emergency medical services would create a significant effect. No new off-trust facilities or major renovation to any facilities would be required.

Alternative B

Under the No Action Alternative, the Hotel would not be developed. No mitigation required.

3.10.8 MITIGATION MEASURES

No adverse impacts to public services would occur as a result of the Proposed Project. No mitigation is required for the Proposed Project.

3.11 NOISE

3.11.1 SENSITIVE RECEPTORS

The project site is surrounded by rural residential areas to the south and west, with Tribal buildings and the Casino directly adjacent. A single-family rural residence, located on-Reservation approximately 75 feet south of the project site, is the nearest sensitive noise receptor. The nearest off-Reservation sensitive receptor is a single-family rural residence approximately 165 feet east of the project site. The nearest school, Trinidad Elementary School, is located approximately 0.9 miles north of the project site. With the exception of special status species, discussed in **Section 3.4**, there are no other noise sensitive receptors in the vicinity of the project site.

3.11.2 EXISTING NOISE SOURCES

The noise environment surrounding the project site is influenced primarily by vehicle, highway, and tide-generated noise. Noise levels are increased during parts of the year when local fishery seasons open (e.g. salmon, Dungeness crab, etc.) and during popular tourist months.

3.11.3 IMPACTS TO AMBIENT NOISE

A significant effect would occur if project-related noise sources would cause an exceedance of the U.S. Department of Housing and Urban Development's day-night equivalent (Leq) threshold of 65 decibels A-weighted (dBA) at the nearest sensitive receptor during construction or operation (HUD, 2016).

ALTERNATIVE A

Construction Noise

Site preparation and grading associated with Alternative A would temporarily generate noise above background noise levels. The closest sensitive receptor that would be exposed to noise during project construction is a single family rural residence approximately 75 feet south of the project site. Impacts to the residence are not considered in this analysis because it is on-Reservation and the Tribe would handle the noise issues internally. The nearest off-Reservation sensitive receptor is a residence located approximately 165 feet east of the project site. Construction noise levels at and near the 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 truck routes, depending on the number of haul trips made and types of vehicles used. **Table 3.11-1** shows typical noise levels produced by various types of construction equipment.

TABLE 3.11-1
TYPICAL NOISE LEVELS FROM CONSTRUCTION EQUIPMENT

CONSTRUCTION EQUIPMENT	NOISE LEVEL (DBA, L_{EQ} AT 50 FEET)
Truck	88
Portable Air Compressor	81
Concrete Mixer (Truck)	85
Dozer	85
Paver	89
Generator	76
Backhoe	80
Source: FTA, 2006	

Sources of construction noise attenuate (lessen) at a rate of 6 dBA to 9 dBA per doubling of distance from the source, depending upon environmental conditions (i.e. atmospheric conditions and noise barriers, either vegetative or manufactured, etc.) (FTA, 2006). An attenuation factor of 8.0 dBA per doubling of distance is appropriate given the undulating topography and obstructing vegetation in the vicinity of the project site. Based on **Table 3.11-1**, the maximum projected construction noise level on the project site would be approximately 89 dBA. This is a conservative maximum noise level based on the assumption that louder equipment (pavers) could potentially be used daily. However, not all equipment would be used simultaneously and not all equipment would be used on a daily basis. Thus, the actual noise level would be lower than calculated.

Using an attenuation factor of 8.0 dBA Leq per doubling of distance, maximum average sound levels at nearby sensitive receptors (approximately 165 feet east of construction activity) would be approximately 77 dBA Leq, which is less than the FHWA threshold of 78 DBA Leq. This level is higher than the

County threshold of 50 dBA Leq for commercial land use noise, however construction noise is exempt from County noise requirements (County of Humboldt, 2012b).

Operational Noise

The level of traffic noise depends on three factors: (1) the volume of the traffic, (2) the speed of the traffic, and (3) the number of trucks in the flow of the traffic. It is not anticipated that traffic speed or the mix of trucks in project-area traffic would change during the operational phase; however, implementation of Alternative A would increase traffic volumes. In accordance with the City's General Plan Draft Noise and Safety Element, the primary source of noise in the project area is traffic on U.S. Highway 101 (HWY-101). The ambient noise level in the vicinity of the Subject Property is approximately 65 dBA Leq, as stated in the 2013 Caltrans Technical Noise Supplement for typical commercial area noise levels (Caltrans, 2013).

The existing traffic volume on HWY-101 is approximately 10,600 vehicles per day (vpd) and Alternative A would add approximately 669 additional vpd to the existing traffic volume, which would result in an ambient noise level increase of approximately 0.27 dBA Leq (**Appendix G**). The increase in traffic on HWY-101 under Alternative A would increase the ambient noise level in the vicinity of the project to approximately 65.27 dBA, Leq, which is below the federal noise abatement criterion of 67 dBA Leq. Therefore, Alternative A would not result in significant adverse impacts associated with traffic noise levels for sensitive receptors located in the vicinity of HWY-101.

Parking lot noise due to vehicles is limited by low vehicle speeds and as a result is not expected to represent a significant source of noise. Human activity in parking lots can also produce noise, including talking, yelling, and opening and closing of car doors and trunk lids. Such activities can occur any time and frequently occur in the evening. It is typical for a passing car in a parking lot to produce a maximum noise level of 60– 65 dBA at a distance of 50 feet, which is comparable to the level of a raised voice. This would not result in significant adverse impacts as maximum parking lot noise levels would be below the federal abatement criterion.

ALTERNATIVE B

Under the No-Action Alternative, the project site would remain undeveloped. No mitigation required.

3.11.4 MITIGATION MEASURES

The following mitigation measures shall be implemented to further reduce impacts from noise during construction:

- Construction activities shall only occur between the hours of 7:00 AM to 6:00 PM Monday through Friday and 9:00 AM to 5:00 PM on Saturday. No construction activities shall occur on any Sunday.
- Where feasible, stationary construction equipment shall be located on the northern portion of the project site.
- All construction equipment over 50 horsepower shall be equipped with noise-reducing mufflers.

3.12 HAZARDOUS MATERIALS

3.12.1 HAZARDOUS MATERIALS MANAGEMENT

Operation of the existing Casino involves a minimal amount of hazardous materials and the Hotel is expected to use similar products. Potentially hazardous materials that may be used and stored at the Hotel include paints, polishes, cleaning products, oils, and detergents. Even when hazardous materials are properly stored and disposed of, there is potential for an accidental spill to occur.

3.12.2 PHASE I ENVIRONMENTAL SITE ASSESSMENT

In December 2015, AES conducted a records search of hazardous material incidents for a nearby Phase I Environmental Site Assessment (Phase I ESA) at Trinidad Harbor (AES, 2015). The proposed Hotel is located within the area analyzed during that Phase I ESA, which identified several listings within a 1.0-mile radius of the Proposed Project site.

- **888 Galindo Street**: two 500-gallon storage tanks containing diesel fuel
- **Private Residence**: heating fuel tank leak
- **807 Edwards Street**: active storage tank
- **806 Edwards Street**: two incidents with storage tank installation
- **570 Ewing Street**: hazardous materials generator
- **470 Oceans Avenue**: Citizens Mortuary
- **409 Trinity Street**: current NPDES permit
- **408 Wagner Street**: storage fuel tank
- **Trinidad Union School**: storage fuel tanks

No listings within the project site were identified. Additionally, a search of the SWRCB Geo Tracker website found three sites approximately 0.5 miles north of the project site (SWRCB, 2017):

- **Chevron Station #9-1728**: Case closed
- **Humboldt State University (Marine Lab)**: Case closed
- **Pacific Bell**: Case Closed

3.12.3 IMPACTS FROM HAZARDOUS MATERIALS

ALTERNATIVE A

During grading and construction, it is possible that hazardous materials, such as gasoline, diesel fuel, and hydraulic fluid, may be brought on site. Temporary aboveground storage tanks, as well as storage sheds/trailers, would likely be used by contractors for fueling and maintenance purposes. During handling and transfer from one container to another, the potential for an accidental release exists. Depending on the relative hazard of the material, if a spill of significant quantity were to occur, the accidental release could pose as a hazard to construction employees, as well as the environment.

No environmental concerns were identified on or in the immediate vicinity of the project site that would likely pose an adverse effect to the environmental integrity of the project site. Development of the Proposed Project would not result in exposing employees or the public to existing hazardous materials conditions.

Alternative B
Under the No-Action Alternative, the Hotel would not be developed. No mitigation required.

3.12.4 MITIGATION MEASURES
No adverse effects from hazardous materials would result from the Proposed Project with the incorporation of the BMPs listed in **Appendix C**. No mitigation required.

3.13 VISUAL RESOURCES

3.13.1 EXISTING ENVIRONMENT
The development footprint is located on a paved parking lot adjacent to the existing Casino. Standing at six stories, the height of the proposed Hotel will be significantly taller than the existing Casino (**Figure 2-2**). Visual characteristics of the project site are typical of coastal rural-residential forested areas in the County. The Proposed Project vicinity is relatively undeveloped and features redwood trees and a variety of coastal vegetation. Views of the as-yet undeveloped site are blocked by trees to the south and west and by the existing Casino to the north and east. The project site is not visible from HWY-101 due to the tall forest lining the highway, but the site is visible from Trinidad Head, a California Historical Landmark.

3.13.2 IMPACTS TO VISUAL RESOURCES
ALTERNATIVE A
The proposed Hotel would impact the overall coastal aesthetics of the project site. Mitigation measures would require features to soften the visual impact and allow the proposed Hotel to blend into the scenery and adjacent existing Casino so that the Proposed Project would not result in any adverse effects to scenic resources. Residences to the east, west, and south may have views of the Proposed Project, but the Proposed Project would be adjacent to the existing Casino. Incorporation of mitigation measures in Section 3.13.1 would reduce effects to visual resources to less than significant.

Lighting from the proposed Hotel would be minimal. The Tribe would use downcast, bi-level dimming motion sensor external lighting, which would not alter the visual aesthetics of the area. Given the relatively small area proposed for development, the additional facilities would fill a small portion of the viewshed when compared to the expansive scenic resources in all directions (Camel Rock, Trinidad Head, Trinidad Bay, beaches, and associated costal bluffs). Incorporation of mitigation measures in Section 3.13.1 would reduce effects to visual resources to less than significant.

Alternative B
Under the No-Action Alternative, the project site would not be developed. No mitigation required.

3.13.3 MITIGATION
- Design elements shall be incorporated into the Proposed Project to minimize visual impacts of buildings and associated structures, including landscaping that compliments buildings and parking areas, with setbacks and vegetation consistent with existing landscaping. Earth-toned paints and coatings shall be used, all exterior glass shall be non-reflective and low-glare, and signs and facades shall be designed with a non-reflective backing to decrease reflectivity.

SECTION 4.0

CUMULATIVE AND GROWTH-INDUCING EFFECTS

Cumulative impacts are defined by CEQ as effects "on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions" (40 CFR Section 1508.7). No major development projects are proposed and/or are currently being constructed in the region surrounding the Tribe's lands (OPR, 2017). However, buildout of the City's Draft General Plan would result in commercial buildout along the west side of HWY-101 (City of Trinidad, 2009). Additionally, buildout of the Tribe's Comprehensive Economic Development Strategy (Master Plan) would result in development of tribal enterprises and supporting infrastructure on the Tribal lands near the existing Casino and proposed Hotel (Tribe, 2013).

The cumulative impact analysis within this EA considered the construction of the projects described above and conservatively assumes an approximately 1.3 percent annual growth rate (**Appendix G**), along with the full implementation of the Tribe's Master Plan. Cumulative impacts for each environmental issue area are discussed below. The time frame for the cumulative effects analysis generally extends to 2032; the County of Humboldt's planning horizon year (County of Humboldt, 2012b).

Some actions, which result in individually insignificant impacts, may have significant impacts when cumulative, synergistic, or additive effects are considered. The significance of these effects is particularly evident when impacts pass a threshold, such as causing a jeopardy opinion with regard to endangered species or a nonconformity determination under the CAA.

Growth itself is very perceptible and is sometimes regarded by the public as both adverse and an impact. Generally, growth is simply a part of the cumulative environment, rather than an effect or result. However, a shift to unplanned and unregulated growth could be a significant impact. The effects of potential cumulative projects, analyzed in conjunction with the Proposed Project, are presented below.

4.1 CUMULATIVE EFFECTS

4.1.1 LAND RESOURCES

The principal effects to land resources associated with any future development in the vicinity of the project site would include localized topographical changes and soil attrition, but as the site has already been graded and paved, this effect is minimal. The Proposed Project and other projects in the area would be required to implement measures consistent with local permitting requirements for construction to address any regional geotechnical, seismic, or mining hazards. Therefore, there are no cumulatively considerable land resources impacts associated with the Proposed Project.

No development or changes in land use are proposed under Alternative B, the No-Action Alternative. Accordingly, no land resources would be affected and no cumulatively considerable adverse effects would result from the implementation of Alternative B.

4.1.2 WATER RESOURCES

As discussed in **Section 3.2.1**, under the preferred water option, there is adequate supply of surface water from Luffenholtz Creek to serve additional projects in the region; therefore, there is no cumulative impact associated with groundwater availability. Cumulative impacts to water quality could occur if individual projects degrade water quality as a result of stormwater and point-source discharges. However, projects that may be constructed in the vicinity of the Proposed Project are required to comply with the CWA as it relates to stormwater and point-source discharges. Therefore, there are no cumulatively considerable water resource impacts associated with the Proposed Project.

GROUNDWATER OPTION

If the Tribe selects to utilize groundwater as the main potable water source, impacts would be negligible as indicated by the analysis presented in **Section 3.2.4.** As discussed there within, impacts from the potential groundwater wells would be minimal as the resulting basin recharge rate would be 1,200 percent greater than the water demand for the Proposed Project. Furthermore, impacts from well pumping would be limited to a maximum of 50 feet which would not be a cumulatively considerable impact.

ALTERNATIVE B

No development or changes in land use are proposed under Alternative B, the No-Action Alternative. Accordingly, no water resources would be affected and no cumulatively considerable adverse effects would result from the implementation of Alternative B.

4.1.3 AIR QUALITY

AIR QUALITY

The NCAB is either currently designated as attainment or maintenance for all CAPs, and therefore is currently meeting the attainment standards for all criteria pollutants established by the USEPA. Any future development in the vicinity of the Proposed Project would be subject to state and federal regulations. Furthermore, mobile sources such as passenger cars would become the main source of CAP emissions from foreseeable development as a result of increased trips to the hotel. Although vehicle miles traveled (VMT) may increase, technology advancements resulting in an increase in fuel efficiency will, on average, result in a decrease of mobile source emissions. Therefore, no cumulatively considerable adverse impacts to air quality are anticipated.

CLIMATE CHANGE AND GREENHOUSE GAS EMISSIONS

Worldwide GHG emissions are likely to increase as a result of increased global development. However, annual emissions from the Proposed Project are estimated to be approximately four percent less in 2040 than in 2020 as a result of increased fuel efficiency and therefore would not result in a cumulatively considerable additions to GHG emissions.

No development or changes in land use are proposed under Alternative B, the No-Action Alternative. Accordingly, there would be no air quality changes and no greenhouse gasses would be generated. Therefore, no cumulatively considerable adverse effects would result from the implementation of Alternative B.

4.1.4 BIOLOGICAL RESOURCES

Potential cumulative effects to biological resources on the project site will be reduced to a less-than-significant level through incorporation of the mitigation measures discussed in **Section 3.4.5**. Similarly, all other development in the area affecting these resources is limited in scope by land use restrictions within the local coastal plan for the coastal zone and City zoning ordinance. Therefore, there are no cumulatively considerable biological resources impacts associated with the Proposed Project.

No development or changes in land use are proposed under Alternative B, the No-Action Alternative. Accordingly, no biological resources would be affected and no cumulatively considerable adverse effects would result from the implementation of Alternative B.

4.1.5 CULTURAL RESOURCES

Grading and development have eliminated the potential for cultural resources on site, however paleontological resources may be encountered. Protection measures for impacts to paleontological resources have been included in **Section 3.5.5**. Similarly, all other development in the area affecting these resources must adhere to similar protections for paleontological resources. Therefore, there are no cumulatively considerable cultural resources impacts associated with the Proposed Project.

No development or changes in land use are proposed under Alternative B, the No-Action Alternative. Accordingly, no cultural or paleontological resources would be affected and no cumulatively considerable adverse effects would result from the implementation of Alternative B.

4.1.6 SOCIOECONOMIC CONDITIONS / ENVIRONMENTAL JUSTICE

Cumulative socioeconomic effects could occur in the project area as the result of developments that affect the lifestyle and economic well-being of residents. The Proposed Project would introduce new economic activity in the County and in the City. This would be a beneficial effect to the region and the Tribe on several different socioeconomic levels. These effects would occur as the region's economic and demographic characteristics change. However, these cumulative effects would not be significant in comparison with existing economic conditions in the region. Planning documents for the County and the City will continue to designate land uses for businesses, industry, and housing, as well as plan public services for anticipated growth in the region. Specific potential cumulative effects include increases to regional and tribal employment, as well as the local economy.

The Proposed Project is not anticipated to result in an adverse environmental justice impacts. As Alternative A would benefit a minority group (the Tribe), the environmental justice impacts would be positive rather than adverse.

No development or changes in land use are proposed under Alternative B, the No-Action Alternative. Accordingly, there would be no changes in local socioeconomic conditions and no cumulatively considerable adverse effects would result from the implementation of Alternative B.

4.1.7 TRANSPORTATION AND CIRCULATION

The 20 year projected LOS analysis to 2039 in the TIA assumed a 2.0 percent per year traffic growth rate and no significant regional developments. Overall, the results indicated that area transportation improvements not related to Alternative A are needed to improve, or at a minimum, maintain the existing functionality of the transportation network:

1. Main Street/Scenic Drive/ Patrick's Point Drive (Site #1) will be operating in failing condition in the year 2039, regardless of development, if no improvements are made.
2. N Westhaven Drive/Trinidad Frontage Road/US101 northbound Off Ramp (Site #4) will be operating in failing condition in the year 2039, regardless of development, if no improvements are made.

All other intersections and roadways analyzed in this report, if maintained to their current condition, adequately serve the area from a LOS analysis perspective.

In order to maintain a LOS of acceptable levels, a new interchange located approximately 0.7 mile south of the Main Street interchange is proposed as part of the Master Plan to provide direct access to the Rancheria and Westhaven Drive and is incorporated in the Cumulative context as mitigation for Alternative A.

With the proposed Cher-Ae Lane Interchange incorporated into the Master Plan, the study intersections and interchanges would not exceed the target threshold of LOS C with the addition of traffic generated by Alternative A in the cumulative 2039 projection. Therefore, Alternative A in the cumulative 2039 projection would not have a significant adverse impact on the transportation network in the vicinity of the project site. The Proposed Project would not noticeably increase ridership on County bus and transit service; therefore, an adverse cumulative effect to public transit would not occur.

No development or changes in land use are proposed under Alternative B, the No-Action Alternative. Accordingly, no increased demands would be placed on the transportation system and no cumulatively considerable adverse effects would result from the implementation of Alternative B.

MITIGATION MEASURES

- Construct the Cher-Ae Lane interchange off of HWY 101 to provide direct access to the Rancheria and Westhaven Drive.

4.1.8 LAND USE

The project site is held in federal trust by the BIA, therefore, the project site would not be subject to state or local land use jurisdiction. While the project site is located within the Coastal Zone, the site is considered excluded from the Coastal Zone as that phrase is defined in the CZMA, as it is on land held in trust by the federal government. Therefore, the Proposed Project is not required to be developed in accordance with the Local Coastal Program. However, for the BIA to issue a loan guarantee for this project, the project is required to be consistent to the maximum extent practicable with the enforceable policies of the California Coastal Management Program (CCMP) under the CZMA. The type of land use for the proposed Hotel is consistent with the adjacent land use of the existing Casino. The Tribe's Master Plan governs growth and the proposed Hotel is included as a component of the Master Plan. Therefore, there are no cumulatively considerable land use impacts associated with the Proposed Project.

No development or changes in land use are proposed under Alternative B, the No-Action Alternative. Accordingly, no cumulatively considerable adverse effects would result from the implementation of Alternative B.

4.1.9 AGRICULTURE

The Proposed Project would not remove any agricultural lands or resources, as none exist on the project site or adjacent to the project site. The project site is not under the Williamson Act contracts, nor does the site provide adequate acreage for crop development or cattle grazing or have history of agricultural uses. None of the features of the Tribe's Master Plan would result in loss of agricultural lands. Therefore, there are no cumulatively considerable agricultural impacts associated with the Proposed Project.

No development or changes in land use are proposed under Alternative B, the No-Action Alternative. Accordingly, no agricultural lands would be affected and no cumulatively considerable adverse effects would result from the implementation of Alternative B.

4.1.10 PUBLIC SERVICES

The Proposed Project would utilize the existing on-site wastewater systems, thus there would be no cumulatively considerable impacts to this municipal service. All other public services would be accommodated by existing and planned public services. As development of the surrounding area continues, the combined need for public services may create a cumulative impact. However, all future land uses in the region will be subject to approval by local governments or the Tribe under the Master Plan. Should future infrastructure improvements be required, the Tribe and associated agencies would be responsible for mitigating all identified impacts. Therefore, there are no cumulatively considerable public services impacts associated with the Proposed Project.

No development or changes in land use are proposed under Alternative B, the No-Action Alternative. Accordingly, no new public services demands would be created and no cumulatively considerable adverse effects would result from the implementation of Alternative B.

4.1.11 NOISE

Generally, noise increases as areas are developed. Therefore, the cumulative conditions under Alternative A would increase noise levels through increased traffic and operational activities. Using the growth rate of approximately 1.3 percent per year from the TIA, traffic volumes on HWY-101 would be approximately 13,356 vehicles per day. With the addition of project traffic to HWY-101, traffic volumes on HWY-101 would increase to approximately 14,025 vehicles per day. Therefore, in the cumulative 2040 year, the ambient noise level would increase by approximately 0.21 dBA, Leq. With the addition of cumulative traffic volume, the ambient noise level would be approximately 65.48 dBA, Leq, which is less than the federal noise abatement criterion of 67 dBA Leq. Therefore, the Proposed Project would not result in a cumulatively significant adverse impacts associated with traffic noise levels for sensitive receptors located in the vicinity of HWY-101. It is not anticipated that parking lot noise due to vehicles or human activity would change over the buildout year conditions. This would not result in cumulatively significant adverse noise impact, as maximum parking lot noise levels would be below the federal abatement criterion of 67 dBA, Leq. Therefore, there are no cumulatively considerable noise impacts associated with the Proposed Project.

No development or changes in land use are proposed under Alternative B, the No-Action Alternative. Accordingly, no new noise sources would be generated and no cumulatively considerable adverse effects would result from the implementation of Alternative B.

4.1.12 HAZARDOUS MATERIALS

Any new development in the area would be required to adhere to State and municipal regulations in the delivery, handling, and storage of hazardous materials, thereby reducing the risk of accidental exposure to the public's health and welfare. Under the Master Plan, the Tribal Council is responsible for ensuring development does not result in the release of hazardous materials and would be required to follow all associated Federal and Tribal requirements for use, storage, and handling. Therefore, there are no cumulatively considerable hazardous materials impacts associated with the Proposed Project.

No development or changes in land use are proposed under Alternative B, the No-Action Alternative. Accordingly, no new hazardous materials sources would be generated and no cumulatively considerable adverse effects would result from the implementation of Alternative B.

4.1.13 VISUAL RESOURCES

Cumulative development that takes place would be consistent with local land use regulations, including associated design guidelines and the Tribe's Master Plan. Cumulative effects would include a shift from undeveloped lots to views of developed areas, as well as an increase in the density of urban uses within the City and the Reservation. However, the development of the Proposed Project would be generally consistent with the visual goals of County and City land use regulations and implements the Tribe's Master Plan. Substantial development is located directly to the north of the project site, and the Proposed Project would be consistent with that development. Therefore, there are no cumulatively considerable visual resources impacts associated with the Proposed Project.

No development or changes in land use are proposed under Alternative B, the No-Action Alternative. Accordingly, no new structures would be built and no cumulatively considerable adverse effects would result from the implementation of Alternative B.

4.2 INDIRECT AND GROWTH-INDUCING EFFECTS

Under NEPA, indirect and growth-inducing effects of a proposed project must be analyzed [40 CFR 1508.8(b)]. The CEQ Regulations define indirect effects as effects that are caused by the Proposed Action and are later in time or further removed in distance, but still reasonably foreseeable. Growth-inducing effects are defined as effects that foster economic or population growth, either directly or indirectly. Direct growth inducement could result, for example, if a project includes the construction of a new residential development. Indirect growth inducement could result if a project establishes substantial new permanent employment opportunities (e.g. new commercial, industrial, or governmental enterprises) or if it removes obstacles to population growth (e.g. expansion of a wastewater treatment plant to increase the service availability). This section focuses on the indirect and growth-inducing effects of Alternative A, the Proposed Project. With no change compared to existing conditions, Alternative B would not result in indirect or growth-inducing effects and is therefore not discussed further.

4.2.1 INDIRECT EFFECTS

Analyses of the adequacy of local resources, infrastructure, and services are included in the discussion of environmental consequences for each Project Alternative. No significant, unmitigatible impacts to resources have been identified that would result from the implementation of Alternative A.

Any utility upgrades would occur on infrastructure already located on Tribal lands, and would be limited to modifications of the WWTP. The remaining utilities are already located on site and local utility

providers have existing capacity to serve the project site. A significant number of new employees would not move to the community from out of the area; as such, no new housing, schools, or other facilities would be constructed as a result of development on the project site. There would be no change in off-site land use and no significant change in population density in the vicinity of the project site. No significant adverse indirect effects relevant to any environmental issue area would occur.

4.4.2 GROWTH-INDUCING EFFECTS

Growth inducement may constitute a significant effect if the increased growth is not consistent with or accommodated by the land use and growth management plans and policies for the area affected. Local land use plans provide for development patterns and growth policies allow for orderly development supported by adequate public services and utilities such as water supply, roadway infrastructure, sewer services, and solid waste disposal services. A project that would induce "disorderly" growth (i.e. would conflict with local land use plans) could indirectly cause adverse environmental or public service impacts.

The Proposed Project is projected to employ approximately 50 full-time and part-time employees currently living in the City or nearby cities. Although it is anticipated that the majority of the permanent employees would already reside locally, there is room for accommodation if relocation must occur. Therefore, the Proposed Project would not directly induce substantial population growth in the region of the project site.

Analyses of the adequacy of local infrastructure and services are included in the discussion of environmental consequences for each proposed Alternative. No significant, unmitigated impacts have been identified that would result from the Proposed Project. Utility infrastructure would not be improved or expanded to increase service availability to any areas surrounding the project site. Wastewater treatment would only serve Tribal development on the proposed trust property and there is adequate domestic water supply available. Therefore, growth-inducing impacts would be less than significant for the Proposed Project.

SECTION 5.0

CONSULTATION, COORDINATION, AND LIST OF PREPARERS

5.1 FEDERAL AGENCIES

Bureau of Indian Affairs (Lead Federal Agency)
Chad Broussard
Harold Hall

United States Department of Agriculture-Natural Resources Conservation Service

5.2 LOCAL GOVERNMENT

City of Trinidad Water District
Bryan Buckman

Humboldt County Sheriff's Department
George Cavinta

5.3 PREPARERS OF ENVIRONMENTAL ASSESSMENT

Analytical Environmental Services

Project Director:	David Zweig, P.E.
Project Manager:	Trent Wilson
Technical Staff	Charlane Gross
	Sam Schoevaars
	Glenn Mayfield
	Dana Hirschberg

SECTION 6.0

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APPENDICES

APPENDIX A

PRELIMINARY WASTEWATER FEASIBILITY REPORT

NORTHSTAR
... Designing Solutions

Civil Engineering
Architecture
Environmental
Planning
Surveying
Water Resources

September 29, 2016

Russ Wenham, P.E.
Omni Means
330 Hartnell Avenue
Suite B
Redding, CA 96002

RE: Preliminary Feasibility Report for Trinidad Rancheria Cher-Ae Heights Facility

Dear Russ,

Here is our Preliminary Feasibility Report for the Trinidad Rancheria Cher-Ae Heights Facility, one mile south of Trinidad in Humboldt County California.

This report is based on a site visit with Kenneth Smith, the current plant operator on Monday September 26, 2016 and a review of available documentation. Of particular value to the review was the document prepared by Winzler & Kelly *Trinidad Rancheria Phase 2 Community Wastewater Investigation – Wastewater Treatment, Disposal and Reuse Assessment, March 2004* (Assessment.) This document is an excellent tool for the Rancheria to use in their planning efforts going forward and was used as the basis of this current analysis. A copy of the document is attached for reference. The assumptions in the assessment are sound and have been updated as necessary to reflect current data and our professional opinion.

Facility Description

The Cher-Ae Heights area includes a residential area, the Cher-Ae Heights Casino (Casino), a former clinic complex (currently vacant) and the Tribal Office. In 2002, the Rancheria expanded the Cher-Ae Heights Casino, which includes the 200-seat restaurant and event center. A wastewater treatment plant serves the Casino and approximately 60% of the treated wastewater is recycled back into the Casino and used for toilet flushing. The remaining treated wastewater is dispersed back into the environment by means of a dispersal field (leachfield) located just south of the Tribal Office. The homes at Cher-Ae Heights, with two exceptions, are served by individual septic tanks and dispersal fields. The remaining two homes, the Tribal Office and the former clinic complex are served by septic tanks that flow by gravity or are pumped to the same dispersal field that services the Casino's tertiary treatment system. No secondary or tertiary treatment is provided to flows from these auxiliary facilities.

The Rancheria is proposing to add a 100 room hotel to the facility.

Wastewater Flow Analysis

In Table ES.1 of the Assessment, a prediction of facility wastewater flows was provided. This table projected potential future wastewater flows from the Casino, the Cher-Ae Heights community flows, and a potential new 200-room hotel and gas station/mini-mart. Given the marginal soil conditions in the area, the Assessment assumed capacity for homes not connected to the wastewater system would

be held in the design to address any failures of these systems in the future. Chapter 2 of the Assessment outlines an extensive evaluation of the individual septic systems. Given the conclusions from the evaluation and limited options for repair, we feel it is prudent to provide capacity for these systems in the community dispersal field evaluation and design.

Table 1 of this report shows the updated prediction of wastewater flows used in the analysis of the treatment and dispersal system assuming a 100 room hotel.

Area	Existing Average Flow (gal/day)	Potential Additional Future Average Flow (gal/day)	Total Average Flow (gal/day)
Existing Community Wastewater Flows	0	4,560[1]	4,560
Casino[2]	7,200	7,800	15,000
100 Room Hotel	0	10,000	10,000
Staff Expansion[3]	0	500	500
Total Estimated Treatment Flow	**7,200**	**22,860**	**30,060**

Table 1- Predicted Wastewater Flows for Cher-Ae Heights Wastewater Treatment System

Treatment System Capacity

The existing treatment system is a Zenon, ZenoGem system which is a combination of biological treatment and membrane separation. In the existing system, the wastewater from the Casino is pumped to a 15,000 gallon holding tank. It is then pumped into a concrete bioreactor where it is aerated and bacteria breaks down the organics in the wastewater. The wastewater is then filtered through the ZeeWeed membranes. It is then polished with paper cartridge filters and disinfected with a UV system and chlorine injection system and stored in storage tanks to be recycled back to the Casino toilets. Excess flows are disposed of in the existing dispersal field via 15hp and 25hp pumps housed in the effluent tank.

There are currently three ZeeWeed membrane "cartridges" in the bioreactor. The bioreactor basin was designed to allow for the addition of three more cartridges without having to resize the basin. This would effectively double the size of the treatment system, giving it a capacity to handle 30,000 gpd.

Additional pumps, blowers, and piping would have to be added to handle 30,000 gpd and a parallel carbon polishing system would have to be added. Upgrades of the electrical system would also be required. The UV disinfection systems would also require a larger impeller on the existing pump, but the system itself is sufficiently sized to handle the new flow.

[1] Assumes 20 single family homes at 180 gpd/ home average daily flow each, 500 gpd in Tribal Office, 100 gpd for the Clinic complex and 2 single family homes at 180 gpd/ home average daily flow each.
[2] 15,000 gallons assumed future growth of casino per 1999 Master Planning Document referenced in Assessment.
[3] Assumes 50 additional employees at 10 gpd/person/day.

All of this equipment can be accommodated by the existing building. The existing treatment system has also experienced flows close to the peak flow capacity of the treatment plant, and additional tankage may be required at the head works to allow the peak flows to be equalized if additional flows are added in the future. For treatment capacity beyond 30,000gpd average flow, (60,000gpd peak flow) extensive modifications would be required to potentially create a parallel treatment train to provide the needed capacity.

The capacity of the existing treatment plant is 15,000gpd average daily flow, but was designed to be expanded to 30,000gpd average daily flow without requiring extensive retrofitting. With the future hotel flows and capacity held in reserve for the existing 20 single family homes the flows from the proposed hotel are within the window of expansion at the 30,060gpd average daily flow ceiling without extensive retrofitting.

Any expansion should incorporate an additional standalone recycled water tank that is not chlorinated for use in the backwashing process of the membranes. This tank may impact the space currently dedicated to maintenance staff and activities. Additional building space may be required to make sure routine maintenance activities are not impacted.

There are some minor plumbing issues that should be corrected at the time of upgrade. Currently the floor drains and plumbing fixtures in the treatment building are plumbed to the effluent tank. This should be rerouted to the holding tank and processed prior to dispersal.

There are some upgrades that should occur with plumbing in the pump tanks to replace corroded pipes and valves.

Dispersal System Capacity

According to the Assessment, Cher-Ae Heights currently disposes of wastewater in dispersal trenches. The wastewater from the Casino is treated in the treatment plant and discharged to the community dispersal field. Wastewater from the septic tanks from the Tribal Office, the clinic complex, and two homes is discharged directly to the community dispersal field without further treatment in the treatment plant. The community dispersal field was designed with a capacity of 10,000 gallons per day. However, with plugging believed to have been caused by the discharge of Casino wastewater to the field before the treatment plant was completed, the actual long-term capacity of the dispersal field at this time is not known. The existing dispersal field should be cleaned and then the capacity should be evaluated through field investigations and hydraulic stress testing to determine the actual operational capacity.

A visual inspection of the community dispersal area during our site visit showed no obvious signs of surfacing or clear breakout downslope from the dispersal fields.

The 1998 “Sanitary Sewer Leachfield” plans prepared by Winzler & Kelly show trench monitoring piezometers in the two zones. These were not found during our site investigation and Mr. Kenneth Smith was unsure of their existence. These piezometers are a good tool for assessing the condition of the dispersal fields and would be of great value in a hydraulic load test of the dispersal trenches to determine the actual capacity of the dispersal system.

The Assessment also recommended, "…that the leach lines be cleaned and flushed, and that a number of backhoe test pits be excavated into the leach trenches to inspect the pressure distribution lines, the gravels, and groundwater elevations. Through this type of investigation, the actual operating capacity of the leachfield can be better assessed."

For this analysis, it is assumed that the Rancheria completed the cleaning and evaluation of the existing dispersal field still has the ability to disperse 10,000gpd as designed. With non-secondary treated effluent entering the system from: past practices prior to the treatment system installation; treatment system issues during startup leading to non-treated or partially treated effluent entering the dispersal trenches; and the existing facilities currently discharging septic tank effluent; it is critical that this capacity is verified. Additional dispersal trenches beyond this estimate may be required to compensate for the loss in dispersal capacity in the community dispersal field from the practices listed above.

According to the Assessment, comparison of water meter usage records for the Casino and the process wastewater flows from the treatment plant show that approximately 60% of the average daily flow is recycled back into the Casino and used for toilet flushing, and does not require dispersal field. Therefore approximately 2,880gpd goes from the treatment plant to the dispersal field. In addition, an estimated 960 gpd are discharged to the dispersal field from the Tribal Offices, the clinic complex and the two houses connected to the community dispersal field. The total estimated flow to the community dispersal field is therefore approximately 4,000gpd. If the community dispersal field has an actual long term operating capacity of 10,000gpd, then there is approximately 6,000gpd of capacity remaining in the existing community dispersal field.

The Assessment accurately points out a concern regarding dispersal field reserve capacity. It states, "An important issue to consider in planning leachfields is potential reserve capacity. Typical leachfield plumbing includes siting 100% reserve capacity so that there is a new leachfield location designated if the initial leachfield fails. This planning is done because leachfields are expected to eventually fail, which means their ability to receive wastewater diminishes. The effluent from the Zenon plant is much cleaner than septic tank effluent, but all leachfields are expected to diminish in performance over time. Figure 5.1 does not account for any reserve capacity. Someday the Rancheria may need replacement disposal capacity which may have to be provided by replacement leachfields or other disposal means."

Table 2 shows the predicted dispersal capacity required to support the existing community facilities and the hotel expansion. Using the Predicted Total Average Daily Flow of approximately 20,000gpd and using the same assumptions for site constraints in the Assessment ranging from 50% to 150% of land area for conflicts, and a long-term soil dispersal capacity of 5 gpd/lineal foot of trench, an additional 40,000 to 60,000 square feet of land would be required to install additional dispersal fields. This does not include full replacement area for dispersal field replacement.

Although not recommended, if the Rancheria chose to remove the expansion capacity for the existing community facility built in to the flow calculations (3,600gpd), an additional 10,000sf to 15,000sf would be required for the hotel expansion. Note: The dispersal fields for the individual homes would need to be found on an individual basis, and may not be locally available due to soil conditions, site constraints and setbacks.

The Assessment identified two potential areas on the facility that may be feasible for dispersal. These were the mounded ridge to the South of Ter Ker Coo Lane and the hillside south of the Tribal Office where the existing dispersal field was installed.

As illustrated here, the availability of acceptable soils for the dispersal field capacity is the critical item to support the hotel expansion. A site survey to locate usable soils that have adequate structure to disperse 5 gallons per lineal foot of trench per day, free of seasonal groundwater, and not constrained by setbacks from creeks and streams, bluffs, unstable landforms, or cuts. A site survey should be the first order of work to confirm the Cher-Ae facility has the capacity to support the proposed hotel wastewater flows.

Area	Existing Average Flow (gal/day)	Potential Additional Future Average Flow (gal/day)	Total Average Flow (gal/day)
Existing Community Wastewater Flows	960	3,600	4,560
Casino[4]	2,880	3,120	6,000
100 Room Hotel[5]	0	8,000	8,000
Staff Expansion	0	500	500
Total Estimated Flow	**3,840**	**15,220**	**19,060**

Table 2 - Predicted Wastewater Flows for Cher-Ae Heights Wastewater Dispersal System

Preliminary Opinion of Costs for the Wastewater System to Support a 100 Room Hotel

A preliminary opinion of cost for the conveyance of the hotel flows to the treatment plant, treatment plant expansion, dispersal field expansion, and delivery of treated effluent to the hotel for toilet flushing, is $620,000. This number is to be used for planning purposes based on the following assumptions:

a. Treatment system will be upgraded assuming a design capacity of 30,000gpd average daily flow, using existing infrastructure and expanding the treatment capacity within the existing footprint and expansion design.
b. Inclusion of UV treatment and additional storage tank for additional toilet flush capacity and backwash water.
c. Inclusion of minor plumbing upgrades discussed above.
d. Dispersal capacity is assumed at 20,000gpd and 40,000 to 60,000 square feet can be found for dispersal.
e. Gravity collection lines from the hotel will parallel the existing gravity collection lines from the casino.

[4] Assumes 60% of treatment flow recycled for toilet flushing in casino
[5] Assumes 20% of treatment flow recycled for toilet flushing in hotel

Description	Quantity	Unit	Unit Cost	Total Cost
Gravity Collection From Hotel To Treatment w/ Pavement Replacement	500	LF	$ 90.00	$45,000
MBR Upgrade, Equipment, Pumps, Tanks Etc.	1	Lump Sum	$80,000	$80,000
Electrical Upgrade	1	Lump Sum	$20,000	$20,000
Misc Plumbing, Tanks	1	Lump Sum	$20,000	$20,000
Reuse Pressure Line to Hotel	500	LF	$90.00	$20,000
Subtotal				$185,000
15% Contingency				$27,750
25% Engineering				$46,250
TOTAL				$ 259,000
Treatment Costs Used in Estimate				**$ 260,000**

Table 3 - Preliminary Opinion of Cost for Treatment System Expansion

Description	Quantity	Unit	Unit Cost	Total Cost
Dispersal Field Pump Station	1	Lump Sum	$50,000	$50,000
Force Main w/ Pavement Replacement (length assumed)	1000	LF	$80.00	$80,000
Dispersal Trenches	2000	LF	$50.00	$100,000
Land Preparation and Cleanup	1	Lump Sum	$25,000	$25,000
Subtotal				$255,000
15% Contingency				$38,250
25% Engineering				$63,750
TOTAL				$357,000
Dispersal Costs Used in Estimate				**$360,000**

Table 4 - Preliminary Opinion of Cost Dispersal System

Recommended Next Steps and Additional Data Needs

The above opinion of cost is based on many conservative assumptions with regard to reserve capacity designed into the system for existing septic system failures not currently on the community system, casino expansion reserve capacity, and dispersal system capabilities. The following are a list of recommended next steps and information needs to refine this opinion of cost and further refine the concept.

1. Investigate the long-term capacity of the existing community dispersal field to confirm its long-term acceptance rate. Confirmation of this area's actual capacity will have a significant impact on the additional dispersal area needed to support the hotel project. This may include:
   a. Long-term hydraulic load test to determine the maximum dispersal system captivity
   b. Install trench piezometers in selected dispersal trenches to monitor trench performance during dosing events and through the winter.
   c. Selected trench excavations with a backhoe to physically inspect the trench conditions.
   d. Conduct and document routine maintenance on the pressure dosed dispersal fields, particularly those areas where the septic tank effluent from the auxiliary uses are introduced.
2. Explore additional areas that are suitable for treated wastewater dispersal. This may include:
   a. A catalog of potential areas known to long time staff and residents of areas on the Rancheria that have deeper soils not subject to seasonal high groundwater or unstable geological formations.
   b. Field verify any areas identified as having potential for wastewater dispersal. This would include geotechnical analysis for any area's suitability to disperse treated wastewater long-term. This could include but not limited to:
      i. Percolation testing
      ii. Ring Infiltration Testing
      iii. Long-term Infiltration Testing
      iv. Seasonal Groundwater Monitoring
3. Conduct routine influent and effluent sampling and testing at the treatment system to inform the treatment expansion design process.
4. Consider the pros and cons of "holding" reserve capacity in the treatment and dispersal system design for existing system not currently connected to the community system. It may be beneficial to identify smaller areas elsewhere on the Rancheria that can accommodate individual or smaller clusters of systems.
5. Consider replacement of the existing MBR cassettes along with the installation of the expansion capacity.
6. Consider reviewing options for the complete replacement of the treatment system with an updated skid mounted MBR. This option could take advantage of treatment process technology, may make operations more streamline and alleviate some of the issues associated with retrieving operational data, troubleshooting and alarm responses.
7. An upgrade of the UV system that allows for redundancy should be explored. Currently, the existing UV system is a single unit that does not have redundancy in case of failure of the unit.
8. Explore the use of ozone as part of the disinfection train. Ozone is a very strong oxidant with known disinfection capabilities and has been proven successful in removing color from treated effluent. Ozone would help reduce chlorine consumption in the disinfection process, and may help with public perception of 'less than perfect" water in toilets and urinals.
9. With toilets in the hotels being flushed with reclaimed water, a review of toilet colors such as off white or biscuit colors reduces the contrast between any residual color in the toilet water. This could also assist with lowering water demand and chlorine consumption.

I cannot stress enough the need to determine if there is additional dispersal capacity on the site and where this resource is on the Rancheria. The size and location of these areas will have a significant impact on the design and associated cost with the dispersal component of the system.

I hope this information proves informative for our client and aids in the conceptual planning process for what looks to be a spectacular hotel facility. As always, I am available to answer any questions you may have.

Sincerely,
NORTHSTAR

Nick Weigel P.E.
Senior Engineer

Encl: *Trinidad Rancheria Phase 2 Community Wastewater Investigation – Wastewater Treatment, Disposal and Reuse Assessment, March 2004,* Winzler & Kelly

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FINAL

TRINIDAD RANCHERIA
PHASE 2 COMMUNITY WASTEWATER INVESTIGATION

WASTEWATER TREATMENT, DISPOSAL AND REUSE ASSESSMENT

MARCH 2004

Prepared for:

Trinidad Rancheria
P.O. Box 630
Trinidad, California 95570



Prepared by:

WINZLER & KELLY
CONSULTING ENGINEERS

633 Third Street
Eureka, California 95501
707.443.8326
707.444.8330 fax
www.w-and-k.com

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EXECUTIVE SUMMARY

This report assesses various wastewater treatment, disposal, and reuse options for the Trinidad Rancheria's Cher-Ae Heights property to assist in considering future potential options for development. The further development of this land will result in the generation of additional wastewater that must be appropriately managed. This report assesses several wastewater treatment and disposal options for the Trinidad Rancheria and provides tools to assist the Rancheria in evaluating future development options. The goal is to develop reliable treatment and disposal alternatives that meet regulatory standards, while minimizing required capital, personnel, and maintenance costs.

This report includes an analysis of the capacity and performance of the existing wastewater management systems as well as an analysis of options to accommodate a potential future hotel facility (assumed to be up to 200 rooms for planning purposes) and a new gas station/mini-mart.

This report assesses current conditions, issues, and specific goals and potential growth areas of the Rancheria. It then develops anticipated wastewater flows for the existing and future conditions. The wastewater treatment requirements are then outlined and wastewater treatment, reuse, and disposal alternatives assessed. The alternative summary includes a conceptual level analysis for each alternative, our opinion of the conceptual level costs for construction, and other issues.

Cher-Ae Heights Site Description

The Cher-Ae Heights area includes a residential area, the Cher-Ae Heights Casino (Casino), a former clinic complex (a portion of which currently houses the Youth Program), and the Tribal Office. In 2002, the Rancheria expanded the Cher-Ae Heights Casino to its current 50,000 square-foot configuration, which includes the 200-seat Sunset Restaurant. A wastewater treatment plant services the Casino, and approximately 60% of the treated wastewater is recycled back into the Casino and used for toilet flushing. The remaining treated wastewater is disposed of in a leachfield located just south of the Tribal Office.

The homes at Cher-Ae Heights, with two exceptions, are served by individual leachfields. The remaining two homes, the Tribal Office and the former clinic complex are served by septic tanks that drain or are pumped to the same leachfield that services the Casino's tertiary treatment system.

EXISTING AND PROJECTED POTENTIAL WASTEWATER FLOWS

The projected potential future wastewater flows from the Casino, the Cher-Ae Heights community area, and a potential new 200-room hotel and gas station/mini-mart are presented in Table ES.1.

Table: ES.1: Projected Potential Cher-Ae Heights Community Wastewater Flows Trinidad Rancheria

Area	Existing Average Flow (gal/day)	Potential Additional Future Average Flow (gal/day)	Total Average Flow (gal/day)
Existing Community Wastewater flows	7,200	0	7,200
Casino	7,200	7,800	15,000
200 Room Hotel	0	20,000	20,000
Gas station/mini mart	0	1,000	1,000
Total Estimated Flow	**14,400**	**28,800**	**43,200**

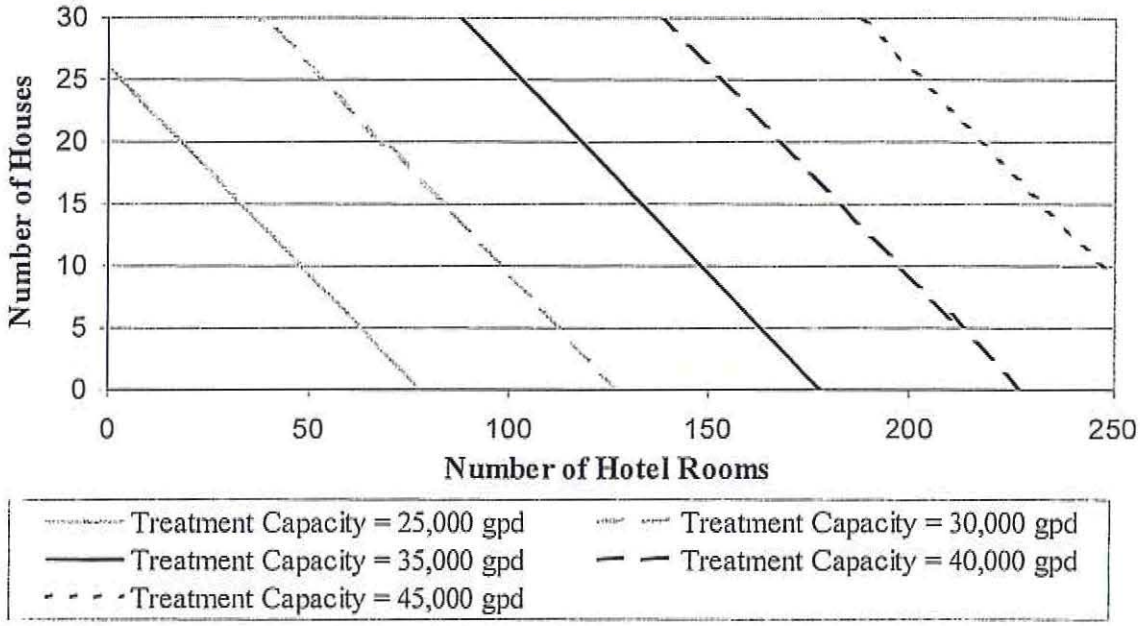
From Table ES.1, the Existing Community Wastewater Flows are defined to be those wastewater flows that are generated by homes, the Tribal Office, and the former clinic complex at Cher-Ae Heights. No future addition to these flows was projected. The total flows from the Casino were based on the Master Planning for the sizing of the treatment plant which was completed in the spring of 1999, and which estimated a projected maximum daily flow of 30,000 gallons per day (gpd) (15,000 gpd average flow). Table ES.1 assumes that the Hotel will have up to 200 rooms, although the exact size of the hotel has not yet been determined. Any new wastewater facilities must be able to potentially handle the existing flows, but also include capacity for planned expansion to help ensure that the facilities are adequately sized to be able to grow with the Rancheria.

WASTEWATER FLOW CAPACITY

As part of the development planning, the Rancheria may choose to combine some existing homes on individual septic systems along with a potential new hotel of some size and treat all the wastewater together. Different combinations of the number of homes and the size of the treatment plant result in different flows, which also include the projected future Casino/restaurant flows, the flows from the Tribal Office and the clinic complex, and flows from the gas station/ mini-mart. This relationship is graphically presented in Figure ES.1.

Figure ES.1 is based on potential future Casino wastewater flows (15,000 gpd average) plus the Tribal Office, clinic complex, two homes that are currently connected to the community leachfield, and gas station/mini-mart, in addition to a combination of homes served and hotel rooms developed. Figure ES.2 is a very valuable planning tool the Rancheria can use to evaluate the required wastewater treatment capacity from any combination of hotel size and number of homes served.

Figure ES.1: Treatment Capacity Relationship Between Number of Cher-Ae Heights Houses Served and Proposed New Hotel Rooms
Trinidad Rancheria



Note: Assumes flows from the future Casino (15,000 gpd average) plus the Tribal Office, clinic complex, two homes currently connected to the community leachfield, and gas station/mini-mart are served (for a total required treatment capacity of 17,200) in addition to the combination of homes served and hotel rooms developed.

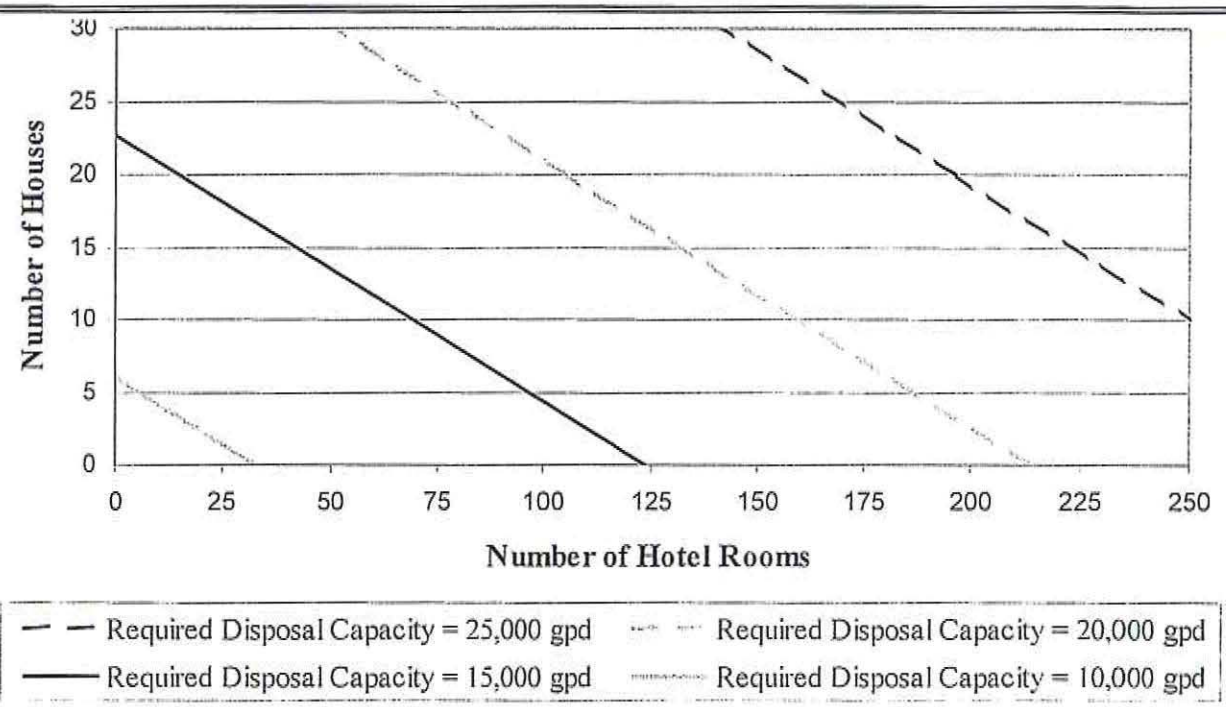
WASTEWATER TREATMENT CAPACITY SUMMARY AND ANALYSIS

Figure ES.1 is used to determine projected future flows that will require treatment at the Zenon plant. Different combinations of development can lead to different projected flows. The expansion requirements of the treatment plant were examined relative to different combinations of development. The capacity of the existing treatment plant is 15,000 gpd average daily flow, but was designed to be expanded to 30,000 gpd average daily flow without requiring extensive retrofitting.

Figure ES.2 shows a relationship between the stages in treatment plant capacity and what combinations of development may be served at the various stages. For example, if the existing treatment plant was expanded to its maximum size of 30,000 gpd, it could serve existing development plus the gas station/mini-mart and either a 128-room hotel and no homes or a 68 room hotel and all 20 Cher-Ae Heights homes not currently connected to the community leachfield. The projected flow for Cher-Ae Heights including the Casino/Restaurant, Tribal Office, former clinic building, existing homes, a 200 room hotel, and a gas station/mini-mart is approximately 43,200 gpd. Thus, to treat all wastewater, significant expansion of the existing treatment plant would be needed.

The figure shows that a disposal capacity of just over 25,000 gpd is needed to serve the 20 existing houses and a 200 room hotel in addition to the Casino/Restaurant (under future master planned capacity), Tribal Offices, former clinic complex, the two homes currently connected to the community leachfield, and a new gas station/ mini-mart. Like Figure ES.1, Figure ES.3 serves as a valuable planning tool for the Rancheria to consider future development scenarios and how disposal capacity can be achieved.

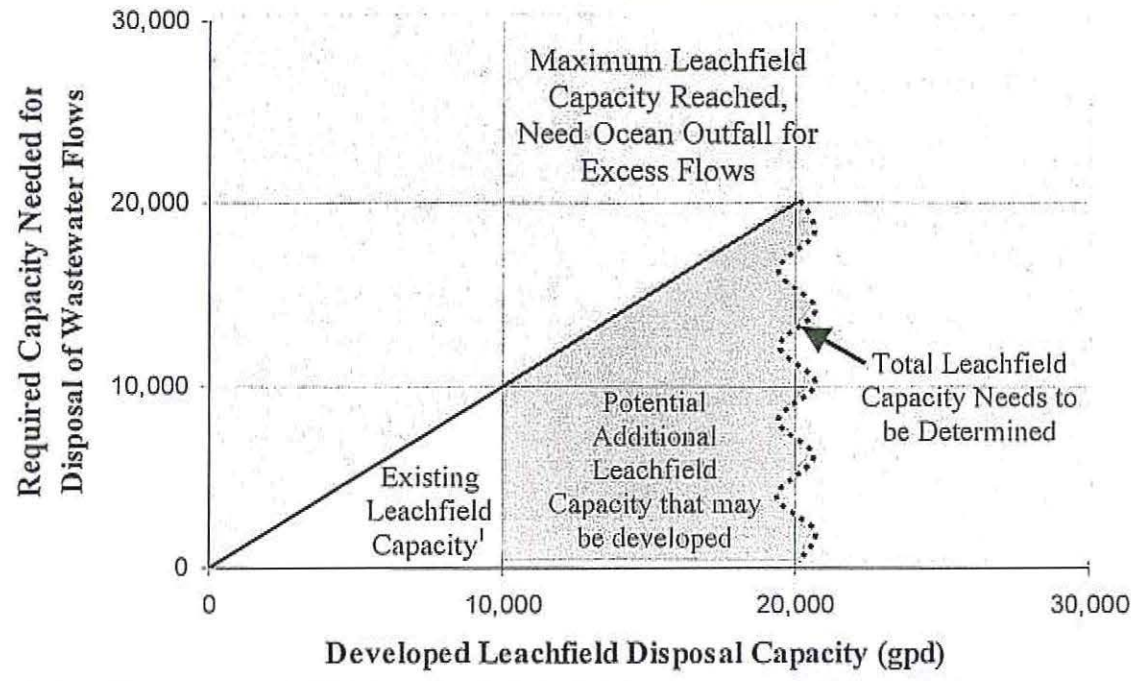
Figure ES.3: Disposal Capacity Relationship Between Number of Cher-Ae Heights Houses Served and Proposed New Hotel Rooms
Trinidad Rancheria



Notes:
This graph assumes that 6,000 gpd of disposal capacity is reserved for the Casino at Master Plan build out flows (15,000 gpd with 60% of the water recycled). This graph also assumes that the Tribal Office, clinic complex, and two homes currently connected to the community leachfield, and the gas station/mini-mart are served with a combined disposal flow of 2,200 gpd (assumes no water recycling). This equates to a base disposal flow of 8,200 gpd. The remaining flow is distributed between homes served and hotel rooms developed. To serve the remaining 20 homes and a 200 room hotel, a disposal capacity of 25,200 gpd would be needed.

Use and expansion of the community leachfield system and ocean outfall disposal were the two viable disposal options developed. As presented in the next section on costs, development of leachfield capacity is less expensive than an ocean outfall. However, leachfield capacity can be a limiting factor in Rancheria development and ocean outfall capacity may be needed. Ocean outfall capacity is needed when available leachfield capacity is exceeded and this relationship is shown in Figure ES.4

Figure ES.4: Relationship Between Required Disposal Capacity, Developed Leachfield Capacity, and the Need for Additional Disposal through an Ocean Outfall Trinidad Rancheria



[1] Assumed to be 10,000 gallons per day. Actual capacity must be verified.

Expansion of the Community Leachfield

Cher-Ae Heights currently disposes of wastewater in leachfields. This is the primary means of treatment and disposal for wastewater from the existing homes. The wastewater from the Casino is treated in the Zenon plant and discharged to the community leachfield. Wastewater from the septic tanks from the Tribal Office, the clinic complex, and two homes is discharged directly to the community leachfield without further treatment in the Zenon plant.

The community leachfield was designed with a capacity of 10,000 gallons per day. However with plugging believed to have been caused by the discharge of Casino wastewater to the field before the Zenon plant was completed, the capacity of the leachfield at this time is not known. The existing leachfield should be cleaned and then the capacity should be evaluated through field investigations and hydraulic stress testing to determine the actual operational capacity.

Depending on what the Rancheria wishes to develop in the future, how the flows at the Casino increase, and if more houses are connected to the Zenon system, additional leachfield capacity could be required. Several undeveloped sites have been investigated in the past. However, the Rancheria should think broadly in terms of overall land use when planning potential

developments. The best land for leachfields may currently be taken up by housing assignments, which were not previously evaluated for leachfield potential.

For the Rancheria to create some of the potential developments that have been envisioned, it may be necessary to re-evaluate land use to determine the highest and best use of land for the community. At this time it is not possible to accurately determine additional potential leachfield capacity because it depends on land use decisions and site characteristics. However, it may be possible for the Rancheria to develop an additional 5-10,000 gpd or more of capacity. Additional planning, field studies, and engineering analysis will be needed to determine what capacity can be developed.

Ocean Outfall

The other viable disposal option considered is to discharge the treated wastewater through an ocean outfall some distance off shore. The North Coast Regional Water Quality Control Board often requires that outfalls be extended from the shore to a point where the ocean depth is 60 feet below mean sea level or more. Near Cher-Ae Heights the pipeline would have to be approximately 7,600 feet long to reach an ocean depth of 60 feet. The cost for the pipe alone for this option would exceed $2 million. To make this a more viable option, approval would have to be obtained to terminate the outfall at a shallower depth, which would require demonstration that the required mixing and dilution was met.

An ocean outfall option would have relatively high annual maintenance costs because the Rancheria would need to ensure that the outfall pipe is kept clear of debris and growths. Large storms can also damage the outfall pipe and lead to large repair costs.

A significant advantage to this option is that it would probably allow for much more disposal capacity than onsite leachfields, which are limited by the availability of acceptable land. With an ocean outfall, the Rancheria could likely have the capacity to accommodate wastewater flows from many types of future development projects.

CAPITAL COST ANALYSIS

Probable costs for the following treatment and disposal options were developed.

Treatment Options
- Utilize Existing Treatment Plant
- Expand Treatment Plant
- Construct a Parallel Treatment Train

Disposal Options
- Construction of a Community Leachfield
- Construction of an Ocean Outfall

Table ES.5: Summary of Alternative Costs and Issues
Trinidad Rancheria

Alt#	Development Served	Treatment Option	Disposal Option	Capital Cost for Treatment and Disposal	Degree of Permitting	Comments
1	Casino, Tribal Office, clinic complex, two houses	Existing treatment capacity at 15,000 gpd	Discharge to existing Casino Leachfield	$0	None (no change)	The master planned future average flow for the Casino plus the other existing developments use existing capacity.
2	Casino, Tribal Office, clinic complex, two houses, plus gas station/m-m, and a 44 room hotel (or 8 Cher-Ae Heights homes)	Upgrade existing treatment capacity to 30,000 gpd	Discharge to existing Casino Leachfield	$110,000	None (Assumes no Federal Oversight required)	For this alternative the number of hotel rooms or homes served is limited by the Casino leachfield disposal capacity.
3	Casino, Tribal Office, clinic complex, two houses, plus gas station/m-m, and a 134 room hotel (or 74 room hotel and 20 Cher-Ae Heights homes)	Upgrade existing treatment capacity to 30,000 gpd	Increase Discharge Capacity by adding new leachfield for 5,000 gpd	$460,000	None (Assumes no Federal Oversight required)	This alternative is limited by treatment capacity. In addition, it may be difficult to find sufficient leachfield area. If not enough area can be found, development needs to be reduced or an ocean outfall considered.
4	Casino, Tribal Office, clinic complex, two houses, plus gas station/m-m, and a 200 room and 5 Cher-Ae Heights homes (or 116 room hotel and 20 Cher-Ae Heights homes)	Upgrade existing treatment capacity to 30,000 gpd, and build a new treatment train	Increase Discharge Capacity by adding new leachfield for 10,000 gpd	$460,000 + cost of additional treatment facilities	None (Assumes no Federal Oversight required)	It may be difficult to find sufficient leachfield area. If not enough area can be found, development needs to be reduced or an ocean outfall considered.
5	Casino, Tribal Office, clinic complex, two houses, plus gas station/m-m, and a 200 room and 20 Cher-Ae Heights homes	Upgrade existing treatment capacity to 30,000 gpd, and build a new treatment train	Ocean outfall Discharge	$1,460,000 to $3,460,000 + cost of additional treatment facilities	Difficult (Assumes state and local involvement)	This option has ample disposal capacity for currently proposed development. However, the cost is much higher than the other alternatives, and treatment plant expansion would be required to treat the higher flows.

INTRODUCTION

The Trinidad Rancheria would like to consider potential options for development of the land at the Cher-Ae Heights community in Trinidad. The further development of this land will result in the generation of additional wastewater that must be appropriately managed. This report assesses several wastewater treatment and disposal options for the Trinidad Rancheria to provide tools to assist the Rancheria in evaluating future development options. The goal is to develop reliable treatment and disposal alternatives that meet regulatory standards, while minimizing required capital, personnel, and maintenance costs.

This report includes consideration of capacity and performance of existing wastewater management systems as well as analysis of options to accommodate a potential future hotel facility (assumed to be up to 200 rooms for planning purposes) and a new gas station/mini-mart.

The current system performance issues as well as the potential for future system growth are mainly at the Cher-Ae Heights community, which is the focus of this report. The wastewater system for the Westhaven subdivision is relatively new and is working well and there are no plans for major developments at that site. The characteristics of the Westhaven subdivision system are considered under a separate brief analysis.

SITE AND WASTEWATER SYSTEMS DESCRIPTION

The Rancheria is located one mile south of the town of Trinidad, California in Humboldt County on the Northern Coast of California. The Rancheria has several property holdings including Cher-Ae Heights, the Westhaven subdivision, the Archer Road subdivision, the North Coast Inn, and the Trinidad Harbor. This study focuses on the Cher-Ae Heights property, which is entirely Trust land.

The Cher-Ae Heights area is the original Rancheria, with homes and wastewater management systems that date back to the 1950's. This 44-acre area has been developed over the years and currently includes a residential area, the Cher-Ae Heights Casino, a former clinic complex, a portion of which currently houses the Youth Program, and the Tribal Office. The residential area consists of approximately 20 homes housing about 60 people. The Tribal Office houses approximately 30 employees as well as visitors to the library and offices. The Youth Program, at the former clinic complex, houses 3 employees and an afternoon youth program for 5 to 10 children. The remainder of the clinic complex is currently unoccupied, and consists of approximately 9,000 square feet of office and utility space.

In 2002, the Rancheria expanded the Cher-Ae Heights Casino to its current 50,000 square-foot configuration, which includes the 200-seat Sunset Restaurant. The Casino and restaurant presently employs approximately 220 people. The Casino is serviced by a wastewater treatment plant with a current capacity of 15,000 gallons per day (gpd) average daily flow and 30,000 gpd peak daily flow. Currently, flows into the treatment plant average 7,100 gpd. Approximately 60% of the treated wastewater is recycled back into the Casino and used for toilet flushing. The remaining treated wastewater is disposed of in a leachfield with a design capacity of 10,000-gpd, located just south of the Tribal Office.

The homes at Cher-Ae Heights, with two exceptions, are served by individual leachfields. The remaining two homes, the Tribal Office and the former clinic complex are served by septic tanks that drain or are pumped to the same leachfield that services the Casino.

Cher-Ae Heights is situated on gentle to steeply sloping ground with elevations ranging from 80 feet at the eastern edge adjacent to Highway 101, down to sea level with a steep bluff on the western edge of the property down to the Pacific Ocean. The depth to groundwater is relatively shallow in many areas of Cher-Ae Heights, and there are also areas where the groundwater daylights at the surface, particularly during the rainy season. The soils consist mainly of sandy loams with shallow bedrock and bedrock outcroppings in several areas. The undeveloped areas of Cher-Ae Heights are typically forested and steep. McConnahas/Mill Creek runs along the northern property boundary of Cher-Ae Heights. It is a small stream that drains approximately two square miles of relatively undeveloped watershed. The Rancheria has been replacing about one residential leachfield system at the Cher-Ae location each year for the past five years, mainly due to age or problems relating to high groundwater.

PURPOSE

The purpose of this report is to provide an assessment of several wastewater collection, treatment and disposal scenarios in order to address current issues with individual leachfields and the community leach filed system, and to address wastewater capacity issues associated with potential development options for the Cher-Ae Heights area. This analysis provides a planning tool for the Rancheria to help in making future land use and development decisions through identifying options, range in costs, and further study, system design, and other implementation steps.

This analysis begins with a description of current conditions, issues, and specific goals for potential growth options of the Rancheria. Anticipated wastewater flows for existing and potential future conditions are developed based on a range of different options. Wastewater treatment requirements are outlined and wastewater disposal alternatives assessed based on the regulatory framework and known physical site conditions.

This alternatives analysis includes a conceptual level design for each feasible alternative as well as an assessment of the ability of the alternative to meet treatment and disposal requirements. A conceptual cost estimate was developed for feasible alternatives, and potential requirements associated with alternative implementation are also presented.

INTRODUCTION

The current conditions serve as the basis for evaluating existing issues that need to be addressed and potential approaches for addressing them, which are considered further in subsequent chapters. The homes at the Cher-Ae Heights development receives wastewater service predominately through individual septic tank and leachfield systems. The Casino is connected into the Zenon treatment plant which recycles highly treated effluent for toilet flushing in the Casino and the rest is discharged into a community leachfield. Two of the homes, the Tribal Office, and the old Health Clinic are connected to septic tanks and then to the community leachfield.

A summary of the conditions of the existing individual septic and leachfield systems, and the community system are discussed in the following sections. Subsequent chapters evaluate existing and potential future flows and options for alternative wastewater management strategies to address the issues identified in this chapter.

EVALUATION OF EXISTING INDIVIDUAL LEACHFIELD AND SEPTIC SYSTEM PROBLEMS

The individual septic tank and leachfield systems at the Cher-Ae Heights community have been developed over many years with various designs and little documentation. This has resulted in some system performance problems and in 2000 Winzler & Kelly performed a survey of the systems at Cher-Ae Heights (and Westhaven). The findings were presented in the *Trinidad Rancheria Septic System Survey, Final Report*, Winzler & Kelly, August 2000. The on-site systems were evaluated using a series of techniques including research of Indian Health Services records, interviews with residents, and field inspections.

The evaluation was based on the regulatory requirements of leachfield construction contained within Chapter 4 of the *Water Quality Control Plan for the North Coast Region*, North Coast Regional Water Quality Control Board, May 23, 1996 (Basin Plan), as well as Humboldt County Environmental Health Department standards. Although the sovereign status of the land means that the Rancheria is under no legal requirements to conform to State and local regulations, it is in the best interest of the Rancheria, and has been the past practice, to provide the highest level of standards practicable. Thus, in the Septic System Survey, the characteristics of the sites were evaluated based on typical regulatory requirements.

The results of the Rancheria Septic System Survey are reproduced in Appendix A of this report. Areas of potential problems or conflicts with regulations are labeled "Red". Problems found with treatment and disposal systems include the following (each of which is further discussed in subsequent paragraphs):

- Overly full with sludge or scum
- Lack of baffles and sanitary "T"s
- Access to tanks / Placement of structures above tanks
- Malfunction of leachfield
- Other problems

The Rancheria has corrected many of the more pressing problems identified in 2000 and has been replacing about one leachfield system each year for the past five years. Even so, there is reason to consider connecting all individual systems up to a central treatment and disposal system, which is discussed under a subsequent chapter.

Overly Full with Sludge or Scum

Septic tanks are the point of primary treatment in the septic system. It is in the septic tank where heavy solids and lighter scum are allowed to separate from the wastewater. Five of the twenty-one septic tanks examined in 2000 had sludge depths of 24-inches or more, and scum levels in excess of eight inches and were in need of being pumped. This condition of excessive sludge and scum can lead to carry over of solids or grease to the leachfield and premature degradation of capacity. The Rancheria has subsequently addressed this issue, but it points to the need of regular inspection and maintenance of individual septic systems.

Lack of Baffles and Sanitary "T"s

Baffles and sanitary tees help to separate sludge and scum from the wastewater, thus preventing it from entering into the disposal field and possibly clogging the leach pipes, gravels, or trench sidewalls. Sanitary tees and baffles are standard on new septic systems, but older systems may lack them. Three sites at Cher-Ae Heights lacked these features.

Access to Tanks / Placement of Structures Above Tanks

The placement of structures or driveways over tanks makes access for maintenance and pumping difficult or impossible, and may result in greater structural loads being placed upon a tank than it was designed for. Wooden decks have been built above the septic tank at one site at Cher-Ae Heights, thus making regular maintenance much more difficult. Other tanks at the Trinidad Rancheria are located underneath a driveway and a large above ground pool.

Tank-lid risers are recommended, which allow easy access to inspection ports above ground. This makes locating the septic tank and making regular maintenance easier and less expensive. Of the twenty-five septic systems surveyed at Cher-Ae Heights, only seven tanks had these access ports.

Malfunction of Leachfield

Common problems found with leachfield design that may cause malfunction were:

- High groundwater levels
- Inadequate setbacks from steep slopes and natural bluffs
- Inadequate setbacks from ephemeral streams
- Sharp changes in slope
- Unstable landforms
- Shallow depth to bedrock

The design and construction of a septic system and leachfield along with appropriate maintenance are the most important factors in system performance. Typical failure of a leachfield due to inadequate design or maintenance is effluent surfacing from a leachfield and causing odors and possible health or environmental impacts.

Although a significant number of the sites had either inadequate separation to groundwater or inadequate setbacks, only a small number of sites had either surfacing effluent or noticeable odor. However, the field investigations were conducted in the summer so surfacing wastewater problems would be at a minimum. It is expected that some sites that did not exhibit surfacing effluent in the summer would have problems in the winter when groundwater was at a maximum.

Of the 47 sites examined in the Septic System Survey, 26 had a depth to groundwater that was shallower than that recommended by the North Coast Regional Water Quality Control Board (NCRWQCB) in the Basin Plan. The Basin Plan requires a minimum of five feet of clearance from the bottom of the leaching trench to the seasonally high groundwater level. The majority of the sites with shallow depth to groundwater are located at Cher-Ae Heights.

Many of the sites at Cher-Ae Heights failed to meet the Basin Plan's required setbacks from breaks in slope, unstable landforms, and ephemeral streams. Fourteen of the 25 leachfield systems surveyed at Cher-Ae Heights were located within 25 feet of natural bluffs or sharp changes in slope. Two sites at Cher-Ae Heights have leachfields located within 50 feet of ephemeral springs or streams. There are four sites at Cher-Ae Heights where the leachfield is located on or within 50 feet of unstable landforms, such as hills, where visible slumping has occurred. One site at Cher-Ae Heights has a leachfield placed where the depth to bedrock is only four feet.

There was one site at Cher-Ae Heights where it appears that the leachfield is old and probably clogged. There were six sites at Cher-Ae Heights where effluent was surfacing either on the leachfield itself or down slope from it.

Although there was a multitude of design related issues, not every site with a design issue had an immediately obvious problem when surveyed. However, the design related issues suggest that long term performance is questionable and that problems may occur during wet periods and in the future sooner than if the systems were properly designed.

Other Problems

One plastic septic tank, which appeared to have been malformed by slope movement, was observed at Cher-Ae Heights. Continued movement of that slope seems likely, and may eventually cause either the inlet or outlet lines from the tank to separate, thus resulting in a release of untreated effluent and failure of the system.

Recommended Improvements

The Septic System Survey offered a series of recommendations and the original report should be referenced for details.

Overall, the analysis suggests there is a wide array of systems in place that appear to be of many designs, and there is little documentation available. A significant number of the systems currently have performance problems, and many of them have known design problems (but perhaps no performance problems yet). The lack of available information and the types of problems found suggests that the design related problems are likely more widespread than can be currently determined. This combination of factors suggests that the Rancheria should consider replacing the individual systems with a community system. The extent and type of system will depend in large measure on the Rancheria's development plans for the entire area. The potential wastewater flows from homes, treatment options, and disposal options are considered in the following chapters along with other development options.

EVALUATION OF EXISTING ZENON TREATMENT PLANT AND COMMUNITY LEACHFIELD

The Rancheria's plans to expand the Casino lead to the development of a new wastewater treatment and disposal system to replace a failed mound system. Due to the known difficulty in locating land on site for a leachfield and a shortage of potable water from the City of Trinidad, a water recycling treatment plant manufactured by Zenon was chosen. The Casino was designed to include dual plumbing so the highly treated effluent from the Zenon plant could be used for toiled flushing.

A study was conducted in the spring of 1998 of four potential leachfield sites at Cher-Ae Heights and found the following:

Site	Findings
South of Casino Parking Lot	Disturbed soils, blue clay, expected high groundwater, infeasible.
Between Casino Lower Lot and Ter Ker Coo Lane	Disturbed soils, high water table, infeasible.
Mounded Ridge South of Ter Ker Coo Lane	Well drained soils, potentially feasible.
Hillside South of Tribal Office (Leachfield developed at this site in fall of 1998)	Well drained soils, ample area, feasible.

The hillside south of the Tribal Office was developed into a leachfield with a design capacity of 10,000 gallons per day. After the leachfield was constructed the Casino expansion project was undertaken. The implementation strategy was based on using the old mound system until the new treatment plant was on line so that only clean water would be discharged to the new leachfield. However, the old mound system was decommissioned before the new treatment plant was completed and relatively untreated effluent, including greasy water from the snack bar, was discharged directly to the new leachfield for several months.

After the Casino and the new treatment plant were completed and connected to the new leachfield there were a number of startup issues that were addressed. After working through a series of details with the manufacturer and the operator regarding both how the system was to work, and a number of mechanical performance issues, the treatment plant was operated to consistently produce high quality effluent.

The leachfield began experiencing some operational problems several months after the new treatment plant was on line in the spring of 2002. The operator found he could not pump water to the leachfield at the needed capacity. After solving a valving problem, the leachfield still appeared to be operating under the design capacity. The operator located the ends of some of the leachlines and flushed them out and found a significant amount of grease and black slime in the pipes. Flushing of the pipes improved the performance for several months, but the same problem appeared to recur. The lines were flushed of grease and slime again in the fall of 2003. The grease and slime is most likely the result of discharging of effluent to the leachfield prior to the completion of the treatment plant and cleaning the system of this residue is essential to maintaining both near and long term capacity.

For the purposes of this study, it is assumed that the leachfield still has its original design capacity of 10,000 gpd. However, it is recommended that the leach lines be cleaned and flushed, and that a number of backhoe test pits be excavated into the leach trenches to inspect the pressure distribution lines, the gravels, and groundwater elevations. Through this type of investigation, the actual operating capacity of the leachfield can be better assessed.

INTRODUCTION

Current wastewater flows are not metered at most of the Rancheria's facilities except for the Casino. However, typical design flows can be estimated for facilities based on the type of facility, its use, and its occupancy. These design flows along with the data from the Casino/ Restaurant were utilized to estimate current and projected wastewater flows for Cher-Ae Heights.

Wastewater flows generated from the Casino are evaluated first based on actual measurement data. Flows from the remaining Cher-Ae community, which includes homes, the Tribal Office, and the clinic complex are then considered. The potential reduction in wastewater flows due to installation of water conserving fixtures is considered. Finally, disposal capacity is considered based on a reduction in disposal requirements due to recycling for toilet flushing in the Casino and any potential future hotel.

CURRENT METERED CASINO WASTEWATER FLOWS

Actual wastewater flows from the Casino's Zenon Wastewater Treatment Plant were obtained from Ron Sundberg, the plant operator, and are summarized in Table 3.1. The raw data tables are provided in Appendix B along with water quality data for the treatment plant.

Table 3.1: Casino Wastewater Treatment Plant 2002-2003
Summary of Total Monthly Metered Flows
Trinidad Rancheria

Date	Avg. Daily Flow (gallon/day)	Peak Daily Flow (gallon/day)
June 2002	8,875	14,850
July 2002	9,112	26,870
August 2002	8,896	28,150
September 2002	7,047	13,490
October 2002	6,539	11,200
November 2002	6,749	16,540
December 2002	6,831	14,250
January 2003	5,924	16,280
February 2003	6,261	23,140
March 2003	6,241	12,510
April 2003	6,442	20,510
Overall Avg. Daily Flow	**7,174**	
Peak Daily Flow		**28,150**
Avg. of Peak Daily Flows		**17,981**

The figures shown in Table 3.1 represent the actual measured influent wastewater flows and are not a function of how much water is recycled for toilet flushing. Water recycled for toilet flushing affects disposal capacity, not treatment capacity. Required disposal capacity accounting for water recycling is discussed in a subsequent section in this chapter.

CURRENT ESTIMATED COMMUNITY WASTEWATER FLOWS

For the purposes of this study, Existing Community Wastewater Flows are defined to be those wastewater flows that are generated by homes, the Tribal Office, and the former clinic complex at Cher-Ae Heights.

The estimated current wastewater flows for the Cher-Ae Heights community area are provided in Table 3.2.

Table 3.2: Current Estimated Cher-Ae Heights Community Wastewater Flows Trinidad Rancheria

Description	Units	Average Unit Flow [1] (gal/unit/day)	Estimated Avg. Flows (gal/day)
Estimated Current Average Wastewater Flow Rates			
Tribal Offices	50 Employees	10	500
Clinic Complex	10 People	10	100
Single Family Homes on Community Leachfield	2 Houses	2	600
Single Family Homes	20 Houses	300	6,000
			7,200

[1] Adapted from Metcalf & Eddy, Wastewater Engineering, Treatment, Disposal, Reuse, 3rd ed., pg 17,McGraw-Hill, Inc., New York, NY, 1991.

The flows presented in Table 3.2 are estimates, because there is no metering of these flows. These estimates are based on industry standard references of typical wastewater flows for these types of developments

PROJECTED CASINO WASTEWATER FLOWS

Master planning for the sizing of the treatment plant was completed in the spring of 1999 based on a projected maximum daily flow of 30,000 gallons per day from the Casino (15,000 gpd average flow). This master planned capacity should be reserved for potential future growth in the patronage of the Casino.

PROJECTED POTENTIAL COMMUNITY WASTEWATER FLOWS

Based on conversations with Rancheria staff, development plans for Cher-Ae Heights could include a new hotel facility and a new gas station/mini-mart. The analysis presented in this section assumes that the Hotel will have up to 200 rooms, although the exact size of the hotel has not yet been determined. Any new wastewater facilities must be able to potentially handle the existing flows, but also include capacity for planned expansion to help ensure that the facilities are adequately sized to be able to grow with the Rancheria.

The projected potential future wastewater flows from Cher-Ae Heights projected growth, including a new 200-room hotel and gas station/mini-mart, are presented in Table 3.3.

Table 3.3: Projected Potential Hotel and Gas Station/Mini-Mart Wastewater Flows Trinidad Rancheria

Description	Units	Average Unit Flow[1] (gal/unit/day)	Estimated Avg. Flows (gal/day)
Hotel	200 rooms	100	20,000
Gas Station/Mini Mart	100 users	10	1,000
Total Estimated Projected Wastewater Flow			**21,000**

[1] Adapted from Metcalf & Eddy, Wastewater Engineering, Treatment, Disposal, Reuse, 3rd ed., pg 17,McGraw-Hill, Inc., New York, NY, 1991.

The total wastewater flows from the Casino and the community facilities are summarized in the next section.

SUMMARY OF EXISTING AND PROJECTED POTENTIAL WASTEWATER FLOWS

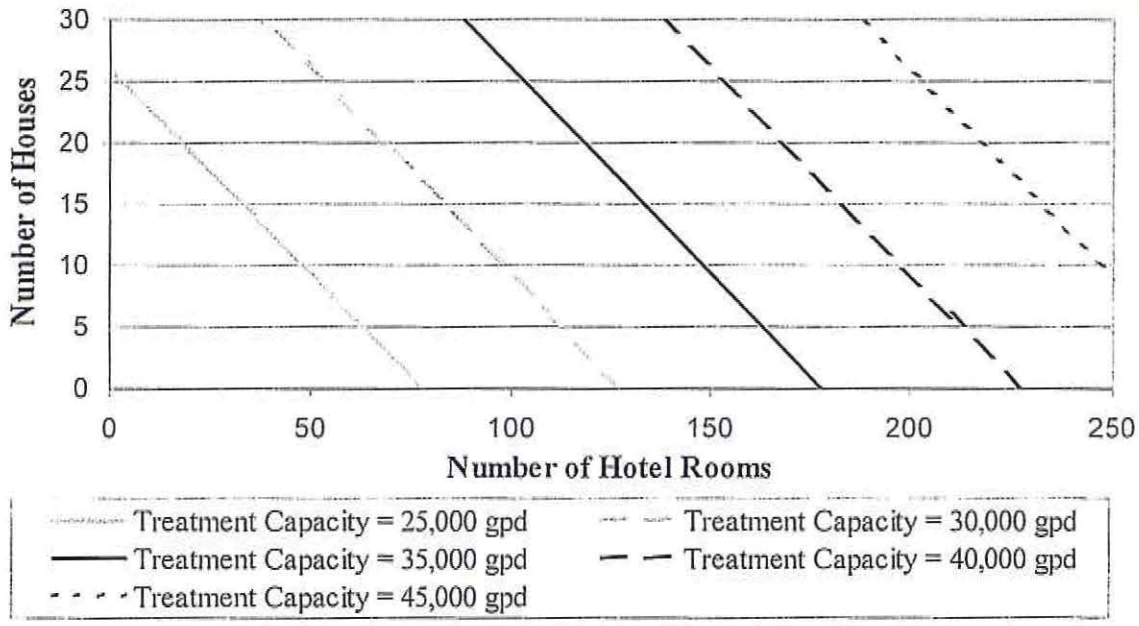
The projected future wastewater flows from the Casino, the Cher-Ae Heights community area, and a potential 200-room hotel and gas station/mini-mart are presented in Table 3.4.

Table: 3.4: Projected Cher-Ae Heights Community Wastewater Flows Trinidad Rancheria

Area	Existing Average Flow (gal/day)	Potential Additional Future Average Flow (gal/day)	Total Average Flow (gal/day)
Community Area (homes, Tribal Offices, clinic complex)	7,200	0	7,200
Casino	7,200	7,800	15,000
200 Room Hotel	0	20,000	20,000
Gas station/mini mart	0	1,000	1,000
Total Estimated Flow	**14,400**	**28,800**	**43,200**

As part of the development planning, the Rancheria may choose to combine some existing homes on individual septic systems along with a potential new hotel of some size and treat all the wastewater together. This scenario is discussed further in this report in the chapter on the development of alternatives. Different combinations of the number of homes and the size of the treatment plant result in different flows, which also include the projected future Casino/restaurant flows, the flows from the Tribal Office and the clinic complex, and flows from the gas station/ mini-mart. This relationship is graphically presented in Figure 3.1. Figure 3.1 assumes that the Casino and restaurant will require the 15,000 gpd master planned average flow and that there is no growth in the flows from the Tribal Office and the clinic complex. Figure 3.1 is a very valuable planning tool the Rancheria can use to evaluate the required wastewater treatment capacity from any combination of hotel size and number of homes served. This is used further in subsequent chapters of this report.

Figure 3.1: Treatment Capacity Relationship Between Number of Cher-Ae Heights Houses Served and Proposed New Hotel Rooms Developed
Trinidad Rancheria



Note: Assumes flows from the future Casino (15,000 gpd average) plus the Tribal Office, clinic complex, two homes currently connected to the community leachfield, and gas station/mini-mart are served (for a total required treatment capacity of 17,200) in addition to the combination of homes served and hotel rooms developed.

AFFECT OF LOW FLOW TECHNOLOGIES

The total estimated wastewater flow presented in Table 3.3 does not take into account any additional measures to reduce wastewater flows through conservation using low-flow technologies.

Low-flow water efficient toilets, fixtures, and other appliances could be installed in existing homes and other facilities. The American Water Works Association (AWWA) has conducted studies that show that household flows can be reduced by about 30% through the use of low-flow fixtures. This would reduce the estimated flow per household from 300 gpd to 200 gpd, which is an achievable usage rate. However, this would require that the Rancheria retrofit existing facilities at a substantial cost.

As a result of existing federal regulations, all toilets, showerheads, and kitchen and lavatory faucets newly installed are required to be low flow, and those are the only models legally sold. Thus, the existing Casino/restaurant and any new development would already have low flow devices installed.

Table 3.5 presents the potential reduction in wastewater flows if low-flow technologies are installed in homes. It was assumed that the Tribal Office and former clinic complex could achieve the same reduction in water use as a household. Because the existing federal regulations require low-flow devices in new construction, no flow reduction from the installation of these devices was assumed at the proposed hotel or gas station/mini-mart.

Table 3.5: Potential Reduction in Wastewater Flows From Installation of Low Flow Technologies
Trinidad Rancheria

Description	Projected Average Flows (gal/day)	Percent Reduction Resulting from Low-Flow Technologies	Projected Reduction in Flows (gal/day)
Single Family Homes	6,000	30%	1,800
Homes on Leachfield	600	30%	180
Clinic Complex	100	30%	30
Tribal Offices	500	30%	150
Casino/Restaurant	15,000	0%	0
Hotel	20,000	0%	0
Gas Station/Mini Mart	1000	0%	0
TOTALS	**43,200**	---	**2,610**

As can be seen in Table 3.5 the use of all available water recycling and low flow technologies reduces the total amount of wastewater to be treated and disposed by less than 5% of the projected future flow. For the purposes of this study, it was assumed that existing facilities are not retrofitted with low flow fixtures. However, the Rancheria may wish to undertake this as a separate project.

WATER RECYCLING FOR TOILET FLUSHING

Water recycling for toilet flushing does not affect treatment capacity requirements, but it does affect disposal capacity requirements. If there is no water recycling, then the treatment capacity equals the disposal capacity. However, the Casino was developed with a water recycling system for toilet flushing to reduce the need for potable water and reduce the need for disposal capacity. Recycling for irrigation had also been previously investigated, however it is infeasible for reducing wastewater disposal capacity since there is no demand for irrigation in the winter when wastewater disposal is most critical.

Based on the comparison of water meter usage records for the Casino and the process wastewater flows from the treatment plant, approximately 60% of the average daily flow is recycled back into the Casino and used for toilet flushing, and does not require disposal.

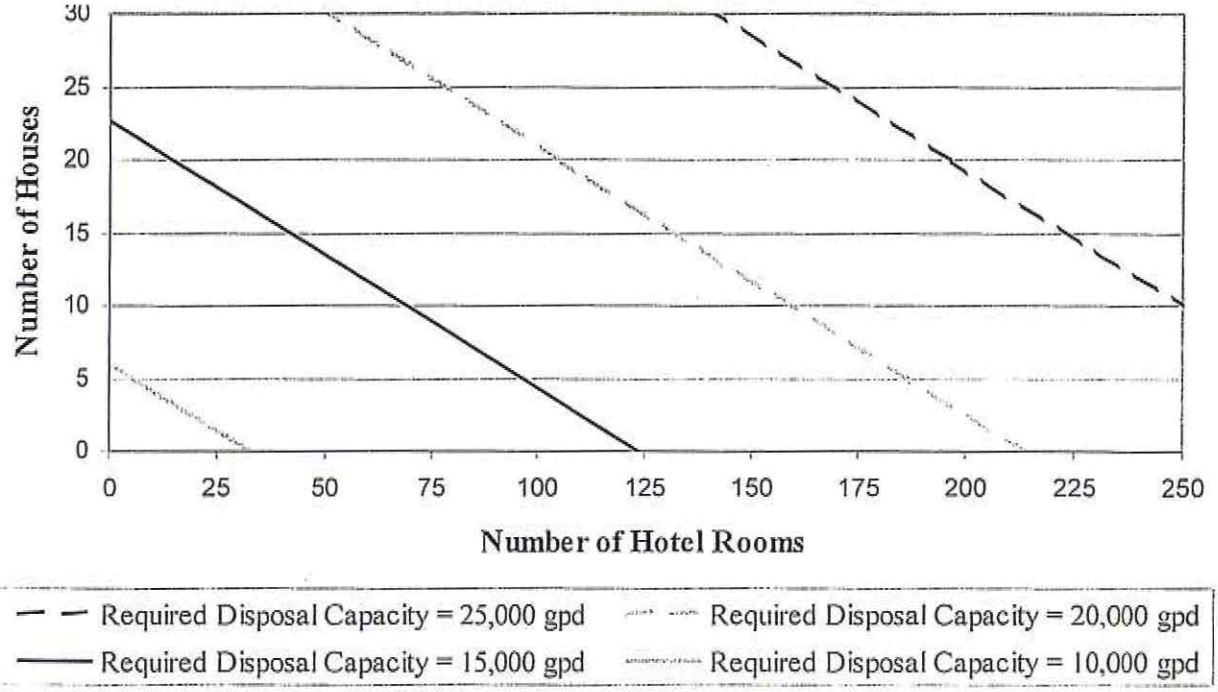
Given the wastewater treatment and disposal limitations and constraints, it is recommended that the hotel, and all new major construction at the Rancheria be constructed with dual plumbing systems and the ability to recycle treated wastewater for toilet flushing. For the remainder of this report it is assumed that the hotel will install water recycling facilities for toilet flushing to reduce needed disposal capacity and potable water supplies.

RELATIONSHIP BETWEEN DISPOSAL CAPACITY AND DEVELOPMENT OPTIONS

Like wastewater flow, there is a relationship between the number of houses served and the number of hotel rooms that can be developed and the resulting disposal capacity required. This relationship was developed based on the assumption that the Casino and the potential hotel will recycle water for toilet flushing. Figure 3.2 shows the relationship between the number of houses served and the number of hotel rooms developed for 15,000 gpd, 20,000 gpd, and 25,000 gpd disposal capacity.

The figure shows that a disposal capacity of almost 25,000 gpd is needed to serve all 20 existing houses and a 200 room hotel in addition to the Casino/Restaurant (under future master planned capacity), Tribal Offices, former clinic complex, and a new gas station/ mini-mart. Like Figure 3.1, Figure 3.2 serves as a valuable planning tool for the Rancheria to consider future development scenarios and how disposal capacity can be achieved, which is also discussed further in subsequent chapters of this report.

Figure 3.2: Disposal Capacity Relationship Between Number of Cher-Ae Heights Houses Served and Proposed New Hotel Rooms
Trinidad Rancheria



Notes:
This graph assumes that 6,000 gpd of disposal capacity is reserved for the Casino at Master Plan build out flows (15,000 gpd with 60% of the water recycled). This graph also assumes that the Tribal Office, clinic complex, and two homes currently connected to the community leachfield, and the gas station/mini-mart are served with a combined disposal flow of 2,200 gpd (assumes no water recycling). This equates to a base disposal flow of 8,200 gpd. The remaining flow is distributed between homes served and hotel rooms developed. To serve the remaining 20 homes and a 200 room hotel, a disposal capacity of 25,200 gpd would be needed.

INTRODUCTION

The type of wastewater treatment required for disposal alternatives can vary depending on the final disposal or use of the effluent. This has both a regulatory basis and an operational basis. For example, from a regulatory standpoint, a higher level of treatment is required for wastewater to be recycled for toilet flushing than is required for discharge to a leachfield. However, from an operational basis, it is to the owner's advantage to put the cleanest water possible into a leachfield, because it is much more likely to perform better at higher capacity and have a longer operating life. This is especially important when leachfield capacity is very scarce, such as is the case at the Cher-Ae Heights community.

Trust land at Cher-Ae Heights, falls under the regulatory oversight of the Federal government and is not subjected to State or Local regulations. However, non-Trust land and wastewater that flows off of Trust lands falls under State and Local jurisdiction. Leachfields and treatment of wastewater for recycling for toilet flushing on Trust land technically do not fall under the regulations established by State or Local agencies to protect public health and the environment. However, it has been the practice of the Rancheria, and is the basis of this analysis, to create systems that would comply with the intent of these requirements. Discharges to creeks, and ocean outfalls, however, would flow off of Trust land and would need to comply with all standards associated with non-Trust land.

OVERVIEW OF GOVERNING REGULATIONS

Congress passed the Clean Water Act (CWA) in 1972 with the goal of reducing the impacts of the discharge of pollutants to surface waters of the United States. The Act was amended in 1977 and again in 1987 and regulations were established for toxic pollution control and effluent limitations. The CWA governs discharge from "point sources" into "navigable waters of the United States" and provides guidelines for effluent limitations and permitting of these discharges. This is handled under the National Pollution Discharge Elimination System (NPDES). The State of California is fully authorized to administer the NPDES program and the discharge of wastewater from the Rancheria would fall under the NPDES requirements as overseen by the North Coast Regional Water Quality Control Board (NCRWQCB). An NPDES permit would have to be obtained from the NCRWQCB for discharge of wastewater to a surface water body that flowed off of Trust land.

There are no specific Federal regulations governing discharge through leachfields or through recycled water use. However, as stated earlier, State or Local regulations were established to protect public health and the environment, it has been the practice of the Rancheria to voluntarily conform to the intent of the requirements. Individual septic systems and leachfields would fall under the permitting and regulatory oversight of Humboldt County Division of Environmental Health. However, community leachfields on non-trust land fall under the regulation of North Coast Regional Water Quality Control Board. The regulatory requirements of leachfield construction on non-Trust land are contained within Chapter 4 of the Basin Plan. The Basin Plan establishes site evaluation criteria including ground slope and stability, soil depth, depth to groundwater, percolation rates, setback requirements, and other requirements.

Title 22, Chapter 3 of the California Code of Regulations covers treatment requirements for water recycling in California for non-Trust lands (see Appendix C). The North Coast Regional Water Quality Control Board (Regional Board) governs treatment requirements for other disposal options that involve treated effluent on non-Trust lands. Requirements are set to meet water quality objective set out in the "Water Quality Control Plan for the North Coast" (Basin Plan).

Three types of water treatment levels are discussed, which would apply to different disposal options. They are as follows:

- Undisinfected Wastewater
- Disinfected Secondary Wastewater
- Disinfected Tertiary Wastewater

A discussion of each of these treatment options in regards to potential disposal options for Cher-Ae Heights is presented in this section.

Undisinfected Wastewater

Undisinfected wastewater is currently being discharged through the individual residential leachfields and through the Tribal Office and former clinic complex septic systems. The typical design loading rates are much lower for leachfield systems using undisinfected wastewater that has only received low level septic tank treatment. This is because solids and grease from septic tanks can carry over into leachfields and can build up and block the soils pores reducing infiltration. From a technical standpoint, higher levels of treatment can allow an increase in typical loading rates and probable lifespan of the system. However, State and Local regulatory agencies do not allow for the consider of treatment level when designing leachfields.

Secondary Treatment Requirements

If wastewater were to be discharged directly to a surface waterbody such as a nearby stream or the ocean it would need to be treated to secondary standards or higher. The minimum standards for secondary treatment are included in Table 4.1.

Table 4.1: Minimum Standards for Secondary Treatment
Trinidad Rancheria

Component	Average 30 day Concentration	Average 7 day Concentration
BOD_5	30 mg/L	45 mg/L
Total Suspended Solids	30 mg/L	45 mg/L
PH	6.0 to 9.0 at all times	
$CBOD_5$[1]	25 mg/L	40 mg/L
Total Coliform	23 MPN/100 ml	230 MPN/100 ml

[1] Five day carbonaceous biological oxygen demand may be substituted for BOD5 at discretion of permitting authority.

The levels in Table 4.1 are the minimum discharge requirements, or level that the wastewater would have to be treated to prior to discharge from a treatment system. However, the discharge would also have to conform to the Basin Plan. The North Coast Regional Water Quality Control Board, would likely impose other discharge requirements including standards for temperature, phosphate and nitrate levels, turbidity, dissolved oxygen, receiving water minimum flows, and sampling and reporting requirements. The Basin Plan generally prohibits the degradation of the quality of receiving waters and the established discharge requirements would likely be determined based on that limitation. Discharge to a surface water would also need to comply with the California Toxic Rule, which covers priority pollutants.

The Basin Plan makes some special distinctions for coastal streams, stating, "On all coastal streams and natural drainage ways that flow directly to the ocean, all new discharges will be prohibited." The Regional Board has upheld this position on wastewater discharge applications in other areas and it is very unlikely the Rancheria's situation would be viewed any differently. The only other option is to try to change the Basin Plan to allow a discharge to a coastal stream that would also be essentially impossible.

In the following chapter on wastewater disposal options, ocean outfall discharge will be considered potentially feasible and discharge to a coastal stream will be considered infeasible.

Reclaimed/Recycled Water Treatment Requirements

Recycled water intended to be reused for toilet flushing like in the Casino, would need to be treated to tertiary standards, such as is achieved with the Zenon membrane treatment plant. Water recycling regulations are contained in Chapter 3 of Title 22 of the California Code of Regulations (CCR) (See Appendix C). Other types of water recycling, such as irrigation, can have a different level of treatment depending on how the water is to be used. As discussed in a previous chapter, however, recycling water for irrigation does not reduce the wastewater disposal capacity requirement because there is no demand for irrigation in the winter when the disposal of wastewater can be most critical. Therefore, recycling of effluent for toilet flushing in the existing Casino and in a potential new hotel will be the only type of recycling considered in this study. Retrofitting existing homes or the Tribal Office or clinic complex is not considered because of the high costs of dual pluming retrofits and the relatively low use for these other facilities.

SUMMARY OF WASTEWATER TREATMENT APPROACH

The overall objective is to develop cost effective, long term, wastewater management solutions to allow the Rancheria the potential to create additional future developments. Since land for leachfields is scarce, the available land should be managed as best as possible. Continued treatment of water for toilet flushing requires a high level of treatment as provided by the Zenon plant. As will be discussed further in this report, the Zenon plant has expansion capacity in the existing treatment train, and an additional train could be developed in the future if needed.

Given the logic of developing a system to provide good long term performance, continued use and expansion of the Zenon plant to produce high quality effluent makes the most practical sense for Cher-Ae Heights. This system will provide effluent for an expanded community leachfield, and ocean outfall discharge options which are discussed further in the next chapter.

INTRODUCTION

Disposal of the treated wastewater typically drives system design and operation because there are few methods available for disposal from a technical and regulatory standpoint. Basically the treated effluent needs to be put back into the hydrologic cycle. It can be viewed that there are the following three mechanisms to accomplishing this:

- Discharge to the ground and groundwater
- Discharge to a surface water body
- Evaporate it into the air

Different disposal methods employ different mechanisms and sometimes one method can use several mechanisms. Discharge to the ground and groundwater is typically achieved through a leachfield. Irrigation is typically a combination of discharge to the ground and groundwater and evaporation into the air. Discharge to McConnahas Mill Creek and an ocean outfall are examples of discharge to a surface water body. Each of these alternatives is discussed in the following sections.

Depending on which discharge option is selected, the required treatment level can then be determined, (e.g., secondary treatment for discharge to surface water, or tertiary treatment for recycling the wastewater in the hotel). The discussion of disposal options assumed water recycling for toilet flushing is practiced at the proposed hotel, as discussed in Chapter 3. Treatment options are discussed in Chapter 6.

DISCHARGE TO LEACHFIELDS

Cher-Ae Heights currently disposes of wastewater in leachfields. As discussed in Chapter 2, this is the primary means of treatment and disposal for wastewater from the existing homes, and each home generally has their own septic tank and leachfield. The wastewater from the Casino is treated in the Zenon plant and discharged to the community leachfield. Wastewater from the septic tanks from the Tribal Office, the clinic complex, and two homes is discharged directly to the community leachfield without further treatment in the Zenon plant.

The existing Casino leachfield has experienced some operating problems as was discussed in Chapter 2. The community leachfield was designed with a capacity of 10,000 gallons per day. However, with plugging believed to have been caused by the discharge of Casino wastewater to the field before the Zenon plant was completed, the capacity of the leachfield at this time is not known. The existing leachfield should be cleaned and then the capacity should be evaluated through field investigations and hydraulic stress testing to determine the actual operational capacity.

Potential Excess Capacity in Existing Community Leachfield

For this analysis it is assumed that the Rancheria completes the cleaning and evaluation of the existing leachfield and that its capacity is 10,000 gpd as designed. The results of this analysis can be adjusted based on the results of the investigation of the leachfield.

Based on the comparison of water meter usage records for the Casino and the process wastewater flows from the treatment plant, approximately 60% of the current 7,200 gpd average daily flow is recycled back into the Casino and used for toilet flushing, and does not require leachfield disposal. Therefore approximately 2,900 gpd goes from the treatment plant to the leachfield. In addition, an estimated 500 gallons per day are discharged to the leachfield from the Tribal Offices, and an additional 100 gpd from the clinic complex. Two houses are also connected to the community leachfield with an estimated flow of up to 600 gpd. The total estimated flow to the community leachfield is therefore approximately 4,000 gpd. If the community leachfield has an actual long term operating capacity of 10,000 gpd, then there is approximately 6,000 gpd of capacity remaining in the existing community leachfield.

Depending on what the Rancheria wishes to develop in the future, how the flows at the Casino increase, and if more houses are connected to the system, additional leachfield capacity could be required.

The relationship between disposal capacity and the additional required land area needed for leachfield disposal is shown in Figure 5.1. The disposal capacity is based on the existing leachfield, which is 25,000 ft^2 and has a design capacity of 10,000 gpd. Additional land area would be needed when the disposal capacity exceeds the existing community leachfield capacity. Figure 5.1 provides general guidance on overall sizing and assumes that new leachfield disposal sites may need additional land area to account for setbacks, topography, and other site constraints.

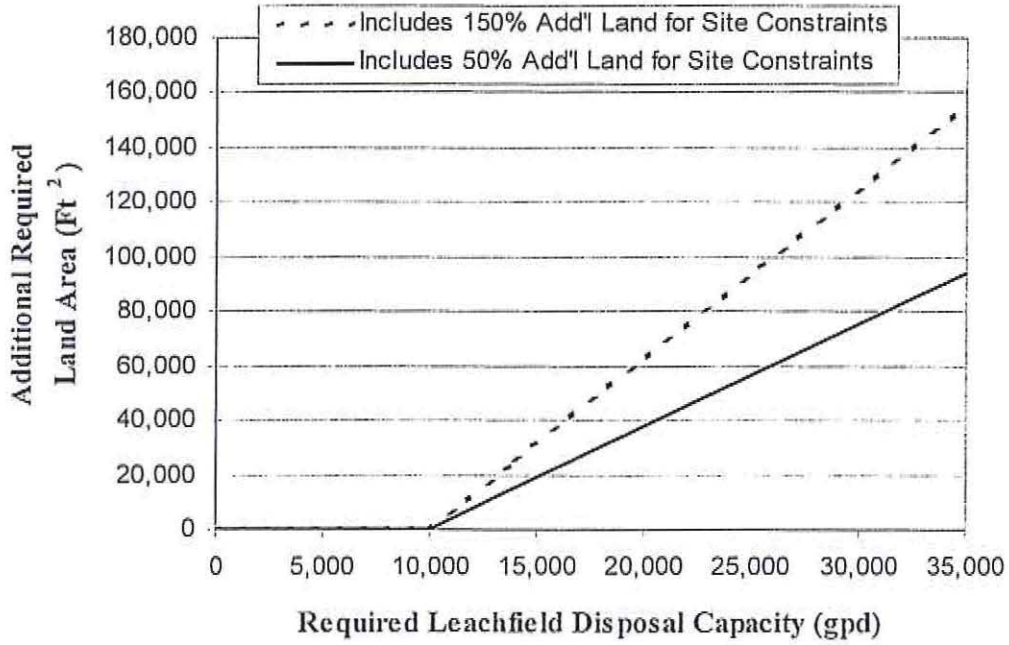
An important issue to consider in planning leachfields is potential reserve capacity. Typical leachfield planning includes siting 100% reserve capacity so that there is a new leachfield location designated if the initial leachfield fails. This planning is done because leachfields are expected to eventually fail, which means their ability to receive wastewater diminishes. The effluent from the Zenon plant is much cleaner than septic tank effluent, but all leachfields are expected to diminish in performance over time. Figure 5.1 does not account for any reserve capacity. Some day the Rancheria may need replacement disposal capacity, which may have to be provided by replacement leachfields or other disposal means.

Several undeveloped sites have been investigated in the past as was discussed under Chapter 2. However, the Rancheria should think broadly in terms of overall land use when planning potential developments. The best land for leachfields may currently be taken up by housing assignments, which were not previously evaluated for leachfield potential. For the Rancheria to create some of the potential developments that have been envisioned, it may be necessary to re-evaluate land use to determine the highest and best use of land for the community. At this time it is not possible to accurately determine additional potential leachfield capacity available at Cher-

Ae Heights because it depends on land use decisions and site characteristics. However, it may be possible for the Rancheria to develop an additional 5-10,000 gpd or more of capacity. Additional planning, field studies, and engineering analysis will be needed to determine what capacity can be developed.

The potential to develop additional leachfield capacity to serve various development levels is considered under the alternatives analysis in the following chapter.

Figure 5.1: Relationship Between Disposal Capacity and Required Leachfield Area Trinidad Rancheria



DISCHARGE BY IRRIGATION

Properly treated wastewater can be used for irrigation of some types of plants. Irrigation, however, is only useful during dry periods when plants need water, unless large and expensive seasonal storage reservoirs are provided. Irrigation with treated wastewater could not be practiced during the wet season because the ground cannot accept additional water and the treated wastewater applied would runoff. The Trinidad area receives a significant amount of rainfall and little irrigation is needed in the area except for during a short period of the summer. It is unlikely that even if wastewater were stored for irrigation in the summer, the demand would be high enough to dispose of all wastewater. Irrigation also takes large areas of land, which is very limited at the Rancheria, and could alternatively be used for other types of development. Irrigation with treated wastewater is often a good option in warmer climates with less rain where irrigation water is needed in greater amounts for longer periods of the year.

Irrigation even just for the summer months would require an extensive piping system and large areas of land. Due to cost prohibitions and limited need for irrigation water, disposal through irrigation would not be a viable option for year-round disposal, and this option is not considered further in this report.

DISCHARGE TO McCONNAHAS/MILL CREEK

A third alternative is the discharge of the treated effluent to McConnahas/Mill Creek. As discussed in more detail in Chapter 4, the Basin Plan prohibits discharges to coastal streams. The consideration of discharge to McConnahas/Mill Creek is impractical and will not be considered further in this report.

DISCHARGE TO AN OCEAN OUTFALL

The last option considered is to discharge the treated wastewater through an ocean outfall some distance off shore. This type of discharge would not fall under the Basin Plan's no new discharge policy. However, the NCRWQCB often requires that outfalls be extended from the shore to a point where the ocean depth is 60 feet below mean sea level or more. Near Cher-Ae Heights the pipeline would have to be approximately 7,600 feet long to reach an ocean depth of 60 feet, The cost for the pipe alone for this option would be approximately $3 million. To make this a more viable option, approval would have to be obtained to terminate the outfall at a shallower depth, which would require demonstration that the required mixing and dilution was met.

An ocean outfall option would have relatively high annual maintenance costs because the Rancheria would need to ensure that the outfall pipe is kept clear of debris and growths. Large storms can also damage the outfall pipe and lead to large repair costs.

A significant advantage to this option is that it would probably allow for much more disposal capacity than on site leachfields, which are limited by the availability of acceptable land. With an ocean outfall, the Rancheria could likely have the capacity to accommodate wastewater flows from many types of future development projects.

The use of an ocean outfall is discussed further under the alternative development chapter of this report.

INTRODUCTION

The Rancheria uses several wastewater treatment methods. At the Cher-Ae Heights property there are two types of systems. Septic tanks are used for treating wastewater prior to discharge to individual leachfields for homes. However, a number of these individual systems have problems and should be replaced. A Zenon membrane treatment plant is used to treat wastewater from the Casino/Restaurant, where the treated wastewater is reused for toiled flushing, and excess treated effluent is discharged to a large community leachfield.

SELECTION OF MOST APPROPRIATE TYPE OF TREATMENT

As was discussed under the previous section, expansion of centralized leachfield systems for disposal of treated effluent from additional developments is one of the most viable options from a permitting perspective. Although, leachfields can be operated with effluent from simple septic tanks, operating a leachfield with highly treated effluent from the Zenon plant greatly increases the potential life of the leachfield, reduces the necessary size of the disposal area, and enhances groundwater quality protection. With so little land available at Cher-Ae Heights it is logical to maximize the value of the land and the potential operating life of a leachfield system through high level treatment of wastewater prior to discharge. Discharge to an ocean outfall is also technically possible and would require a high level of treatment to secondary or tertiary such as provided through the existing Zenon plant.

Given the logic of developing a system to provide good long term performance, continued use and expansion of the Zenon plant to produce high quality effluent makes the most practical sense for Cher-Ae Heights. This system will provide effluent for an expanded community leachfield or ocean outfall discharge. Thus, it is recommended that all development connected to a community wide system be treated prior to discharge.

The needed capacity of the wastewater treatment system depends on the amount of development the Rancheria decides to proceed with and the number of homes they would like to connect to a community system. The tradeoffs between treatment plant expansion options and development served are discussed below.

TREATMENT PLANT CAPACITY AND EXPANSION OPTIONS

The capacity of the existing treatment plant is 15,000 gpd average daily flow, but was designed to be expanded to 30,000 gpd average daily flow without requiring extensive retrofitting or building a parallel treatment train. The Zenon, ZenoGem system is a combination of biological treatment and membrane separation. In the existing system, the wastewater from the Casino is pumped to a 15,000 gallon holding tank. It is then pumped into a concrete bioreactor where it is aerated and bacteria breaks down the wastewater. The wastewater is then filtered through the ZeeWeed membranes. It is then polished with activated carbon and disinfected with a UV system and recycled back to the Casino toilets, with excess flow disposed of in the existing leachfield. There are currently three ZeeWeed membrane "cartridges" in the bioreactor. The bioreactor

basin was designed to allow for the addition of three more cartridges without having to resize the basin. This would effectively double the size of the treatment system, giving it a capacity to handle 30,000 gpd.

Additional pumps, blowers, and piping would have to be added to handle 30,000 gpd and a parallel carbon polishing system would have to be added. Upgrades of the electrical system would also be required. The UV disinfection systems would also required a larger impeller on the existing pump, but the system itself is sufficiently sized to handle the new flow. This can all be accommodated in the existing building. The existing treatment system has also been experiencing flows close to the peak flow capacity of the treatment plant, and additional tankage may be required at the headworks to allow the peak flows to be equalized if additional flows are added in the future. For treatment capacity beyond 30,000 gpd average flow (60,000 gpd peak flow), extensive modifications would be required to potentially create a parallel treatment train to provide the needed capacity. How the treatment plant would be expanded should be assessed further when a final design of the proposed facilities is performed based on the Rancheria's specific development plan.

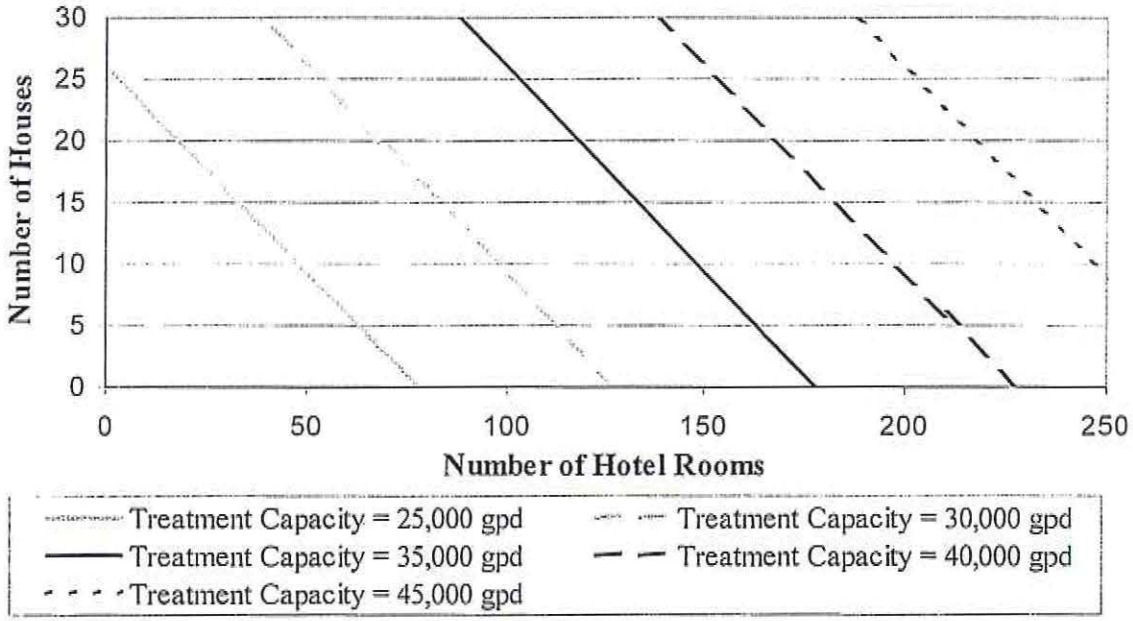
INTRODUCTION

Previous chapters developed the potential wastewater treatment flow, and disposal flow based on the relationship between how many homes may be connected to a centralized treatment system, and how many hotel rooms may be developed. Treatment regulations were also considered along with potential disposal options, and it was concluded that use and expansion of existing leachfields, or an ocean outfall are potentially feasible disposal options. Treatment options were considered as well and it was concluded that use and expansion of the existing Zenon plant could meet potential flow requirements as well as treatment requirements for the potential disposal options. In this chapter, the overall development conditions are summarized in one place to lead into the development of costs in the following chapter and the comparison of alternatives in the final chapter.

WASTEWATER FLOW CAPACITY SUMMARY

The projected wastewater flows were developed in Chapter 3 and a summary of the relationships is presented in Figure 7.1.

Figure 7.1: Treatment Capacity Relationship Between Number of Cher-Ae Heights Houses Served and Proposed New Hotel Rooms
Trinidad Rancheria

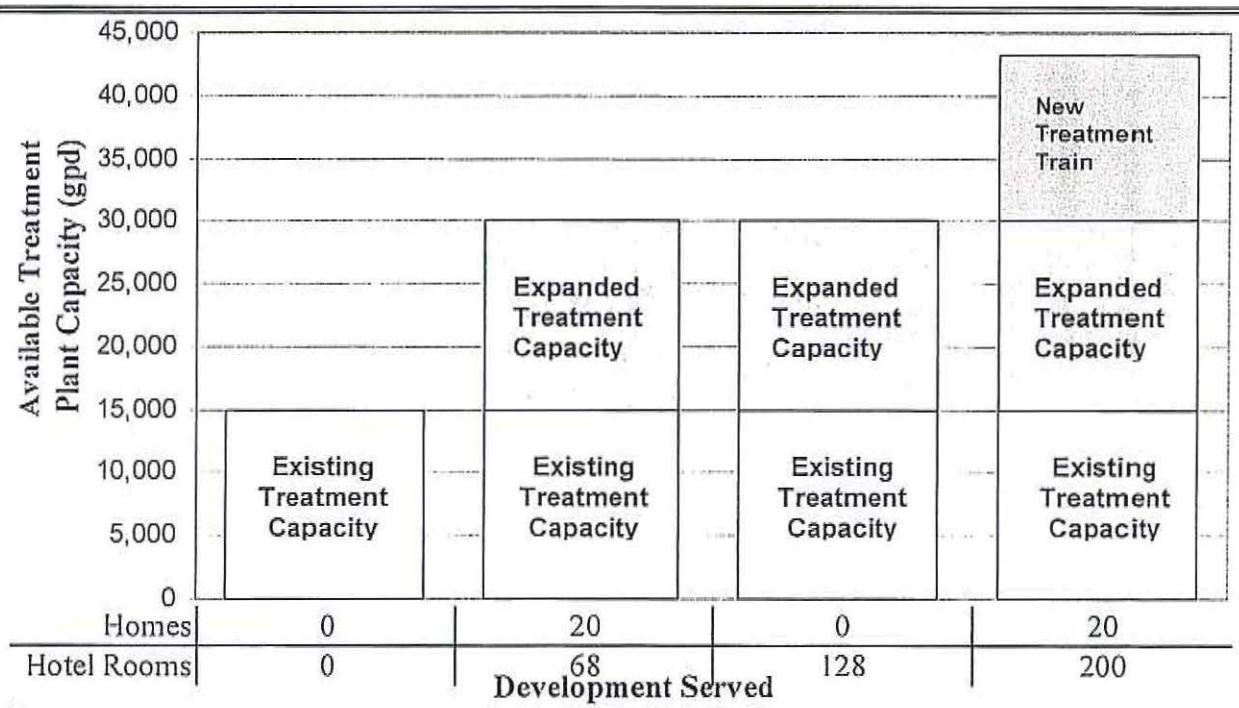


Note: Assumes flows from the future Casino (15,000 gpd average) plus the Tribal Office, clinic complex, two homes currently connected to the community leachfield, and gas station/mini-mart are served (for a total required treatment capacity of 17,200) in addition to the combination of homes served and hotel rooms developed.

WASTEWATER TREATMENT CAPACITY SUMMARY AND ANALYSIS

Figure 7.1 is used to determine projected future flows that will requirement treatment at the Zenon plant. Different combinations of development can lead to different projected flows. The expansion requirements of the treatment plant were also examined relative to different combinations of development. Figure 7.2 shows a relationship between the stages in treatment plant capacity and what combinations of developments may be served at the various stages. For example, if the existing treatment plant was expanded to its maximum size of 30,000 gpd, it could serve existing development plus the gas station/mini-mart and either a 134-room hotel and no homes, or a 74 room hotel and all 20 Cher-Ae Heights homes. The projected flow for Cher-Ae Heights including the Casino/Restaurant, Tribal Office, former clinic building, existing homes, a 200 room hotel, and a gas station/mini-mart is approximately 42,600 gpd. Thus to treat all wastewater, significant expansion of the existing treatment plant would be needed.

Figure 7.2: Developed Treatment Capacity Versus Development Served
Trinidad Rancheria



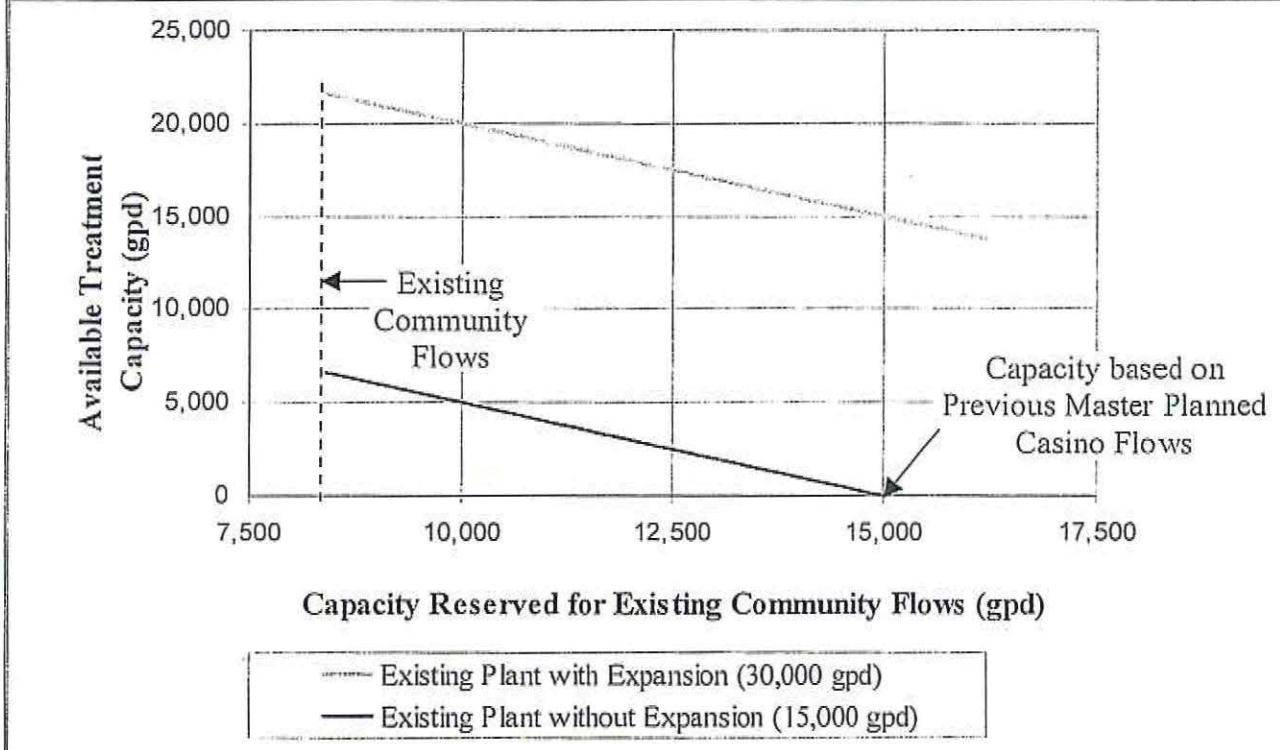
Notes:
The capacity of the existing treatment plant is 15,000 gpd, which is all reserved for the Casino at Master Plan build out flows. At an expanded capacity of 30,000 gpd, assuming the Tribal Office, clinic complex, and two homes currently connected to the community leachfield, the Casino at build out flows, and a gas station/mini-mart are served, there are many different possible combinations of number of Cher-Ae Heights homes served or hotel room developed. To serve all 20 homes and a 200 room hotel, as well as the other development mentioned above, a treatment capacity of 43,200 gpd would be needed, which would require the construction of a new treatment train.

DEVELOPMENT WITHIN EXISTING WASTEWATER TREATMENT CAPACITY

This section evaluates what types of new and existing development could be served with the existing treatment plant or the plant at it maximum expanded capacity without the assumption that capacity must be reserved for the Casino master plan build out flows. This is in contrast to the previous section where it was assume that capacity must be reserved for Casino master plan build out flows.

Figure 7.3 shows the available treatment capacity with increasing amounts of capacity reserved for existing community flows, which include the Casino, Tribal Office, clinic complex, and two homes currently connected to the community leachfield. Figure 7.3 shows the available capacity for the existing plant and for the plant expanded to its maximum capacity of 30,000 gpd.

Figure 7.3: Treatment Capacity Relationship Between Reserved Capacity and Available Capacity
Trinidad Rancheria



Note: Existing community flows include the Casino, Tribal Office, clinic complex, and two homes currently connected to the community leachfield. The increase in reserve capacity is attributable to the master planned Casino flows. No growth is assumed for the other community flows.

Figure 7.3 shows that both as reserve capacity is reduced and as the treatment plant are expanded, the available treatment capacity increases. The options for using the available treatment capacity include serving either the 20 existing homes not currently on the community leachfield or devoting capacity to new development for a hotel and gas station/mini-mart, or both. Table 7.1 presents the potential treatment options under four scenarios that are part of Figure 7.3. Two options are presented for the existing treatment plant at minimum reserve capacity and maximum reserve capacity. The same two options are presented for an expanded treatment plant.

Table 7.1: Potential Treatment Options for Proposed and Existing Development Trinidad Rancheria

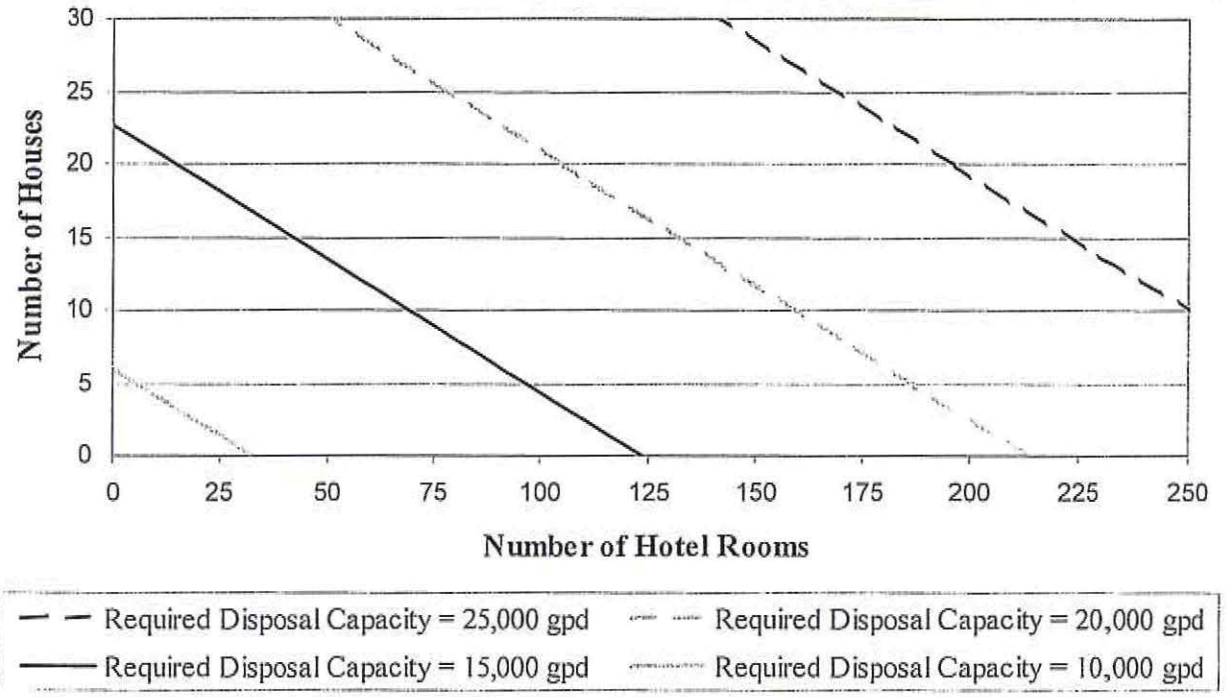
	Existing Treatment Plant Capacity (15,000 gpd)		Expanded Treatment Capacity (30,000 gpd)	
	Focus on Existing Homes Served	**Focus on Development**	**Focus on Existing Homes Served**	**Focus on Development**
Maximum Reserve Capacity (Casino at master planned flows)	Casino only, no other existing development	No new development	20 Homes and 68 Hotel Rooms plus a Gas Station/ Mini-mart	128 Hotel Rooms plus a Gas Station/ Mini-mart
Minimum Reserve Capacity (Reserve Capacity for Existing Community Flows only)	20 homes and no Hotel or Gas Station/ Mini-mart	56 Hotel Rooms plus Gas Station/ Mini-mart	20 Homes and 146 Hotel Rooms plus a Gas Station/ Mini-mart	200 Hotel Rooms plus a Gas Station/ Mini-mart and 2 Homes

Note: Existing community flows are assumed to be served in all scenarios and include the Casino, Tribal Office, clinic complex, and two homes currently connected to the community leachfield (8,400 gpd).

WASTEWATER DISPOSAL CAPACITY SUMMARY

The previous section addressed how required treatment capacity would be provided. This section addresses how disposal capacity is to be provided. The projected wastewater disposal flows were developed in Chapter 3 and a summary of the relationships is presented in Figure 7.4. Figure 7.4 is based on disposal of flows from the Casino at build out conditions plus the Tribal Office, clinic complex, two homes that are currently connected to the community leachfield, and gas station/mini-mart.

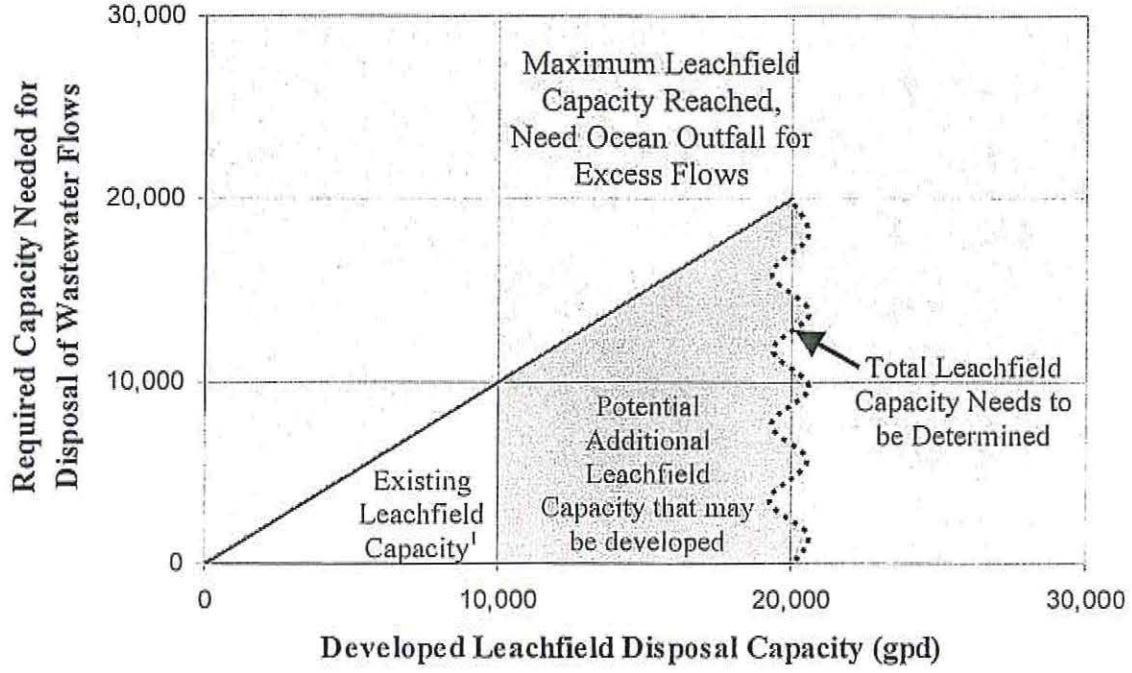
Figure 7.4: Disposal Capacity Relationship Between Number of Cher-Ae Heights Houses Served and Proposed New Hotel Rooms
Trinidad Rancheria



Notes:
This graph assumes that 6,000 gpd of disposal capacity is reserved for the Casino at Master Plan build out flows (15,000 gpd with 60% of the water recycled). This graph also assumes that the Tribal Office, clinic complex, and two homes currently connected to the community leachfield, and the gas station/mini-mart are served with a combined disposal flow of 2,200 gpd (assumes no water recycling). This equates to a base disposal flow of 8,200 gpd. The remaining flow is distributed between homes served and hotel rooms developed. To serve the remaining 20 homes and a 200 room hotel, a disposal capacity of 25,200 gpd would be needed.

Use and expansion of the community leachfield system and ocean outfall disposal were the two viable options developed. As will be seen in the following chapter, development of leachfield capacity is less expensive than an ocean outfall. However, leachfield capacity can be a limiting factor in Rancheria development and ocean outfall capacity may be needed. Ocean outfall capacity is needed when leachfield capacity is exceeded and this relationship is shown in Figure 7.5

Figure 7.5: Relationship Between Required Disposal Capacity, Developed Leachfield Capacity, and the Need for Additional Disposal through an Ocean Outfall Trinidad Rancheria



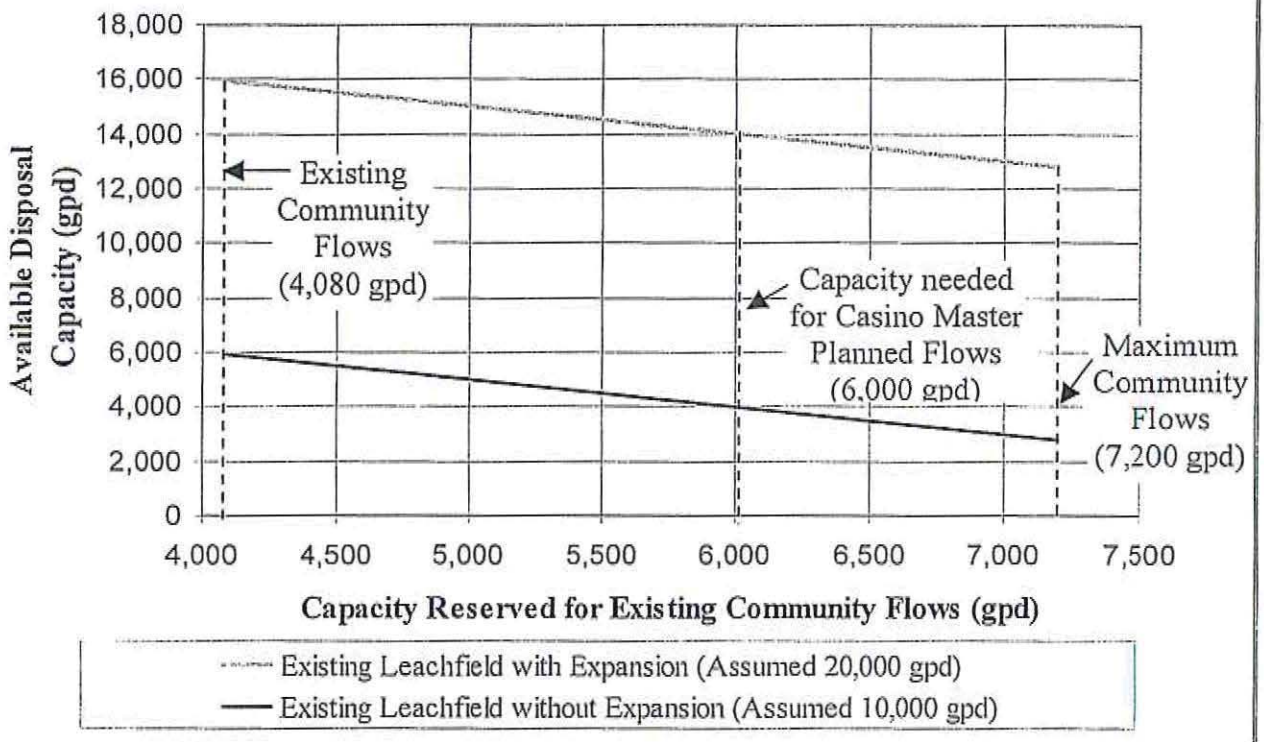
[1] Assumed to be 10,000 gallons per day. Actual capacity must be verified.

DEVELOPMENT WITHIN EXISTING AND POTENTIALLY EXPANDED LEACHFIELD DISPOSAL CAPACITY

The previous section looked at what combinations of new and existing development could be served within existing and expanded leachfield disposal capacities. The analysis assumed that capacity was always reserved for Casino at master plan build out flows. This section evaluates what types of new and existing development could be served with the existing leachfield with an assumed disposal capacity of 10,000 gpd and a potentially expanded leachfield system with an assumed capacity of 20,000 gpd without the assumption that capacity is reserved for the Casino master plan build out flows.

Figure 7.6 shows the available disposal capacity with increasing amounts of capacity reserved for existing community flows, which include the Casino, Tribal Office, clinic complex, and two homes currently connected to the community leachfield.

Figure 7.6: Disposal Capacity Relationship Between Reserved Capacity and Available Capacity
Trinidad Rancheria



Note: Existing community flows include the Casino, Tribal Office, clinic complex, and two homes currently connected to the community leachfield. The increase in reserve capacity is attributable to the master planned Casino flows. At the maximum community flows, the Casino is assumed to be at its master planned design flow. No growth is assumed for the other community flows.

Figure 7.6 shows that both as reserve capacity is reduced and as the potential leachfield capacity is expanded the additional disposal capacity increases. The options for using the available disposal capacity include serving either the 20 existing homes not currently on the community leachfield or devoting capacity to new development for a hotel and gas station/mini-mart, or both. Table 7.2 presents the potential treatment options under four scenarios that are part of Figure 7.6. Two capacity options are presented for disposal, the existing capacity assumed to be 10,000 gpd and a potential assumed capacity of 20,000 gpd. The development potential for both these options for minimum and maximum Casino reserve disposal capacity is also included.

Table 7.2: Potential Disposal Options for Proposed and Existing Development Trinidad Rancheria

	Assumed Existing Disposal Capacity (10,000 gpd)		Potential Assumed Disposal (20,000 gpd)	
	Focus on Existing Homes Served	Focus on Development	Focus on Existing Homes Served	Focus on Development
Maximum Reserve Capacity (Casino at master planned flows)	9 homes and no Hotel or Gas Station Mini-mart	33 Hotel Rooms plus a Gas Station/ Mini-mart	20 Homes and 105 Hotel Rooms plus a Gas Station/ Mini-mart	200 Hotel Rooms plus a Gas Station/ Mini-mart and 3 Homes
Minimum Reserve Capacity (Reserve Capacity for Existing Community Flows only)	20 homes and no Hotel or Gas Station/ Mini-mart	89 Hotel Rooms plus a Gas Station/ Mini-mart	20 Homes and 162 Hotel Rooms plus a Gas Station/ Mini-mart	200 Hotel Rooms plus a Gas Station/ Mini-mart and 13 Homes

Note: Existing community flows are assumed to be served in all scenarios and include the Casino, Tribal Office, clinic complex, and two homes currently connected to the community leachfield (4,080 gpd).

STAGED DEVELOPMENT WITHIN EXISTING TREATMENT PLANT AND LEACHFIELD CAPACITIES

The Trinidad Rancheria has several options for connecting new and existing development to their community treatment and disposal systems, depending on how much capacity is reserved for the Casino at master planned flows and which parts of their system are expanded. Figures 7.3 and 7.6 showed the variations in available treatment and disposal capacity depending on the amount of capacity that was reserved for the Casino. Tables 7.1 and 7.2 took that information and added figures on the types of existing and new development that could be served with the available capacities, with a focus on either connecting existing homes or developing a new hotel and gas station/mini-mart.

The information from the previous tables was combined in Table 7.3. Table 7.3 shows 3 different scenarios for the use of existing and expanded treatment and disposal facilities at the Casino. The first scenario assumes that the treatment plant and leachfield are not expanded. In this case the amount of new and existing development that can be served is limited by the treatment capacity. The second scenario assumes that the treatment plant is expanded, but the leachfield is not. In this case the amount of new and existing development that can be served is limited by the disposal capacity of the existing leachfield. In the final scenario, it is assumed that the treatment plant and leachfield are expanded. Assuming that leachfield disposal capacity could eventually be expanded to handle a total flow of 20,000 gpd, it is the expanded treatment plant of capacity of 30,000 gpd that limits the new and existing development served. For more specific information on the development options under these scenarios, see Table 7.3.

Table 7.3: Potential Treatment and Disposal Options for Proposed and Existing Development
Trinidad Rancheria

	TREATMENT PLANT LIMITING Existing Treatment Plant (15,000 gpd) Assumed Existing Disposal Capacity (10,000 gpd)		LEACHFIELD LIMITING Expanded Treatment Plant (30,000 gpd) Assumed Existing Disposal Capacity (10,000 gpd)		TREATMENT PLANT LIMITING Expanded Treatment Plant (30,000 gpd) Expanded Disposal Capacity (15,000 gpd to 19,000 gpd)	
	Focus on Existing Homes Served	**Focus on Development**	**Focus on Existing Homes Served**	**Focus on Development**	**Focus on Existing Homes Served**	**Focus on Development**
Maximum Reserve Capacity (Casino at master planned flows)	Casino only, no other existing development	No new development	9 homes and no Hotel or Gas Station Mini-mart	33 Hotel Rooms plus a Gas Station/ Mini-mart	20 Homes and 68 Hotel Rooms plus a Gas Station/ Mini-mart	128 Hotel Rooms plus a Gas Station/ Mini-mart
Minimum Reserve Capacity (Reserve Capacity for Existing Community Flows only)	20 homes and no Hotel or Gas Station/ Mini-mart	56 Hotel Rooms plus Gas Station/ Mini-mart	20 homes and no Hotel or Gas Station Mini-mart	89 Hotel Rooms plus a Gas Station/ Mini-mart	20 Homes and 146 Hotel Rooms plus a Gas Station/ Mini-mart	200 Hotel Rooms plus a Gas Station/ Mini-mart and 2 Homes

Note: Existing community flows are assumed to be served in all scenarios and include the Casino, Tribal Office, clinic complex, and two homes currently connected to the community leachfield (4,080 gpd).

INTRODUCTION

Potential development conditions were summarized in the previous chapter. Costs for various levels of expansion are considered in this chapter and alternative scenarios are considered in the following chapter.

Probable costs for the following treatment and disposal options are develop in this chapter.

Treatment Options
- Utilize Existing Treatment Plant
- Expand Treatment Plant
- Construct a Parallel Treatment Train

Disposal Options
- Construction of a Community Leachfield
- Construction of an Ocean Outfall

In addition to treatment and disposal costs, an estimate of the collection system costs for conveying wastewater from a new hotel and gas station/mini-mart and from the Cher-Ae Heights homes is presented. In addition to collection system costs, there would be a cost associated with the installation of a dual plumbing system in the hotel to recycle wastewater flows, which should be considered when evaluating potential hotel costs. In addition, if the existing homes are not connected to a new treatment system, there would be costs associated with repair and replacement of the existing septic and leachfield systems over time as they fail.

Each of these major cost areas is considered in the following sections.

TREATMENT OPTIONS

The treatment options are relatively straightforward. The first is just to utilize the existing capacity at the Zenon treatment plant. The second would be to expand the plant to double its capacity using the built-infrastructure that was included in the original design.

Utilize Existing Treatment Plant

The existing treatment system should be able to accommodate 15,000 gpd for the proposed facilities without any additional costs. Thus, there are no additional capital costs for utilizing the full capacity of the existing treatment plant. There would be minor increases in operations and maintenance costs, which are not included here.

Expand Existing Treatment Plant

The expansion to a 30,000 gpd plant would require relatively minor capital costs when compared to the construction of a new plant. Our estimate of probable costs for expansion of the existing treatment plant is presented in Table 8.1. Additional operating costs would be associated with additional electrical consumption, sludge disposal, and carbon usage, however these costs would be incremental, and are not included here.

Table 8.1: Estimated Capital Costs for Treatment Plant Expansion Trinidad Rancheria

Description	Quantity	Unit	Unit Cost	Total Cost
ZeeWeed Cartridges	3	Each	$10,000	$30,000
Blower	1	Each	$32,000	$32,000
UV Pump Impeller Replace	1	Lump Sum	$2,000	$2,000
Recirculation Pump	1	Each	$5,000	$5,000
Carbon System	1	Lump Sum	$5,000	$5,000
			Subtotal	**$74,000**
			15% Contingency	$11,100
			25% Engineering	$18,500
			TOTAL	**$103,600**
			Rounded to	**$110,000**

Construct a Parallel Treatment Train

If the Rancheria wanted to treat the wastewater from all 20 existing homes and from a 200 room hotel, they would need a treatment capacity of 42,600 gpd. This would, exceed the capacity of the existing treatment plant, even with the incremental expansion capabilities. A parallel treatment train would need to be constructed, which would require new tankage, pumps, treatment units, and support facilities. The cost of such an expansion would depend on how large the Rancheria would like to expand the plant. There would be some shared facilities with the existing plant so there would be some economies of scale relative to the cost for the existing plant. The potential need to expand the treatment plant and associated costs should be determined after the Rancheria has considered development scenarios further.

DISPOSAL COSTS

Two disposal methods were investigated in this assessment. The costs for construction of a community leachfield and the construction of an ocean outfall are presented in this section.

Costs for Construction of a Community Leachfield

The costs for developing a community leachfield were estimated based on doubling the existing capacity. As previously discussed, the amount of capacity that can be developed depends on the areas that are available for development and their characteristics. The areas available for development depend on land use decisions. For this cost analysis it is assumed that an additional 10,000 gallons per day of leachfield capacity is developed. Based on the design of the original community leachfield, it is assumed that a new leachfield can percolate approximately 5 gpd per linear foot. This means that 2,000 feet of leach trench will be required. It is estimated that this will require 25,000 square feet plus additional areas for setbacks or other site constraints. Our opinion of the probable capital costs for constructing expanded community leachfields and

piping to them is provided in Table 8.2. The actual cost of leachfield construction will depend on where the leachfields are located with respect to the new facilities, actual soil and groundwater conditions, and other site development issues.

The existing Casino leachfield has also experienced some performance problems from plugging, due to untreated effluent and grease that were discharged to the new leachfield for several months before the treatment plant was completed. The existing leachfield should be cleaned and then the capacity should be evaluated to determine the actual operational capacity. The costs for cleaning and evaluating the existing leachfield are not included in the cost estimate in Table 8.2.

Table 8.2: Estimated Capital Costs for the Construction of Community Leachfields (Capable of Handling Flows from 200-room Hotel & Gas Station) Trinidad Rancheria

Description	Quantity	Unit	Unit Cost	Total Cost
Force Mains	1,000	LF	$40	$40,000
Leachfield Lines	2,000	LF	$20	$40,000
Land Preparation and Cleanup	1	LS	$25,000	$25,000
			Subtotal	**$105,000**
			15% Contingency	$16,000
			25% Soil Sciences, Field Research, Engineering	$26,000
			TOTAL	**$147,000**
			Rounded to	**$150,000**

Costs do not include additional pump station and control systems at the treatment plant.
Costs do not include demolition or relocation of existing improvements.

Costs for Construction of an Ocean Outfall

An ocean outfall disposal option is not constrained by capacity like the community leachfield system would be. The costs developed for an ocean outfall could handle flows from all existing and proposed development including all homes at Cher-Ae Heights and a 200 room hotel or potentially even more if the Rancheria wished. The major cost involved with the construction of an ocean outfall is the development of a pipeline from Cher-Ae Heights to the ocean discharge point and then a pump station.

The NCRWQCB often requires that outfalls be extended from the shore to a point where the ocean depth is 60 feet below mean sea level or more. Near Cher-Ae Heights the pipeline would have to be approximately 7,600 feet long to reach an ocean depth of 60 feet. It is possible that the Rancheria could reduce the cost of this option by obtaining approval to terminate the outfall at a shallower depth. This would require a study to demonstrate that the rate of mixing and dilution required by the NCRWQCB was met.

Our opinion of probable costs for an ocean outfall are presented in Tables 8.3 and 8.4. Table 8.3 assumes a discharge pipe 2,000 feet long could be permitted. Table 8.4 assumes that the discharge pipe would have to be 7,600 feet long. As can be seen from these two tables, the cost dramatically increases for the longer pipe length.

Table 8.3: Estimated Capital Costs for the Construction of Ocean Outfall with 2,000 Ft Discharge Pipe
Trinidad Rancheria

Description	Quantity	Unit	Unit Cost	Total Cost
Pump Stations	1	Each	$150,000	$150,000
Force Mains	1,000	LF	$35	$35,000
Outfall Piping	2,000	LF	$40	$80,000
Directional Drilling	2,000	LF	$200	$400,000
			Subtotal	**$665,000**
			15% Contingency	$100,000
			25% Engineering	$165,000
			25% Permitting	$165,000
			15% Special Oceanographic Studies	$100,000
			TOTAL	**$1,195,000**
			Rounded to	**$1,200,000**

Table 8.4: Estimated Capital Costs for the Construction of Ocean Outfall with 7,600 Ft Discharge Pipe
Trinidad Rancheria

Description	Quantity	Unit	Unit Cost	Total Cost
Pump Stations	1	Each	$150,000	$150,000
Force Mains	1,000	LF	$35	$35,000
Outfall Piping	7,600	LF	$40	$304,000
Directional Drilling	7,600	LF	$200	$1,520,000
			Subtotal	**$2,009,000**
			15% Contingency	$301,000
			15% Engineering	$301,000
			10% Permitting	$200,000
			5% Special Oceanographic Studies	$100,000
			TOTAL	**$2,911,000**
			Rounded to	**$3,000,000**

The cost of an ocean outfall with a 2,000 ft pipe is considerably higher than the cost of a community leachfield. The gap between the leachfield cost and the outfall cost for a 7,600 ft pipe is even greater. Although an outfall could provide ample disposal capacity, it is potentially very costly, could be difficult to permit, and may generate public controversy and opposition.

COLLECTION SYSTEM COSTS

The cost for transporting the wastewater from the gas station and hotel or from Cher-Ae Heights residences to a central treatment system would depend on their location and whether the flow can be conveyed by gravity or whether it would have to be pumped. There are some low areas at the Rancheria and for the purposes of this conceptual analysis it is assumed that the two pump stations would be needed. Our opinion of the probable cost for collection and transport of wastewater from the hotel and gas station/mini-mart to the treatment plant are present in Table 8.5. These costs assume that the flows would have to be pumped to the treatment plant.

Table 8.5: Estimated Capital Costs for Hotel and Gas Station Collection System Trinidad Rancheria

Description	Quantity	Unit	Unit Cost	Total Cost
Pump Station at Hotel & Gas Station	2	Each	$75,000	$150,000
Forcemain	2,000	LF	$40	$80,000
			Subtotal	**$230,000**
			15% Contingency	$35,000
			15% Engineering	$35,000
			TOTAL	**$300,000**
			Rounded to	**$300,000**

Our opinion of the probable cost for collection and transport of wastewater from the Cher-Ae Heights homes to the treatment plant are present in Table 8.6. These costs assume that the flows would have to be pumped to the treatment plant from two new pump stations.

Table 8.6: Estimated Capital Costs for Residential Collection System Trinidad Rancheria

Description	Quantity	Unit	Unit Cost	Total Cost
Pump Station	2	Each	$75,000	$150,000
Forcemains	1,000	LF	$40	$40,000
Gravity Mains	2,000	LF	$50	$100,000
			Subtotal	**$290,000**
			15% Contingency	$43,500
			15% Engineering	$43,500
			TOTAL	**$377,000**
			Rounded to	**$400,000**

The following chapter provides a summary of alternatives and overall recommendations.

INTRODUCTION

This report is intended as a planning study to provide the Rancheria with information and planning tools to make informed decisions concerning wastewater treatment and disposal options for existing and potential future facilities. As a planning document, this work includes conceptual level analysis of the relationships that affect the decision making process. The Rancheria should utilize the findings of this report to focus their efforts on the preferred development strategy and the steps necessary to further the implementation process. Site and project specific configuration and cost information along with potential permitting requirements should be evaluated based on the Rancheria's specific development plan.

ALTERNATIVE SUMMARY AND RECOMMENDATIONS

The Trinidad Rancheria is considering the addition of a new hotel as well as a new gas station/min-mart. Existing homes on septic systems could also be served from an alternative system. The addition of these facilities requires that the Rancheria plan for the treatment and disposal of the wastewater generated at these facilities. The Rancheria has a number of options available to treat and dispose of their wastewater. For planning purposes, we have created a number of alternatives for comparison purposes that are summarized in Table 9.1.

IMPLEMENTATION STRATEGY

The construction of a hotel or other development, will require advanced planning to deal with the wastewater infrastructure requirements. To further the implementation process, we recommend the following steps in this order of priority:

- Clean existing leach lines at the Casino leachfield
- Perform a study to evaluate the capacity of the existing Casino leachfield
- Evaluate all property at Cher-Ae Heights for leachfield potential
- Complete strategic development planning in part based on the findings of this study and the result of evaluation of leachfield potential
- Create Development strategy that may include phasing of connections to the wastewater system and expansion of treatment and disposal capacity
- Design, and permit as needed, infrastructure improvements
- Construct infrastructure improvements prior to completion of the new developments

Table 9.1: Summary of Alternative Costs and Issues
Trinidad Rancheria

Alt#	Development Served	Treatment Option	Disposal Option	Capital Cost for Treatment and Disposal	Degree of Permitting	Comments
1	Casino, Tribal Office, clinic complex, two houses	Existing treatment capacity at 15,000 gpd	Discharge to existing Casino Leachfield	$0	None (no change)	The master planned future average flow for the Casino plus the other existing developments use existing capacity.
2	Casino, Tribal Office, clinic complex, two houses, plus gas station/m-m, and a 44 room hotel (or 8 Cher-Ae Heights homes)	Upgrade existing treatment capacity to 30,000 gpd	Discharge to existing Casino Leachfield	$110,000	None (Assumes no Federal Oversight required)	For this alternative the number of hotel rooms or homes served is limited by the Casino leachfield disposal capacity.
3	Casino, Tribal Office, clinic complex, two houses, plus gas station/m-m, and a 134 room (or 74 room hotel and 20 Cher-Ae Heights homes)	Upgrade existing treatment capacity to 30,000 gpd	Increase Discharge Capacity by adding new leachfield for 5,000 gpd	$460,000	None (Assumes no Federal Oversight required)	This alternative is limited by treatment capacity. In addition, it may be difficult to find sufficient leachfield area. If not enough area can be found, development needs to be reduced or an ocean outfall considered.
4	Casino, Tribal Office, clinic complex, two houses, plus gas station/m-m, and a 200 room and 5 Cher-Ae Heights homes (or 116 room hotel and 20 Cher-Ae Heights homes)	Upgrade existing treatment capacity to 30,000 gpd, and build a new treatment train	Increase Discharge Capacity by adding new leachfield for 10,000 gpd	$460,000 + cost of additional treatment facilities	None (Assumes no Federal Oversight required)	It may be difficult to find sufficient leachfield area. If not enough area can be found, development needs to be reduced or an ocean outfall considered.
5	Casino, Tribal Office, clinic complex, two houses, plus gas station/m-m, and a 200 room and 20 Cher-Ae Heights homes	Upgrade existing treatment capacity to 30,000 gpd, and build a new treatment train	Ocean outfall Discharge	$1,460,000 to $3,460,000 + cost of additional treatment facilities	Difficult (Assumes state and local involvement)	This option has ample disposal capacity for currently proposed development. However, the cost is much higher than the other alternatives, and treatment plant expansion would be required to treat the higher flows.

Appendix A

Septic System Survey Summary Table

SITE DESC					NFORMATION						
#	Address	Street	Area	Assig	of ch d ft.)	Leach Field Map?	Slope of Leach Field (%)	Reserve Area Available?	Soil Class	Depth to Limiting Condition (feet)	Type of Limiting Condition
1	1901	Pishka Ct	A	David Weat	0	yes	3	yes	2	4	groundwater
2	1902	Pishka Ct	A	Carleen Bro	x 2	yes	3	yes	2	5	groundwater
3	1903	Pishka Ct	A	Tracy Cady	0	yes	0-1	yes	2	4	groundwater
4	1904	Pishka Ct	A	Dwayne Du	0	yes	1	yes	2	5	groundwater
5	1905	Pishka Ct	A	Andrew Lar	0	yes	8	yes	2	6	groundwater
6	1906	Pishka Ct	A	Deborah He	0	yes	0-1	yes	2	6	groundwater
7	1907	Pishka Ct	A	Vivian Lewi	0	yes	3	yes	2	6	groundwater
8	109	Twe-Goh Ct	A	David Silva	0	yes	2	yes	2	8.5	groundwater
9	112	Twe-Goh Ct	A	Vacant (Trib		n/a	n/a	n/a	2	9	groundwater
10	115	Twe-Goh Ct	A	Michael Ber	000	yes	0-2	yes	2	8.5	groundwater
11	116	Twe-Goh Ct	A	Jessie Quin	000	yes	3	yes	2	>9	groundwater
12	119	Twe-Goh Ct	A	Deanna Chi	000	yes	5	yes	2	8.5	groundwater
13	122	Twe-Goh Ct	A	Garth Sund	000	yes	#	#	2	#	#
14	1	Cher-Ae Ln	R	Tribal Office		no	2-4	no			
15	15	Cher-Ae Ln	R	Cathy Silva		yes	5-10	no	2		
16	101	Cher-Ae Ln	R	Marian Seid	0	yes	3	no	2	1.5	groundwater
17	9	Ma-We-Mor-View Ln	R	UIHS		no	2-4	no			
18	28	Ma-We-Mor-View Ln	R	David Letso	0	yes	2	no	2	5	groundwater
19	71	Ma-We-Mor-View Ln	R	Christensen		no	2-4	no			
20	131	Ma-We-Mor-View Ln	R	Louis E. Du		no	n/a	yes	3	3	groundwater
21	131-C	Ma-We-Mor-View Ln	R	Louis G. Du		no	n/a	yes	3	3	groundwater
22	25	Pa-Pah Ln	R	Nicole Van I		yes	6	no	2	4	bedrock
23	29	Pa-Pah Ln	R	Juanita San	0	yes	4	no	3	2	groundwater
24	33	Pa-Pah Ln	R	Larry Letson	0	yes	5	no	2	2	groundwater
25	67	Pa-Pah Ln	R	Sonya Rhod	0	yes	4	yes	2	9	bedrock
26	72	Pa-Pah Ln	R	Carol & Keit		no	4	no	2 to 1	4	groundwater
27	73	Pa-Pah Ln	R	Vera Weath		no	3	no	2	2.5	groundwater
28	78	Pa-Pah Ln	R	Kim Martinel	0	yes	2	yes	2 to 1	4	groundwater
29	821	Scenic	R	Lisa Sundbe	0	yes	8	yes	2	3	groundwater
30	824	Scenic	R	Rose Joy Su		no	unk.	no	2	2	groundwater
31	888	Scenic	R	Mark Sundbi		no		no	2	2.5	groundwater
32	930	Scenic	R	Joannie Ber		yes	n/a	no	n/a	n/a	n/a
33	950	Scenic	R	Lilian M. Qu		yes	4	no	2	5.5	groundwater
34	80	Ter-Ker-Coo Ln	R	Shirley Laos	00	yes	4	yes	3	2.5	groundwater
35	85	Ter-Ker-Coo Ln	R	Ruby Rolling							
36	110	Wa-Ray Rd	R	Myra Lowe	0	yes	4	no	2	2	groundwater
37	118	Wa-Ray Rd	R	Fred Lambe		yes	2	no	3	2	groundwater
38	120	Wa-Ray Rd	R	Wendy Lam		no	8	no	3	2	groundwater
39	101	Kay-Win Rd	W	Ken King Sr					2	>12	groundwater
40	102	Kay-Win Rd	W	Gary Quinn	000	yes	5%	yes			
41	106	Kay-Win Rd	W	William C. C							
42	874	N. Westhaven	W	Louise Dunc		yes	3%	yes	2	2	groundwater
43	11	Teh-Pah Ln	W	Sandra Dunc							
44	12	Teh-Pah Ln	W	Glenn Quinn							
45	13	Teh-Pah Ln	W	Fred Lambe	00	yes	0-3	yes			
46	14	Teh-Pah Ln	W	Virginia McK							
47	15	Teh-Pah Ln	W	John E. Wall							

Area: A = Archer Road
R = Rancheria
W = Westhaven

Last Modified on 8/24/00

SITE SUITABILITY			
#	County Setbacks Met?	Ponding on Leachfield ?	Recommendations
1	yes	no	ediate action
2	yes	no	ediate action
3	yes	no	ediate action
4	yes	no	ediate action
5	yes	no	ediate action
6	yes	no	tence of smell problem
7	yes	no	ediate action
8	yes	no	th Basin Plan
9	n/a	n/a	th Basin Plan
10	yes	no	th Basin Plan
11	yes	no	th Basin Plan
12	no - break in slope	no	ediate action
13	#	#	ediate action
14	no - break in slope	yes	being reviewed by Winzler & Kelly
15	no - break in slope	no	ediate action
16	yes	no	k, take no other immediate action.
17	no - break in slope	yes	being reviewed by Winzler & Kelly
18	no - break in slope	no	th Basin Plan
19			th Basin Plan
20	no - break in slope	no	ail new leach field
21	no - break in slope	no	ail new leach field
22	no - ephemeral stream	no	ediate action
23	no - ephemeral stream	yes	ediate action
24	yes	no	ation is necessary
25	yes	no	h Basin Plan
26	yes	no	all new leach field
27	yes	no	ediate action
28	yes	yes	ediate action
29	no-unstable & slope break	no	ediate action
30	no - break in slope	no	ediate action
31	no-unstable & slope break	yes	ation is necessary
32	no-unstable & slope break	n/a	sibly relocate septic tank, analyze wetland system
33	no-unstable & slope break	no	ediate action
34	yes	no	, switch fields regularly
35			mell problem
36	no - break in slope	no	ediate action
37	no - break in slope	no	all new leach field
38	no - break in slope	no	ediate action
39	yes	no	h Basin Plan
40			h Basin Plan
41			h Basin Plan
42	yes	no	diate action
43			h Basin Plan
44			h Basin Plan
45			h Basin Plan
46			h Basin Plan
47			h Basin Plan

Area: A = Archer Road
R = Rancheria
W = Westhaven

Last Modified on 8/24/00

Appendix B

Casino Wastewater Treatment Plant Flows

TRINIDAD RANCHERIA
WASTE WATER TREATMENT PLANT
DAILY TOTALS - June 2002

	WATER METERS									E.T. METERS												
	WATER TANKS				PROCESS PUMPS				Total	MEMBRANE BANK #1				MEMBRANE BANK #2				FLYGT PUMPS				U.V.	
	81A		81B		P35A		P35B		Flows	TRANSFER PUMP		PROCESS PUMP		TRANSFER PUMP		PROCESS PUMP		PUMP #1		PUMP #2			
	GAL.	TOTAL	GAL.	TOTAL	GAL.	TOTAL	GAL.	TOTAL	GAL.	MIN.	TOTAL	HOURS	TOTAL	MIN.	TOTAL	HOURS	TOTAL	HOURS	TOTAL	HOURS	TOTAL	HOURS	TOTAL
PREVIOUS DAY																							
TIME: DATE																							
1																							
2																							
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							
13																							
14																							
15																							
16																							
17	7930	7930	22120	22120	1070	1070	129750	129750	130820	1400.2	1400.2	6.6	6.6	1904.2	1904.2	49.8	49.8	153.5	153.5	4499.4	4499.4	158.19	158.19
18	9800	1870	26860	4740	1070	0	142000	12250	12250	1536.4	136.2	6.7	0.1	2040.4	136.2	49.9	0.1	156	2.5	4500.9	1.5	180.94	22.75
19	11640	1840	31670	4810	1070	0	156850	14850	14850	1707.8	171.4	12.2	5.5	2159.3	118.9	50	0.1	157.9	1.9	4501.7	0.8	206.72	25.78
20	11700	60	31790	120	1070	0	163430	6580	6580	1811.2	103.4	18.1	5.9	2227.4	68.1	50.6	0.6	158.2	0.3	4501.9	0.2	229.58	22.86
21	11910	210	32670	880	1070	0	171950	8520	8520	1923.3	112.1	27.2	9.1	2332.3	104.9	58.3	7.7	158.6	0.4	4503.4	1.5	253.46	23.88
22	11910	0	32670	0	1070	0	173300	1350	1350	1943.3	20	28	0.8	2352.9	20.6	59.5	1.2	158.6	0	4503.9	0.5	279.37	25.91
23	11910	0	32760	90	1070	0	180300	7000	7000	2005	61.7	28.6	0.6	2414.5	61.6	65.9	6.4	159	0.4	4506.5	2.6	301.29	21.92
24	13890	1980	36850	4090	1070	0	191780	11480	11480	2159.8	154.8	29.2	0.6	2525.7	111.2	76.2	10.3	161.2	2.2	4519.2	12.7	325.98	24.69
25	15540	1650	40420	3570	1070	0	200710	8930	8930	2301.3	141.5	30.2	1	2533.2	7.5	84.4	8.2	164.3	3.1	4519.2	0	347.79	21.81
26	15670	130	40810	390	1070	0	203020	2310	2310	2320.9	19.6	32.3	2.1	2587.9	54.7	86.4	2	164.8	0.5	4519.2	0	372.09	24.3
27	16730	1060	43100	2290	1070	0	213610	10590	10590	2420.6	99.7	32.4	0.1	2687.7	99.8	96.1	9.7	165.9	1.1	4519.2	0	396.5	24.41
28	18900	2170	48000	4900	1070	0	224030	10420	10420	2555.6	135	33.9	1.5	2822.7	135	105.6	9.5	168.4	2.5	4519.2	0	416.62	20.12
29	20100	1200	50600	2600	1070	0	234230	10200	10200	2667.4	111.8	34.6	0.7	2934.5	111.8	115	9.4	170	1.6	4519.2	0	445.91	29.29
30	21680	1580	54350	3750	1070	0	245120	10890	10890	2799.2	131.8	34.6	0	3066.3	131.8	124.9	9.9	170.9	0.9	4519.2	0	465.54	19.63
TOTAL		21680		54350		1070		245120	246190		2799.2		34.6		3066.3		124.9		170.9		4519.2		465.54
MAX.		7930		22120		1070		129750	14850		1400.2		9.1		1904.2		49.8		153.5		4499.4		158.19
MIN.		0		0		0		1350	1350		19.6		0		7.5		0.1		0		0		19.63
AVE.		1548.6		3882.1		76.4		17508.6	8874.6		199.9		2.5		219.0		8.9		12.2		322.8		33.3

Average does not include first reading of pumps

Day	Total Process Pump Flows
17	130820 gallons
18	12250
19	14850
20	6580
21	8520
22	1350
23	7000
24	11480
25	8930
26	2310
27	10590
28	10420
29	10200
30	10890

TRINIDAD RANCHERIA
WASTE WATER TREATMENT PLANT
DAILY TOTALS - JULY 2002

	WATER METERS									E.T. METERS												
	WATER TANKS				PROCESS PUMPS				Total	MEMBRANE BANK #1				MEMBRANE BANK #2				FLYGT PUMPS				U.V.	
	81A		81B		P35A		P35B		Flows	TRANSFER PUMP		PROCESS PUMP		TRANSFER PUMP		PROCESS PUMP		PUMP #1		PUMP #2			
	GAL.	TOTAL	GAL.	TOTAL	GAL.	TOTAL	GAL.	TOTAL	GAL.	MIN.	TOTAL	HOURS	TOTAL	MIN.	TOTAL	HOURS	TOTAL	HOURS	TOTAL	HOURS	TOTAL	HOURS	TOTAL
PREVIOUS DAY	21690		54350		1170		245120			2799.2		34.6		3066.3		124.9		170.9		4519.2		465.54	
TIME: DATE:																							
1	28910	7230	68920	14570	1170	0	271990	26870	26870	2834.5	35.3	34.6	0	3456.2	389.9	149.7	24.8	171.3	0.4	4519.2	0	492.12	26.58
2	29950	1040	71850	2930	1170	0	278870	6880	6880	3133.1	298.6	35.1	0.5	3535.8	79.6	156.1	6.4	172.5	1.2	4519.2	0	515.95	23.83
3	29950	0	71920	70	1170	0	282720	3850	3850	3303.2	170.1	35.2	1.1	3570.4	34.6	159.4	3.3	172.5	0	4519.2	0	540.04	24.09
4	30210	260	74290	2370	1170	0	289440	6720	6720	3368.9	65.7	35.3	0.1	3636.7	66.3	165.6	6.2	172.9	0.4	4519.2	0	561.58	21.54
5	35760	5550	84120	9830	1170	0	312490	23050	23050	3669.1	300.2	36.4	0.1	3936.4	299.7	186.5	20.9	174.8	1.9	4519.2	0	584	22.42
6	35760	0	84120	0	1170	0	323630	11140	11140	3807.6	138.5	36.8	0.4	4075.1	138.7	196.5	10	175.6	0.8	4519.2	0	611.8	27.8
7	36930	1170	86830	2710	1170	0	324750	1120	1120	3839.4	31.8	37.9	1.1	4106.7	31.6	197.6	1.1	175.8	0.2	4519.2	0	635.98	24.18
8	40870	3940	95010	8180	1170	0	341480	16730	16730	4013	173.6	38.1	0.2	4388.3	281.6	213	15.4	178	2.2	4519.2	0	660.11	24.13
9	40870	0	95010	0	1170	0	346590	5110	5110	4069.4	56.4	217.6	179.5	4385.1	-3.2	217.6	4.6	178.2	0.2	4519.2	0	683.74	23.63
10	41420	550	96670	1660	1170	0	351170	4580	4580	4126.6	57.2	221.7	4.1	4401.9	16.8	221.7	4.1	178.7	0.5	4519.2	0	606.83	-76.91
11	41980	560	98050	1680	1170	0	361100	9930	9930	4264.8	138.2	230.9	9.2	4540.1	138.2	230.9	9.2	180.8	2.1	4519.3	0.1	727.09	120.26
12	41980	0	98350	0	1170	0	367310	6210	6210	4314.6	49.8	236.5	5.6	4589.9	49.8	236.5	5.6	180.8	0	4519.3	0	746.43	19.34
13	42440	460	100270	1920	1170	0	378580	11270	11270	4456.1	141.5	249.8	13.3	4726.8	136.9	246.8	10.3	181.4	0.6	4519.3	0	773.25	26.82
14	46610	4170	113820	13550	1170	0	404750	26170	26170	4843.5	387.4	270.8	21	5114.3	387.5	270.8	24	181.4	0	4519.3	0	799.95	26.7
15	47690	1080	117380	3560	1170	0	414020	9270	9270	4940.8	97.3	279.4	8.6	5211.6	97.3	279.4	8.6	183.2	1.8	4519.3	0	822.35	22.4
16	47710	20	117600	220	1170	0	418950	4930	4930	4998.5	57.7	283.8	4.4	5269.4	57.8	283.8	4.4	183.7	0.5	4519.3	0	845.27	22.92
17	47970	260	118400	800	1170	0	420580	1630	1630	5021.4	22.9	285.5	1.7	5292.2	22.8	285.5	1.7	184	0.3	4519.3	0	869.5	24.23
18	49290	1320	121930	3530	1170	0	433480	12900	12900	5183.4	162	297.3	11.8	5405.9	113.7	297.3	11.8	184	0	4519.3	0	893.41	23.91
19	50100	810	123810	1880	1170	0	442340	8860	8860	5250.8	67.4	305.5	8.2	5478.8	72.9	305.5	8.2	186.3	2.3	4519.3	0	916.1	22.69
20	50130	30	123960	150	1170	0	447880	5540	5540	5257	6.2	310.5	5	5673.9	195.1	310.5	5	186.3	0	4519.3	0	941.1	25
21	51060	930	126490	2530	1170	0	459790	11910	11910	5269.1	12.1	321.6	11.1	6091.4	417.5	321.6	11.1	187.5	1.2	4519.3	0	957.23	26.13
22	51450	390	127560	1070	1170	0	464920	5130	5130	5273.6	4.5	326.3	4.7	6254.6	163.2	326.3	4.7	187.8	0.3	4519.3	0	990.31	23.08
23	52040	590	129120	1560	1170	0	470730	5810	5810	5291.9	18.3	331.9	5.6	6434.3	179.7	331.9	5.6	188.7	0.9	4519.3	0	1015.04	24.73
24	52350	310	130160	1040	1330	160	476460	5730	5890	5298.3	6.4	337.6	5.7	6634.1	199.8	337.6	5.7	189.4	0.7	4519.3	0	1038.38	23.34
25	52890	540	131790	1630	4110	2780	480950	4490	7270	5310.3	12	341.6	4	6854.7	220.6	341.6	4	189.8	0.4	4519.3	0	1060.91	22.53
26	53340	450	133020	1230	6350	2240	484990	4040	6280	5317.1	6.8	345.2	3.6	7048.1	193.4	345.2	3.6	190.5	0.7	4519.3	0	1080.19	19.28
27	53940	600	134660	1640	9800	3450	489150	4160	7610	5331	13.9	349.1	3.9	7272.5	224.4	349.1	3.9	191.3	0.8	4519.3	0	1099.16	18.97
28	54640	700	136700	2040	16920	7120	493840	4690	11810	5343.9	12.9	353.4	4.3	7666	393.5	353.4	4.3	192.2	0.9	4519.3	0	1131.56	32.4
29	55230	590	138380	1680	21730	4810	495970	2130	6940	5350.5	6.6	355.3	1.9	7891.7	225.7	355.3	1.9	192.9	0.7	4519.3	0	1157.06	25.5
30	55540	310	139410	1030	23900	2170	498480	2510	4680	5354.8	4.3	357.6	2.3	8063.8	172.1	357.6	2.3	193.2	0.3	4519.3	0	1186.3	29.24
31	56200	660	141190	1780	25920	2020	502850	4370	6390	5360.3	5.5	361.6	4	8274.3	210.5	361.6	4	194	0.8	4519.3	0	1205.73	19.43
TOTAL		34520		86840		24750		257730	282480		2561.1		327		5208		236.7		23.1		0.1		740.19
MAX.		7230		14570		7120		26870	26870		387.4		179.5		417.5		24.8		2.3		0.1		120.26
MIN.		0		0		0		1120	1120		4.3		0		-3.2		1.1		0		0		-76.91
AVE.		1113.5		2801.3		798.4		8313.9	9112.3		82.6		10.5		168.0		7.6		0.7		0.0		23.9

TRINIDAD RANCHERIA
WASTE WATER TREATMENT PLANT
DAILY TOTALS - AUGUST 2002

		WATER METERS									E.T. METERS													
		WATER TANKS				PROCESS PUMPS				Total	MEMBRANE BANK #1				MEMBRANE BANK #2				FLYGT PUMPS				U.V.	
		81A		81B		P35A		P35B		Flows	TRANSFER PUMP		PROCESS PUMP		TRANSFER PUMP		PROCESS PUMP		PUMP #1		PUMP #2			
		GAL..	TOTAL	GAL.	TOTAL	GAL.	TOTAL	GAL.	TOTAL	GAL.	MIN.	TOTAL	HOURS	TOTAL	MIN.	TOTAL	HOURS	TOTAL	HOURS	TOTAL	HOURS	TOTAL	HOURS	TOTAL
PREVIOUS DAY		5620		141190		25920		502850			5360.3		105.4		8274.3		361.6		194		4519.3		1205.73	
TIME:	DATE																							
	1	56860	51240	143020	1830	31500	5580	506560	3710	9290	5370.7	10.4	110.5	5.1	8566.1	291.8	365	3.4	195	1	4519.3	0	1230.85	25.12
	2	57210	350	144070	1050	34380	2880	509480	2920	5800	5377	6.3	113.2	2.7	8757.8	191.7	367.7	2.7	195.3	0.3	4519.3	0	1253.1	22.25
	3	57270	60	144410	340	38100	3720	511950	2470	6190	5382.5	5.5	116.7	3.5	8963.4	205.6	370	2.3	195.3	0	4519.3	0	1275.77	22.67
	4	57960	690	146240	1830	43740	5640	518580	6630	12270	5396.2	13.7	121.8	5.1	9332.1	368.7	376.1	6.1	196	0.7	4519.3	0	1301.8	26.03
	5	58490	530	147670	1430	46920	3180	520910	2330	5510	5401.6	5.4	124.8	3	9526.7	194.6	378.2	2.1	196.8	0.8	4519.3	0	1325.13	23.33
	6	59060	570	149190	1520	50100	3180	524660	3750	6930	5408.7	7.1	127.7	2.9	9751.4	224.7	381.7	3.5	197.6	0.8	4519.3	0	1350.85	25.72
	7	59670	610	150790	1600	55251	5151	526430	1770	6921	5415.2	6.5	131.6	3.9	9949.6	199.2	383.3	1.6	198	0.4	4519.3	0	1373.7	22.85
	8	60250	580	152380	1590	58540	3289	530010	3580	6869	5422.2	7	135.6	4	10197.1	247.5	386.6	3.3	198.9	0.9	4519.3	0	1389.4	15.7
	9	60802	552	153810	1430	62430	3890	533570	3560	7450	5431.7	9.5	139.2	3.6	10430.2	233.1	389.9	3.3	199.6	0.7	4519.3	0	1420.32	30.92
	10	61460	658	155620	1810	67720	5290	535570	2000	7290	5441.7	10	144.1	4.9	10776.7	346.5	394.5	4.6	200.4	0.8	4519.3	0	1447.52	27.2
	11	65202	3742	163920	8300	78910	11190	549600	14030	25220	5463	21.3	154.4	10.3	11489.1	712.4	404.6	10.1	200.5	0.1	4519.3	0	1469.45	21.93
	12	66120	918	166200	2280	82100	3190	553360	3760	6950	5468.7	5.7	157.4	3	11678.5	189.4	408.1	3.5	201.7	1.2	4519.3	0	1493.18	23.73
	13	67050	930	168560	2360	86980	4880	556550	3190	8070	5475	6.3	161.9	4.5	11934.5	256	411	2.9	202.7	1	4519.3	0	1517.32	24.14
	14	67480	430	169790	1230	89320	2340	557950	1400	3740	5478.3	3.3	164.1	2.2	12058.1	123.6	412.3	1.3	202.9	0.2	4519.3	0	1540.5	23.18
	15	67480	0	169810	20	93320	4000	560820	2870	6870	5486.7	8.4	167.8	3.7	12277.2	219.1	414.9	2.6	203.2	0.3	4519.3	0	1565.5	25
	16	67780	300	170790	980	95350	2030	563840	3020	5050	5494.7	8	169.6	1.8	12442.4	165.2	417.7	2.8	203.4	0.2	4519.3	0	1585.65	20.15
	17	69830		176050	5260	106410	11060	573420	9580	20640	5520	25.3	179.9	10.3	13138.3	695.9	426.5	8.8	203.4	0	4519.3	0	1615.08	29.43
	18	75140	5310	187830	11780	119770	13360	588210	14790	28150	5556.5	36.5	192.3	12.4	14015.4	877.1	440.2	13.7	204.1	0.7	4519.3	0	1639.06	23.98
	19	76190	1050	190260	2430	122590	2820	591530	3320	6140	5579.6	23.1	195	2.7	14160.1	144.7	443.3	3.1	205.5	1.4	4519.3	0	1661.79	22.73
	20	76630	440	191610	1350	125550	2960	594120	2590	5550	5586.1	6.5	197.7	2.7	14335	174.9	445.7	2.4	206.3	0.8	4519.3	0	1685.11	23.32
	21	77210	580	193170	1560	125876	326	597280	3160	3486	5591.8	5.7	200.7	3	14535.1	200.1	448.6	2.9	208.8	2.5	4519.3	0	1709.04	23.93
	22	77240	30	193270	100	136570	10694	597580	300	10994	5598.3	6.5	207.9	7.2	14738.7	203.6	449.7	1.1	208.8	0	4519.7	0.4	1732.21	23.17
	23	78000	760	195260	1990	141760	5190	602700	5120	10310	5605.2	6.9	212.7	4.8	15004.5	265.8	454.6	4.9	210.9	2.1	4519.7	0	1754.47	22.26
	24	78600	600	197100	1840	147030	5270	605750	3050	8320	5614.6	9.4	218.3	5.6	15301.5	297	457.4	2.8	214.7	3.8	4519.7	0	1778.11	23.64
	25	79410	810	199230	2130	153540	6510	611260	5510	12020	5625.8	11.2	224.6	6.3	15654.6	353.1	463	5.6	218.1	3.4	4519.7	0	1801.15	23.04
	26	80090	680	201030	1800	156490	2950	615390	4130	7080	5633	7.2	227.3	2.7	15898.4	243.8	466.6	3.8	220	1.9	4519.7	0	1827.42	26.27
	27	80750	660	202770	1740	158820	2330	618930	3540	5870	5638.6	5.6	229.4	2.1	16081.6	183.2	470.1	3.3	222.4	2.4	4519.7	0	1851.21	23.79
	28	81130	380	203880	1110	161050	2230	621250	2320	4550	5643.6	5	231.5	2.1	16239.9	158.3	472.3	2.2	223	0.6	4519.7	0	1873.72	22.51
	29	81640	510	205290	1410	165340	4290	625060	3810	8100	5652.7	9.1	235.5	4	16504.7	264.8	475.8	3.5	226.2	3.2	4519.7	0	1899.43	25.71
	30	81640	0	205290	0	168000	2660	627940	2880	5540	5657.3	4.6	238	2.5	16687.8	183.1	478.5	2.7	226.2	0	4519.7	0	1920.73	21.3
	31	81890	250	206080	790	172890	4890	631650	3710	8600	5667.3	10	242.5	4.5	16975.6	287.8	481.9	3.4	227.5	1.3	4519.7	0	1946.33	25.6
	TOTAL		74220		64890		146970		128800	275770		307		137.1		8701.3		120.3		33.5		0.4		740.6
	MAX.		51240		11780		13360		14790	28150		36.5		12.4		877.1		13.7		3.8		0.4		30.92
	MIN.		0		0		326		300	3486		3.3		1.8		123.6		1.1		0		0		15.7
	AVE.		2474.0		2093.2		4741.0		4154.8	8895.8		9.9		4.4		280.7		3.9		1.1		0.0		23.9

TRINIDAD RANCHERIA
WASTE WATER TREATMENT PLANT
DAILY TOTALS - SEPTEMBER 2002

	WATER METERS										E.T. METERS													
		WATER TANKS				PROCESS PUMPS				Total	MEMBRANE BANK #1				MEMBRANE BANK #2				FLYGT PUMPS				U.V.	
		81A		81B		P35A		P35B		Flows	TRANSFER PUMP		PROCESS PUMP		TRANSFER PUMP		PROCESS PUMP		PUMP #1		PUMP #2			
		GAL.	TOTAL	GAL.	TOTAL	GAL.	TOTAL	GAL.	TOTAL	GAL.	MIN.	TOTAL	HOURS	TOTAL	MIN.	TOTAL	HOURS	TOTAL	HOURS	TOTAL	HOURS	TOTAL	HOURS	TOTAL
PREVIOUS DAY		81890		206080		172890		631650			5667.3		242.5		16975.6		481.9		227.5		4521.7		1946.33	
TIME:	DATE																							
	1	82810	920	208510	2430	178550	5660	639480	7830	13490	5681.7	14.4	247.8	5.3	17387.8	412.2	489.2	7.3	231.2	3.7	4521.7	0	1971.33	25
	2	83160	350	209830	1320	180980	2430	642470	2990	5420	5686.9	5.2	250.1	2.3	17576.1	188.3	492	2.8	233.3	2.1	4521.7	0	1993.27	21.94
	3	83830	670	211660	1830	184340	3360	645610	3140	6500	5692.9	6	253.2	3.1	17786.4	210.3	494.9	2.9	235.6	2.3	4523.5	1.8	2019.13	25.86
	4	84070	240	212480	820	186350	2010	648220	2610	4620	5698.8	5.9	256.1	2.9	17945	158.6	497.3	2.4	236	0.4	4523.8	0.3	2043	23.87
	5	84500	430	213720	1240	190300	3950	650520	2300	6250	5705.6	6.8	258.8	2.7	18149.3	204.3	499.4	2.1	237.4	1.4	4528.3	4.5	2065.67	22.67
	6	85020	520	215180	1460	192060	1760	654700	4180	5940	5710.7	5.1	260.5	1.7	18352.4	203.1	503.4	4	238.7	1.3	4537.9	9.6	2089.35	23.68
	7	85870	850	217510	2330	197720	5660	659820	5120	10780	5720.4	9.7	265.7	5.2	18708.5	356.1	508.1	4.7	240.8	2.1	4543.2	5.3	2117.88	28.53
	8	86270	400	218760	1250	201530	3810	664520	4700	8510	5729.4	9	269.3	3.6	18969.2	260.7	512.6	4.5	241.9	1.1	4543.7	0.5	2139.35	21.47
	9	86720	450	220050	1290	203470	1940	667180	2660	4600	5734	4.6	271.1	1.8	19116.9	147.7	515	2.4	243.3	1.4	4543.8	0.1	2163.22	23.87
	10	87050	330	221180	1130	206660	3210	668360	1180	4390	5737.9	3.9	274.1	3	19267.8	150.9	516.1	1.1	243.3	0	4551.2	7.4	2178.19	14.97
	11	87460	410	222400	1220	207860	1180	671080	2720	3900	5752.3	14.4	275.2	1.1	19389	121.2	518.7	2.6	244.4	1.1	4555.1	3.9	2209.69	31.5
	12	88050	590	224080	1680	210800	2940	675740	4660	7600	5759.2	6.9	278	2.8	19641.3	252.3	523	4.3	245	0.6	4558.6	3.7	2234.79	25.1
	13	88590	540	225620	1540	215130	4330	678640	2900	7230	5765.6	6.6	282	4	19880.7	239.4	525.8	2.8	245.5	0.5	4563.3	4.5	2258.7	23.91
	14	89180	590	228200	2580	217790	2660	683640	5000	7660	5773.1	7.3	284.5	2.5	20125.3	244.6	530.4	4.6	245.9	0.4	4570.2	6.9	2281.15	22.45
	15	89940	760	229310	1110	223050	5260	689620	5980	11240	5784.8	11.7	289.5	5	20499.1	373.8	536	5.6	246.4	0.5	4576.8	6.6	2309.06	27.91
	16	90280	340	230290	980	224220	1170	692810	3190	4360	5795.8	11	290.6	1.1	20629.7	130.6	539	3	247.4	1	4580.5	3.7	2330.69	21.63
	17	90860	580	231240	950	226180	1960	696350	3540	5500	5800.2	4.4	292.4	1.8	20840	210.3	542.3	3.3	247.4	0	4582.8	2.3	2355.44	24.75
	18	91070	210	232820	1580	229190	3010	698720	2370	5380	5817.2	17	295.2	2.8	20967.4	127.4	544.5	2.2	248.1	0.7	4585.2	2.4	2378.94	23.5
	19	91660	590	234630	1810	231900	2710	703230	4510	7220	5826.1	8.9	297.7	2.5	21192.9	225.5	548.7	4.2	249	0.9	4586.8	1.6	2402.14	23.2
	20	92110	450	236180	1550	235570	3670	705260	2030	5700	5832.6	6.5	301.2	3.5	21394.7	201.8	550.6	1.9	249.8	0.8	4589.1	2.3	2424.76	22.62
	21	93000	890	238730	2550	241110	5540	710180	4920	10460	5847.1	14.5	306.4	5.2	21743.5	348.8	555.2	4.6	250.5	0.7	4595.8	6.7	2451.56	26.8
	22	93680	680	240720	1990	246060	4950	716700	6520	11470	5864.2	17.1	311	4.6	22082.4	338.9	561.3	6.1	251.4	0.9	4598.1	2.3	2478.47	26.91
	23	93980	300	241710	990	248430	2370	718450	1750	4120	5877.4	13.2	313.2	2.2	22203.4	121	562.9	1.6	251.4	0	4601	2.9	2496.96	20.49
	24	94410	430	242900	1190	250670	2240	720740	2290	4530	5881.3	3.9	315.4	2.2	22356.5	153.1	565.1	2.2	251.9	0.5	4601.3	0.3	2523	24.04
	25	94870	460	244290	1390	253270	2600	723260	2520	5120	5887.2	5.9	317.8	2.4	22529.8	173.3	567.4	2.3	252.4	0.5	4604.2	2.9	2547.13	24.13
	26	95300	430	245610	1320	255510	2240	727320	4060	6300	5904.9	17.7	319.9	2.1	22728	198.2	571.2	3.8	252.9	0.5	4606.8	2.6	2570.68	23.55
	27	95750	450	247000	1390	259900	4390	729730	2410	6800	5913.5	8.6	324	4.1	22928.4	200.4	573.5	2.3	252.9	0	4609.6	2.8	2593.25	22.57
	28	96460	710	248970	1970	265180	5280	734440	4710	9990	5934.1	20.6	328.9	4.9	23238.9	310.5	577.9	4.4	253.4	0.5	4612.5	2.9	2618.29	25.04
	29	97000	540	250500	1530	269380	4200	740820	6380	10580	5947.9	13.8	332.9	4	23583.8	344.9	583.9	6	253.9	0.5	4616.3	3.8	2641.84	23.55
	30	97520	520	251970	1470	271360	1980	744590	3770	5750	5959.4	11.5	334.8	1.9	23763.5	179.7	587.5	3.6	254.3	0.4	4618.5	2.2	2666.61	24.77
	31																							
	TOTAL		15630		45890		98470		112940	211410		292.1		92.3		6787.9		105.6		26.8		96.8		720.28
	MAX.		920		2580		5660		7830	13490		20.6		5.3		412.2		7.3		3.7		9.6		31.5
	MIN.		210		820		1170		1180	3900		3.9		1.1		121		1.1		0		0		14.97
	AVE.		521.0		1529.7		3282.3		3764.7	7047.0		9.7		3.1		226.3		3.5		0.9		3.2		24.0

TRINIDAD RANCHERIA
WASTE WATER TREATMENT PLANT
DAILY TOTALS - OCTOBER 2002

	WATER METERS										E.T. METERS													
		WATER TANKS				PROCESS PUMPS				Total	MEMBRANE BANK #1				MEMBRANE BANK #2				FLYGT PUMPS				U.V.	
		B1A		B1B		P35A		P35B		Flows	TRANSFER PUMP		PROCESS PUMP		TRANSFER PUMP		PROCESS PUMP		PUMP #1		PUMP #2			
		GAL.	TOTAL	GAL.	TOTAL	GAL.	TOTAL	GAL.	TOTAL	GAL.	MIN.	TOTAL	HOURS	TOTAL	MIN.	TOTAL	HOURS	TOTAL	HOURS	TOTAL	HOURS	TOTAL	HOURS	TOTAL
PREVIOUS DAY		97520		251970		271360		744590			5959.4		334.8		23763.5		587.5		254.3		4618.5		2666.61	
TIME:	DATE																							
	1	97930	410	253300	1330	273780	2420	746990	2400	4820	5964	4.6	337.1	2.3	23929.6	166.1	589.7	2.2	254.8	0.5	4622.2	3.7	2690.1	23.49
	2	98330	400	254620	1320	277360	3580	748550	1560	5140	5969.2	5.2	340.5	3.4	24090	160.4	591.2	1.5	255.2	0.4	4622.8	0.6	2714.82	24.72
	3	98770	440	255910	1290	280270	2910	752180	3630	6540	5979.8	10.6	343.2	2.7	24298	208	594.5	3.3	255.2	0	4633.9	11.1	2737.85	23.03
	4	99360	590	257730	1820	284930	4660	755180	3000	7660	5987.9	8.1	347.5	4.3	24543.4	245.4	597.4	2.9	255.7	0.5	4639.6	5.7	2762.78	24.93
	5	99920	560	259540	1810	288550	3620	760580	5400	9020	5995.2	7.3	351	3.5	24840.5	297.1	602.5	5.1	256	0.3	4643.2	3.6	2769.03	26.25
	6	100315	395	260775	1235	290935	2385	765100	4520	6905	6001.7	6.5	353.3	2.3	25067	226.5	606.7	4.2	256.4	0.4	4644.4	1.2	2811.8	22.77
	7	100710	395	262010	1235	293320	2385	769620	4520	6905	6008.2	6.5	355.5	2.2	25293.5	226.5	611	4.3	256.7	0.3	4645.6	1.2	2834.8	23
	8	100880	170	262690	680	295620	2300	771610	1990	4290	6023.7	15.5	357.7	2.2	25414.2	120.7	612.9	1.9	256.7	0	4645.6	0	2858.19	23.39
	9	101160	280	263670	980	299090	3470	773830	2220	5690	6027.4	3.7	359.6	1.9	25556.4	142.2	614.9	2	256.8	0.1	4646.3	0.7	2881.11	22.92
	10	101740	580	265270	1600	302560	3470	777200	3370	6840	6047.4	20	364.2	4.6	25818.7	262.3	618.2	3.3	257	0.2	4647.9	1.6	2906.62	25.51
	11	101960	220	265970	700	306980	4420	780510	3310	7730	6061.4	14	368.4	4.2	26039.7	221	621.3	3.1	257	0	4648.2	0.3	2930.44	23.82
	12	102630	670	267880	1910	312210	5230	784700	4190	9420	6072.9	11.5	373.3	4.9	26340.9	301.2	625.3	4	257.2	0.2	4648.5	0.3	2956.91	26.47
	13	103010	380	269020	1140	314800	2590	789370	4670	7260	6082	9.1	375.7	2.4	26579.7	238.8	629.6	4.3	257.3	0.1	4648.8	0.3	2978.42	21.51
	14	103380	370	270130	1110	318570	3770	789820	450	4220	6088.7	6.7	379.4	3.7	26718.6	138.9	630.1	0.5	257.5	0.2	4649	0.2	3000.62	22.2
	15	103840	460	271320	1190	320100	1530	793850	4030	5560	6106.6	17.9	383.3	3.9	26853	134.4	635.4	5.3	257.7	0.2	4649	0	3025.68	25.06
	16	104170	330	272340	1020	321430	1330	797420	3570	4900	6110	3.4	384.6	1.3	26996.4	143.4	638.9	3.5	257.9	0.2	4649.5	0.5	3049.57	23.89
	17	104520	350	273540	1200	324980	3550	800600	3180	6730	6120.4	10.4	388.9	4.3	27238.9	242.5	641.8	2.9	258	0.1	4649.7	0.2	3074.8	25.23
	18	104910	390	274830	1290	329280	4300	802430	1830	6130	6129.7	9.3	393	4.1	27431.3	192.4	643.7	1.9	258.2	0.2	4649.9	0.2	3098.97	24.17
	19	105290	380	275950	1120	332790	3510	805690	3260	6770	6145	15.3	396.3	3.3	27642.3	211	646.8	3.1	258.3	0.1	4650.2	0.3	3121.48	22.51
	20	105670	380	277050	1100	336600	3810	809050	3360	7170	6160.8	15.8	399.9	3.6	27865.1	222.8	649.9	3.1	258.5	0.2	4650.5	0.3	3145.92	24.44
	21	106050	380	278150	1100	340410	3810	812410	3360	7170	6176.7	15.9	403.5	3.6	28087.9	222.8	653.1	3.2	258.7	0.2	4650.9	0.4	3170.37	24.45
	22	106340	290	278950	800	342050	1640	815330	2920	4560	6192.9	16.2	405.1	1.6	28230.1	142.2	655.9	2.8	258.7	0	4651.1	0.2	3193.5	23.13
	23	107040	700	280710	1760	347670	5620	820910	5580	11200	6215.3	22.4	410.2	5.1	28580.6	350.5	661.2	5.3	259	0.3	4651.4	0.3	3219.11	25.61
	24	107340	300	281570	860	349550	1880	823760	2850	4730	6234.9	19.6	412.3	2.1	28720.6	140	663.9	2.7	259	0	4651.8	0.4	3240.45	21.34
	25	107760	420	282770	1200	353830	4280	826620	2860	7140	6263.8	28.9	416.3	4	28935.9	215.3	666.7	2.8	259.2	0.2	4652.1	0.3	3265.84	25.39
	26	108340	580	284630	1860	360940	7110	830190	3570	10680	6282.6	18.8	423.1	6.8	29260.3	324.4	670	3.3	259.5	0.3	4652.6	0.5	3294.73	28.89
	27	108566	226	285240	610	363850	2910	832730	2540	5450	6288.7	6.1	425.7	2.6	29439.4	179.1	672.6	2.6	259.5	0	4652.8	0.2	3319.24	24.51
	28	108790	224	286070	830	366800	2950	835280	2550	5500	6294.5	5.8	428.7	3	29619.1	179.7	674.8	2.2	259.6	0.1	4653.2	0.4	3338.21	18.97
	29	109290	500	287530	1460	372280	5480	835860	580	6060	6313.6	19.1	434	5.3	29799.5	180.4	677.6	2.8	259.8	0.2	4653.5	0.3	3362.08	23.85
	30	109830	540	289270	1740	375960	3700	840410	4550	8250	6324.2	10.6	437.4	3.4	30041.5	242	681.8	4.2	260	0.2	4654.2	0.7	3392.27	30.21
	31	109950	120	289590	320	377560	1580	841100	690	2270	6337	12.8	439	1.6	30101.5	60	682.5	0.7	260	0	4654.2	0	3408.25	15.98
	TOTAL		12430		37620		106200		96510	202710		377.6		104.2		6338		95		5.7		35.7		741.64
	MAX.		700		1910		7110		5580	11200		28.9		6.8		350.5		5.3		0.5		11.1		30.21
	MIN.		120		320		1330		450	2270		3.4		1.3		60		0.5		0		0		15.98
	AVE.		401.0		1213.5		3425.8		3113.2	6539.0		12.2		3.4		204.5		3.1		0.2		1.2		23.9

TRINIDAD RANCHERIA
WASTE WATER TREATMENT PLANT
DAILY TOTALS - NOVEMBER 2002

	WATER METERS										E.T. METERS													
		WATER TANKS				PROCESS PUMPS				Total	MEMBRANE BANK #1				MEMBRANE BANK #2				FLYGT PUMPS				U.V.	
		81A		81B		P35A		P35B		Flows	TRANSFER PUMP		PROCESS PUMP		TRANSFER PUMP		PROCESS PUMP		PUMP #1		PUMP #2			
		GAL.	TOTAL	GAL.	TOTAL	GAL.	TOTAL	GAL.	TOTAL	GAL.	MIN.	TOTAL	HOURS	TOTAL	MIN.	TOTAL	HOURS	TOTAL	HOURS	TOTAL	HOURS	TOTAL	HOURS	TOTAL
PREVIOUS DAY		109950		289590		377560		841100			6337		439		30101.5		682.5		260		4654.2		3408.25	
TIME:	DATE																							
	1	110000	50	289770	180	379410	1850	841350	250	2100	6353	16	440.7	1.7	30155.7	54.2	682.7	0.2	260.2	0.2	4654.2	0	3431.05	22.8
	2	110000	0	289770	0	383600	4190	845010	3660	7850	6365.5	12.5	444.7	4	30436.2	280.5	686.2	3.5	260.2	0	4654.2	0	3459.32	28.27
	3	110000	0	289770	0	387870	4270	848770	3760	8030	6373.2	7.7	448.8	4.1	30703.5	267.3	689.8	3.6	260.2	0	4654.4	0.2	3484.15	24.83
	4	110100	100	290120	350	390360	2490	852000	3230	5720	6378	4.8	451.2	2.4	30899.3	195.8	692.9	3.1	260.3	0.1	4654.4	0	3507.16	23.01
	5	110360	260	290970	850	391920	1560	854710	2710	4270	6382.1	4.1	452.6	1.4	31052.3	153	695.4	2.5	260.5	0.2	4654.7	0.3	3531.45	24.29
	6	110620	260	291910	940	393980	2060	857000	2290	4350	6385.8	3.7	454.6	2	31201.4	149.1	697.6	2.2	260.5	0	4655	0.3	3554.98	23.53
	7	111020	400	293160	1250	397460	3480	860450	3450	6930	6409.1	23.3	457.9	3.3	31402.5	201.1	701	3.4	260.7	0.2	4655.3	0.3	3579.76	24.78
	8	111430	410	294470	1310	400430	2970	863850	3400	6370	6416.1	7	460.8	2.9	31626.1	223.6	704.2	3.2	260.7	0	4656.1	0.8	3602.79	23.03
	9	111630	200	295200	730	404000	3570	867190	3340	6910	6422.8	6.7	464.2	3.4	31892.1	266	707.4	3.2	260.8	0.1	4656.2	0.1	3625.81	23.02
	10	112510	880	297670	2470	411000	7000	874090	6900	13900	6437.7	14.9	470.9	6.7	32367.4	475.3	714	6.6	261.2	0.4	4656.7	0.5	3655.2	29.39
	11	112830	320	298660	990	413400	2400	876540	2450	4850	6441.2	3.5	473.2	2.3	32520.9	153.5	716.3	2.3	261.2	0	4657.5	0.8	3674.97	19.77
	12	113230	400	300430	1770	416130	2730	878910	2370	5100	6449.4	8.2	475.9	2.7	32704.3	183.4	719	2.7	261.5	0.3	4657.8	0.3	3700.29	25.32
	13	113580	350	301420	990	418980	2850	880510	1600	4450	6463.4	14	478.6	2.7	32845.6	141.3	720.6	1.6	261.5	0	4658.1	0.3	3722.89	22.6
	14	113920	340	302530	1110	420460	1480	885030	4520	6000	6469.5	6.1	480	1.4	33061.8	216.2	724.9	4.3	261.7	0.2	4658.4	0.3	3745.33	22.44
	15	114190	270	303460	930	422390	1930	888130	3100	5030	6480.9	11.4	481.9	1.9	33248.8	187	728.4	3.5	261.8	0.1	4658.7	0.3	3769.82	24.49
	16	114650	460	304800	1340	425620	3230	893300	5170	8400	6495	14.1	485	3.1	33527.9	279.1	732.8	4.4	262	0.2	4659.1	0.4	3794.77	24.95
	17	115280	630	306670	1870	429790	4170	900270	6970	11140	6508.4	13.4	488.9	3.9	33915	387.1	739.5	6.7	262.3	0.3	4659.5	0.4	3823.54	28.77
	18	116620	1340	307630	960	432740	2950	901540	1270	4220	6512.9	4.5	491.8	2.9	34061.3	146.3	740.7	1.2	262.5	0.2	4659.9	0.4	3845.21	21.67
	19	115880	-740	308520	890	434000	1260	903810	2270	3530	6516.4	3.5	493.1	1.3	34188.2	126.9	743	2.3	262.5	0	4660.3	0.4	3864.47	19.26
	20	116290	410	309930	1410	436710	2710	905820	2010	4720	6512.2	-4.2	495.6	2.5	34280.4	92.2	744.8	1.8	262.5	0	4660.6	0.3	3890.68	26.21
	21	116720	430	311180	1250	441540	4830	907160	1340	6170	6538.7	26.5	500.3	4.7	34483	202.6	746.1	1.3	262.6	0.3	4661	0.4	3913.45	22.77
	22	117310	590	312920	1740	446360	4820	910410	3250	8070	6546.2	7.5	504.9	4.6	34770.1	287.1	749.2	3.1	262.9	0.1	4661.3	0.3	3941.17	27.72
	23	117690	380	314090	1170	448750	2390	913960	3550	5940	6551.3	5.1	507.2	2.3	34976.4	206.3	752.6	3.4	263.1	0.2	4661.7	0.4	3961.59	20.42
	24	118780	1090	317160	3070	453590	4840	921720	7760	12600	6565.5	14.2	511.8	4.6	35417.7	441.3	760	7.4	263.4	0.3	4662.7	1	3992.06	30.47
	25	118870	90	317550	390	454770	1180	922480	760	1940	6567.1	1.6	513	1.2	35505.8	88.1	760.8	0.8	263.4	0	4662.7	0	4007.67	15.61
	26	119510	640	319390	1840	457640	2870	925890	3410	6280	6572.3	5.2	515.8	2.8	35690.3	184.5	765.3	4.5	263.8	0.4	4663.1	0.4	4035.99	28.32
	27	119750	240	320180	790	461860	4220	925890	0	4220	6574.5	2.2	519.8	4	35755.4	65.1	768.4	3.1	263.8	0	4663.8	0.7	4057.88	21.89
	28	120260	510	321590	1410	474570	12710	925890	0	12710	6582.1	7.6	532.2	12.4	35952.3	196.9	778.9	10.5	264	0.2	4664.6	0.8	4087.6	29.72
	29	120710	450	322810	1220	478700	4130	925890	0	4130	6588.2	6.1	536.2	4	35993.1	40.8	783.3	4.4	264.2	0.2	4664.6	0	4100.47	12.87
	30	121410	700	324680	1870	495240	16540	925890	0	16540	6600	11.8	552.2	16	36277.4	284.3	793.9	10.6	264.3	0.1	4666	1.4	4132.1	31.63
	TOTAL		11460		35090		117680		84790	202470		263		113.2		6175.9		111.4		4.3		11.8		723.85
	MAX.		1340		3070		16540		7760	16540		26.5		16		475.3		10.6		0.4		1.4		31.63
	MIN.		-740		0		1180		0	1940		-4.2		1.2		40.8		0.2		0		0		12.87
	AVE.		382.0		1169.7		3922.7		2826.3	6749.0		8.8		3.8		205.9		3.7		0.1		0.4		24.1

TRINIDAD RANCHERIA
WASTE WATER TREATMENT PLANT
DAILY TOTALS - DECEMBER 2002

		WATER METERS									E.T. METERS													
		WATER TANKS				PROCESS PUMPS				Total	MEMBRANE BANK #1				MEMBRANE BANK #2				FLYGT PUMPS				U.V.	
		81A		81B		P35A		P35B		Flows	TRANSFER PUMP		PROCESS PUMP		TRANSFER PUMP		PROCESS PUMP		PUMP #1		PUMP #2			
		GAL.	TOTAL	GAL.	TOTAL	GAL.	TOTAL	GAL.	TOTAL	GAL.	MIN.	TOTAL	HOURS	TOTAL	MIN.	TOTAL	HOURS	TOTAL	HOURS	TOTAL	HOURS	TOTAL	HOURS	TOTAL
PREVIOUS DAY		121410		324680		495240		925890			6600		552.2		36277.4		793.9		264.3		4666		4132.1	
TIME:	DATE																							
	1	122020	610	326200	1520	509490	14250	925890	0	14250	6608.2	8.2	565.9	13.7	36473.6	196.2	808.1	14.2	264.5	0.2	4667	1	4157.44	25.34
	2	122450	430	327280	1080	513650	4160	925890	0	4160	6610.1	1.9	569.9	4	36525.7	52.1	811.4	3.3	264.7	0.2	4667	0	4175.59	18.15
	3	122850	400	328610	1330	520220	6570	925890	0	6570	6613.2	3.1	576.2	6.3	36602.1	76.4	816.8	5.4	264.8	0.1	4668.1	1.1	4201.6	26.01
	4	123210	360	329820	1210	525460	5240	925890	0	5240	6616.3	3.1	581.3	5.1	36679.8	77.7	819.9	3.1	265	0.2	4668.1	0	4225.51	23.91
	5	123720	510	331420	1600	534510	9050	925890	0	9050	6622.9	6.6	590.1	8.8	36818.1	138.3	824	4.1	265.3	0.3	4668.1	0	4254.16	28.65
	6	124050	330	332450	1030	540970	6460	925890	0	6460	6626.5	3.6	596.3	6.2	36892.4	74.3	831.5	7.5	265.5	0.2	4668.1	0	4273.52	19.36
	7	124650	600	334200	1750	555030	14060	925890	0	14060	6635.2	8.7	609.9	13.6	37096.1	203.7	845.1	13.6	265.8	0.3	4668.1	0	4304.69	31.17
	8	125160	510	335620	1420	561940	6910	925890	0	6910	6639	3.8	616.6	6.7	37189.4	93.3	852.1	7	266.1	0.3	4668.1	0	4323.14	18.45
	9	125710	550	337230	1610	570750	8810	925890	0	8810	6642.4	3.4	625.3	8.7	37276.8	87.4	867.6	15.5	266.3	0.2	4668.1	0	4347.08	23.94
	10	125830	120	337760	530	574440	3690	925890	0	3690	6650.4	8	629.4	4.1	37333.3	56.5	870.6	3	266.4	0.1	4668.1	0	4370.21	23.13
	11	126200	370	338970	1210	580430	5990	925890	0	5990	6660.1	9.7	635.3	5.9	37406	72.7	874.4	3.8	266.7	0.3	4668.1	0	4393.74	23.53
	12	126400	200	339630	660	586550	6120	925890	0	6120	6663.5	3.4	641.4	6.1	37492.7	86.7	879	4.6	266.7	0	4668.7	0.6	4417.51	23.77
	13	126750	350	340660	1030	586940	390	933450	7560	7950	6681.5	18	647.7	6.3	37582.4	89.7	886.2	7.2	266.9	0.2	4669.5	0.8	4441.73	24.22
	14	127630	880	342080	1420	587600	660	942260	8810	9470	6700.3	18.8	655.2	7.5	37717.1	134.7	894.7	8.5	267.1	0.2	4671.4	1.9	4464.1	22.37
	15	128200	570	343580	1500	591230	3630	946610	4350	7980	6704.9	4.6	659.9	4.7	37853	135.9	900	5.3	267.2	0.1	4676.1	4.7	4488.43	24.33
	16	128810	610	345350	1770	594330	3100	948940	2330	5430	6708.9	4	661.9	2	37944.2	91.2	902.2	2.2	267.5	0.3	4684.4	8.3	4513.54	25.11
	17	129070	260	346290	940	596910	2580	950850	1910	4490	6711.7	2.8	664.3	2.4	38025.3	81.1	904	1.8	267.5	0	4685.5	1.1	4534.14	20.6
	18	129560	490	347700	1410	598330	1420	953990	3140	4560	6717.4	5.7	665.7	1.4	38105.6	80.3	907	3	267.6	0.1	4687.2	1.7	4560.11	25.97
	19	129970	410	348890	1190	601220	2890	956080	2090	4980	6726.4	9	668.5	2.8	38186.2	80.6	909	2	267.7	0.1	4687.8	0.6	4578.06	17.95
	20	130340	370	350060	1170	603020	1800	959450	3370	5170	6732.6	6.2	670.2	1.7	38273.7	87.5	912.2	3.2	267.7	0	4689.8	2	4601.51	23.45
	21	130850	510	351650	1590	607090	4070	962060	2610	6680	6738	5.4	674.1	3.9	38394.3	120.6	914.6	2.4	268.1	0.4	4692.8	3	4629.02	27.51
	22	131220	370	352740	1090	610040	2950	966120	4060	7010	6743	5	677	2.9	38510.3	116	918.5	3.9	268.1	0	4695.1	2.3	4650.01	20.99
	23	131890	670	354500	1760	613400	3360	968750	2630	5990	6747.5	4.5	680.1	3.1	38614.1	103.8	921	2.5	268.4	0.3	4697	1.9	4674.39	24.38
	24	132390	500	355840	1340	615330	1930	971770	3020	4950	6756.8	9.3	682	1.9	38697.2	83.1	923.8	2.8	268.5	0.1	4697.8	0.8	4698.59	24.2
	25	132390	0	357650	1810	619010	3680	973780	2010	5690	6760.8	4	685.5	3.5	38792.9	95.7	925.7	1.9	268.8	0.3	4699.1	1.3	4722.91	24.32
	26	133620	1230	358270	620	621040	2030	979140	5360	7390	6764.9	4.1	687.8	2.3	38928.4	135.5	930.8	5.1	269	0.2	4700.7	1.6	4748.72	25.81
	27	134570	950	361970	3700	625770	4730	985000	5860	10590	6784.3	19.4	692.1	4.3	39092.3	163.9	936.4	5.6	269.2	0.2	4714.4	13.7	4778.4	29.68
	28	135240	670	363800	1830	628880	3110	988440	3440	6550	6791.8	7.5	695.2	3.1	39204.6	112.3	939.7	3.3	269.4	0.2	4719.3	4.9	4800.96	22.56
	29	135450	210	364400	600	630980	2100	991540	3100	5200	6802.4	10.6	697.2	2	39289.2	84.6	942.6	2.9	269.4	0	4721.1	1.8	4819.99	19.03
	30	136000	550	366070	1670	633310	2330	994770	3230	5560	6806.6	4.2	699.4	2.2	39381.8	92.6	945.7	3.1	269.6	0.2	4722.4	1.3	4845.06	25.07
	31	136470	470	367370	1300	635850	2540	997040	2270	4810	6819.1	12.5	701.9	2.5	39456.6	74.8	948.1	2.4	269.8	0.2	4723.4	1	4866.64	21.58
	TOTAL		15060		42690		140610		71150	211760		219.1		149.7		3179.2		154.2		5.5		57.4		734.54
	MAX.		1230		3700		14250		8810	14250		19.4		13.7		203.7		15.5		0.4		13.7		31.17
	MIN.		0		530		390		0	3690		1.9		1.4		52.1		1.8		0		0		17.95
	AVE.		485.8		1377.1		4535.8		2295.2	6831.0		7.1		4.8		102.6		5.0		0.2		1.9		23.7

TRINIDAD RANCHERIA
WASTE WATER TREATMENT PLANT
DAILY TOTALS - JANUARY 2003

	WATER METERS										E.T. METERS													
		WATER TANKS				PROCESS PUMPS				Total	MEMBRANE BANK #1				MEMBRANE BANK #2				FLYGT PUMPS				U.V.	
		81A		81B		P35A		P35B		Flows	TRANSFER PUMP		PROCESS PUMP		TRANSFER PUMP		PROCESS PUMP		PUMP #1		PUMP #2			
		GAL.	TOTAL	GAL.	TOTAL	GAL.	TOTAL	GAL.	TOTAL	GAL.	MIN.	TOTAL	HOURS	TOTAL	MIN.	TOTAL	HOURS	TOTAL	HOURS	TOTAL	HOURS	TOTAL	HOURS	TOTAL
PREVIOUS DAY		136470		367370		635850		997040			6819.1		701.9		39456.6		948.1		269.8		4723.4		4866.64	
TIME:	DATE																						4891.6	
	1	137360	890	369540	2170	644670	8820	1004500	7460	16280	6839	19.9	710.5	8.6	39734.2	277.6	955.3	7.2	270.2	0.4	4725	1.6	4891.6	24.96
	2	137910	550	371660	2120	648260	3590	1007100	2600	6190	6844.9	5.9	716.2	5.7	39853.3	119.1	961.5	6.2	270.3	0.1	4726	1	4918.28	26.68
	3	138420	510	372330	670	650660	2400	1010910	3810	6210	6847.1	2.2	718.6	2.4	39943.6	90.3	965.2	3.7	270.4	0.1	4727.7	1.7	4935.98	17.7
	4	139140	720	374300	1970	655580	4920	1015900	4990	9910	6857.8	10.7	723.2	4.6	40113.5	169.9	969.9	4.7	270.7	0.3	4728.9	1.2	4967.56	31.58
	5	139730	590	375880	1580	660340	4760	1019630	3730	8490	6866.5	8.7	727.8	4.6	40253.2	139.7	973.4	3.5	270.9	0.2	4729.8	0.9	4992.34	24.78
	6	140140	410	376830	950	661700	1360	1020910	1280	2640	6877.2	10.7	729.1	1.3	40286.3	33.1	974.6	1.2	271.1	0.2	4730.9	1.1	5011.18	18.84
	7	140270	130	377440	610	663440	1740	1022420	1510	3250	6885.6	8.4	730.8	1.7	40339.4	53.1	976.1	1.5	271.1	0	4730.9	0	5034.05	22.87
	8	140610	340	378330	890	665680	2240	1024400	1980	4220	6894.6	9	733.5	2.7	40404.7	65.3	978.3	2.2	271.3	0.2	4731.7	0.8	5058.96	24.91
	9	140930	320	379330	1000	668270	2590	1026680	2280	4870	6898.4	3.8	736	2.5	40492.6	87.9	980.5	2.2	271.4	0.1	4733.5	1.8	5081.52	22.56
	10	141400	470	380660	1330	670610	2340	1031650	4970	7310	6903.9	5.5	738.3	2.3	40609	116.4	985.2	4.7	271.4	0	4735.7	2.2	5107.18	25.66
	11	141940	540	382190	1530	674910	4300	1034070	2420	6720	6914.1	10.2	742.5	4.2	40725.8	116.8	987.6	2.4	271.6	0.2	4739.2	3.5	5129.7	22.52
	12	142720	780	384330	2140	680850	5940	1036870	4800	10740	6926	11.9	748.3	5.8	40898.6	172.8	992.1	4.5	271.9	0.3	4742.6	3.4	5160.64	30.94
	13	142960	240	385100	770	682320	1470	1040370	1500	2970	6927.6	1.6	749.3	1	40934.1	35.5	993.2	1.1	271.9	0	4742.9	0.3	5183.4	22.76
	14	143200	240	385870	770	683790	1470	1041880	1510	2980	6929.2	1.6	751.4	2.1	41002.7	68.6	995	1.8	271.9	0	4745.3	2.4	5206.15	22.75
	15	143430	230	386560	690	685500	1710	1043060	1180	2890	6934.6	5.4	753.2	1.8	41095	92.3	996.2	1.2	271.9	0	4746.5	1.2	5226.93	20.78
	16	143780	350	387610	1050	689030	3530	1045060	2000	5530	6938.3	3.7	756.5	3.3	41135.8	40.8	998	1.8	272.1	0.2	4746.5	0	5249.17	22.24
	17	144320	540	389180	1570	693000	4570	1048110	3050	7620	6942.6	4.3	761	4.5	41269	133.2	1000.9	2.9	272.4	0.3	4746.5	0	5278.09	28.92
	18	144820	500	390750	1570	696640	3040	1052930	4820	7860	6948.4	5.8	764	3	41395.8	126.8	1005.5	4.6	272.7	0.3	4746.5	0	5302.62	24.53
	19	145310	490	392270	1520	701810	5170	1056890	3960	9130	6956.7	8.3	769	5	41547.7	151.9	1009.2	3.7	273	0.3	4746.5	0	5327.32	24.7
	20	145670	360	393250	980	703720	1910	1058660	1770	3680	6965.5	8.8	770.9	1.9	41601.1	53.4	1010.9	1.7	273.2	0.2	4746.5	0	5346.49	19.17
	21	145840	170	393940	690	705860	2140	1059900	1240	3380	6967.2	1.7	773.3	2.4	41660	58.9	1012.1	1.2	273.3	0.1	4746.5	0	5369.23	22.74
	22	146190	350	395060	1120	707170	1310	1062910	3010	4320	6970.2	3	774.6	1.3	41731.2	71.2	1014.9	2.8	273.5	0.2	4746.5	0	5393.48	24.25
	23	146600	410	396210	1150	710640	3470	1064690	1780	5250	6979.6	9.4	778	3.4	41821.5	90.3	1016.6	1.7	273.7	0.2	4746.5	0	5418.03	24.55
	24	146980	380	397350	1140	714100	3460	1067390	2700	6160	6991.3	11.7	781.3	3.3	41912.8	91.3	1019.2	2.6	274	0.3	4746.5	0	5440.78	22.75
	25	147600	620	399210	1860	718610	4510	1071630	4240	8750	7007.1	15.8	785.6	4.3	42052.4	139.6	1023.2	4	274.3	0.3	4746.5	0	5468.76	27.98
	26	148080	480	400660	1450	722880	4270	1077490	5860	10130	7019	11.9	789.8	4.2	42220.1	167.7	1028.8	5.6	274.6	0.3	4746.5	0	5490.97	22.21
	27	148480	400	401860	1200	725480	2600	1079590	2100	4700	7021.4	2.4	792.3	2.5	42299.9	79.8	1030.8	2	274.8	0.2	4746.5	0	5514.83	23.86
	28	148710	230	402780	920	727480	2010	1081570	1980	3990	7024.1	2.7	794.2	1.9	42372.4	72.5	1032.7	1.9	274.9	0.1	4746.5	0	5538.93	24.1
	29	149200	490	404210	1430	729120	1630	1083920	2350	3980	7037.5	13.4	795.8	1.6	42427	54.6	1034.9	2.2	275.3	0.4	4746.5	0	5562.42	23.49
	30	149220	20	404210	0	730050	930	1083970	50	980	7046.8	9.3	796.7	0.9	42436.3	9.3	1035	0.1	275.3	0	4746.5	0	5585.61	23.19
	31	149220	0	404210	0	730700	650	1085820	1850	2500	7053.2	6.4	797.4	0.7	42474.8	38.5	1036.7	1.7	275.3	0	4746.5	0	5607.18	21.57
	TOTAL		12750		36840		94850		88780	183630		234.1		95.5		3018.2		88.6		5.5		23.1		740.54
	MAX.		890		2170		8820		7460	16280		19.9		8.6		277.6		7.2		0.4		3.5		31.58
	MIN.		0		0		650		50	980		1.6		0.7		9.3		0.1		0		0		17.7
	AVE.		411.3		1188.4		3059.7		2863.9	5923.5		7.6		3.1		97.4		2.9		0.2		0.7		23.9

TRINIDAD RANCHERIA
WASTE WATER TREATMENT PLANT
DAILY TOTALS - FEBRUARY 2003

	WATER METERS										E.T. METERS													
		WATER TANKS				PROCESS PUMPS				Total	MEMBRANE BANK #1				MEMBRANE BANK #2				FLYGT PUMPS				U.V.	
		81A		81B		P35A		P35B		Flows	TRANSFER PUMP		PROCESS PUMP		TRANSFER PUMP		PROCESS PUMP		PUMP #1		PUMP #2			
		GAL.	TOTAL	GAL.	TOTAL	GAL.	TOTAL	GAL.	TOTAL	GAL.	MIN.	TOTAL	HOURS	TOTAL	MIN.	TOTAL	HOURS	TOTAL	HOURS	TOTAL	HOURS	TOTAL	HOURS	TOTAL
PREVIOUS DAY		149220		404210		730700		1085820			7053.2		797.4		42474.8		1036.7		275.3		4746.5		5607.18	
TIME:	DATE																							
	1	149220	0	404210	0	730700	0	1085820	0	0	7053.2	0	797.4	0	42474.8	0	1036.7	0	275.3	0	4746.5	0	5607.18	0
	2	149220	0	404210	0	730700	0	1085820	0	0	7053.2	0	797.4	0	42474.8	0	1036.7	0	275.3	0	4746.5	0	5607.18	0
	3	149220	0	404210	0	741880	11180	1097780	11960	23140	7078.2	25	808.1	10.7	42864.9	390.1	1047.9	11.2	275.3	0	4746.5	0	5681.61	74.43
	4	149320	100	404680	470	744850	2970	1098680	900	3870	7098	9.8	811	2.9	42925.9	61	1048.8	0.9	275.4	0.1	4746.5	0	5704.29	22.68
	5	149520	200	405290	610	746440	1590	1100450	1770	3360	7098.2	10.2	812.5	1.5	42980.1	54.2	1050.5	1.7	275.6	0.2	4746.5	0	5729.61	25.32
	6	150010	490	406690	1400	749550	3110	1103960	3410	6520	7108	9.8	815.6	3.1	43091	110.9	1053.8	3.3	275.9	0.3	4746.5	0	5755.01	25.4
	7	150570	560	408340	1650	754400	4850	1106370	2510	7360	7119.8	11.8	820.3	4.7	43219.4	128.4	1056.2	2.4	276.1	0.2	4746.5	0	5780.99	25.98
	8	151000	430	409700	1360	757660	3460	1109320	2950	6410	7133.3	13.5	823.7	3.4	43327.6	108.2	1059	2.8	276.5	0.4	4746.5	0	5801.81	20.82
	9	151830	830	411990	2290	765050	7190	1113810	4490	11680	7142.4	9.1	830.7	7	43510.4	182.8	1063.3	4.3	276.8	0.3	4746.5	0	5829.56	27.75
	10	152250	420	413210	1220	767080	2030	1116110	2300	4330	7147.2	4.8	832.6	1.9	43572.6	62.2	1065.4	2.1	277.1	0.3	4746.5	0	5850.74	21.18
	11	152660	410	414440	1230	769310	2230	1117740	1630	3860	7149.6	2.4	834.9	2.3	43640	67.4	1067.1	1.7	277.3	0.2	4746.5	0	5873.35	22.61
	12	152920	260	415050	610	770120	810	1118560	820	1630	7161.2	11.6	836.6	1.7	43685.1	45.1	1067.8	0.7	277.4	0.1	4746.5	0	5896.85	23.5
	13	153240	320	416240	1190	772780	2660	1122870	4310	6970	7164.4	3.2	838.3	1.7	43782.8	97.7	1072	4.2	277.6	0.2	4746.5	0	5920.24	23.39
	14	153960	720	418300	2060	776900	4120	1127130	4260	8380	7170.7	6.3	842.3	4	43920.6	137.8	1076	4	277.9	0.3	4746.5	0	5945.47	25.23
	15	154780	820	420250	1950	781470	4570	1133290	6160	10730	7185.7	15	846.8	4.5	44109.4	188.8	1081.9	5.9	285.8	7.9	4747.3	0.8	5964.11	18.64
	16	155620	840	422500	2250	785490	4020	1139910	6620	10640	7194.3	8.6	851	4.2	44256.6	147.2	1090.6	8.7	286.5	0.7	4747.8	0.5	5992.32	28.21
	17	156200	580	424330	1830	790210	4720	1142870	2960	7680	7199.8	5.5	855.3	4.3	44396.5	139.9	1091.1	0.5	287	0.5	4748.7	0.9	6017.05	24.73
	18	156540	340	425340	1010	792480	2270	1144000	1130	3400	7207.2	7.4	857.5	2.2	44458.3	61.8	1092.2	1.1	287.5	0.5	4748.7	0	6042.24	25.19
	19	156650	110	425760	420	794450	1970	1145290	1290	3260	7216.4	9.2	861.2	3.7	44506.2	47.9	1096	3.8	288	0.5	4748.7	0	6065.59	23.35
	20	156930	280	426820	1060	796650	2200	1148650	3360	5560	7219.9	3.5	863.3	2.1	44599.2	93	1099.2	3.2	288.5	0.5	4748.7	0	6090.23	24.64
	21	157370	440	428110	1290	799690	3040	1151930	3280	6320	7234.7	14.8	866.3	3	44689.7	90.5	1102.4	3.2	289	0.5	4748.7	0	6111.91	21.68
	22	158060	690	430270	2160	804130	4440	1157260	5330	9770	7241.9	7.2	870.6	4.3	44854.9	165.2	1107.5	5.1	290	1	4748.7	0	6141.24	29.33
	23	158410	350	431400	1130	806410	2280	1160340	3080	5360	7244.7	2.8	872.9	2.3	44945.9	91	1110.4	2.9	291.3	1.3	4748.7	0	6159.45	18.21
	24	158880	470	432850	1450	809520	3110	1163260	2920	6030	7251.6	6.9	877	4.1	45054.8	108.9	1114.2	3.8	292.2	0.9	4748.7	0	6185.23	25.78
	25	159240	360	434050	1200	811710	2190	1165020	1760	3950	7254.9	3.3	879.2	2.2	45114.5	59.7	1115.9	1.7	292.6	0.4	4748.7	0	6208.98	23.75
	26	159410	170	434700	650	813360	1650	1166260	1240	2890	7257.8	2.9	880.7	1.5	45174.4	59.9	1117	1.1	293.1	0.5	4748.7	0	6232.62	23.64
	27	159780	370	435930	1230	815460	2100	1169820	3560	5660	7264.7	6.9	882.8	2.1	45271.8	97.4	1120.5	3.5	293.6	0.5	4748.7	0	6255.54	22.92
	28	160220	440	437400	1470	819170	3710	1172660	2840	6550	7274.1	9.4	886.5	3.7	45388.2	116.4	1123.2	2.7	294.4	0.8	4748.7	0	6281.02	25.48
	TOTAL		11000		33190		68470		86640	175310		220.9		89.1		2913.4		86.5		19.1		2.2		673.84
	MAX.		840		2290		11180		11960	23140		25		10.7		390.1		11.2		7.9		0.9		74.43
	MIN.		0		0		0		0	0		0		0		0		0		0		0		0
	AVE.		392.9		1185.4		3159.6		3101.4	6261.1		7.9		3.2		104.1		3.1		0.7		0.1		24.1

TRINIDAD RANCHERIA
WASTE WATER TREATMENT PLANT
DAILY TOTALS - MARCH 2003

	WATER METERS										E.T. METERS													
		WATER TANKS				PROCESS PUMPS				Total	MEMBRANE BANK #1				MEMBRANE BANK #2				FLYGT PUMPS				U.V.	
		81A		81B		P35A		P35B		Flows	TRANSFER PUMP		PROCESS PUMP		TRANSFER PUMP		PROCESS PUMP		PUMP #1		PUMP #2			
		GAL.	TOTAL	GAL.	TOTAL	GAL.	TOTAL	GAL.	TOTAL	GAL.	MIN.	TOTAL	HOURS	TOTAL	MIN.	TOTAL	HOURS	TOTAL	HOURS	TOTAL	HOURS	TOTAL	HOURS	TOTAL
PREVIOUS DAY		160220		437400		819170		1172660			7274.1		886.5		45388.2		1123.2		294.4		4748.7		6281.62	
TIME:	DATE																							
	1	161080	860	439970	2570	824310	5140	1180030	7370	12510	7306	31.9	891.6	5.1	45609.2	221	1130.4	7.2	295.7	1.3	4748.7	0	6310.51	28.89
	2	161820	740	441920	1950	827030	2720	1185900	5870	8590	7318	12	894.2	2.6	45734.9	125.7	1136	5.6	296.4	0.7	4748.7	0	6334.32	23.81
	3	162440	620	443430	1510	829370	2340	1187380	1480	3820	7344.8	26.8	898.3	4.1	45789	54.1	1139.2	3.2	297.7	1.3	4748.7	0	6353.02	18.7
	4	162570	130	443810	380	830550	1180	1189520	2140	3320	7346.6	1.8	900.6	2.3	45837.8	48.8	1141.6	2.4	297.7	0	4748.7	0	6377.1	24.08
	5	162660	90	444180	370	833280	2730	1190570	1050	3780	7355.8	9.2	903.3	2.7	45899	61.2	1143.4	1.8	298.1	0.4	4748.7	0	6400.87	23.77
	6	162950	300	445040	860	840320	7040	1190570	0	7040	7359.3	3.5	910.2	6.9	45998.2	99.2	1149.4	6	298.5	0.4	4748.7	0	6423.92	23.05
	7	163650	690	446990	1950	849340	9020	1191090	520	9540	7371.3	12	919.6	9.4	46116.1	117.9	1159	9.6	299	0.5	4748.7	0	6448.93	25.01
	8	164330	680	449050	2060	854270	4930	1195530	4440	9370	7377.3	6	924.5	4.9	46284.9	168.8	1163.3	4.3	300.2	1.2	4748.7	0	6478.89	29.96
	9	164700	370	450250	1200	857400	3130	1198550	3020	6150	7381	3.7	927.5	3	46400.3	115.4	1166.2	2.9	300.6	0.4	4748.7	0	6502.97	24.08
	10	165020	320	451280	1030	858640	1240	1200590	2040	3280	7383.7	2.7	928.7	1.2	46459	58.7	1168.2	2	300.8	0.2	4748.7	0	6521.34	18.37
	11	165290	270	452060	780	860230	1590	1202430	1840	3430	7386.4	2.7	930.3	1.6	46526.5	67.5	1170	1.8	301.5	0.7	4748.7	0	6543.7	22.36
	12	165370	80	452480	420	861960	1730	1204020	1590	3320	7389.2	2.8	932	1.7	46582.5	56	1171.6	1.6	301.7	0.2	4748.7	0	6565.15	21.45
	13	165680	310	453690	1210	864750	2790	1206750	2730	5520	7396	6.8	934.8	2.8	46681	98.5	1174.2	2.6	302.3	0.6	4748.7	0	6588.35	23.2
	14	166370	690	455850	2160	869820	5070	1211220	4470	9540	7397	1	939.8	5	46863.7	182.7	1178.6	4.4	303	0.7	4749.1	0.4	6619.72	31.37
	15	166960	590	457630	1780	876430	6610	1214820	3600	10210	7398.9	1.9	946.5	6.7	47057.5	193.8	1182.2	3.6	303.2	0.2	4750.9	1.8	6646.7	26.98
	16	167630	670	459530	1900	881180	4750	1219870	5050	9800	7402.3	3.4	951	4.5	47223.8	166.3	1186.9	4.7	303.6	0.4	4752.1	1.2	6669.51	22.81
	17	167920	290	460360	830	882720	1540	1221350	1480	3020	7407.8	5.5	952.5	1.5	47274.1	50.3	1188.5	1.6	304.4	0.8	4752.1	0	6689.35	19.84
	18	168190	270	461320	960	884560	1840	1223320	1970	3810	7421.3	13.5	954.3	1.8	47334.5	60.4	1190.3	1.8	304.9	0.5	4752.2	0.1	6714.58	25.23
	19	168380	190	461870	550	886690	2130	1224300	980	3110	7442	20.7	956.5	2.2	47384.5	50	1191.6	1.3	305.1	0.2	4753	0.8	6737.02	22.44
	20	168700	320	462840	970	889130	2440	1226820	2520	4960	7445.3	3.3	958.9	2.4	47477	92.5	1193.7	2.1	305.3	0.2	4753.8	0.8	6760.09	23.07
	21	169100	400	464050	1210	891940	2810	1230320	3500	6310	7453.4	8.1	961.6	2.7	47586	109	1197.1	3.4	305.6	0.3	4754.7	0.9	6783.16	23.07
	22	169560	460	465500	1450	895660	3720	1233650	3330	7050	7474.6	21.2	965.4	3.8	47708.1	122.1	1200.4	3.3	306.5	0.9	4754.7	0	6808.59	25.43
	23	170060	500	466860	1360	900170	4510	1238200	4550	9060	7481.4	6.8	969.8	4.4	47804	95.9	1204	3.6	307.4	0.9	4755.8	1.1	6832.88	24.29
	24	170360	300	467930	1070	901640	1470	1241180	2980	4450	7491.3	9.9	971.3	1.5	47952.3	148.3	1207.8	3.8	307.9	0.5	4756.5	0.7	6861.84	28.96
	25	170600	240	468530	600	902950	1310	1243310	2130	3440	7493.5	2.2	974.1	2.8	48001.1	48.8	1209	1.2	308.4	0.5	4756.5	0	6880.42	18.58
	26	171270	670	470350	1820	906710	3760	1247250	3940	7700	7501.7	8.2	978.4	4.3	48136.5	135.4	1213.8	4.8	308.8	0.4	4758.4	1.9	6910.49	30.07
	27	171450	180	471000	650	907740	1030	1249560	2310	3340	7503.8	2.1	980.5	2.1	48189.7	53.2	1216	2.2	309.2	0.4	4758.4	0	6928.62	18.13
	28	172040	590	472530	1530	909530	1790	1254800	5240	7030	7514.8	11	985.1	4.6	48294.3	104.6	1221.2	5.2	309.7	0.5	4759.4	1	6950.03	21.41
	29	172520	480	474090	1560	915050	5520	1257970	3170	8690	7521.1	6.3	990.6	5.5	48446.6	152.3	1224.4	3.2	310	0.3	4762.7	3.3	6978.06	28.03
	30	173100	580	475850	1760	919240	4190	1264050	6080	10270	7528.6	7.5	994.7	4.1	48622.4	175.8	1230.4	6	310.4	0.4	4765.7	3	7006.27	28.21
	31	173160	60	476030	180	920430	1190	1264980	830	2020	7536.2	7.6	996	1.3	48656.7	34.3	1231.3	0.9	310.5	0.1	4766	0.3	7021.65	15.38
	TOTAL		12940		38630		101260		92220	193480		262.1		109.5		3268.5		108.1		16.1		17.3		740.03
	MAX.		860		2570		9020		7370	12510		31.9		9.4		221		9.6		1.3		3.3		31.37
	MIN.		60		180		1030		0	2020		1		1.2		34.3		0.9		0		0		15.38
	AVE.		417.4		1246.1		3266.5		2974.8	6241.3		8.5		3.5		105.4		3.5		0.5		0.6		23.9

TRINIDAD RANCHERIA
WASTE WATER TREATMENT PLANT
DAILY TOTALS - APRIL 2003

	WATER METERS										E.T. METERS													
		WATER TANKS				PROCESS PUMPS				Total	MEMBRANE BANK #1				MEMBRANE BANK #2				FLYGT PUMPS				U.V.	
		81A		81B		P35A		P35B		Flows	TRANSFER PUMP		PROCESS PUMP		TRANSFER PUMP		PROCESS PUMP		PUMP #1		PUMP #2			
		GAL.	TOTAL	GAL.	TOTAL	GAL.	TOTAL	GAL.	TOTAL	GAL.	MIN.	TOTAL	HOURS	TOTAL	MIN.	TOTAL	HOURS	TOTAL	HOURS	TOTAL	HOURS	TOTAL	HOURS	TOTAL
PREVIOUS DAY		173160		476030		920430		1264880			7536.2		996		48656.7		1231.3		310.5		4766		7021.65	
TIME:	DATE																							
	1	173255	95	476420	390	921975	1545	1266270	1390	2935	7538.3	2.1	997.5	1.5	48720.4	63.7	1232.6	1.3	310.6	0.1	4767.3	1.3	7045.43	23.78
	2	173350	95	476810	390	923520	1545	1267660	1390	2935	7540.4	2.1	999	1.5	48784.1	63.7	1234	1.4	310.8	0.2	4768.5	1.2	7069.2	23.77
	3	173590	240	477620	810	926510	2990	1270810	3150	6140	7543.3	2.9	1002	3	48896.3	112.2	1237.2	3.2	311.1	0.3	4769.4	0.9	7096.09	26.89
	4	173790	200	478380	760	928160	1650	1275120	4310	5960	7549.5	6.2	1004.6	2.6	48997.6	101.3	1241.5	4.3	311.4	0.3	4769.4	0	7118.01	21.92
	5	174290	500	479890	1510	928160	0	1284240	9120	9120	7554.3	4.8	1013.1	8.5	49130.6	133	1250.9	9.4	311.8	0.4	4771.4	2	7143.58	25.57
	6	174590	300	480820	930	928425	265	1290220	5980	6245	7558.2	3.9	1013.3	0.2	49246.2	115.6	1257.2	6.3	312.1	0.3	4772.8	1.4	7166.35	22.77
	7	174890	300	481750	930	928790	365	1296200	5980	6345	7562	3.8	1013.6	0.3	49360.6	114.4	1263.4	6.2	312.4	0.3	4774.2	1.4	7189.12	22.77
	8	175160	270	482630	880	928910	120	1300930	4730	4850	7567.5	5.5	1018.2	4.6	49436.5	75.9	1268.4	5	312.7	0.3	4774.2	0	7215.31	26.19
	9	175160	0	482630	0	929000	90	1303010	2080	2170	7576	8.5	1020.9	2.7	49511.8	75.3	1270.8	2.4	312.7	0	4775.4	1.2	7241.18	25.87
	10	175300	140	483010	380	929800	800	1309770	6760	7560	7586.1	10.1	1026.2	5.3	49591.9	80.1	1278.3	7.5	313	0.3	4775.4	0	7261.16	19.98
	11	175450	150	483540	530	931740	1940	1312500	2730	4670	7589.9	3.8	1028.2	2	49683.8	91.9	1281.2	2.9	313	0	4775.6	0.2	7281.36	20.2
	12	176120	670	485810	2270	937450	5710	1317310	4810	10520	7606.1	16.2	1034.3	6.1	49872.3	188.5	1286.3	5.1	313.6	0.6	4775.8	0.2	7314.14	32.78
	13	176515	395	486990	1180	940360	2910	1320355	3045	5955	7611.2	5.1	1037.3	3	49971.3	99	1289.5	3.2	313.9	0.3	4776	0.2	7335.87	21.73
	14	176910	395	488170	1180	943270	2910	1323400	3045	5955	7616.2	5	1040.4	3.1	50070.4	99.1	1292.8	3.3	314.3	0.4	4776.2	0.2	7357.6	21.73
	15	177200	290	489120	950	945350	2080	1324930	1530	3610	7619.2	3	1042.8	2.4	50139.1	68.7	1294.4	1.6	314.3	0	4776.4	0.2	7380.33	22.73
	16	177430	230	489940	820	945750	400	1331560	6630	7030	7622.8	3.6	1048.2	5.4	50236.6	97.5	1301.4	7	314.5	0.2	4776.6	0.2	7405.34	25.01
	17	177880	450	491270	1330	946990	1240	1336680	5120	6360	7627.2	4.4	1049.5	1.3	50354.3	117.7	1306.8	5.4	315.2	0.7	4776.6	0	7429.74	24.4
	18	178230	350	492320	1050	949250	2260	1340450	3770	6030	7635.1	7.9	1054.1	4.6	50453.4	99.1	1310.9	4.1	315.5	0.3	4776.6	0	7451.74	22
	19	178810	580	493880	1560	951540	2290	1346350	5900	8190	7643.3	8.2	1059.5	5.4	50579.7	126.3	1317.1	6.2	316	0.5	4776.6	0	7472.75	21.01
	20	179590	780	496080	2200	954840	3300	1357200	10850	14150	7653.1	9.8	1067.5	8	50810.1	230.4	1328.5	11.4	316.8	0.8	4776.6	0	7506.82	34.07
	21	179950	360	497000	920	956110	1270	1358420	1220	2490	7655.1	2	1069	1.5	50862.6	52.5	1330.8	2.3	317.6	0.8	4776.6	0	7524.33	17.51
	22	180260	310	498000	1000	958530	2420	1361300	2880	5300	7657.9	2.8	1071.5	2.5	50941.1	78.5	1332.8	2	317.9	0.3	4776.6	0	7549.8	25.47
	23	180300	40	498250	250	959600	1070	1362800	1500	2570	7660.1	2.2	1072.6	1.1	51003.9	62.8	1334.4	1.6	318	0.1	4776.6	0	7572.85	23.05
	24	180590	290	499180	930	961800	2200	1366690	3890	6090	7664.6	4.5	1074.8	2.2	51106.1	102.2	1338.4	4	318.3	0.3	4776.6	0	7594.98	22.13
	25	180870	280	500180	1000	964300	2500	1370210	3520	6020	7670	5.4	1077.3	2.5	51219.1	113	1342.1	3.7	318.7	0.4	4776.6	0	7620.58	25.6
	26	184460	3590	508650	8470	974780	10480	1380240	10030	20510	7683.4	13.4	1088	10.7	51565.7	346.6	1352.5	10.4	319.1	0.4	4776.6	0	7647.08	26.5
	27	185070	610	510250	1600	978520	3740	1383490	3250	6990	7687.7	4.3	1091.7	3.7	51679.1	113.4	1355.8	3.3	319.2	0.1	4776.6	0	7666.42	19.34
	28	186120	1050	513010	2760	983170	4650	1388920	5430	10080	7696	8.3	1096.4	4.7	51860.4	181.3	1361.4	5.6	319.6	0.4	4776.6	0	7695.16	28.74
	29	186460	340	513960	950	986590	3420	1391950	3030	6450	7704.3	8.3	1099.9	3.5	51964.3	103.9	1364.8	3.4	320.1	0.5	4776.6	0	7718.6	23.44
	30	186800	340	514910	950	990010	3420	1394990	3040	6460	7712.7	8.4	1103.5	3.6	52068.5	104.2	1368.2	3.4	320.7	0.6	4776.6	0	7742.05	23.45
	31									0														
	TOTAL		13640		38880		69580		130110	199690		176.5		107.5		3411.8		136.9		10.2		10.6		720.4
	MAX.		3590		8470		10480		10850	20510		16.2		10.7		346.6		11.4		0.8		2		34.07
	MIN.		0		0		0		1220	0		2		0.2		52.5		1.3		0		0		17.51
	AVE.		454.7		1296.0		2319.3		4337.0	6441.6		5.9		3.6		113.7		4.6		0.3		0.4		24.0

Cher-Ae Heights Casino
Wastewater Treatment Plant BOD

2002	Influent	Effluent
January	Off line	
February	Off line	
March	Off line	
April	Off line	
May	Off line	
June	550 ppm	0 ppm
July	540 ppm	0 ppm
August	400 ppm	0 ppm
September	540 ppm	0 ppm
October	560 ppm	0 ppm
November	700 ppm	0 ppm
December	630 ppm	0 ppm

Appendix C
Wastewater Treatment Regulations

Title 22 Code of Regulations

DIVISION 4. ENVIRONMENTAL HEALTH
CHAPTER 1. INTRODUCTION

ARTICLE 1. DEFINITIONS

60001. Department

Whenever the term "department" is used in this division, it means the State Department of Health Services, unless otherwise specified.

60003. Director

Whenever the term "director" is used in this division, it means the Director, State Department of Health Services, unless otherwise specified.

CHAPTER 2. REGULATIONS FOR THE IMPLEMENTATION OF THE CALIFORNIA ENVIRONMENTAL QUALITY ACT

ARTICLE 1. GENERAL REQUIREMENTS AND CATEGORICAL EXEMPTIONS

60100. General requirements

The Department of Health Services incorporates by reference the objectives, criteria, and procedures as delineated in Chapters 1, 2, 2.5, 2.6, 3, 4, 5, and 6, Division 13, Public Resources Code, Sections 21000 et seq., and the Guidelines for the Implementation of the California Environmental Quality Act, Title 14, Division 6, Chapter 3, California Administrative Code, Sections 15000 et seq.

60101. Specific activities within categorical exempt classes

The following specific activities are determined by the Department to fall within the classes of categorical exemptions set forth in Sections 15300 et seq. of Title 14 of the California Administrative Code:

(a) Class 1: Existing Facilities.

CHAPTER 3 WATER RECYCLING CRITERIA
ARTICLE 1 DEFINITIONS

60301. Definitions

60301.100. Approved laboratory

"Approved laboratory" means a laboratory that has been certified by the Department to perform microbiological analyses pursuant to section 116390, Health and Safety Code.

60301.160. Coagulated wastewater

"Coagulated wastewater" means oxidized wastewater in which colloidal and finely divided suspended matter have been destabilized and agglomerated upstream from a filter by the addition of suitable floc-forming chemicals.

60301.170. Conventional treatment

"Conventional treatment" means a treatment chain that utilizes a sedimentation unit process between the coagulation and filtration processes and produces an effluent that meets the definition for disinfected tertiary recycled water.

60301.200. Direct beneficial use

"Direct beneficial use" means the use of recycled water that has been transported from the point of treatment or production to the point of use without an intervening discharge to waters of the State.

60301.220. Disinfected secondary-2.2 recycled water

"Disinfected secondary-2.2 recycled water" means recycled water that has been oxidized and disinfected so that the median concentration of total coliform bacteria in the disinfected effluent does not exceed a most probable number (MPN) of 2.2 per 100 milliliters utilizing the bacteriological results of the last seven days for which analyses have been completed, and the number of total coliform bacteria does not exceed an MPN of 23 per 100 milliliters in more than one sample in any 30 day period.

60301.225. Disinfected secondary-23 recycled water

"Disinfected secondary-23 recycled water" means recycled water that has been oxidized and disinfected so that the median concentration of total coliform bacteria in the disinfected effluent does not exceed a most probable number (MPN) of 23 per 100

60301.250. Dual plumbed system

"Dual plumbed system" or "dual plumbed" means a system that utilizes separate piping systems for recycled water and potable water within a facility and where the recycled water is used for either of the following purposes:

(a) To serve plumbing outlets (excluding fire suppression systems) within a building or

(b) Outdoor landscape irrigation at individual residences.

60301.300. F-Specific bacteriophage MS-2

"F-specific bacteriophage MS-2" means a strain of a specific type of virus that infects coliform bacteria that is traceable to the American Type Culture Collection (ATCC 15597B1) and is grown on lawns of E. coli (ATCC 15597).

60301.310. Facility

"Facility" means any type of building or structure, or a defined area of specific use that receives water for domestic use from a public water system as defined in section 116275 of the Health and Safety Code.

60301.320. Filtered wastewater

"Filtered wastewater" means an oxidized wastewater that meets the criteria in subsection (a) or (b):

(a) Has been coagulated and passed through natural undisturbed soils or a bed of filter media pursuant to the following:

(1) At a rate that does not exceed 5 gallons per minute per square foot of surface area in mono, dual or mixed media gravity, upflow or pressure filtration systems, or does not exceed 2 gallons per minute per square foot of surface area in traveling bridge automatic backwash filters; and

(2) So that the turbidity of the filtered wastewater does not exceed any of the following:

(A) An average of 2 NTU within a 24-hour period;

(B) 5 NTU more than 5 percent of the time within a 24-hour period; and

60301.630. NTU

"NTU" (Nephelometric turbidity unit) means a measurement of turbidity as determined by the ratio of the intensity of light scattered by the sample to the intensity of incident light as measured by method 2130 B. in Standard Methods for the Examination of Water and Wastewater, 20th ed.; Eaton, A. D., Clesceri, L. S., and Greenberg, A. E., Eds; American Public Health Association: Washington, DC, 1995; p. 2-8.

60301.650. Oxidized wastewater.

"Oxidized wastewater" means wastewater in which the organic matter has been stabilized, is nonputrescible, and contains dissolved oxygen.

60301.660. Peak dry weather design flow

"Peak Dry Weather Design Flow" means the arithmetic mean of the maximum peak flow rates sustained over some period of time (for example three hours) during the maximum 24-hour dry weather period. Dry weather period is defined as periods of little or no rainfall.

60301.700. Recycled wateragency.

"Recycled water agency" means the public water system, or a publicly or privately owned or operated recycled water system, that delivers or proposes to deliver recycled water to a facility.

60301.710. Recycling plant

"Recycling plant" means an arrangement of devices, structures, equipment, processes and controls which produce recycled water.

60301.740. Regulatory Agency

"Regulatory agency" means the California Regional Water Quality Control Board(s) that have jurisdiction over the recycling plant and use areas.

60301.750. Restricted access golf course

"Restricted access golf course" means a golf course where public access is controlled so that areas irrigated with recycled water cannot be used as if they were part of a park, playground, or school yard and where irrigation is conducted only in areas and during periods when the golf course is not being used by golfers.

ARTICLE 3. USES OF RECYCLED WATER.

60303. Exceptions

The requirements set forth in this chapter shall not apply to the use of recycled water onsite at a water recycling plant, or wastewater treatment plant, provided access by the public to the area of onsite recycled water use is restricted.

60304. Use of recycled water for irrigation

(a) Recycled water used for the surface irrigation of the following shall be a disinfected tertiary recycled water, except that for filtration pursuant to Section 60301.320(a) coagulation need not be used as part of the treatment process provided that the filter effluent turbidity does not exceed 2 NTU, the turbidity of the influent to the filters is continuously measured, the influent turbidity does not exceed 5 NTU for more than 15 minutes and never exceeds 10 NTU, and that there is the capability to automatically activate chemical addition or divert the wastewater should the filter influent turbidity exceed 5 NTU for more than 15 minutes:

(1) Food crops, including all edible root crops, where the recycled water comes into contact with the edible portion of the crop,

(2) Parks and playgrounds,

(3) School yards,

(4) Residential landscaping,

(5) Unrestricted access golf courses, and

(6) Any other irrigation use not specified in this section and not prohibited by other sections of the California Code of Regulations.

(b) Recycled water used for the surface irrigation of food crops where the edible portion is produced above ground and not contacted by the recycled water shall be at least disinfected secondary-2.2 recycled water.

(c) Recycled water used for the surface irrigation of the following shall be at least disinfected secondary-23 recycled water:

(1) Cemeteries,

60305. Use of recycled water for impoundments.

(a) Except as provided in subsection (b), recycled water used as a source of water supply for nonrestricted recreational impoundments shall be disinfected tertiary recycled water that has been subjected to conventional treatment.

(b) Disinfected tertiary recycled water that has not received conventional treatment may be used for nonrestricted recreational impoundments provided the recycled water is monitored for the presence of pathogenic organisms in accordance with the following:

(1) During the first 12 months of operation and use the recycled water shall be sampled and analyzed monthly for *Giardia*, enteric viruses, and *Cryptosporidium*. Following the first 12 months of use, the recycled water shall be sampled and analyzed quarterly for *Giardia*, enteric viruses, and *Cryptosporidium*. The ongoing monitoring may be discontinued after the first two years of operation with the approval of the department. This monitoring shall be in addition to the monitoring set forth in section 60321.

(2) The samples shall be taken at a point following disinfection and prior to the point where the recycled water enters the use impoundment. The samples shall be analyzed by an approved laboratory and the results submitted quarterly to the regulatory agency.

(c) The total coliform bacteria concentrations in recycled water used for nonrestricted recreational impoundments, measured at a point between the disinfection process and the point of entry to the use impoundment, shall comply with the criteria specified in section 60301.230 (b) for disinfected tertiary recycled water.

(d) Recycled water used as a source of supply for restricted recreational impoundments and for any publicly accessible impoundments at fish hatcheries shall be at least disinfected secondary-2.2 recycled water.

(e) Recycled water used as a source of supply for landscape impoundments that do not utilize decorative fountains shall be at least disinfected secondary-23 recycled water.

60306. Use of recycled water for cooling

(a) Recycled water used for industrial or commercial cooling or air conditioning that involves the use of a cooling tower, evaporative condenser, spraying or any mechanism that creates a mist shall be a disinfected tertiary recycled water.

(9) Commercial car washes, including hand washes if the recycled water is not heated, where the general public is excluded from the washing process.

(b) Recycled water used for the following uses shall be at least disinfected secondary-23 recycled water:

(1) Industrial boiler feed,

(2) Nonstructural fire fighting,

(3) Backfill consolidation around nonpotable piping,

(4) Soil compaction,

(5) Mixing concrete,

(6) Dust control on roads and streets,

(7) Cleaning roads, sidewalks and outdoor work areas and

(8) Industrial process water that will not come into contact with workers.

(c) Recycled water used for flushing sanitary sewers shall be at least undisinfected secondary recycled water.

ARTICLE 4. USE AREA REQUIREMENTS.

60310. Use area requirements

(a) No irrigation with disinfected tertiary recycled water shall take place within 50 feet of any domestic water supply well unless all of the following conditions have been met:

(1) A geological investigation demonstrates that an aquitard exists at the well between the uppermost aquifer being drawn from and the ground surface.

(2) The well contains an annular seal that extends from the surface into the aquitard.

(3) The well is housed to prevent any recycled water spray from coming into contact with the wellhead facilities.

(h) Except as allowed under section 7604 of title 17, California Code of Regulations, no physical connection shall be made or allowed to exist between any recycled water system and any separate system conveying potable water.

(i) The portions of the recycled water piping system that are in areas subject to access by the general public shall not include any hose bibbs. Only quick couplers that differ from those used on the potable water system shall be used on the portions of the recycled water piping system in areas subject to public access.

ARTICLE 5. DUAL PLUMBED RECYCLED WATER SYSTEMS.

60313. General requirements.

(a) No person other than a recycled water agency shall deliver recycled water to a dual-plumbed facility.

(b) No recycled water agency shall deliver recycled water for any internal use to any individually-owned residential units including free-standing structures, multiplexes, or condominiums.

(c) No recycled water agency shall deliver recycled water for internal use except for fire suppression systems, to any facility that produces or processes food products or beverages. For purposes of this Subsection, cafeterias or snack bars in a facility whose primary function does not involve the production or processing of foods or beverages are not considered facilities that produce or process foods or beverages.

(d) No recycled water agency shall deliver recycled water to a facility using a dual plumbed system unless the report required pursuant to section 13522.5 of the Water Code, and which meets the requirements set forth in section 60314, has been submitted to, and approved by, the regulatory agency.

60314. Report submittal

(a) For dual-plumbed recycled water systems, the report submitted pursuant to section 13522.5 of the Water Code shall contain the following information in addition to the information required by section 60323:

(1) A detailed description of the intended use area identifying the following:

(A) The number, location, and type of facilities within the use area proposing to use dual plumbed systems,

(B) The average number of persons estimated to be served by each facility on a daily basis,

(C) The specific boundaries of the proposed use area including a map showing the location of each facility to be served,

(D) The person or persons responsible for operation of the dual plumbed system at each facility, and

control specialist certified by the California-Nevada section of the American Water Works Association or an organization with equivalent certification requirements. A written report documenting the result of the inspection or testing for the prior year shall be submitted to the department within 30 days following completion of the inspection or testing.

(b) The recycled water agency shall notify the department of any incidence of backflow from the dual-plumbed recycled water system into the potable water system within 24 hours of the discovery of the incident.

(c) Any backflow prevention device installed to protect the public water system serving the dual-plumbed recycled water system shall be inspected and maintained in accordance with section 7605 of Title 17, California Code of Regulations.

ARTICLE 5.1. GROUNDWATER RECHARGE

60320. Groundwater recharge

(a) Reclaimed water used for groundwater recharge of domestic water supply aquifers by surface spreading shall be at all times of a quality that fully protects public health. The State Department of Health Services' recommendations to the Regional Water Quality Control Boards for proposed groundwater recharge projects and for expansion of existing projects will be made on an individual case basis where the use of reclaimed water involves a potential risk to public health.

(b) The State Department of Health Services' recommendations will be based on all relevant aspects of each project, including the following factors: treatment provided; effluent quality and quantity; spreading area operations; soil characteristics; hydrogeology; residence time; and distance to withdrawal.

(c) The State Department of Health Services will hold a public hearing prior to making the final determination regarding the public health aspects of each groundwater recharge project. Final recommendations will be submitted to the Regional Water Quality Control Board in an expeditious manner.

(b) The report shall be prepared by a properly qualified engineer registered in California and experienced in the field of wastewater treatment, and shall contain a description of the design of the proposed reclamation system. The report shall clearly indicate the means for compliance with these regulations and any other features specified by the regulatory agency.

(c) The report shall contain a contingency plan which will assure that no untreated or inadequately treated wastewater will be delivered to the use area.

60325. Personnel

(a) Each reclamation plant shall be provided with a sufficient number of qualified personnel to operate the facility effectively so as to achieve the required level of treatment at all times.

(b) Qualified personnel shall be those meeting requirements established pursuant to Chapter 9 (commencing with Section 13625) of the Water Code.

60327. Maintenance

A preventive maintenance program shall be provided at each reclamation plant to ensure that all equipment is kept in a reliable operating condition.

60329. Operating records and reports

(a) Operating records shall be maintained at the reclamation plant or a central depository within the operating agency. These shall include: all analyses specified in the reclamation criteria; records of operational problems, plant and equipment breakdowns, and diversions to emergency storage or disposal; all corrective or preventive action taken.

(b) Process or equipment failures triggering an alarm shall be recorded and maintained as a separate record file. The recorded information shall include the time and cause of failure and corrective action taken.

(c) A monthly summary of operating records as specified under (a) of this section shall be filed monthly with the regulatory agency.

(d) Any discharge of untreated or partially treated wastewater to the use area, and the cessation of same, shall be reported immediately by telephone to the regulatory agency, the State Department of Health, and the local health officer.

not attended full time, the alarm(s) shall be connected to sound at a police station, fire station or other full time service unit with which arrangements have been made to alert the person in charge at times that the reclamation plant is unattended.

60337. Power supply

The power supply shall be provided with one of the following reliability features:

(a) Alarm and standby power source.

(b) Alarm and automatically actuated short-term retention or disposal provisions as specified in Section 60341.

(c) Automatically actuated long-term storage or disposal provisions as specified in Section 60341.

ARTICLE 9. RELIABILITY REQUIREMENTS FOR PRIMARY EFFLUENT

60339. Primary treatment

Reclamation plants producing reclaimed water exclusively for uses for which primary effluent is permitted shall be provided with one of the following reliability features:

(a) Multiple primary treatment units capable of producing primary effluent with one unit not in operation.

(b) Long-term storage or disposal provisions as specified in Section 60341.

Note: Use of primary effluent for recycled water is no longer allowed. [repeal of Section 60309, effective December 2000]

ARTICLE 10. RELIABILITY REQUIREMENTS FOR FULL TREATMENT

60341. Emergency storage or disposal

(a) Where short-term retention or disposal provisions are used as a reliability feature, these shall consist of facilities reserved for the purpose of storing or disposing of untreated or partially treated wastewater for at least a 24-hour period. The facilities shall include all the necessary diversion devices, provisions for odor control, conduits, and pumping and pump back equipment. All of the equipment other than the pump back

60345. Biological treatment

All biological treatment unit processes shall be provided with one of the following reliability features:

(a) Alarm and multiple biological treatment units capable of producing oxidized wastewater with one unit not in operation.

(b) Alarm, short-term retention or disposal provisions, and standby replacement equipment.

(c) Alarm and long-term storage or disposal provisions.

(d) Automatically actuated long-term storage or disposal provisions.

60347. Secondary sedimentation

All secondary sedimentation unit processes shall be provided with one of the following reliability features:

(a) Multiple sedimentation units capable of treating the entire flow with one unit not in operation.

(b) Standby sedimentation unit process.

(c) Long-term storage or disposal provisions.

60349. Coagulation

(a) All coagulation unit processes shall be provided with the following mandatory features for uninterrupted coagulant feed:

(1) Standby feeders,

(2) Adequate chemical stowage and conveyance facilities,

(3) Adequate reserve chemical supply, and

(4) Automatic dosage control.

(3) Chlorine scales, and

(4) Automatic devices for switching to full chlorine cylinders.

Automatic residual control of chlorine dosage, automatic measuring and recording of chlorine residual, and hydraulic performance studies may also be required.

(b) All disinfection unit processes where chlorine is used as the disinfectant shall be provided with one of the following reliability features:

(1) Alarm and standby chlorinator;

(2) Alarm, short-term retention or disposal provisions, and standby replacement equipment;

(3) Alarm and long-term storage or disposal provisions;

(4) Automatically actuated long-term storage or disposal provisions; or

(5) Alarm and multiple point chlorination, each with independent power source, separate chlorinator, and separate chlorine supply.

60355. Other alternatives to reliability requirements

Other alternatives to reliability requirements set forth in Articles 8 to 10 may be accepted if the applicant demonstrates to the satisfaction of the State Department of Health that the proposed alternative will assure an equal degree of reliability.

(i) "Reclaimed Water" is a wastewater which as a result of treatment is suitable for uses other than potable use.

(j) "Reduced Pressure Principle Backflow Prevention Device (RP)" is a backflow preventer incorporating not less than two check valves, an automatically operated differential relief valve located between the two check valves, a tightly closing shut-off valve on each side of the check valve assembly, and equipped with necessary test cocks for testing.

(k) "User Connection" is the point of connection of a user's piping to the water supplier's facilities.

(l) "Water Supplier" is the person who owns or operates the public water system.

(m) "Water User" is any person obtaining water from a public water supply.

7584. Responsibility and scope of program

The water supplier shall protect the public water supply from contamination by implementation of a cross-connection control program. The program, or any portion thereof, may be implemented directly by the water supplier or by means of a contract with the local health agency, or with another agency approved by the health agency. The water supplier's cross-connection control program shall for the purpose of addressing the requirements of Sections 7585 through 7605 include, but not be limited to, the following elements:

(a) The adoption of operating rules or ordinances to implement the cross-connection program.

(b) The conducting of surveys to identify water user premises where cross-connections are likely to occur,

(c) The provisions of backflow protection by the water user at the user's connection or within the user's premises or both,

(d) The provision of at least one person trained in cross-connection control to carry out the cross-connection program,

(e) The establishment of a procedure or system for testing backflow preventers, and

(f) The maintenance of records of locations, tests, and repairs of backflow preventers.

ARTICLE 2. PROTECTION OF WATER SYSTEM

7601. Approval of backflow preventers

Backflow preventers required by this Chapter shall have passed laboratory and field evaluation tests performed by a recognized testing organization which has demonstrated their competency to perform such tests to the Department.

7602. Construction of backflow preventers

(a) Air-gap Separation. An Air-gap separation (AG) shall be at least double the diameter of the supply pipe, measured vertically from the flood rim of the receiving vessel to the supply pipe; however, in no case shall this separation be less than one inch.

(b) Double Check Valve Assembly. A required double check valve assembly (DC) shall, as a minimum, conform to the AWWA Standard C506-78 (R83) adopted on January 28, 1978 for Double Check Valve Type Backflow Preventive Devices which is herein incorporated by reference.

(c) Reduced Pressure Principle Backflow Prevention Device. A required reduced pressure principle backflow prevention device (RP) shall, as a minimum, conform to the AWWA Standard C506-78 (R83) adopted on January 28, 1978 for Reduced Pressure Principle Type Backflow Prevention Devices which is herein incorporated by reference.

7603. Location of backflow preventers

(a) Air-gap Separation. An air-gap separation shall be located as close as practical to the user's connection and all piping between the user's connection and the receiving tank shall be entirely visible unless otherwise approved in writing by the water supplier and the health agency.

(b) Double Check Valve Assembly. A double check valve assembly shall be located as close as practical to the user's connection and shall be installed above grade, if possible, and in a manner where it is readily accessible for testing and maintenance.

(c) Reduced Pressure Principle Backflow Prevention Device. A reduced pressure principle backflow prevention device shall be located as close as practical to the user's connection and shall be installed a minimum of twelve inches (12") above grade and not more than thirty-six inches (36") above grade measured from the bottom of the device and with a minimum of twelve inches (12") side clearance.

TABLE 1
TYPE OF BACKFLOW PROTECTION REQUIRED

Degree of Hazard	Minimum Type of Backflow Prevention
(a) Sewage and Hazardous Substances	
(1) Premises where there are waste water pumping and/or treatment plants and there is no interconnection with the potable water system. This does not include a single-family residence that has a sewage lift pump. A RP be provided in lieu of an AG if approved by the health agency and water supplier.	AG
(2) Premises where hazardous substances are handled in any manner in which the substances may enter the potable water system. This does not include a single-family residence that has a sewage lift pump. A RP may be provided in lieu of an AG if approved by the health agency and water supplier.	AG
(3) Premises where there are irrigation systems into which fertilizers, herbicides, or pesticides are, or can be, injected.	RP
(b) Auxiliary Water Supplies	
(1) Premises where there is an unapproved auxiliary water supply which is interconnected with the public water system. A RP or DC may be provided in lieu of an AG if approved by the health agency and water supplier.	AG
(2) Premises where there is an unapproved auxiliary RP water supply and there are no interconnections with the public water system. A DC may be provided in lieu of a RP if approved by the health agency and water supplier.	RP

(e) Dockside Watering Points and Marine Facilities

(1) Pier hydrants for supplying water to vessels for any purpose. RP

(2) Premises where there are marine facilities. RP

(f) Premises where entry is restricted so that inspections for cross-connections cannot be made with sufficient frequency or at sufficiently short notice to assure that do not exist. RP

(g) Premises where there is a repeated history of cross-connections being established or re-established. RP

Section 7605. Testing and maintenance of backflow preventers

(a) The water supplier shall assure that adequate maintenance and periodic testing are provided by the water user to ensure their proper operation.

(b) Backflow preventers shall be tested by persons who have demonstrated their competency in testing of these devices to the water supplier or health agency.

(c) Backflow preventers shall be tested at least annually or more frequently if determined to be necessary by the health agency or water supplier. When devices are found to be defective, they shall be repaired or replaced in accordance with the provisions of this Chapter.

(d) Backflow preventers shall be tested immediately after they are installed, relocated or repaired and not placed in service unless they are functioning as required.

(e) The water supplier shall notify the water user when testing of backflow preventers is needed. The notice shall contain the date when the test must be completed.

(f) Reports of testing and maintenance shall be maintained by the water supplier for a minimum of three years.

* * * * *

APPENDIX B

DRAFT GEOTECHNICAL FEASIBILITY AND PRELIMINARY DESIGN REPORT

DRAFT GEOTECHNICAL FEASIBILITY AND PRELIMINARY DESIGN REPORT

TRINIDAD RANCHERIA CHER-AE HEIGHTS HOTEL

Trinidad, California

Prepared by:

Crawford & Associates, Inc.
4220 Rocklin Road, Suite 1
Rocklin, CA 95677

November 2016

Prepared for:

Trinidad Rancheria Economic Development Corporation
P.O. Box 630
Trinidad, CA 95570

DRAFT

Crawford & Associates, Inc.
Geotechnical Engineering, Design and Construction Services
Sacramento | Modesto | Pleasanton | Rocklin | Ukiah

Corporate Office: 1100 Corporate Drive, Suite 230 | Sacramento, CA 95831 | (916) 455-4225
Modesto: 1165 Scenic Drive, Suite B | Modesto, CA 95350 | (209) 312-7668
Pleasanton: 6200 Stoneridge Mall Road, Suite 330 | Pleasanton, CA 94588 | (925) 401-3515
Rocklin: 4220 Rocklin Road, Suite 1 | Rocklin, CA 95677 | (916) 455-4225
Ukiah: 100 North Pine Street | Ukiah, CA 95482 | (707) 240-4400

November 8, 2016
CAInc File No. 16-319.1

Mr. David Tyson
Trinidad Rancheria Economic Development Corporation
P.O. Box 630
Trinidad, CA 95570

Subject: **DRAFT GEOTECHNICAL FEASIBILITY AND PRELIMINARY DESIGN REPORT**
Trinidad Rancheria Cher-Ae Heights Hotel
Trinidad, California

Dear Mr. Tyson,

Attached is our **DRAFT** Geotechnical Feasibility and Preliminary Design Report for the Trinidad Rancheria Cher-Ae Heights Hotel. Crawford & Associates, Inc. (CAInc) completed this report in accordance with our agreement with Trinidad Rancheria Economic Development Corporation (TREDC) dated August 26, 2016.

This report provides geotechnical data, geological hazards assessment, and preliminary geotechnical recommendations for the proposed hotel project. We will issue a final report upon receiving comments from you on this draft.

Please call if you have questions or require additional information.

Sincerely,

Crawford & Associates, Inc.,

Adam J. Killinger, PE, GE
Project Manager

Rick Sowers, PE, CEG
Principal Engineering Geologist

Nick Anderson, EIT
Project Engineer

DRAFT

Crawford & Associates, Inc.
Geotechnical Engineering, Design and Construction Services
Sacramento | Modesto | Pleasanton | Rocklin | Ukiah

Corporate Office: 1100 Corporate Drive, Suite 230 | Sacramento, CA 95831 | (916) 455-4225
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Corporate Office: 1100 Corporate Drive, Suite 230 | Sacramento, CA 95831 | (916) 455-4225
Modesto: 1165 Scenic Drive, Suite B | Modesto, CA 95350 | (209) 312-7668
Pleasanton: 6200 Stoneridge Mall Road, Suite 330 | Pleasanton, CA 94588 | (925) 401-3515
Rocklin: 4220 Rocklin Road, Suite 1 | Rocklin, CA 95677 | (916) 455-4225
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SELECT REFERENCES

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1 INTRODUCTION

1.1 PURPOSE

Crawford & Associates, Inc. (CAInc) prepared this Draft Geotechnical Feasibility and Preliminary Design Report for the Trinidad Rancheria Cher-Ae Heights Hotel project in Trinidad, California. This report provides our geotechnical data, geologic hazards evaluation, feasibility assessment and preliminary geotechnical recommendations for planning and preliminary design/costing. CAInc will prepare a final Geotechnical Design Report for the project based on further definition of project details, including final structure layouts, building loads, retaining walls, site grading and drainage/subdrainage elements.

1.2 SCOPE OF SERVICES

To prepare this report, CAInc:

- Reviewed published geologic, soils, groundwater and seismic maps pertaining to the site;
- Reviewed previous geotechnical studies at the casino and along nearby sections of Scenic Drive;
- Conducted geologic reconnaissance of the site and immediate area;
- Discussed the project elements with the design team;
- Drilled, logged, and sampled 6 exploratory borings to a maximum depth of 81.4 ft below ground surface (bgs);
- Performed laboratory testing on soil samples recovered from the borings;
- Conducted engineering analysis for preliminary foundation design; and
- Developed preliminary geotechnical recommendations based on the data and test results.

2 SITE & PROJECT DESCRIPTION

The site is located near the top of a 230±ft high bluff overlooking Trinidad Bay. Scenic Drive traverses the slope between the site and the ocean, approximately 65ft below the top of bluff. The overall slope between the casino and the ocean is about 2:1 (H:V) and is heavily vegetated, including numerous water-loving plants suggestive of shallow groundwater/springs. Scenic Drive is a county-owned road that has experienced numerous slip-outs and slides due to wave attach undercutting the ocean bluff. Several structures are present along the slope below the casino, including a residence about half-way along the slope between the casino and Scenic Drive.

The project includes a proposed 6-story hotel and complementary facilities (e.g. pool, fitness center, mechanical building, offices, etc.) located along the southwest side of the existing casino building. The hotel will be a steel-frame, stand-alone structure. The base level is expected to be near existing grade, which is generally flat within the building footprint. Some retaining walls may be incorporated into the final design to account for sloping ground to the southwest of the building.

Public access to the hotel is expected to be from a porte cochere with entrance from an existing paved roadway along the east side of the casino property; no additional grading is required for this access. Truck/delivery access is expected to be via a new road constructed from near the existing exit road at Scenic Drive with a “hairpin” turn near the existing residence and end near the northwest corner of the casino near the existing kitchen/restaurant. The road grade will be on the order of 7-12% and require

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new cut/fills to about 10-15 feet high. New cuts may require retaining walls to about 10 ft high. We understand the existing residence will be acquired by the tribe and removed as part of this project.

We show the tentative layout on Figure 1.

3 GEOLOGY

The site is underlain by Pleistocene marine terrace sediments deposited on a wave-cut bench in rock of the Jura-Cretaceous Franciscan Complex. The marine terrace sediments are generally comprised of pebbly sand, silt and clay. The underlying Franciscan Complex is comprised of weathered/sheared shale. We show the site geology on Figure 6.

Rock consistent with the Franciscan Complex is exposed near beach-level and locally in the site vicinity near the intersection of Scenic Drive and the casino exit road. This rock is observed to be variably-weathered shale and greywacke sandstone, with layering dipping typically to the northeast. Some rock is very hard while some is soft (mostly within sheared shale layers). The hard rock is generally resistant to erosion, as evidenced by the "sea stacks" left standing in the bay and along the shore.

We observed marine terrace deposits exposed along the road cuts of Scenic Drive and along the slopes below the casino. These soils are partly-cemented, pebbly sand and silt.

The slopes adjacent west of the site are moderately steep with localized areas of instability. An active slide is located along at the south end of the site and extends from the top of bluff to ocean level 200+ft below. The existing casino is not affected by this feature, although the existing parking area near the mechanical building is at the head of this slide and the outer edge of the pavement has broken and dropped about 6-inches vertically. Scenic Drive crosses this slide and has experienced distress from this movement. This slope contains evidence of shallow groundwater and springs that likely contribute to the slope instability in this area.

The active Trinidad Fault is mapped near the ocean and trending about parallel to the shoreline. The proposed hotel project is located approximately 500 feet northeast of this fault. Further discussion of fault rupture hazard and seismic ground motions are presented in Sections 8 and 9 below.

4 PREVIOUS EXPLORATION

4.1 CASINO EXPANSION EXPLORATIONS

The original casino building was expanded in 2000 from 21,000±sf to 50,000±sf, including expansions to the north and south. SHN Consulting Engineers & Geologists (SHN) performed three machine-drilled borings and one hand boring for the northern expansion to a maximum depth of 27ft bgs (report dated October 1998). Taber Consultants (Taber) excavated six test pits for the southern expansion, including a retaining wall and water tank, to a maximum depth of 12ft bgs (reports dated January 1999 and May 1999). These studies show that the existing casino, retaining wall and water tank are founded on strip/ring footings established in the weathered shale bedrock. We include pertinent data from the existing casino expansions in Appendix D.

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4.2 SCENIC DRIVE SLOPE STABILITY EXPLORATIONS

Reviewed nearby geotechnical studies along Scenic Drive include three investigations performed by Taber (at PM 2.45, PM 2.20 and PM 1.25) and one investigation performed by SHN Consulting Engineers & Geologists (at PM 2.05). These studies show that groundwater is a primary initiator of landslides in the area. Terrace deposit and slide debris thicknesses varied from 0 to up to 40ft (generally 10-20ft), which lie on top of the weathered bedrock.

Slope stability measures to support the road have included drained, reconstructed embankments, soldier-pile retaining walls and welded-wire retaining walls.

5 CURRENT EXPLORATION

For this project, CAInc retained Geo-Ex Subsurface Exploration (Geo-Ex) to perform six (6) exploratory test borings between September 13, 2016 and September 16, 2016 ranging in depth from 31½ to 81½ ft below ground surface (bgs). Geo-Ex used a truck-mounted CME 75 drill rig equipped with flight augers or rotary wash techniques to perform this work.

During the drilling operations, penetration tests (blow counts) were performed at regular intervals using a Modified California Sampler (2.4" ID) or Standard Penetration Test Sampler (1.4" ID) to evaluate the relative density of coarse-grained (cohesionless) soil and to retain soil samples for laboratory testing. The penetration tests were performed by using a 140-pound automatic trip-hammer falling 30 inches. The recorded blow counts are shown on our boring logs and on the cross sections (Figures 3 and 4). The consistency of fine-grained (cohesive) soil was determined in accordance with ASTM D2488.

Our project engineer, Mr. Nick Anderson, logged the borings and visually classified the soils encountered according to the Unified Soil Classification System (USCS). Soil samples obtained from the borings were packaged and sealed in the field to reduce moisture loss and disturbance and delivered to laboratories for testing.

CAInc made ground water observations during drilling operations. One-inch diameter piezometers were installed in B3 and B5 to monitor future groundwater fluctuations. The remaining borings were backfilled with soil cuttings or neat cement grout. Details of the piezometer construction are shown on Detail 1.

6 SURFACE AND SUBSURFACE CONDITIONS

6.1 SOIL UNITS

We divide the soils overlying the bedrock into two general units. The uppermost unit is fill comprised of mostly stiff sandy lean clay and medium dense silty gravel. This unit is present across the majority of the hotel site and generally less than about 5 feet in depth.

The fill is underlain by marine terrace deposits within the northern half of the hotel footprint. These deposits are generally orange-tan, medium dense to very dense, silty and clayey sand with variable amounts of gravel and cementation. We encountered these soils to a depth of about 8 feet in B3 (near center of hotel footprint); the thickness then increases rapidly to a depth of 43 feet at B2 (north end of hotel

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footprint). The sharp drop in the bedrock surface toward the north likely represents deposition over an eroded, wave-cut bedrock surface.

6.2 BEDROCK

We encountered bedrock consistent with the Franciscan Complex as described above in each of the borings below the fill and/or terrace soils. The rock is predominately decomposed to moderately weathered shale with lesser sandstone and mudstone layers. Where decomposed, the rock is mostly angular rock fragments within a sheared clay matrix. The rock unit was drillable to the full depth of our test borings (maximum 81.4 ft, B3) with power auger and rotary wash methods; rock coring was not required for drill penetration. Table 1 summarizes the bedrock depth/elevation and description at the exploration locations completed by this office and those of SHN (1998) and Taber (1998) for the casino expansion work.

Table 1: Bedrock Summary

Exploration	Boring/Test Pit Number	Depth (ft)	Approximate Elevation (ft)	Description
SHN (1998)	B1	6.0	210	Sandstone/Mudstone, fractured
	B2	Unknown	Unknown	Unknown
	B3	6.0	213	Sandstone/Mudstone, fracture, highly weathered
	HB1	Unknown	Unknown	Unknown
Taber (1998)	TP1	6.5	227.5	Shale, completely weathered and fractured
	TP2	8.5	230.0	Shale, weathered and completely fractured
	TP3	6.5	229.0	Shale, completely weathered and fractured/sheared
	TP4	10.0	228.0	Shale, completely weathered and fractured/sheared
	TP5	4.0	227.0	Shale, completely weathered and fractured/sheared
	TP6	1.0	234.0	Shale, highly weathered and completely fractured
CAInc (2016)	B1	>31	<184	Not encountered
	B2	43.2	181.8	Shale, soft
	B3	8.0	222.0	Shale, decomposed to moderately weathered
	B4	4.0	226.0	Shale, decomposed to moderately weathered
	B5	3.5	226.5	Shale, intensely to moderately weathered
	B6	4.0	226.0	Shale, very intensely to moderately weathered

We present detailed logs of our test borings in Appendix A. Data from the SHN and Taber studies are included in Appendix D.

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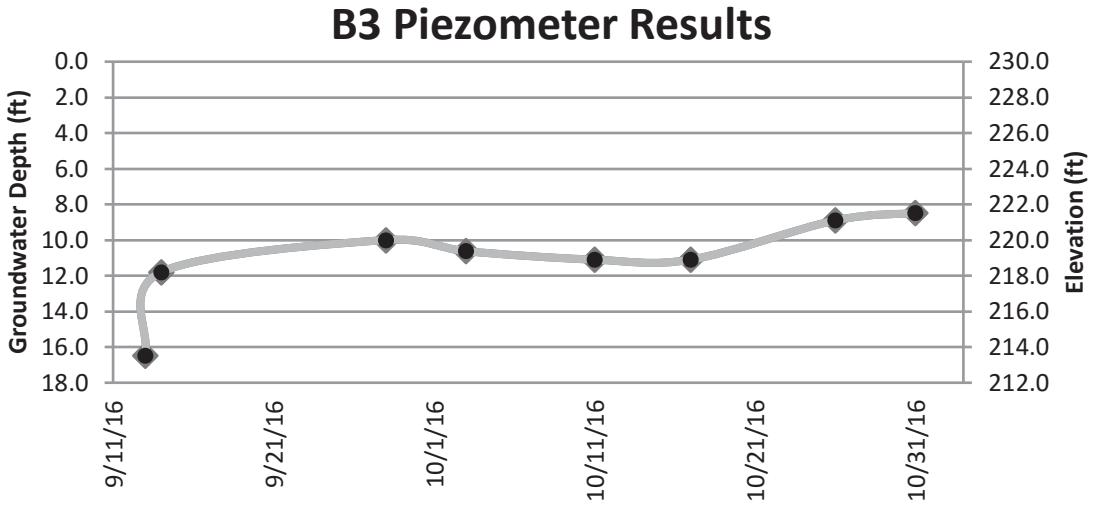
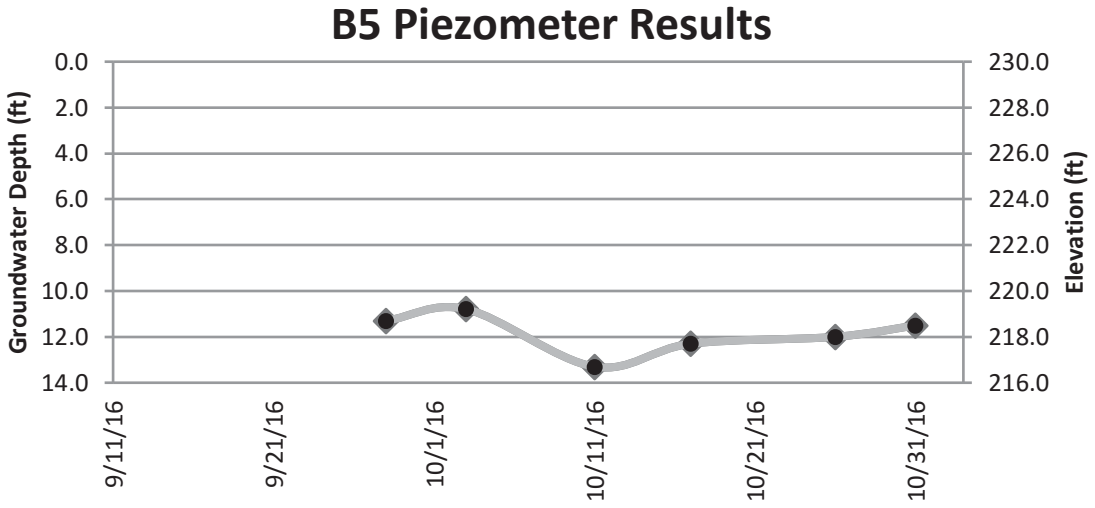
6.3 GROUNDWATER

We encountered free groundwater during drilling in boring B3 at a depth of about 16.5 ft; this level rose to about depth 12 ft within 24 hours after drilling. The remaining borings were dry to full auger depth. Piezometers were installed in B3 and B5 to monitor seasonal groundwater fluctuations. The casino's Facilities Manager, Butch Rindels, is collecting groundwater readings using an electronic water level meter on a weekly basis. Through October, groundwater in both B3 and B5 has been measured at about depth 8-12 ft, as shown below. Groundwater rises significantly shortly after heavy rains.





In general, we interpret groundwater to be seasonally present within the terrace soils near the bedrock contact. The groundwater is likely "perched" over the less-permeable bedrock and daylights onto the subjacent slope as springs/seeps, as evidenced by extensive water-loving plants along the slopes below the casino. Groundwater within the bedrock unit appears to be intermittent and restricted to the decomposed/sheared zones.

7 LABORATORY TESTING

CAInc completed the following laboratory tests on representative soil samples obtained from our exploratory borings:

- Moisture Content / Dry Density (ASTM D2216 / D2937)
- Particle Size Analysis (ASTM D422)
- No. 200 Sieve Wash (ASTM D1140)
- Atterberg Limits (ASTM D4318)
- Expansion Index Test (ASTM D4829)
- Unconsolidated-Undrained Triaxial Shear Strength Test (ASTM D2850)
- Unconfined Compressive Strength (ASTM D2166)
- Direct Shear Strength (ASTM D3080)
- R-value (CTM 301)
- Sulfate/Chloride Content (CTM 417/422)
- pH/Minimum Resistivity (CTM 643)

We present the complete laboratory test results in Appendix B.

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7.1 CLASSIFICATION AND STRENGTH TESTS

Table 2 summarizes the results of classification and strength tests on representative samples from the terrace soils and weathered bedrock.

Table 2: Classification and Strength Tests

Sub-surface Unit	Sample		Classification Tests					Strength Tests	
	Boring - Sample Number	Depth (ft)	Moisture Content (%)	Dry Density (pcf)	% Passing 200	Liquid Limit	Plastic Limit	Cohesion (psf)	Friction Angle (°)
Terrace Deposits	B1-1	6.0	18.3	105.3	24	NP	NP	-	-
	B1-2	11.0	9.2	123.4	16	-	-	-	-
	B1-3	16.0	12.7	103.1	15	-	-	-	-
	B1-4	21.0	13.4	94.5	-	-	-	85	34.4
	B1-5	25.0	-	-	22	-	-	-	-
	B1-6	31.0	6.3	124.3	-	-	-	-	-
	B2-2	8.0	6.9	114.9	-	-	-	-	-
	B2-3	13.0	14.6	113.0	18	-	-	-	-
	B2-4	18.0	13.0	116.3	22	-	-	-	-
	B2-5	23.0	8.5	109.9	15	-	-	-	-
	B2-6	28.0	13.7	95.0	-	-	-	50	34.3
	B2-7	33.0	-	-	23	-	-	-	-
	B3-1	5.3	15.5	100.9	-	-	-	-	-
Bedrock	B3-2	11.0	8.5	133.0	-	-	-	3,051	-
	B3-3	16.0	4.9	138.2	-	-	-	2,387	-
	B3-4	21.0	-	-	-	27	14	-	-
	B3-6	31.0	8.1	127.7	-	-	-	-	-
	B3-10	51.0	7.0	142.3	-	-	-	-	-
	B4-1	6.0	8.8	129.6	-	-	-	1,272	-
	B4-2	11.0	8.5	137.1	-	-	-	-	-
	B4-4	21.0	-	-	-	33	17	-	-
	B4-7	36.0	6.2	143.0	-	-	-	1,400	21.8
	B5-1	6.0	4.1	137.3	-	-	-	-	-
	B5-3	16.0	-	-	-	24	13	-	-
	B5-4	21.0	5.8	148.7	-	-	-	-	-
	B5-7	36.0	-	-	-	29	14	-	-
	B5-8	41.0	6.2	141.0	-	-	-	1,225	27.5
	B6-2	11.0	6.6	123.6	-	-	-	3,783	-

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Based on these results, we assign an average angle of internal friction value of 32 degrees to the terrace soils and modeled the weak bedrock with an undrained shear strength of 3,750 psf (represented as a very stiff to hard clay). The rock specimens tested were of the sheared matrix material that is weak relative to the rock mass as a whole; overall we consider the rock unit to be classed as "soft" and "highly weathered", with typical allowable bearing pressures on the order of 4-8 tsf (8,000-16,000 psf).

7.2 CORROSION TESTS

Table 3 summarizes the results of soil corrosivity tests on samples from various levels within the bedrock unit.

Table 3: Soil Corrosion Test Summary

Boring - Sample Number	Depth (ft)	pH	Minimum Resistivity (ohm-cm)	Chloride Content (ppm)	Sulfate Content (ppm)
B3-7	36.0	8.57	1,070	12.1	225.9
B4-4	21.0	8.18	1,150	12.0	175.2
B4-8	40.0	8.54	1,850	3.7	19.4
B5-9	46.0	8.55	800	12.9	131.8
B6-1	6.0	7.72	1,720	6.9	100.4

According to Caltrans Corrosion Guidelines, a site is considered corrosive to foundation elements if one or more of the following conditions exist: Chloride concentration is greater than or equal to 500 ppm, sulfate concentration is greater than or equal to 2000 ppm, minimal resistivity of 1000 ohm-cm or less, or the pH is 5.5 or less.

Based on Caltrans guidelines, the site soils are non-corrosive to cementitious materials but may be corrosive to ferrous material. We recommend consulting a corrosion engineer to develop possible corrosion mitigation measures, as needed.

7.3 EXPANSION INDEX TESTS

Results of Expansion Index (EI) tests conducted on both the terrace soils and the bedrock show EI = 3 and 54, respectively. Table 4 summarizes these results and those previously performed for the casino expansion in 2000 by Taber Consultants.

Table 4: Expansion Index Test Summary

Exploration	Boring - Sample Number	Description	EI	Expansion Potential
Crawford (2016)	Bulk 1	Terrace Deposits	3	Very Low
	Bulk 2	Bedrock	54	Medium
Taber (1998)	TP1@4'	Terrace Deposits	14	Very Low
	TP3@8'	Bedrock	30	Low

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These results indicate that some portions of the bedrock (likely the decomposed, clay-rich matrix) may be at least moderately expansive and require consideration in design of some project elements (e.g., slab-on-grade floors, flatwork, etc).

8 SEISMIC DESIGN PARAMETERS

The USGS Interactive Deaggregation Page[1] indicates a maximum peak horizontal ground acceleration (PGA) of 0.52g for a seismic event with a 10% probability of exceedance in 50 years.

Based on our exploratory borings and the previous site investigations, we provide the California Building Code (CBC) seismic parameters as shown in Table 5. We determined these values using a site latitude of 41.0530°N and longitude of 124.1293°W.

Table 5: Seismic Parameters

Site Class	C
Risk Category	**I/II/III/IV**
Ss – Acceleration Parameter	2.440 g
S1 – Acceleration Parameter	1.001 g
Fa – Site Coefficient	1.000
Fv – Site Coefficient	1.300
SMS – Adjusted MCE* Spectral Response Acceleration Parameter	2.440 g
SM1 – Adjusted MCE* Spectral Response Acceleration Parameter	1.301 g
SDS – Design Spectral Acceleration Parameter	1.627 g
SD1 – Design Spectral Acceleration Parameter	0.868 g
Tl – Long-Period Transition Period**	12

* Maximum Considered Earthquake
** Figure 22-12, ASCE 7-10

9 PRELIMINARY CONCLUSIONS AND RECOMMENDATIONS

Based on the data presented above, we consider the site is suitable for construction of the proposed hotel and complementary facilities provided that appropriate mitigation of the geologic hazards is incorporated into project design. Below, we provide a discussion of the geologic hazards, mitigation alternatives, and preliminary geotechnical recommendations for the structure foundations, retaining walls, pavement structural sections and site grading.

We anticipate that the project will be somewhat modified based on these conclusions. Further geotechnical study by this office will be completed for final design, based on the final structure layout, retaining walls and site grading.

[1] http://geohazards.usgs.gov/deaggint/2008/ accessed June 8, 2016

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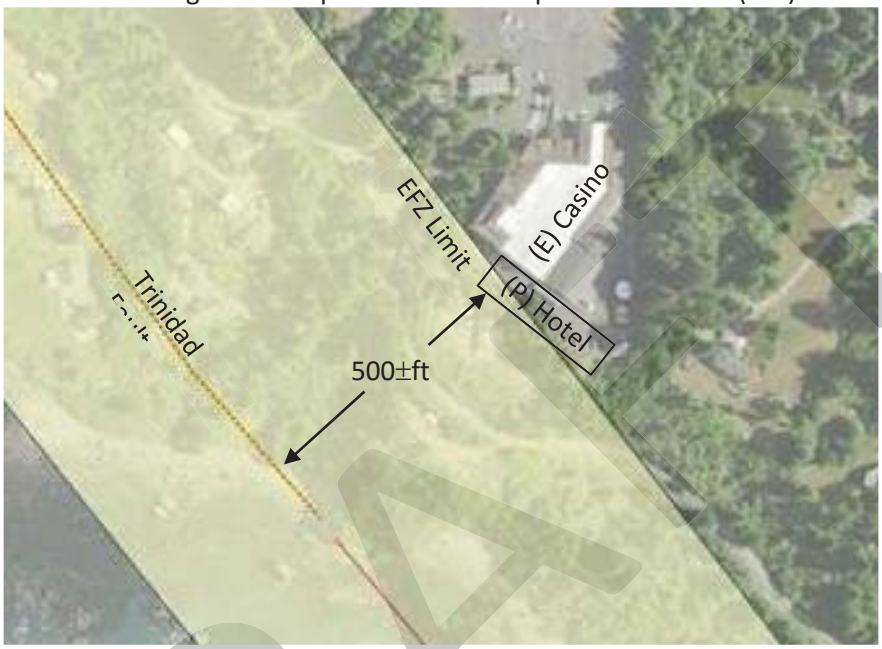
9.1 GEOLOGIC HAZARDS

9.1.1 FAULT RUPTURE

The active Trinidad Fault is mapped near the shoreline approximately 500±ft to the southwest of the proposed hotel. The California Geologic Survey (CGS) considers a fault to be active if it has shown evidence of ground displacement during the Holocene period, defined as about the last 11,000 years. The hotel lies at the eastern edge of an Alquist–Priolo Earthquake Fault Zone (EFZ) as defined by CGS.



The Earthquake Fault Zone Act requires structures for human occupancy to be set-back a minimum of 50 ft from an active fault. EFZ boundaries are commonly set at 500 feet from major active faults to accommodate imprecise fault locations and possible branches of active faults. The basis for establishing the Trinidad EFZ is a Fault Evaluation Report (FER-138, California Division of Mines and Geology, 1982); this report concludes that the fault scarp can be traced with confidence north of the site but is less distinct along the coast to the south. The relatively wide zone in this area reflects the imprecise location of the Trinidad Fault and potential for other branches of this fault to exist.

Except for the northwest corner, the proposed hotel footprint is positioned outside of the mapped EFZ. While we cannot say conclusively that an active fault is not present within this footprint, we consider the likelihood of an active fault through the site to be low and that the risk of fault rupture does not represent a "fatal flaw" to the project. Further investigation would be necessary to confirm this assessment, if required.

9.1.2 LANDSLIDES

Landslides are common along the slopes below the site, particularly at and below Scenic Drive. These slides are typically initiated at the beach level by wave erosion that undercuts the toe of slope preferentially within the "weak rock" areas of the shale bedrock. This erosion leads to block failures within the bedrock that translate upslope as individual translational/rotational slides. Several of these slides have affected Scenic Drive in this vicinity and have been the subject of past site investigations;

roadway slope stabilization measures taken by Humboldt County have included retaining walls systems, slope reconstruction and subdrainage elements.

An active slide extends upslope of Scenic Drive to near the southwest corner of the proposed hotel. This slide appears to be relatively shallow (perhaps on the order of 10-15 feet deep). The head of the slide is near the edge of the existing casino parking area. We show the approximate limits of this slide on Figure 1.

The active slide appears to involve primarily the terrace deposits overlying the bedrock. Groundwater is a major contributor to slope instability and appears to move within and through the terrace materials, "daylighting" out-of-slope where the rock is exposed. Areas of surface seepage, springs and water-loving vegetation are evidence of seasonal, shallow groundwater within the slope.

Based on preliminary discussions with the design team, we expect the hotel footprint will be modified to avoid the slide feature. Depending on the final hotel layout, some level of slope stabilization should be considered to limit headward encroachment of the slide. Appropriate stabilization work may include such options as a soil nail wall, welded wire wall or cantilevered soldier pile wall, with wall height likely on the order of 10-15 feet. If the hotel footprint cannot be modified to avoid the slide, then more extensive slope stabilization will be required, such as a drained, reconstructed embankment, regraded slope, tie-back soldier pile wall(s) or a tiered wall system. Table 6, below, summarizes a few of these options. Figure 5 shows some conceptual design elements.

Table 6: Slope Stabilization Options

Stabilization Technique/System	Advantages	Disadvantages
Soil Nail Wall	• Minor grading required to install "nails" (comprised of steel bars placed in pre-drilled holes, grouted in place) • "Top-down" construction minimizes ground disturbance • Cost-effective	• Requires drain elements against the excavation face and permanent facing connected to the nail heads
Drained, Reconstructed Embankment	• Provides secure slope stabilization if slope geometry and slide depth is confirmed • Utilizes on-site soils for reconstruction	• Requires significant grading and subdrainage • Requires keyway at toe into intact material • Likely requires work beyond property limits
Lightweight Fill Slope	• Unloads the slope and creates usable fill • Free draining material • Possibly qualifies for state grant funds	• Requires significant grading and off-haul of native soils • Costly (without the use of State grant) • Limited contractors have experience
Soldier Pile and Lagging Wall	• Stabilizes the upper portion of the slope • May provide additional usable area	• Requires moderate grading • Requires tie-backs for systems typically greater than 8-10 ft high
Tensar Geopier SRT System	• Suitable for shallow unstable soil • Low impact • Cost-effective	• Proprietary design • Loud installation • Slide plane may be too deep (>15ft limit)
Welded Wire (e.g., Hilfiker) Wall	• Flexible and cost-effective • Local product (based in Eureka, CA) • Commonly used in the area	• Requires secure support at toe of wall • Requires backslope excavation into the slope

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9.1.3 LIQUEFACTION POTENTIAL

Liquefaction can occur when saturated, loose to medium dense, granular soils (generally within 50 ft of the surface), or specifically defined cohesive soils, are subjected to ground shaking. Based on the soil, rock, and groundwater conditions encountered during our exploration and current industry accepted liquefaction evaluation methods, liquefaction is not generally expected to occur, unless sustained high groundwater levels are identified within the granular terrace soils. Liquefaction potential is considered low within the underlying bedrock.

9.1.4 TSUNAMI

The coastal area is mapped within a tsunami inundation hazard to an elevation of less than 50ft as shown on Figure 7. The casino site is at an elevation approximately 230 feet above the ocean level and is therefore outside of the hazard mapping.

9.2 PRELIMINARY RECOMMENDATIONS

9.2.1 HOTEL SUPPORT

The site is considered stable for hotel foundations established within undisturbed terrace deposits and/or bedrock. Due to the potential for landsliding along the subjacent slope and the variable materials across the longitudinal footprint (involving both weak bedrock and terrace soils), we do not recommend spread footings or other shallow foundation systems for the hotel structure. Pile foundations, achieving penetration into the bedrock unit, are therefore recommended. Driven piles (e.g., pre-cast concrete, cast-in-steel-shell (CISS), pipe piles, and H-piles) may be feasible, however, are not considered as appropriate as drilled piles due to vibrations/noise from the pile-driving equipment and variable driving conditions into the rock unit.

We consider cast-in-drilled-hole (CIDH) piles to be most appropriate; these piles require smaller equipment for installation than for driven piles and minimize noise/vibrations. The potential for groundwater and caving soils will require casing and minimum 24-inch diameter piles. For use in preliminary design, we recommend using skin friction only due to the "wet" method installation. Based on the strength data obtained from the field and laboratory tests, we recommend preliminary axial pile capacities be based on factored (allowable) adhesion value in bedrock of 1.5 kips/ft^2 and frictional capacity of 0.5 kips/ft^2 in the terrace deposits. Piles should be embedded a minimum of 10ft into bedrock. See Figure 4 for our interpreted bedrock profile along the longitudinal axis of the hotel.

We performed preliminary lateral pile analysis for both 24-inch and 36-inch diameter CIDH piles with 1% steel and a fixed-head condition (as requested by Steve Vasquez, PE) for ½-inch of deflection at the top of the pile. We performed two models – one model assuming terrace deposits and one model assuming bedrock to the surface. We summarize these results in Table 7. We will perform additional analysis to develop axial and lateral pile capacities for final design.

Table 7: Lateral Pile Analysis (Shear Resistance, ½-in deflection)

Soil/Rock Deposit	24-inch CIDH	36-inch CIDH
Terrace Deposits	75 kips	150 kips
Bedrock	127 kips	235 kips

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We include deflection vs depth, bending moment vs depth, and shear resistance vs depth graphs in Appendix C.

9.2.2 COMPLEMENTARY FACILITIES SUPPORT

Soil support for the complementary facilities (e.g. fitness center, mechanical building, offices, etc.) are available by means of shallow spread or isolated footings bearing in compacted fill, undisturbed terrace deposits, or bedrock at least 2ft below nearest adjacent grade and at least 2ft wide. Allowable bearing pressure on the order of 2,000 psf in compacted fill or terrace deposits and 4,000 psf in bedrock is available for support. Maintain a minimum 5ft horizontal clearance from the top of slope.

Support for the pool (currently shown at the south end of the hotel, near the slide) may require drilled piers into bedrock depending on final layouts. Use similar adhesion values as for the hotel support. The pool should be set back a minimum of 10ft from the top of slope and the slope adequately stabilized to prevent headward encroachment of the slide.

9.2.3 RETAINING WALL SUPPORT & LATERAL PRESSURES

Depending on final structure layouts, retaining walls up to 10ft in height (e.g., concrete cantilever walls or similar) may be required for this project. On level ground, adequate soil support for the retaining wall foundations are available by means of shallow spread footings bearing in newly compacted fill, undisturbed terrace deposits, or bedrock at least 2ft below nearest adjacent grade and 2ft wide. Allowable bearing pressure on the order of 2,000 psf in compacted fill or terrace deposits and 4,000 psf in bedrock is available for support.

On sloped ground, soil support may be available on spread footings with reduced bearing pressure. However, drilled piers into bedrock may be recommended depending on the location and proximity to slide features.

Retaining walls should be drained with a minimum of 1ft thick permeable rock with filter fabric backing, or an appropriate geocomposite drain (e.g., Mirafi G-series or equivalent).

For preliminary design, use the equivalent fluid weights (EFWs) shown in Table 8 below to design assuming level backfill conditions. These values are based on a soil friction of 32 degrees and assume the use of native granular terrace soils or granular import for backfill. These use of native soils will be verified as part of the final design study.

Table 8: Equivalent Fluid Weights

Condition	Static EFW (pcf)	Seismic EFW (pcf)
Active	39	45
Passive	203	152

For static design, apply the resultant of the static at-rest earth pressure at a depth of 0.33H from the base of the wall where H equals the wall height.

For seismic design, apply the additional resultant force of the seismic at-rest earth pressure at a depth of 0.66H from the base of the wall where H equals the wall height.

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9.2.4 PAVEMENT

We completed one R-Value test (CTM 301) on a bulk sample of near surface (granular fill) soil. Test results indicate an R-value of 74 by stabilometer. Using a maximum Caltrans allowable R-Value of 50 and Chapter 600 of the Caltrans Highway Design Manual (CHDM), 6th Edition, and assuming similar native (granular) soils at pavement subgrade, we recommend the sections shown in Table 9 below for design of entrance and parking lot pavement.

Table 9: Pavement Design

Traffic Index (TI)	5.0	6.0	7.0	8.0	9.0
Hot Mix Asphalt (feet)	0.20	0.25	0.30	0.40	0.45
Class 2 Aggregate Base (feet)	0.30	0.35	0.45	0.45	0.55

*The upper 0.2 feet of HMA may be replaced with rubberized hot mix asphalt.

If select import fill is used for pavement subgrade, we recommend the R-value of import fill to be greater than 50.

9.3 GRADING

For preliminary design of the truck/delivery access road, use fill slopes of 2:1 (H:V) or flatter and cut slopes of 1½:1 or flatter. Fill slopes constructed at 1½:1 may be acceptable depending on the quality of the embankment fill.

General grading recommendations typically include clearing the site to remove vegetation, tree roots, debris, abandoned utilities, soft or unstable areas, and other deleterious materials. For this site, we estimate an average sub-excavation average of about 2 feet to expose undisturbed, native ground. This exposed surface should then be scarified to a minimum depth of 6 inches, moisture-conditioned, and compacted to at least 90% relative compaction per ASTM D1557. Local swale and/or spring areas may create wet ground conditions that would require drainage and/or drying of soil to achieve the required compaction.

Due to the presence of springs and possible “perched” groundwater throughout the slopes, we recommend subdrainage at the base of new fills. Depending on the final alignment and fill prism, a trenched underdrain or blanket drains may be suitable along the upslope side of the fill sections. Final subdrain details will depend on the selected alignment and fill dimensions and be addressed in the geotechnical design report.

Site soils are erodible (especially the granular terrace soils) and surface drainage will require control by directing runoff to suitable discharge points with erosion dissipaters, as necessary.

10 LIMITATIONS

CAInc performed these services in accordance with generally accepted geotechnical engineering principles and practices currently used in this area. This report is intended to provide assistance to the design team for project feasibility, planning and preliminary design/costing. CAInc will complete a Geotechnical Report for final design based on specific structure layout, grades, loading conditions and other details. Do not use this report for different locations and/or projects without the written consent of CAInc. Where referenced, we used ASTM or Caltrans standards as a general (not strict) guideline only.

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CAInc based this report on the current site conditions. We assumed the soil/rock and groundwater conditions are representative of the subsurface conditions on the site. Actual conditions between explorations will vary.

Our scope did not include evaluation of on-site hazardous materials.

Logs of our explorations are presented in Appendix A. The lines designating the interface between soil types are approximate. The transition between soil types may be abrupt or gradual. Our recommendations are based on the final logs, which represent our interpretation of the field logs and general knowledge of the site and geological conditions.

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Tsunami Inundation Map for Emergency Planning: Trinidad Quadrangle, Crannell Quadrangle, California Geological Survey, 2009.

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FIGURES

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Earthquake Fault Zone Map	Figure 9
Piezometer Logs	Detail 1

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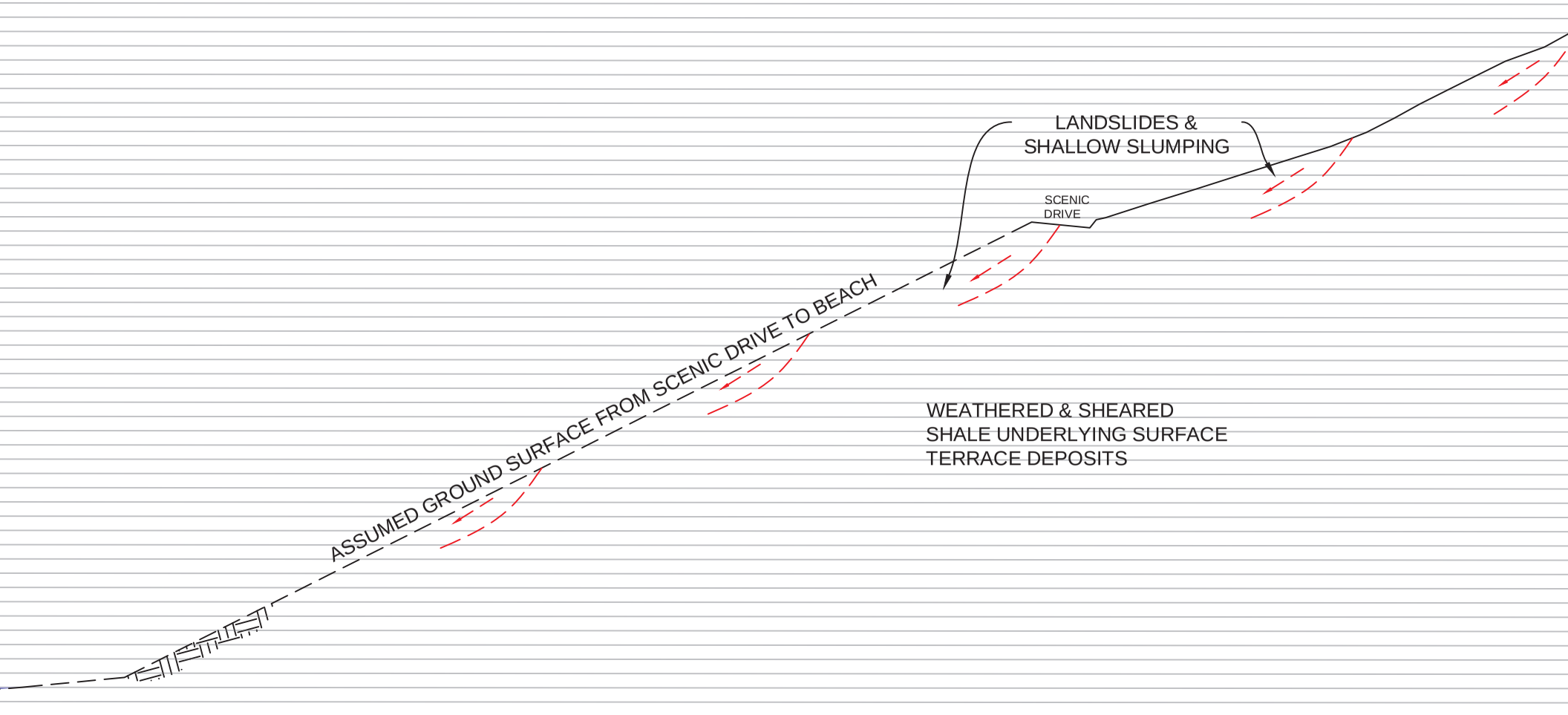
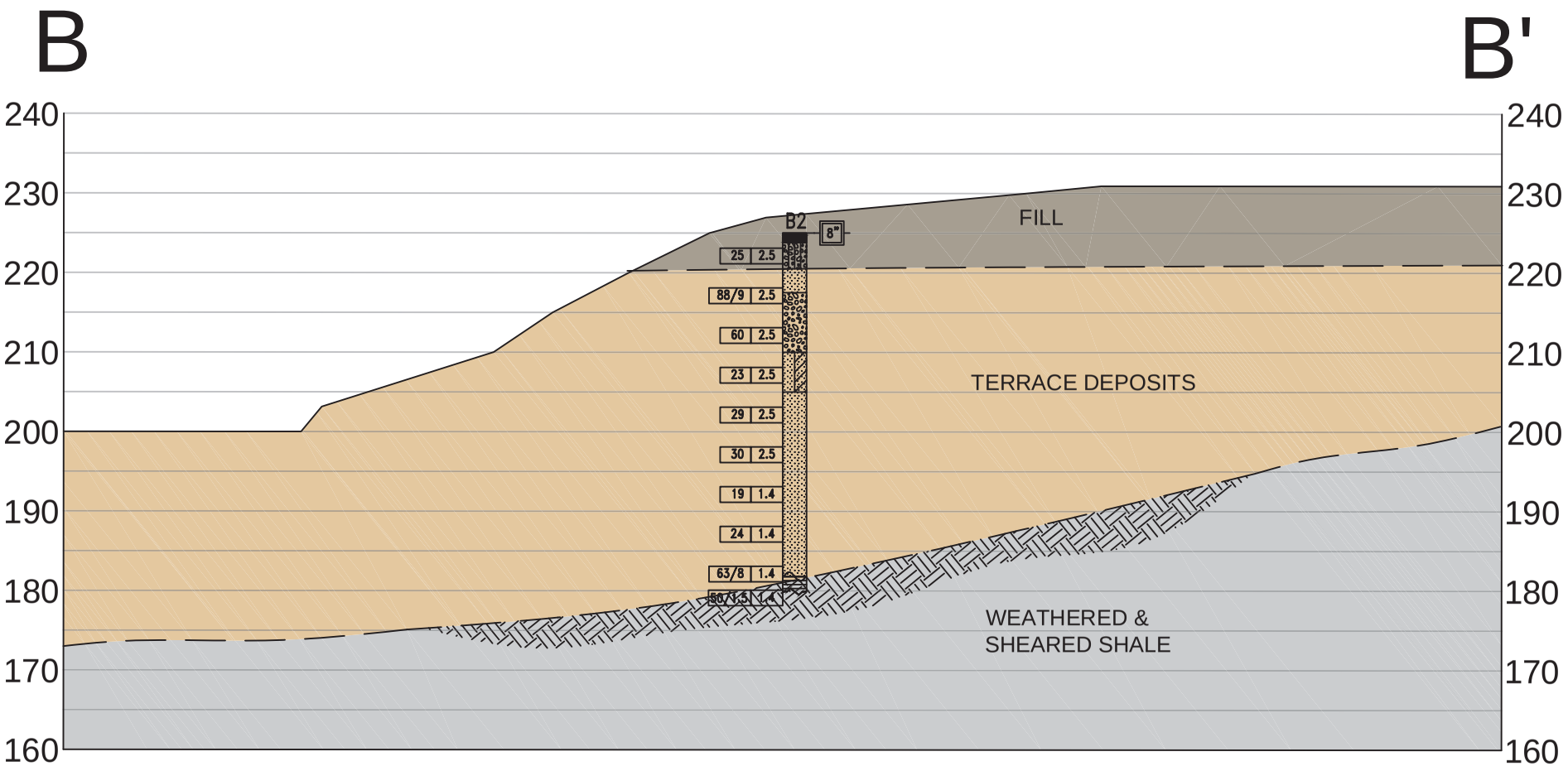
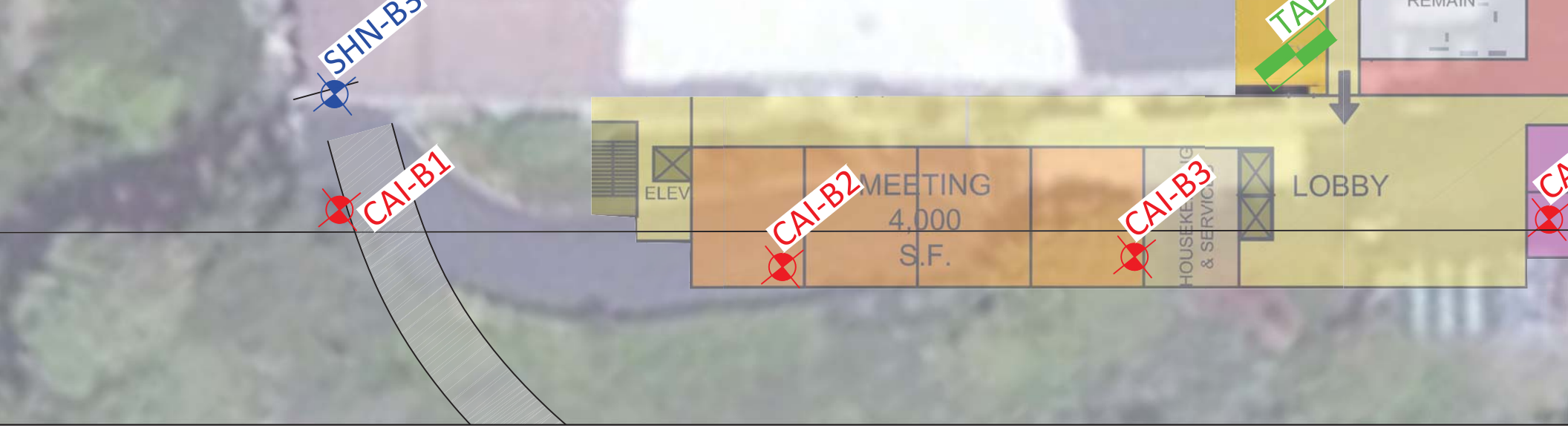
Project Location
Cap Rock
WESTHAVEN DR N
101
SCENIC DR
(OFF SCREEN) Taber PM 2.45 Slide Investigation
(E) CASINO
SHN-B3
CAI-B1
CAI-B2
CAI-B3
CAI-B4
CAI-B5
CAI-B6
TAB-TP1
TAB-TP2
TAB-TP3
TAB-TP4
TAB-TP6
(P) ACCESS/DELIVERY ROAD
(E) CONCRETE RETAINING WALL
(E) WATER TANK
(E) RESIDENCE
A
A'
B
B'
C
C'
Marine terrace deposits exposed locally along the bluff slope and road cuts
Sandstone/shale exposed along base of bluff
Taber PM 2.20
Investigation
PACIFIC OCEAN
(OFF SC
2.05 S
and Tabe

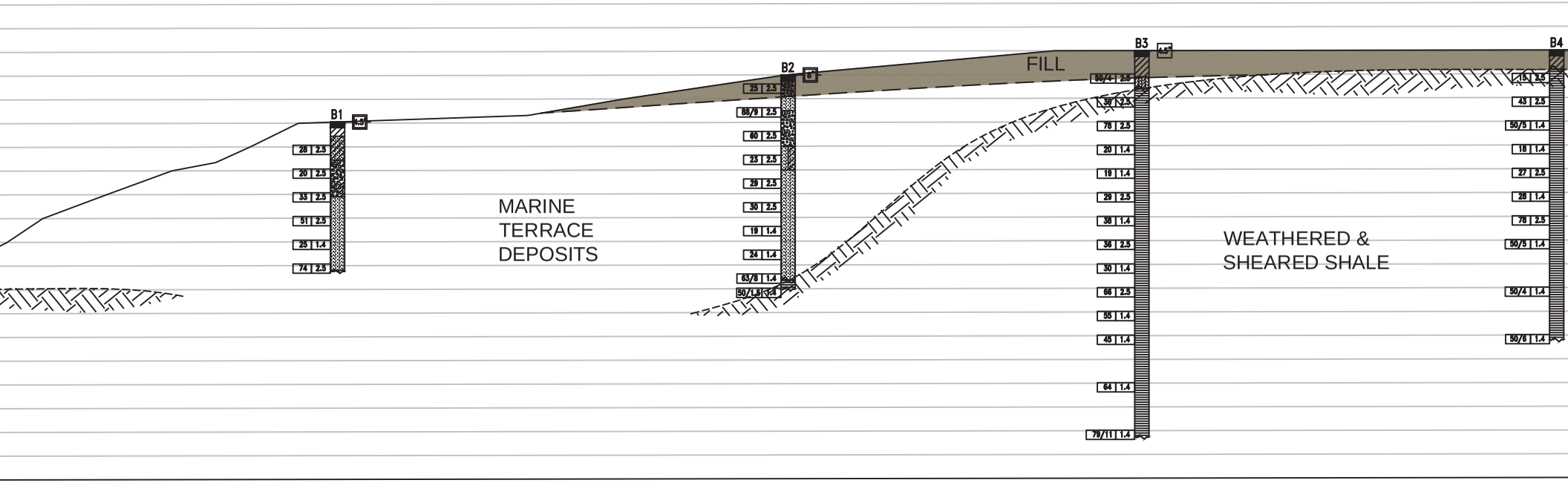

(E) SCENIC DRIVE

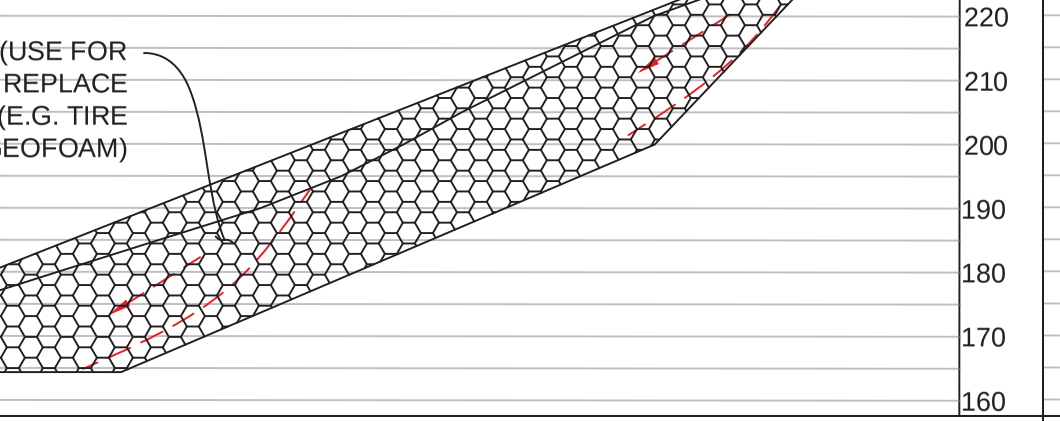

LANDSLIDES &
SHALLOW SLUMPING
SCENIC
DRIVE
ASSUMED GROUND SURFACE FROM SCENIC DRIVE TO BEACH
WEATHERED & SHEARED
SHALE UNDERLYING SURFACE
TERRACE DEPOSITS

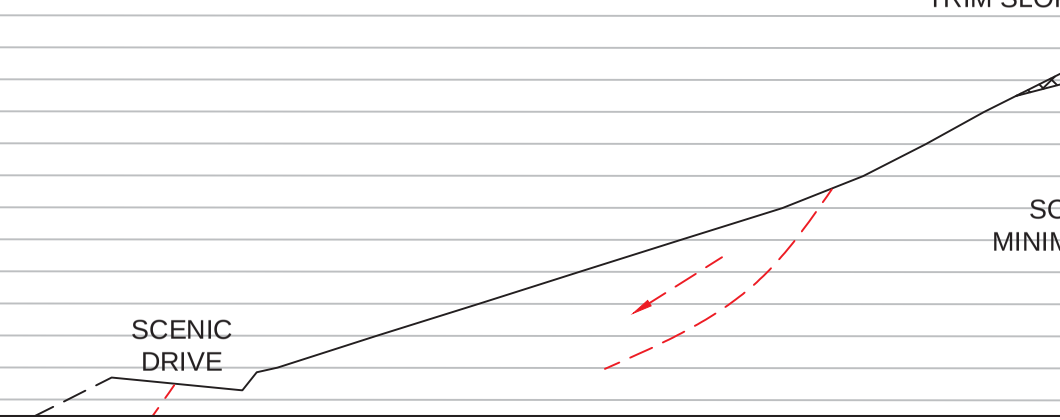

B
B'
CAI-B2
CAI-B3
(E) BUILDING
MEETING
4,000
S.F.


B
B'
240
230
220
210
200
190
180
170
160
B2
8"
FILL
25 2.5
88/9 2.5
60 2.5
23 2.5
29 2.5
30 2.5
19 1.4
24 1.4
63/8 1.4
50/7.5 1.4
TERRACE DEPOSITS
WEATHERED &
SHEARED SHALE

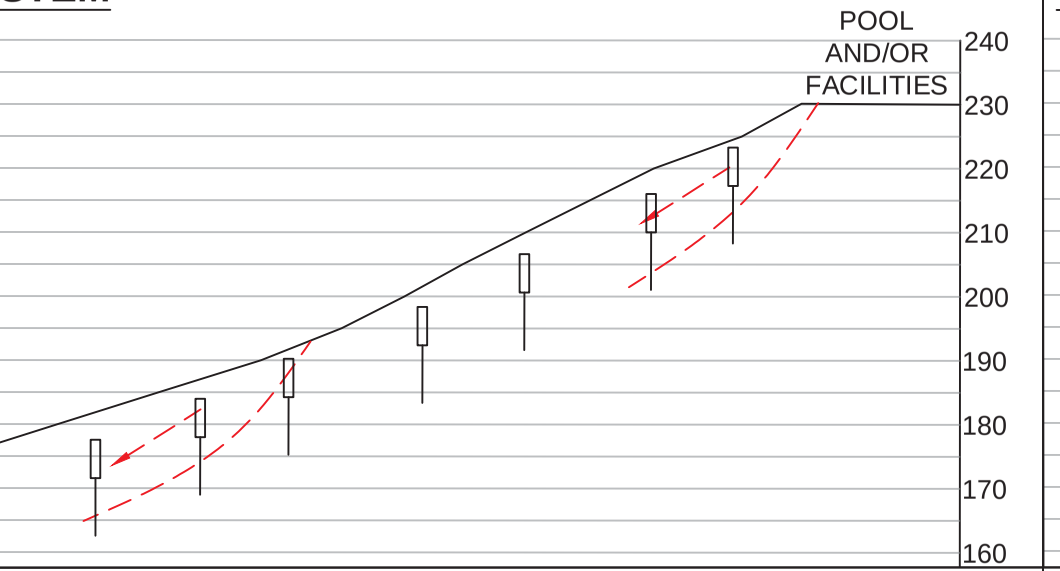

SHN-B5
CAI-B1
CAI-B2
CAI-B3
ELEV
MEETING
4,000
S.F.
LOBBY


B1
B2
B3
B4
FILL
MARINE
TERRACE
DEPOSITS
WEATHERED &
SHEARED SHALE

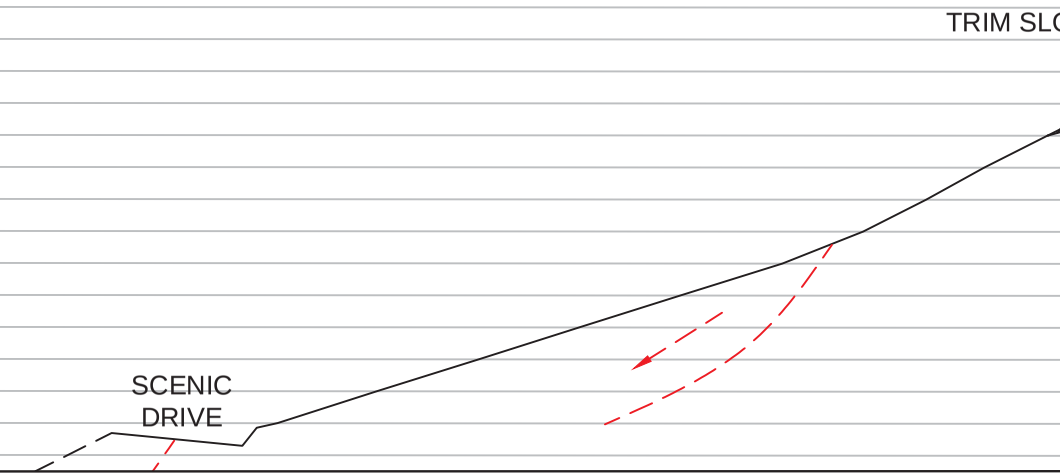




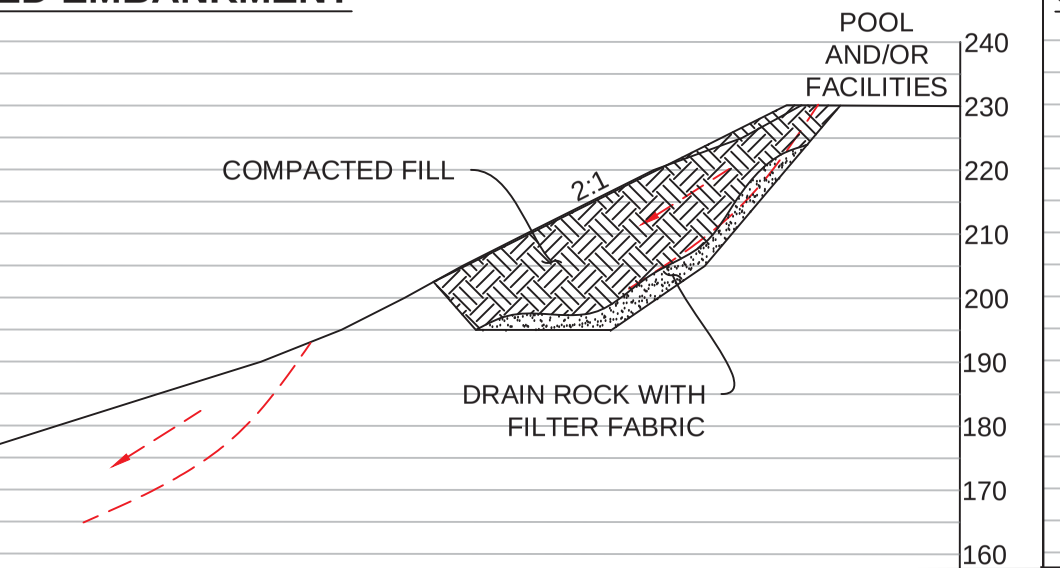
STEM



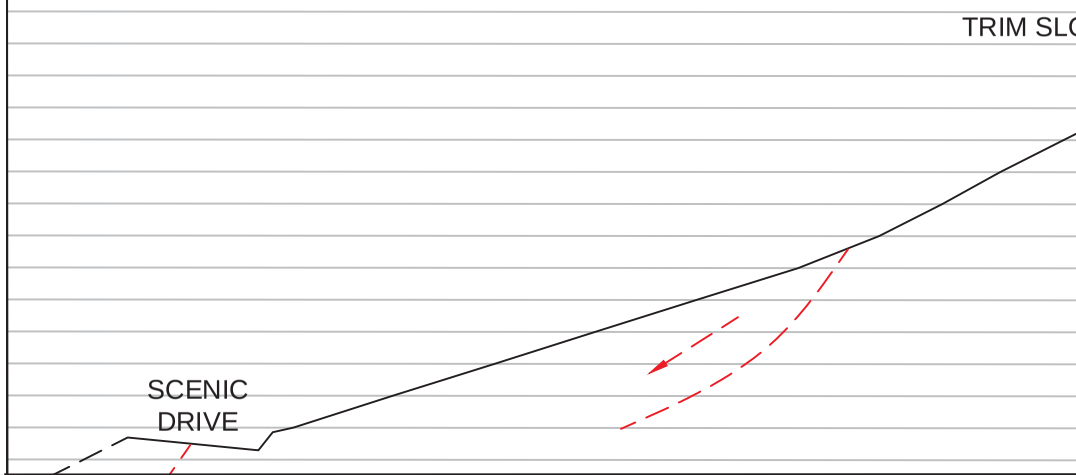
WELDED WIRE (HILFIKER) WALL

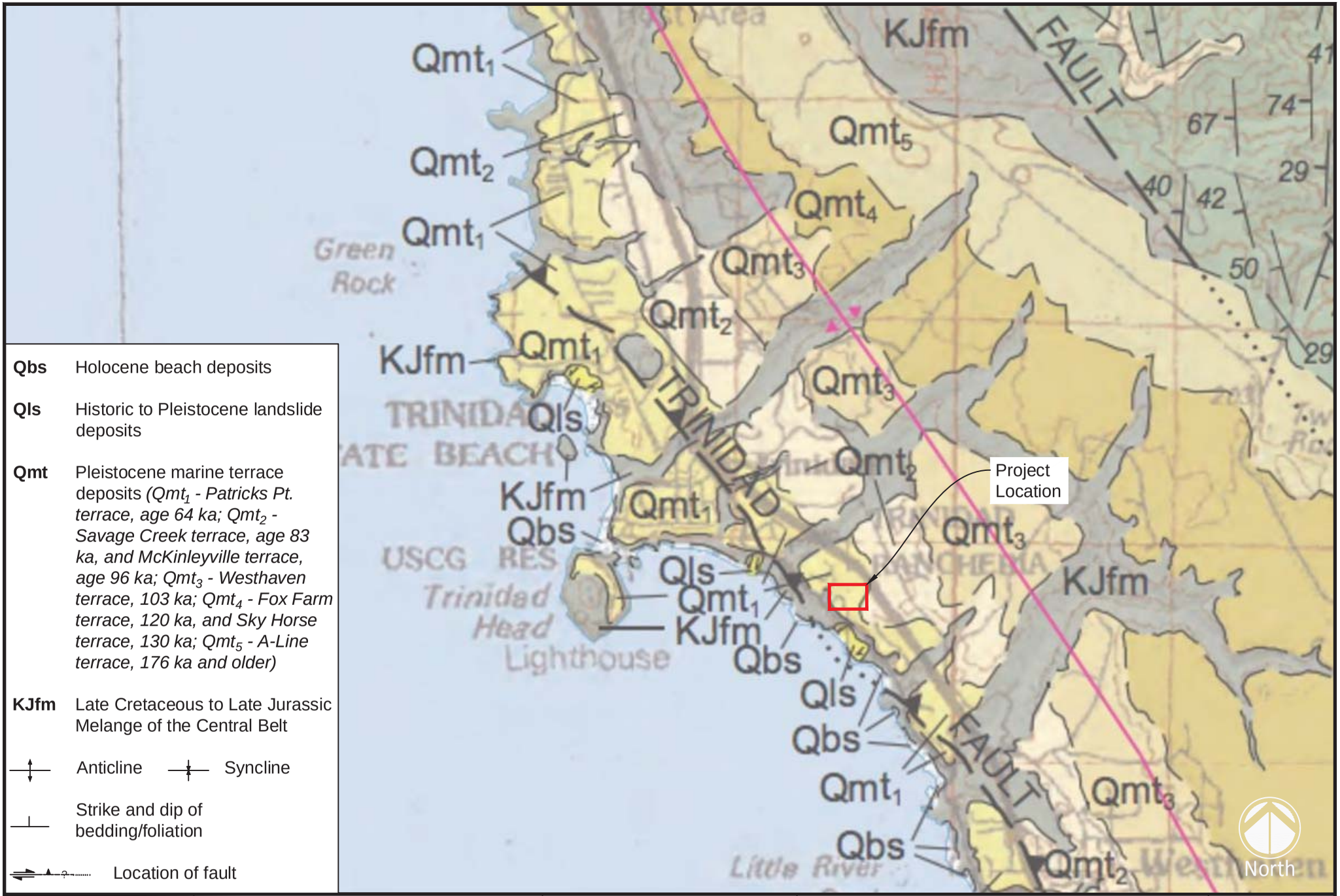


ED EMBANKMENT



SOIL NAIL WALL





Qbs Holocene beach deposits

Qls Historic to Pleistocene landslide deposits

Qmt Pleistocene marine terrace deposits *(Qmt_1 - Patricks Pt. terrace, age 64 ka; Qmt_2 - Savage Creek terrace, age 83 ka, and McKinleyville terrace, age 96 ka; Qmt_3 - Westhaven terrace, 103 ka; Qmt_4 - Fox Farm terrace, 120 ka, and Sky Horse terrace, 130 ka; Qmt_5 - A-Line terrace, 176 ka and older)*

KJfm Late Cretaceous to Late Jurassic Melange of the Central Belt

Anticline — Syncline

Strike and dip of bedding/foliation

Location of fault

Project Mgr.	AJK	11/1/16
Project Eng.	NRA	11/1/16
Designer		
Checked By		
Drawn By	NRA	11/1/16
	By	Date

Source: "Preliminary Geologic Map of Onshore Portions of the Crescent City and Orick 30' x 60' Quadrangles, California", California Geologic Survey, 2012

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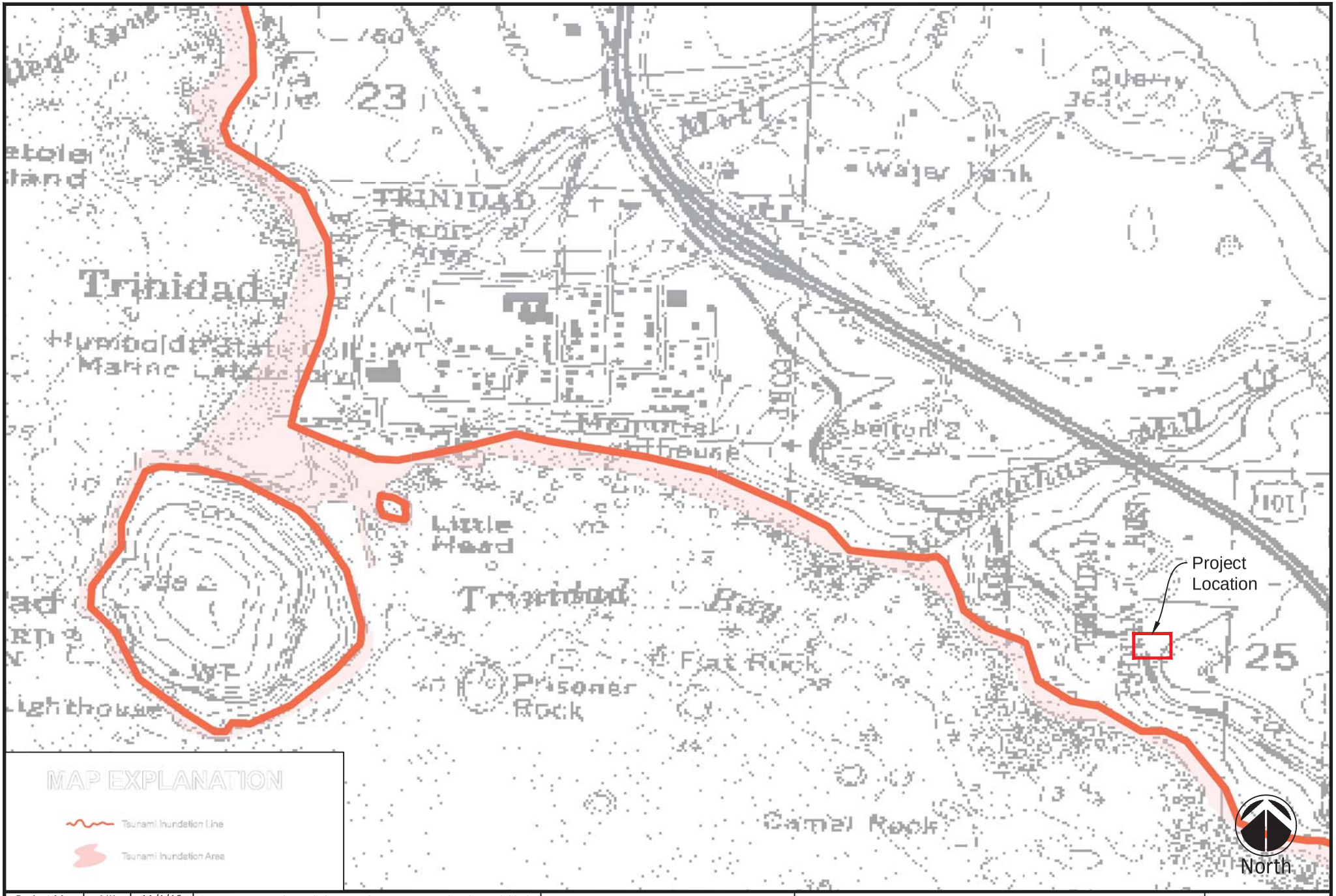
Trinidad Rancheria
Cher-Ae Heights Hotel
27 Scenic Drive
Trinidad, California 95570

Figure 6
Geology Map

Project No.	16-319.1
Scale	1"=3,000'
Date	11/1/16



Project Mgr.	AJK	11/1/16
Project Eng.	NRA	11/1/16
Designer		
Checked By		
Drawn By	NRA	11/1/16
	By	Date

Source: "Tsunami Inundation Map for Emergency Planning, Trinidad Quadrangle, Crannel Quadrangle", California Emergency Management Agency, 2009

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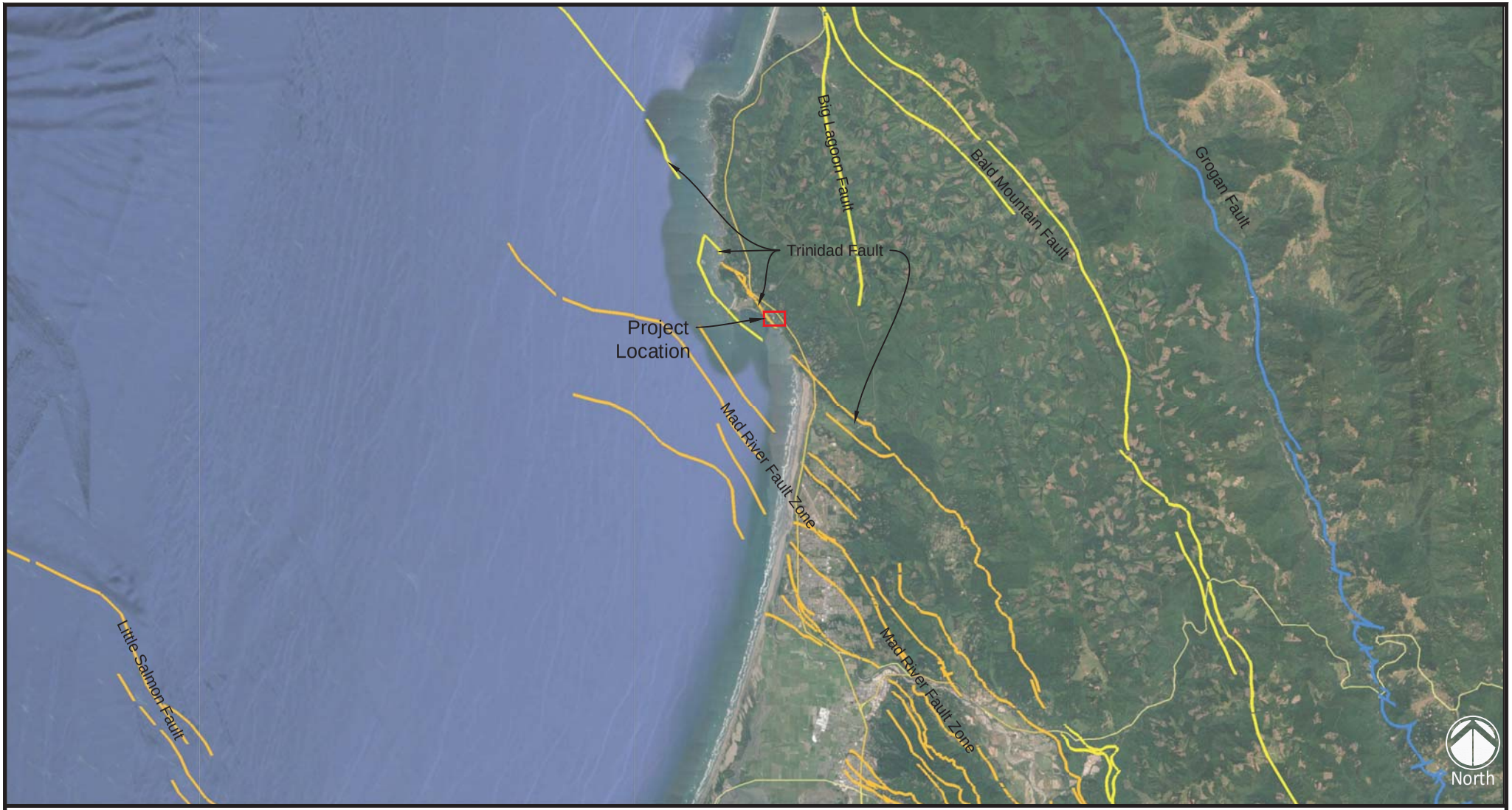
Figure 7
Tsunami Inundation Map

Project No.	16-319.1
Scale	1"=1,000'
Date	11/1/16



LEGEND

Quaternary Fault (Age)
- <150 years
- <15,000 years
- <130,000 years

Quaternary Fault (Age)
- <750,000 years
- <1.6 million years

Location
- Well Constrained
- Moderately Constrained
- Inferred

Project Mgr.	AJK	11/1/16
Project Eng.	NRA	11/1/16
Designer		
Checked By		
Drawn By	NRA	11/1/16
	By	Date

Source: Google Earth with USGS Fault Map overlay

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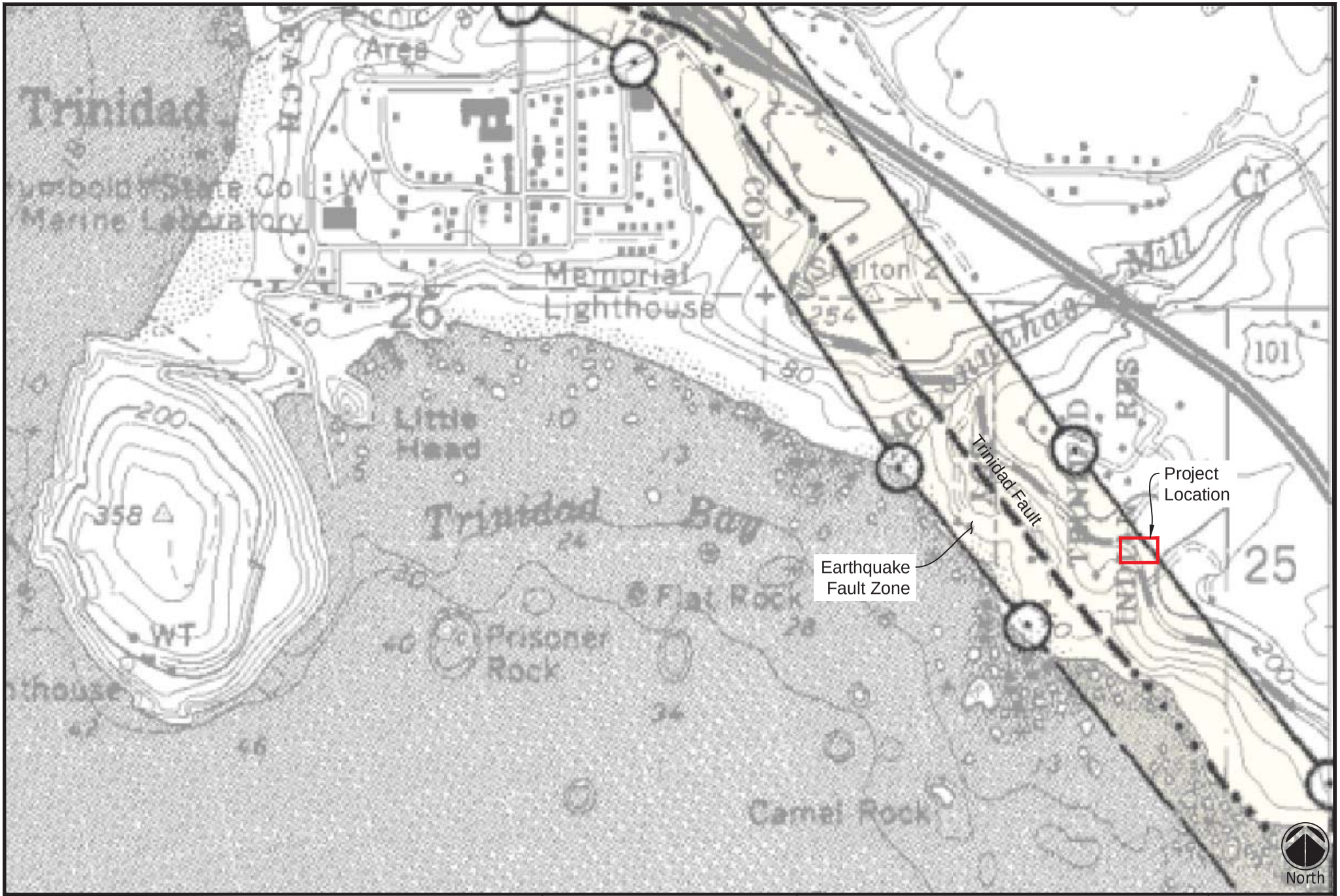
Figure 8
Fault Activity Map

Project No.	16-319.1
Scale	1"=20,000
Date	11/1/16



Project Mgr.	AJK	11/1/16
Project Eng.	NRA	11/1/16
Designer		
Checked By		
Drawn By	NRA	11/1/16
	By	Date

Source: "State of California Special Studies Zones, Trinidad Quadrangle", California Division of Mines and Geology, 1983

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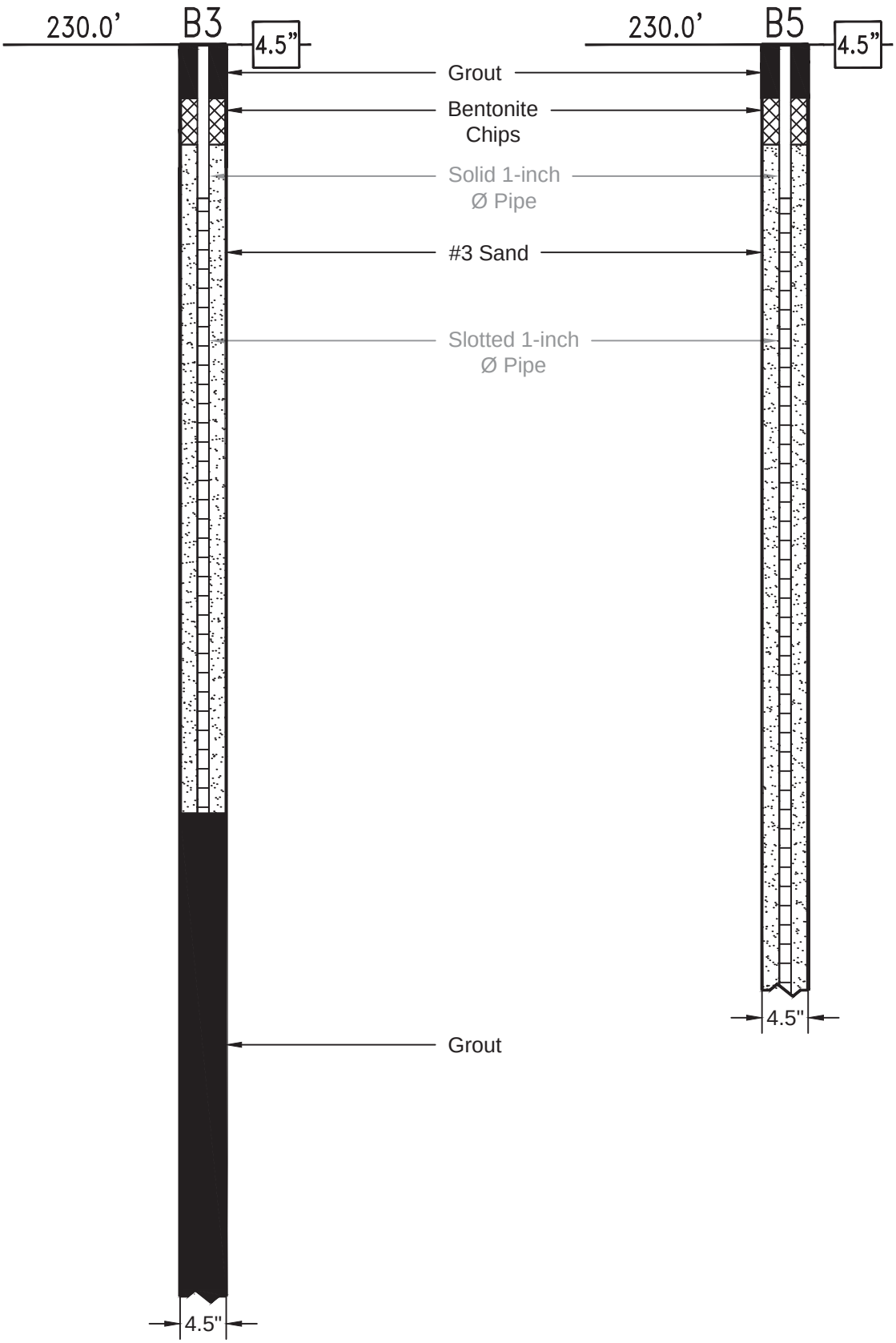
Figure 9
Earthquake Fault Zone Map

Project No.	16-319.1
Scale	NTS
Date	11/1/16

Piezometer Logs



Project Mgr.	AJK	11/1/16
Project Eng.	NRA	11/1/16
Designer		
Checked By		
Drawn By	NRA	11/1/16
	By	Date

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Detail 1
Piezometer Logs

Project No.	16-319.1
Scale	1"=10'
Date	11/1/16

APPENDIX A

Boring Log Legend
Boring Logs

DRAFT

UNIFIED SOIL CLASSIFICATION (ASTM D 2487-06)

MATERIAL TYPES	CRITERIA FOR ASSIGNING SOIL GROUP NAMES			GRAPHIC SYMBOL	GROUP SYMBOL	SOIL GROUP NAMES
COARSE-GRAINED SOILS >50% RETAINED ON NO. 4 SIEVE	GRAVELS >50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS <5% FINES	Cu ≥ 4 AND 1 ≤ Cc ≤ 3		GW	WELL-GRADED GRAVEL
			Cu < 4 AND/OR 1 > Cc > 3		GP	POORLY-GRADED GRAVEL
		GRAVELS WITH FINES >12% FINES	FINES CLASSIFY AS ML OR MH		GM	SILTY GRAVEL
			FINES CLASSIFY AS CL OR CH		GC	CLAYEY GRAVEL
	SANDS <50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN SANDS <5% FINES	Cu ≥ 6 AND 1 ≤ Cc ≤ 3		SW	WELL-GRADED SAND
			Cu < 6 AND/OR 1 > Cc > 3		SP	POORLY-GRADED SAND
		SANDS WITH FINES >12% FINES	FINES CLASSIFY AS ML OR MH		SM	SILTY SAND
			FINES CLASSIFY AS CL OR CH		SC	CLAYEY SAND
FINE-GRAINED SOILS >50% PASSING NO. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT <50	INORGANIC	PI>7 AND PLOTS ON OR ABOVE "A" LINE		CL	LEAN CLAY
			PI>4 AND PLOTS BELOW "A" LINE		ML	SILT
		ORGANIC	LL (oven dried)<0.75/LL (not dried)		OL	ORGANIC CLAY OR SILT
	SILTS AND CLAYS LIQUID LIMIT >50	INORGANIC	PI PLOTS ON OR ABOVE "A" LINE		CH	FAT CLAY
			PI PLOTS BELOW "A" LINE		MH	ELASTIC SILT
		ORGANIC	LL (oven dried)<0.75/LL (not dried)		OH	ORGANIC CLAY OR SILT
HIGHLY ORGANIC SOILS		PRIMARILY ORGANIC MATTER, DARK COLOR, ORGANIC ODOR			PT	PEAT

NOTE: $Cu = D_{60}/D_{10}$

$Cc = (D_{30})^2 / D_{10} \times D_{60}$

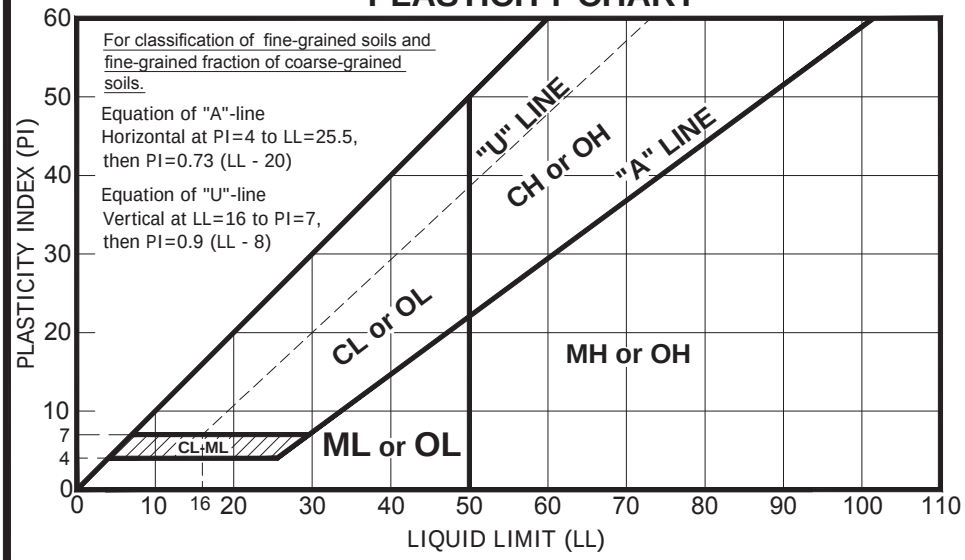
BLOW COUNT

The number of blows of a 140-lb. hammer falling 30-inches required to drive the sampler the last 12-inches of an 18-inch drive. The notation 50/0.4 indicates 4-inches of penetration achieved in 50 blows.

SAMPLE TYPES

- Auger or backhoe cuttings
- Shelby tube
- Standard Penetration (SPT)
- Bulk Sample
- Modified California 2"
- California Standard 2.5"
- Rock core

PLASTICITY CHART



ADDITIONAL TESTS

C	- Consolidation
CP	- Compaction Curve
CR	- Corrosivity Testing
CU	- Consolidated Undrained Triaxial
DS	- Direct Shear
EI	- Expansion Index
P	- Permeability
PA	- Partical Size Analysis
PI	- Plasticity Index
PP	- Pocket Penetrometer
R	- R-Value
SE	- Sand Equivalent
SG	- Specific Gravity
SL	- Shrinkage Limit
SW	- Swell Potential
TV	- Pocket Torvane Shear Test
UC	- Unconfined Compression
UU	- Unconsolidated Undrained Triaxial

GROUND WATER LEVELS

- Later water level after drilling
- Water level at time of drilling

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BORING LOG / TEST PIT LEGEND AND SOIL DESCRIPTIONS

LOG OF BORING B1

PROJECT NO: 16-319.1
PROJECT: Trinidad Rancheria Hotel
LOCATION: Trinidad, CA
CLIENT: TREDC
LOGGED BY: NRA
DEPTH OF BORING: 31.5 (ft)

BEGIN DATE: 9/13/2016
COMPLETION DATE: 9/13/2016
SURFACE ELEVATION: 215 (ft)
SURFACE CONDITION: Asphalt
WATER DEPTH: Not encountered
READING TAKEN: 9/13/2016
HAMMER EFFICIENCY: 70%

DRILLING CONTRACTOR: Geo-Ex Subsurface
DRILLING METHOD: Solid-Stem Auger
DRILL RIG: CME 75
HAMMER TYPE: Auto 140lb, 30" drop
SAMPLER TYPE & SIZE: MCAL (2.5"ID), SPT (1.4"ID)
BOREHOLE DIAMETER: 4.5 (in)
BACKFILL METHOD: Soil cuttings

FIELD									LABORATORY					
ELEVATION (ft)	DEPTH (ft)	SAMPLE	SAMPLE NO	BLOWS PER 6 IN.	BLOWS PER FOOT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION	RECOVERY(%)	PLASTIC LIMIT	LIQUID LIMIT	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200 SIEVE	REMARKS
								ASPHALT.							
	1							Well-graded GRAVEL with SAND (GW); aggregate base.							
213	2							SANDY lean CLAY (CL); brown; dry to moist [FILL].							
	3														
211	4							SILTY SAND (SM); medium dense; light orange tan; dry to moist; about 10% fine, subangular to subrounded GRAVEL; about 65% medium to fine SAND; about 25% nonplastic fines [TERRACE DEPOSITS].							
	5		1	13	28				89						
209	6			14								18	105	24	Atterberg limits shown to be non-plastic.
	7			14											
207	8							CLAYEY GRAVEL with SAND (GC); medium dense; orange tan; moist; about 50% fine GRAVEL, max. 1 in. dia.; about 36% medium to fine SAND; about 15% medium plasticity fines; subangular to rounded gravel.							
	9														
205	10		2	6	20				72						
	11			7								9	123	16	
203	12			13											
	13														
201	14														
	15		3	11	33				100						
199	16			12				SILTY SAND (SM); medium dense; orange tan; moist to wet; about 85% fine SAND; about 15% fines.				13	103	15	
	17			21											
197	18														
	19														
195	20		4	14	51			Dense; light orange tan; medium to fine SAND.	94						
	21			22								13	95		Direct Shear Strength phi = 34.4 psf cohesion = 85 psf
193	22			29											
	23														
191	24														

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PROJECT NUMBER: 16-319.1
PROJECT: Trinidad Rancheria Hotel
BORING: B1
ENTRY BY: NRA
CHECKED BY:

ELEVATION (ft)	DEPTH (ft)	SAMPLE	SAMPLE NO	BLOWS PER 6 IN.	BLOWS PER FOOT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION	RECOVERY(%)	LABORATORY: PLASTIC LIMIT	LABORATORY: LIQUID LIMIT	LABORATORY: MOISTURE (%)	LABORATORY: DRY DENSITY (PCF)	LABORATORY: % PASSING 200 SIEVE	REMARKS
			5	12 12 13	25			Medium dense; about 20% fines. SILTY SAND (SM) *(continued)*.	89					22	Some caving.
189	26														
	27														
187	28														
	29														
185	30		6	11 29 45	74			Dense; coarse to fine, subangular to subrounded SAND.	89						
	31											6	124		
183	32							Poorly graded GRAVEL with SAND (GP); very dense; orange tan with white and gray gravel; about 60% fine, subrounded GRAVEL; medium to fine SAND; trace fines.							
	33							Bottom of borehole at 31.5 ft bgs							
181	34							No free groundwater encountered on 9/13/16.							
	35														
179	36														
	37														
177	38														
	39														
175	40														
	41														
173	42														
	43														
171	44														
	45														
169	46														
	47														
167	48														
	49														
165	50														
	51														
163	52														
	53														
161	54														
	55														

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PROJECT NUMBER: 16-319.1
PROJECT: Trinidad Rancheria Hotel
BORING: B1
ENTRY BY: NRA
CHECKED BY:

LOG OF BORING B2

PROJECT NO: 16-319.1
PROJECT: Trinidad Rancheria Hotel
LOCATION: Trinidad, CA
CLIENT: TREDC
LOGGED BY: NRA
DEPTH OF BORING: 45.1 (ft)

BEGIN DATE: 9/13/2016
COMPLETION DATE: 9/13/2016
SURFACE ELEVATION: 225 (ft)
SURFACE CONDITION: Asphalt
WATER DEPTH: Not encountered
READING TAKEN: 9/13/2016
HAMMER EFFICIENCY: 70%

DRILLING CONTRACTOR: Geo-Ex Subsurface
DRILLING METHOD: Hollow-Stem Auger
DRILL RIG: CME 75
HAMMER TYPE: Auto 140lb, 30" drop
SAMPLER TYPE & SIZE: MCAL (2.5"ID), SPT (1.4"ID)
BOREHOLE DIAMETER: 8 (in)
BACKFILL METHOD: Soil cuttings

FIELD									LABORATORY					
ELEVATION (ft)	DEPTH (ft)	SAMPLE	SAMPLE NO	BLOWS PER 6 IN.	BLOWS PER FOOT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION	RECOVERY(%)	PLASTIC LIMIT	LIQUID LIMIT	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200 SIEVE	REMARKS
	1							ASPHALT. Well-graded GRAVEL with SAND (GW); aggregate base.							
223	2							SILTY GRAVEL with SAND (GM); medium dense; reddish brown; moist; about 30% coarse to fine, subangular to subrounded GRAVEL; about 25% coarse to fine SAND; about 45% low plasticity fines; bark/mulch present near surface [FILL].							
	3		1	6 11 14	25				0						
221	4														
	5							Poorly graded SAND (SP); medium dense; orange; dry to moist; medium to fine, subangular to subrounded SAND; trace fines [TERRACE DEPOSITS].							
219	6														
	7														
	8		2	15 38 50/3	88/9			SILTY SAND with GRAVEL (SM); very dense; tan with bronze mottling and black spots; dry to moist; about 30% fine, angular to subangular GRAVEL; about 55% angular to subangular SAND; about 15% fines.	100			7	115		
217	9														
	10														
215	11														
	12														
213	13		3	11 27 33	60			Dense; moist; moderate cementation; quartz gravel present.	83			15	113	18	
	14														
211	15														
	16							CLAYEY SAND (SC); medium dense; orange and bronze; moist to wet; trace fine GRAVEL; coarse to medium, subangular to subrounded SAND; about 20% medium plasticity fines.							
209	17														
	18		4	8 10 13	23				78			13	116	22	
207	19														
	20														
205	21							SILTY SAND (SM); medium dense; orangish gray; moist to wet; about 85% medium to fine, subangular to subrounded SAND; about 15% fines.							
	22														
203	23		5	9 13 16	29				100			9	110	15	
	24														
201															

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PROJECT NUMBER: 16-319.1
PROJECT: Trinidad Rancheria Hotel
BORING: B2
ENTRY BY: NRA
CHECKED BY:

ELEVATION (ft)	DEPTH (ft)	SAMPLE	SAMPLE NO	BLOWS PER 6 IN.	BLOWS PER FOOT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION	RECOVERY(%)	LABORATORY: PLASTIC LIMIT	LIQUID LIMIT	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200 SIEVE	REMARKS
								SILTY SAND (SM) *(continued)*.							
199	26														
	27		6	10 12 18	30			Orangish brown.	89						
197	28											14	95		Direct Shear Strength phi = 34.3 psf cohesion = 50 psf
	29														
195	30														
	31														
193	32		7	8 9 10	19			Moist; about 25% fines.	100						
	33													23	
191	34														
	35														
189	36														
	37		8	8 11 13	24				94						
187	38														
	39														
185	40														
	41														
183	42		9	9 13 50/2	63/8			Very dense; wet; coarse to fine, subangular to subrounded SAND.	86						
	43							SEDIMENTARY ROCK (SHALE) [BEDROCK].							Very tough, slow drilling.
181	44														
	45		10	50/1.5	REF			Bottom of borehole at 45.1 ft bgs	0						
179	46							Auger refusal. No free groundwater encountered on 9/13/16.							
	47														
177	48														
	49														
175	50														
	51														
173	52														
	53														
171	54														
	55														

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PROJECT NUMBER: 16-319.1
PROJECT: Trinidad Rancheria Hotel
BORING: B2
ENTRY BY: NRA
CHECKED BY:

LOG OF BORING B3

PROJECT NO: 16-319.1
PROJECT: Trinidad Rancheria Hotel
LOCATION: Trinidad, CA
CLIENT: TREDC
LOGGED BY: NRA
DEPTH OF BORING: 81.4 (ft)

BEGIN DATE: 9/13/2016
COMPLETION DATE: 9/14/2016
SURFACE ELEVATION: 230 (ft)
SURFACE CONDITION: Asphalt
WATER DEPTH: 16.5
READING TAKEN: 9/14/2016
HAMMER EFFICIENCY: 70%

DRILLING CONTRACTOR: Geo-Ex Subsurface
DRILLING METHOD: Rotary Wash
DRILL RIG: CME 75
HAMMER TYPE: Auto 140lb, 30" drop
SAMPLER TYPE & SIZE: MCAL (2.5"ID), SPT (1.4"ID)
BOREHOLE DIAMETER: 4.5 (in)
BACKFILL METHOD: Piezometer Installed

ELEVATION (ft)	DEPTH (ft)	SAMPLE	SAMPLE NO	BLOWS PER 6 IN.	BLOWS PER FOOT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION	RECOVERY(%)	LABORATORY: PLASTIC LIMIT	LABORATORY: LIQUID LIMIT	LABORATORY: MOISTURE (%)	LABORATORY: DRY DENSITY (PCF)	LABORATORY: % PASSING 200 SIEVE	REMARKS
								ASPHALT.							
	1							Well-graded GRAVEL with SAND (GW); aggregate base.							
228	2							SANDY lean CLAY (CL); orange brown; moist; about 30% medium to fine SAND; about 70% medium plasticity fines [FILL].							
	3														
226	4														
	5		1	29 50/4	50/4				80			16	101		Tough drilling.
224	6							SILTY SAND (SM); very dense; orange, light tan, gray, and bronze; dry to moist; about 80% medium to fine SAND; about 20% low plasticity fines; moderate cementation [TERRACE DEPOSITS].							
	7														
222	8							SEDIMENTARY ROCK (SHALE), blue gray to dark gray, decomposed, moist; angular shale fragments and sub-grounded gravel in clay matrix [BEDROCK].							Easier drilling.
	9														
220	10		2	6 14 16	30				100						
	11											9	133		Unconfined Compressive Strength cohesion = 3051 psf
218	12														
	13														
216	14														
	15		3	22 34 44	78			Intensely weathered.	100						
214	16											5	138		Unconfined Compressive Strength cohesion = 2387 psf
	17														
212	18														Tough drilling; auger bit grinds against rock.
	19														
210	20		4	10 8 12	20			Very intensely weathered, wet.	78						Switch from auger to mud rotary.
	21									14	27				PI
208	22														
	23														
206	24														

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PROJECT NUMBER: 16-319.1
PROJECT: Trinidad Rancheria Hotel
BORING: B3
ENTRY BY: NRA
CHECKED BY:

ELEVATION (ft)	DEPTH (ft)	SAMPLE	SAMPLE NO	BLOWS PER 6 IN.	BLOWS PER FOOT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION	RECOVERY(%)	LABORATORY: PLASTIC LIMIT	LABORATORY: LIQUID LIMIT	LABORATORY: MOISTURE (%)	LABORATORY: DRY DENSITY (PCF)	LABORATORY: % PASSING 200 SIEVE	REMARKS
			5	7 7 12	19			Decomposed. SEDIMENTARY ROCK (Shale) *(continued)*.	44						
204	26														
	27														
202	28														
	29														
200	30		6	9 13 16	29			Intensely weathered.	89						
	31											8	128		
198	32														
	33														
196	34														
	35		7	10 13 25	38				56						
194	36														Corrosion Testing pH = 8.57 Min. Resistivity = 1,070 ohm-cm Chlorides = 12.1 ppm Sulfates = 225.9 ppm
	37														
192	38														
	39														
190	40		8	14 14 22	36			Decomposed.	22						
	41														
188	42														
	43														
186	44														
	45		9	15 11 19	30				39						
184	46														
	47														
182	48														Tough drilling.
	49														
180	50		10	10 28 38	66			Intensely weathered.	44						
	51											7	142		
178	52														
	53														
176	54														
	55		11		55			Moderately weathered.	50						

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PROJECT NUMBER: 16-319.1
PROJECT: Trinidad Rancheria Hotel
BORING: B3
ENTRY BY: NRA
CHECKED BY:

FIELD									LABORATORY						
ELEVATION (ft)	DEPTH (ft)	SAMPLE	SAMPLE NO	BLOWS PER 6 IN.	BLOWS PER FOOT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION	RECOVERY(%)	PLASTIC LIMIT	LIQUID LIMIT	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200 SIEVE	REMARKS
174	56		11	8 29 26	55				50						
	57														
172	58														
	59														
170	60		12	11 20 25	45			Intensely weathered.	39						Tough drilling and easy drilling sections from 48ft to 70ft.
	61														
168	62														
	63														
166	64														
	65														
164	66														
	67														
162	68														
	69														
160	70		13	16 18 46	64			Intensely to moderately weathered.	72						Very tough, slow drilling from 70-80ft.
	71														
158	72														
	73														
156	74														
	75														
154	76														
	77														
152	78														
	79														
150	80		14	22 29 50/5	79/11			Moderately weathered.	41						
	81														
148	82							Bottom of borehole at 81.4 ft bgs Near mud rotary refusal. Groundwater during augering encountered at 16.5ft on 9/13/16. Groundwater rose to 11.8ft on 9/14/16. Piezometer installed to 50ft; see Detail 1.							
	83														
146	84														
	85														

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PROJECT NUMBER: 16-319.1
PROJECT: Trinidad Rancheria Hotel
BORING: B3
ENTRY BY: NRA
CHECKED BY:

LOG OF BORING B4

PROJECT NO: 16-319.1
PROJECT: Trinidad Rancheria Hotel
LOCATION: Trinidad, CA
CLIENT: TREDC
LOGGED BY: NRA
DEPTH OF BORING: 61 (ft)

BEGIN DATE: 9/15/2016
COMPLETION DATE: 9/15/2016
SURFACE ELEVATION: 230 (ft)
SURFACE CONDITION: Asphalt
WATER DEPTH: Not encountered
READING TAKEN: 9/15/2016
HAMMER EFFICIENCY: 70%

DRILLING CONTRACTOR: Geo-Ex Subsurface
DRILLING METHOD: Rotary Wash
DRILL RIG: CME 75
HAMMER TYPE: Auto 140lb, 30" drop
SAMPLER TYPE & SIZE: MCAL (2.5"ID), SPT (1.4"ID)
BOREHOLE DIAMETER: 4.5 (in)
BACKFILL METHOD: Cement grout

FIELD									LABORATORY					
ELEVATION (ft)	DEPTH (ft)	SAMPLE	SAMPLE NO	BLOWS PER 6 IN.	BLOWS PER FOOT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION	RECOVERY(%)	PLASTIC LIMIT	LIQUID LIMIT	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200 SIEVE	REMARKS
								ASPHALT.							
	1							Well-graded GRAVEL with SAND (GW); aggregate base.							
228	2							SANDY lean CLAY (CL); grayish brown with bronze streaks; dry to moist; medium to fine SAND; medium plasticity fines [FILL].							
	3														
226	4							SEDIMENTARY ROCK (SHALE), dark gray, decomposed, moist; angular shale fragments and sub-grounded gravel in clay matrix [BEDROCK].							
	5		1	3 6 9	15				56						
224	6											9	130		Unconfined Compressive Strength cohesion = 1272 psf
	7														
222	8														
	9														
220	10		2	3 8 35	43	4.5+		Intensely weathered, white quartz angular gravel present.	78						
	11											9	137		
218	12														
	13														
216	14														
	15		3	4 50/5	50/5			Moderately weathered.	91						
214	16														Very tough drilling. Auger bit grinding on rock.
	17														
212	18														Easier drilling.
	19														
210	20		4	5 8 10	18			Intensely weathered.	89						Switch from auger to mud rotary.
	21									17	33				Corrosion Testing pH = 8.18 Min. Resistivity = 1,150 ohm-cm Chlorides = 12.0 ppm Sulfates = 175.2 ppm PI
208	22														
	23														
206	24														

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PROJECT NUMBER: 16-319.1
PROJECT: Trinidad Rancheria Hotel
BORING: B4
ENTRY BY: NRA
CHECKED BY:

ELEVATION (ft)	DEPTH (ft)	SAMPLE	SAMPLE NO	BLOWS PER 6 IN.	BLOWS PER FOOT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION	RECOVERY(%)	LABORATORY: PLASTIC LIMIT	LABORATORY: LIQUID LIMIT	LABORATORY: MOISTURE (%)	LABORATORY: DRY DENSITY (PCF)	LABORATORY: % PASSING 200 SIEVE	REMARKS
			5	6 13 14	27			SEDIMENTARY ROCK (Shale) *(continued)*.	22						
204	26														
	27														
202	28														
	29														
200	30		6	20 15 13	28			Intensely to moderately weathered, intensely fractured, white quartz angular gravel present.	67						
	31														
198	32														
	33														
196	34														
	35		7	15 31 47	78			Moderately weathered.	56						
194	36											6	143		Triaxial Shear Strength - Staged UU phi = 21.8 degrees cohesion = 1400 psf
	37														
192	38														
	39														
190	40		8	50/5	REF				60						
	41														Corrosion Testing pH = 8.54 Min. Resistivity = 1,850 ohm-cm Chlorides = 3.7 ppm Sulfates = 19.4 ppm
188	42														
	43														
186	44														
	45														
184	46														
	47														
182	48														
	49														
180	50		9	50/4	REF				75						
	51														
178	52														
	53														
176	54														
	55														

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PROJECT NUMBER: 16-319.1
PROJECT: Trinidad Rancheria Hotel
BORING: B4
ENTRY BY: NRA
CHECKED BY:

ELEVATION (ft)	DEPTH (ft)	SAMPLE	SAMPLE NO	BLOWS PER 6 IN.	BLOWS PER FOOT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION	RECOVERY(%)	LABORATORY: PLASTIC LIMIT	LABORATORY: LIQUID LIMIT	LABORATORY: MOISTURE (%)	LABORATORY: DRY DENSITY (PCF)	LABORATORY: % PASSING 200 SIEVE	REMARKS
174	56														
	57														
172	58														
	59														
170	60														
	61	X	10	45 50/6	50/6				8						
								Bottom of borehole at 61.0 ft bgs No free groundwater encountered within auger depth of 20ft on 9/15/16.							
168	62														
	63														
166	64														
	65														
164	66														
	67														
162	68														
	69														
160	70														
	71														
158	72														
	73														
156	74														
	75														
154	76														
	77														
152	78														
	79														
150	80														
	81														
148	82														
	83														
146	84														
	85														

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PROJECT NUMBER: 16-319.1
PROJECT: Trinidad Rancheria Hotel
BORING: B4
ENTRY BY: NRA
CHECKED BY:

LOG OF BORING B5

PROJECT NO: 16-319.1
PROJECT: Trinidad Rancheria Hotel
LOCATION: Trinidad, CA
CLIENT: TREDC
LOGGED BY: NRA
DEPTH OF BORING: 61.5 (ft)

BEGIN DATE: 9/16/2016
COMPLETION DATE: 9/16/2016
SURFACE ELEVATION: 230 (ft)
SURFACE CONDITION: Asphalt
WATER DEPTH: Not encountered
READING TAKEN: 9/16/2016
HAMMER EFFICIENCY: 70%

DRILLING CONTRACTOR: Geo-Ex Subsurface
DRILLING METHOD: Rotary Wash
DRILL RIG: CME 75
HAMMER TYPE: Auto 140lb, 30" drop
SAMPLER TYPE & SIZE: MCAL (2.5"ID), SPT (1.4"ID)
BOREHOLE DIAMETER: 4.5 (in)
BACKFILL METHOD: Piezometer Installed

FIELD									LABORATORY					
ELEVATION (ft)	DEPTH (ft)	SAMPLE	SAMPLE NO	BLOWS PER 6 IN.	BLOWS PER FOOT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION	RECOVERY(%)	PLASTIC LIMIT	LIQUID LIMIT	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200 SIEVE	REMARKS
								ASPHALT.							
	1							Well-graded GRAVEL with SAND (GW); aggregate base.							
228	2							SANDY lean CLAY (CL); grayish brown; moist; medium to fine SAND; medium plasticity fines [FILL].							
	3														
226	4							SEDIMENTARY ROCK (SHALE), dark bluish gray, intensely to moderately weathered, moist; angular shale fragments and sub-grounded gravel in clay matrix [BEDROCK].							Tougher drilling.
	5		1	6	23				61						
224	6			10 13								4	137		
	7														
222	8														
	9														
220	10		2	17	33			Moderately weathered.	78						
	11			17 16											
218	12														
	13														
216	14														
	15		3	18	40				67						
214	16			16 24						13	24				PI
	17														
212	18														
	19														
210	20		4	18	49			Pebbly subrounded gravel in clay matrix.	83						Switch from auger to mud rotary.
	21			20 29								6	149		
208	22														
	23														
206	24														

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PROJECT NUMBER: 16-319.1
PROJECT: Trinidad Rancheria Hotel
BORING: B5
ENTRY BY: NRA
CHECKED BY:

ELEVATION (ft)	DEPTH (ft)	SAMPLE	SAMPLE NO	BLOWS PER 6 IN.	BLOWS PER FOOT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION	RECOVERY(%)	LABORATORY: PLASTIC LIMIT	LABORATORY: LIQUID LIMIT	LABORATORY: MOISTURE (%)	LABORATORY: DRY DENSITY (PCF)	LABORATORY: % PASSING 200 SIEVE	REMARKS
			5	7 5 11	16			Moderately weathered. SEDIMENTARY ROCK (Shale) *(continued)*.	61						
204	26														
	27														
202	28														
	29														Easier drilling.
200	30		6	33 37 51	88				22						Sample very disturbed.
	31														
198	32														
	33														
196	34														
	35		7	9 16 16	32			Intensely to moderately weathered.	83						
194	36									14	29				PI
	37														
192	38														
	39														
190	40		8	23 32 38	70			Moderately weathered.	22						
	41											6	141		Triaxial Shear Strength - Staged UU phi = 27.5 degrees cohesion = 1225 psf
188	42														
	43														
186	44														
	45		9	17 10 13	23			Intensely to moderately weathered.	78						
184	46														Corrosion Testing pH = 8.55 Min. Resistivity = 800 ohm-cm Chlorides = 12.9 ppm Sulfates = 131.8 ppm Tougher drilling. Drill bit grinding on rock.
	47														
182	48														
	49														
180	50		10	50/2	REF			Light grayish green and white, slightly weathered, intensely fractured, partly serpentinized.	100						
	51														
178	52														
	53														
176	54														
	55														

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PROJECT NUMBER: 16-319.1
PROJECT: Trinidad Rancheria Hotel
BORING: B5
ENTRY BY: NRA
CHECKED BY:

ELEVATION (ft)	DEPTH (ft)	FIELD: SAMPLE	FIELD: SAMPLE NO	FIELD: BLOWS PER 6 IN.	FIELD: BLOWS PER FOOT	FIELD: POCKET PEN. (TSF)	FIELD: GRAPHIC LOG	DESCRIPTION	RECOVERY(%)	LABORATORY: PLASTIC LIMIT	LABORATORY: LIQUID LIMIT	LABORATORY: MOISTURE (%)	LABORATORY: DRY DENSITY (PCF)	LABORATORY: % PASSING 200 SIEVE	REMARKS
174	56														
	57														
172	58														
	59														
170	60	X	11	25 25 36	61			Intensely weathered.	89						
	61														
168	62							Bottom of borehole at 61.5 ft bgs Flushed with clean water prior to installing piezometer. No free groundwater encountered within auger depth of 20ft on 9/16/16. Piezometer installed to 61.5ft; see Detail 1.							
	63														
166	64														
	65														
164	66														
	67														
162	68														
	69														
160	70														
	71														
158	72														
	73														
156	74														
	75														
154	76														
	77														
152	78														
	79														
150	80														
	81														
148	82														
	83														
146	84														
	85														

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PROJECT NUMBER: 16-319.1
PROJECT: Trinidad Rancheria Hotel
BORING: B5
ENTRY BY: NRA
CHECKED BY:

LOG OF BORING B6

PROJECT NO: 16-319.1
PROJECT: Trinidad Rancheria Hotel
LOCATION: Trinidad, CA
CLIENT: TREDC
LOGGED BY: NRA
DEPTH OF BORING: 31.5 (ft)

BEGIN DATE: 9/15/2016
COMPLETION DATE: 9/16/2016
SURFACE ELEVATION: 230 (ft)
SURFACE CONDITION: Asphalt
WATER DEPTH: Not encountered
READING TAKEN: 9/16/2016
HAMMER EFFICIENCY: 70%

DRILLING CONTRACTOR: Geo-Ex Subsurface
DRILLING METHOD: Solid-Stem Auger
DRILL RIG: CME 75
HAMMER TYPE: Auto 140lb, 30" drop
SAMPLER TYPE & SIZE: MCAL (2.5"ID), SPT (1.4"ID)
BOREHOLE DIAMETER: 4.5 (in)
BACKFILL METHOD: Soil cuttings

FIELD									LABORATORY						
ELEVATION (ft)	DEPTH (ft)	SAMPLE	SAMPLE NO	BLOWS PER 6 IN.	BLOWS PER FOOT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION	RECOVERY(%)	PLASTIC LIMIT	LIQUID LIMIT	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200 SIEVE	REMARKS
								ASPHALT.							
	1							Well-graded GRAVEL with SAND (GW); aggregate base.							
228	2							Poorly graded SAND (SP); brownish gray; moist; coarse to fine SAND; trace fines; fill for nearby storm drain trench [FILL].							
	3														
226	4							SEDIMENTARY ROCK (SHALE), gray, very intensely weathered [BEDROCK].							
	5		1	18 15 8	23				44						
224	6														Corrosion Testing pH = 7.72 Min. Resistivity = 1,720 ohm-cm Chlorides = 6.9 ppm Sulfates = 100.4 ppm
	7														
222	8														
	9														
220	10		2	8 10 12	22			Light gray, decomposed, dry to moist; subrounded to subangular gravel in clay matrix.	61						
	11											7	124		Unconfined Compressive Strength cohesion = 3783 psf
218	12														
	13														
216	14														
	15		3	4 11 19	30			Intensely weathered.	50						Very tough drilling, near auger refusal.
214	16														
	17														
212	18														Drill bit grinding on rock.
	19														
210	20		4	50/2	REF			Moderately weathered, dry.	0						Tougher drilling.
	21														
208	22														
	23														
206	24														

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PROJECT NUMBER: 16-319.1
PROJECT: Trinidad Rancheria Hotel
BORING: B6
ENTRY BY: NRA
CHECKED BY:

ELEVATION (ft)	DEPTH (ft)	SAMPLE	SAMPLE NO	BLOWS PER 6 IN.	BLOWS PER FOOT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION	RECOVERY(%)	LABORATORY: PLASTIC LIMIT	LABORATORY: LIQUID LIMIT	LABORATORY: MOISTURE (%)	LABORATORY: DRY DENSITY (PCF)	LABORATORY: % PASSING 200 SIEVE	REMARKS
204	26		5	15 20 22	42			SEDIMENTARY ROCK (Shale) *(continued)*.	78						Easier drilling.
	27														
202	28														
	29														
200	30		6	20 14 17	31			Intensely to moderately weathered.	78						
	31														
198	32							Bottom of borehole at 31.5 ft bgs No free groundwater encountered on 9/16/16.							
	33														
196	34														
	35														
194	36														
	37														
192	38														
	39														
190	40														
	41														
188	42														
	43														
186	44														
	45														
184	46														
	47														
182	48														
	49														
180	50														
	51														
178	52														
	53														
176	54														
	55														

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PROJECT NUMBER: 16-319.1
PROJECT: Trinidad Rancheria Hotel
BORING: B6
ENTRY BY: NRA
CHECKED BY:

APPENDIX B

Laboratory Test Results

DRAFT

Crawford & Associates, Inc.
Geotechnical Engineering, Design and Construction Services

Project Name: Trinadad Rancheria Hotel
CAInc File No: 16-319.1
Date: 9/30/16
Technician: CAP

MOISTURE-DENSITY TESTS - D2216

	1	2	3	4	5
Sample No.	B1-1	B1-2	B1-3	B1-6	B2-2
USCS Symbol	SM	GC	SM	SP	GP
Depth (ft.)	6	11	16	31	8
Sample Length (in.)	5.544	5.600	5.651	5.622	5.218
Diameter (in.)	2.388	2.374	2.374	2.405	2.375
Sample Volume (ft^3)	0.01437	0.01434	0.01448	0.01478	0.01338
Total Mass Soil+Tube (g)	1087.8	1151.6	1058.3	1157.9	998.2
Mass of Tube (g)	276.0	275.1	295.8	271.8	253.0
Tare No.	P10	P9	P1	P9	G1
Tare (g)	131.7	254.6	131.4	254.5	20.7
Wet Soil + Tare (g)	580.3	741.6	506.6	740.6	59.5
Dry Soil + Tare (g)	510.8	700.7	464.4	711.8	57.0
Dry Soil (g)	379.1	446.1	333.0	457.3	36.4
Water (g)	69.5	40.9	42.2	28.8	2.5
Moisture (%)	**18.3**	**9.2**	**12.7**	**6.3**	**6.9**
Dry Density (pcf)	**105.3**	**123.4**	**103.1**	**124.3**	**114.9**

Notes:

Crawford & Associates, Inc.
Geotechnical Engineering, Design and Construction Services

Project Name: Trinadad Rancheria Hotel
CAInc File No: 16-319.1
Date: 9/30/16
Technician: CAP

MOISTURE-DENSITY TESTS - D2216

	1	2	3	4	5
Sample No.	B2-3	B2-4	B2-5	B3-1	B3-6
USCS Symbol	SM	SC	SM	SM	Rock
Depth (ft.)	13	18	23	5.5	31
Sample Length (in.)	5.361	5.589	5.983	3.618	4.657
Diameter (in.)	2.377	2.392	2.358	2.408	2.418
Sample Volume (ft^3)	0.01377	0.01453	0.01512	0.00954	0.01238
Total Mass Soil+Tube (g)	1081.2	1138.4	1120.3	771.5	1040.1
Mass of Tube (g)	272.4	272.0	302.4	267.5	265.1
Tare No.	P18	P8	Q6	D17	C15
Tare (g)	129.0	127.6	186.3	20.8	20.7
Wet Soil + Tare (g)	591.4	509.7	496.0	71.9	69.5
Dry Soil + Tare (g)	532.6	465.8	471.8	65.0	65.9
Dry Soil (g)	403.6	338.2	285.5	44.3	45.2
Water (g)	58.8	43.9	24.2	6.9	3.7
Moisture (%)	**14.6**	**13.0**	**8.5**	**15.5**	**8.1**
Dry Density (pcf)	**113.0**	**116.3**	**109.9**	**100.9**	**127.7**

Notes:

Crawford & Associates, Inc.
Geotechnical Engineering, Design and Construction Services

Project Name: Trinadad Rancheria Hotel
CAInc File No: 16-319.1
Date: 9/30/16
Technician: CAP

MOISTURE-DENSITY TESTS - D2216

	1	2	3	4	5
Sample No.	B3-10	B4-2	B5-1	B5-4	
USCS Symbol	Rock	Rock	Rock	Rock	
Depth (ft.)	51	11	6	21	
Sample Length (in.)	5.983	5.907	5.749	5.635	
Diameter (in.)	2.377	2.375	2.369	2.377	
Sample Volume (ft^3)	0.01536	0.01514	0.01466	0.01447	
Total Mass Soil+Tube (g)	1334.7	1296.5	1235.5	1221.9	
Mass of Tube (g)	273.4	274.3	284.9	189.8	
Tare No.	H5	D15	G7	C5	
Tare (g)	20.7	20.9	20.5	21.1	
Wet Soil + Tare (g)	61.7	56.1	102.1	82.8	
Dry Soil + Tare (g)	59.0	53.4	98.89	79.4	
Dry Soil (g)	38.4	32.5	78.39	58.3	
Water (g)	2.7	2.8	3.21	3.4	
Moisture (%)	**7.0**	**8.5**	**4.1**	**5.8**	
Dry Density (pcf)	**142.3**	**137.1**	**137.3**	**148.7**	

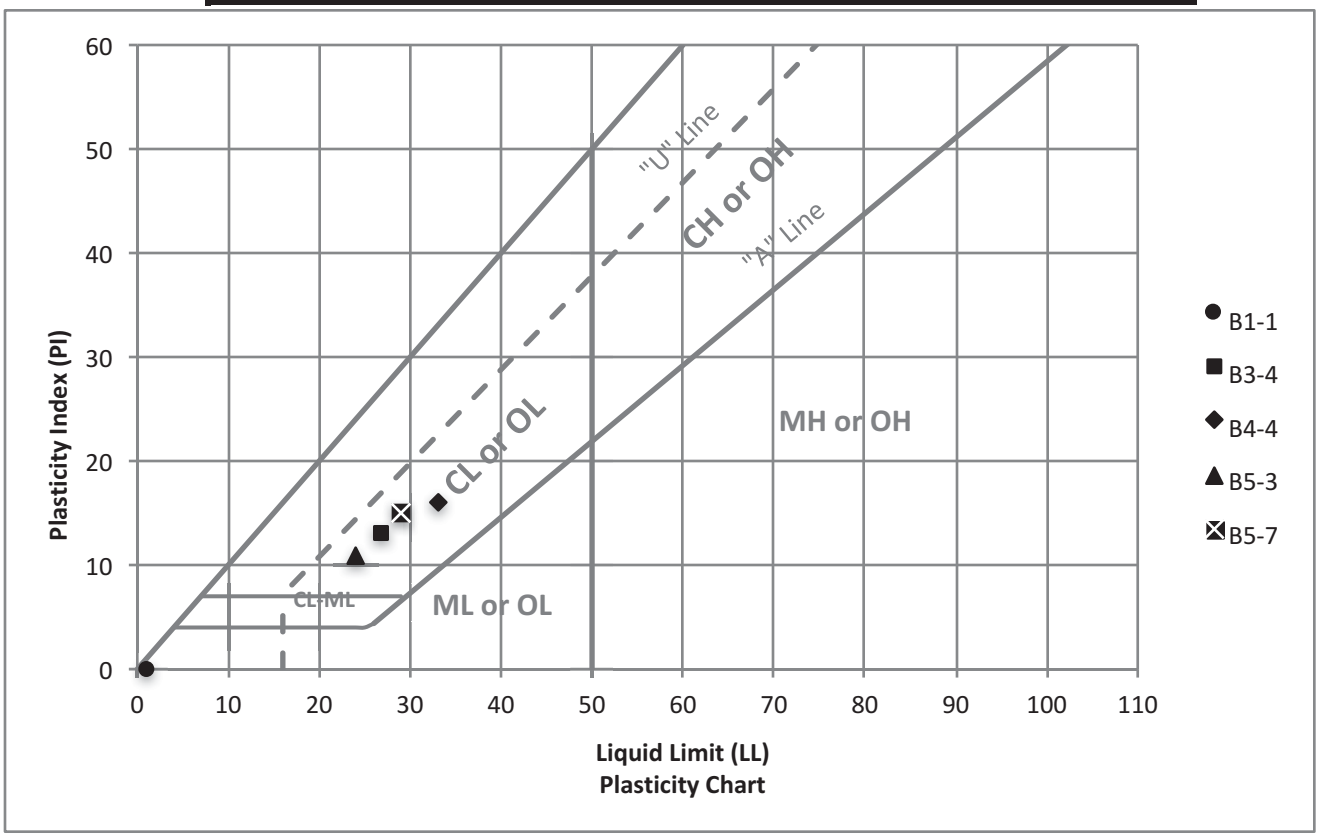
Notes:

Crawford & Associates, Inc.
Geotechnical Engineering, Design and Construction Services

Project Name: Trinidad Rancheria Hotel
CAInc File No: 16-319.1
Date: 10/3/16
Technician: KKL/CAP

Plastic Index - ASTM D4318

Sample ID	Depth (ft)	Liquid Limit	Plastic Limit	PI
B1-1	6	NP	NP	NP
B3-4	21	27	14	13
B4-4	21	33	17	16
B5-3	16	24	13	11
B5-7	36	29	14	15

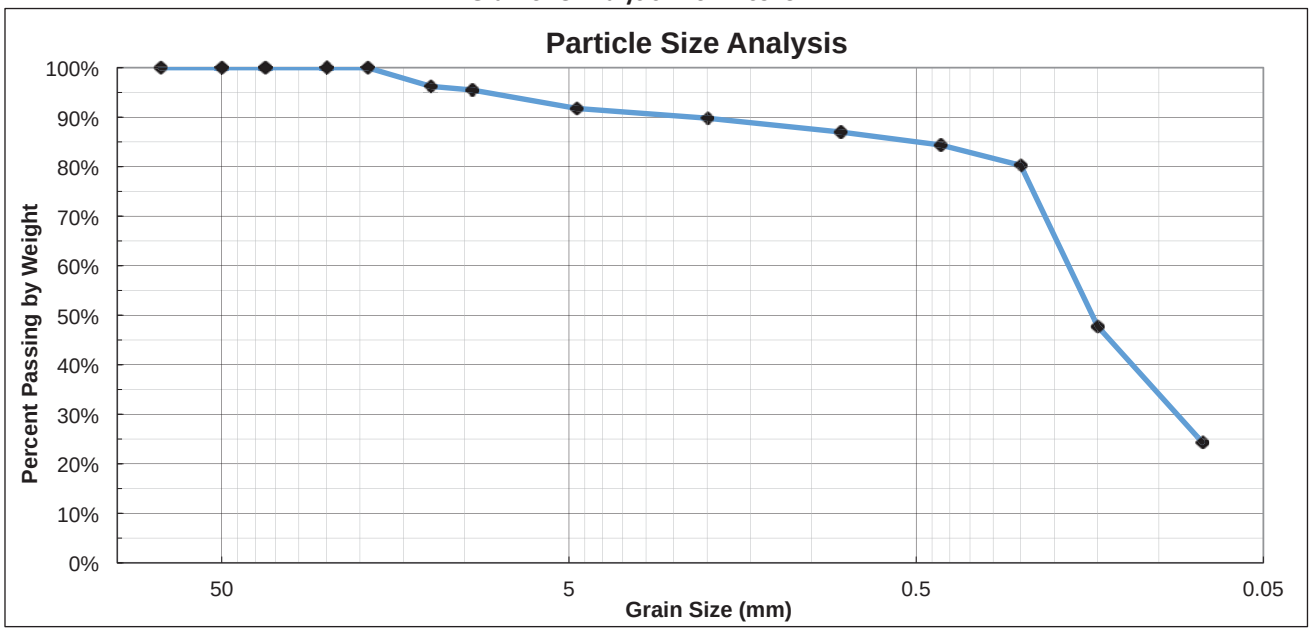


Note: For B1-1, the material was not able to be rolled into a 3.2 mm diameter thread for the plastic limit and the soil pat slid in the cup when performing the liquid limit.

Crawford & Associates, Inc.
Geotechnical Engineering, Design and Construction Services

Project Name: Trinadad Rancheria Hotel
CAInc File No: 16-319.1
Date: 10/4/16
Technician: KKL
Sample ID: B1-1
Depth: 6'
USCS Classification: Silty SAND

Grain Size Analysis - ASTM 6913



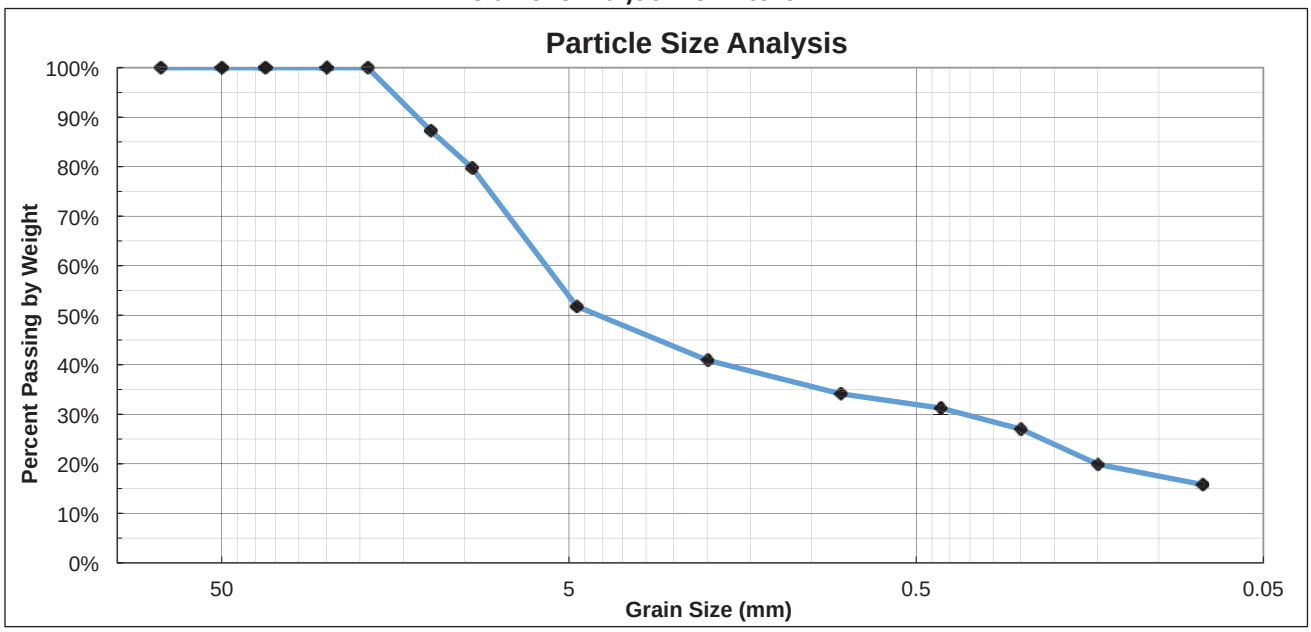
% Cobble	% Gravel		% Sand			% Fines
	Coarse	Fine	Coarse	Medium	Fine	Silt/Clay
	0	8	2	6	60	
0	**8**		**68**			**24**

		Sieve #	Opening mm	Cummulative Mass Retained (g)	% Passing %
Cobbles		**3"**	75	0.0	100%
Gravel	Coarse	**2"**	50	0.0	100%
		1-1/2"	37.5	0.0	100%
		1"	25.0	0.0	100%
		3/4"	19.0	0.0	100%
	Fine	**1/2"**	12.5	14.3	96%
		3/8"	9.50	17.1	95%
		#4	4.75	31.2	92%
Sand	Coarse	**#10**	2.00	38.7	90%
	Medium	**#20**	0.825	49.3	87%
		#40	0.425	59.2	84%
	Fine	**#60**	0.250	74.8	80%
		#100	0.150	198.1	48%
		#200	0.075	286.7	24%

Crawford & Associates, Inc.
Geotechnical Engineering, Design and Construction Services

Project Name: Trinadad Rancheria Hotel
CAInc File No: 16-319.1
Date: 10/3/16
Technician: KKL
Sample ID: B1-2
Depth: 11'
USCS Classification: Clayey GRAVEL with SAND

Grain Size Analysis - ASTM 6913



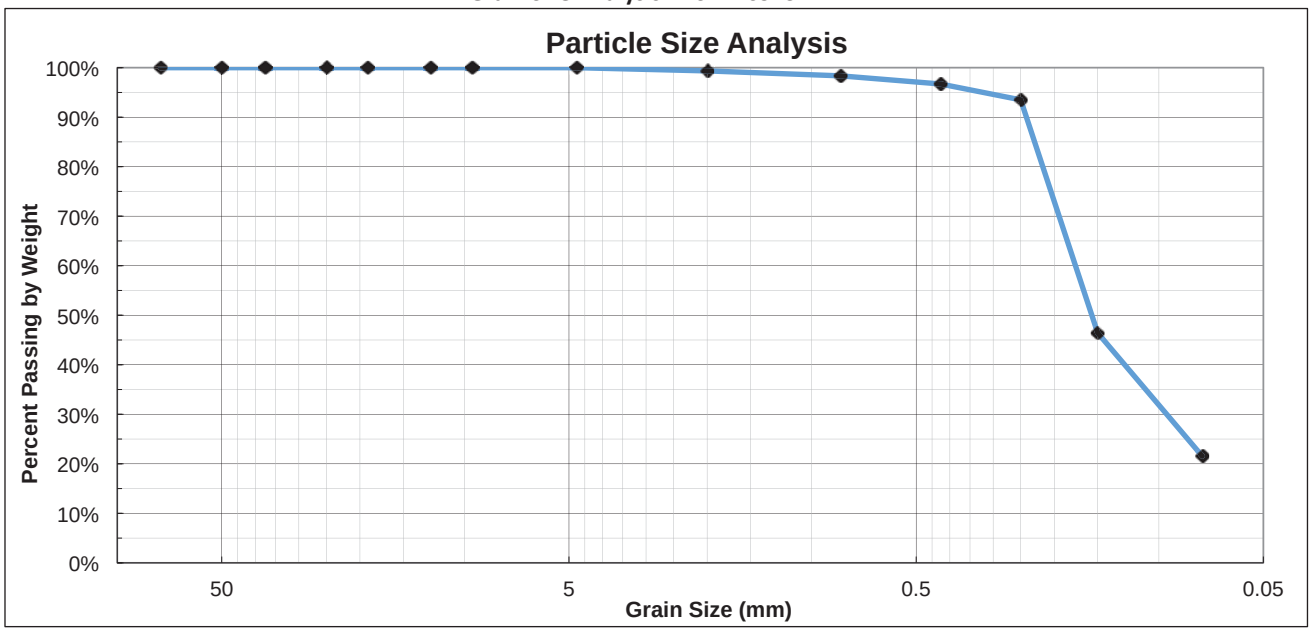
% Cobble	% Gravel		% Sand			% Fines
	Coarse	Fine	Coarse	Medium	Fine	Silt/Clay
	0	48	11	10	15	
0	**48**		**36**			**16**

		Sieve #	Opening mm	Cummulative Mass Retained (g)	% Passing %
Cobbles		**3"**	75	0.0	100%
Gravel	Coarse	**2"**	50	0.0	100%
		1-1/2"	37.5	0.0	100%
		1"	25.0	0.0	100%
		3/4"	19.0	0.0	100%
	Fine	**1/2"**	12.5	48.2	87%
		3/8"	9.50	76.7	80%
		#4	4.75	182.5	52%
Sand	Coarse	**#10**	2.00	223.7	41%
	Medium	**#20**	0.825	249.4	34%
		#40	0.425	260.3	31%
	Fine	**#60**	0.250	276.4	27%
		#100	0.150	303.3	20%
		#200	0.075	318.8	16%

Crawford & Associates, Inc.
Geotechnical Engineering, Design and Construction Services

Project Name: Trinadad Rancheria Hotel
CAInc File No: 16-319.1
Date: 10/7/16
Technician: CAP
Sample ID: B1-5
Depth: 26'
USCS Classification: Silty SAND

Grain Size Analysis - ASTM 6913



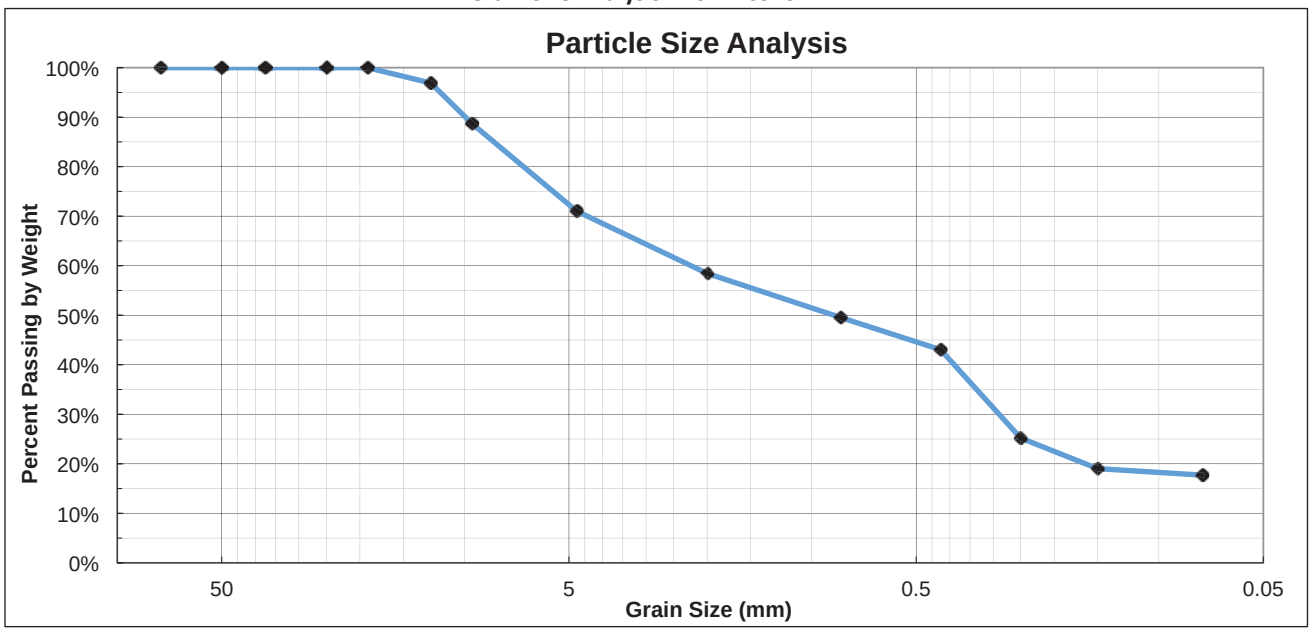
% Cobble	% Gravel		% Sand			% Fines
	Coarse	Fine	Coarse	Medium	Fine	Silt/Clay
	0	0	1	2	75	
0	**0**		**78**			**22**

		Sieve #	Opening mm	Cummulative Mass Retained (g)	% Passing %
Cobbles		**3"**	75	0.0	100%
Gravel	Coarse	**2"**	50	0.0	100%
		1-1/2"	37.5	0.0	100%
		1"	25.0	0.0	100%
		3/4"	19.0	0.0	100%
	Fine	**1/2"**	12.5	0.0	100%
		3/8"	9.50	0.0	100%
		#4	4.75	0.0	100%
Sand	Coarse	**#10**	2.00	1.1	99%
	Medium	**#20**	0.825	2.8	98%
		#40	0.425	5.6	97%
	Fine	**#60**	0.250	11.0	94%
		#100	0.150	90.7	46%
		#200	0.075	132.8	22%

Crawford & Associates, Inc.
Geotechnical Engineering, Design and Construction Services

Project Name: Trinadad Rancheria Hotel
CAInc File No: 16-319.1
Date: 10/4/16
Technician: KKL
Sample ID: B2-3
Depth: 13'
USCS Classification: Silty SAND with GRAVEL

Grain Size Analysis - ASTM 6913



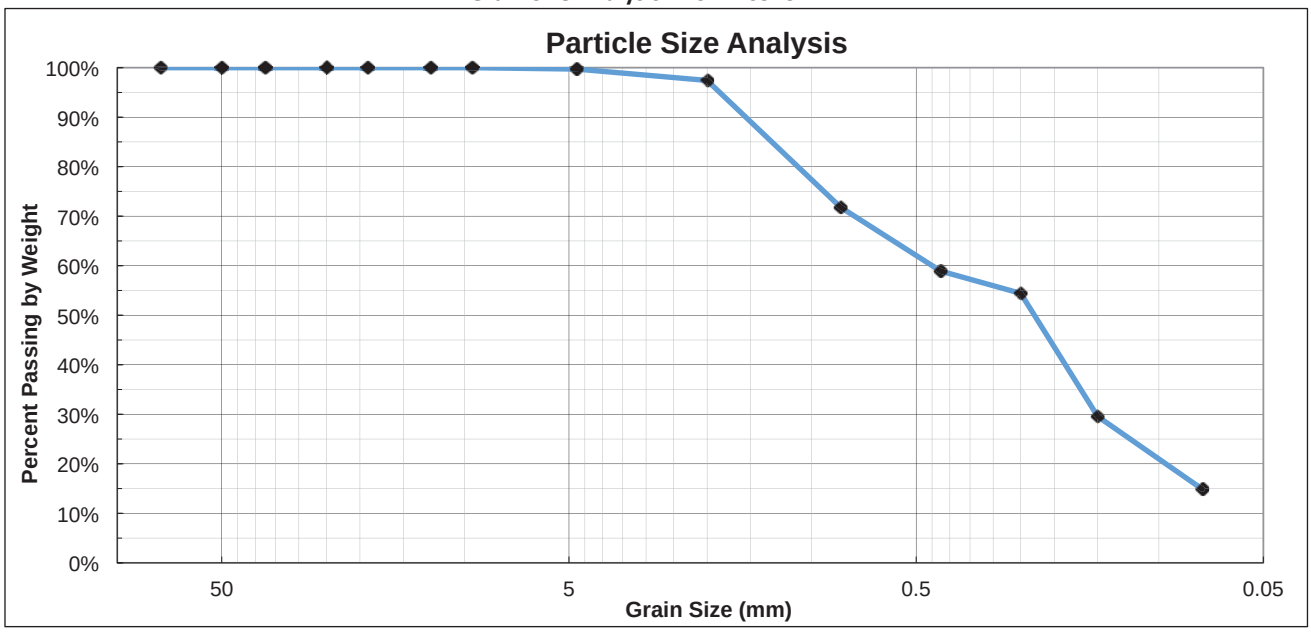
% Cobble	% Gravel		% Sand			% Fines
	Coarse	Fine	Coarse	Medium	Fine	Silt/Clay
	0	29	13	15	25	
0	**29**		**53**			**18**

		Sieve #	Opening mm	Cummulative Mass Retained (g)	% Passing %
Cobbles		**3"**	75	0.0	100%
Gravel	Coarse	**2"**	50	0.0	100%
		1-1/2"	37.5	0.0	100%
		1"	25.0	0.0	100%
		3/4"	19.0	0.0	100%
	Fine	**1/2"**	12.5	12.5	97%
		3/8"	9.50	45.7	89%
		#4	4.75	116.9	71%
Sand	Coarse	**#10**	2.00	167.7	58%
	Medium	**#20**	0.825	203.6	50%
		#40	0.425	229.9	43%
	Fine	**#60**	0.250	301.9	25%
		#100	0.150	326.8	19%
		#200	0.075	332.1	18%

Crawford & Associates, Inc.
Geotechnical Engineering, Design and Construction Services

Project Name: Trinadad Rancheria Hotel
CAInc File No: 16-319.1
Date: 10/3/16
Technician: KKL
Sample ID: B2-5
Depth: 23'
USCS Classification: Silty SAND

Grain Size Analysis - ASTM 6913



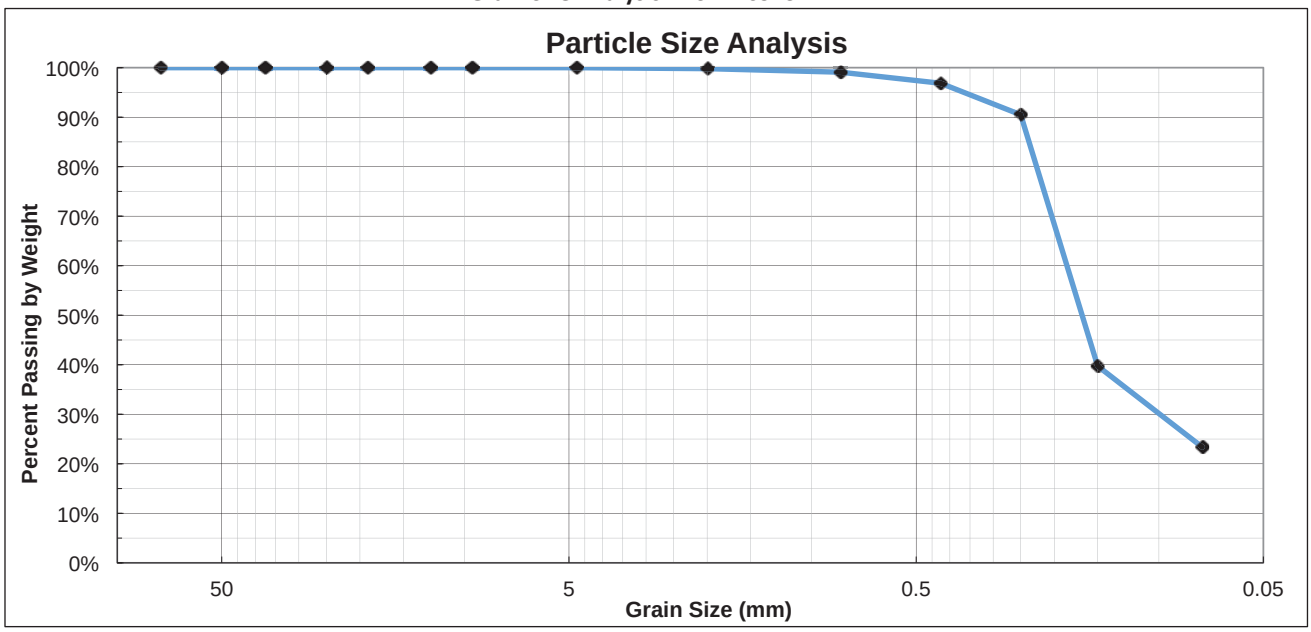
% Cobble	% Gravel		% Sand			% Fines
	Coarse	Fine	Coarse	Medium	Fine	Silt/Clay
	0	0	3	38	44	
0	**0**		**85**			**15**

		Sieve #	Opening mm	Cummulative Mass Retained (g)	% Passing %
Cobbles		**3"**	75	0.0	100%
Gravel	Coarse	**2"**	50	0.0	100%
		1-1/2"	37.5	0.0	100%
		1"	25.0	0.0	100%
		3/4"	19.0	0.0	100%
	Fine	**1/2"**	12.5	0.0	100%
		3/8"	9.50	0.0	100%
		#4	4.75	0.8	100%
Sand	Coarse	**#10**	2.00	7.4	97%
	Medium	**#20**	0.825	80.5	72%
		#40	0.425	117.3	59%
	Fine	**#60**	0.250	130.1	54%
		#100	0.150	201.1	30%
		#200	0.075	243.0	15%

Crawford & Associates, Inc.
Geotechnical Engineering, Design and Construction Services

Project Name: Trinadad Rancheria Hotel
CAInc File No: 16-319.1
Date: 10/7/16
Technician: CAP
Sample ID: B2-7
Depth: 33'
USCS Classification: Silty SAND

Grain Size Analysis - ASTM 6913



% Cobble	% Gravel		% Sand			% Fines
	Coarse	Fine	Coarse	Medium	Fine	Silt/Clay
	0	0	0	3	74	
0	**0**		**77**			**23**

		Sieve #	Opening mm	Cummulative Mass Retained (g)	% Passing %
Cobbles		**3"**	75	0.0	100%
Gravel	Coarse	**2"**	50	0.0	100%
		1-1/2"	37.5	0.0	100%
		1"	25.0	0.0	100%
		3/4"	19.0	0.0	100%
	Fine	**1/2"**	12.5	0.0	100%
		3/8"	9.50	0.0	100%
		#4	4.75	0.0	100%
Sand	Coarse	**#10**	2.00	0.3	100%
	Medium	**#20**	0.825	1.3	99%
		#40	0.425	4.5	97%
	Fine	**#60**	0.250	13.6	90%
		#100	0.150	86.1	40%
		#200	0.075	109.5	23%

Crawford & Associates, Inc.
Geotechnical Engineering, Design and Construction Services

Project Name: Trindad Rancheria Hotel
CAInc File No: 16-319.1
Date: 10/3/16
Technician: KKL

200 Wash - ASTM D1140

Max Particle Size (100% Passing)	Standard Sieve Size	Recommended Min Mass of Test Specimens
2 mm or less	No. 10	20 g
4.75 mm	No. 4	100 g
9.5 mm	3/8 "	500 g
19.0 mm	3/4 "	2.5 kg
37.5 mm	1 1/2 "	10 kg
75.0 mm	3 "	50 kg

Table from 6.2 of ASTM D1140

Sample No.	B1-3	B2-4			
USCS Symbol	SM	SC			
Depth (ft.)	16	18			
Tare No.	P1	P8			
Tare (g)	131.4	127.6			
Dry Soil + Tare (g)	464.4	465.8			
Dry Mass before (g)	333.0	338.2			
Dry Mass after (g)	281.4	265.1			
Percent Fines (%)	15	22			

EXPANSION INDEX TEST

Project No:	S9763-05-86	**JOB**	Crawford 16-319.1		ASTM D4829
Sample	Bulk 1	**DATE**	10/5-7/16	**BY**	MR

Initial Ht = 1 inches **G_s =** 2.7 *Factor =* $\frac{(4)(1728)(2.2046)}{(\pi)(4.01)^2(1000)}$ = 0.3016

$EI_{raw} = \frac{(1000)(\Delta H)}{H}$

Dry Density (pcf) = γ_d = *(Calc'd Dry Wt, gms) (Factor) / (Sample ht. in inches)*

$EI_{corrected} = EI_{raw} - \frac{(50-S)(65+EI_{raw})}{220-S}$

$Saturation = \frac{(100)(w)(Gs)(\gamma d)}{[(Gs)(62.4)]-\gamma d}$

where: w = % moisture in decimal
S = saturation in percent
H = initial height
ΔH = total change in height

0 - 20	VERY LOW
21 - 50	LOW
51 - 90	MEDIUM
91 - 130	HIGH
> 130	VERY HIGH

TRIAL 1					TRIAL 2				
DATE and TIME	LOAD	DIAL READ	REV COUNT	TOTAL EXPAN	DATE and TIME	LOAD	DIAL READ	REV COUNT	TOTAL EXPAN
DRY					**DRY**				
	1 psi				10/5/2016 1:16 PM	1 psi	0.2278		
	1 psi			0.0000	10/5/2016 1:26 PM	1 psi	0.2274		-0.0004
WET									
	1 psi			0.0000	10/5/2016 2:06 PM	1 psi	0.2104		-0.0170
	1 psi			0.0000	10/5/2016 2:32 PM	1 psi	0.2304		0.0030
	1 psi			0.0000	10/5/2016 4:07 PM	1 psi	0.2302		0.0028
	1 psi			0.0000	10/5/2016 4:32 PM	1 psi	0.2307		0.0033
	1 psi			0.0000	10/5/2016 4:50 PM	1 psi	0.2307		0.0033
	1 psi			0.0000	10/6/2016 8:05 AM	1 psi	0.2303		0.0029
	1 psi			0.0000	10/6/2016 9:27 AM	1 psi	0.2303		0.0029
	1 psi			0.0000		1 psi			

TRIAL 1						TRIAL 2					
Moisture Content			Density			Moisture Content			Density		
	Before	After		Before	After		Before	After		Before	After
Tare No.						Tare No.	Adj	MT-6			
Gross Wet Wt (gm)	983.7		Wet+ring (gms)	549.5		Gross Wet Wt (gm)		854.45	Wet+ring (gms)	550.7	588.65
Gross Dry Wt (gm)	901.6		Ring (gms)	192.8		Gross Dry Wt (gm)		771.58	Ring (gms)	192.8	
Water Loss (gm)	82.1		Wet Soil (gms)	356.7		Water Loss (gm)		82.87	Wet Soil (gms)	357.9	
Tare Wt. (gm)	224		Calc'd dry soil (gms)	318.2		Tare Wt. (gm)		459.43	Calc'd dry soil (gms)	314.5	312.8
Net Dry Wt (gm)	677.6		Dry Dens (pcf)	96.0		Net Dry Wt (gm)		312.15	Dry Dens (pcf)	94.9	94.0
% Moisture	12.1					% Moisture	13.8	26.5			

Calculated Saturation (%)	43.3		Calculated Saturation (%)	48.0 90.5
Total Swell (%)			Total Swell (%)	0.3
Expansion Index			Expansion Index	3

EXPANSION INDEX TEST

Project No:	S9763-05-86	**JOB**	Crawford 16-319.1		ASTM D4829
Sample	Bulk 2	**DATE**	10/5-7/16	**BY**	MR

Initial Ht = 1 inches **G_s =** 2.7 *Factor =* $\frac{(4)(1728)(2.2046)}{(\pi)(4.01)^2(1000)}$ = 0.3016

$E\,I_{raw} = \frac{(1000)(\Delta H)}{H}$

Dry Density (pcf) = γ_d = *(Calc'd Dry Wt, gms) (Factor) / (Sample ht. in inches)*

$E\,I_{corrected} = E\,I_{raw} - \frac{(50-S)(65+E\,I_{raw})}{220-S}$

$Saturation = \frac{(100)(w)(Gs)(\gamma d)}{[(Gs)(62.4)]-\gamma d}$

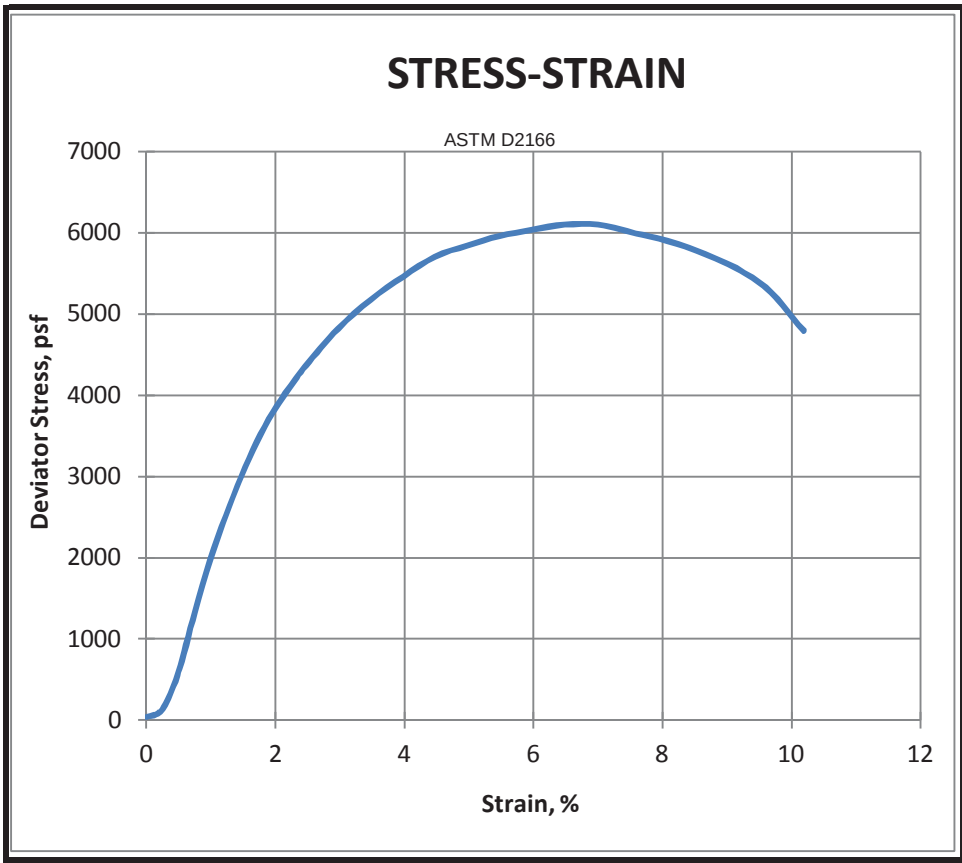
where: w = % moisture in decimal
S = saturation in percent
H = initial height
ΔH = total change in height

0 - 20	VERY LOW
21 - 50	LOW
51 - 90	MEDIUM
91 - 130	HIGH
> 130	VERY HIGH

TRIAL 1					TRIAL 2				
DATE and TIME	LOAD	DIAL READ	REV COUNT	TOTAL EXPAN	DATE and TIME	LOAD	DIAL READ	REV COUNT	TOTAL EXPAN
DRY					**DRY**				
	1 psi				10/5/2016 2:19 PM	1 psi	0.2706		
	1 psi			0.0000	10/5/2016 2:29 PM	1 psi	0.2711		0.0005
WET									
	1 psi			0.0000	10/5/2016 4:05 PM	1 psi	0.3075		0.0364
	1 psi			0.0000	10/5/2016 4:30 PM	1 psi	0.3110		0.0399
	1 psi			0.0000	10/5/2016 4:52 PM	1 psi	0.3121		0.0410
	1 psi			0.0000	10/6/2016 8:04 AM	1 psi	0.3245		0.0534
	1 psi			0.0000	10/6/2016 9:26 AM	1 psi	0.3246		0.0535
	1 psi			0.0000					
	1 psi			0.0000					
	1 psi			0.0000					

TRIAL 1						TRIAL 2					
Moisture Content			Density			Moisture Content			Density		
	Before	After		Before	After		Before	After		Before	After
Tare No.						Tare No.	Adj	MT-6			
Gross Wet Wt (gm)	734.19		Wet+ring (gms)			Gross Wet Wt (gm)		661.45	Wet+ring (gms)	624.3	657.18
Gross Dry Wt (gm)	686.5		Ring (gms)			Gross Dry Wt (gm)		593.57	Ring (gms)	199.6	
Water Loss (gm)	47.69		Wet Soil (gms)	0		Water Loss (gm)		67.88	Wet Soil (gms)	424.7	
Tare Wt. (gm)	111.4		Calc'd dry soil (gms)	0.0		Tare Wt. (gm)		205.1	Calc'd dry soil (gms)	393.2	389.5
Net Dry Wt (gm)	575.1		Dry Dens (pcf)	0.0		Net Dry Wt (gm)		388.47	Dry Dens (pcf)	118.6	111.5
% Moisture	8.3					% Moisture	8.0	17.5			

Calculated Saturation (%)	0.0		Calculated Saturation (%)	51.4	92.4
Total Swell (%)			Total Swell (%)	5.4	
Expansion Index			Expansion Index	54	



Failure Photo

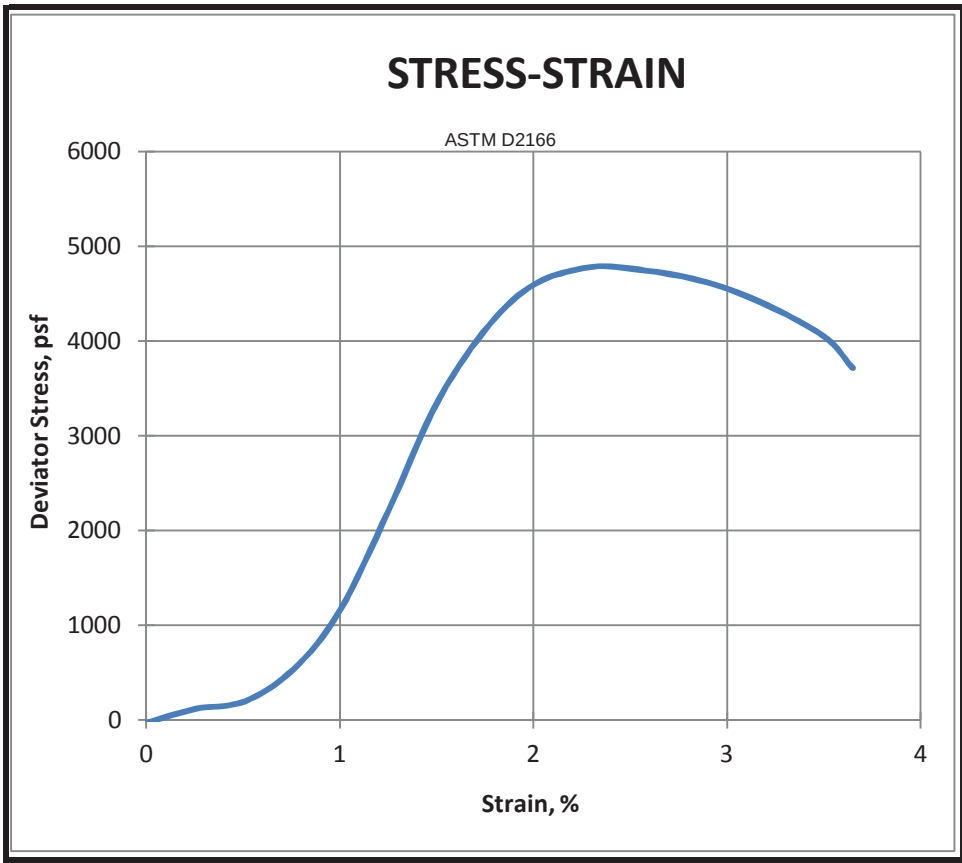


Sample Description Gravel up to 1/2" removed and patched as possible	
Sample ID	B3-2
Sample Depth (feet)	11.00
Material Description	Black lean CLAY with gravel (shale)
Initial Conditions at Start of Test	
Height (inch) average of 3	4.97
Diameter (inch) average of 3	2.39
Moisture Content (%)	8.5
Dry Density (pcf)	133.0
Estimated Specific Gravity	2.7
Saturation (%)	86.5
Shear Test Conditions	
Strain Rate (%/min)	0.9925
Major Principal Stress at Failure (psf)	6100
Strain at Failure (%)	6.5
Test Results	
Unconfined Compressive Strength (tons/ft^2)	3.1
Unconfined Compressive Strength (lbs/ft^2)	6101
Shear Strength (tons/ft^2)	1.5
Shear Strength (lbs/ft^2)	3051

GEOCON CONSULTANTS, INC.
Geocon Consultants, Inc.
3160 Gold Valley Drive, Suite 800
Rancho Cordova, California 95742
Telephone: (916) 852-9118
Fax: (916) 852-9132

Unconfined Compressive Strength (ASTM D2166)

Project: Crawford 16-319.1
Location:
Number: S9763-05-86
Figure:



Failure Photo



Sample Description Sample partially remolded in order to perform test (1/2" gravel)	
Sample ID	B3-3
Sample Depth (feet)	16.00
Material Description	Black lean CLAY with gravel (shale)
Initial Conditions at Start of Test	
Height (inch) average of 3	4.69
Diameter (inch) average of 3	2.42
Moisture Content (%)	4.9
Dry Density (pcf)	138.2
Estimated Specific Gravity	2.7
Saturation (%)	60.4
Shear Test Conditions	
Strain Rate (%/min)	0.9872
Major Principal Stress at Failure (psf)	4770
Strain at Failure (%)	2.5
Test Results	
Unconfined Compressive Strength (tons/ft^2)	2.4
Unconfined Compressive Strength (lbs/ft^2)	4774
Shear Strength (tons/ft^2)	1.2
Shear Strength (lbs/ft^2)	2387

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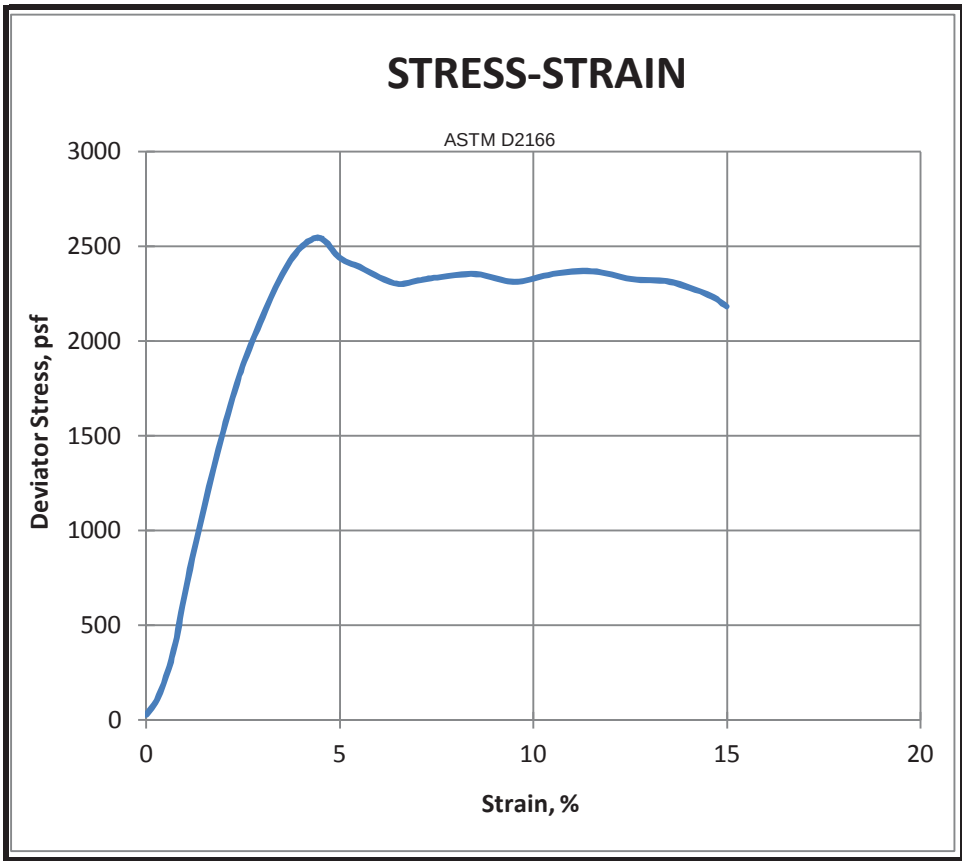
3160 Gold Valley Drive, Suite 800
Rancho Cordova, California 95742
Telephone: (916) 852-9118
Fax: (916) 852-9132

Unconfined Compressive Strength (ASTM D2166)

Project: Crawford 16-319.1
Location:
Number: S9763-05-86
Figure:



Failure Photo



Sample Description Sample partially remolded in order to perform test	
Sample ID	B4-1
Sample Depth (feet)	6.00
Material Description	Black lean CLAY with gravel (shale)
Initial Conditions at Start of Test	
Height (inch) average of 3	4.94
Diameter (inch) average of 3	2.39
Moisture Content (%)	8.8
Dry Density (pcf)	129.6
Estimated Specific Gravity	2.7
Saturation (%)	79.6
Shear Test Conditions	
Strain Rate (%/min)	0.9967
Major Principal Stress at Failure (psf)	2540
Strain at Failure (%)	4.5
Test Results	
Unconfined Compressive Strength (tons/ft^2)	1.3
Unconfined Compressive Strength (lbs/ft^2)	2544
Shear Strength (tons/ft^2)	0.6
Shear Strength (lbs/ft^2)	1272

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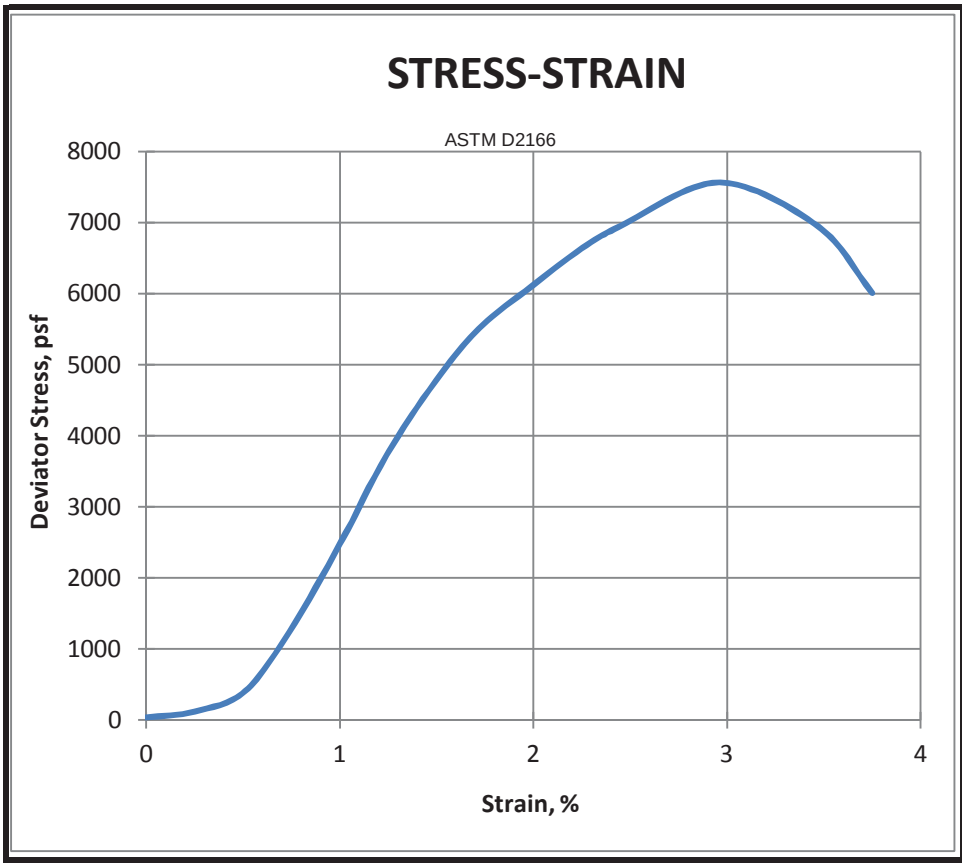
Unconfined Compressive Strength (ASTM D2166)

Project: Crawford 16-319.1
Location:
Number: S9763-05-86
Figure:



Failure Photo



Sample Description	
Sample ID	B6-2
Sample Depth (feet)	11.00
Material Description	Dark gray lean CLAY
Initial Conditions at Start of Test	
Height (inch) average of 3	4.97
Diameter (inch) average of 3	2.39
Moisture Content (%)	6.6
Dry Density (pcf)	123.6
Estimated Specific Gravity	2.7
Saturation (%)	49.3
Shear Test Conditions	
Strain Rate (%/min)	1.0151
Major Principal Stress at Failure (psf)	7570
Strain at Failure (%)	3.0
Test Results	
Unconfined Compressive Strength (tons/ft^2)	3.8
Unconfined Compressive Strength (lbs/ft^2)	7566
Shear Strength (tons/ft^2)	1.9
Shear Strength (lbs/ft^2)	3783

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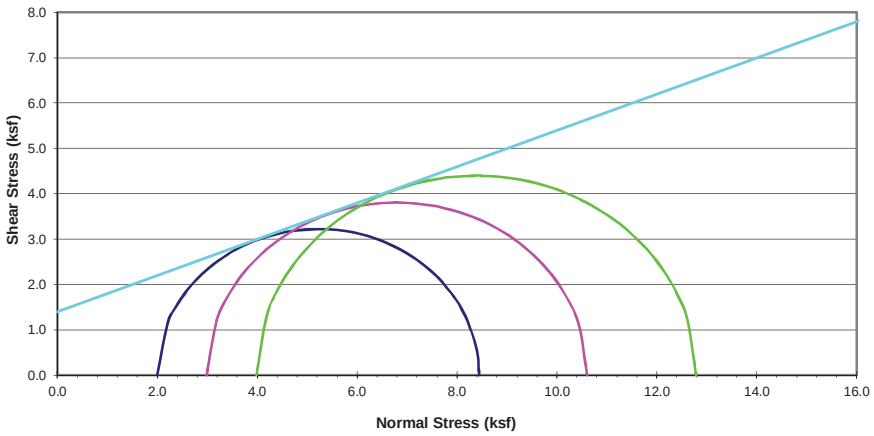
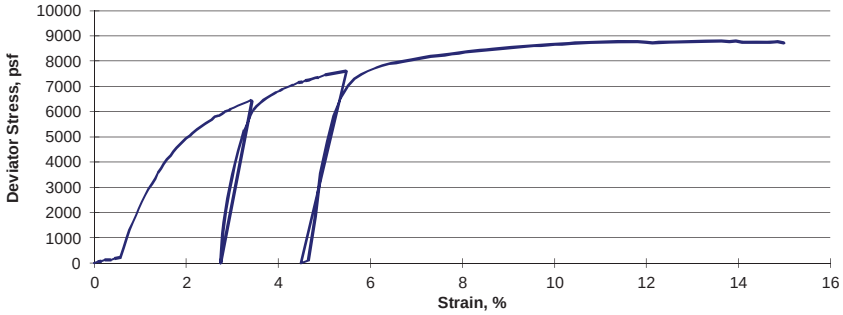
Unconfined Compressive Strength (ASTM D2166)

Project: Crawford 16-319.1
Location:
Number: S9763-05-86
Figure:

MOHR'S CIRCLES



STRESS-STRAIN



Failure Photo



Test Results		
	ϕ, degrees	**21.8**
	c, psf	**1400**

Sample Description		
	Sample ID	B4-7
	Sample Depth (feet)	36
	Material Description	Black lean CLAY (Shale)

Initial Conditions at Start of Stage				
Sample ID (psf), minor principal stress		**2000**	**3000**	**4000**
	Height (inch)	4.970	4.831	4.593
	Diameter (inch)	2.396	2.430	2.456
	Moisture Content (%)	6.2	6.2	6.2
	Dry Density (pcf)	143.0	143.0	143.0
	Saturation (%)	93.7	93.7	93.7

Shear Test Conditions				
	Strain Rate (%/min)	0.2956	0.2941	0.2990
	Major Principal Stress at Failure (psf)	8440	10610	12790
	Strain at failure (%)	3.39	5.47	13.50
	Deviator Stress and Fail (psf)	6440	7620	8800

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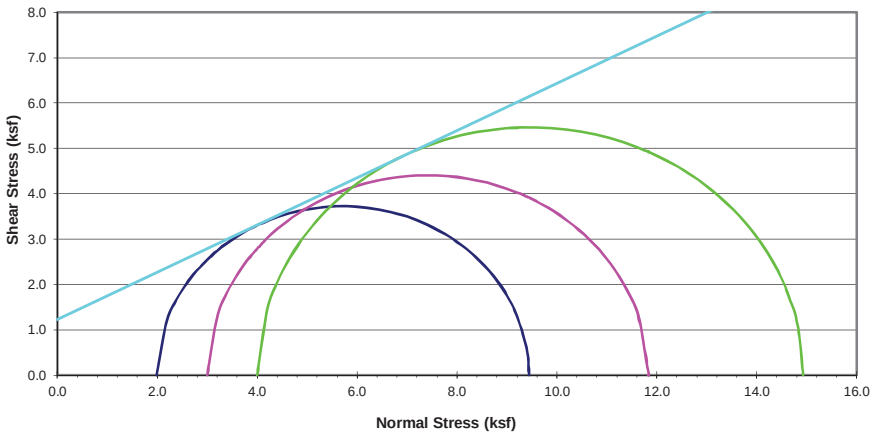
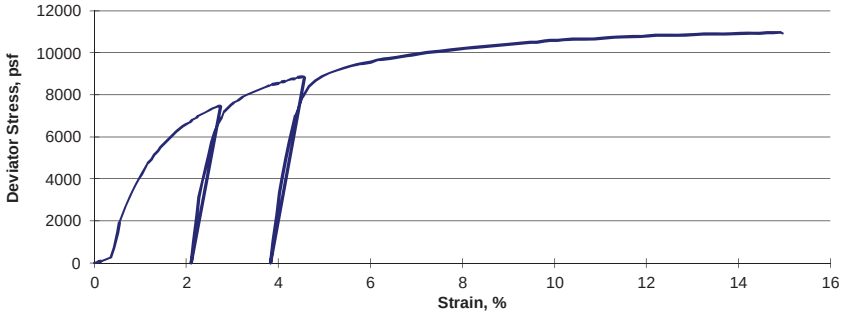
Triaxial Shear Strength - UU Test (staged)

Project: Crawford 16-319.1
Location:
Number: S9763-05-86
Figure:

MOHR'S CIRCLES



STRESS-STRAIN



Failure Photo



Test Results		
	ϕ, degrees	**27.5**
	c, psf	**1225**

Sample Description		
	Sample ID	B5-8
	Sample Depth (feet)	41
	Material Description	Black lean CLAY (Shale)

Initial Conditions at Start of Stage				
Sample ID (psf), minor principal stress		**2000**	**3000**	**4000**
	Height (inch)	4.800	4.697	4.510
	Diameter (inch)	2.403	2.429	2.451
	Moisture Content (%)	6.2	6.2	6.2
	Dry Density (pcf)	141.0	141.0	141.0
	Saturation (%)	86.7	86.7	86.7

Shear Test Conditions				
	Strain Rate (%/min)	0.2940	0.2946	0.2984
	Major Principal Stress at Failure (psf)	9440	11820	14930
	Strain at failure (%)	2.70	4.56	14.32
	Deviator Stress and Fail (psf)	7450	8820	10930

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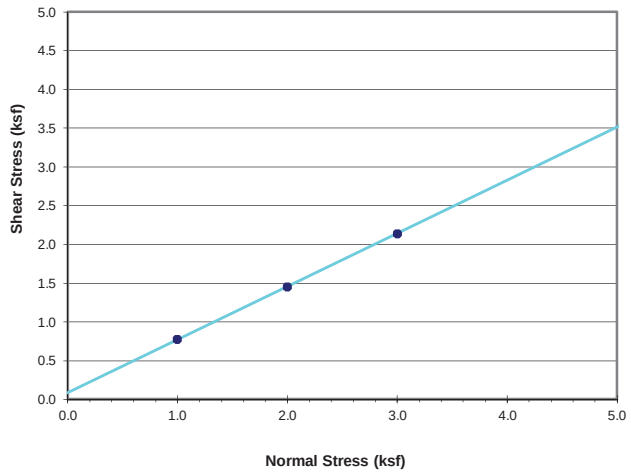
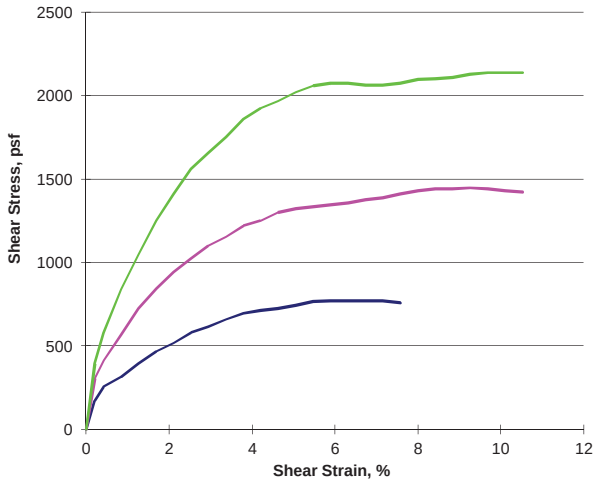
Triaxial Shear Strength - UU Test (staged)

Project: Crawford 16-319.1
Location:
Number: S9763-05-86
Figure:

SHEAR STRENGTH



STRESS-STRAIN



Sample Description			
Boring Number	B1-4		
Sample Depth (feet)			
Material Description	Olive Silty SAND		
Initial Conditions at Start of Test			
Sample ID (psf)	**1000**	**2000**	**3000**
Height (inch)	1.00	1.00	1.00
Diameter (inch)	2.375	2.375	2.375
Moisture Content (%)	14.1	13.0	13.1
Dry Density (pcf)	93.9	93.7	95.8
Estimated Specific Gravity	2.70	2.70	2.70
Saturation (%)	47.9	43.9	46.7
Shear Test Conditions			
Strain Rate (%/min)	1.004	1.049	1.026
Major Principle Stress at Failure (psf)	769	1447	2138
Strain at Failure (%)	5.89	9.26	9.68
Test Results			
ϕ, degrees **34.4**			
c, psf **85**			

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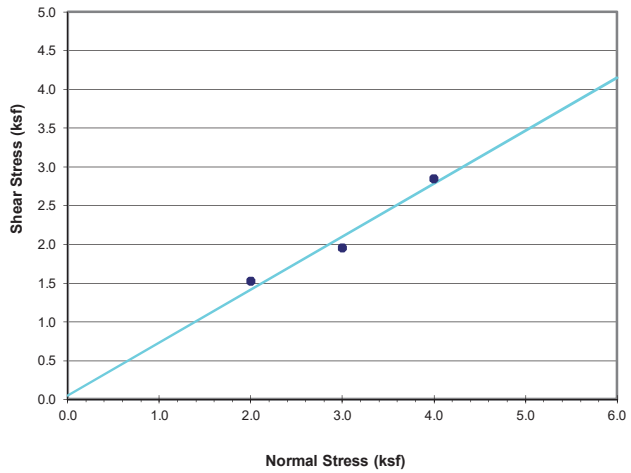
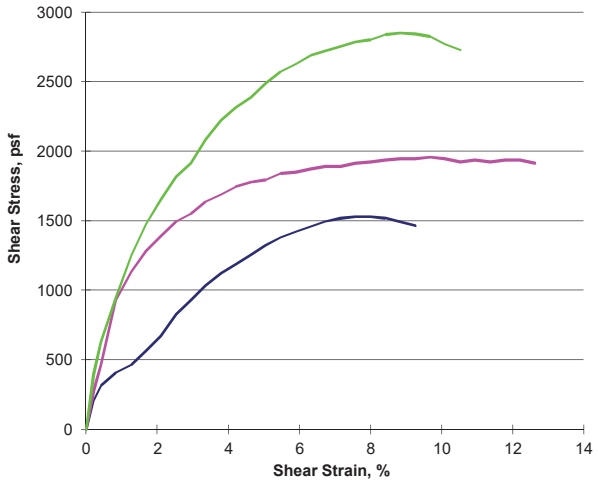
Direct Shear Strength Test (ASTM D3080)

Project: Crawford Lab 16-319.1
Location:
Number: S9763-05-86
Figure:

SHEAR STRENGTH



STRESS-STRAIN



Sample Description			
Boring Number	B2-6		
Sample Depth (feet)	28		
Material Description	Olive Brown Silty SAND		
Initial Conditions at Start of Test			
Sample ID (psf)	**2000**	**3000**	**4000**
Height (inch)	1.00	1.00	1.00
Diameter (inch)	2.375	2.375	2.375
Moisture Content (%)	13.2	13.5	14.4
Dry Density (pcf)	94.2	92.8	97.9
Estimated Specific Gravity	2.70	2.70	2.70
Saturation (%)	45.3	44.8	53.8
Shear Test Conditions			
Strain Rate (%/min)	0.802	0.842	0.833
Major Principle Stress at Failure (psf)	1527	1956	2848
Strain at Failure (%)	7.58	9.68	8.84
Test Results			
ϕ, degrees **34.3**			
c, psf **50**			

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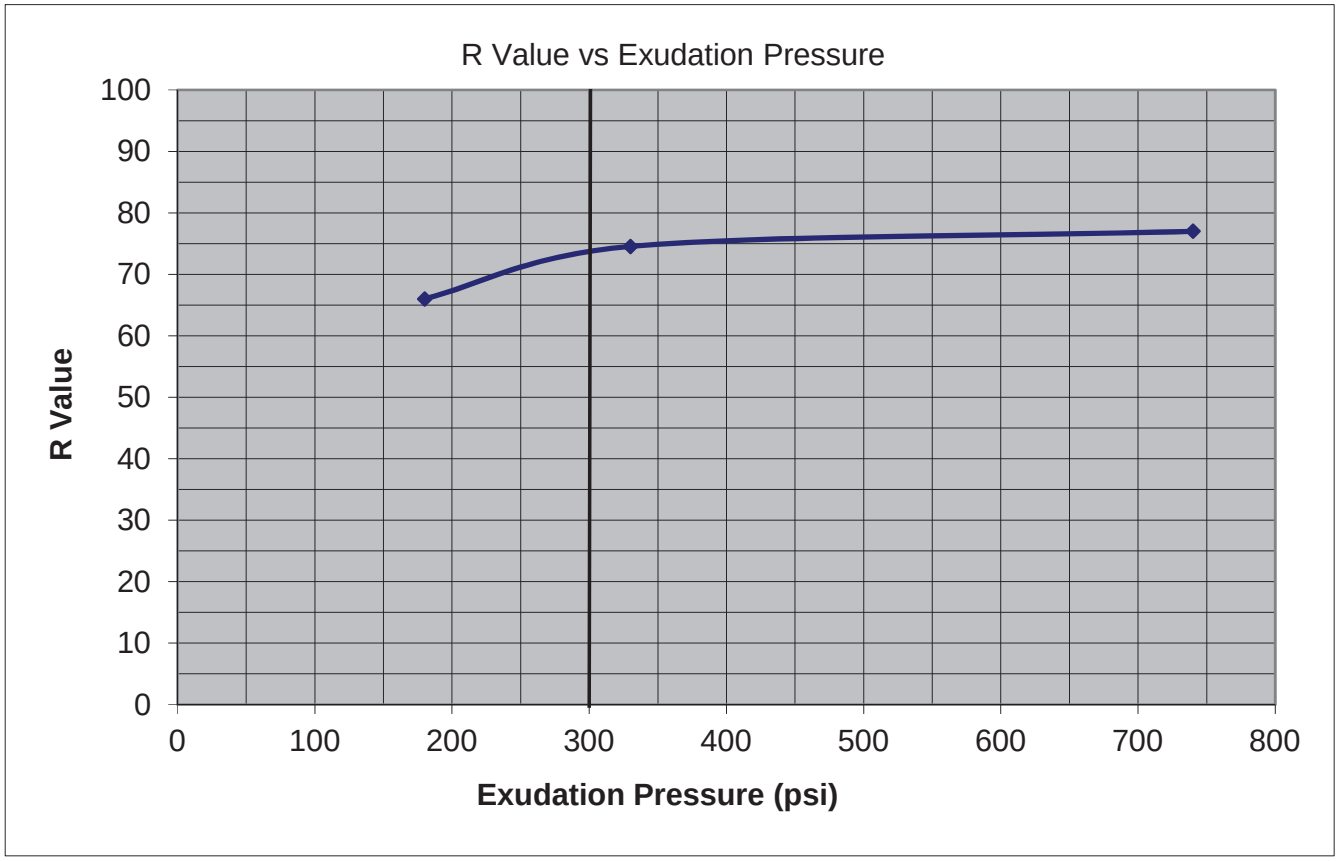
Direct Shear Strength Test (ASTM D3080)

Project: Crawford Lab 16-319.1
Location:
Number: S9763-05-86
Figure:



Sample ID & Description				
Boring Number	Bulk-1			
Sample Depth (feet)	--			
Material Description	Dark reddish brown Silty SAND with gravel			
Test Data				
Specimen	D	E	F	
Exudation Pressure (psi)	180	330	740	
Expansion Dial (.0001")	22	25	38	
Expansion Pressure (psf)	95	108	165	
Resistance 'R' Value	66	75	77	
Moisture at test (%)	16.5	15.6	14.7	
Dry density at test (pcf)	106.7	104.2	110.0	
R Value at 300 psi exudation pressure		**74**		
R Value by expansion pressure (TI=5.0)		63		

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R Value By Exudation

Project: Crawford 16-319.1
Location:
Number: S9763-05-86
Figure:

Sunland Analytical
11419 Sunrise Gold Cir.#10
Rancho Cordova, CA 95742
(916) 852-8557

Date Reported 09/28/16
Date Submitted 09/23/16

To: Nick Anderson
Crawford and Associates
5701 Lonetree Blvd, Suite 110
Rocklin, CA, 95765

From: Gene Oliphant, Ph.D. \ Randy Horney
General Manager \ Lab Manager

The reported analysis was requested for the following:
Location : 16-319.1 Site ID: B6-1
Thank you for your business.

* For future reference to this analysis please use SUN # 72899 - 152178

EVALUATION FOR SOIL CORROSION

Soil pH	7.72	
Minimum Resistivity	1.72	ohm-cm (x1000)
Chloride	6.9 ppm	0.0007 %
Sulfate-S	100.4 ppm	0.01 %

METHODS:
pH and Min.Resistivity CA DOT Test #643 Mod.(Sm.Cell)
Sulfate CA DOT Test #417, Chloride CA DOT Test #422

Sunland Analytical
11419 Sunrise Gold Cir.#10
Rancho Cordova, CA 95742
(916) 852-8557

Date Reported 09/28/16
Date Submitted 09/23/16

To: Nick Anderson
Crawford and Associates
5701 Lonetree Blvd, Suite 110
Rocklin, CA, 95765

From: Gene Oliphant, Ph.D. \ Randy Horney
General Manager \ Lab Manager

The reported analysis was requested for the following:
Location : 16-319.1 Site ID: B5-9
Thank you for your business.

* For future reference to this analysis please use SUN # 72899 - 152177

EVALUATION FOR SOIL CORROSION

Soil pH	8.55			
Minimum Resistivity	0.80	ohm-cm (x1000)		
Chloride	12.9	ppm	0.0013	%
Sulfate-S	131.8	ppm	0.0132	%

METHODS:
pH and Min.Resistivity CA DOT Test #643 Mod.(Sm.Cell)
Sulfate CA DOT Test #417, Chloride CA DOT Test #422

Sunland Analytical
11419 Sunrise Gold Cir.#10
Rancho Cordova, CA 95742
(916) 852-8557

Date Reported 09/28/16
Date Submitted 09/23/16

To: Nick Anderson
Crawford and Associates
5701 Lonetree Blvd, Suite 110
Rocklin, CA, 95765

From: Gene Oliphant, Ph.D. \ Randy Horney
General Manager \ Lab Manager

The reported analysis was requested for the following:
Location : 16-319.1 Site ID: B4-8
Thank you for your business.

* For future reference to this analysis please use SUN # 72899 - 152176

EVALUATION FOR SOIL CORROSION

Soil pH	8.54			
Minimum Resistivity	1.85	ohm-cm (x1000)		
Chloride	3.7 ppm		0.0004	%
Sulfate-S	19.4 ppm		0.0019	%

METHODS:
pH and Min.Resistivity CA DOT Test #643 Mod.(Sm.Cell)
Sulfate CA DOT Test #417, Chloride CA DOT Test #422

Sunland Analytical
11419 Sunrise Gold Cir.#10
Rancho Cordova, CA 95742
(916) 852-8557

Date Reported 09/28/16
Date Submitted 09/23/16

To: Nick Anderson
Crawford and Associates
5701 Lonetree Blvd, Suite 110
Rocklin, CA, 95765

From: Gene Oliphant, Ph.D. \ Randy Horney
General Manager \ Lab Manager

The reported analysis was requested for the following:
Location : 16-319.1 Site ID: B4-4
Thank you for your business.

* For future reference to this analysis please use SUN # 72899 - 152175

EVALUATION FOR SOIL CORROSION

Soil pH	8.18			
Minimum Resistivity	1.15	ohm-cm (x1000)		
Chloride	12.0	ppm	0.0012	%
Sulfate-S	175.2	ppm	0.0175	%

METHODS:
pH and Min.Resistivity CA DOT Test #643 Mod.(Sm.Cell)
Sulfate CA DOT Test #417, Chloride CA DOT Test #422

Sunland Analytical
11419 Sunrise Gold Cir.#10
Rancho Cordova, CA 95742
(916) 852-8557

Date Reported 09/28/16
Date Submitted 09/23/16

To: Nick Anderson
Crawford and Associates
5701 Lonetree Blvd, Suite 110
Rocklin, CA, 95765

From: Gene Oliphant, Ph.D. \ Randy Horney
General Manager \ Lab Manager

The reported analysis was requested for the following:
Location : 16-319.1 Site ID: B3-7
Thank you for your business.

* For future reference to this analysis please use SUN # 72899 - 152174

EVALUATION FOR SOIL CORROSION

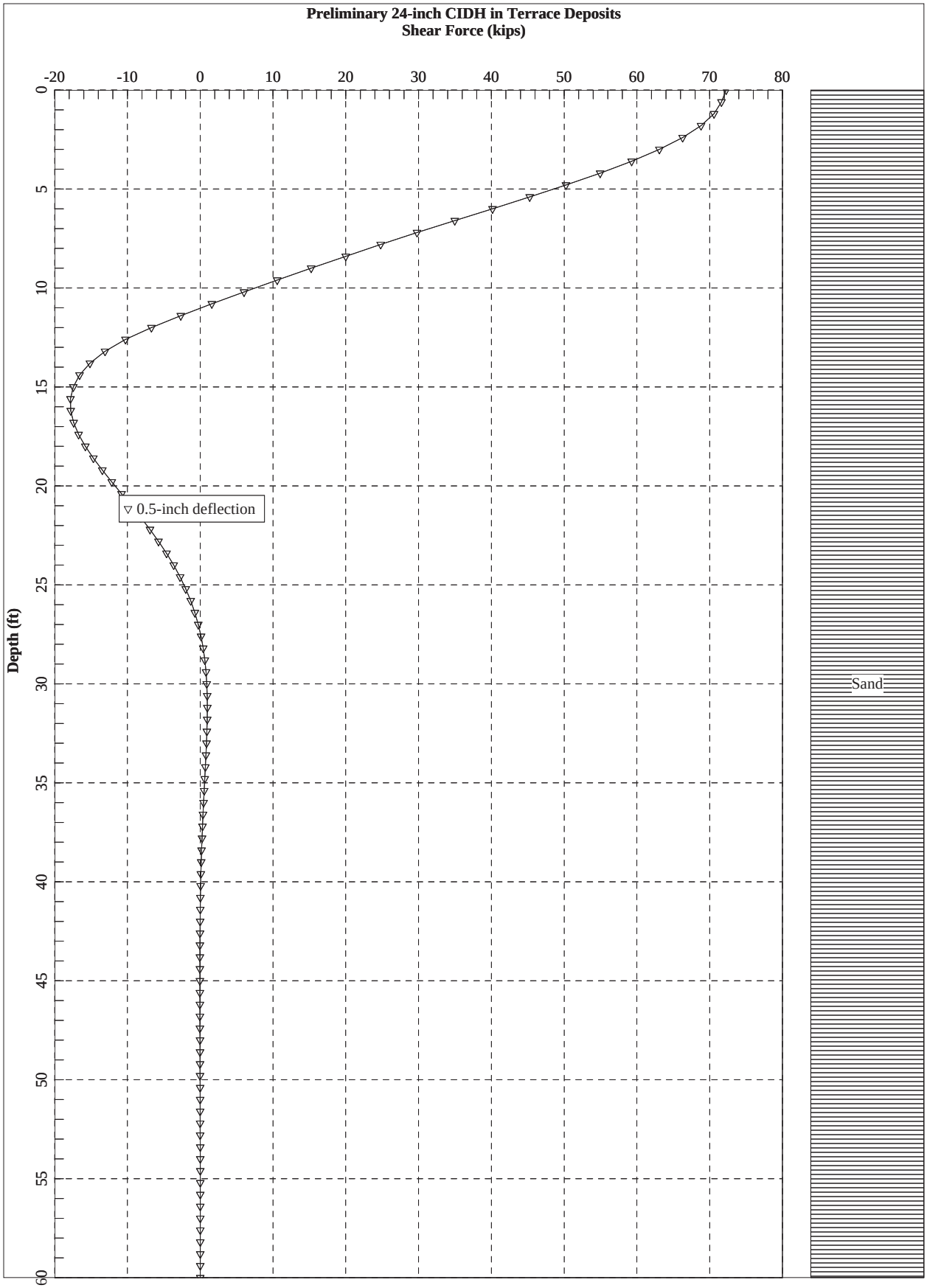
Soil pH	8.57			
Minimum Resistivity	1.07	ohm-cm (x1000)		
Chloride	12.1	ppm	0.0012	%
Sulfate-S	225.9	ppm	0.0226	%

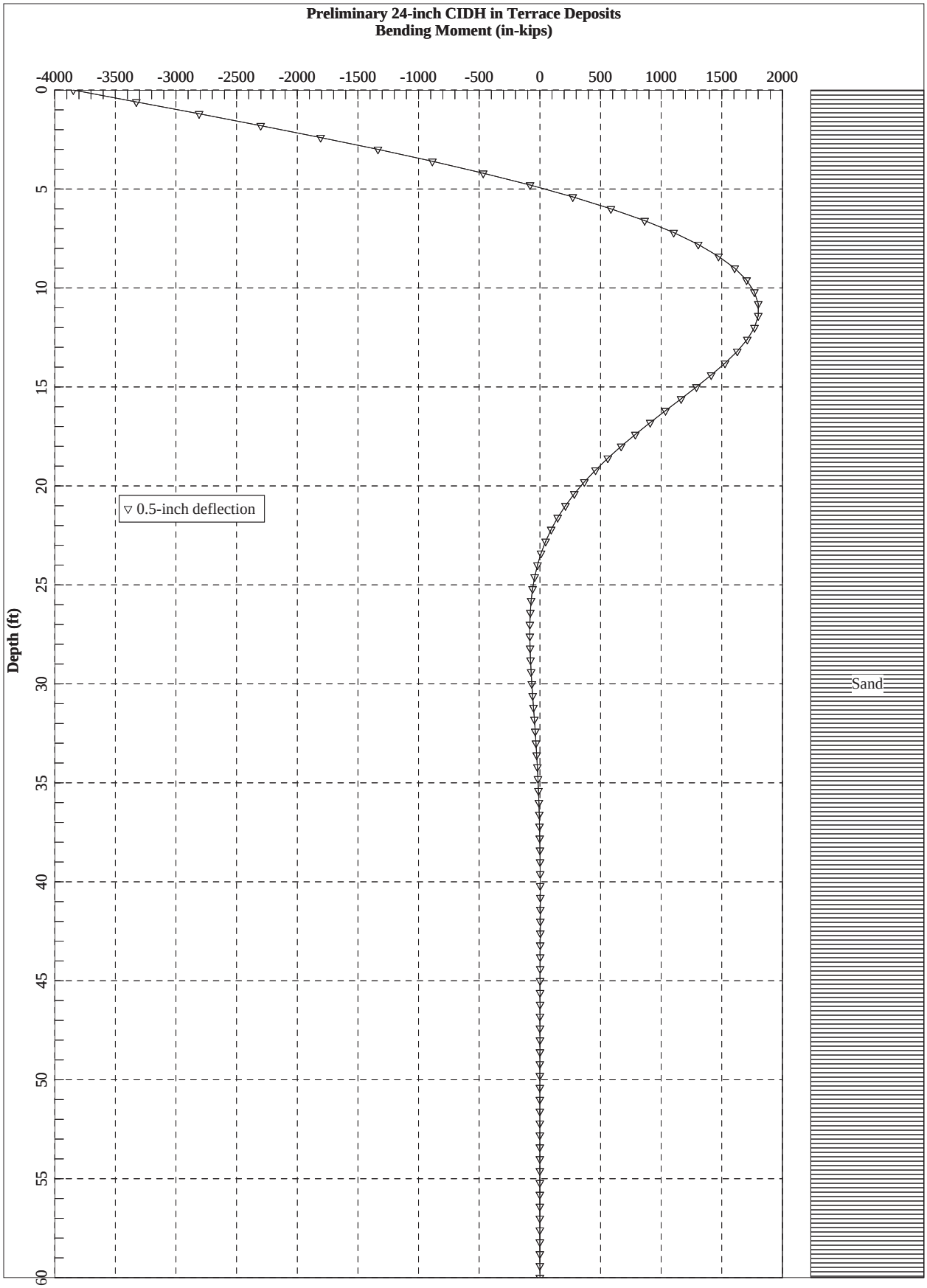
METHODS:
pH and Min.Resistivity CA DOT Test #643 Mod.(Sm.Cell)
Sulfate CA DOT Test #417, Chloride CA DOT Test #422

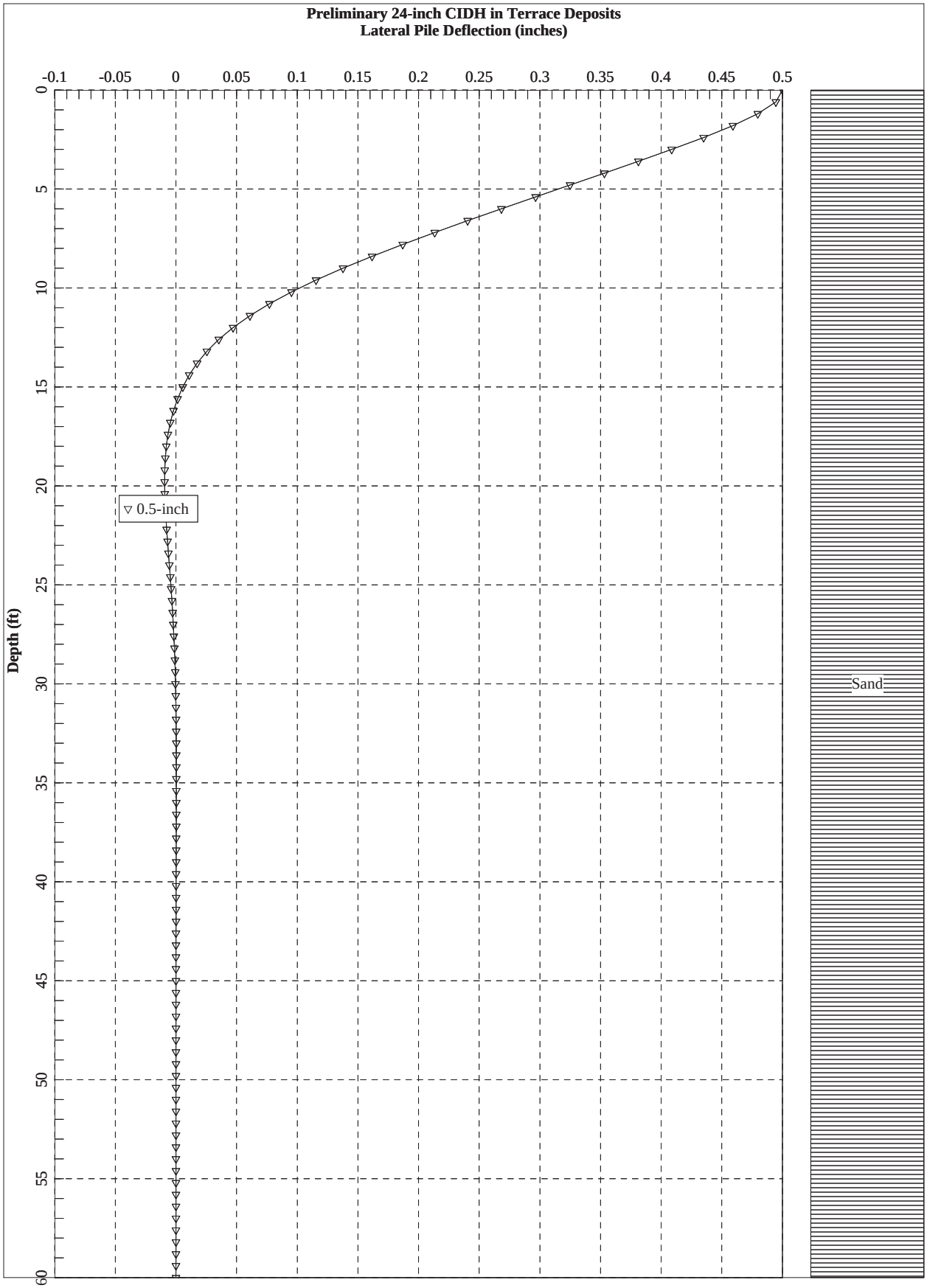
APPENDIX C

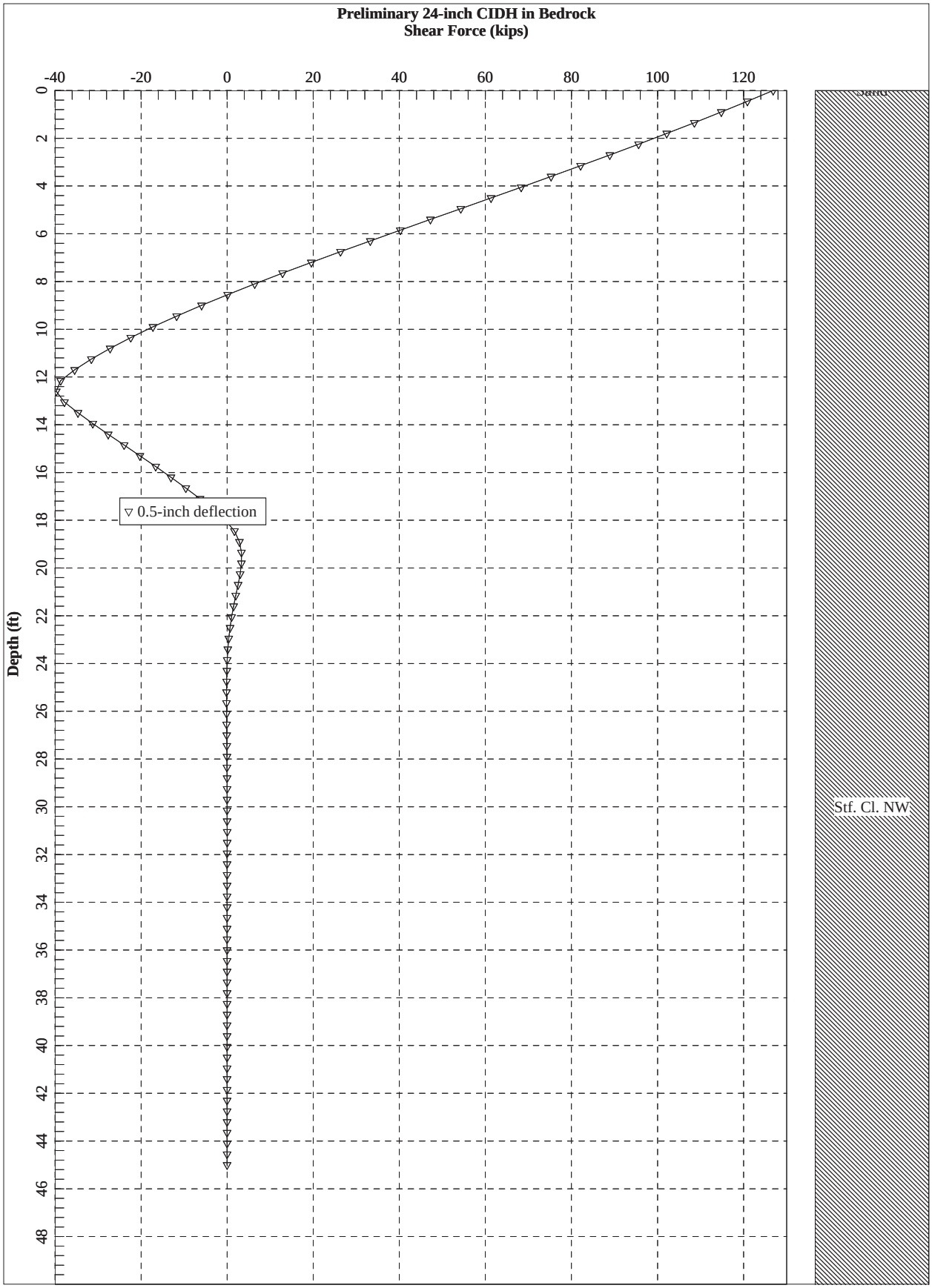
LPile Outputs

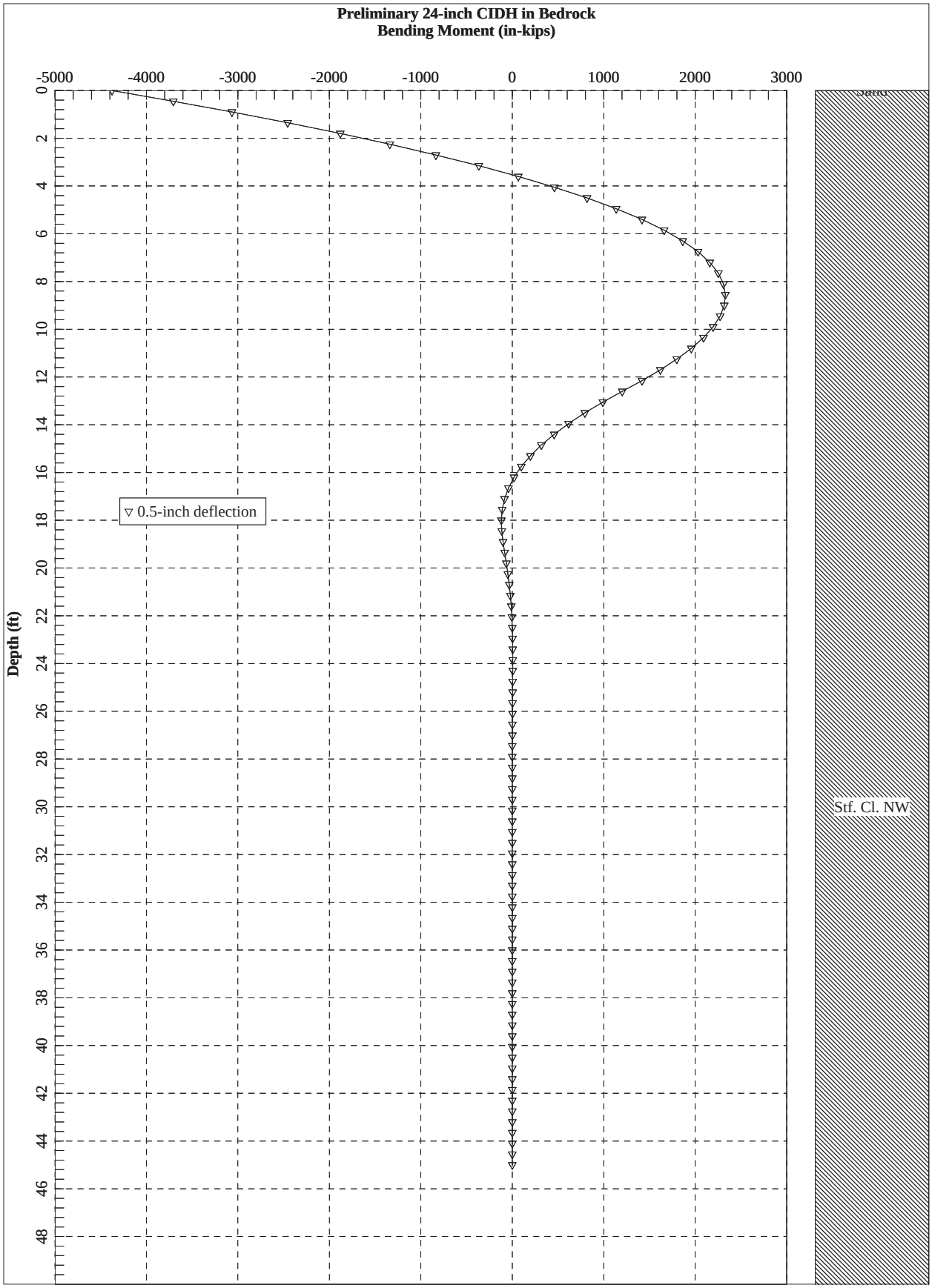
DRAFT

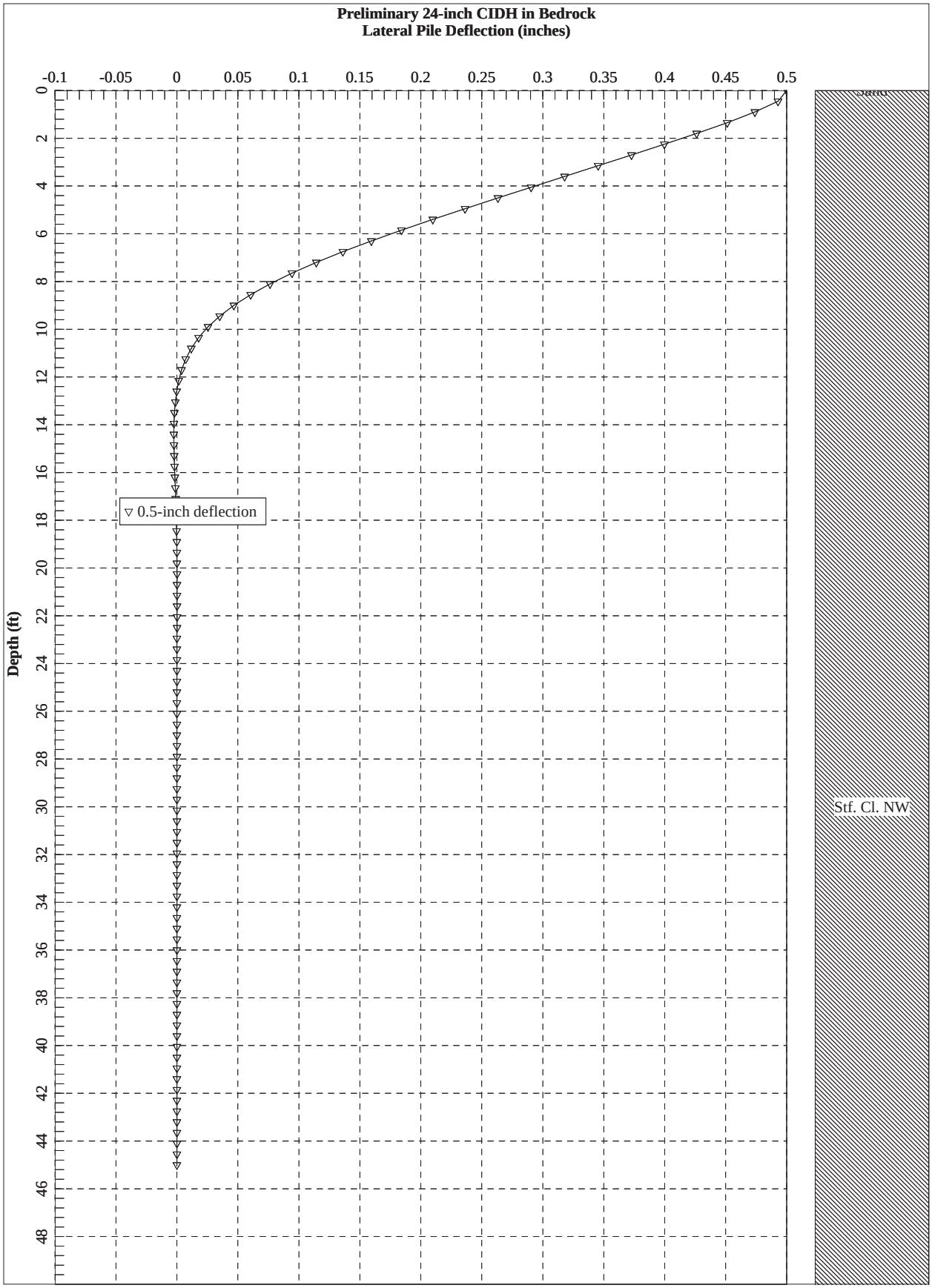

Preliminary 24-inch CIDH in Terrace Deposits
Shear Force (kips)
-20
-10
0
10
20
30
40
50
60
70
80
Depth (ft)
0
5
10
15
20
25
30
35
40
45
50
55
60
0.5-inch deflection
Sand

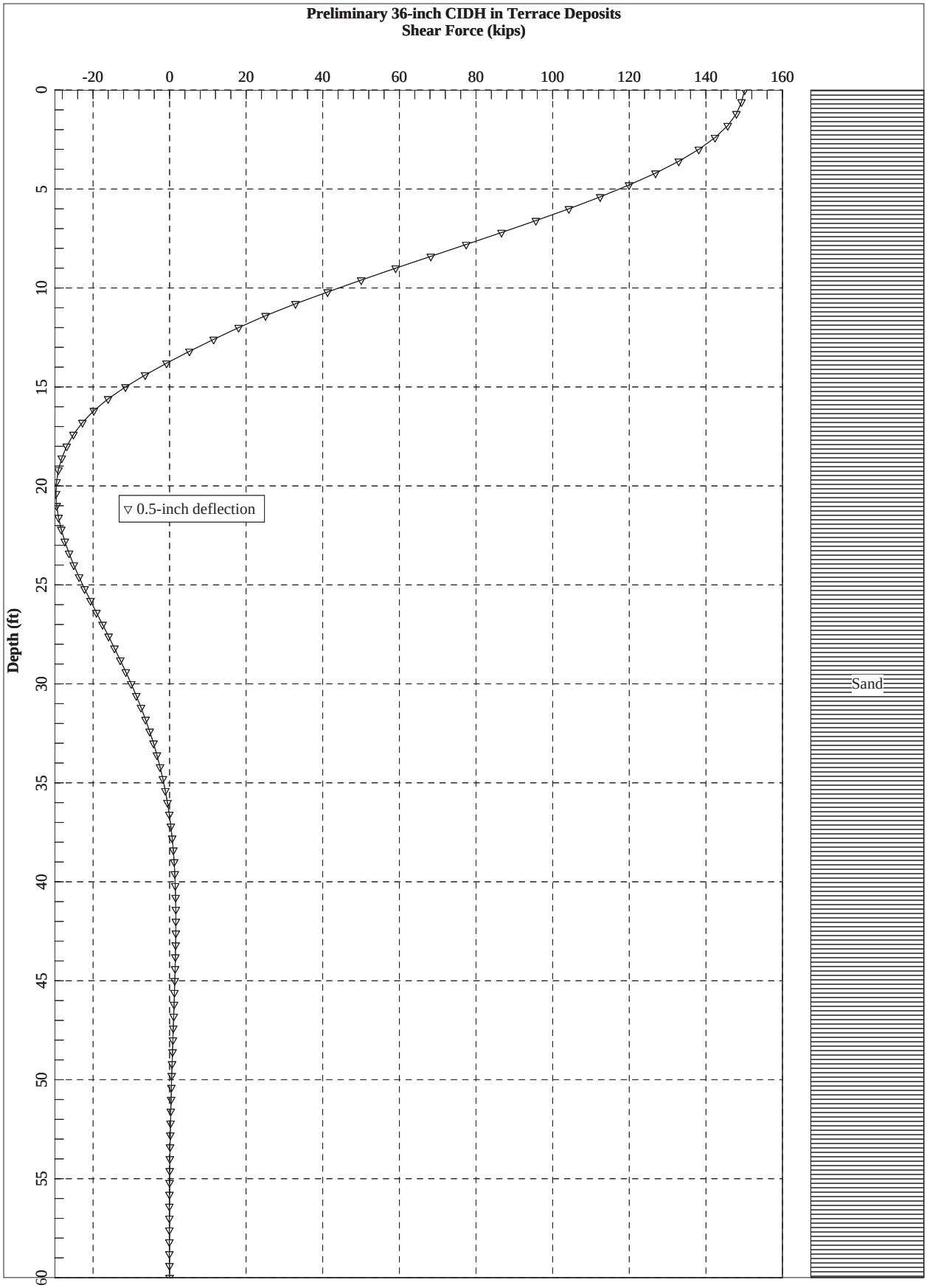

Preliminary 24-inch CIDH in Terrace Deposits
Bending Moment (in-kips)
-4000
-3500
-3000
-2500
-2000
-1500
-1000
-500
0
500
1000
1500
2000
Depth (ft)
0
5
10
15
20
25
30
35
40
45
50
55
60
0.5-inch deflection
Sand

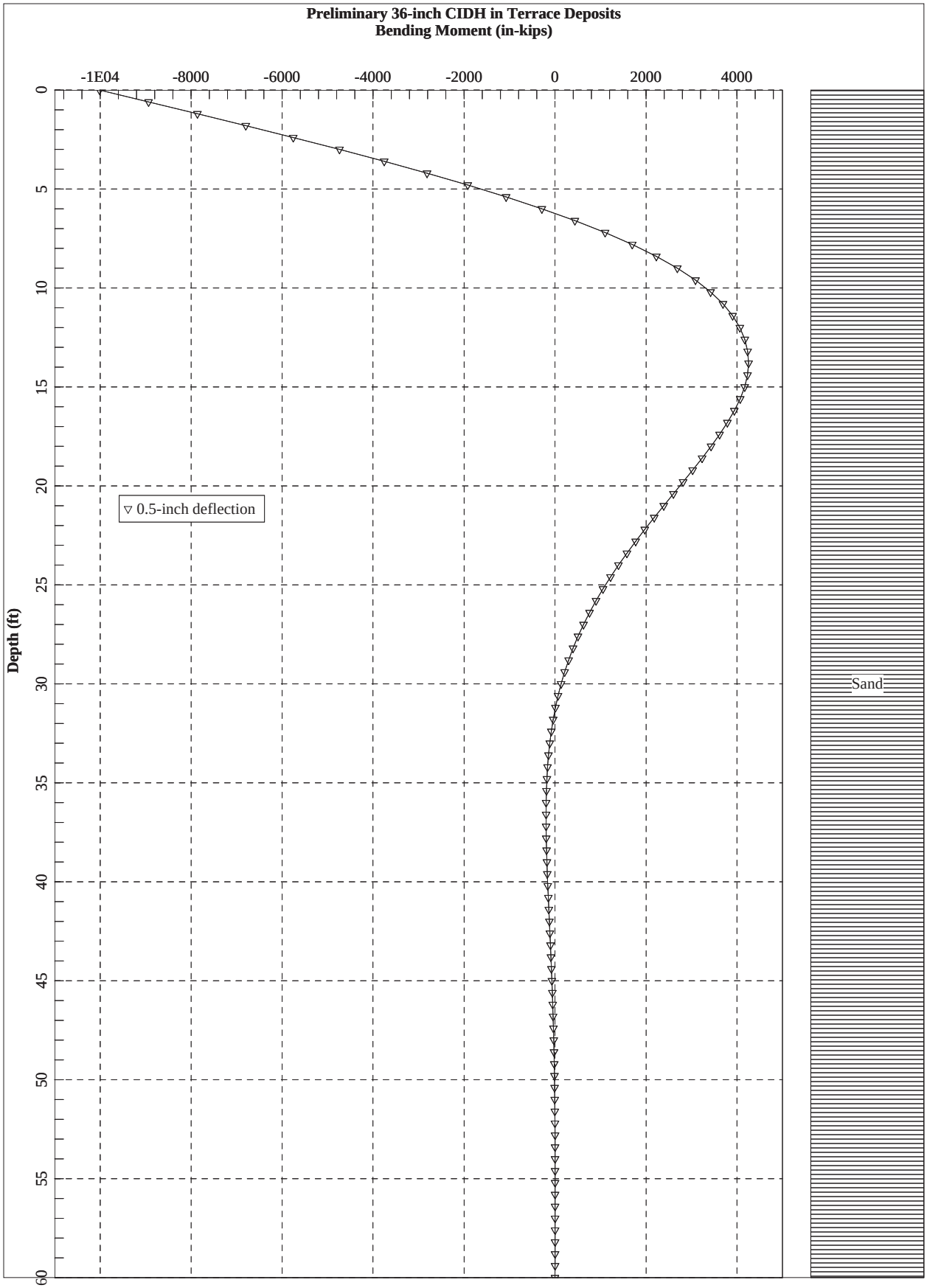

Preliminary 24-inch CIDH in Terrace Deposits
Lateral Pile Deflection (inches)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
0.35
0.4
0.45
0.5
Depth (ft)
0
5
10
15
20
25
30
35
40
45
50
55
60
0.5-inch
Sand

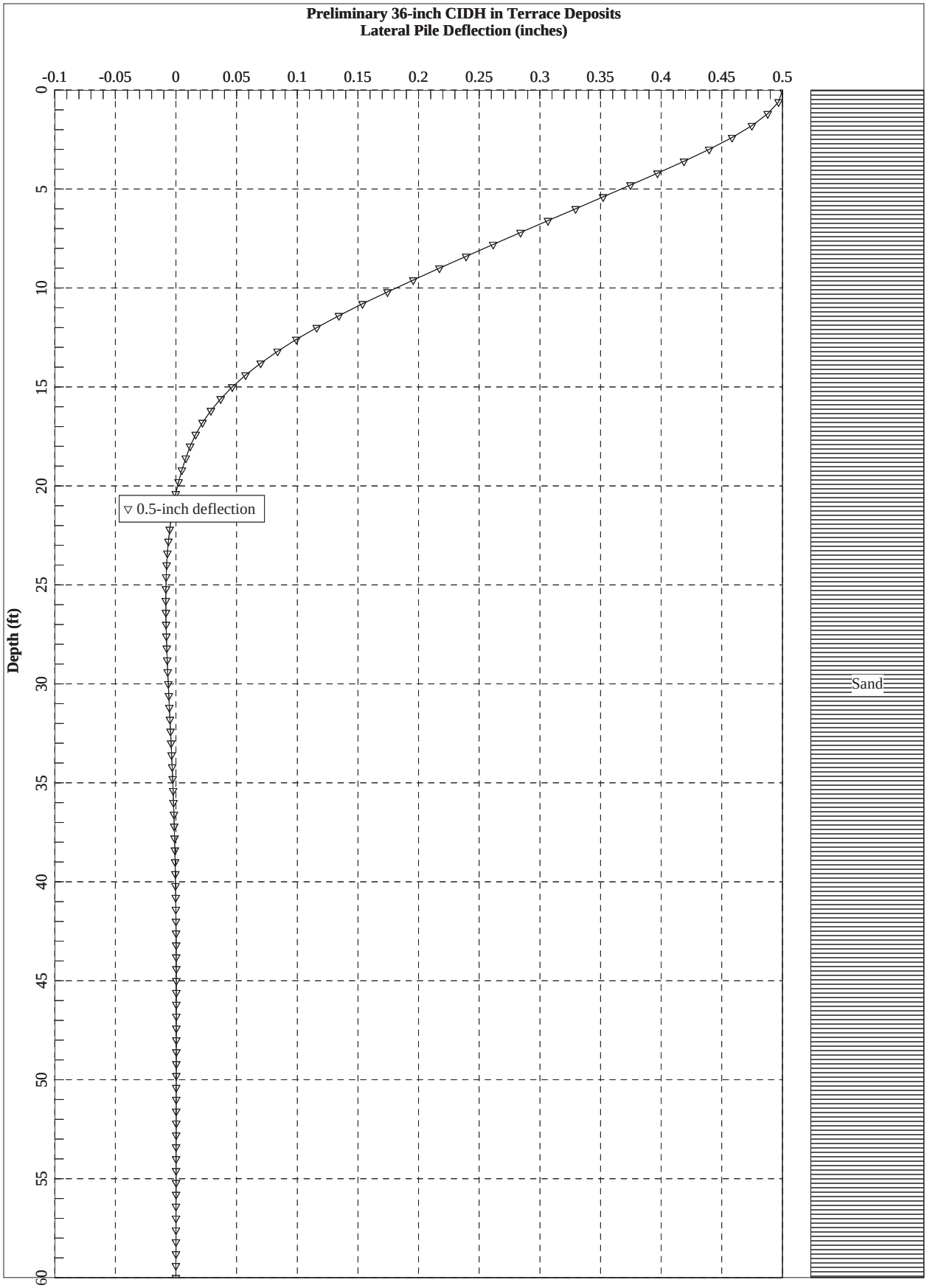

Preliminary 24-inch CIDH in Bedrock
Shear Force (kips)
-40
-20
0
20
40
60
80
100
120
Depth (ft)
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
32
34
36
38
40
42
44
46
48
▽ 0.5-inch deflection
Stf. Cl. NW


Preliminary 24-inch CIDH in Bedrock
Bending Moment (in-kips)
-5000
-4000
-3000
-2000
-1000
0
1000
2000
3000
Depth (ft)
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
32
34
36
38
40
42
44
46
48
▽ 0.5-inch deflection
Stf. Cl. NW

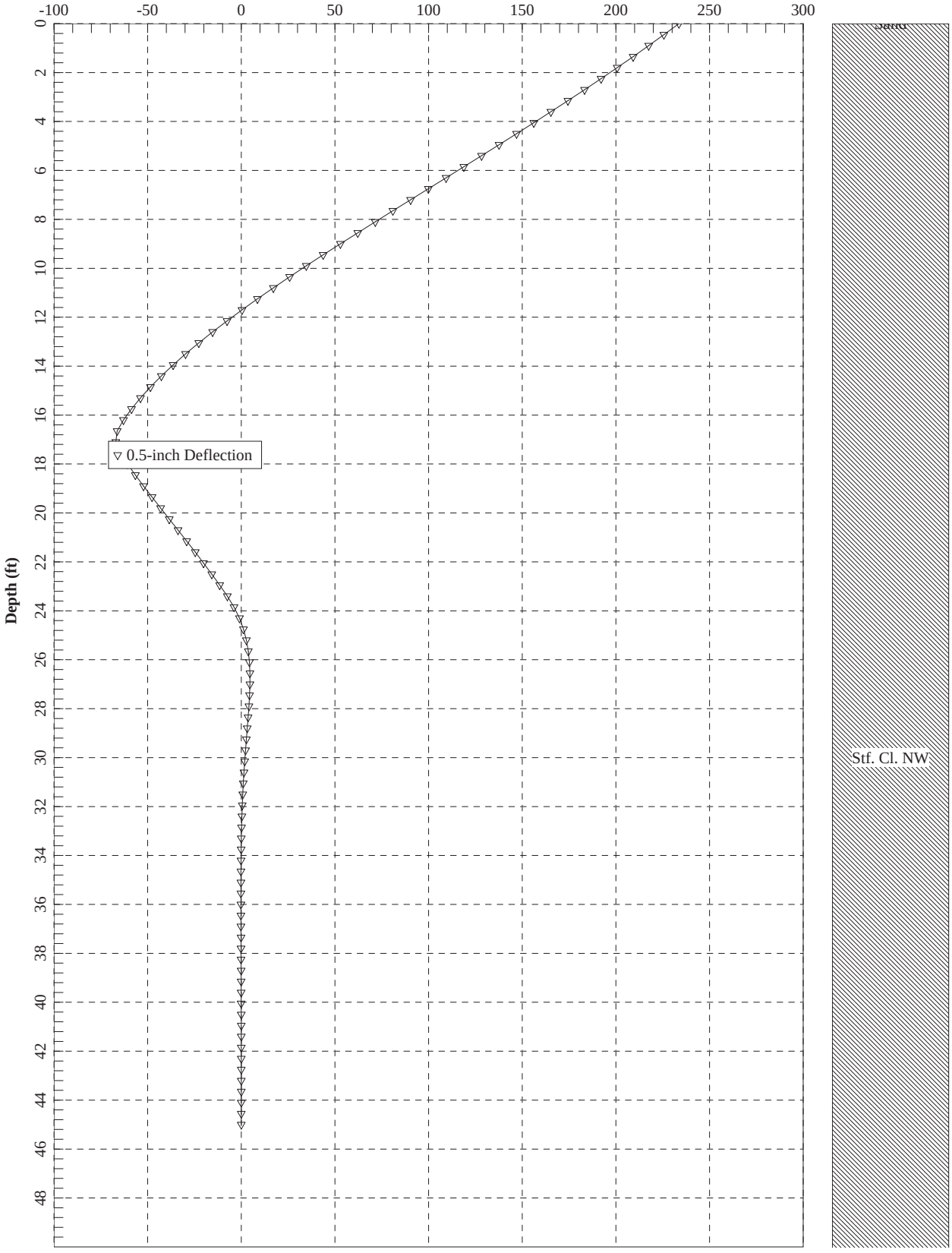

Preliminary 24-inch CIDH in Bedrock
Lateral Pile Deflection (inches)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
0.35
0.4
0.45
0.5
Depth (ft)
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
32
34
36
38
40
42
44
46
48
▽ 0.5-inch deflection
Sand
Stf. Cl. NW

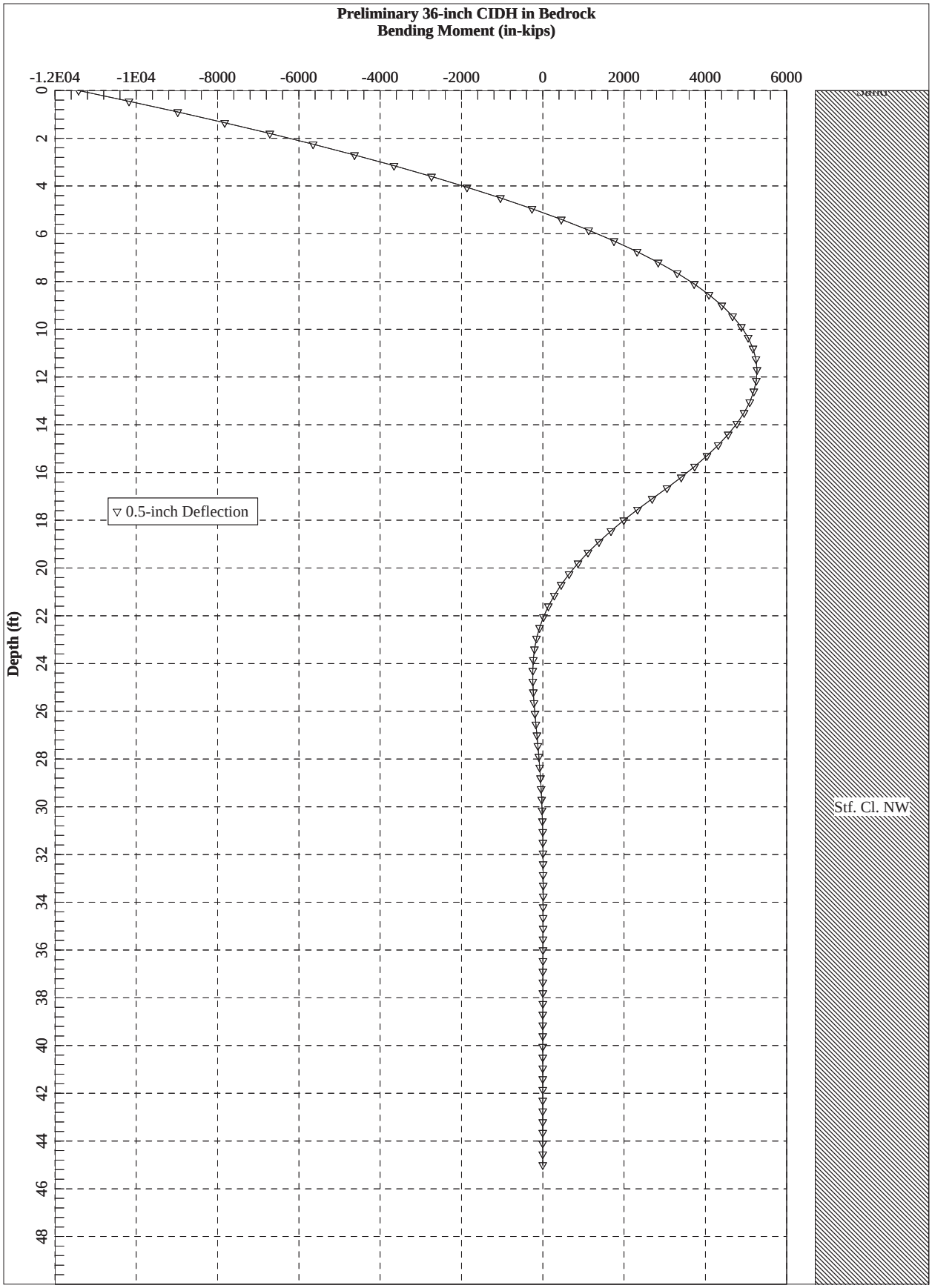

Preliminary 36-inch CIDH in Terrace Deposits
Shear Force (kips)
-20
0
20
40
60
80
100
120
140
160
0
5
10
15
20
25
30
35
40
45
50
55
60
Depth (ft)
0.5-inch deflection
Sand

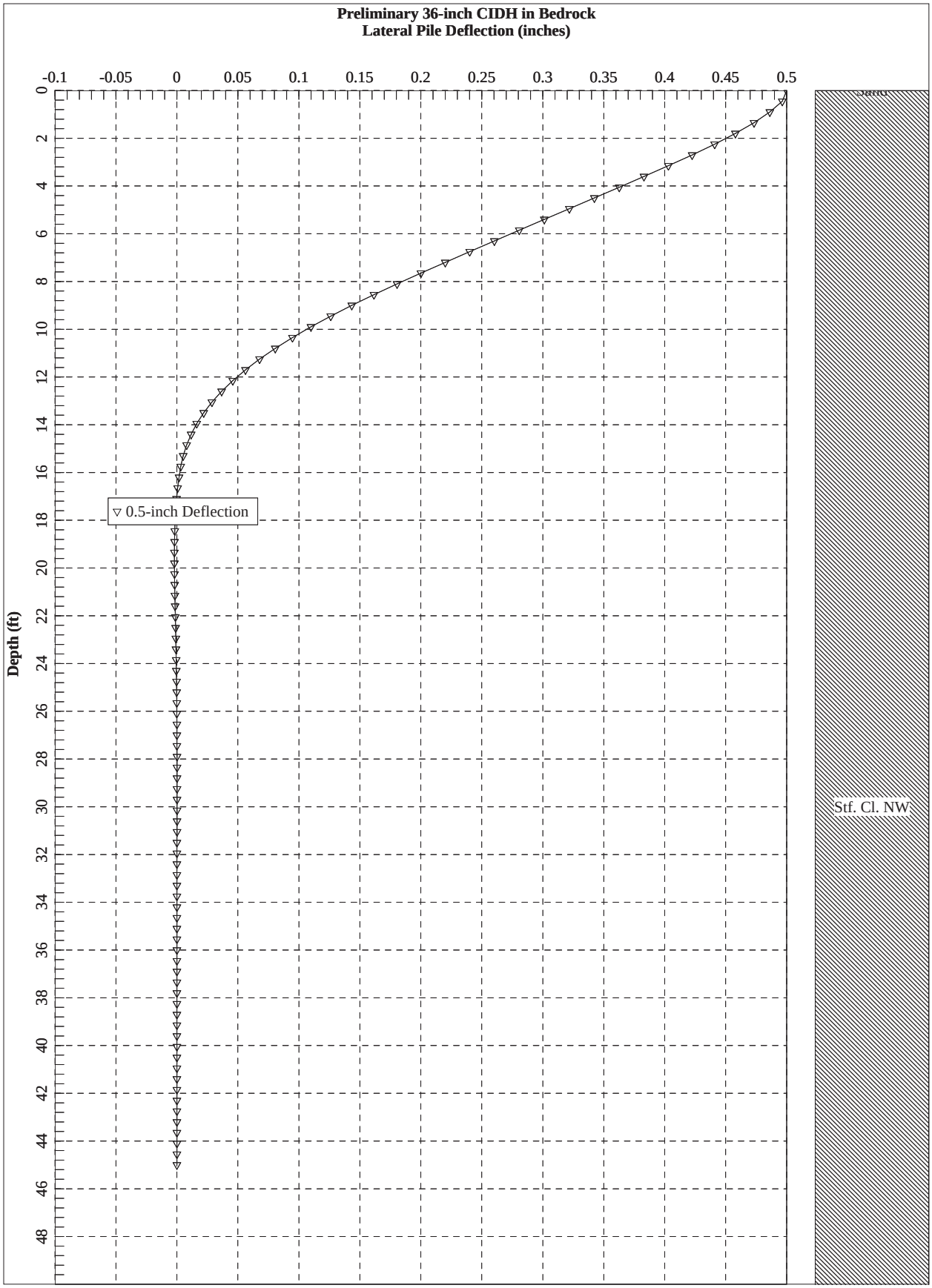

Preliminary 36-inch CIDH in Terrace Deposits
Bending Moment (in-kips)
-1E04
-8000
-6000
-4000
-2000
0
2000
4000
Depth (ft)
0
5
10
15
20
25
30
35
40
45
50
55
60
▽ 0.5-inch deflection
Sand


Preliminary 36-inch CIDH in Terrace Deposits
Lateral Pile Deflection (inches)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
0.35
0.4
0.45
0.5
Depth (ft)
0
5
10
15
20
25
30
35
40
45
50
55
60
0.5-inch deflection
Sand

Preliminary 36-inch CIDH in Bedrock
Shear Force (kips)




Preliminary 36-inch CIDH in Bedrock
Bending Moment (in-kips)
-1.2E04
-1E04
-8000
-6000
-4000
-2000
0
2000
4000
6000
Depth (ft)
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
32
34
36
38
40
42
44
46
48
▽ 0.5-inch Deflection
Stf. Cl. NW


Preliminary 36-inch CIDH in Bedrock
Lateral Pile Deflection (inches)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
0.35
0.4
0.45
0.5
Depth (ft)
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
32
34
36
38
40
42
44
46
48
0.5-inch Deflection
Sand
Stf. Cl. NW

APPENDIX D

SHN Geotechnical Report – Proposed Expansion Cher-Ae Heights Gaming Building Boring Logs
Taber Geotechnical Report – Trinidad Rancheria Expansion Project Test Pit Logs

DRAFT

BORING LOG KEY

SAMPLE TYPES


DISTURBED SAMPLE (BULK)


HAND DRIVEN TUBE SAMPLE


1.4" I.D. STANDARD PENETRATION TEXT SAMPLE (SPT)


2.5" I.D. MODIFIED CALIFORNIA SAMPLE (NOT RETAINED)


MODIFIED CALIFORNIA SAMPLE (RETAINED)


CORE BARREL SAMPLE (NOT RETAINED)


CORE BARREL SAMPLE (RETAINED)

SYMBOLS


INITIAL WATER LEVEL


STABILIZED WATER LEVEL

GRADATIONAL CONTACT

WELL DEFINED CONTACT

SS SPLIT SPOON

SHN CONSULTING ENGINEERS & GEOLOGISTS

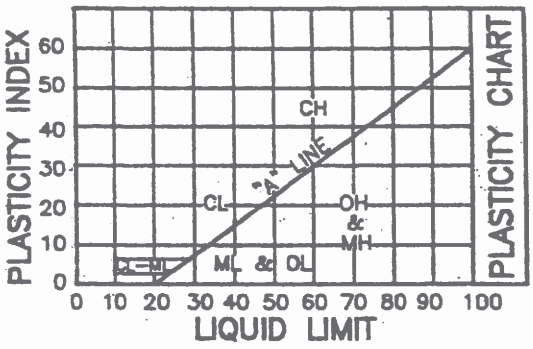
METHOD OF SOIL CLASSIFICATION

MAJOR DIVISIONS		SYMBOLS	TYPICAL NAMES
COARSE GRAINED SOILS (MORE THAN 1/2 OF SOIL > NO. 200 SIEVE SIZE)	GRAVELS (MORE THAN 1/2 OF COARSE FRACTION > NO.4 SIEVE SIZE)	GW	WELL GRADED GRAVELS OR GRAVEL–SAND MIXTURES, LITTLE OR NO FINES
		GP	POORLY GRADED GRAVELS OR GRAVEL–SAND MIXTURES, LITTLE OR NO FINES
		GM	SILTY GRAVELS, GRAVEL–SAND–SILT MIXTURES
		GC	CLAYEY GRAVELS, GRAVEL–SAND–CLAY MIXTURES
	SANDS (MORE THAN 1/2 OF COARSE FRACTION < NO.4 SIEVE SIZE)	SW	WELL GRADED SANDS OR GRAVELLY SANDS, LITTLE OR NO FINES
		SP	POORLY GRADED SANDS OR GRAVELLY SANDS, LITTLE OR NO FINES
		SM	SILTY SANDS, SAND–SILT MIXTURES
		SC	CLAYEY SANDS, SAND–CLAY MIXTURES
FINE GRAINED SOILS (MORE THAN 1/2 OF SOIL < NO. 200 SIEVE SIZE)	SILTS & CLAYS LIQUID LIMIT LESS THAN 50	ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
		CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
		OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS & CLAYS LIQUID LIMIT GREATER THAN 50	MH	INORGANIC LILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
		CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
		OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTY CLAYS, ORGANIC SILTS
HIGHLY ORGANIC SOILS		PT	PEAT AND OTHER HIGHLY ORGANIC SOILS

CLASSIFICATION CHART

CLASSIFICATION	U.S. STANDARD SIEVE SIZE
BOULDERS	ABOVE 12"
COBBLES	12" TO 3"
GRAVEL	3" TO NO. 4
COARSE	3" TO 3/4"
FINE	3/4" TO NO. 4
SAND	NO. 4 TO NO. 200
COARSE	NO. 4 TO NO. 10
MEDIUM	NO. 10 TO NO. 40
FINE	NO. 40 TO NO. 200
SILT & CLAY	BELOW NO. 200

GRAIN SIZE CHART



CONSISTANCY OF FINE GRAINED SOILS		DENSITY OF COARSE GRAINED SOILS	
CLASSIFICATION	COHESION (PSF)	CLASSIFICATION	STANDARD PENETRATION (BLOW COUNT)
VERY SOFT	0–250	VERY LOOSE	0–4
SOFT	250–500	LOOSE	4–10
MEDIUM STIFF	500–1000	MEDIUM	10–30
STIFF	1000–2000	DENSE	30–50
VERY STIFF	2000–4000	VERY DENSE	50+
HARD	4000+		

MOISTURE CLASIFICATIONS
DRY
DAMP
MOIST
WET

BASED ON UNIFIED SOILS CLASSIFICATION SYSTEM

HOLE NUMBER B-1

PROJECT Cher-Ae Heights
JOB NUMBER 098210
LOCATION Trinidad, California
DATE DRILLED 9/17/98
GROUND SURFACE ELEVATION 286 ft.
SAMPLER TYPE 2.5" ID Mod. CA; 1.4" SPT w/ no liners; downhole 130 lb hammer, rope & pulley
EXCAVATION METHOD 8.5" Hollow Stem Auger
LOGGED BY CC
TOTAL DEPTH OF HOLE 19.5 ft.

MOISTURE (%)	DRY DEN (PCF)	UNC CMP (PSF)	UNC CMP (PSF) BY POCKET PEN	DEPTH (ft.)	SAMPLES	BLOWS/6 IN	GRAPHIC LOG	USGS CLASS	MATERIALS DESCRIPTION	REMARKS
				0					ASPHALT/CONCRETE	
				1					FILL, GRAVEL, aggragate base, rounded to 3/4" maximum dimension.	
				2						
				3		7			FILL, SILT, sandy, clayey, very stiff, damp, light brown, with angular gravel fragments to 1/4" maximum dimension.	fairly cohesive
24.1	87	1050	—	4		9 19				
				5						
				6						
				7		14			SANDSTONE, fractured to 2.5" maximum dimension, with minor gray clay.	Very fine sand particles seen under lens.
11.5	117	—	>5000	8		31 27				Becomes denser per driller
				9						
				10		17			MUDSTONE, fractured to larger than 2.5" maximum dimension, with moisture in fractures, minor clayey silt, plastic.	
7.2	123	—	>5000	11		25 50/5"				
				12						
				13		50/3"				No recovery. Increasing gravel per driller
				14						Very dry, gray cuttings
				15						Hard drilling
				16						
				17						
				18		11			MUDSTONE, bedded.	
				19		27 50/5"				
				20					Bottom of boring at 19.5 feet. No free goundwater observed.	
				21						
				22						
				23						
				24						
				25						
				26						
				27						
				28						

HOLE NUMBER B-3

PROJECT Cher-Ae Heights
LOCATION Trinidad, California
GROUND SURFACE ELEVATION 289.3 ft.
EXCAVATION METHOD 8.5" Hollow Stem Auger
LOGGED BY CC

JOB NUMBER 098210
DATE DRILLED 9/17/98
SAMPLER TYPE 2.5" ID Mod. CA; 1.4" SPT w/ no liners; downhole 130 lb hammer, rope & pulley
TOTAL DEPTH OF HOLE 26.0 ft.

MOISTURE (%)	DRY DEN (PCF)	UNC CMP (PSF)	UNC CMP (PSF) BY POCKET PEN	DEPTH (ft.)	SAMPLES	BLOWS/6 IN	GRAPHIC LOG	USGS CLASS	MATERIALS DESCRIPTION	REMARKS
				1					ASPHALT/CONCRETE	
									FILL, GRAVEL, aggragate base, rounded to 3/4" maximum dimension.	
				2				ML	SILT, gravelly, soft, damp to dry, light brown, roots, with gravel to 1/2" maximum dimension, topsoil.	
				3		37		SM		Colluvium?
				4		50/3"			SAND, silty, very dense, damp, light brown and reddish brown, with angular weathered gravel to 2" maximum dimension.	
				5						
				6						
				7		50/5"			SANDSTONE, fractured, weathered, very fine grained, dry, greenish brown.	
				8						
				9						
				10		8			MUDSTONE, highly weathered, stiff, damp, gray, with silt and clay.	
				11		22				
				12		24				
				13		18			MUDSTONE, highly weathered, stiff, damp, gray, with silt and clay, with minor rounded mudstone gravel, with quartz vein.	
				14		35				
				15		41				
				16						
				17						Very hard drilling. Dry cuttings with rounded gravel.
10.1	131	—	—	18		10			SILTSTONE, highly weathered, very stiff, damp, gray.	
				19		11				
				20		13				
				21						
				22						
				23		15			MUDSTONE, highly weathered, fractured, damp, gray.	
				24		27				
				25		40				
				26		19				
						50/6"			Bottom of boring at 26.0 feet. No free groundwater observed.	Auger refusal
				27						
				28						

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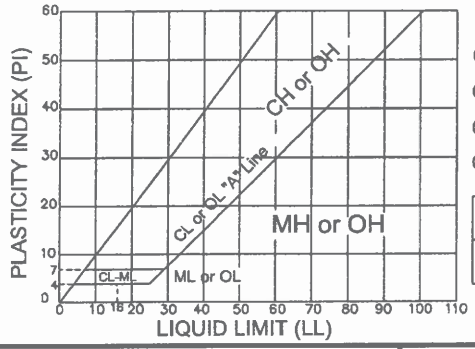
UNIFIED SOIL CLASSIFICATION SUMMARY

(ASTM D 2487-90)

Pt	OH	CH	MH	OL	CL	ML	SC	SM	SP	SW	GC	GM	GP	GW
Highly organic soils	Silts and clays Liquid limit 50 or more			Silts and clays Liquid limit less than 50			Sands with fines >12% fines		Clean sands < 5% fines		Gravels with fines > 12% fines		Clean gravels < 5% fines	
							Sands—50% or more of coarse fraction is smaller than No. 4. Sieve				Gravels—more than 50% of coarse fraction is larger than No. 4 sieve			
Fine grained soils (50% or more is smaller than No. 200 sieve)							Coarse grained soils (More than 50% is larger than No. 200 sieve)							



LABORATORY CLASSIFICATION CRITERIA

GW and SW – Cu ≥ 4 for GW and 6 FOR SW; 1 ≤ Cc ≤ 3

GP and SP—Clean gravel or sand not meeting requirements for GW and SW.

GM and SM—Atterberg limits of fines below "A" line or P.I. less than 4.

GC and SC—Atterberg limits of fines above "A" line with P.I. greater than 7.

Fines (silt or clay)	Sand			Gravel		Cobbles	Boulders
	Fine	Medium	Coarse	Fine	Coarse		
Sieve sizes	200	40	10	4	3/4"	3"	10"

Classification of earth materials shown on the test boring logs is based on field inspection and should not be construed to imply laboratory analysis unless so stated.

MATERIAL SYMBOLS

- Gravel
- Sand
- Silt
- Clay
- Sandy clay or clayey sand
- Sandy silt or silty sand
- Silty clay or clayey silt
- Peat or organic matter
- Fill material
- Shale
- Sandstone
- Limestone
- Metamorphic rock
- Igneous rock

CONSISTENCY CLASSIFICATION FOR SOILS

No. of Blows*	Granular	Cohesive
0–5	Very loose	Very soft
6–10	Loose	Soft
11–20	Semicompact	Stiff
21–35	Compact	Very stiff
36–70	Dense	Hard
> 70	Very dense	Very hard

* According to the Standard Penetration Test (ASTM D 1586)

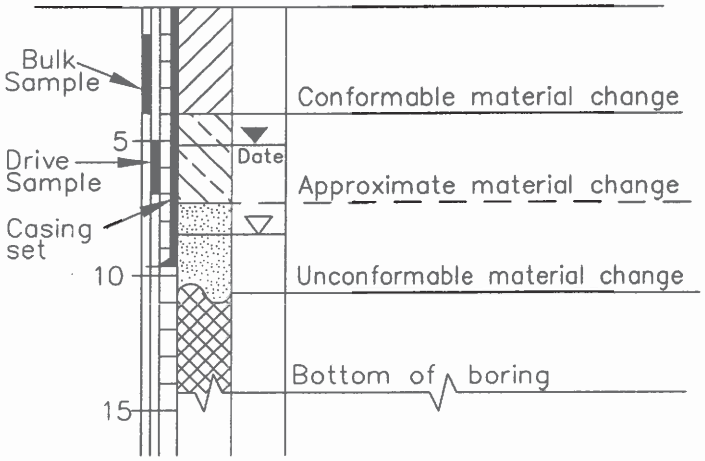
"+" indicates extrapolated blow count

Where standard penetration test has not been performed, consistencies shown on logs are estimated.

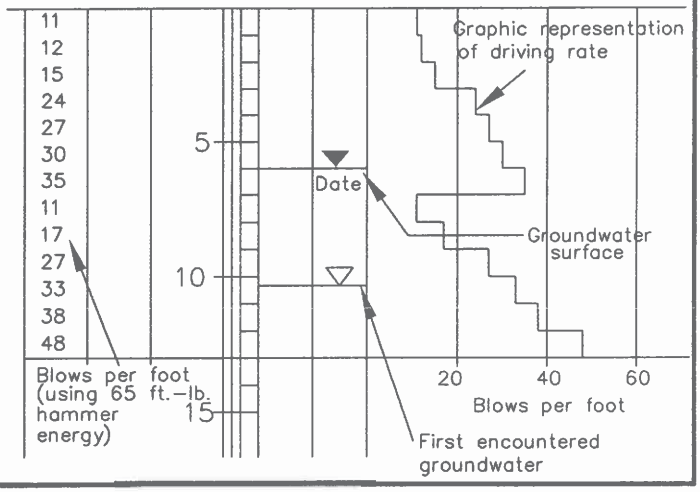
KEY TO "OTHER TESTS" LABORATORY

- H – Hydrometer
- E – Expansion Index
- A – Atterberg Limits
- G – Gradation
- SE – Sand Equivalent
- C – Consolidation
- M – Maximum Dry Density Determination
- R – Stabilometer Resistance Value
- S – Direct Shear
- T – Triaxial Shear
- P – Permeability
- Ch – Corrosivity Testing
- SG – Specific Gravity

LEGEND OF BORING



LEGEND OF PENETRATION TEST



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TEST PIT LOG

2P2/398/231

TYPE: Case 490 with 18-Inch Bucket — ELEVATION: 304± — Test Pit No. 1

SAMPLE No.	SAMPLE SIZE (inches)	BLOWS/FOOT 350 ft-lb	Moisture (%)	DRY DENSITY (lbs/cu. ft.)	OTHER TESTS	UNCONFINED COMPRESSIVE STRENGTH (tsf)	DEPTH IN FEET	UNIFIED SOIL CLASS	MATERIAL SYMBOL
1	2.5		27	84			0	CL	
2	2.5		29	88	S			SC / SM	
A	Bag				R,G,E		5		
							10		
							15		
							20		

(Stiff) Red brown CLAYEY SILT with very fine SAND and ROOTS/ROOTLETS

(Semicompact-compact) orange brown and brown SILTY very fine-fine SAND with thin lenses of CLAYEY SILT and fine-coarse SANDY GRAVEL

12-22-98

(Very hard) blue gray gravelly rock fragments in CLAYEY matrix (completely weathered and fractured and sheared sedimentary ROCK-SHALE)

Groundwater measured at 6.3ft. depth;
Test pit backfilled with spoils, tamped/wheel rolled 12-22-98

TYPE: Case 490 with 18-Inch Bucket — ELEVATION: 308.5± — Test Pit No. 2

SAMPLE No.	SAMPLE SIZE (inches)	BLOWS/FOOT 350 ft-lb	Moisture (%)	DRY DENSITY (lbs/cu. ft.)	OTHER TESTS	UNCONFINED COMPRESSIVE STRENGTH (tsf)	DEPTH IN FEET	UNIFIED SOIL CLASS	MATERIAL SYMBOL
1	2.5		23	80			0	SM	
								SM	
B	Bag				S,G		5	SC / SM	
2	2.5		25	97					
							10		
							15		
							20		

(Loose) red brown SILTY very fine-fine SAND with ROOTS/ROOTLETS

(Semicompact) light brown SILTY very fine-fine SAND

(Compact-dense) light brown and orange brown SILTY and CLAYEY fine SAND with thin SILTY layers

12-22-98 (Very hard) dark brown/black weathered and completely fractured sedimentary ROCK-SHALE

Groundwater measured at 9.0ft. depth;
Test pit backfilled with spoils, tamped/wheel rolled 12-22-98

THE BORING LOGS SHOW SUBSURFACE CONDITIONS AT THE DATES AND LOCATIONS INDICATED AND IT IS NOT WARRANTED THAT THEY ARE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

LOGGED BY: W.E.N. DATE: 12-22-98

12/98 2P2398231a.dwg 1of1

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TEST PIT LOG

2P2/398/231

TYPE: Case 490 with 18-Inch Bucket — ELEVATION: 305.5± — Test Pit No. 3

DEPTH IN FEET	MATERIAL SYMBOL	UNIFIED SOIL CLASS	SAMPLE No.	SAMPLE SIZE (inches)	BLOWS/FOOT 350 ft-lb	Moisture (%)	DRY DENSITY (lbs/cu. ft.)	OTHER TESTS	UNCONFINED COMPRESSIVE STRENGTH (tsf)
5		SM						R,E	
10				Bag				C	
15									
20									

(Loose) gray coarse GRAVEL cover over (compact-dense) orange brown to gray weakly cemented SILTY very fine-fine SAND to fine-medium SAND

12-22-98

(Very hard) dark blue gray CLAY with fine-coarse ROCK fragments (completed weathered and fractured/sheared sedimentary ROCK-SHALE)

Groundwater measured at 6.3ft. depth;
Test pit backfilled with spoils, tamped/wheel rolled on 12-22-98

TYPE: Case 490 with 18-Inch Bucket — ELEVATION: 308± — Test Pit No. 4

DEPTH IN FEET	MATERIAL SYMBOL	UNIFIED SOIL CLASS	SAMPLE No.	SAMPLE SIZE (inches)	BLOWS/FOOT 350 ft-lb	Moisture (%)	DRY DENSITY (lbs/cu. ft.)	OTHER TESTS	UNCONFINED COMPRESSIVE STRENGTH (tsf)
5		SM							
10		SP							
15		GP							
20									

(Compact to dense) orange brown to light brown weakly cemented SILTY very fine-fine SAND

(Semicompact-compact) gray fine SAND grading to coarse SAND

12-22-98 (Compact-dense) gray fine-coarse SANDY GRAVEL/GRAVELLY SAND and COBBLES

(Very stiff-hard) dark gray CLAY with ROCK fragments (completely weathered and fractured/sheared sedimentary ROCK-SHALE

Groundwater measured at 8.5ft. depth;
Test pit backfilled with spoils, tamped/wheel rolled on 12-22-98

THE BORING LOGS SHOW SUBSURFACE CONDITIONS AT THE DATES AND LOCATIONS INDICATED AND IT IS NOT WARRANTED THAT THEY ARE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

LOGGED BY: W.E.N. | DATE: 12-22-98

12/98 2P2398231b.dms 1=1

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TEST PIT LOG

2P2/398/231

TYPE: Case 490 with 18-Inch Bucket — ELEVATION: 301± — Test Pit No. 5

SAMPLE No.	SAMPLE SIZE (inches)	BLOWS/FOOT 350 ft-lb	Moisture (%)	DRY DENSITY (lbs/cu. ft.)	OTHER TESTS	UNCONFINED COMPRESSIVE STRENGTH (tsf)	DEPTH IN FEET	UNIFIED SOIL CLASS	MATERIAL SYMBOL	
S 1	2.5		23	103			0	SM		(Loose-semicompact) orange brown SILTY SAND with ROOTS/ROOTLETS
								CL		(Stiff) gray CLAY
Bag D							5			(Very hard) gray GRAVELLY ROCK fragments in CLAYEY matrix (completely weathered and fractured/sheared sedimentary ROCK-SHALE)
							10			No free groundwater encountered. Test pit backfilled with spoils, tamped with bucket on 12-22-98.
							15			
							20			

TYPE: Case 490 with 18-Inch Bucket — ELEVATION: 305± — Test Pit No. 6

SAMPLE No.	SAMPLE SIZE (inches)	BLOWS/FOOT 350 ft-lb	Moisture (%)	DRY DENSITY (lbs/cu. ft.)	OTHER TESTS	UNCONFINED COMPRESSIVE STRENGTH (tsf)	DEPTH IN FEET	UNIFIED SOIL CLASS	MATERIAL SYMBOL	
							0	ML		(Loose) gray fine-coarse GRAVEL (fill) over (semicompact) orange brown fine SANDY SILT
										(Very hard) black highly weathered and completely fractured sedimentary ROCK-SHALE
							5			12-22-98
							10			Groundwater measured at 6.5ft. depth; Test pit backfilled with spoils, tamped/wheel rolled on 12-22-98
							15			
							20			

THE BORING LOGS SHOW SUBSURFACE CONDITIONS AT THE DATES AND LOCATIONS INDICATED AND IT IS NOT WARRANTED THAT THEY ARE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

LOGGED BY: W.E.N. | DATE: 12-22-98

12/98 2P2398231c.dwg 1=1

APPENDIX E

Site Photos

DRAFT



Photo 1: Looking east at head of landslide



Photo 2: "Water loving plants" beneath landslide at Scenic Drive



Photo 3: Vertical drop at landslide scarp



Photo 4: Exposed bedrock at Casino Entrance



Photo 5: Sea stacks at beach west of Scenic Drive



Photo 6: Weathered bedrock

APPENDIX C

BEST MANAGEMENT PRACTICES

BEST MANAGEMENT PRACTICES AND CONSERVATION MEASURES

Construction

The project site development footprint is under one acre (approximately 0.40 acres) and coverage under the General Construction National Pollutant Discharge Elimination System (NPDES) permit is not required and therefore a Stormwater Pollution Prevention Plan (SWPPP) is not required. However, to further reduce construction impacts from construction, Best Management Practices (BMPs) shall be implemented as necessary. BMPs shall be inspected, maintained, and repaired to assure continued performance of their intended function. BMPs shall be chosen to best suit the site and the activities that occur. Construction BMPs may include, but are not limited to, the following:

- Stripped areas shall be stabilized through temporary seeding using dryland grasses.
- Exposed stockpiled soils shall be covered with plastic covering to prevent wind and rain erosion.
- The construction entrance shall be stabilized by the use of riprap, crushed gravel, or other such materials to prevent the track-out of dirt and mud.
- Construction roadways shall be stabilized using frequent watering, stabilizing chemical application, or physical covering of gravel or riprap.
- Filter fences shall be erected at all on-site stormwater exit points and along the edge of graded areas to stabilized non-graded areas and control siltation of on-site stormwater.
- Prior to land-disturbing activities, the clearing and grading limits shall be marked clearly, both in the field and on the plans. This can be done using construction fences or by creating buffer zones.
- Concentrated flows create high potential for erosion; therefore, any slopes shall be protected from concentration flow. This can be done by using gradient terraces, interceptor dikes, and swales, and by installing pipe slope drains or level spreaders. Inlets need to be protected to provide an initial filtering of stormwater runoff; however, any sediment buildup shall be removed so the inlet does not become blocked.
- If construction occurs during wet periods, sub-grade stabilization shall be required. Mulching or netting may be needed for wet-weather construction.
- Temporary erosion control measures (such as silt fence, gravel filter berms, straw wattles, sediment/grease traps, mulching of disturbed soil, construction stormwater chemical treatment, and construction stormwater filtration) shall be employed for disturbed areas.
- Exposed and unworked soils shall be stabilized by the application of effective BMPs. These include, but are not limited to, temporary or permanent seeding, mulching, nets and blankets, plastic covering, sodding, and gradient terraces.
- Temporary erosion control measures (such as silt fences, staked straw bales, and temporary revegetation) shall be employed for disturbed areas and stockpiled soil.
- Potentially hazardous materials shall be stored away from drainages and containment berms shall be constructed to prevent spilled materials from reaching water bodies.
- Vehicles and equipment used during construction shall be provided proper and timely maintenance to reduce potential for mechanical breakdowns leading to a spill of materials into water bodies. Maintenance and fueling shall be conducted in an area that meets the criteria set forth in the spill prevention plan.

Water Resources

The following BMPs would be implemented to reduce water usage at the Hotel:

- In order to reduce water consumption and support LEED and sustainability goals of the building, all plumbing would include low-flow and ultra-flow fixtures to reduce water consumption. All fittings are made of brass construction with a high-quality chrome finish, and polished, per the current Hyatt Place plumbing and accessories list. All proposed fixtures would comply with applicable water use reduction requirements of American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Standard 189.1 Section 6.

Air Quality and Greenhouse Gasses

Generation of construction-related emissions is a short-term nuisance impact. The following BMPs, required through contractual obligations, would be implemented to reduce these temporary construction emissions.

- The contractor shall designate an on-site Air Quality Construction BMP Manager (AQCBM) whom would be responsible for directing compliance with the following BMPs for project construction relating to heavy-duty equipment use:
    - All diesel-powered equipment shall be properly maintained and shall minimize idling time to 5 minutes when construction equipment is not in use, unless per engine manufacturer's specifications or for safety reasons more time is required.
    - Engines shall be kept in good mechanical condition to minimize exhaust emissions.
- The AQCBM would be responsible for directing compliance with the following BMPs for fugitive dust control practices during project construction:
    - Spray exposed soil with water or other suppressant at least twice a day or as needed.
    - Minimize dust emissions during transport of fill material or soil by wetting down loads, ensuring adequate freeboard (space from the top of the material to the top of the truck bed) on trucks, and/or covering loads.
    - Promptly clean up spills of transported material on public roads.
    - Locate construction equipment and truck staging areas away from sensitive receptors as practical and in consideration of potential effects on other resources.
    - Cover dirt, gravel, and debris piles as needed to reduce dust and wind-blown debris.
- To reduce operational greenhouse gas emissions, the Tribe shall install Energy Star rated appliances such as washing machines, dishwashers, celling fans, and refrigerators. Additionally, the Tribe shall install Energy Star rated low-flow water fixtures such as showerheads and bathroom faucets.

Fire Protection

The following BMPs, required through contractual obligations, would be included as part of Alternative A to minimize the risk of fire during construction:

- Any construction equipment that normally includes a spark arrester would be equipped with an arrester in good working order. This includes, but is not limited to, vehicles, heavy equipment, and chainsaws.

- Structural fire protection would be provided through compliance with Uniform Fire Code requirements for residences and commercial structures similar in size to the proposed clubhouse. The Tribe would cooperate with the fire district by allowing routine inspections. The Tribe would ensure that appropriate water supply and pressure is available for emergency fire flows.
- Typical fire flow allowances would be confirmed with the local Fire Marshall prior to construction of any water storage tank.
- Comply with California Fire Code and National Fire Alarm Code requirements for commercial structures similar in size to the proposed Hotel.

Hazardous Materials

The following BMPs would be required through contractual obligations and would be included as part of Alternative A to minimize the risk from use of hazardous materials during construction:

- Personnel shall follow BMPs for filling and servicing construction equipment and vehicles. To reduce the potential for accidental release, fuel, oil, and hydraulic fluids shall be transferred directly from a service truck to construction equipment and shall not be stored on site.
- Catch-pans shall be placed under equipment to catch potential spills during servicing.
- Refueling shall be conducted only with approved pumps, hoses, and nozzles.
- Vehicle engines shall be shut down during refueling and idling shall be kept to a minimum.
- No smoking, open flames, or welding shall be allowed in refueling or service areas.
- Refueling shall be performed away from bodies of water to prevent contamination of water in the event of a leak or spill.
- Service trucks shall be provided with fire extinguishers and spill containment equipment, such as absorbents.
- Should a spill contaminate soil, the soil shall be put into containers and disposed of in accordance with local, state, and federal regulations.
- All containers used to store hazardous materials shall be inspected at least once per week for signs of leaking or failure. All maintenance, refueling, and storage areas shall be inspected monthly.
- Hazardous materials must be stored in appropriate and approved containers in accordance with applicable regulatory agency protocols.
- Potentially hazardous materials, including fuels, shall be stored away from drainages and secondary containment shall be provided for all hazardous materials stored during construction and operation.
- In the event that contaminated soil and/or groundwater are encountered during construction-related earth-moving activities, all work shall be halted until a professional hazardous materials specialist or other qualified individual assesses the extent of contamination. If contamination is determined to be hazardous, representatives of the Tribe shall consult with the BIA and EPA to determine the appropriate course of action, including development of a Sampling and Remediation Plan, if necessary. Any contaminated soils that are determined to be hazardous shall be disposed of in accordance with federal regulations.

APPENDIX D

REGULATORY CONTEXT

1 WATER QUALITY

1.1 SURFACE WATER

The Clean Water Act (CWA) (33 USC 1251-1376), as amended by the Water Quality Act of 1987, is the major federal legislation governing water quality. The objective of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." The U.S. Environmental Protection Agency (USEPA) is delegated as the authoritative body under the CWA. Important sections of the CWA applicable to the Proposed Action are as follows:

- *Section 303* and *Section 304* provide for water quality standards, criteria, and guidelines. Section 303(d) requires states to identify impaired water bodies and develop total maximum daily loads (TMDLs) for the contaminant(s) of concern. Section 304 publishes water quality criteria for the protection of aquatic life and human health in surface water for approximately 150 pollutants.
- *Section 402* establishes the National Pollutant Discharge Elimination System (NPDES), a permitting system for the discharge of any pollutant (except for dredged or fill material) into waters of the U.S. Each NPDES permit contains limits on pollutant concentrations of wastes discharged to surface waters to prevent degradation of water quality and protect beneficial uses.

1.2 ANTIDEGRADATION POLICY

The federal antidegradation policy (40 CFR Part 131.6) is designed to protect water quality and water resources. The policy directs states to adopt a statewide policy that includes the following primary provisions: (1) existing instream uses and the water quality necessary to protect those uses shall be maintained and protected; (2) where existing water quality is better than necessary to support fishing and swimming conditions, that quality shall be maintained and protected unless the state finds that allowing lower water quality is necessary for important local economic or social development; and (3) where high-quality waters constitute an outstanding national resource, such as waters of national and state parks, wildlife refuges, and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected. Each state must also develop procedures to implement its antidegradation policy through water quality management processes. Each state's antidegradation policy must include implementation methods consistent with the provisions outlined in 40 CFR 131.12 (USEPA, 1994).

Complying with the antidegradation provision of the CWA, the North Coast Regional Water Quality Control Board (NCRWQCB) has established general water quality objectives for all inland surface waters under State jurisdiction to protect designated beneficial uses. The Water Quality Control Plan for the North Coast Region (Basin Plan) outlines these surface water quality objectives. **Table 1** lists the specific water quality objectives outlined in the Basin Plan by parameter for surface waters under State jurisdiction within the surrounding watersheds. The Basin Plan does not currently list surface water quality objectives for the Trinidad HU.

The State Water Resources Control Board (SWRCB), in compliance with Section 303 of the CWA, has prepared a list of impaired water bodies in 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 TMDLs for each contaminant or "stressor" affecting the water body. The Proposed Project will not discharge into or affect any of the listed impaired water bodies (CDWR, 2006).

TABLE 1
GENERAL WATER QUALITY OBJECTIVES

WATERBODY	SPECIFIC CONDUCTANCE (MICRO-OHM)		TOTAL DISSOLVED SOLIDS (MG/L)			DISSOLVED OXYGEN (MG/L)		PH		HARDNESS (MG/L)	BORON (MG/L)	
	90% UPPER LIMIT[1]	50% UPPER LIMIT[2]	90% UPPER LIMIT[1]	50% UPPER LIMIT[2]	MIN	90% UPPER LIMIT[1]	50% UPPER LIMIT[2]	MIN	MAX	50% UPPER LIMIT[2]	90% UPPER LIMIT[1]	50% UPPER LIMIT[2]
Redwood Creek	2203	1253	1153	753	7.0	7.5	10.0	8.5	6.5	NONE	NONE	NONE
Mad River	3003	1503	1603	903	7.0	7.5	10.0	8.5	6.5	NONE	NONE	NONE
Eel River	3753	2253	2753	1403	7.0	7.5	10.0	8.5	6.5	NONE	NONE	NONE

[1] 50% upper and lower limits represent the 50 percentile values of the monthly means for a calendar year. 50% or more of the monthly means must be less than or equal to an upper limit and greater than or equal to a lower limit.

[2] 90% upper and lower limits represent the 90 percentile values for a calendar year. 90% or more of the values must be less than or equal to an upper limit and greater than or equal to a lower limit.

[3] Does not apply to estuarine areas.

Source: NCRWQCB, 2011a

1.3 GROUNDWATER

The Basin Plan also specifies water quality objectives for groundwater in the north coast. Water quality objectives for groundwater are listed in **Table 2**.

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

TABLE 2
WATER QUALITY OBJECTIVES FOR GROUNDWATER

TASTES AND ODORS	BACTERIA[1]	RADIOACTIVITY[1]	CHEMICAL CONSTITUENTS[1]
Cannot exceed concentrations that cause nuisance or adversely affect beneficial uses	Cannot exceed 1.1 mpn/100ml or 1 colony/100ml	Cannot exceed California Code of Regulations, Title 22, Division 4, Chapter 15, Article 5, Section 64443, Table 4 and Listed in Table 3-2 of the Basin Plan	Cannot exceed Limits Specified in California Code of Regulations, Title 22, Division 4, Chapter 15, Article 4, Section 64435 Tables 2 and 3, and Section 64444.5 (Table 5) and Listed In Table 3-2 of the Basin Plan

[1] Domestic or municipal sources only.

source: NCRWQCB, 2011a

2 AIR QUALITY

2.1 CLEAN AIR ACT

The Federal Clean Air Act (CAA) was enacted for the purpose of protecting and enhancing the quality of the nation's air resources to benefit public health, welfare, and productivity. Basic components of the CAA and its amendments include national ambient air quality standards (NAAQS) for major air pollutants and state implementation plans (SIPs) to ensure countrywide NAAQS compliance. Regulation of air pollution is achieved through both the NAAQS and emissions limitations for individual sources of air pollutants established through permitting requirements. The USEPA is the federal agency responsible for identifying criteria air pollutants (CAPs) for which NAAQS are established, updating and revising the NAAQS, and approving and overseeing SIPs as they relate to compliance with the CAA. The USEPA has identified six CAPs that are both common indicators of regional air quality and detrimental to human health. The six CAPs are ozone, carbon monoxide (CO), particulate matter ($\leq$ 10 microns and $\leq$ 2.5 microns in diameter (PM_{10} and $PM_{2.5}$)), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead (Pb). The NAAQS, appropriate metrics, and violation criteria for the six CAPs are presented in **Table 3**.

TABLE 3
NATIONAL AMBIENT AIR QUALITY STANDARDS

POLLUTANT	AVERAGING TIME	PARTS PER MILLION (PPM) MICROGRAMS	PER CUBIC METER (µG/M3)	VIOLATION CRITERIA
Ozone	8 hours	0.075	75	If exceeded on more than 3 days in 3 years.
CO	8 hours	9	9,000	If exceeded on more than 1 day per year.
	1 hour	35	35,000	
PM_{10}	24-hour	N/A	150	If exceeded on more than 1 day per year.
$PM_{2.5}$	24-hour	N/A	35	If exceeded on more than 1 day per year.
NO_2	Annual	0.053	100	If exceeded.
	1-hour	0.100	N/A	If exceeded on more than 3 days in 3 years.
SO_2	1-hour	0.075	N/A	If exceeded on more than 1 day per year.
Lead	Quarter	N/A	0.15	If exceeded on more than 1 day per year.

Source: USEPA, 2017

2.1.1 Federal General Conformity

Under the General Conformity Rule of the CAA, the lead agency with respect to a federal action is required to demonstrate that a proposed federal action conforms to the applicable SIP(s) before the proposed federal action is taken. There are two phases to a demonstration of general conformity:

1) The Conformity Review process, which entails an initial review of the federal action to assess whether a full conformity determination is necessary, and
2) The Conformity Determination process, which requires that a proposed federal action be demonstrated to conform to the applicable SIP(s).

The Conformity Review requires the lead agency to compare estimated emissions attributable to the federal action to the applicable general conformity *de minimis* threshold(s) for all CAPs for which the applicable air basin or region is in nonattainment for the applicable NAAQS. If the emission estimate(s) from step one is below the applicable *de minimis* threshold(s), then a General Conformity Determination is not required under the CAA (40 CFR Part 93). If emission estimates are greater than *de minimis* levels, the lead agency must conduct a Conformity Determination.

2.1.2 Federal Class I Areas

Title 1, Part C of the CAA was established, in part, to preserve, protect, and enhance the air quality in national parks, national wilderness areas, national monuments, national seashores, and other areas of special national or regional natural, recreational, scenic, or historic value. The CAA designates all international parks, national wilderness areas, and memorial parks larger than 5,000 acres and national parks larger than 6,000 acres as "Class I areas." The CAA prevents significant deterioration of air quality in Class I areas under the Prevention of Significant Deterioration (PSD) program. The PSD Program protects Class I areas by allowing only a small increment of air quality deterioration in these areas by requiring assessment of potential adverse impacts on air quality related values of Class I areas. The nearest federal Class I area, Redwood National Park, is located approximately 10 miles northeast of the project site.

Any major source of emissions within 100 kilometers (km) (62.1 miles) from a federal Class I area is required to conduct a pre-construction review of air quality impacts on the area(s). A "major source" for the PSD program is defined as a facility that will emit 250 tons per year (tpy) of regulated pollutant from direct stationary sources. For certain industries, these requirements apply to facilities that emit 100 tpy or more of regulated pollutants through direct stationary sources. Mobile sources such as vehicle emissions are not stationary sources by definition and are therefore not subject to the PSD program.

2.1.3 Federal Hazardous Air Pollutant Program

Title III of the CAA requires the USEPA to promulgate National Emissions Standards for Hazardous Air Pollutants (NESHAPs). The NESHAPs may differ between regional sources and area sources of hazardous air pollutants (HAPs). Major sources are defined as stationary sources with potential to emit more than 10 tons per year (tpy) of any HAP or more than 25 tpy of any combination of HAPs (all other non-major sources are considered area sources under the NESHAPs program). HAPs are a specific group of airborne chemicals designated by the USEPA. Sources of HAPs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Cars and trucks release at least 40 different HAPs. The most

important HAPs, in terms of health risk, are diesel particulate matter (DPM), benzene, formaldehyde, 1,3-butadiene, and acetaldehyde.

HAPs are less pervasive in the urban atmosphere than CAPs but are linked to short-term (acute) or long-term (chronic or carcinogenic) adverse human health effects. There are hundreds of different types of HAPs, with varying degrees of toxicity. Currently, there are over 188 HAPs listed by the USEPA. The majority of the estimated health risk from HAPs can be attributed to relatively few compounds, the most important being DPM (CARB, 2005). Diesel engines emit a complex mixture of air pollutants, composed of gaseous and solid material. The visible emissions in diesel exhaust are particulate matter, which includes carbon. Diesel exhaust also contains a variety of harmful gases and over 40 other cancer-causing substances.

2.2 CLIMATE CHANGE

2.2.1 Federal

In 2002, President George W. Bush established a national policy goal of reducing the GHG emission intensity (tons of GHG emissions per million dollars of gross domestic product) of the U.S. economy by 18 percent by 2012. No binding reductions were associated with the goal. Rather, the USEPA administered a variety of voluntary programs and partnerships with GHG emitters, in which the USEPA collaborated with industries producing and utilizing GHGs to reduce associated emissions.

2.2.2 Clean Air Act

In *Massachusetts et al.* vs. *Environmental Protection Agency et al.* (April 2, 2007), the US Supreme Court ruled that the CAA authorizes the USEPA to regulate CO_2 emissions from new motor vehicles. The Court did not mandate that the USEPA enact regulations to reduce GHG emissions but found that the only instances in which the USEPA could avoid taking action were if the USEPA found that GHGs do not contribute to climate change or if the UESPA offered a "reasonable explanation" for not determining that GHGs contribute to climate change. On December 15, 2009, the USEPA issued a final endangerment and cause finding (74 FR 66496), stating that high atmospheric levels of GHGs "are the unambiguous result of human emissions and are very likely the cause of the observed increase in average temperatures and other climatic changes." The USEPA further found that "atmospheric concentrations of GHG endanger public health and welfare within the meaning of Section 202 of the Clean Air Act." The finding itself does not impose any requirements on industry or other entities.

2.2.3 U.S. Environmental Protection Agency

On December 7, 2009, USEPA Administrator Lisa Jackson signed a Final Action, under Section 202(a) of the CAA, finding that six key well-mixed GHGs constitute a threat to public health and welfare and that the combined emissions from motor vehicles cause and contribute to the climate change problem. The following are the most recent regulatory actions taken by the USEPA:

- On September 15, 2009, the USEPA and the U.S. Department of Transportation's (DOT's) National Highway Traffic Safety Administration (NHTSA) proposed a new national program that would reduce GHG emissions and improve fuel economy for all new cars and trucks sold in the United States. The USEPA proposed the first national GHG emissions standards under the CAA

and NHTSA proposed an increase in the Corporate Average Fuel Economy (CAFE) standards under the Energy Policy and Conservation Act.

- In response to the FY2008 Consolidated Appropriations Act (HR 2764; PL 110–161), the USEPA issued the Final Mandatory Reporting of Greenhouse Gases Rule. Signed by the Administrator on September 22, 2009, the rule requires that suppliers of fossil fuels and industrial GHGs, manufacturers of vehicles and engines outside of the light duty sector, and facilities that emit 25,000 metric tons or more of GHGs per year to submit annual reports to the USEPA. The rule is intended to collect accurate and timely emissions data to guide future policy decisions on climate change.
- On September 30, 2009, the USEPA proposed new thresholds for GHGs that define when CAA permits under the New Source Review and Title V operating permits programs would be required.

2.2.4 Council on Environmental Quality (CEQ) GHG Guidance

The Council on Environmental Quality (CEQ) recently released a final guidance memorandum on how climate change should be addressed in NEPA documents (CEQ, 2016). The CEQ guidance advises federal lead agencies to address impacts to and from climate change when assessing cumulative project-level impacts under NEPA. To assess impacts, the guidance states that federal agencies should quantify direct and indirect emissions of the Project Alternatives (including the No-Action Alternative), with the level of effort being proportionate to the scale of the emissions relevant to NEPA review, as a proxy for assessing potential effects on climate change in a NEPA analysis. According to CEQ, climate change impacts relating to indirect and direct actions concerning the federal action and associated short-term and long-term effects should also be included in the NEPA analysis.

The guidance does not establish any particular quantity of GHG emissions as "significantly" affecting the quality of the human environment or give greater consideration to the effects of GHG emissions and climate change over other effects on the human environment. However, the guidance does state that agencies should consider reasonable alternatives and mitigation measures to reduce action-related GHG emissions or increase carbon sequestration in the same fashion as they consider alternatives and mitigation measures for any other environmental effects. The guidance further states that climate change effects on the environment and on the Proposed Project should be considered in NEPA analysis if the project is considered vulnerable to the effects of climate change, such as increasing sea level, drought, high intensity precipitation events, increased fire risk, or ecological change. Assessment of such impacts, if applicable, should be conducted with existing information as CEQ states that agencies need not undertake new research or analysis of potential climate change impacts in the Proposed Action area.

Local

The County Draft Climate Action Plan (CAP) includes a GHG inventory and establishes an emission reduction target. The Draft CAP also identifies numerous goals and policies aimed at reducing GHG emissions. These goals and policies are to be incorporated into the County General Plan; however, the General Plan has yet to be adopted by the County Board of Supervisors and does not apply to land held in trust by the federal government (County of Humboldt, 2012a). Primary sources of GHG emissions in the region include vehicles, trucks, airplanes, mills, ships, canneries, and electricity generation facilities.

3 BIOLOGICAL RESOURCES

3.1 FEDERAL ENDANGERED SPECIES ACT

The United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) implement the Federal Endangered Species Act of 1973 (FESA) (16 USC 1531 *et seq*.). Threatened and endangered species on the federal list (50 CFR 17.11 and 17.12) are protected from "take" (direct or indirect harm), unless a Biological Opinion (BO) with incidental take provisions is rendered. Pursuant to the requirements of FESA, an agency reviewing a Proposed Project within its jurisdiction must determine whether any federally listed species may be present in the project site and determine whether the Proposed Project will have a potentially significant impact upon such species. Under FESA, habitat loss is considered an impact to the species. In addition, the agency must determine whether the Proposed Project is likely to jeopardize the existence of species or habitat for species proposed to be listed under FESA (16 USC 1536[3], [4]). USFWS also designates species of concern. Species of concern receive attention from federal agencies during environmental review, although they are not otherwise protected under FESA. Project-related impacts to such species would also be considered significant and would require mitigation.

3.1.1 Waters of the U.S.

Any person, firm, or agency planning to alter or work in navigable waters of the U.S., including the discharge of dredged or fill material, must first obtain authorization from the United States Army Corps of Engineers (USACE). Permits, licenses, variances, or similar authorization may also be required by other federal, state, and local statutes. Section 10 of the Rivers and Harbors Act of 1899 prohibits the obstruction or alteration of navigable waters of the United States without a permit from the Corps of Engineers (33 USC 403). Section 301 of the Federal Water Pollution Control Act and Amendments of 1972 (CWA) prohibits the discharge of pollutants, including dredged or fill material, into waters of the United States without a Section 404 permit from USACE (33 USC 1344). Water Quality Certification (a CWA Section 401 permit) may be required by the USEPA before other permits are issued.

3.1.2 Executive Order 11990 (Protection of Wetlands)

Executive Order (EO) 11990 was established for the protection of wetlands and riparian systems. Wetlands are transitional lands between terrestrial and aquatic systems. EO 11990 requires federal agencies to consider wetland protection as an important part of their policies and take action to minimize the destruction, loss, or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands.

3.1.3 Migratory Bird Treaty Act

Most bird species, especially those that are breeding, migratory, or of limited distribution, are protected under federal and state regulations. Under the Migratory Bird Treaty Act of 1918 (16 USC 703-711), migratory bird species and their nests and eggs that are on the federal list (50 CFR 10.13) are protected from injury or death and project-related disturbances must be reduced or eliminated during the nesting cycle.

4 CULTURAL RESOURCES

4.1 NATIONAL REGISTER OF HISTORIC PLACES

The eligibility of a resource for listing in the National Register of Historic Places (NRHP) is determined by evaluating the resource using criteria defined in 36 CFR 60.4 as follows: the quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, association, and:

A. That are associated with events that have made a significant contribution to the broad patterns of our history;
B. That are associated with the lives of persons significant in our past;
C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
D. That has yielded, or may be likely to yield, information important to prehistory or history.

Sites younger than 50 years, unless of exceptional importance, are not eligible for listing in the NRHP.

While most historic buildings and many historic archaeological properties are significant because of their association with important events, people, or styles (criteria A, B, and C), the significance of most prehistoric and some historic-period archaeological properties is usually assessed under criterion D. This criterion stresses the importance of the information contained in an archaeological site, rather than its intrinsic value as a surviving example of a type or its historical association with an important person or event. It places importance not on physical appearance but rather on information potential.

4.1.1 National Historic Preservation Act

Section 106 of the National Historic Preservation Act (NHPA) as amended, and its implementing regulations found in 36 CFR Part 800, require federal agencies to identify cultural resources that may be affected by actions involving federal lands, funds, or permitting. The significance of the resources must be evaluated using established criteria outlined in 36 CFR 60.4, as described below.

If a resource is determined to be a *historic property*, Section 106 of the NHPA requires that effects of the federal undertaking on the resource be determined. A historic property is defined as:

…any prehistoric or historic district, site, building, structure or object included in, or eligible for inclusion in the National Register of Historic Places, including artifacts, records, and material remains related to such a property (NHPA Sec. 301[5]).…

Section 106 of the NHPA prescribes specific criteria for determining whether a project would adversely affect a historic property, as defined in 36 CFR 800.5. An impact is considered adverse when prehistoric or historic archaeological sites, structures, or objects that are listed or eligible for listing in the NRHP are subjected to the following:

- Physical destruction of or damage to all or part of the property;
- Alteration of a property;
- Removal of the property from its historic location;
- Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;
- Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features;
- Neglect of a property that causes its deterioration; and
- Transfer, lease, or sale of the property out of federal control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

If the historic property will be adversely affected by development, then prudent and feasible measures to avoid or reduce adverse impacts must be taken. The State Historic Preservation Officer (SHPO) must be provided an opportunity to review and comment on these measures prior to project implementation.

4.2 Traditional Cultural Properties

The 1992 amendments to the NHPA allowed for a new designation of a traditional cultural property (TCP). These amendments established "Properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization" might be determined eligible for inclusion in the NRHP (Section 101(d)(6) of the NHPA. Accordingly, a tribal TCP can only be significant and eligible for listing on the NRHP if it meets two criteria: 1) rooted in that community's history; and 2) are important in maintaining the continuing cultural identity of the community."

4.3 Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (NAGPRA) is a federal law passed in 1990. NAGPRA provides a process for museums and federal agencies to return certain Native American cultural items -- human remains, funerary objects, sacred objects, or objects of cultural patrimony -- to lineal descendants and culturally affiliated Indian tribes and Native Hawaiian organizations. NAGPRA includes provisions for unclaimed and culturally unidentifiable Native American cultural items, intentional and inadvertent discovery of Native American burials and cultural items on federal and tribal lands, and penalties for noncompliance and illegal trafficking.

4.4 Paleontological Resources Preservation Act

The Paleontological Resources Preservation subtitle of the Omnibus Public Land Management Act, 16 USC 470aaa to aaa-11 requires the U.S. Department of Agriculture and the U.S. Department of the Interior to issue implementation regulations that provide for the preservation, management, and protection of paleontological resources on Federal lands and to insure that these resources are available for current and future generations to enjoy as part of America's national heritage.

Paleontological resources are defined as the traces or remains of prehistoric plants and animals. Such remains often appear as fossilized or petrified skeletal matter, imprints, or endocasts, and reside in

sedimentary rock layers. Fossils are important resources, due to their scientific and educational value. Fossil remains of vertebrates are considered significant. Invertebrate fossils are considered significant if they function as index fossils. Index fossils are those that appear in the fossil record for a relatively short and known period, allowing geologists to interpret the age range of the geological formations in which they are found.

Significance Criteria

Significance for paleontological resources is reflected in terms of compliance with the Antiquities Act of 1906 (PL 59-209; 16 USC 431 et seq.; 34 Stat. 225), which calls for the protection of historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest on federal land. Additional provisions appear in the Archaeological and Historic Data Preservation Act of 1974, as amended, for the survey, recovery, and preservation of significant scientific, prehistoric, historic, archaeological, or paleontological data, in such cases wherein this type of data might be otherwise destroyed or irrecoverably lost because of federal projects.

5 SOCIOECONOMIC CONDITIONS/ENVIRONMENTAL JUSTICE

On February 11, 1994, President Clinton issued EO 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" and an accompanying Presidential Memorandum to focus federal attention on the environmental and human health conditions in minority communities and low-income communities. EO 12898, as amended, directs federal agencies to develop an Environmental Justice Strategy that identifies and addresses disproportionately high human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations. Compliance with EO 12898 has been incorporated into the NEPA compliance requirements of the BIA for the Proposed Action.

6 LAND USE

6.1 REGULATORY SETTING

The Nation's coastal waters are protected by the federal Coastal Zone Management Act (CZMA) of 1972, which is administered by the National Oceanic and Atmospheric Administration (NOAA) within the Department of Commerce. In California, the CZMA is administered by the California Coastal Commission (CCC), which was established by voter initiative and made permanent by the California Coastal Act of 1976. The CCC carries out its statutory responsibilities largely through the review and approval of local coastal programs (LCPs). The Coastal Zone is defined by the California Coastal Act as "the land and water area of the State of California from the Oregon Border to the border of the Republic of Mexico," as officially mapped on 7.5-minute USGS quadrangle maps and adopted by the CCC. The CZMA states that "excluded from the coastal zone are lands of which is held in trust by the federal government." Therefore, the project site is not considered part of the Coastal Zone.

Title 15 CFR Part 930 requires federal consistency determinations for projects directly or indirectly affecting any coastal use or resource. Federal consistency determinations stem from the CZMA requirement that federal actions (that are reasonably likely to affect any land or water use or natural resource of the Coastal Zone) be consistent with the enforceable policies of a coastal State's or territory's federally approved Coastal Management Program ("State CMP" or "CMP"). Federal actions include: (1) direct federal actions--activities and development projects performed by a federal agency or a contractor for the benefit of a federal agency; and (2) indirect federal actions--activities not performed by a federal agency, but requiring federal permits or licenses or other forms of federal approval and federal financial assistance to states, territories, and local governments.

The objective is to ensure that federal agencies and applicants for federal approvals and funding adequately consider and comply with State CMPs. Under CZMA Sec. 307(C), each federal agency shall provide a consistency determination to the relevant State agency designated at the earliest practical time but in no case later than 90 days before final approval of the federal activity (unless both the federal agency and the State agency agree to a different schedule).

7 AGRICULTURE

7.1 WILLIAMSON ACT PROVISIONS

Under the provisions of the Williamson Act (California Land Conservation Act 1965, Section 51200), landowners contract with the County to maintain agricultural or open space use of their lands in return for reduced property tax assessment. Withdrawal involves a ten-year period of tax adjustment to full market value before protected open space can be converted to urban uses. Consequently, land under a Williamson Act Contract can be in either a non-renewal status or a renewal status. Lands with a non-renewal status indicate the owner has withdrawn from the Williamson Act Contract and is waiting for a period of tax adjustment for the land to reach its full market value for tax purposes.

7.2 FARMLAND PROTECTION POLICY ACT

The goal of the Farmland Protection Policy Act (FPPA) is to minimize the extent that federal actions and programs result in the conversion of agricultural lands to non-agricultural uses. Pursuant to the FPPA, the Farmland Conversion Rating Form (Form AD 1006) is used to determine the value of the farmland under consideration and the level of protection such land should receive.

8 NOISE

Noise is generally defined as unwanted sound. Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level) which is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing and 120 to 140 dB corresponding to the threshold of pain.

Environmental noise is typically measured in A-weighted decibels (dBA). A dBA is a dB corrected for the variation in frequency response of the typical human ear at commonly encountered noise levels. In general, A-weighting of environmental sound consists of evaluating all of the frequencies of a sound, taking into account the fact that human hearing is less sensitive at low frequencies and extremely high frequencies but is more sensitive in mid-range frequency. **Table 4** provides examples of noise sources and their effects on humans, which correspond to various sound levels.

TABLE 4
TYPICAL A-WEIGHTED SOUND LEVELS

COMMON NOISES	NOISE LEVEL (DBA)	EFFECT
Rocket launching pad	180	Irreversible hearing loss
Carrier deck jet operation/Air raid siren	140	Painfully loud
Thunderclap	130	Painfully loud
Jet takeoff (200 feet)/Auto horn (3 feet)	120	Maximum vocal effort
Pile driver/Rock concert	110	Very loud
Garbage truck/Firecrackers	100	Very loud
Heavy truck (50 feet)/City traffic	90	Very annoying and continuous exposure is likely to result in hearing damage
Alarm Clock (2 feet)/Hair dryer	80	Annoying
Noisy restaurant/Freeway traffic/Business office	70	Telephone use difficult
Air conditioning unit/Conversational speech	60	Intrusive
Light auto traffic (100 feet)	50	Quiet
Living room/Bedroom/Quiet office	40	Quiet
Library/soft whisper (15 feet)	30	Very Quiet
Broadcasting studio	20	Very Quiet
	10	Just Audible
Threshold of hearing	0	Hearing begins
Source: U.S. Department of Housing and Urban Development, 2009		

8.1 Noise Exposure and Community Noise

An individual's noise exposure is a measure of noise over a period. A noise level is a measure of noise at a given instant in time. However, community noise varies continuously over a period with respect to the contributing sound sources in the community noise environment. What makes community noise constantly variable throughout a day is the addition of short duration, single event noise sources such as aircraft flyovers, vehicle passbys, sirens, etc. that are readily identifiable to the individual. These successive additions of sound to the community noise environment vary the community noise level from instant to instant, requiring the measurement of noise exposure over a period to legitimately characterize a community noise environment and evaluate cumulative noise impacts. This time-varying characteristic of environmental noise is described using statistical noise descriptors. The noise descriptors used in this EA are summarized below:

- Leq: the equivalent sound level (Leq) is used to describe noise over a specified period, typically one hour, in terms of a single numerical value. Leq is the constant sound level which would contain the same acoustic energy as the varying sound level during the same period (i.e. the average noise exposure level for the given time period).
- Ldn: 24-hour day and night A-weighed noise exposure level (Ldn), which accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night ("penalizing" nighttime noises). Noise between 10:00 PM and 7:00 AM is weighted (penalized) by adding 10 dB to take into account the greater annoyance of nighttime noises.
- CNEL: similar to the Ldn, the Community Noise Equivalent Level (CNEL) adds a 5-dB "penalty" for the evening hours between 7:00 PM and 10:00 PM, in addition to a 10-dBA penalty between the hours of 10:00 PM and 7:00 AM.

A wide variation in individual thresholds of annoyance exists and different tolerances to noise tend to develop based on an individual's past experiences with noise. Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the "ambient noise" level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived;
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference;
- A change in level of at least 5 dBA is required before any noticeable change in human response would be expected; and
- A 10-dBA change is subjectively heard as approximately a doubling in loudness and can cause adverse response, depending on the existing ambient noise level.

8.2 Noise Standards

Noise standards used in this study include the Federal Highway Administration (FHWA) Noise Abatement Criteria (NAC) for the assessment of noise consequences related to surface traffic and the noise impact criteria established by the County noise policy. These standards are discussed below.

8.2.1 Federal Noise Abatement Criteria

The Federal Highway Administration (FHWA) provides construction noise level thresholds in its 2006 Construction Noise Handbook, which are provided in **Table 5**. Sensitive receptors with the potential to be impacted by the Project Alternatives include residential land uses; thus, a 78-dBA Leq noise standard would apply. Activity criteria provided in **Table 5** are used to evaluate impacts to the noise environment from construction activities.

TABLE 5
FEDERAL CONSTRUCTION NOISE THRESHOLDS

NOISE RECEPTOR LOCATIONS AND LAND USES	DAYTIME (7:00 AM- 6:00 PM)	EVENING (6:00 PM TO 10:00 PM)	NIGHTTIME (10:00 PM TO 7:00 AM)
	DBA, LEQ[1]		
Noise-Sensitive Locations: (residences, institutions, hotels, etc.)	78 or Baseline + 5 (whichever is louder)	Baseline + 5	Baseline + 5 (if Baseline < 70) or Baseline + 3 (if Baseline > 70)
Commercial Areas: (businesses, offices, stores, etc.)	83 or Baseline + 5	None	None
Industrial Areas: (factories, plants, etc.)	88 or Baseline + 5	None	None
Notes: [1] Leq thresholds were empirically determined (FHWA, 2006) Source: FHWA Construction Noise Handbook, 2006			

8.2.2 County Noise Regulations

The County establishes a maximum acceptable noise threshold of 50 dBA Leq for commercial land use noise (County of Humboldt, 2012). However, pursuant to Noise Control Ordinance Measure N-IM7x, construction is exempt from noise requirements (County of Humboldt, 2012). Construction noise may occur at levels identified as normally unacceptable if mitigation measures and construction standards reduce noise levels to a normally acceptable value.

8.2.3 Sensitive Receptors

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. Residences, motels and hotels, schools, libraries, churches, hospitals, nursing homes, auditoriums, and parks and other outdoor recreation areas are generally more sensitive to noise than commercial and industrial land uses are. 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 is air emissions or noise, in the atmosphere.

APPENDIX E

CALEEMOD FILES

CalEEMod Inputs

TREDC Hotel Project

Project-Specific Inputs for the TREDC Hotel Project

Input	Type of Input	Project Specific Inputs	
		Inputs	Source/Notes
Project Name	Project Name	TREDC Hotel Project	Project Description
Project Location	County	Humboldt	Modeler, based on location
Climate zone	Climate Zone Number	1	Modeler, based on location
Land Use Setting	Urban or Rural	Rural	Modeler, based on location
Operational Year	1st year of operation after full buildout.	2018 – 1st year 2040 – cumulative	Project Description
Utility Company	Utility Company Name	PG&E	USEPA Power Profiler
Land Use Type and Subtype	Residential, Commercial, Recreation, etc.	See **Table 1.**	See **Table 1.**
Unit Amount	Size of Buildings or Number of units for each Land Use Type.	See **Table 1.**	See **Table 1.**
Lot Acreage	Acreage of each Land Use Type	See **Table 1.**	See **Table 1.**
Population	Population based on persons/household	See **Table 1.**	See **Table 1.**
Construction Phases	Type of construction phase (Demo, Site Prep, etc.) and beginning and ending dates	6 Months starting 6/1/2017	Project Description
Off-Road Equipment	Type of equipment (Excavator, Dozer, etc.) and number of units per construction phase	--	--
Demolition	Sq ft or tons of Demo	3,484 tons	Cal Recycle, 2004. Assuming the depth of asphalt is 6 inches and the entire site is demolished.
Construction Trip Gen Rate	Average number of one-way trips per day	--	--
Operational Trip Reductions	% reduction in trips.	--	--
Operational Trip Gen Rate and trip length	Trips and trip lengths	See **Tables 2**.	See **Tables 2**.
Area Sources	Hearths – # of wood-burning fireplaces, #of gas fireplaces, and # of units with no fireplace.	Not Applicable	No hearths are included in the project design.
	Landscape Equipment - % of equipment that is electric.	--	--
Energy Use	Project Specific Emission Factors.	--	--

Input	Type of Input	Project Specific Inputs	
		Inputs	Source/Notes
Water and Wastewater	Indoor and outdoor water use for each Land Use Subtype in gallons per year.	--	--
Solid waste	Tons of solid waste generated per year (per hotel room)	0.73	Project Description
	Land Fill Gas Capture Rate		
Operational off-road equipment	Excavator, Dozer, etc.	--	--
Land Use Change	Vegetation land use type (cropland, etc.) and initial and final acreage	--	--
Sequestration	Type and net number of new trees added	--	--

Source: AES, 2016; CalEEMod, 2016; USEPA, 2015; Cal Recycle, 2004.

Project–Mitigation Inputs for the TREDC Hotel Project

Mitigation Input Category	CAPCOA Mitigation Number	Include in Model? (yes/no)	Type of Input / Unit	Project Specific Inputs	
				Inputs	Source/Notes
Off-Road Equipment	C-1	Yes	Engine Type, DPF Level, and Oxidation Catalyst	See **Table 3.**	See **Table 3.**
Soil Stabilizer for Unpaved Roads	N/A	Yes	PM10 (% Reduction)	10%	Default % Reduction.
	N/A		PM2.5 (% Reduction)	10%	Default % Reduction.
Water Exposed Area	N/A	Yes	Frequency (per day)	2 times per day	Default % Reduction
	N/A		PM10 (% Reduction)	55%	Default % Reduction.
	N/A		PM2.5 (% Reduction)	55%	Default % Reduction.
Replace Ground Cover of Area Disturbed	N/A	No	PM10 (% Reduction)	--	--
	N/A		PM2.5 (% Reduction)	--	--
Unpaved Road Mitigation	N/A	No	Moisture Content (%)	--	--
	N/A	Yes	Vehicle Speed (mph)	15	Default Reduction
Type of Residential	N/A	No	Type of Residential	--	--
Increased Density	LUT-1	No	Dwelling Units/Acre	--	--
			Job/Job Acre	--	--
Increased Diversity	LUT-3	No	Yes or No	--	--
Improved Walkability Design	LUT-9	No	Intersections/Square Miles	--	--
Improve Destination Accessibility	LUT-4	No	Distance to Downtown/Job Ctr	--	--
Increased Transit Accessibility	LUT-5	No	Average Distance to Transit Station (miles)	--	--
Integrated Below Market Rate Housing	LUT-6	No	# Dwelling Units Below Market Rate	--	--
Improve Pedestrian Network	SDT-1	No	Yes or No; Project Site, Project Site and Connecting off-site, and Rural	--	--

Mitigation Input Category	CAPCOA Mitigation Number	Include in Model? (yes/no)	Type of Input / Unit	Project Specific Inputs	
				Inputs	Source/Notes
Provide Traffic Calming Measures	SDT-2	No	% Streets with Improvement	--	--
		No	% Intersections with Improvement	--	--
Implement Neighborhood Electric Vehicle (NEV) Network	SDT-3	No	% of streets equipped with NEV network.	--	--
Limit Parking Supply	PDT-1	No	% Reduction in Spaces	--	--
Unbundled Parking Costs	PDT-2	No	Monthly Parking Costs ($)	--	--
On-Street Market Pricing	PDT-3	No	% Increase in Price	--	--
Provide a Bus Rapid Transit System	TST-1	No	% Lines BRT	--	--
Expand Transit Network	TST-3	No	% Increase Transit Coverage	--	--
Increase Transit Frequency	TST-4	No	Level of Implementation	--	--
		No	% Reduction in Headways	--	--
Implement Trip Reduction Program	TRT-1, TRT-2	No	% employee eligible	--	--
		No	Program Type	--	--
Transit Subsidy	TRT-4	No	% employee eligible	--	--
		No	Daily Transit Subsidy Amount ($)	--	--
Implement Employee Parking “Cash-Out”	TRT-15	No	% employee eligible	--	--
Workplace Parking Charge	TRT-14	No	% employee eligible	--	--
		No	Daily Parking Charge ($)	--	--
Encourage Telecommuting	TRT-6	No	% employee work 9/80	--	--

Mitigation Input Category	CAPCOA Mitigation Number	Include in Model? (yes/no)	Type of Input / Unit	Project Specific Inputs	
				Inputs	Source/Notes
and Alternative Work Schedules		No	% employee work 4/40	--	--
		No	% employee telecommute 1.5 days	--	--
Market Commute Trip Reduction Option	TRT-7	No	% employee eligible	--	--
Employee Vanpool/Shuttle	TRT-11	No	% employee eligible	--	--
		No	% vanpool mode share	--	--
Provide Ride Sharing Program	TRT-3	No	% employee eligible	--	--
Implement School Bus Program	TRT-13	No	% family using	--	--
Only Natural Gas Hearth	N/A	No	Yes or No	--	--
No hearth	N/A	No	Yes or No	--	--
Use of Low VOC Cleaning Supplies	N/A	No	Yes or No	--	--
Use low VOC Paint (Residential Interior)	N/A	No	Emission Factor (EF) (g/l)	--	--
Use low VOC Paint (Residential Exterior)	N/A	No	EF (g/l)	--	--
Use low VOC Paint (Non-residential Interior)	N/A	No	EF (g/l)	--	--
Use low VOC Paint (Non-residential Exterior)	N/A	No	EF (g/l)	--	--
Electric Lawnmower	A-1	No	Percent of equipment type that will be electric.	--	--
Electric Leafblower	A-1	No	Percent of equipment type that will be electric.	--	--

Mitigation Input Category	CAPCOA Mitigation Number	Include in Model? (yes/no)	Type of Input / Unit	Project Specific Inputs	
				Inputs	Source/Notes
Electric Chainsaw	A-1	No	Percent of equipment type that will be electric.	--	--
Exceed Title 24	BE-1	No	Percentage improvement selected for the Project.	--	--
Install High Efficiently Lighting	LE-1	No	% Lighting Energy Reduction	--	--
On-site Renewable Energy	AE-1, AE-2, AE-3	No	kWh Generated	--	--
		No	% of Electricity Use Generated	--	--
Energy Efficient Appliances	BE-4	Yes	Appliance Type, Land Use Subtype, % Improvement	Use Default Values	Defaults
Apply Water Conservation Strategy	WUW-2	No	% Reduction Indoor	--	--
		No	% Reduction Outdoor	--	--
Use Reclaimed Water	WSW-1	No	% Indoor Water Use	--	--
		No	% Outdoor Water Use	--	--
Use Grey Water	WSW-2	No	% Indoor Water Use	--	--
		No	% Outdoor Water Use	--	--
Install Low-Flow Bathroom Faucet	WUW-1	Yes	% Reduction in flow	32%	Default % reduction assuming implementation of Recommended Mitigation
Install Low-flow Kitchen Faucet	WUW-1	Yes	% Reduction in flow	18%	Default % reduction assuming implementation of Recommended Mitigation.
Install Low-flow Toilet	WUW-1	Yes	% Reduction in flow	20%	Default % reduction assuming implementation of Recommended Mitigation
Install Low-flow Shower	WUW-1	Yes	% Reduction in flow	20%	Default % reduction assuming implementation of Recommended Mitigation
Turf Reduction	WUW-5	No	Turf Reduction Area (sqft)	--	--
		No	% Reduction turf	--	--
Use Water-Efficient Irrigation Systems	WUW-4	No	% Reduction	--	--
Water Efficient Landscape	WUW-3	No	Maximum Applied Water Allowance (MAWA) (gal/yr)	--	--
		No	Estimated Total Water Use (ETWU) (gal/yr)	--	--

Mitigation Input Category	CAPCOA Mitigation Number	Include in Model? (yes/no)	Type of Input / Unit	Project Specific Inputs	
				Inputs	Source/Notes
Institute Recycling and Composting Service	SW-1	No	% Reduction in Waste Disposal over State requirements	--	--

Source: AES, 2016; CalEEMod, 2016

Table 1 – Land Use Inputs

Land Use Type	Land Use Subtype	Unit Amount	Size Metric
Recreation	Hotel	100	Rooms

Table 2 - Trip Generation Rates

Land Use	Daily Trip Generation Rate[1]			Trip Length[2]		
	Weekday	Saturday	Sunday	Commercial-Customer (C-C)	Commercial-Work (C-W)	Commercial-Nonwork (C-NW)
Hotel	5.72 trips/rooms	5.73 trips/rooms	4.17 trips/rooms	24	24	24

Notes: 1 – includes 30% internal capture rate

2 – Trip length adjusted to reflect an average trip length from the City of Eureka Omni-Means, LTD and SHN Consulting Engineers & Geologist, Inc. 2014

Table 3 – Off-Road Equipment Mitigation Inputs

Equipment Type	Engine Tier	Number of Equipment Mitigated	Diesel Particulate Filter (DPF)
Air Compressors	Tier 3	1	Level 3
Cement and Mortar Mixers	Tier 3	4	Level 3
Concrete/Industrial Saws	Tier 3	2	Level 3
Cranes	Tier 3	1	Level 3
Forklifts	Tier 3	2	Level 3
Graders	Tier 3	1	Level 3
Pavers	Tier 3	1	Level 3
Rollers	Tier 3	1	Level 3
Rubber Tired Dozers	Tier 3	2	Level 3
Tractors/Loaders/Backhoes	Tier 3	8	Level 3

TREDC Hotel Project

Humboldt County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	100.00	Room	0.40	17,424.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	103
Climate Zone	1			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Refer to Project Description

Construction Phase -

Vehicle Trips - Refer to CalEEMod input table

Demolition -

Construction Off-road Equipment Mitigation - Refer to CalEEMod tables

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15

tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblLandUse	BuildingSpaceSquareFeet	145,200.00	17,424.00
tblLandUse	LandUseSquareFeet	145,200.00	17,424.00
tblLandUse	LotAcreage	3.33	0.40
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	CC_TL	6.60	24.00
tblVehicleTrips	CNW_TL	6.60	24.00
tblVehicleTrips	CW_TL	14.70	24.00
tblVehicleTrips	ST_TR	8.19	5.73
tblVehicleTrips	SU_TR	5.95	4.17
tblVehicleTrips	WD_TR	8.17	5.72

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.2876	0.8370	0.5523	9.2000e-004	0.0475	0.0506	0.0982	8.5900e-003	0.0468	0.0554	0.0000	85.3120	85.3120	0.0196	0.0000	85.8012
Maximum	**0.2876**	**0.8370**	**0.5523**	**9.2000e-004**	**0.0475**	**0.0506**	**0.0982**	**8.5900e-003**	**0.0468**	**0.0554**	**0.0000**	**85.3120**	**85.3120**	**0.0196**	**0.0000**	**85.8012**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.2287	0.4604	0.5466	9.2000e-004	0.0265	4.5200e-003	0.0310	5.2400e-003	4.4700e-003	9.7100e-003	0.0000	85.3120	85.3120	0.0196	0.0000	85.8011
Maximum	**0.2287**	**0.4604**	**0.5466**	**9.2000e-004**	**0.0265**	**4.5200e-003**	**0.0310**	**5.2400e-003**	**4.4700e-003**	**9.7100e-003**	**0.0000**	**85.3120**	**85.3120**	**0.0196**	**0.0000**	**85.8011**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**20.46**	**44.99**	**1.03**	**0.00**	**44.33**	**91.07**	**68.46**	**39.00**	**90.45**	**82.47**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2017	8-31-2017	0.5375	0.3010
2	9-1-2017	9-30-2017	0.1577	0.0759
		Highest	0.5375	0.3010

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0883	1.0000e-005	9.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7900e-003	1.7900e-003	0.0000	0.0000	1.9100e-003
Energy	1.9600e-003	0.0178	0.0150	1.1000e-004		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	58.1311	58.1311	2.1200e-003	7.2000e-004	58.3982
Mobile	0.5918	3.8939	8.7755	0.0170	1.1881	0.0375	1.2256	0.3207	0.0356	0.3563	0.0000	1,551.6333	1,551.6333	0.0962	0.0000	1,554.0374
Waste						0.0000	0.0000		0.0000	0.0000	11.1138	0.0000	11.1138	0.6568	0.0000	27.5339
Water						0.0000	0.0000		0.0000	0.0000	0.8048	4.2800	5.0848	0.0829	1.9900e-003	7.7496
Total	**0.6821**	**3.9117**	**8.7914**	**0.0171**	**1.1881**	**0.0389**	**1.2269**	**0.3207**	**0.0370**	**0.3576**	**11.9185**	**1,614.0462**	**1,625.9647**	**0.8379**	**2.7100e-003**	**1,647.7210**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0883	1.0000e-005	9.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7900e-003	1.7900e-003	0.0000	0.0000	1.9100e-003
Energy	1.9600e-003	0.0178	0.0150	1.1000e-004		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	58.1311	58.1311	2.1200e-003	7.2000e-004	58.3982
Mobile	0.5918	3.8939	8.7755	0.0170	1.1881	0.0375	1.2256	0.3207	0.0356	0.3563	0.0000	1,551.6333	1,551.6333	0.0962	0.0000	1,554.0374
Waste						0.0000	0.0000		0.0000	0.0000	11.1138	0.0000	11.1138	0.6568	0.0000	27.5339
Water						0.0000	0.0000		0.0000	0.0000	0.6438	3.4814	4.1252	0.0663	1.5900e-003	6.2573
Total	**0.6821**	**3.9117**	**8.7914**	**0.0171**	**1.1881**	**0.0389**	**1.2269**	**0.3207**	**0.0370**	**0.3576**	**11.7576**	**1,613.2476**	**1,625.0052**	**0.8214**	**2.3100e-003**	**1,646.2286**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.35**	**0.05**	**0.06**	**1.98**	**14.76**	**0.09**

3.0 Construction Detail

Construction Phase

TREDC Hotel Project - Humboldt County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2017	6/14/2017	5	10	
2	Site Preparation	Site Preparation	6/15/2017	6/15/2017	5	1	
3	Grading	Grading	6/16/2017	6/19/2017	5	2	
4	Building Construction	Building Construction	6/20/2017	11/6/2017	5	100	
5	Architectural Coating	Architectural Coating	11/14/2017	11/20/2017	5	5	
6	Paving	Paving	11/7/2017	11/13/2017	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 26,136; Non-Residential Outdoor: 8,712; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	344.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	7.00	3.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0373	0.0000	0.0373	5.6400e-003	0.0000	5.6400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0500e-003	0.0525	0.0396	6.0000e-005		3.6600e-003	3.6600e-003		3.4900e-003	3.4900e-003	0.0000	5.3493	5.3493	1.0500e-003	0.0000	5.3755
Total	**6.0500e-003**	**0.0525**	**0.0396**	**6.0000e-005**	**0.0373**	**3.6600e-003**	**0.0409**	**5.6400e-003**	**3.4900e-003**	**9.1300e-003**	**0.0000**	**5.3493**	**5.3493**	**1.0500e-003**	**0.0000**	**5.3755**

3.2 Demolition - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.7100e-003	0.0703	0.0145	1.4000e-004	2.8300e-003	7.5000e-004	3.5700e-003	7.8000e-004	7.1000e-004	1.4900e-003	0.0000	13.3567	13.3567	4.9000e-004	0.0000	13.3690
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-004	7.3000e-004	5.7700e-003	1.0000e-005	6.0000e-004	1.0000e-005	6.1000e-004	1.6000e-004	1.0000e-005	1.7000e-004	0.0000	0.5892	0.5892	5.0000e-005	0.0000	0.5905
Total	**3.4100e-003**	**0.0710**	**0.0203**	**1.5000e-004**	**3.4300e-003**	**7.6000e-004**	**4.1800e-003**	**9.4000e-004**	**7.2000e-004**	**1.6600e-003**	**0.0000**	**13.9459**	**13.9459**	**5.4000e-004**	**0.0000**	**13.9595**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0168	0.0000	0.0168	2.5400e-003	0.0000	2.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3300e-003	0.0298	0.0397	6.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	5.3492	5.3492	1.0500e-003	0.0000	5.3755
Total	**1.3300e-003**	**0.0298**	**0.0397**	**6.0000e-005**	**0.0168**	**3.0000e-004**	**0.0171**	**2.5400e-003**	**3.0000e-004**	**2.8400e-003**	**0.0000**	**5.3492**	**5.3492**	**1.0500e-003**	**0.0000**	**5.3755**

3.2 Demolition - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.7100e-003	0.0703	0.0145	1.4000e-004	2.8300e-003	7.5000e-004	3.5700e-003	7.8000e-004	7.1000e-004	1.4900e-003	0.0000	13.3567	13.3567	4.9000e-004	0.0000	13.3690
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-004	7.3000e-004	5.7700e-003	1.0000e-005	6.0000e-004	1.0000e-005	6.1000e-004	1.6000e-004	1.0000e-005	1.7000e-004	0.0000	0.5892	0.5892	5.0000e-005	0.0000	0.5905
Total	**3.4100e-003**	**0.0710**	**0.0203**	**1.5000e-004**	**3.4300e-003**	**7.6000e-004**	**4.1800e-003**	**9.4000e-004**	**7.2000e-004**	**1.6600e-003**	**0.0000**	**13.9459**	**13.9459**	**5.4000e-004**	**0.0000**	**13.9595**

3.3 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3000e-004	5.2600e-003	2.1800e-003	0.0000		2.4000e-004	2.4000e-004		2.2000e-004	2.2000e-004	0.0000	0.4534	0.4534	1.4000e-004	0.0000	0.4569
Total	**4.3000e-004**	**5.2600e-003**	**2.1800e-003**	**0.0000**	**2.7000e-004**	**2.4000e-004**	**5.1000e-004**	**3.0000e-005**	**2.2000e-004**	**2.5000e-004**	**0.0000**	**0.4534**	**0.4534**	**1.4000e-004**	**0.0000**	**0.4569**

3.3 Site Preparation - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	4.0000e-005	2.9000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0295	0.0295	0.0000	0.0000	0.0295
Total	**3.0000e-005**	**4.0000e-005**	**2.9000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0295**	**0.0295**	**0.0000**	**0.0000**	**0.0295**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.2000e-004	0.0000	1.2000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2000e-004	2.4400e-003	2.9300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.4534	0.4534	1.4000e-004	0.0000	0.4569
Total	**1.2000e-004**	**2.4400e-003**	**2.9300e-003**	**0.0000**	**1.2000e-004**	**2.0000e-005**	**1.4000e-004**	**1.0000e-005**	**2.0000e-005**	**3.0000e-005**	**0.0000**	**0.4534**	**0.4534**	**1.4000e-004**	**0.0000**	**0.4569**

3.3 Site Preparation - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	4.0000e-005	2.9000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0295	0.0295	0.0000	0.0000	0.0295
Total	**3.0000e-005**	**4.0000e-005**	**2.9000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0295**	**0.0295**	**0.0000**	**0.0000**	**0.0295**

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2100e-003	0.0105	7.9200e-003	1.0000e-005		7.3000e-004	7.3000e-004		7.0000e-004	7.0000e-004	0.0000	1.0699	1.0699	2.1000e-004	0.0000	1.0751
Total	**1.2100e-003**	**0.0105**	**7.9200e-003**	**1.0000e-005**	**7.5000e-004**	**7.3000e-004**	**1.4800e-003**	**4.1000e-004**	**7.0000e-004**	**1.1100e-003**	**0.0000**	**1.0699**	**1.0699**	**2.1000e-004**	**0.0000**	**1.0751**

3.4 Grading - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	1.5000e-004	1.1500e-003	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1178	0.1178	1.0000e-005	0.0000	0.1181
Total	**1.4000e-004**	**1.5000e-004**	**1.1500e-003**	**0.0000**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1178**	**0.1178**	**1.0000e-005**	**0.0000**	**0.1181**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.4000e-004	0.0000	3.4000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7000e-004	5.9600e-003	7.9400e-003	1.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	1.0699	1.0699	2.1000e-004	0.0000	1.0751
Total	**2.7000e-004**	**5.9600e-003**	**7.9400e-003**	**1.0000e-005**	**3.4000e-004**	**6.0000e-005**	**4.0000e-004**	**1.9000e-004**	**6.0000e-005**	**2.5000e-004**	**0.0000**	**1.0699**	**1.0699**	**2.1000e-004**	**0.0000**	**1.0751**

3.4 Grading - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	1.5000e-004	1.1500e-003	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1178	0.1178	1.0000e-005	0.0000	0.1181
Total	**1.4000e-004**	**1.5000e-004**	**1.1500e-003**	**0.0000**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1178**	**0.1178**	**1.0000e-005**	**0.0000**	**0.1181**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0641	0.6380	0.4035	5.7000e-004		0.0430	0.0430		0.0395	0.0395	0.0000	52.8851	52.8851	0.0162	0.0000	53.2902
Total	**0.0641**	**0.6380**	**0.4035**	**5.7000e-004**		**0.0430**	**0.0430**		**0.0395**	**0.0395**	**0.0000**	**52.8851**	**52.8851**	**0.0162**	**0.0000**	**53.2902**

3.5 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3400e-003	0.0234	8.4100e-003	4.0000e-005	8.7000e-004	2.9000e-004	1.1600e-003	2.5000e-004	2.8000e-004	5.3000e-004	0.0000	3.6777	3.6777	2.4000e-004	0.0000	3.6837
Worker	4.8700e-003	5.1200e-003	0.0404	5.0000e-005	4.2000e-003	5.0000e-005	4.2500e-003	1.1200e-003	5.0000e-005	1.1600e-003	0.0000	4.1245	4.1245	3.6000e-004	0.0000	4.1336
Total	**6.2100e-003**	**0.0285**	**0.0488**	**9.0000e-005**	**5.0700e-003**	**3.4000e-004**	**5.4100e-003**	**1.3700e-003**	**3.3000e-004**	**1.6900e-003**	**0.0000**	**7.8022**	**7.8022**	**6.0000e-004**	**0.0000**	**7.8173**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0140	0.3065	0.3981	5.7000e-004		2.8900e-003	2.8900e-003		2.8900e-003	2.8900e-003	0.0000	52.8850	52.8850	0.0162	0.0000	53.2901
Total	**0.0140**	**0.3065**	**0.3981**	**5.7000e-004**		**2.8900e-003**	**2.8900e-003**		**2.8900e-003**	**2.8900e-003**	**0.0000**	**52.8850**	**52.8850**	**0.0162**	**0.0000**	**53.2901**

3.5 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3400e-003	0.0234	8.4100e-003	4.0000e-005	8.7000e-004	2.9000e-004	1.1600e-003	2.5000e-004	2.8000e-004	5.3000e-004	0.0000	3.6777	3.6777	2.4000e-004	0.0000	3.6837
Worker	4.8700e-003	5.1200e-003	0.0404	5.0000e-005	4.2000e-003	5.0000e-005	4.2500e-003	1.1200e-003	5.0000e-005	1.1600e-003	0.0000	4.1245	4.1245	3.6000e-004	0.0000	4.1336
Total	**6.2100e-003**	**0.0285**	**0.0488**	**9.0000e-005**	**5.0700e-003**	**3.4000e-004**	**5.4100e-003**	**1.3700e-003**	**3.3000e-004**	**1.6900e-003**	**0.0000**	**7.8022**	**7.8022**	**6.0000e-004**	**0.0000**	**7.8173**

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2019					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.3000e-004	5.4600e-003	4.6700e-003	1.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004	0.0000	0.6383	0.6383	7.0000e-005	0.0000	0.6400
Total	**0.2027**	**5.4600e-003**	**4.6700e-003**	**1.0000e-005**		**4.3000e-004**	**4.3000e-004**		**4.3000e-004**	**4.3000e-004**	**0.0000**	**0.6383**	**0.6383**	**7.0000e-005**	**0.0000**	**0.6400**

3.6 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	4.0000e-005	2.9000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0295	0.0295	0.0000	0.0000	0.0295
Total	**3.0000e-005**	**4.0000e-005**	**2.9000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0295**	**0.0295**	**0.0000**	**0.0000**	**0.0295**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2019					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5000e-004	3.3900e-003	4.5800e-003	1.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.6383	0.6383	7.0000e-005	0.0000	0.6400
Total	**0.2021**	**3.3900e-003**	**4.5800e-003**	**1.0000e-005**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.6383**	**0.6383**	**7.0000e-005**	**0.0000**	**0.6400**

3.6 Architectural Coating - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	4.0000e-005	2.9000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0295	0.0295	0.0000	0.0000	0.0295
Total	**3.0000e-005**	**4.0000e-005**	**2.9000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0295**	**0.0295**	**0.0000**	**0.0000**	**0.0295**

3.7 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.6300e-003	0.0249	0.0184	3.0000e-005		1.5200e-003	1.5200e-003		1.4100e-003	1.4100e-003	0.0000	2.4610	2.4610	6.8000e-004	0.0000	2.4781
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.6300e-003**	**0.0249**	**0.0184**	**3.0000e-005**		**1.5200e-003**	**1.5200e-003**		**1.4100e-003**	**1.4100e-003**	**0.0000**	**2.4610**	**2.4610**	**6.8000e-004**	**0.0000**	**2.4781**

3.7 Paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3000e-004	6.6000e-004	5.2000e-003	1.0000e-005	5.4000e-004	1.0000e-005	5.5000e-004	1.4000e-004	1.0000e-005	1.5000e-004	0.0000	0.5303	0.5303	5.0000e-005	0.0000	0.5315
Total	**6.3000e-004**	**6.6000e-004**	**5.2000e-003**	**1.0000e-005**	**5.4000e-004**	**1.0000e-005**	**5.5000e-004**	**1.4000e-004**	**1.0000e-005**	**1.5000e-004**	**0.0000**	**0.5303**	**0.5303**	**5.0000e-005**	**0.0000**	**0.5315**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.6000e-004	0.0119	0.0173	3.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	2.4610	2.4610	6.8000e-004	0.0000	2.4781
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.6000e-004**	**0.0119**	**0.0173**	**3.0000e-005**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**	**0.0000**	**2.4610**	**2.4610**	**6.8000e-004**	**0.0000**	**2.4781**

3.7 Paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3000e-004	6.6000e-004	5.2000e-003	1.0000e-005	5.4000e-004	1.0000e-005	5.5000e-004	1.4000e-004	1.0000e-005	1.5000e-004	0.0000	0.5303	0.5303	5.0000e-005	0.0000	0.5315
Total	**6.3000e-004**	**6.6000e-004**	**5.2000e-003**	**1.0000e-005**	**5.4000e-004**	**1.0000e-005**	**5.5000e-004**	**1.4000e-004**	**1.0000e-005**	**1.5000e-004**	**0.0000**	**0.5303**	**0.5303**	**5.0000e-005**	**0.0000**	**0.5315**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5918	3.8939	8.7755	0.0170	1.1881	0.0375	1.2256	0.3207	0.0356	0.3563	0.0000	1,551.6333	1,551.6333	0.0962	0.0000	1,554.0374
Unmitigated	0.5918	3.8939	8.7755	0.0170	1.1881	0.0375	1.2256	0.3207	0.0356	0.3563	0.0000	1,551.6333	1,551.6333	0.0962	0.0000	1,554.0374

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hotel	572.00	573.00	417.00	3,244,041	3,244,041
Total	572.00	573.00	417.00	3,244,041	3,244,041

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hotel	24.00	24.00	24.00	19.40	61.60	19.00	58	38	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Hotel	0.448795	0.060687	0.206149	0.145887	0.057916	0.009282	0.014626	0.042627	0.002929	0.001905	0.006409	0.001553	0.001236

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	38.7260	38.7260	1.7500e-003	3.6000e-004	38.8777
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	38.7260	38.7260	1.7500e-003	3.6000e-004	38.8777
NaturalGas Mitigated	1.9600e-003	0.0178	0.0150	1.1000e-004		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	19.4052	19.4052	3.7000e-004	3.6000e-004	19.5205
NaturalGas Unmitigated	1.9600e-003	0.0178	0.0150	1.1000e-004		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	19.4052	19.4052	3.7000e-004	3.6000e-004	19.5205

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hotel	363639	1.9600e-003	0.0178	0.0150	1.1000e-004		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	19.4052	19.4052	3.7000e-004	3.6000e-004	19.5205
Total		**1.9600e-003**	**0.0178**	**0.0150**	**1.1000e-004**		**1.3500e-003**	**1.3500e-003**		**1.3500e-003**	**1.3500e-003**	**0.0000**	**19.4052**	**19.4052**	**3.7000e-004**	**3.6000e-004**	**19.5205**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hotel	363639	1.9600e-003	0.0178	0.0150	1.1000e-004		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	19.4052	19.4052	3.7000e-004	3.6000e-004	19.5205
Total		**1.9600e-003**	**0.0178**	**0.0150**	**1.1000e-004**		**1.3500e-003**	**1.3500e-003**		**1.3500e-003**	**1.3500e-003**	**0.0000**	**19.4052**	**19.4052**	**3.7000e-004**	**3.6000e-004**	**19.5205**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hotel	133119	38.7260	1.7500e-003	3.6000e-004	38.8777
Total		**38.7260**	**1.7500e-003**	**3.6000e-004**	**38.8777**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hotel	133119	38.7260	1.7500e-003	3.6000e-004	38.8777
Total		**38.7260**	**1.7500e-003**	**3.6000e-004**	**38.8777**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0883	1.0000e-005	9.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7900e-003	1.7900e-003	0.0000	0.0000	1.9100e-003
Unmitigated	0.0883	1.0000e-005	9.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7900e-003	1.7900e-003	0.0000	0.0000	1.9100e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0202					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0681					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.0000e-005	1.0000e-005	9.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7900e-003	1.7900e-003	0.0000	0.0000	1.9100e-003
Total	**0.0883**	**1.0000e-005**	**9.3000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.7900e-003**	**1.7900e-003**	**0.0000**	**0.0000**	**1.9100e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0202					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0681					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.0000e-005	1.0000e-005	9.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7900e-003	1.7900e-003	0.0000	0.0000	1.9100e-003
Total	**0.0883**	**1.0000e-005**	**9.3000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.7900e-003**	**1.7900e-003**	**0.0000**	**0.0000**	**1.9100e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	4.1252	0.0663	1.5900e-003	6.2573
Unmitigated	5.0848	0.0829	1.9900e-003	7.7496

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hotel	2.53668 / 0.281853	5.0848	0.0829	1.9900e-003	7.7496
Total		**5.0848**	**0.0829**	**1.9900e-003**	**7.7496**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hotel	2.02934 / 0.281853	4.1252	0.0663	1.5900e-003	6.2573
Total		**4.1252**	**0.0663**	**1.5900e-003**	**6.2573**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	11.1138	0.6568	0.0000	27.5339
Unmitigated	11.1138	0.6568	0.0000	27.5339

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hotel	54.75	11.1138	0.6568	0.0000	27.5339
Total		**11.1138**	**0.6568**	**0.0000**	**27.5339**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hotel	54.75	11.1138	0.6568	0.0000	27.5339
Total		**11.1138**	**0.6568**	**0.0000**	**27.5339**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

TREDC Hotel Project

Humboldt County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	100.00	Room	0.40	17,424.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	103
Climate Zone	1			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Refer to Project Description

Construction Phase -

Demolition -

Vehicle Trips - Refer to CalEEMod input table

Construction Off-road Equipment Mitigation - Refer to CalEEMod tables

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15

tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblLandUse	BuildingSpaceSquareFeet	145,200.00	17,424.00
tblLandUse	LandUseSquareFeet	145,200.00	17,424.00
tblLandUse	LotAcreage	3.33	0.40
tblProjectCharacteristics	OperationalYear	2018	2040
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	CC_TL	6.60	24.00
tblVehicleTrips	CNW_TL	6.60	24.00
tblVehicleTrips	CW_TL	14.70	24.00
tblVehicleTrips	ST_TR	8.19	5.73
tblVehicleTrips	SU_TR	5.95	4.17
tblVehicleTrips	WD_TR	8.17	5.72

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.2876	0.8370	0.5523	9.2000e-004	0.0475	0.0506	0.0982	8.5900e-003	0.0468	0.0554	0.0000	85.3120	85.3120	0.0196	0.0000	85.8012
Maximum	**0.2876**	**0.8370**	**0.5523**	**9.2000e-004**	**0.0475**	**0.0506**	**0.0982**	**8.5900e-003**	**0.0468**	**0.0554**	**0.0000**	**85.3120**	**85.3120**	**0.0196**	**0.0000**	**85.8012**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.2287	0.4604	0.5466	9.2000e-004	0.0265	4.5200e-003	0.0310	5.2400e-003	4.4700e-003	9.7100e-003	0.0000	85.3120	85.3120	0.0196	0.0000	85.8011
Maximum	**0.2287**	**0.4604**	**0.5466**	**9.2000e-004**	**0.0265**	**4.5200e-003**	**0.0310**	**5.2400e-003**	**4.4700e-003**	**9.7100e-003**	**0.0000**	**85.3120**	**85.3120**	**0.0196**	**0.0000**	**85.8011**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**20.46**	**44.99**	**1.03**	**0.00**	**44.33**	**91.07**	**68.46**	**39.00**	**90.45**	**82.47**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2017	8-31-2017	0.5375	0.3010
2	9-1-2017	9-30-2017	0.1577	0.0759
		Highest	0.5375	0.3010

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0883	1.0000e-005	9.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7900e-003	1.7900e-003	0.0000	0.0000	1.9000e-003
Energy	1.9600e-003	0.0178	0.0150	1.1000e-004		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	58.1311	58.1311	2.1200e-003	7.2000e-004	58.3982
Mobile	0.4794	3.1400	7.5618	0.0163	1.1780	0.0302	1.2082	0.3163	0.0286	0.3450	0.0000	1,483.5605	1,483.5605	0.0815	0.0000	1,485.5976
Waste						0.0000	0.0000		0.0000	0.0000	11.1138	0.0000	11.1138	0.6568	0.0000	27.5339
Water						0.0000	0.0000		0.0000	0.0000	0.8048	4.2800	5.0848	0.0829	1.9900e-003	7.7496
Total	**0.5696**	**3.1578**	**7.5777**	**0.0164**	**1.1780**	**0.0316**	**1.2095**	**0.3163**	**0.0300**	**0.3463**	**11.9185**	**1,545.9735**	**1,557.8920**	**0.8233**	**2.7100e-003**	**1,579.2811**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0883	1.0000e-005	9.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7900e-003	1.7900e-003	0.0000	0.0000	1.9000e-003
Energy	1.9600e-003	0.0178	0.0150	1.1000e-004		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	58.1311	58.1311	2.1200e-003	7.2000e-004	58.3982
Mobile	0.4794	3.1400	7.5618	0.0163	1.1780	0.0302	1.2082	0.3163	0.0286	0.3450	0.0000	1,483.5605	1,483.5605	0.0815	0.0000	1,485.5976
Waste						0.0000	0.0000		0.0000	0.0000	11.1138	0.0000	11.1138	0.6568	0.0000	27.5339
Water						0.0000	0.0000		0.0000	0.0000	0.6438	3.4814	4.1252	0.0663	1.5900e-003	6.2573
Total	**0.5696**	**3.1578**	**7.5777**	**0.0164**	**1.1780**	**0.0316**	**1.2095**	**0.3163**	**0.0300**	**0.3463**	**11.7576**	**1,545.1748**	**1,556.9324**	**0.8067**	**2.3100e-003**	**1,577.7888**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.35**	**0.05**	**0.06**	**2.01**	**14.76**	**0.09**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2017	6/14/2017	5	10	
2	Site Preparation	Site Preparation	6/15/2017	6/15/2017	5	1	
3	Grading	Grading	6/16/2017	6/19/2017	5	2	
4	Building Construction	Building Construction	6/20/2017	11/6/2017	5	100	
5	Paving	Paving	11/7/2017	11/13/2017	5	5	
6	Architectural Coating	Architectural Coating	11/14/2017	11/20/2017	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 26,136; Non-Residential Outdoor: 8,712; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	344.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	7.00	3.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0373	0.0000	0.0373	5.6400e-003	0.0000	5.6400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0500e-003	0.0525	0.0396	6.0000e-005		3.6600e-003	3.6600e-003		3.4900e-003	3.4900e-003	0.0000	5.3493	5.3493	1.0500e-003	0.0000	5.3755
Total	**6.0500e-003**	**0.0525**	**0.0396**	**6.0000e-005**	**0.0373**	**3.6600e-003**	**0.0409**	**5.6400e-003**	**3.4900e-003**	**9.1300e-003**	**0.0000**	**5.3493**	**5.3493**	**1.0500e-003**	**0.0000**	**5.3755**

3.2 Demolition - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.7100e-003	0.0703	0.0145	1.4000e-004	2.8300e-003	7.5000e-004	3.5700e-003	7.8000e-004	7.1000e-004	1.4900e-003	0.0000	13.3567	13.3567	4.9000e-004	0.0000	13.3690
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-004	7.3000e-004	5.7700e-003	1.0000e-005	6.0000e-004	1.0000e-005	6.1000e-004	1.6000e-004	1.0000e-005	1.7000e-004	0.0000	0.5892	0.5892	5.0000e-005	0.0000	0.5905
Total	**3.4100e-003**	**0.0710**	**0.0203**	**1.5000e-004**	**3.4300e-003**	**7.6000e-004**	**4.1800e-003**	**9.4000e-004**	**7.2000e-004**	**1.6600e-003**	**0.0000**	**13.9459**	**13.9459**	**5.4000e-004**	**0.0000**	**13.9595**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0168	0.0000	0.0168	2.5400e-003	0.0000	2.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3300e-003	0.0298	0.0397	6.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	5.3492	5.3492	1.0500e-003	0.0000	5.3755
Total	**1.3300e-003**	**0.0298**	**0.0397**	**6.0000e-005**	**0.0168**	**3.0000e-004**	**0.0171**	**2.5400e-003**	**3.0000e-004**	**2.8400e-003**	**0.0000**	**5.3492**	**5.3492**	**1.0500e-003**	**0.0000**	**5.3755**

3.2 Demolition - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.7100e-003	0.0703	0.0145	1.4000e-004	2.8300e-003	7.5000e-004	3.5700e-003	7.8000e-004	7.1000e-004	1.4900e-003	0.0000	13.3567	13.3567	4.9000e-004	0.0000	13.3690
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-004	7.3000e-004	5.7700e-003	1.0000e-005	6.0000e-004	1.0000e-005	6.1000e-004	1.6000e-004	1.0000e-005	1.7000e-004	0.0000	0.5892	0.5892	5.0000e-005	0.0000	0.5905
Total	**3.4100e-003**	**0.0710**	**0.0203**	**1.5000e-004**	**3.4300e-003**	**7.6000e-004**	**4.1800e-003**	**9.4000e-004**	**7.2000e-004**	**1.6600e-003**	**0.0000**	**13.9459**	**13.9459**	**5.4000e-004**	**0.0000**	**13.9595**

3.3 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3000e-004	5.2600e-003	2.1800e-003	0.0000		2.4000e-004	2.4000e-004		2.2000e-004	2.2000e-004	0.0000	0.4534	0.4534	1.4000e-004	0.0000	0.4569
Total	**4.3000e-004**	**5.2600e-003**	**2.1800e-003**	**0.0000**	**2.7000e-004**	**2.4000e-004**	**5.1000e-004**	**3.0000e-005**	**2.2000e-004**	**2.5000e-004**	**0.0000**	**0.4534**	**0.4534**	**1.4000e-004**	**0.0000**	**0.4569**

3.3 Site Preparation - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	4.0000e-005	2.9000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0295	0.0295	0.0000	0.0000	0.0295
Total	**3.0000e-005**	**4.0000e-005**	**2.9000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0295**	**0.0295**	**0.0000**	**0.0000**	**0.0295**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.2000e-004	0.0000	1.2000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2000e-004	2.4400e-003	2.9300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.4534	0.4534	1.4000e-004	0.0000	0.4569
Total	**1.2000e-004**	**2.4400e-003**	**2.9300e-003**	**0.0000**	**1.2000e-004**	**2.0000e-005**	**1.4000e-004**	**1.0000e-005**	**2.0000e-005**	**3.0000e-005**	**0.0000**	**0.4534**	**0.4534**	**1.4000e-004**	**0.0000**	**0.4569**

3.3 Site Preparation - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	4.0000e-005	2.9000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0295	0.0295	0.0000	0.0000	0.0295
Total	**3.0000e-005**	**4.0000e-005**	**2.9000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0295**	**0.0295**	**0.0000**	**0.0000**	**0.0295**

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2100e-003	0.0105	7.9200e-003	1.0000e-005		7.3000e-004	7.3000e-004		7.0000e-004	7.0000e-004	0.0000	1.0699	1.0699	2.1000e-004	0.0000	1.0751
Total	**1.2100e-003**	**0.0105**	**7.9200e-003**	**1.0000e-005**	**7.5000e-004**	**7.3000e-004**	**1.4800e-003**	**4.1000e-004**	**7.0000e-004**	**1.1100e-003**	**0.0000**	**1.0699**	**1.0699**	**2.1000e-004**	**0.0000**	**1.0751**

3.4 Grading - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	1.5000e-004	1.1500e-003	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1178	0.1178	1.0000e-005	0.0000	0.1181
Total	**1.4000e-004**	**1.5000e-004**	**1.1500e-003**	**0.0000**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1178**	**0.1178**	**1.0000e-005**	**0.0000**	**0.1181**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.4000e-004	0.0000	3.4000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7000e-004	5.9600e-003	7.9400e-003	1.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	1.0699	1.0699	2.1000e-004	0.0000	1.0751
Total	**2.7000e-004**	**5.9600e-003**	**7.9400e-003**	**1.0000e-005**	**3.4000e-004**	**6.0000e-005**	**4.0000e-004**	**1.9000e-004**	**6.0000e-005**	**2.5000e-004**	**0.0000**	**1.0699**	**1.0699**	**2.1000e-004**	**0.0000**	**1.0751**

3.4 Grading - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	1.5000e-004	1.1500e-003	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1178	0.1178	1.0000e-005	0.0000	0.1181
Total	**1.4000e-004**	**1.5000e-004**	**1.1500e-003**	**0.0000**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1178**	**0.1178**	**1.0000e-005**	**0.0000**	**0.1181**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0641	0.6380	0.4035	5.7000e-004		0.0430	0.0430		0.0395	0.0395	0.0000	52.8851	52.8851	0.0162	0.0000	53.2902
Total	**0.0641**	**0.6380**	**0.4035**	**5.7000e-004**		**0.0430**	**0.0430**		**0.0395**	**0.0395**	**0.0000**	**52.8851**	**52.8851**	**0.0162**	**0.0000**	**53.2902**

3.5 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3400e-003	0.0234	8.4100e-003	4.0000e-005	8.7000e-004	2.9000e-004	1.1600e-003	2.5000e-004	2.8000e-004	5.3000e-004	0.0000	3.6777	3.6777	2.4000e-004	0.0000	3.6837
Worker	4.8700e-003	5.1200e-003	0.0404	5.0000e-005	4.2000e-003	5.0000e-005	4.2500e-003	1.1200e-003	5.0000e-005	1.1600e-003	0.0000	4.1245	4.1245	3.6000e-004	0.0000	4.1336
Total	**6.2100e-003**	**0.0285**	**0.0488**	**9.0000e-005**	**5.0700e-003**	**3.4000e-004**	**5.4100e-003**	**1.3700e-003**	**3.3000e-004**	**1.6900e-003**	**0.0000**	**7.8022**	**7.8022**	**6.0000e-004**	**0.0000**	**7.8173**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0140	0.3065	0.3981	5.7000e-004		2.8900e-003	2.8900e-003		2.8900e-003	2.8900e-003	0.0000	52.8850	52.8850	0.0162	0.0000	53.2901
Total	**0.0140**	**0.3065**	**0.3981**	**5.7000e-004**		**2.8900e-003**	**2.8900e-003**		**2.8900e-003**	**2.8900e-003**	**0.0000**	**52.8850**	**52.8850**	**0.0162**	**0.0000**	**53.2901**

3.5 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3400e-003	0.0234	8.4100e-003	4.0000e-005	8.7000e-004	2.9000e-004	1.1600e-003	2.5000e-004	2.8000e-004	5.3000e-004	0.0000	3.6777	3.6777	2.4000e-004	0.0000	3.6837
Worker	4.8700e-003	5.1200e-003	0.0404	5.0000e-005	4.2000e-003	5.0000e-005	4.2500e-003	1.1200e-003	5.0000e-005	1.1600e-003	0.0000	4.1245	4.1245	3.6000e-004	0.0000	4.1336
Total	**6.2100e-003**	**0.0285**	**0.0488**	**9.0000e-005**	**5.0700e-003**	**3.4000e-004**	**5.4100e-003**	**1.3700e-003**	**3.3000e-004**	**1.6900e-003**	**0.0000**	**7.8022**	**7.8022**	**6.0000e-004**	**0.0000**	**7.8173**

3.6 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.6300e-003	0.0249	0.0184	3.0000e-005		1.5200e-003	1.5200e-003		1.4100e-003	1.4100e-003	0.0000	2.4610	2.4610	6.8000e-004	0.0000	2.4781
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.6300e-003**	**0.0249**	**0.0184**	**3.0000e-005**		**1.5200e-003**	**1.5200e-003**		**1.4100e-003**	**1.4100e-003**	**0.0000**	**2.4610**	**2.4610**	**6.8000e-004**	**0.0000**	**2.4781**

3.6 Paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3000e-004	6.6000e-004	5.2000e-003	1.0000e-005	5.4000e-004	1.0000e-005	5.5000e-004	1.4000e-004	1.0000e-005	1.5000e-004	0.0000	0.5303	0.5303	5.0000e-005	0.0000	0.5315
Total	**6.3000e-004**	**6.6000e-004**	**5.2000e-003**	**1.0000e-005**	**5.4000e-004**	**1.0000e-005**	**5.5000e-004**	**1.4000e-004**	**1.0000e-005**	**1.5000e-004**	**0.0000**	**0.5303**	**0.5303**	**5.0000e-005**	**0.0000**	**0.5315**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.6000e-004	0.0119	0.0173	3.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	2.4610	2.4610	6.8000e-004	0.0000	2.4781
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.6000e-004**	**0.0119**	**0.0173**	**3.0000e-005**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**	**0.0000**	**2.4610**	**2.4610**	**6.8000e-004**	**0.0000**	**2.4781**

3.6 Paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3000e-004	6.6000e-004	5.2000e-003	1.0000e-005	5.4000e-004	1.0000e-005	5.5000e-004	1.4000e-004	1.0000e-005	1.5000e-004	0.0000	0.5303	0.5303	5.0000e-005	0.0000	0.5315
Total	**6.3000e-004**	**6.6000e-004**	**5.2000e-003**	**1.0000e-005**	**5.4000e-004**	**1.0000e-005**	**5.5000e-004**	**1.4000e-004**	**1.0000e-005**	**1.5000e-004**	**0.0000**	**0.5303**	**0.5303**	**5.0000e-005**	**0.0000**	**0.5315**

3.7 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2019					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.3000e-004	5.4600e-003	4.6700e-003	1.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004	0.0000	0.6383	0.6383	7.0000e-005	0.0000	0.6400
Total	**0.2027**	**5.4600e-003**	**4.6700e-003**	**1.0000e-005**		**4.3000e-004**	**4.3000e-004**		**4.3000e-004**	**4.3000e-004**	**0.0000**	**0.6383**	**0.6383**	**7.0000e-005**	**0.0000**	**0.6400**

3.7 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	4.0000e-005	2.9000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0295	0.0295	0.0000	0.0000	0.0295
Total	**3.0000e-005**	**4.0000e-005**	**2.9000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0295**	**0.0295**	**0.0000**	**0.0000**	**0.0295**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2019					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5000e-004	3.3900e-003	4.5800e-003	1.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.6383	0.6383	7.0000e-005	0.0000	0.6400
Total	**0.2021**	**3.3900e-003**	**4.5800e-003**	**1.0000e-005**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.6383**	**0.6383**	**7.0000e-005**	**0.0000**	**0.6400**

3.7 Architectural Coating - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	4.0000e-005	2.9000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0295	0.0295	0.0000	0.0000	0.0295
Total	**3.0000e-005**	**4.0000e-005**	**2.9000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0295**	**0.0295**	**0.0000**	**0.0000**	**0.0295**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4794	3.1400	7.5618	0.0163	1.1780	0.0302	1.2082	0.3163	0.0286	0.3450	0.0000	1,483.5605	1,483.5605	0.0815	0.0000	1,485.5976
Unmitigated	0.4794	3.1400	7.5618	0.0163	1.1780	0.0302	1.2082	0.3163	0.0286	0.3450	0.0000	1,483.5605	1,483.5605	0.0815	0.0000	1,485.5976

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hotel	572.00	573.00	417.00	3,244,041	3,244,041
Total	572.00	573.00	417.00	3,244,041	3,244,041

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hotel	24.00	24.00	24.00	19.40	61.60	19.00	58	38	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Hotel	0.555197	0.027252	0.217244	0.114264	0.010253	0.002787	0.012651	0.049427	0.004514	0.000798	0.003917	0.001338	0.000357

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	38.7260	38.7260	1.7500e-003	3.6000e-004	38.8777
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	38.7260	38.7260	1.7500e-003	3.6000e-004	38.8777
NaturalGas Mitigated	1.9600e-003	0.0178	0.0150	1.1000e-004		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	19.4052	19.4052	3.7000e-004	3.6000e-004	19.5205
NaturalGas Unmitigated	1.9600e-003	0.0178	0.0150	1.1000e-004		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	19.4052	19.4052	3.7000e-004	3.6000e-004	19.5205

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hotel	363639	1.9600e-003	0.0178	0.0150	1.1000e-004		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	19.4052	19.4052	3.7000e-004	3.6000e-004	19.5205
Total		**1.9600e-003**	**0.0178**	**0.0150**	**1.1000e-004**		**1.3500e-003**	**1.3500e-003**		**1.3500e-003**	**1.3500e-003**	**0.0000**	**19.4052**	**19.4052**	**3.7000e-004**	**3.6000e-004**	**19.5205**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hotel	363639	1.9600e-003	0.0178	0.0150	1.1000e-004		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	19.4052	19.4052	3.7000e-004	3.6000e-004	19.5205
Total		**1.9600e-003**	**0.0178**	**0.0150**	**1.1000e-004**		**1.3500e-003**	**1.3500e-003**		**1.3500e-003**	**1.3500e-003**	**0.0000**	**19.4052**	**19.4052**	**3.7000e-004**	**3.6000e-004**	**19.5205**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hotel	133119	38.7260	1.7500e-003	3.6000e-004	38.8777
Total		**38.7260**	**1.7500e-003**	**3.6000e-004**	**38.8777**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hotel	133119	38.7260	1.7500e-003	3.6000e-004	38.8777
Total		**38.7260**	**1.7500e-003**	**3.6000e-004**	**38.8777**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0883	1.0000e-005	9.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7900e-003	1.7900e-003	0.0000	0.0000	1.9000e-003
Unmitigated	0.0883	1.0000e-005	9.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7900e-003	1.7900e-003	0.0000	0.0000	1.9000e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0202					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0681					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.0000e-005	1.0000e-005	9.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7900e-003	1.7900e-003	0.0000	0.0000	1.9000e-003
Total	**0.0883**	**1.0000e-005**	**9.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.7900e-003**	**1.7900e-003**	**0.0000**	**0.0000**	**1.9000e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0202					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0681					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.0000e-005	1.0000e-005	9.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7900e-003	1.7900e-003	0.0000	0.0000	1.9000e-003
Total	**0.0883**	**1.0000e-005**	**9.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.7900e-003**	**1.7900e-003**	**0.0000**	**0.0000**	**1.9000e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	4.1252	0.0663	1.5900e-003	6.2573
Unmitigated	5.0848	0.0829	1.9900e-003	7.7496

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hotel	2.53668 / 0.281853	5.0848	0.0829	1.9900e-003	7.7496
Total		**5.0848**	**0.0829**	**1.9900e-003**	**7.7496**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hotel	2.02934 / 0.281853	4.1252	0.0663	1.5900e-003	6.2573
Total		**4.1252**	**0.0663**	**1.5900e-003**	**6.2573**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	11.1138	0.6568	0.0000	27.5339
Unmitigated	11.1138	0.6568	0.0000	27.5339

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hotel	54.75	11.1138	0.6568	0.0000	27.5339
Total		**11.1138**	**0.6568**	**0.0000**	**27.5339**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hotel	54.75	11.1138	0.6568	0.0000	27.5339
Total		**11.1138**	**0.6568**	**0.0000**	**27.5339**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

TREDC Hotel Project

Humboldt County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	100.00	Room	0.40	17,424.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	103
Climate Zone	1			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Refer to Project Description

Construction Phase -

Vehicle Trips - Refer to CalEEMod input table

Demolition -

Construction Off-road Equipment Mitigation - Refer to CalEEMod tables

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15

tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblLandUse	BuildingSpaceSquareFeet	145,200.00	17,424.00
tblLandUse	LandUseSquareFeet	145,200.00	17,424.00
tblLandUse	LotAcreage	3.33	0.40
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	CC_TL	6.60	24.00
tblVehicleTrips	CNW_TL	6.60	24.00
tblVehicleTrips	CW_TL	14.70	24.00
tblVehicleTrips	ST_TR	8.19	5.73
tblVehicleTrips	SU_TR	5.95	4.17
tblVehicleTrips	WD_TR	8.17	5.72

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	81.1053	24.6354	11.8194	0.0416	8.1808	0.8815	9.0623	1.3262	0.8410	2.1671	0.0000	4,273.6205	4,273.6205	0.3702	0.0000	4,282.2977
Maximum	**81.1053**	**24.6354**	**11.8194**	**0.0416**	**8.1808**	**0.8815**	**9.0623**	**1.3262**	**0.8410**	**2.1671**	**0.0000**	**4,273.6205**	**4,273.6205**	**0.3702**	**0.0000**	**4,282.2977**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	80.8324	20.1020	11.8392	0.0416	4.0803	0.2100	4.2903	0.7053	0.2035	0.9088	0.0000	4,273.6205	4,273.6205	0.3702	0.0000	4,282.2977
Maximum	**80.8324**	**20.1020**	**11.8392**	**0.0416**	**4.0803**	**0.2100**	**4.2903**	**0.7053**	**0.2035**	**0.9088**	**0.0000**	**4,273.6205**	**4,273.6205**	**0.3702**	**0.0000**	**4,282.2977**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.34**	**18.40**	**-0.17**	**0.00**	**50.12**	**76.18**	**52.66**	**46.82**	**75.81**	**58.06**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4845	1.0000e-004	0.0104	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0219	0.0219	6.0000e-005		0.0234
Energy	0.0107	0.0977	0.0821	5.9000e-004		7.4200e-003	7.4200e-003		7.4200e-003	7.4200e-003		117.2083	117.2083	2.2500e-003	2.1500e-003	117.9049
Mobile	3.3509	21.7434	48.6571	0.0975	7.2338	0.2144	7.4481	1.9420	0.2034	2.1454		9,813.8772	9,813.8772	0.6002		9,828.8810
Total	**3.8462**	**21.8411**	**48.7495**	**0.0981**	**7.2338**	**0.2218**	**7.4556**	**1.9420**	**0.2109**	**2.1528**		**9,931.1074**	**9,931.1074**	**0.6025**	**2.1500e-003**	**9,946.8092**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4845	1.0000e-004	0.0104	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0219	0.0219	6.0000e-005		0.0234
Energy	0.0107	0.0977	0.0821	5.9000e-004		7.4200e-003	7.4200e-003		7.4200e-003	7.4200e-003		117.2083	117.2083	2.2500e-003	2.1500e-003	117.9049
Mobile	3.3509	21.7434	48.6571	0.0975	7.2338	0.2144	7.4481	1.9420	0.2034	2.1454		9,813.8772	9,813.8772	0.6002		9,828.8810
Total	**3.8462**	**21.8411**	**48.7495**	**0.0981**	**7.2338**	**0.2218**	**7.4556**	**1.9420**	**0.2109**	**2.1528**		**9,931.1074**	**9,931.1074**	**0.6025**	**2.1500e-003**	**9,946.8092**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2017	6/14/2017	5	10	
2	Site Preparation	Site Preparation	6/15/2017	6/15/2017	5	1	
3	Grading	Grading	6/16/2017	6/19/2017	5	2	
4	Building Construction	Building Construction	6/20/2017	11/6/2017	5	100	
5	Architectural Coating	Architectural Coating	11/14/2017	11/20/2017	5	5	
6	Paving	Paving	11/7/2017	11/13/2017	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 26,136; Non-Residential Outdoor: 8,712; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	344.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	7.00	3.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.4554	0.0000	7.4554	1.1288	0.0000	1.1288			0.0000			0.0000
Off-Road	1.2100	10.4978	7.9182	0.0120		0.7318	0.7318		0.6978	0.6978		1,179.3075	1,179.3075	0.2319		1,185.1047
Total	**1.2100**	**10.4978**	**7.9182**	**0.0120**	**7.4554**	**0.7318**	**8.1872**	**1.1288**	**0.6978**	**1.8266**		**1,179.3075**	**1,179.3075**	**0.2319**		**1,185.1047**

3.2 Demolition - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.5350	14.0022	2.7854	0.0283	0.5977	0.1483	0.7460	0.1635	0.1419	0.3054		2,964.4853	2,964.4853	0.1039		2,967.0835
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1273	0.1354	1.1158	1.3100e-003	0.1277	1.4000e-003	0.1291	0.0339	1.3000e-003	0.0352		129.8277	129.8277	0.0113		130.1095
Total	**0.6623**	**14.1376**	**3.9011**	**0.0296**	**0.7254**	**0.1497**	**0.8751**	**0.1974**	**0.1432**	**0.3406**		**3,094.3130**	**3,094.3130**	**0.1152**		**3,097.1929**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3549	0.0000	3.3549	0.5080	0.0000	0.5080			0.0000			0.0000
Off-Road	0.2652	5.9644	7.9381	0.0120		0.0603	0.0603		0.0603	0.0603	0.0000	1,179.3075	1,179.3075	0.2319		1,185.1047
Total	**0.2652**	**5.9644**	**7.9381**	**0.0120**	**3.3549**	**0.0603**	**3.4152**	**0.5080**	**0.0603**	**0.5682**	**0.0000**	**1,179.3075**	**1,179.3075**	**0.2319**		**1,185.1047**

3.2 Demolition - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.5350	14.0022	2.7854	0.0283	0.5977	0.1483	0.7460	0.1635	0.1419	0.3054		2,964.4853	2,964.4853	0.1039		2,967.0835
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1273	0.1354	1.1158	1.3100e-003	0.1277	1.4000e-003	0.1291	0.0339	1.3000e-003	0.0352		129.8277	129.8277	0.0113		130.1095
Total	**0.6623**	**14.1376**	**3.9011**	**0.0296**	**0.7254**	**0.1497**	**0.8751**	**0.1974**	**0.1432**	**0.3406**		**3,094.3130**	**3,094.3130**	**0.1152**		**3,097.1929**

3.3 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.8524	10.5148	4.3533	9.7700e-003		0.4726	0.4726		0.4347	0.4347		999.5201	999.5201	0.3063		1,007.1764
Total	**0.8524**	**10.5148**	**4.3533**	**9.7700e-003**	**0.5303**	**0.4726**	**1.0028**	**0.0573**	**0.4347**	**0.4920**		**999.5201**	**999.5201**	**0.3063**		**1,007.1764**

3.3 Site Preparation - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0637	0.0677	0.5579	6.6000e-004	0.0639	7.0000e-004	0.0646	0.0169	6.5000e-004	0.0176		64.9139	64.9139	5.6400e-003		65.0547
Total	**0.0637**	**0.0677**	**0.5579**	**6.6000e-004**	**0.0639**	**7.0000e-004**	**0.0646**	**0.0169**	**6.5000e-004**	**0.0176**		**64.9139**	**64.9139**	**5.6400e-003**		**65.0547**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2386	0.0000	0.2386	0.0258	0.0000	0.0258			0.0000			0.0000
Off-Road	0.2382	4.8716	5.8579	9.7700e-003		0.0361	0.0361		0.0361	0.0361	0.0000	999.5201	999.5201	0.3063		1,007.1764
Total	**0.2382**	**4.8716**	**5.8579**	**9.7700e-003**	**0.2386**	**0.0361**	**0.2747**	**0.0258**	**0.0361**	**0.0618**	**0.0000**	**999.5201**	**999.5201**	**0.3063**		**1,007.1764**

3.3 Site Preparation - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0637	0.0677	0.5579	6.6000e-004	0.0639	7.0000e-004	0.0646	0.0169	6.5000e-004	0.0176		64.9139	64.9139	5.6400e-003		65.0547
Total	**0.0637**	**0.0677**	**0.5579**	**6.6000e-004**	**0.0639**	**7.0000e-004**	**0.0646**	**0.0169**	**6.5000e-004**	**0.0176**		**64.9139**	**64.9139**	**5.6400e-003**		**65.0547**

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	1.2100	10.4978	7.9182	0.0120		0.7318	0.7318		0.6978	0.6978		1,179.3075	1,179.3075	0.2319		1,185.1047
Total	**1.2100**	**10.4978**	**7.9182**	**0.0120**	**0.7528**	**0.7318**	**1.4845**	**0.4138**	**0.6978**	**1.1115**		**1,179.3075**	**1,179.3075**	**0.2319**		**1,185.1047**

3.4 Grading - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1273	0.1354	1.1158	1.3100e-003	0.1277	1.4000e-003	0.1291	0.0339	1.3000e-003	0.0352		129.8277	129.8277	0.0113		130.1095
Total	**0.1273**	**0.1354**	**1.1158**	**1.3100e-003**	**0.1277**	**1.4000e-003**	**0.1291**	**0.0339**	**1.3000e-003**	**0.0352**		**129.8277**	**129.8277**	**0.0113**		**130.1095**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3387	0.0000	0.3387	0.1862	0.0000	0.1862			0.0000			0.0000
Off-Road	0.2652	5.9644	7.9381	0.0120		0.0603	0.0603		0.0603	0.0603	0.0000	1,179.3075	1,179.3075	0.2319		1,185.1047
Total	**0.2652**	**5.9644**	**7.9381**	**0.0120**	**0.3387**	**0.0603**	**0.3990**	**0.1862**	**0.0603**	**0.2465**	**0.0000**	**1,179.3075**	**1,179.3075**	**0.2319**		**1,185.1047**

3.4 Grading - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1273	0.1354	1.1158	1.3100e-003	0.1277	1.4000e-003	0.1291	0.0339	1.3000e-003	0.0352		129.8277	129.8277	0.0113		130.1095
Total	**0.1273**	**0.1354**	**1.1158**	**1.3100e-003**	**0.1277**	**1.4000e-003**	**0.1291**	**0.0339**	**1.3000e-003**	**0.0352**		**129.8277**	**129.8277**	**0.0113**		**130.1095**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2812	12.7589	8.0700	0.0114		0.8591	0.8591		0.7904	0.7904		1,165.9164	1,165.9164	0.3572		1,174.8473
Total	**1.2812**	**12.7589**	**8.0700**	**0.0114**		**0.8591**	**0.8591**		**0.7904**	**0.7904**		**1,165.9164**	**1,165.9164**	**0.3572**		**1,174.8473**

3.5 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0261	0.4675	0.1585	7.9000e-004	0.0183	5.7400e-003	0.0241	5.2700e-003	5.5000e-003	0.0108		81.9745	81.9745	5.1100e-003		82.1023
Worker	0.0891	0.0948	0.7811	9.2000e-004	0.0894	9.8000e-004	0.0904	0.0237	9.1000e-004	0.0246		90.8794	90.8794	7.8900e-003		91.0766
Total	**0.1152**	**0.5622**	**0.9396**	**1.7100e-003**	**0.1077**	**6.7200e-003**	**0.1145**	**0.0290**	**6.4100e-003**	**0.0354**		**172.8539**	**172.8539**	**0.0130**		**173.1789**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2793	6.1296	7.9624	0.0114		0.0578	0.0578		0.0578	0.0578	0.0000	1,165.9164	1,165.9164	0.3572		1,174.8473
Total	**0.2793**	**6.1296**	**7.9624**	**0.0114**		**0.0578**	**0.0578**		**0.0578**	**0.0578**	**0.0000**	**1,165.9164**	**1,165.9164**	**0.3572**		**1,174.8473**

3.5 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0261	0.4675	0.1585	7.9000e-004	0.0183	5.7400e-003	0.0241	5.2700e-003	5.5000e-003	0.0108		81.9745	81.9745	5.1100e-003		82.1023
Worker	0.0891	0.0948	0.7811	9.2000e-004	0.0894	9.8000e-004	0.0904	0.0237	9.1000e-004	0.0246		90.8794	90.8794	7.8900e-003		91.0766
Total	**0.1152**	**0.5622**	**0.9396**	**1.7100e-003**	**0.1077**	**6.7200e-003**	**0.1145**	**0.0290**	**6.4100e-003**	**0.0354**		**172.8539**	**172.8539**	**0.0130**		**173.1789**

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	80.7602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909
Total	**81.0926**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.1909**

3.6 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0127	0.0135	0.1116	1.3000e-004	0.0128	1.4000e-004	0.0129	3.3900e-003	1.3000e-004	3.5200e-003		12.9828	12.9828	1.1300e-003		13.0110
Total	**0.0127**	**0.0135**	**0.1116**	**1.3000e-004**	**0.0128**	**1.4000e-004**	**0.0129**	**3.3900e-003**	**1.3000e-004**	**3.5200e-003**		**12.9828**	**12.9828**	**1.1300e-003**		**13.0110**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	80.7602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0143	0.0143		0.0143	0.0143	0.0000	281.4481	281.4481	0.0297		282.1909
Total	**80.8197**	**1.3570**	**1.8324**	**2.9700e-003**		**0.0143**	**0.0143**		**0.0143**	**0.0143**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.1909**

3.6 Architectural Coating - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0127	0.0135	0.1116	1.3000e-004	0.0128	1.4000e-004	0.0129	3.3900e-003	1.3000e-004	3.5200e-003		12.9828	12.9828	1.1300e-003		13.0110
Total	**0.0127**	**0.0135**	**0.1116**	**1.3000e-004**	**0.0128**	**1.4000e-004**	**0.0129**	**3.3900e-003**	**1.3000e-004**	**3.5200e-003**		**12.9828**	**12.9828**	**1.1300e-003**		**13.0110**

3.7 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0532	9.9754	7.3425	0.0113		0.6087	0.6087		0.5636	0.5636		1,085.1071	1,085.1071	0.3018		1,092.6515
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0532**	**9.9754**	**7.3425**	**0.0113**		**0.6087**	**0.6087**		**0.5636**	**0.5636**		**1,085.1071**	**1,085.1071**	**0.3018**		**1,092.6515**

3.7 Paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2291	0.2437	2.0084	2.3700e-003	0.2299	2.5300e-003	0.2324	0.0610	2.3400e-003	0.0633		233.6899	233.6899	0.0203		234.1970
Total	**0.2291**	**0.2437**	**2.0084**	**2.3700e-003**	**0.2299**	**2.5300e-003**	**0.2324**	**0.0610**	**2.3400e-003**	**0.0633**		**233.6899**	**233.6899**	**0.0203**		**234.1970**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2239	4.7579	6.9028	0.0113		0.0436	0.0436		0.0436	0.0436	0.0000	1,085.1071	1,085.1071	0.3018		1,092.6515
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2239**	**4.7579**	**6.9028**	**0.0113**		**0.0436**	**0.0436**		**0.0436**	**0.0436**	**0.0000**	**1,085.1071**	**1,085.1071**	**0.3018**		**1,092.6515**

3.7 Paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2291	0.2437	2.0084	2.3700e-003	0.2299	2.5300e-003	0.2324	0.0610	2.3400e-003	0.0633		233.6899	233.6899	0.0203		234.1970
Total	**0.2291**	**0.2437**	**2.0084**	**2.3700e-003**	**0.2299**	**2.5300e-003**	**0.2324**	**0.0610**	**2.3400e-003**	**0.0633**		**233.6899**	**233.6899**	**0.0203**		**234.1970**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.3509	21.7434	48.6571	0.0975	7.2338	0.2144	7.4481	1.9420	0.2034	2.1454		9,813.8772	9,813.8772	0.6002		9,828.8810
Unmitigated	3.3509	21.7434	48.6571	0.0975	7.2338	0.2144	7.4481	1.9420	0.2034	2.1454		9,813.8772	9,813.8772	0.6002		9,828.8810

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hotel	572.00	573.00	417.00	3,244,041	3,244,041
Total	572.00	573.00	417.00	3,244,041	3,244,041

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hotel	24.00	24.00	24.00	19.40	61.60	19.00	58	38	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Hotel	0.448795	0.060687	0.206149	0.145887	0.057916	0.009282	0.014626	0.042627	0.002929	0.001905	0.006409	0.001553	0.001236

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0107	0.0977	0.0821	5.9000e-004		7.4200e-003	7.4200e-003		7.4200e-003	7.4200e-003		117.2083	117.2083	2.2500e-003	2.1500e-003	117.9049
NaturalGas Unmitigated	0.0107	0.0977	0.0821	5.9000e-004		7.4200e-003	7.4200e-003		7.4200e-003	7.4200e-003		117.2083	117.2083	2.2500e-003	2.1500e-003	117.9049

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hotel	996.271	0.0107	0.0977	0.0821	5.9000e-004		7.4200e-003	7.4200e-003		7.4200e-003	7.4200e-003		117.2083	117.2083	2.2500e-003	2.1500e-003	117.9049
Total		**0.0107**	**0.0977**	**0.0821**	**5.9000e-004**		**7.4200e-003**	**7.4200e-003**		**7.4200e-003**	**7.4200e-003**		**117.2083**	**117.2083**	**2.2500e-003**	**2.1500e-003**	**117.9049**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hotel	0.996271	0.0107	0.0977	0.0821	5.9000e-004		7.4200e-003	7.4200e-003		7.4200e-003	7.4200e-003		117.2083	117.2083	2.2500e-003	2.1500e-003	117.9049
Total		**0.0107**	**0.0977**	**0.0821**	**5.9000e-004**		**7.4200e-003**	**7.4200e-003**		**7.4200e-003**	**7.4200e-003**		**117.2083**	**117.2083**	**2.2500e-003**	**2.1500e-003**	**117.9049**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4845	1.0000e-004	0.0104	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0219	0.0219	6.0000e-005		0.0234
Unmitigated	0.4845	1.0000e-004	0.0104	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0219	0.0219	6.0000e-005		0.0234

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1106					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3729					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.9000e-004	1.0000e-004	0.0104	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0219	0.0219	6.0000e-005		0.0234
Total	**0.4845**	**1.0000e-004**	**0.0104**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0219**	**0.0219**	**6.0000e-005**		**0.0234**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1106					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3729					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.9000e-004	1.0000e-004	0.0104	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0219	0.0219	6.0000e-005		0.0234
Total	**0.4845**	**1.0000e-004**	**0.0104**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0219**	**0.0219**	**6.0000e-005**		**0.0234**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

TREDC Hotel Project

Humboldt County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	100.00	Room	0.40	17,424.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	103
Climate Zone	1			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Refer to Project Description

Construction Phase -

Demolition -

Vehicle Trips - Refer to CalEEMod input table

Construction Off-road Equipment Mitigation - Refer to CalEEMod tables

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15

tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblLandUse	BuildingSpaceSquareFeet	145,200.00	17,424.00
tblLandUse	LandUseSquareFeet	145,200.00	17,424.00
tblLandUse	LotAcreage	3.33	0.40
tblProjectCharacteristics	OperationalYear	2018	2040
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	CC_TL	6.60	24.00
tblVehicleTrips	CNW_TL	6.60	24.00
tblVehicleTrips	CW_TL	14.70	24.00
tblVehicleTrips	ST_TR	8.19	5.73
tblVehicleTrips	SU_TR	5.95	4.17
tblVehicleTrips	WD_TR	8.17	5.72

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	81.1053	24.6354	11.8194	0.0416	8.1808	0.8815	9.0623	1.3262	0.8410	2.1671	0.0000	4,273.6205	4,273.6205	0.3702	0.0000	4,282.2977
Maximum	**81.1053**	**24.6354**	**11.8194**	**0.0416**	**8.1808**	**0.8815**	**9.0623**	**1.3262**	**0.8410**	**2.1671**	**0.0000**	**4,273.6205**	**4,273.6205**	**0.3702**	**0.0000**	**4,282.2977**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	80.8324	20.1020	11.8392	0.0416	4.0803	0.2100	4.2903	0.7053	0.2035	0.9088	0.0000	4,273.6205	4,273.6205	0.3702	0.0000	4,282.2977
Maximum	**80.8324**	**20.1020**	**11.8392**	**0.0416**	**4.0803**	**0.2100**	**4.2903**	**0.7053**	**0.2035**	**0.9088**	**0.0000**	**4,273.6205**	**4,273.6205**	**0.3702**	**0.0000**	**4,282.2977**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.34**	**18.40**	**-0.17**	**0.00**	**50.12**	**76.18**	**52.66**	**46.82**	**75.81**	**58.06**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Area	0.4844	9.0000e-005	0.0101	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0219	0.0219	6.0000e-005		0.0233
Energy	0.0107	0.0977	0.0821	5.9000e-004		7.4200e-003	7.4200e-003		7.4200e-003	7.4200e-003		117.2083	117.2083	2.2500e-003	2.1500e-003	117.9049
Mobile	2.7193	17.5289	41.8999	0.0932	7.1760	0.1723	7.3483	1.9171	0.1632	2.0803		9,386.0600	9,386.0600	0.5076		9,398.7494
Total	**3.2145**	**17.6267**	**41.9921**	**0.0938**	**7.1760**	**0.1797**	**7.3558**	**1.9171**	**0.1707**	**2.0878**		**9,503.2902**	**9,503.2902**	**0.5099**	**2.1500e-003**	**9,516.6775**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Area	0.4844	9.0000e-005	0.0101	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0219	0.0219	6.0000e-005		0.0233
Energy	0.0107	0.0977	0.0821	5.9000e-004		7.4200e-003	7.4200e-003		7.4200e-003	7.4200e-003		117.2083	117.2083	2.2500e-003	2.1500e-003	117.9049
Mobile	2.7193	17.5289	41.8999	0.0932	7.1760	0.1723	7.3483	1.9171	0.1632	2.0803		9,386.0600	9,386.0600	0.5076		9,398.7494
Total	**3.2145**	**17.6267**	**41.9921**	**0.0938**	**7.1760**	**0.1797**	**7.3558**	**1.9171**	**0.1707**	**2.0878**		**9,503.2902**	**9,503.2902**	**0.5099**	**2.1500e-003**	**9,516.6775**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2017	6/14/2017	5	10	
2	Site Preparation	Site Preparation	6/15/2017	6/15/2017	5	1	
3	Grading	Grading	6/16/2017	6/19/2017	5	2	
4	Building Construction	Building Construction	6/20/2017	11/6/2017	5	100	
5	Paving	Paving	11/7/2017	11/13/2017	5	5	
6	Architectural Coating	Architectural Coating	11/14/2017	11/20/2017	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 26,136; Non-Residential Outdoor: 8,712; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

TREDC Hotel Project - Humboldt County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	344.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	7.00	3.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.4554	0.0000	7.4554	1.1288	0.0000	1.1288			0.0000			0.0000
Off-Road	1.2100	10.4978	7.9182	0.0120		0.7318	0.7318		0.6978	0.6978		1,179.3075	1,179.3075	0.2319		1,185.1047
Total	**1.2100**	**10.4978**	**7.9182**	**0.0120**	**7.4554**	**0.7318**	**8.1872**	**1.1288**	**0.6978**	**1.8266**		**1,179.3075**	**1,179.3075**	**0.2319**		**1,185.1047**

3.2 Demolition - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.5350	14.0022	2.7854	0.0283	0.5977	0.1483	0.7460	0.1635	0.1419	0.3054		2,964.4853	2,964.4853	0.1039		2,967.0835
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1273	0.1354	1.1158	1.3100e-003	0.1277	1.4000e-003	0.1291	0.0339	1.3000e-003	0.0352		129.8277	129.8277	0.0113		130.1095
Total	**0.6623**	**14.1376**	**3.9011**	**0.0296**	**0.7254**	**0.1497**	**0.8751**	**0.1974**	**0.1432**	**0.3406**		**3,094.3130**	**3,094.3130**	**0.1152**		**3,097.1929**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3549	0.0000	3.3549	0.5080	0.0000	0.5080			0.0000			0.0000
Off-Road	0.2652	5.9644	7.9381	0.0120		0.0603	0.0603		0.0603	0.0603	0.0000	1,179.3075	1,179.3075	0.2319		1,185.1047
Total	**0.2652**	**5.9644**	**7.9381**	**0.0120**	**3.3549**	**0.0603**	**3.4152**	**0.5080**	**0.0603**	**0.5682**	**0.0000**	**1,179.3075**	**1,179.3075**	**0.2319**		**1,185.1047**

3.2 Demolition - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.5350	14.0022	2.7854	0.0283	0.5977	0.1483	0.7460	0.1635	0.1419	0.3054		2,964.4853	2,964.4853	0.1039		2,967.0835
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1273	0.1354	1.1158	1.3100e-003	0.1277	1.4000e-003	0.1291	0.0339	1.3000e-003	0.0352		129.8277	129.8277	0.0113		130.1095
Total	**0.6623**	**14.1376**	**3.9011**	**0.0296**	**0.7254**	**0.1497**	**0.8751**	**0.1974**	**0.1432**	**0.3406**		**3,094.3130**	**3,094.3130**	**0.1152**		**3,097.1929**

3.3 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.8524	10.5148	4.3533	9.7700e-003		0.4726	0.4726		0.4347	0.4347		999.5201	999.5201	0.3063		1,007.1764
Total	**0.8524**	**10.5148**	**4.3533**	**9.7700e-003**	**0.5303**	**0.4726**	**1.0028**	**0.0573**	**0.4347**	**0.4920**		**999.5201**	**999.5201**	**0.3063**		**1,007.1764**

3.3 Site Preparation - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0637	0.0677	0.5579	6.6000e-004	0.0639	7.0000e-004	0.0646	0.0169	6.5000e-004	0.0176		64.9139	64.9139	5.6400e-003		65.0547
Total	**0.0637**	**0.0677**	**0.5579**	**6.6000e-004**	**0.0639**	**7.0000e-004**	**0.0646**	**0.0169**	**6.5000e-004**	**0.0176**		**64.9139**	**64.9139**	**5.6400e-003**		**65.0547**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2386	0.0000	0.2386	0.0258	0.0000	0.0258			0.0000			0.0000
Off-Road	0.2382	4.8716	5.8579	9.7700e-003		0.0361	0.0361		0.0361	0.0361	0.0000	999.5201	999.5201	0.3063		1,007.1764
Total	**0.2382**	**4.8716**	**5.8579**	**9.7700e-003**	**0.2386**	**0.0361**	**0.2747**	**0.0258**	**0.0361**	**0.0618**	**0.0000**	**999.5201**	**999.5201**	**0.3063**		**1,007.1764**

3.3 Site Preparation - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0637	0.0677	0.5579	6.6000e-004	0.0639	7.0000e-004	0.0646	0.0169	6.5000e-004	0.0176		64.9139	64.9139	5.6400e-003		65.0547
Total	**0.0637**	**0.0677**	**0.5579**	**6.6000e-004**	**0.0639**	**7.0000e-004**	**0.0646**	**0.0169**	**6.5000e-004**	**0.0176**		**64.9139**	**64.9139**	**5.6400e-003**		**65.0547**

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	1.2100	10.4978	7.9182	0.0120		0.7318	0.7318		0.6978	0.6978		1,179.3075	1,179.3075	0.2319		1,185.1047
Total	**1.2100**	**10.4978**	**7.9182**	**0.0120**	**0.7528**	**0.7318**	**1.4845**	**0.4138**	**0.6978**	**1.1115**		**1,179.3075**	**1,179.3075**	**0.2319**		**1,185.1047**

3.4 Grading - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1273	0.1354	1.1158	1.3100e-003	0.1277	1.4000e-003	0.1291	0.0339	1.3000e-003	0.0352		129.8277	129.8277	0.0113		130.1095
Total	**0.1273**	**0.1354**	**1.1158**	**1.3100e-003**	**0.1277**	**1.4000e-003**	**0.1291**	**0.0339**	**1.3000e-003**	**0.0352**		**129.8277**	**129.8277**	**0.0113**		**130.1095**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3387	0.0000	0.3387	0.1862	0.0000	0.1862			0.0000			0.0000
Off-Road	0.2652	5.9644	7.9381	0.0120		0.0603	0.0603		0.0603	0.0603	0.0000	1,179.3075	1,179.3075	0.2319		1,185.1047
Total	**0.2652**	**5.9644**	**7.9381**	**0.0120**	**0.3387**	**0.0603**	**0.3990**	**0.1862**	**0.0603**	**0.2465**	**0.0000**	**1,179.3075**	**1,179.3075**	**0.2319**		**1,185.1047**

3.4 Grading - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1273	0.1354	1.1158	1.3100e-003	0.1277	1.4000e-003	0.1291	0.0339	1.3000e-003	0.0352		129.8277	129.8277	0.0113		130.1095
Total	**0.1273**	**0.1354**	**1.1158**	**1.3100e-003**	**0.1277**	**1.4000e-003**	**0.1291**	**0.0339**	**1.3000e-003**	**0.0352**		**129.8277**	**129.8277**	**0.0113**		**130.1095**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2812	12.7589	8.0700	0.0114		0.8591	0.8591		0.7904	0.7904		1,165.9164	1,165.9164	0.3572		1,174.8473
Total	**1.2812**	**12.7589**	**8.0700**	**0.0114**		**0.8591**	**0.8591**		**0.7904**	**0.7904**		**1,165.9164**	**1,165.9164**	**0.3572**		**1,174.8473**

3.5 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0261	0.4675	0.1585	7.9000e-004	0.0183	5.7400e-003	0.0241	5.2700e-003	5.5000e-003	0.0108		81.9745	81.9745	5.1100e-003		82.1023
Worker	0.0891	0.0948	0.7811	9.2000e-004	0.0894	9.8000e-004	0.0904	0.0237	9.1000e-004	0.0246		90.8794	90.8794	7.8900e-003		91.0766
Total	**0.1152**	**0.5622**	**0.9396**	**1.7100e-003**	**0.1077**	**6.7200e-003**	**0.1145**	**0.0290**	**6.4100e-003**	**0.0354**		**172.8539**	**172.8539**	**0.0130**		**173.1789**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2793	6.1296	7.9624	0.0114		0.0578	0.0578		0.0578	0.0578	0.0000	1,165.9164	1,165.9164	0.3572		1,174.8473
Total	**0.2793**	**6.1296**	**7.9624**	**0.0114**		**0.0578**	**0.0578**		**0.0578**	**0.0578**	**0.0000**	**1,165.9164**	**1,165.9164**	**0.3572**		**1,174.8473**

3.5 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0261	0.4675	0.1585	7.9000e-004	0.0183	5.7400e-003	0.0241	5.2700e-003	5.5000e-003	0.0108		81.9745	81.9745	5.1100e-003		82.1023
Worker	0.0891	0.0948	0.7811	9.2000e-004	0.0894	9.8000e-004	0.0904	0.0237	9.1000e-004	0.0246		90.8794	90.8794	7.8900e-003		91.0766
Total	**0.1152**	**0.5622**	**0.9396**	**1.7100e-003**	**0.1077**	**6.7200e-003**	**0.1145**	**0.0290**	**6.4100e-003**	**0.0354**		**172.8539**	**172.8539**	**0.0130**		**173.1789**

3.6 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0532	9.9754	7.3425	0.0113		0.6087	0.6087		0.5636	0.5636		1,085.1071	1,085.1071	0.3018		1,092.6515
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0532**	**9.9754**	**7.3425**	**0.0113**		**0.6087**	**0.6087**		**0.5636**	**0.5636**		**1,085.1071**	**1,085.1071**	**0.3018**		**1,092.6515**

3.6 Paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2291	0.2437	2.0084	2.3700e-003	0.2299	2.5300e-003	0.2324	0.0610	2.3400e-003	0.0633		233.6899	233.6899	0.0203		234.1970
Total	**0.2291**	**0.2437**	**2.0084**	**2.3700e-003**	**0.2299**	**2.5300e-003**	**0.2324**	**0.0610**	**2.3400e-003**	**0.0633**		**233.6899**	**233.6899**	**0.0203**		**234.1970**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2239	4.7579	6.9028	0.0113		0.0436	0.0436		0.0436	0.0436	0.0000	1,085.1071	1,085.1071	0.3018		1,092.6515
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2239**	**4.7579**	**6.9028**	**0.0113**		**0.0436**	**0.0436**		**0.0436**	**0.0436**	**0.0000**	**1,085.1071**	**1,085.1071**	**0.3018**		**1,092.6515**

3.6 Paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2291	0.2437	2.0084	2.3700e-003	0.2299	2.5300e-003	0.2324	0.0610	2.3400e-003	0.0633		233.6899	233.6899	0.0203		234.1970
Total	**0.2291**	**0.2437**	**2.0084**	**2.3700e-003**	**0.2299**	**2.5300e-003**	**0.2324**	**0.0610**	**2.3400e-003**	**0.0633**		**233.6899**	**233.6899**	**0.0203**		**234.1970**

3.7 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	80.7602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909
Total	**81.0926**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.1909**

3.7 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0127	0.0135	0.1116	1.3000e-004	0.0128	1.4000e-004	0.0129	3.3900e-003	1.3000e-004	3.5200e-003		12.9828	12.9828	1.1300e-003		13.0110
Total	**0.0127**	**0.0135**	**0.1116**	**1.3000e-004**	**0.0128**	**1.4000e-004**	**0.0129**	**3.3900e-003**	**1.3000e-004**	**3.5200e-003**		**12.9828**	**12.9828**	**1.1300e-003**		**13.0110**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	80.7602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0143	0.0143		0.0143	0.0143	0.0000	281.4481	281.4481	0.0297		282.1909
Total	**80.8197**	**1.3570**	**1.8324**	**2.9700e-003**		**0.0143**	**0.0143**		**0.0143**	**0.0143**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.1909**

3.7 Architectural Coating - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0127	0.0135	0.1116	1.3000e-004	0.0128	1.4000e-004	0.0129	3.3900e-003	1.3000e-004	3.5200e-003		12.9828	12.9828	1.1300e-003		13.0110
Total	**0.0127**	**0.0135**	**0.1116**	**1.3000e-004**	**0.0128**	**1.4000e-004**	**0.0129**	**3.3900e-003**	**1.3000e-004**	**3.5200e-003**		**12.9828**	**12.9828**	**1.1300e-003**		**13.0110**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.7193	17.5289	41.8999	0.0932	7.1760	0.1723	7.3483	1.9171	0.1632	2.0803		9,386.0600	9,386.0600	0.5076		9,398.7494
Unmitigated	2.7193	17.5289	41.8999	0.0932	7.1760	0.1723	7.3483	1.9171	0.1632	2.0803		9,386.0600	9,386.0600	0.5076		9,398.7494

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hotel	572.00	573.00	417.00	3,244,041	3,244,041
Total	572.00	573.00	417.00	3,244,041	3,244,041

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hotel	24.00	24.00	24.00	19.40	61.60	19.00	58	38	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Hotel	0.555197	0.027252	0.217244	0.114264	0.010253	0.002787	0.012651	0.049427	0.004514	0.000798	0.003917	0.001338	0.000357

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0107	0.0977	0.0821	5.9000e-004		7.4200e-003	7.4200e-003		7.4200e-003	7.4200e-003		117.2083	117.2083	2.2500e-003	2.1500e-003	117.9049
NaturalGas Unmitigated	0.0107	0.0977	0.0821	5.9000e-004		7.4200e-003	7.4200e-003		7.4200e-003	7.4200e-003		117.2083	117.2083	2.2500e-003	2.1500e-003	117.9049

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hotel	996.271	0.0107	0.0977	0.0821	5.9000e-004		7.4200e-003	7.4200e-003		7.4200e-003	7.4200e-003		117.2083	117.2083	2.2500e-003	2.1500e-003	117.9049
Total		**0.0107**	**0.0977**	**0.0821**	**5.9000e-004**		**7.4200e-003**	**7.4200e-003**		**7.4200e-003**	**7.4200e-003**		**117.2083**	**117.2083**	**2.2500e-003**	**2.1500e-003**	**117.9049**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hotel	0.996271	0.0107	0.0977	0.0821	5.9000e-004		7.4200e-003	7.4200e-003		7.4200e-003	7.4200e-003		117.2083	117.2083	2.2500e-003	2.1500e-003	117.9049
Total		**0.0107**	**0.0977**	**0.0821**	**5.9000e-004**		**7.4200e-003**	**7.4200e-003**		**7.4200e-003**	**7.4200e-003**		**117.2083**	**117.2083**	**2.2500e-003**	**2.1500e-003**	**117.9049**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4844	9.0000e-005	0.0101	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0219	0.0219	6.0000e-005		0.0233
Unmitigated	0.4844	9.0000e-005	0.0101	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0219	0.0219	6.0000e-005		0.0233

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1106					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3729					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.3000e-004	9.0000e-005	0.0101	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0219	0.0219	6.0000e-005		0.0233
Total	**0.4844**	**9.0000e-005**	**0.0101**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0219**	**0.0219**	**6.0000e-005**		**0.0233**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1106					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3729					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.3000e-004	9.0000e-005	0.0101	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0219	0.0219	6.0000e-005		0.0233
Total	**0.4844**	**9.0000e-005**	**0.0101**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0219**	**0.0219**	**6.0000e-005**		**0.0233**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

TREDC Hotel Project

Humboldt County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	100.00	Room	0.40	17,424.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	103
Climate Zone	1			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Refer to Project Description

Construction Phase -

Vehicle Trips - Refer to CalEEMod input table

Demolition -

Construction Off-road Equipment Mitigation - Refer to CalEEMod tables

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15

tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblLandUse	BuildingSpaceSquareFeet	145,200.00	17,424.00
tblLandUse	LandUseSquareFeet	145,200.00	17,424.00
tblLandUse	LotAcreage	3.33	0.40
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	CC_TL	6.60	24.00
tblVehicleTrips	CNW_TL	6.60	24.00
tblVehicleTrips	CW_TL	14.70	24.00
tblVehicleTrips	ST_TR	8.19	5.73
tblVehicleTrips	SU_TR	5.95	4.17
tblVehicleTrips	WD_TR	8.17	5.72

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	81.1082	24.9368	12.1834	0.0412	8.1808	0.8839	9.0647	1.3262	0.8433	2.1695	0.0000	4,225.9986	4,225.9986	0.3709	0.0000	4,234.9302
Maximum	**81.1082**	**24.9368**	**12.1834**	**0.0412**	**8.1808**	**0.8839**	**9.0647**	**1.3262**	**0.8433**	**2.1695**	**0.0000**	**4,225.9986**	**4,225.9986**	**0.3709**	**0.0000**	**4,234.9302**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	80.8353	20.4034	12.2032	0.0412	4.0803	0.2124	4.2928	0.7053	0.2058	0.9111	0.0000	4,225.9986	4,225.9986	0.3709	0.0000	4,234.9302
Maximum	**80.8353**	**20.4034**	**12.2032**	**0.0412**	**4.0803**	**0.2124**	**4.2928**	**0.7053**	**0.2058**	**0.9111**	**0.0000**	**4,225.9986**	**4,225.9986**	**0.3709**	**0.0000**	**4,234.9302**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.34**	**18.18**	**-0.16**	**0.00**	**50.12**	**75.97**	**52.64**	**46.82**	**75.60**	**58.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4845	1.0000e-004	0.0104	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0219	0.0219	6.0000e-005		0.0234
Energy	0.0107	0.0977	0.0821	5.9000e-004		7.4200e-003	7.4200e-003		7.4200e-003	7.4200e-003		117.2083	117.2083	2.2500e-003	2.1500e-003	117.9049
Mobile	3.4454	23.3454	52.2040	0.0970	7.2338	0.2160	7.4497	1.9420	0.2050	2.1469		9,757.3816	9,757.3816	0.6165		9,772.7950
Total	**3.9406**	**23.4431**	**52.2964**	**0.0976**	**7.2338**	**0.2234**	**7.4572**	**1.9420**	**0.2124**	**2.1544**		**9,874.6119**	**9,874.6119**	**0.6189**	**2.1500e-003**	**9,890.7232**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4845	1.0000e-004	0.0104	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0219	0.0219	6.0000e-005		0.0234
Energy	0.0107	0.0977	0.0821	5.9000e-004		7.4200e-003	7.4200e-003		7.4200e-003	7.4200e-003		117.2083	117.2083	2.2500e-003	2.1500e-003	117.9049
Mobile	3.4454	23.3454	52.2040	0.0970	7.2338	0.2160	7.4497	1.9420	0.2050	2.1469		9,757.3816	9,757.3816	0.6165		9,772.7950
Total	**3.9406**	**23.4431**	**52.2964**	**0.0976**	**7.2338**	**0.2234**	**7.4572**	**1.9420**	**0.2124**	**2.1544**		**9,874.6119**	**9,874.6119**	**0.6189**	**2.1500e-003**	**9,890.7232**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2017	6/14/2017	5	10	
2	Site Preparation	Site Preparation	6/15/2017	6/15/2017	5	1	
3	Grading	Grading	6/16/2017	6/19/2017	5	2	
4	Building Construction	Building Construction	6/20/2017	11/6/2017	5	100	
5	Architectural Coating	Architectural Coating	11/14/2017	11/20/2017	5	5	
6	Paving	Paving	11/7/2017	11/13/2017	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 26,136; Non-Residential Outdoor: 8,712; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	344.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	7.00	3.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.4554	0.0000	7.4554	1.1288	0.0000	1.1288			0.0000			0.0000
Off-Road	1.2100	10.4978	7.9182	0.0120		0.7318	0.7318		0.6978	0.6978		1,179.3075	1,179.3075	0.2319		1,185.1047
Total	**1.2100**	**10.4978**	**7.9182**	**0.0120**	**7.4554**	**0.7318**	**8.1872**	**1.1288**	**0.6978**	**1.8266**		**1,179.3075**	**1,179.3075**	**0.2319**		**1,185.1047**

3.2 Demolition - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.5511	14.2759	3.0651	0.0279	0.5977	0.1508	0.7484	0.1635	0.1442	0.3077		2,917.2656	2,917.2656	0.1138		2,920.1108
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1561	0.1632	1.2000	1.3100e-003	0.1277	1.4000e-003	0.1291	0.0339	1.3000e-003	0.0352		129.4255	129.4255	0.0116		129.7147
Total	**0.7072**	**14.4390**	**4.2652**	**0.0292**	**0.7254**	**0.1522**	**0.8776**	**0.1974**	**0.1455**	**0.3429**		**3,046.6911**	**3,046.6911**	**0.1254**		**3,049.8255**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3549	0.0000	3.3549	0.5080	0.0000	0.5080			0.0000			0.0000
Off-Road	0.2652	5.9644	7.9381	0.0120		0.0603	0.0603		0.0603	0.0603	0.0000	1,179.3075	1,179.3075	0.2319		1,185.1047
Total	**0.2652**	**5.9644**	**7.9381**	**0.0120**	**3.3549**	**0.0603**	**3.4152**	**0.5080**	**0.0603**	**0.5682**	**0.0000**	**1,179.3075**	**1,179.3075**	**0.2319**		**1,185.1047**

3.2 Demolition - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.5511	14.2759	3.0651	0.0279	0.5977	0.1508	0.7484	0.1635	0.1442	0.3077		2,917.2656	2,917.2656	0.1138		2,920.1108
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1561	0.1632	1.2000	1.3100e-003	0.1277	1.4000e-003	0.1291	0.0339	1.3000e-003	0.0352		129.4255	129.4255	0.0116		129.7147
Total	**0.7072**	**14.4390**	**4.2652**	**0.0292**	**0.7254**	**0.1522**	**0.8776**	**0.1974**	**0.1455**	**0.3429**		**3,046.6911**	**3,046.6911**	**0.1254**		**3,049.8255**

3.3 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.8524	10.5148	4.3533	9.7700e-003		0.4726	0.4726		0.4347	0.4347		999.5201	999.5201	0.3063		1,007.1764
Total	**0.8524**	**10.5148**	**4.3533**	**9.7700e-003**	**0.5303**	**0.4726**	**1.0028**	**0.0573**	**0.4347**	**0.4920**		**999.5201**	**999.5201**	**0.3063**		**1,007.1764**

3.3 Site Preparation - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0780	0.0816	0.6000	6.6000e-004	0.0639	7.0000e-004	0.0646	0.0169	6.5000e-004	0.0176		64.7127	64.7127	5.7800e-003		64.8574
Total	**0.0780**	**0.0816**	**0.6000**	**6.6000e-004**	**0.0639**	**7.0000e-004**	**0.0646**	**0.0169**	**6.5000e-004**	**0.0176**		**64.7127**	**64.7127**	**5.7800e-003**		**64.8574**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2386	0.0000	0.2386	0.0258	0.0000	0.0258			0.0000			0.0000
Off-Road	0.2382	4.8716	5.8579	9.7700e-003		0.0361	0.0361		0.0361	0.0361	0.0000	999.5201	999.5201	0.3063		1,007.1764
Total	**0.2382**	**4.8716**	**5.8579**	**9.7700e-003**	**0.2386**	**0.0361**	**0.2747**	**0.0258**	**0.0361**	**0.0618**	**0.0000**	**999.5201**	**999.5201**	**0.3063**		**1,007.1764**

3.3 Site Preparation - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0780	0.0816	0.6000	6.6000e-004	0.0639	7.0000e-004	0.0646	0.0169	6.5000e-004	0.0176		64.7127	64.7127	5.7800e-003		64.8574
Total	**0.0780**	**0.0816**	**0.6000**	**6.6000e-004**	**0.0639**	**7.0000e-004**	**0.0646**	**0.0169**	**6.5000e-004**	**0.0176**		**64.7127**	**64.7127**	**5.7800e-003**		**64.8574**

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	1.2100	10.4978	7.9182	0.0120		0.7318	0.7318		0.6978	0.6978		1,179.3075	1,179.3075	0.2319		1,185.1047
Total	**1.2100**	**10.4978**	**7.9182**	**0.0120**	**0.7528**	**0.7318**	**1.4845**	**0.4138**	**0.6978**	**1.1115**		**1,179.3075**	**1,179.3075**	**0.2319**		**1,185.1047**

3.4 Grading - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1561	0.1632	1.2000	1.3100e-003	0.1277	1.4000e-003	0.1291	0.0339	1.3000e-003	0.0352		129.4255	129.4255	0.0116		129.7147
Total	**0.1561**	**0.1632**	**1.2000**	**1.3100e-003**	**0.1277**	**1.4000e-003**	**0.1291**	**0.0339**	**1.3000e-003**	**0.0352**		**129.4255**	**129.4255**	**0.0116**		**129.7147**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3387	0.0000	0.3387	0.1862	0.0000	0.1862			0.0000			0.0000
Off-Road	0.2652	5.9644	7.9381	0.0120		0.0603	0.0603		0.0603	0.0603	0.0000	1,179.3075	1,179.3075	0.2319		1,185.1047
Total	**0.2652**	**5.9644**	**7.9381**	**0.0120**	**0.3387**	**0.0603**	**0.3990**	**0.1862**	**0.0603**	**0.2465**	**0.0000**	**1,179.3075**	**1,179.3075**	**0.2319**		**1,185.1047**

3.4 Grading - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1561	0.1632	1.2000	1.3100e-003	0.1277	1.4000e-003	0.1291	0.0339	1.3000e-003	0.0352		129.4255	129.4255	0.0116		129.7147
Total	**0.1561**	**0.1632**	**1.2000**	**1.3100e-003**	**0.1277**	**1.4000e-003**	**0.1291**	**0.0339**	**1.3000e-003**	**0.0352**		**129.4255**	**129.4255**	**0.0116**		**129.7147**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2812	12.7589	8.0700	0.0114		0.8591	0.8591		0.7904	0.7904		1,165.9164	1,165.9164	0.3572		1,174.8473
Total	**1.2812**	**12.7589**	**8.0700**	**0.0114**		**0.8591**	**0.8591**		**0.7904**	**0.7904**		**1,165.9164**	**1,165.9164**	**0.3572**		**1,174.8473**

3.5 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0277	0.4726	0.1805	7.7000e-004	0.0183	5.8700e-003	0.0242	5.2700e-003	5.6100e-003	0.0109		79.8455	79.8455	5.6000e-003		79.9856
Worker	0.1093	0.1142	0.8400	9.2000e-004	0.0894	9.8000e-004	0.0904	0.0237	9.1000e-004	0.0246		90.5978	90.5978	8.1000e-003		90.8003
Total	**0.1369**	**0.5868**	**1.0205**	**1.6900e-003**	**0.1077**	**6.8500e-003**	**0.1146**	**0.0290**	**6.5200e-003**	**0.0355**		**170.4434**	**170.4434**	**0.0137**		**170.7859**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2793	6.1296	7.9624	0.0114		0.0578	0.0578		0.0578	0.0578	0.0000	1,165.9164	1,165.9164	0.3572		1,174.8473
Total	**0.2793**	**6.1296**	**7.9624**	**0.0114**		**0.0578**	**0.0578**		**0.0578**	**0.0578**	**0.0000**	**1,165.9164**	**1,165.9164**	**0.3572**		**1,174.8473**

3.5 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0277	0.4726	0.1805	7.7000e-004	0.0183	5.8700e-003	0.0242	5.2700e-003	5.6100e-003	0.0109		79.8455	79.8455	5.6000e-003		79.9856
Worker	0.1093	0.1142	0.8400	9.2000e-004	0.0894	9.8000e-004	0.0904	0.0237	9.1000e-004	0.0246		90.5978	90.5978	8.1000e-003		90.8003
Total	**0.1369**	**0.5868**	**1.0205**	**1.6900e-003**	**0.1077**	**6.8500e-003**	**0.1146**	**0.0290**	**6.5200e-003**	**0.0355**		**170.4434**	**170.4434**	**0.0137**		**170.7859**

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	80.7602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909
Total	**81.0926**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.1909**

3.6 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0156	0.0163	0.1200	1.3000e-004	0.0128	1.4000e-004	0.0129	3.3900e-003	1.3000e-004	3.5200e-003		12.9426	12.9426	1.1600e-003		12.9715
Total	**0.0156**	**0.0163**	**0.1200**	**1.3000e-004**	**0.0128**	**1.4000e-004**	**0.0129**	**3.3900e-003**	**1.3000e-004**	**3.5200e-003**		**12.9426**	**12.9426**	**1.1600e-003**		**12.9715**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	80.7602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0143	0.0143		0.0143	0.0143	0.0000	281.4481	281.4481	0.0297		282.1909
Total	**80.8197**	**1.3570**	**1.8324**	**2.9700e-003**		**0.0143**	**0.0143**		**0.0143**	**0.0143**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.1909**

3.6 Architectural Coating - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0156	0.0163	0.1200	1.3000e-004	0.0128	1.4000e-004	0.0129	3.3900e-003	1.3000e-004	3.5200e-003		12.9426	12.9426	1.1600e-003		12.9715
Total	**0.0156**	**0.0163**	**0.1200**	**1.3000e-004**	**0.0128**	**1.4000e-004**	**0.0129**	**3.3900e-003**	**1.3000e-004**	**3.5200e-003**		**12.9426**	**12.9426**	**1.1600e-003**		**12.9715**

3.7 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0532	9.9754	7.3425	0.0113		0.6087	0.6087		0.5636	0.5636		1,085.1071	1,085.1071	0.3018		1,092.6515
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0532**	**9.9754**	**7.3425**	**0.0113**		**0.6087**	**0.6087**		**0.5636**	**0.5636**		**1,085.1071**	**1,085.1071**	**0.3018**		**1,092.6515**

3.7 Paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2809	0.2937	2.1600	2.3600e-003	0.2299	2.5300e-003	0.2324	0.0610	2.3400e-003	0.0633		232.9659	232.9659	0.0208		233.4865
Total	**0.2809**	**0.2937**	**2.1600**	**2.3600e-003**	**0.2299**	**2.5300e-003**	**0.2324**	**0.0610**	**2.3400e-003**	**0.0633**		**232.9659**	**232.9659**	**0.0208**		**233.4865**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2239	4.7579	6.9028	0.0113		0.0436	0.0436		0.0436	0.0436	0.0000	1,085.1071	1,085.1071	0.3018		1,092.6515
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2239**	**4.7579**	**6.9028**	**0.0113**		**0.0436**	**0.0436**		**0.0436**	**0.0436**	**0.0000**	**1,085.1071**	**1,085.1071**	**0.3018**		**1,092.6515**

3.7 Paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2809	0.2937	2.1600	2.3600e-003	0.2299	2.5300e-003	0.2324	0.0610	2.3400e-003	0.0633		232.9659	232.9659	0.0208		233.4865
Total	**0.2809**	**0.2937**	**2.1600**	**2.3600e-003**	**0.2299**	**2.5300e-003**	**0.2324**	**0.0610**	**2.3400e-003**	**0.0633**		**232.9659**	**232.9659**	**0.0208**		**233.4865**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.4454	23.3454	52.2040	0.0970	7.2338	0.2160	7.4497	1.9420	0.2050	2.1469		9,757.3816	9,757.3816	0.6165		9,772.7950
Unmitigated	3.4454	23.3454	52.2040	0.0970	7.2338	0.2160	7.4497	1.9420	0.2050	2.1469		9,757.3816	9,757.3816	0.6165		9,772.7950

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hotel	572.00	573.00	417.00	3,244,041	3,244,041
Total	572.00	573.00	417.00	3,244,041	3,244,041

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hotel	24.00	24.00	24.00	19.40	61.60	19.00	58	38	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Hotel	0.448795	0.060687	0.206149	0.145887	0.057916	0.009282	0.014626	0.042627	0.002929	0.001905	0.006409	0.001553	0.001236

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0107	0.0977	0.0821	5.9000e-004		7.4200e-003	7.4200e-003		7.4200e-003	7.4200e-003		117.2083	117.2083	2.2500e-003	2.1500e-003	117.9049
NaturalGas Unmitigated	0.0107	0.0977	0.0821	5.9000e-004		7.4200e-003	7.4200e-003		7.4200e-003	7.4200e-003		117.2083	117.2083	2.2500e-003	2.1500e-003	117.9049

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hotel	996.271	0.0107	0.0977	0.0821	5.9000e-004		7.4200e-003	7.4200e-003		7.4200e-003	7.4200e-003		117.2083	117.2083	2.2500e-003	2.1500e-003	117.9049
Total		**0.0107**	**0.0977**	**0.0821**	**5.9000e-004**		**7.4200e-003**	**7.4200e-003**		**7.4200e-003**	**7.4200e-003**		**117.2083**	**117.2083**	**2.2500e-003**	**2.1500e-003**	**117.9049**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hotel	0.996271	0.0107	0.0977	0.0821	5.9000e-004		7.4200e-003	7.4200e-003		7.4200e-003	7.4200e-003		117.2083	117.2083	2.2500e-003	2.1500e-003	117.9049
Total		**0.0107**	**0.0977**	**0.0821**	**5.9000e-004**		**7.4200e-003**	**7.4200e-003**		**7.4200e-003**	**7.4200e-003**		**117.2083**	**117.2083**	**2.2500e-003**	**2.1500e-003**	**117.9049**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4845	1.0000e-004	0.0104	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0219	0.0219	6.0000e-005		0.0234
Unmitigated	0.4845	1.0000e-004	0.0104	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0219	0.0219	6.0000e-005		0.0234

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1106					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3729					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.9000e-004	1.0000e-004	0.0104	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0219	0.0219	6.0000e-005		0.0234
Total	**0.4845**	**1.0000e-004**	**0.0104**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0219**	**0.0219**	**6.0000e-005**		**0.0234**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1106					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3729					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.9000e-004	1.0000e-004	0.0104	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0219	0.0219	6.0000e-005		0.0234
Total	**0.4845**	**1.0000e-004**	**0.0104**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0219**	**0.0219**	**6.0000e-005**		**0.0234**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

TREDC Hotel Project

Humboldt County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	100.00	Room	0.40	17,424.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	103
Climate Zone	1			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Refer to Project Description

Construction Phase -

Demolition -

Vehicle Trips - Refer to CalEEMod input table

Construction Off-road Equipment Mitigation - Refer to CalEEMod tables

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15

tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblLandUse	BuildingSpaceSquareFeet	145,200.00	17,424.00
tblLandUse	LandUseSquareFeet	145,200.00	17,424.00
tblLandUse	LotAcreage	3.33	0.40
tblProjectCharacteristics	OperationalYear	2018	2040
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	CC_TL	6.60	24.00
tblVehicleTrips	CNW_TL	6.60	24.00
tblVehicleTrips	CW_TL	14.70	24.00
tblVehicleTrips	ST_TR	8.19	5.73
tblVehicleTrips	SU_TR	5.95	4.17
tblVehicleTrips	WD_TR	8.17	5.72

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	81.1082	24.9368	12.1834	0.0412	8.1808	0.8839	9.0647	1.3262	0.8433	2.1695	0.0000	4,225.9986	4,225.9986	0.3709	0.0000	4,234.9302
Maximum	**81.1082**	**24.9368**	**12.1834**	**0.0412**	**8.1808**	**0.8839**	**9.0647**	**1.3262**	**0.8433**	**2.1695**	**0.0000**	**4,225.9986**	**4,225.9986**	**0.3709**	**0.0000**	**4,234.9302**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	80.8353	20.4034	12.2032	0.0412	4.0803	0.2124	4.2928	0.7053	0.2058	0.9111	0.0000	4,225.9986	4,225.9986	0.3709	0.0000	4,234.9302
Maximum	**80.8353**	**20.4034**	**12.2032**	**0.0412**	**4.0803**	**0.2124**	**4.2928**	**0.7053**	**0.2058**	**0.9111**	**0.0000**	**4,225.9986**	**4,225.9986**	**0.3709**	**0.0000**	**4,234.9302**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.34**	**18.18**	**-0.16**	**0.00**	**50.12**	**75.97**	**52.64**	**46.82**	**75.60**	**58.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4844	9.0000e-005	0.0101	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0219	0.0219	6.0000e-005		0.0233
Energy	0.0107	0.0977	0.0821	5.9000e-004		7.4200e-003	7.4200e-003		7.4200e-003	7.4200e-003		117.2083	117.2083	2.2500e-003	2.1500e-003	117.9049
Mobile	2.7847	18.8207	45.0027	0.0927	7.1760	0.1741	7.3501	1.9171	0.1650	2.0821		9,323.4077	9,323.4077	0.5235		9,336.4963
Total	**3.2798**	**18.9184**	**45.0949**	**0.0933**	**7.1760**	**0.1816**	**7.3576**	**1.9171**	**0.1725**	**2.0896**		**9,440.6379**	**9,440.6379**	**0.5259**	**2.1500e-003**	**9,454.4244**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4844	9.0000e-005	0.0101	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0219	0.0219	6.0000e-005		0.0233
Energy	0.0107	0.0977	0.0821	5.9000e-004		7.4200e-003	7.4200e-003		7.4200e-003	7.4200e-003		117.2083	117.2083	2.2500e-003	2.1500e-003	117.9049
Mobile	2.7847	18.8207	45.0027	0.0927	7.1760	0.1741	7.3501	1.9171	0.1650	2.0821		9,323.4077	9,323.4077	0.5235		9,336.4963
Total	**3.2798**	**18.9184**	**45.0949**	**0.0933**	**7.1760**	**0.1816**	**7.3576**	**1.9171**	**0.1725**	**2.0896**		**9,440.6379**	**9,440.6379**	**0.5259**	**2.1500e-003**	**9,454.4244**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2017	6/14/2017	5	10	
2	Site Preparation	Site Preparation	6/15/2017	6/15/2017	5	1	
3	Grading	Grading	6/16/2017	6/19/2017	5	2	
4	Building Construction	Building Construction	6/20/2017	11/6/2017	5	100	
5	Paving	Paving	11/7/2017	11/13/2017	5	5	
6	Architectural Coating	Architectural Coating	11/14/2017	11/20/2017	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 26,136; Non-Residential Outdoor: 8,712; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	344.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	7.00	3.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.4554	0.0000	7.4554	1.1288	0.0000	1.1288			0.0000			0.0000
Off-Road	1.2100	10.4978	7.9182	0.0120		0.7318	0.7318		0.6978	0.6978		1,179.3075	1,179.3075	0.2319		1,185.1047
Total	**1.2100**	**10.4978**	**7.9182**	**0.0120**	**7.4554**	**0.7318**	**8.1872**	**1.1288**	**0.6978**	**1.8266**		**1,179.3075**	**1,179.3075**	**0.2319**		**1,185.1047**

3.2 Demolition - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.5511	14.2759	3.0651	0.0279	0.5977	0.1508	0.7484	0.1635	0.1442	0.3077		2,917.2656	2,917.2656	0.1138		2,920.1108
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1561	0.1632	1.2000	1.3100e-003	0.1277	1.4000e-003	0.1291	0.0339	1.3000e-003	0.0352		129.4255	129.4255	0.0116		129.7147
Total	**0.7072**	**14.4390**	**4.2652**	**0.0292**	**0.7254**	**0.1522**	**0.8776**	**0.1974**	**0.1455**	**0.3429**		**3,046.6911**	**3,046.6911**	**0.1254**		**3,049.8255**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3549	0.0000	3.3549	0.5080	0.0000	0.5080			0.0000			0.0000
Off-Road	0.2652	5.9644	7.9381	0.0120		0.0603	0.0603		0.0603	0.0603	0.0000	1,179.3075	1,179.3075	0.2319		1,185.1047
Total	**0.2652**	**5.9644**	**7.9381**	**0.0120**	**3.3549**	**0.0603**	**3.4152**	**0.5080**	**0.0603**	**0.5682**	**0.0000**	**1,179.3075**	**1,179.3075**	**0.2319**		**1,185.1047**

3.2 Demolition - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.5511	14.2759	3.0651	0.0279	0.5977	0.1508	0.7484	0.1635	0.1442	0.3077		2,917.2656	2,917.2656	0.1138		2,920.1108
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1561	0.1632	1.2000	1.3100e-003	0.1277	1.4000e-003	0.1291	0.0339	1.3000e-003	0.0352		129.4255	129.4255	0.0116		129.7147
Total	**0.7072**	**14.4390**	**4.2652**	**0.0292**	**0.7254**	**0.1522**	**0.8776**	**0.1974**	**0.1455**	**0.3429**		**3,046.6911**	**3,046.6911**	**0.1254**		**3,049.8255**

3.3 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.8524	10.5148	4.3533	9.7700e-003		0.4726	0.4726		0.4347	0.4347		999.5201	999.5201	0.3063		1,007.1764
Total	**0.8524**	**10.5148**	**4.3533**	**9.7700e-003**	**0.5303**	**0.4726**	**1.0028**	**0.0573**	**0.4347**	**0.4920**		**999.5201**	**999.5201**	**0.3063**		**1,007.1764**

3.3 Site Preparation - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0780	0.0816	0.6000	6.6000e-004	0.0639	7.0000e-004	0.0646	0.0169	6.5000e-004	0.0176		64.7127	64.7127	5.7800e-003		64.8574
Total	**0.0780**	**0.0816**	**0.6000**	**6.6000e-004**	**0.0639**	**7.0000e-004**	**0.0646**	**0.0169**	**6.5000e-004**	**0.0176**		**64.7127**	**64.7127**	**5.7800e-003**		**64.8574**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2386	0.0000	0.2386	0.0258	0.0000	0.0258			0.0000			0.0000
Off-Road	0.2382	4.8716	5.8579	9.7700e-003		0.0361	0.0361		0.0361	0.0361	0.0000	999.5201	999.5201	0.3063		1,007.1764
Total	**0.2382**	**4.8716**	**5.8579**	**9.7700e-003**	**0.2386**	**0.0361**	**0.2747**	**0.0258**	**0.0361**	**0.0618**	**0.0000**	**999.5201**	**999.5201**	**0.3063**		**1,007.1764**

3.3 Site Preparation - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0780	0.0816	0.6000	6.6000e-004	0.0639	7.0000e-004	0.0646	0.0169	6.5000e-004	0.0176		64.7127	64.7127	5.7800e-003		64.8574
Total	**0.0780**	**0.0816**	**0.6000**	**6.6000e-004**	**0.0639**	**7.0000e-004**	**0.0646**	**0.0169**	**6.5000e-004**	**0.0176**		**64.7127**	**64.7127**	**5.7800e-003**		**64.8574**

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	1.2100	10.4978	7.9182	0.0120		0.7318	0.7318		0.6978	0.6978		1,179.3075	1,179.3075	0.2319		1,185.1047
Total	**1.2100**	**10.4978**	**7.9182**	**0.0120**	**0.7528**	**0.7318**	**1.4845**	**0.4138**	**0.6978**	**1.1115**		**1,179.3075**	**1,179.3075**	**0.2319**		**1,185.1047**

3.4 Grading - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1561	0.1632	1.2000	1.3100e-003	0.1277	1.4000e-003	0.1291	0.0339	1.3000e-003	0.0352		129.4255	129.4255	0.0116		129.7147
Total	**0.1561**	**0.1632**	**1.2000**	**1.3100e-003**	**0.1277**	**1.4000e-003**	**0.1291**	**0.0339**	**1.3000e-003**	**0.0352**		**129.4255**	**129.4255**	**0.0116**		**129.7147**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3387	0.0000	0.3387	0.1862	0.0000	0.1862			0.0000			0.0000
Off-Road	0.2652	5.9644	7.9381	0.0120		0.0603	0.0603		0.0603	0.0603	0.0000	1,179.3075	1,179.3075	0.2319		1,185.1047
Total	**0.2652**	**5.9644**	**7.9381**	**0.0120**	**0.3387**	**0.0603**	**0.3990**	**0.1862**	**0.0603**	**0.2465**	**0.0000**	**1,179.3075**	**1,179.3075**	**0.2319**		**1,185.1047**

3.4 Grading - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1561	0.1632	1.2000	1.3100e-003	0.1277	1.4000e-003	0.1291	0.0339	1.3000e-003	0.0352		129.4255	129.4255	0.0116		129.7147
Total	**0.1561**	**0.1632**	**1.2000**	**1.3100e-003**	**0.1277**	**1.4000e-003**	**0.1291**	**0.0339**	**1.3000e-003**	**0.0352**		**129.4255**	**129.4255**	**0.0116**		**129.7147**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2812	12.7589	8.0700	0.0114		0.8591	0.8591		0.7904	0.7904		1,165.9164	1,165.9164	0.3572		1,174.8473
Total	**1.2812**	**12.7589**	**8.0700**	**0.0114**		**0.8591**	**0.8591**		**0.7904**	**0.7904**		**1,165.9164**	**1,165.9164**	**0.3572**		**1,174.8473**

3.5 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0277	0.4726	0.1805	7.7000e-004	0.0183	5.8700e-003	0.0242	5.2700e-003	5.6100e-003	0.0109		79.8455	79.8455	5.6000e-003		79.9856
Worker	0.1093	0.1142	0.8400	9.2000e-004	0.0894	9.8000e-004	0.0904	0.0237	9.1000e-004	0.0246		90.5978	90.5978	8.1000e-003		90.8003
Total	**0.1369**	**0.5868**	**1.0205**	**1.6900e-003**	**0.1077**	**6.8500e-003**	**0.1146**	**0.0290**	**6.5200e-003**	**0.0355**		**170.4434**	**170.4434**	**0.0137**		**170.7859**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2793	6.1296	7.9624	0.0114		0.0578	0.0578		0.0578	0.0578	0.0000	1,165.9164	1,165.9164	0.3572		1,174.8473
Total	**0.2793**	**6.1296**	**7.9624**	**0.0114**		**0.0578**	**0.0578**		**0.0578**	**0.0578**	**0.0000**	**1,165.9164**	**1,165.9164**	**0.3572**		**1,174.8473**

3.5 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0277	0.4726	0.1805	7.7000e-004	0.0183	5.8700e-003	0.0242	5.2700e-003	5.6100e-003	0.0109		79.8455	79.8455	5.6000e-003		79.9856
Worker	0.1093	0.1142	0.8400	9.2000e-004	0.0894	9.8000e-004	0.0904	0.0237	9.1000e-004	0.0246		90.5978	90.5978	8.1000e-003		90.8003
Total	**0.1369**	**0.5868**	**1.0205**	**1.6900e-003**	**0.1077**	**6.8500e-003**	**0.1146**	**0.0290**	**6.5200e-003**	**0.0355**		**170.4434**	**170.4434**	**0.0137**		**170.7859**

3.6 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0532	9.9754	7.3425	0.0113		0.6087	0.6087		0.5636	0.5636		1,085.1071	1,085.1071	0.3018		1,092.6515
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0532**	**9.9754**	**7.3425**	**0.0113**		**0.6087**	**0.6087**		**0.5636**	**0.5636**		**1,085.1071**	**1,085.1071**	**0.3018**		**1,092.6515**

3.6 Paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2809	0.2937	2.1600	2.3600e-003	0.2299	2.5300e-003	0.2324	0.0610	2.3400e-003	0.0633		232.9659	232.9659	0.0208		233.4865
Total	**0.2809**	**0.2937**	**2.1600**	**2.3600e-003**	**0.2299**	**2.5300e-003**	**0.2324**	**0.0610**	**2.3400e-003**	**0.0633**		**232.9659**	**232.9659**	**0.0208**		**233.4865**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2239	4.7579	6.9028	0.0113		0.0436	0.0436		0.0436	0.0436	0.0000	1,085.1071	1,085.1071	0.3018		1,092.6515
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2239**	**4.7579**	**6.9028**	**0.0113**		**0.0436**	**0.0436**		**0.0436**	**0.0436**	**0.0000**	**1,085.1071**	**1,085.1071**	**0.3018**		**1,092.6515**

3.6 Paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2809	0.2937	2.1600	2.3600e-003	0.2299	2.5300e-003	0.2324	0.0610	2.3400e-003	0.0633		232.9659	232.9659	0.0208		233.4865
Total	**0.2809**	**0.2937**	**2.1600**	**2.3600e-003**	**0.2299**	**2.5300e-003**	**0.2324**	**0.0610**	**2.3400e-003**	**0.0633**		**232.9659**	**232.9659**	**0.0208**		**233.4865**

3.7 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	80.7602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909
Total	**81.0926**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.1909**

3.7 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0156	0.0163	0.1200	1.3000e-004	0.0128	1.4000e-004	0.0129	3.3900e-003	1.3000e-004	3.5200e-003		12.9426	12.9426	1.1600e-003		12.9715
Total	**0.0156**	**0.0163**	**0.1200**	**1.3000e-004**	**0.0128**	**1.4000e-004**	**0.0129**	**3.3900e-003**	**1.3000e-004**	**3.5200e-003**		**12.9426**	**12.9426**	**1.1600e-003**		**12.9715**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	80.7602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0143	0.0143		0.0143	0.0143	0.0000	281.4481	281.4481	0.0297		282.1909
Total	**80.8197**	**1.3570**	**1.8324**	**2.9700e-003**		**0.0143**	**0.0143**		**0.0143**	**0.0143**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.1909**

3.7 Architectural Coating - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0156	0.0163	0.1200	1.3000e-004	0.0128	1.4000e-004	0.0129	3.3900e-003	1.3000e-004	3.5200e-003		12.9426	12.9426	1.1600e-003		12.9715
Total	**0.0156**	**0.0163**	**0.1200**	**1.3000e-004**	**0.0128**	**1.4000e-004**	**0.0129**	**3.3900e-003**	**1.3000e-004**	**3.5200e-003**		**12.9426**	**12.9426**	**1.1600e-003**		**12.9715**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.7847	18.8207	45.0027	0.0927	7.1760	0.1741	7.3501	1.9171	0.1650	2.0821		9,323.4077	9,323.4077	0.5235		9,336.4963
Unmitigated	2.7847	18.8207	45.0027	0.0927	7.1760	0.1741	7.3501	1.9171	0.1650	2.0821		9,323.4077	9,323.4077	0.5235		9,336.4963

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hotel	572.00	573.00	417.00	3,244,041	3,244,041
Total	572.00	573.00	417.00	3,244,041	3,244,041

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hotel	24.00	24.00	24.00	19.40	61.60	19.00	58	38	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Hotel	0.555197	0.027252	0.217244	0.114264	0.010253	0.002787	0.012651	0.049427	0.004514	0.000798	0.003917	0.001338	0.000357

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0107	0.0977	0.0821	5.9000e-004		7.4200e-003	7.4200e-003		7.4200e-003	7.4200e-003		117.2083	117.2083	2.2500e-003	2.1500e-003	117.9049
NaturalGas Unmitigated	0.0107	0.0977	0.0821	5.9000e-004		7.4200e-003	7.4200e-003		7.4200e-003	7.4200e-003		117.2083	117.2083	2.2500e-003	2.1500e-003	117.9049

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hotel	996.271	0.0107	0.0977	0.0821	5.9000e-004		7.4200e-003	7.4200e-003		7.4200e-003	7.4200e-003		117.2083	117.2083	2.2500e-003	2.1500e-003	117.9049
Total		**0.0107**	**0.0977**	**0.0821**	**5.9000e-004**		**7.4200e-003**	**7.4200e-003**		**7.4200e-003**	**7.4200e-003**		**117.2083**	**117.2083**	**2.2500e-003**	**2.1500e-003**	**117.9049**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hotel	0.996271	0.0107	0.0977	0.0821	5.9000e-004		7.4200e-003	7.4200e-003		7.4200e-003	7.4200e-003		117.2083	117.2083	2.2500e-003	2.1500e-003	117.9049
Total		**0.0107**	**0.0977**	**0.0821**	**5.9000e-004**		**7.4200e-003**	**7.4200e-003**		**7.4200e-003**	**7.4200e-003**		**117.2083**	**117.2083**	**2.2500e-003**	**2.1500e-003**	**117.9049**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4844	9.0000e-005	0.0101	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0219	0.0219	6.0000e-005		0.0233
Unmitigated	0.4844	9.0000e-005	0.0101	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0219	0.0219	6.0000e-005		0.0233

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1106					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3729					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.3000e-004	9.0000e-005	0.0101	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0219	0.0219	6.0000e-005		0.0233
Total	**0.4844**	**9.0000e-005**	**0.0101**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0219**	**0.0219**	**6.0000e-005**		**0.0233**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1106					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3729					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.3000e-004	9.0000e-005	0.0101	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0219	0.0219	6.0000e-005		0.0233
Total	**0.4844**	**9.0000e-005**	**0.0101**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0219**	**0.0219**	**6.0000e-005**		**0.0233**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX F

SPECIAL STATUS SPECIES

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Arcata Fish and Wildlife Office
1655 HEINDON ROAD
ARCATA, CA 95521
PHONE: (707)822-7201 FAX: (707)822-8411

Consultation Code: 08EACT00-2017-SLI-0047 December 29, 2016
Event Code: 08EACT00-2017-E-00070
Project Name: 216561

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having

similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment

United States Department of Interior
Fish and Wildlife Service

Project name: 216561

Official Species List

Provided by:

Arcata Fish and Wildlife Office
1655 HEINDON ROAD
ARCATA, CA 95521
(707) 822-7201

Consultation Code: 08EACT00-2017-SLI-0047
Event Code: 08EACT00-2017-E-00070

Project Type: DEVELOPMENT

Project Name: 216561
Project Description: Trinidad Hotel EA

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.

Project Location Map:



Project Coordinates: MULTIPOLYGON (((-124.1292804479599 41.05361425219491, -124.1295328437627 41.05328545080284, -124.12954775692013 41.05319556410634, -124.12950602175442 41.05312812884963, -124.128862291509 41.052730351993844, -124.12861791548495 41.05267416230282, -124.12852253613893 41.05272808661494, -124.12859407077121 41.05289665565274, -124.12870731355724 41.052919127409616, -124.12878777982769 41.05287642901565, -124.128901049462 41.052892165275665, -124.12944642306684 41.053251733229196, -124.12920564127488 41.0535958259594, -124.1292804479599 41.05361425219491)))

Project Counties: Humboldt, CA

United States Department of Interior
Fish and Wildlife Service

Project name: 216561

Endangered Species Act Species List

There are a total of 6 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Birds	**Status**	**Has Critical Habitat**	**Condition(s)**
Marbled murrelet *(Brachyramphus marmoratus)* Population: U.S.A. (CA, OR, WA)	Threatened	Final designated	
Northern Spotted owl *(Strix occidentalis caurina)* Population: Wherever found	Threatened	Final designated	
Short-Tailed albatross *(Phoebastria (=diomedea) albatrus)* Population: Wherever found	Endangered		
western snowy plover *(Charadrius nivosus ssp. nivosus)* Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast)	Threatened	Final designated	
Yellow-Billed Cuckoo *(Coccyzus americanus)* Population: Western U.S. DPS	Threatened	Proposed	
Fishes			
Tidewater goby *(Eucyclogobius*	Endangered	Final designated	

newberryi) Population: Wherever found			

Critical habitats that lie within your project area

There are no critical habitats within your project area.

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Taxonomic Group IS (Dune OR Scrub OR Herbaceous OR Marsh OR Riparian OR Woodland OR Forest OR Alpine OR Inland Waters OR Marine OR Estuarine OR Riverine OR Palustrine OR Fish OR Amphibians OR Reptiles OR Birds OR Mammals OR Mollusks OR Arachnids OR Crustaceans OR Insects OR Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes OR Fungi)
 AND (Federal Listing Status IS (Endangered OR Threatened) OR State Listing Status IS (Endangered OR Threatened))
 AND County IS (Humboldt)
 AND Quad IS (Trinidad (4112412))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Charadrius alexandrinus nivosus	ABNNB03031	Threatened	None	G3T3	S2S3	SSC
western snowy plover						
Eucyclogobius newberryi	AFCQN04010	Endangered	None	G3	S3	SSC
tidewater goby						
Spirinchus thaleichthys	AFCHB03010	Candidate	Threatened	G5	S1	SSC
longfin smelt						

Record Count: 3

FEDERAL SPECIAL-STATUS SPECIES

SCIENTIFIC NAME COMMON NAME	FEDERAL STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	PERIOD OF IDENTIFICATION
ANIMALS				
BIRDS				
Brachyramphus Marmoratus Marbled Murrelet	FT	CA, OR, WA	Outside of the breeding season, found in coastal areas, mainly in salt water within 2 km of shore, including bays and sounds. Nests in trees in terrestrial habitat including alpine, conifer forest, and tundra.	Year-Round
Strix Occidentalis Caurina Northern Spotted Owl	FT	CA, OR, WA into BC and Cascade Mountains, forests and Sierra Nevada old growth forests.	Resides in mixed conifer, redwood, and Douglas fir habitats, from sea level up to approximately 2,300 meters. Appear to prefer old-growth forests, but use of managed (previously logged) lands is not uncommon. Owls do not appear to use logged habitat until approximately 60 years after logging unless some larger trees or snags remain after logging. Nesting habitat is a tree or snag cavity, or the broken top of a large tree. Requires a nearby, permanent source of water. Foraging habitat consists of any forest habitat with sufficient prey (e.g. flying squirrels, mice, and voles).	Year-Round
Phoebastria Albatrus Short-Tailed Albatross	FE	Nests on islands off southern Japan and very rare visitor along western coast California.	Requires remote islands for breeding habitat; nests in open, treeless areas with low, or no, vegetation. Spend much of their time feeding in shelf-break areas of the Bering Sea, Aleutian chain and in other Alaskan, Japanese, and Russian waters, as they require nutrient-rich areas of ocean upwelling for their foraging habitat.	December Through July
Charadrius Nivosus Western Snowy Plover	FT	CA, OR, WA, Pacific Coast	Snowy plovers (pacific coast population) breed primarily above the high tide line on coastal beaches, sand spits, dune-backed beaches, sparsely vegetated dunes, beaches at creek and river mouths, and saltpans at lagoons and estuaries. In winter, snowy plovers are found on many of the beaches used for nesting as well as on beaches where they do not nest, in manmade salt ponds, and on estuarine sand and mud flats.	May Through October

SCIENTIFIC NAME COMMON NAME	FEDERAL STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	PERIOD OF IDENTIFICATION
Cooccyzus Americanus Yellow-Billed Cuckoo	FT	AZ, CA, CO, ID, MT, NM, NV, OR, TX, UT, WA, WY, Canada, Mexico	wooded habitat with dense cover and water nearby, including woodlands with low, scrubby, vegetation, overgrown orchards, abandoned farmland, and dense thickets along streams and marshes. Nests are often placed in willows along streams and rivers, with nearby cottonwoods serving as foraging sites.	Year-Round
fishes				
Eucyclogobius Newberryi Tidewater Goby	FE	CA Coast	Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water & high oxygen levels	Consult Agency
Spirinchus Thaleichthys Longfin Smelt	Candidate	CA Coast	Occurs in benthic habitat within medium and large low-grade river systems. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15-30 ppt, but can be found in completely freshwater to almost pure seawater.	Consult Agency
Notes: Federal Status Codes (U.S. Fish And Wildlife Service Or National Marine Fisheries Service) Fe = Listed As Endangered By The Federal Government Ft = Listed As Threatened By The Federal Government Source: USFWS, 2016				

APPENDIX G

TRINIDAD AREA FREEWAY MASTER PLAN STUDY

Trinidad Area Freeway Master Plan Study Report

Prepared for:

The Trinidad Rancheria

Prepared by:



TRINIDAD AREA FREEWAY MASTER PLAN STUDY

PREPARED FOR:
THE TRINIDAD RANCHERIA
1 CHER-AE LANE
TRINIDAD, CA 95570

PREPARED JOINTLY BY:

OMNI-MEANS, LTD.
ENGINEERS & PLANNERS
943 RESERVE DRIVE
SACRAMENTO CA 95678
(916) 782-8688

AND

SHN CONSULTING ENGINEERS & GEOLOGISTS, INC
812 W. WABASH
EUREKA, CA 95501-2138

FEBRUARY 2014

45-6108-01
R1721RPT003.DOCX

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INTRODUCTION

The Trinidad Rancheria (Rancheria) retained the team of SHN Consulting Engineers & Geologist Inc, (SHN) and OMNI-MEANS to complete a roadway improvement needs traffic study, in the vicinity of City of Trinidad in Humboldt County. **Figure 1** (in the appendix) shows the study area. With the planned growth of the Rancheria (per the Master Plan), City of Trinidad (per the General Plan) and other background growth in the County, planning an efficient transportation system is essential to support this growth. The focus of this study is to determine the circulation improvements on US 101 and the interchanges that provide access to the City of Trinidad and the Rancheria to support the future growth. Traffic operations have been quantified based upon weekday peak month AM and PM peak hour traffic operations at critical study intersections, and along US 101 freeway mainline segments, and at mainline/ramp junctions.

STUDY AREA ROADWAY

Roadways that provide the primary vehicle circulation within the study area include US 101, Main Street, Scenic Drive, and Westhaven Drive. Following is a brief description of the primary roadways within the study area:

US 101 is a major north-south freeway facility that provides regional connections to the cities on the north coast and Sacramento/ Los Angeles urban basin to the south. Within Humboldt County, US 101 serves as a vital north-south circulator, and is a general four lane divided freeway with a 65 mph posted speed limit in the immediate vicinity of the study area. Just south of the Main Street interchange (@ PM 98.067), US 101 currently carries an Annual Average Daily Traffic (AADT) of 10,600 vehicles. (Source: 2011 Caltrans Traffic Volumes.) Truck traffic on US 101 in the project area (@ PM 98.067) represents approximately 22% of the daily traffic. (Source: 2010 Caltrans Annual Average Daily Truck Traffic on the California State Highway System.)

Main Street is an east-west two lane primary collector street that extends west of US 101 SB ramps and continues through the City of Trinidad as Trinity Street and Edwards Street. Per the City of Trinidad draft General Plan Circulation Element, the Average Daily Traffic (ADT) on Main Street is 3,170 vehicles.

Scenic Drive is a north-south two lane secondary collector street that extends south of Main Street and provides access to the Rancheria. Per the City of Trinidad draft General Plan Circulation Element, the ADT on Scenic Drive is 870 vehicles.

Westhaven Drive is a north-south two lane primary collector street that extends east of US 101 SB ramps and provides a connection between the City of Trinidad and the unincorporated community of Westhaven in the county. Per the City of Trinidad draft General Plan Circulation Element, the ADT on Westhaven Drive east of US 101 is 865 vehicles.

STUDY LOCATIONS

Intersections

Based on consultation with Caltrans, weekday AM & PM traffic counts were collected for the following study intersections:

1. 6th Avenue/Kay Avenue
2. 6th Avenue/Kahlstrom Avenue
3. Kay Avenue/US101 SB Ramps
4. Kahlstrom Avenue/7th Avenue
5. Main Street/Patricks Point Drive/Trinidad Scenic Drive
6. Main Street/US101 SB Ramps
7. Westhaven Drive/US101 NB Ramps
8. Westhaven Drive/Trinidad Frontage Road
9. Scenic Drive/Baker Ranch Road
10. Scenic Drive/Cher-Ae Heights Casino Driveway
11. Scenic Drive/Cher-Ae Lane
12. Scenic Drive/Lanford Road

The weekday AM and PM peak hour traffic counts were collected in May 2013. The AM peak hour is defined as one-hour of peak traffic flow counted between 7:00 AM and 9:00 AM and the PM peak hour is defined as one-hour of peak traffic flow counted between 4:00 PM and 6:00 PM.

Based on the data obtained from Caltrans continuous count station located at PM 98.067 on US 101, August counts were observed to be 25% higher than the May counts. Therefore, the May counts were adjusted to reflect the peak August month counts. Although, it is unlikely that the local street intersections will experience this same growth, for the purposes of this study, this growth was utilized to reflect August peak month counts.

Figure 2 (in the Appendix) shows the existing lane geometrics and control at the study intersections. **Figure 3** (in the Appendix) shows the existing peak hour volumes at these locations and **Figure 4** (in the appendix) shows the existing ramp volumes.

US101 Mainline Segments

The following mainline segments have been analyzed in the study:

1. US101 Mainline NB – north of Main Street Interchange
2. US101 Mainline SB – north of Main Street Interchange
3. US101 Mainline NB – south of Main Street Interchange
4. US101 Mainline SB – south of Main Street Interchange

US101 Merge/Diverge

The following merge/diverge junctions have been analyzed in the study:

1) NB US101/Kahlstrom Avenue Ramp Diverge
2) SB US101/Kay Avenue Ramp Merge
3) NB US101/Kahlstrom Avenue Ramp Merge
4) SB US101/Kay Avenue Ramp Diverge
5) NB US101/Westhaven Drive Ramp Diverge
6) SB US101/Main Street Ramp Merge
7) NB US101/Westhaven Drive Ramp Merge
8) SB US101/Main Street Ramp Diverge

ANALYSIS METHODOLOGIES AND PARAMETERS

Level-of-Service Methodologies

Traffic operations will be quantified through the determination of "Level of Service" (LOS). Level of Service is a qualitative measure of traffic operating conditions, whereby a letter grade "A" through "F" is assigned to an intersection or roadway segment representing progressively worsening traffic conditions. Levels of Service have been calculated for all intersection control types using the methods documented in the Transportation Research Board Publication *Highway Capacity Manual, Fourth Edition, 2010 (HCM-2010)*. For signalized intersections and all-way-stop-controlled (AWSC) intersections, the intersection delays and levels of service are average values for all intersection movements. For two-way-stop-controlled (TWSC) intersections, the intersection delays and levels of service are representative of those for the worst-case movement.

LOS Policies

The Caltrans published *Guide for the Preparation of Traffic Impact Studies* (dated December 2002) states the following:

> *"Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" on State highway facilities."*

LOS Threshold

Based on the above policy, LOS 'C' has been assumed as the minimum acceptable for all study intersections, mainline segments and ramp merge diverge and weave junctions.

Warrant Analysis

A supplemental traffic signal "warrant" analysis has been completed on unsignalized intersections determined to be operating at unacceptable LOS. The term "signal warrants" refers to the list of established criteria used by Caltrans and other public agencies to quantitatively justify or ascertain the need for installation of a traffic signal at an unsignalized intersection. The signal warrant criteria are based upon several factors, including the volume of vehicular and pedestrian traffic, frequency of accidents, and location of school areas. The criteria is published in the California Manual of Traffic Control Devices (MUTCD).

This study utilizes the peak hour volume-based Warrant 3 as one representative type of traffic signal warrant analysis. It should be noted that the Peak-Hour-Volume Warrant was only applied when the intersection was found to be operating at unacceptable LOS. Therefore, there may be instances when the unsignalized intersection operates at acceptable LOS conditions or better but still meets the Peak-Hour-Volume Warrant.

Technical Analysis Parameters - Intersections

The traffic study would generally provide a "preliminary operational level" evaluation of traffic operating conditions, which is considered sufficient for California Environmental Quality Act (CEQA) and National Environmental Quality Act (NEPA) purposes. The Synchro 8.0 (Trafficware) integrated computer software program has been used to implement the HCM-2010 analysis methodologies at intersections. The specific intersections related technical analysis parameters that have been used for this study are presented below.

Parameters	Existing Conditions	Future Conditions
Peak Hour factor (PHF)	from data collection	0.88
Heavy Vehicle Percentage	5%	5%
# of Conflicting Pedestrian/Hour	5	5
Ideal Saturated Flow[1]	1500 vphpl	1500 vphpl
1. Ideal Saturated Flow assumed as per Caltrans District 1 recommedation.		

Technical Analysis Parameters – Mainline and Ramps

The *Highway Capacity Software* integrated computer software program has been used to implement the HCM-2010 analysis methodologies at freeways and ramps. The specific mainline, ramp related technical analysis parameters that have been used for this study are presented below.

Parameters	Existing Conditions	Future Conditions
Free Flow Speed	55 MPH	55 MPH
Mainline Peak Hour Factor (PHF)	0.88	0.88
Ramp Peak Hour Factor (PHF)	from existing counts	0.88
Mainline Heavy Vehicle Percentage[1]	22%	22%
Ramp Heavy Vehicle Percentage	5%	5%
Terrain	Level	Level
Driver Population	0.86	0.86
Mainline AM peak Hour Volume (Northbound)[2]	317 vph	1% growth rate
Mainline AM peak Hour Volume (Southbound)[2]	287 vph	1% growth rate
Mainline PM peak Hour Volume (Northbound)[2]	541 vph	1% growth rate
Mainline PM peak Hour Volume (Southbound)[2]	486 vph	1% growth rate
Ramp Volumes	from data collection	1% growth rate
1. Mainline Heavy Vehicle Percentage obtained from Caltrans Published 2011 Data.		
2. Data abtained from Caltrans' Performance Measurement System (PEMS) database for Thursday in August 2012 (peak month and day).		

EXISTING CONDITIONS

This section provides a summary of intersection, mainline and ramp merge/diverge analysis for Existing conditions. **Figure 3** (in the appendix) depicts the intersection volumes and **Figure 4** (in the appendix) depicts the freeway mainline and ramp volumes.

Intersections

"Existing" peak-hour traffic operations were quantified for the study intersections. **Table 1A** summarizes Existing AM and PM peak hour intersection LOS values with existing traffic volumes (shown on **Figure 3**) and lane geometrics and control (shown on **Figure 2**).

TABLE 1A
EXISTING CONDITIONS: INTERSECTIONS LEVEL OF SERVICE

#	Intersection	Control Type[1,2]	Target LOS	AM Peak Hour			PM Peak Hour		
				Delay	LOS	Warrant Met?[3]	Delay	LOS	Warrant Met?[3]
1	6th Avenue & Kay Avenue	TWSC	C	8.9	A	-	8.9	A	-
2	6th Avenue & Kahlstrom Avenue	TWSC	C	9.0	A	-	8.8	A	-
3	Kay Avenue & US 101 SB Ramps	TWSC	C	9.5	A	-	9.1	A	-
4	Kahlstrom Avenue & 7th Avenue	TWSC	C	9.0	A	-	0.4	A	-
5	Scenic Drive & Main Street	TWSC	C	12.4	B	-	13.6	B	-
6	Westhaven Drive & US 101 SB Ramps	TWSC	C	9.6	A	-	10.0	A	-
7	Westhaven Drive & US 101 NB Ramps	TWSC	C	10.7	B	-	11.2	B	-
8	Westhaven Drive & Frontage Road	TWSC	C	9.2	A	-	9.0	A	-
9	Scenic Drive & Baker Ranch Drive	TWSC	C	0.7	A	-	8.5	A	-
10	Scenic Drive & Cher-Ae Lane	TWSC	C	8.6	A	-	9.1	A	-
11	Scenic Drive & Cher-Ae Heights Casino	TWSC	C	8.6	A	-	8.6	A	-
12	Scenic Drive & Landford Road	TWSC	C	8.7	A	-	8.9	A	-

Notes:
1. TWSC = Two Way Stop Control
2. LOS = Delay based on worst minor street approach for TWSC intersections
3. Warrant = Based on California MUTCD Warrant 3

As indicated in **Table 1A**, all of the study intersections are found to be operating at acceptable LOS under Existing conditions based on the intersection delay and the corresponding LOS.

Existing Freeway and Ramp Junction Operating Conditions

US 101 freeway mainline and ramp junction peak-hour traffic operations were also quantified applying methods documented in the *HCM-2010* with the existing conditions LOS presented in **Table 1B**. As shown in **Table 1B**, all freeway mainline segments and ramp junctions within the study area currently operate at LOS "C" or better for "Existing" AM and PM peak hour periods.

TABLE 1B
EXISTING CONDITIONS:
US 101 MAINLINE AND RAMP JUNCTION LEVEL OF SERVICE

			AM Peak Hour			PM Peak Hour		
Freeway Mainline Segment	No. Lanes	Target LOS	Volume	Density, (pc/mi/ln)	LOS	Volume	Density, (pc/mi/ln)	LOS
US 101 NB north of Main Street	2	C	204	2.7	A	368	4.9	A
US 101 NB south of Main Street	2	C	343	5.1	A	539	7.2	A
US 101 SB north of Main Street	2	C	164	2.2	A	366	4.9	A
US 101 SB south of Main Street	2	C	282	3.8	A	496	6.6	A

TABLE 1B (CONTINUED)
EXISTING CONDITIONS:
US 101 MAINLINE AND RAMP JUNCTION LEVEL OF SERVICE

			AM Peak Hour		PM Peak Hour	
Interchange Location	Target LOS	Junction Type	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
US 101 Ramps @ 6th Avenue I/C						
U.S. Route 101 Northbound On-Ramp	C	Merge	7.8	A	9.9	A
U.S. Route 101 Northbound Off-Ramp	C	Diverge	6.1	A	9.2	A
U.S. Route 101 Southbound On-Ramp	C	Merge	7.4	A	9.8	A
U.S. Route 101 Southbound Off-Ramp	C	Diverge	5.8	A	8.8	A
US 101 Ramps @ Main Street I/C						
U.S. Route 101 Northbound On-Ramp	C	Merge	5.9	A	7.8	A
U.S. Route 101 Northbound Off-Ramp	C	Diverge	6.8	A	9.3	A
U.S. Route 101 Southbound On-Ramp	C	Merge	7.0	A	9.6	A
U.S. Route 101 Southbound Off-Ramp	C	Diverge	4.1	A	7.2	A

DESIGN YEAR CONDITIONS

General

The Highway Design Manual (HDM) states that the geometric design of new facilities and reconstruction projects should normally be based on estimated traffic 20 years after completion of construction. As such, Caltrans has established that the cumulative year of analysis should be 2040. This is consistent with the Humboldt County Regional Planning efforts and the Humboldt County Regional Travel Demand model.

Year 2040 Traffic Volumes

The following sources of data were reviewed to establish background annual growth rate that will be applied to the study area facilities to derive Year 2040 Base traffic volumes:

1) Humboldt County Travel Demand Model Roadway volumes for Year 2010 and Year 2040 were compared on US 101. In the vicinity of the study area, the model projects approximately 6,100 ADT for Year 2010 and 7,000 ADT for Year 2040. This yields an annual growth rate of approximately 0.5% per year.
2) Historic ADT data available from Caltrans was reviewed for the Year 1992 and Year 2012. In the vicinity of the study area, the 1992 ADT was found to be 8,000 and the peak ADT was found to be 11,300. In 2012, the ADT was found to be 8,900 and the peak ADT was found to be 12,300. This yields an annual growth rate of approximately 0.6% per year.
3) California Department of Finance (DOF) projections for population in Humboldt County were reviewed for Year 2010 and Year 2040 conditions. The DOF estimate for population in Year 2010 was 134,663 and Year 2040 is 147,873. This yields an annual growth rate of approximately 0.6% per year.

Per direction from Caltrans District 1 Long Range Planning, a background growth rate of 1.3% per year has been utilized to derive Year 2040 Base traffic volumes.

Year 2020 Traffic Forecasts

Based on the planned development of the Rancheria and input from Caltrans, Year 2020 was established as the interim analysis year. A background growth rate of 1.3% per year has been utilized to derive Year 2020 Base traffic volumes.

YEAR 2020 BASE TRAFFIC OPERATIONS

This section provides a summary of intersection, mainline and ramp merge/diverge analysis for Year 2020 Base conditions. **Figure 5** (in the appendix) depicts the intersection volumes and **Figure 6** (in the appendix) depicts the freeway mainline and ramp volumes.

Intersections

Year 2020 Base peak-hour traffic operations were quantified for the study intersections. **Table 2A** summarizes Year 2020 Base AM and PM peak hour intersection LOS values with Year 2020 volumes (shown on **Figure 5**) and lane geometrics and control (shown on **Figure 2**).

TABLE 2A
YEAR 2020 BASE CONDITIONS: INTERSECTIONS LEVEL OF SERVICE

#	Intersection	Control Type[1,2]	Target LOS	AM Peak Hour			PM Peak Hour		
				Delay	LOS	Warrant Met?[3]	Delay	LOS	Warrant Met?[3]
1	6th Avenue & Kay Avenue	TWSC	C	9.1	A	-	9.2	A	-
2	6th Avenue & Kahlstrom Avenue	TWSC	C	9.3	A	-	8.9	A	-
3	Kay Avenue & US 101 SB Ramps	TWSC	C	9.7	A	-	9.2	A	-
4	Kahlstrom Avenue & 7th Avenue	TWSC	C	9.4	A	-	1.9	A	-
5	Scenic Drive & Main Street	TWSC	C	14.5	B	-	16.0	C	-
6	Westhaven Drive & US 101 SB Ramps	TWSC	C	9.8	A	-	10.8	B	-
7	Westhaven Drive & US 101 NB Ramps	TWSC	C	11.2	B	-	12.1	B	-
8	Westhaven Drive & Frontage Road	TWSC	C	9.7	A	-	9.5	A	-
9	Scenic Drive & Baker Ranch Drive	TWSC	C	2.5	A	-	8.6	A	-
10	Scenic Drive & Cher-Ae Heights Casino	TWSC	C	8.7	A	-	9.0	A	-
11	Scenic Drive & Cher-Ae Lane	TWSC	C	8.7	A	-	9.5	A	-
12	Scenic Drive & Landford Road	TWSC	C	9.2	A	-	9.5	A	-

Notes:

1. TWSC = Two Way Stop Control

2. LOS = Delay based on worst minor street approach for TWSC intersections

3. Warrant = Based on California MUTCD Warrant 3

As indicated in **Table 2A**, all of the study intersections are found to be operating at acceptable LOS under Year 2020 Base conditions based on the intersection delay and the corresponding LOS.

Year 2020 Base Freeway and Ramp Junction Operating Conditions

US 101 freeway mainline and ramp junction peak-hour traffic operations were also quantified applying methods documented in the *HCM-2010* with the existing conditions LOS presented in **Table 2B**. As shown in **Table 2B**, all freeway mainline segments and ramp junctions within the study area currently operate at LOS "C" or better for Year 2020 Base AM and PM peak hour periods.

TABLE 2B
YEAR 2020 BASE CONDITIONS:
US 101 MAINLINE AND RAMP JUNCTION LEVEL OF SERVICE

Freeway Mainline Segment	No. Lanes	Target LOS	AM Peak Hour			PM Peak Hour		
			Volume	Density, (pc/mi/ln)	LOS	Volume	Density, (pc/mi/ln)	LOS
US 101 NB north of Main Street	2	C	230	3.1	A	400	5.3	A
US 101 NB south of Main Street	2	C	380	5.1	A	580	7.7	A
US 101 SB north of Main Street	2	C	170	2.3	A	410	5.5	A
US 101 SB south of Main Street	2	C	300	4.0	A	540	7.2	A

TABLE 2B (CONTINUED)
YEAR 2020 BASE CONDITIONS:
US 101 MAINLINE AND RAMP JUNCTION LEVEL OF SERVICE

Interchange Location	Target LOS	Junction Type	AM Peak Hour Density (pc/mi/ln)	AM Peak Hour LOS	PM Peak Hour Density (pc/mi/ln)	PM Peak Hour LOS
US 101 Ramps @ 6th Avenue I/C						
U.S. Route 101 Northbound On-Ramp	C	Merge	8.3	A	10.4	B
U.S. Route 101 Northbound Off-Ramp	C	Diverge	5.6	A	8.5	A
U.S. Route 101 Southbound On-Ramp	C	Merge	6.9	A	9.2	A
U.S. Route 101 Southbound Off-Ramp	C	Diverge	5.6	A	8.3	A
US 101 Ramps @ Main Street I/C						
U.S. Route 101 Northbound On-Ramp	C	Merge	6.2	A	8.1	A
U.S. Route 101 Northbound Off-Ramp	C	Diverge	6.3	A	8.8	A
U.S. Route 101 Southbound On-Ramp	C	Merge	6.8	A	9.2	A
U.S. Route 101 Southbound Off-Ramp	C	Diverge	4.1	A	6.6	A

YEAR 2040 BASE TRAFFIC OPERATIONS

This section provides a summary of intersection, mainline and ramp merge/diverge analysis for Year 2040 Base conditions. **Figure 7** (in the appendix) depicts the intersection volumes and **Figure 8** (in the appendix) depicts the freeway mainline and ramp volumes.

Intersections

Year 2040 Base peak-hour traffic operations were quantified for the study intersections. **Table 3A** summarizes Year 2040 Base AM and PM peak hour intersection LOS values with Year 2040 traffic volumes (shown on **Figure 7**) and lane geometrics and control (shown on **Figure 2**).

TABLE 3A
YEAR 2040 BASE CONDITIONS: INTERSECTIONS LEVEL OF SERVICE

#	Intersection	Control Type[1,2]	Target LOS	AM Peak Hour Delay	AM Peak Hour LOS	AM Peak Hour Warrant Met?[3]	PM Peak Hour Delay	PM Peak Hour LOS	PM Peak Hour Warrant Met?[3]
1	6th Avenue & Kay Avenue	TWSC	C	9.1	A	-	9.1	A	-
2	6th Avenue & Kahlstrom Avenue	TWSC	C	9.1	A	-	8.9	A	-
3	Kay Avenue & US 101 SB Ramps	TWSC	C	9.8	A	-	9.3	A	-
4	Kahlstrom Avenue & 7th Avenue	TWSC	C	9.1	A	-	1.9	A	-
5	Scenic Drive & Main Street	TWSC	C	17.1	C	-	21.1	C	-
6	Westhaven Drive & US 101 SB Ramps	TWSC	C	11.3	B	-	11.8	B	-
7	Westhaven Drive & US 101 NB Ramps	TWSC	C	12.8	B	-	14.5	B	-
8	Westhaven Drive & Frontage Road	TWSC	C	10.0	A	-	9.6	A	-
9	Scenic Drive & Baker Ranch Drive	TWSC	C	2.5	A	-	8.6	A	-
10	Scenic Drive & Cher-Ae Heights Casino	TWSC	C	8.7	A	-	8.9	A	-
11	Scenic Drive & Cher-Ae Lane	TWSC	C	8.7	A	-	9.4	A	-
12	Scenic Drive & Landford Road	TWSC	C	9.1	A	-	9.6	A	-

Notes:
1. TWSC = Two Way Stop Control
2. LOS = Delay based on worst minor street approach for TWSC intersections
3. Warrant = Based on California MUTCD Warrant 3

As indicated in **Table 3A**, all of the study intersections are found to be operating at acceptable LOS under Year 2040 Base conditions based on the intersection delay and the corresponding LOS.

Year 2040 Base Freeway and Ramp Junction Operating Conditions

US 101 freeway mainline and ramp junction peak-hour traffic operations were also quantified applying methods documented in the *HCM-2010* with the Year 2040 conditions LOS presented in **Table 3B**. As shown in **Table 3B**, all freeway mainline segments and ramp junctions within the study area currently operate at LOS "C" or better for Year 2040 Base AM and PM peak hour periods.

TABLE 3B
YEAR 2040 BASE CONDITIONS:
US 101 MAINLINE AND RAMP JUNCTION LEVEL OF SERVICE

			AM Peak Hour			PM Peak Hour		
				Density,			Density,	
Freeway Mainline Segment	No. Lanes	Target LOS	Volume	(pc/mi/ln)	LOS	Volume	(pc/mi/ln)	LOS
US 101 NB north of Main Street	2	C	290	3.9	A	520	6.9	A
US 101 NB south of Main Street	2	C	490	6.5	A	760	10.1	B
US 101 SB north of Main Street	2	C	230	3.1	A	500	6.7	A
US 101 SB south of Main Street	2	C	390	5.2	A	690	9.2	A

TABLE 3B (CONTINUED)
YEAR 2040 BASE CONDITIONS:
US 101 MAINLINE AND RAMP JUNCTION LEVEL OF SERVICE

			AM Peak Hour		PM Peak Hour	
			Density		Density	
Interchange Location	Target LOS	Junction Type	(pc/mi/ln)	LOS	(pc/mi/ln)	LOS
US 101 Ramps @ 6th Avenue I/C						
U.S. Route 101 Northbound On-Ramp	C	Merge	7.8	A	9.9	A
U.S. Route 101 Northbound Off-Ramp	C	Diverge	6.1	A	9.2	A
U.S. Route 101 Southbound On-Ramp	C	Merge	7.4	A	9.8	A
U.S. Route 101 Southbound Off-Ramp	C	Diverge	5.8	A	8.8	A
US 101 Ramps @ Main Street I/C						
U.S. Route 101 Northbound On-Ramp	C	Merge	5.9	A	7.8	A
U.S. Route 101 Northbound Off-Ramp	C	Diverge	6.8	A	9.3	A
U.S. Route 101 Southbound On-Ramp	C	Merge	7.0	A	9.6	A
U.S. Route 101 Southbound Off-Ramp	C	Diverge	4.1	A	7.2	A

RANCHERIA MASTER PLAN DEVELOPMENT

The Trinidad Rancheria provided long range plans for development of the Rancheria (Master Plan Development). To assess the roadways improvements needs associated with the Master Plan Development, trips expected from the Master Plan Development will be added to the Base year traffic volumes. The general land use assumptions for the proposed Rancheria Master Plan development are presented below:

Uses	Existing	Master Plan
Casino	50,000 sq.ft.	150,000 sq.ft.
RV Spaces	22	50
Hotel	None	100 Rooms
Office Space	Minimal	100,000 sq.ft.
Retail	None	25,000 sq.ft.
Community Space	Minimal	50,000 sq.ft.
Gas Station	None	6 Pumps

Rancheria Master Plan Development Trip Generation

Table 4A provides the trip generation associated with the proposed Rancheria Master Plan development. Trip Generation estimates for other uses were obtained from the data published in the 9th edition of Institute of Transportation Engineers (ITE). Although the retail uses associated with the proposed Rancheria Master Plan development are expected to be "Specialty Retail" (ITE Use Code 814), a "Shopping Center" (ITE use code 820) was used to estimate trips for this land use. The data is limited for the Specialty Retail type uses and therefore, Shopping Center was used.

Traffic counts conducted at the entrance to the existing Trinidad Rancheria indicated that the existing Rancheria generates 67 trips during the AM peak period and 107 trips during the PM peak period. Based on the 50,000 square feet existing casino establishment, these trips translate to 1.34 trips/1,000 sq.ft. during the AM peak period and 2.14 trips/1,000 sq.ft. during the PM peak period. This data along with data from other Casino/Rancheria's was utilized in deriving trips for the proposed 150,000 square feet casino expansion.

Table 4B provides the trip generation associated with the proposed Rancheria Master Plan development for Year 2020 conditions.

TABLE 4A
RANCHERIA MASTER PLAN DEVELOPMENT - BUILT-OUT TRIP GENERATION

"Unadjusted" Project Trip Generation[1]

Land Use Category (ITE Code)	Rate Unit	AM Pk Hr Trip Rate Total	AM In %	AM Out %	PM Pk Hr Trip Rate Total	PM In %	PM Out %
Casino Trip Generation Rates[2]	per ksf	2.01	69%	31%	3.94	53%	47%
Hotel (310)[3]	per room	0.56	61%	39%	0.59	53%	47%
General Office (710)[3]	per ksf	1.92	88%	12%	1.91	17%	83%
Shopping Center (820)[3]	per ksf	0.96	62%	38%	3.71	48%	52%
Recreational Community Center (495)[3]	per ksf	2.05	66%	34%	2.74	49%	51%
Gas Station with Convenience Market (945)[3]	per FS	10.16	50%	50%	13.51	50%	50%

Land Use Description	Quantity	AM Pk Hr Trips Total	AM In	AM Out	PM Pk Hr Trips Total	PM In	PM Out
Proposed Casino Expansion	150.0 ksf	302	208	94	591	313	278
Hotel	100 rooms	56	34	22	59	31	28
Office	100 ksf	192	169	23	191	32	159
Retail	25 ksf	24	15	9	93	45	48
Recreational	50 ksf	103	68	35	137	67	70
Mini-Mart	6 FS	61	31	30	82	41	41
TOTAL "UNADJUSTED" PROPOSED PROJECT TRIPS		**738**	**525**	**213**	**1,153**	**529**	**624**

Notes: ksf = 1,000 square feet, FS - Fueling Stations

1) Unadjusted Trips include Internal Trips.

2) Trip generation volumes estimated using other sources, which are attached.

3) Trip generation volumes estimated using the ITE Trip Generation (9th Edition) .

4) Based on professional engineering judgement.

Internal Trip Reductions[4]

Land Use Description	AM Peak Hour Internal %	PM Peak Hour Internal %
Hotel	30%	30%
Office, Retail, Recreational and Mini-Mart	20%	20%

Land Use Description	AM Peak Hour Trips Total	AM In	AM Out	PM Peak Hour Trips Total	PM In	PM Out
100 Room Hotel	*16*	*10*	6	*17*	*9*	8
Office, Retail, Recreational and Mini-Mart	*76*	*56*	*19*	*100*	*37*	*63*
TOTAL PROPOSED PROJECT INTERNAL TRIPS	***92***	***66***	***26***	***117***	***46***	***71***

"Unadjusted" External Trip Generation

Land Use Description	AM Peak Hour Trips Total	AM In	AM Out	PM Peak Hour Trips Total	PM In	PM Out
TOTAL "UNADJUSTED" PROJECT TRIPS	738	525	213	1,153	529	624
- Internal trips	-92	-66	-26	-117	-46	-71
TOTAL "UNADJUSTED" PROPOSED PROJECT EXTERNAL TRIPS	**646**	**459**	**187**	**1,036**	**483**	**553**

Full development of the proposed Rancheria Master Plan development is expected to generate 646 AM peak hour trips and 1,036 PM peak hour trips. Note that these are all net "new" trips that will be added to the study intersection in the analysis under Year 2040 Master Plan conditions.

The study includes analysis of proposed Rancheria Master Plan development conditions under Year 2020 conditions. It is not expected that full build-out of the proposed Rancheria Master Plan development will occur by Year 2020 conditions. Therefore, for trip generation purposes under Year 2020 conditions, it is assumed that the 100 room hotel and the 150,000 square feet casino expansion will be constructed.

TABLE 4B
YEAR 2020 MASTER PLAN TRIP GENERATION

"Unadjusted" Project Trip Generation[1]								
Land Use Category (ITE Code)	Rate Unit	AM Pk Hr Trip Rate			PM Pk Hr Trip Rate		
		Total	In %	Out %	Total	In %	Out %
Casino Trip Generation Rates[2]	per ksf	2.01	69%	31%	3.94	53%	47%
Hotel (310)[3]	per room	0.56	61%	39%	0.59	53%	47%
Land Use Description	Quantity	AM Pk Hr Trips			PM Pk Hr Trips		
		Total	In	Out	Total	In	Out
Proposed Casino Expansion	150.0 ksf	302	208	94	591	313	278
Hotel	100 rooms	56	34	22	59	31	28
TOTAL "UNADJUSTED" PROPOSED PROJECT TRIPS		**358**	**242**	**116**	**650**	**344**	**306**

Notes: ksf = 1,000 square feet, FS - Fueling Stations

1) Unadjusted Trips include Internal Trips.

2) Trip generation volumes estimated using other sources, which are attached.

3) Trip generation volumes estimated using the ITE Trip Generation (9th Edition) .

4) Based on professional engineering judgement.

Internal Trip Reductions[4]						
Land Use Description	AM Peak Hour Internal %			PM Peak Hour Internal %		
Hotel		30%			30%	
Land Use Description	AM Peak Hour Trips			PM Peak Hour Trips		
	Total	In	Out	Total	In	Out
100 Room Hotel	*16*	*10*	6	*17*	*9*	8
TOTAL PROPOSED PROJECT INTERNAL TRIPS	***16***	***10***	***6***	***17***	***9***	***8***

"Unadjusted" External Trip Generation						
Land Use Description	AM Peak Hour Trips			PM Peak Hour Trips		
	Total	In	Out	Total	In	Out
TOTAL "UNADJUSTED" PROJECT TRIPS	358	242	116	650	344	306
- Internal trips	-16	-10	-6	-17	-9	-8
TOTAL "UNADJUSTED" PROPOSED PROJECT EXTERNAL TRIPS	**342**	**232**	**110**	**633**	**335**	**298**

Year 2020 development of the proposed Rancheria Master Plan development is expected to generate 342 AM peak hour trips and 633 PM peak hour trips. Note that these are all net "new" trips that will be added to the study intersection in the analysis under Year 2020 Master Plan conditions.

Rancheria Master Plan development Trip Distribution and Assignment

The directional trip distribution and assignment of proposed Rancheria Master Plan development trips was largely based on the type of uses, demographics of the study area, travel patterns from the existing Rancheria derived thru traffic counts. The directional trip distribution for the proposed Rancheria Master Plan development is depicted graphically in **Figure 9 (**in the Appendix**).**

YEAR 2020 RANCHERIA MASTER PLAN TRAFFIC OPERATIONS

This section provides a summary of intersection, mainline and ramp merge/diverge analysis for Year 2020 Rancheria Master Plan conditions. **Figure 10** (in the appendix) depicts the intersection volumes and **Figure 11** (in the appendix) depicts the freeway mainline and ramp volumes.

Intersections

2020 Rancheria Master Plan peak-hour traffic operations were quantified for the study intersections. **Table 5A** summarizes Year 2020 Rancheria Master Plan AM and PM peak hour intersection LOS values with Year 2020 traffic volumes (shown on **Figure 10**) and lane geometrics and control (shown on **Figure 2**).

TABLE 5A
YEAR 2020 RANCHERIA MASTER PLAN CONDITIONS: INTERSECTIONS LEVEL OF SERVICE

#	Intersection	Control Type[1,2]	Target LOS	AM Peak Hour			PM Peak Hour		
				Delay	LOS	Warrant Met?[3]	Delay	LOS	Warrant Met?[3]
1	6th Avenue & Kay Avenue	TWSC	C	9.2	A	-	9.4	A	-
2	6th Avenue & Kahlstrom Avenue	TWSC	C	9.4	A	-	9.1	A	-
3	Kay Avenue & US 101 SB Ramps	TWSC	C	9.7	A	-	9.3	A	-
4	Kahlstrom Avenue & 7th Avenue	TWSC	C	9.4	A	-	1.9	A	-
5	**Scenic Drive & Main Street**	**TWSC**	**C**	**54.3**	**F**	**No**	**OVR**	**F**	**Yes**
6	Westhaven Drive & US 101 SB Ramps	TWSC	C	11.8	B	-	15.3	C	-
7	**Westhaven Drive & US 101 NB Ramps**	**TWSC**	**C**	16.3	C	-	**39.0**	**E**	**Yes**
8	Westhaven Drive & Frontage Road	TWSC	C	9.9	A	-	9.9	A	-
9	Scenic Drive & Baker Ranch Drive	TWSC	C	2.5	A	-	8.7	A	-
10	Scenic Drive & Cher-Ae Heights Casino	TWSC	C	9.1	A	-	9.5	A	-
11	Scenic Drive & Cher-Ae Lane	TWSC	C	10.2	B	-	24.1	C	-
12	Scenic Drive & Landford Road	TWSC	C	11.2	B	-	15.6	C	-

Notes:
1. TWSC = Two Way Stop Control
2. LOS = Delay based on worst minor street approach for TWSC intersections
3. Warrant = Based on California MUTCD Warrant 3

As indicated in **Table 5A**, all of the study intersections with the exception of Scenic Drive and Main Street and Westhaven Drive and US 101 NB Ramps intersections are found to be operating at acceptable LOS under Year 2020 Rancheria Master Plan conditions based on the intersection delay and the corresponding LOS. Furthermore, the Scenic Drive/Main Street and Westhaven Drive/US 101 NB Ramps intersections are projected to meet the peak hour warrant criteria during the PM peak period.

Year 2020 Rancheria Master Plan Freeway and Ramp Junction Operating Conditions

US 101 freeway mainline and ramp junction peak-hour traffic operations were also quantified applying methods documented in the HCM-*2010* with the existing conditions LOS presented in **Table 5B**. As shown in **Table 5B**, all freeway mainline segments and ramp junctions within the study area currently operate at LOS "C" or better for Year 2020 Rancheria Master Plan AM and PM peak hour periods.

TABLE 5B
YEAR 2020 RANCHERIA MASTER PLAN CONDITIONS:
US 101 MAINLINE AND RAMP JUNCTION LEVEL OF SERVICE

			AM Peak Hour			PM Peak Hour		
Freeway Mainline Segment	No. Lanes	Target LOS	Volume	Density, (pc/mi/ln)	LOS	Volume	Density, (pc/mi/ln)	LOS
US 101 NB north of Main Street	2	C	254	3.4	A	464	6.2	A
US 101 NB south of Main Street	2	C	515	6.9	A	774	10.3	A
US 101 SB north of Main Street	2	C	221	2.9	A	484	6.5	A
US 101 SB south of Main Street	2	C	364	4.9	A	713	9.5	A

TABLE 5B (CONTINUED)
YEAR 2020 RANCHERIA MASTER PLAN CONDITIONS:
US 101 MAINLINE AND RAMP JUNCTION LEVEL OF SERVICE

			AM Peak Hour		PM Peak Hour	
Interchange Location	Target LOS	Junction Type	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
US 101 Ramps @ 6th Avenue I/C						
U.S. Route 101 Northbound On-Ramp	C	Merge	9.9	A	12.6	B
U.S. Route 101 Northbound Off-Ramp	C	Diverge	7.5	A	11.3	B
U.S. Route 101 Southbound On-Ramp	C	Merge	8.0	A	11.5	B
U.S. Route 101 Southbound Off-Ramp	C	Diverge	6.6	A	11.0	B
US 101 Ramps @ Main Street I/C						
U.S. Route 101 Northbound On-Ramp	C	Merge	6.4	A	8.7	A
U.S. Route 101 Northbound Off-Ramp	C	Diverge	8.5	A	11.8	B
U.S. Route 101 Southbound On-Ramp	C	Merge	7.6	A	11.3	B
U.S. Route 101 Southbound Off-Ramp	C	Diverge	4.8	A	8.1	A

YEAR 2040 RANCHERIA MASTER PLAN TRAFFIC OPERATIONS

This section provides a summary of intersection, mainline and ramp merge/diverge analysis for Year 2040 Rancheria Master Plan conditions. **Figure 12** (in the appendix) depicts the intersection volumes and **Figure 13** (in the appendix) depicts the freeway mainline and ramp volumes.

Intersections

Year 2040 Rancheria Master Plan peak-hour traffic operations were quantified for the study intersections. **Table 6A** summarizes Year 2040 Rancheria Master Plan AM and PM peak hour intersection LOS values with Year 2040 traffic volumes (shown on **Figure 12**) and lane geometrics and control (shown on **Figure 2**).

TABLE 6A
YEAR 2040 RANCHERIA MASTER PLAN CONDITIONS: INTERSECTIONS LEVEL OF SERVICE

#	Intersection	Control Type[1,2]	Target LOS	AM Peak Hour			PM Peak Hour		
				Delay	LOS	Warrant Met?[3]	Delay	LOS	Warrant Met?[3]
1	6th Avenue & Kay Avenue	TWSC	C	9.3	A	-	9.4	A	-
2	6th Avenue & Kahlstrom Avenue	TWSC	C	9.3	A	-	9.2	A	-
3	Kay Avenue & US 101 SB Ramps	TWSC	C	9.9	A	-	9.5	A	-
4	Kahlstrom Avenue & 7th Avenue	TWSC	C	9.4	A	-	1.9	A	-
5	**Scenic Drive & Main Street**	**TWSC**	**C**	**OVR**	**F**	**Yes**	**OVR**	**F**	**Yes**
6	Westhaven Drive & US 101 SB Ramps	TWSC	C	18.6	C	-	23.7	C	-
7	**Westhaven Drive & US 101 NB Ramps**	**TWSC**	**C**	**71.7**	**F**	**Yes**	**OVR**	**F**	**Yes**
8	Westhaven Drive & Frontage Road	TWSC	C	10.5	B	-	10.4	B	-
9	Scenic Drive & Baker Ranch Drive	TWSC	C	2.5	A	-	8.7	A	-
10	Scenic Drive & Cher-Ae Heights Casino	TWSC	C	9.2	A	-	10.4	B	-
11	**Scenic Drive & Cher-Ae Lane**	**TWSC**	**C**	13.6	B	-	**235.1**	**F**	**Yes**
12	Scenic Drive & Landford Road	TWSC	C	13.4	B	-	22.7	C	-

Notes:
1. TWSC = Two Way Stop Control
2. LOS = Delay based on worst minor street approach for TWSC intersections
3. Warrant = Based on California MUTCD Warrant 3

As indicated in **Table 6A**, the following study intersections are found to be operating at unacceptable LOS D or worse conditions under Year 2040 Rancheria Master Plan conditions based on the intersection delay and the corresponding LOS:

- Scenic Drive and Main Street (meets the peak hour warrant criteria during both peak periods)
- Westhaven Drive and US 101 NB Ramps (meets the peak hour warrant criteria during both peak periods)
- Scenic Drive and Cher-Ae Lane (meets the peak hour warrant criteria during the PM peak period)

Year 2040 Rancheria Master Plan Freeway and Ramp Junction Operating Conditions

US 101 freeway mainline and ramp junction peak-hour traffic operations were also quantified applying methods documented in the HCM-*2010* with the existing conditions LOS presented in **Table 6B**. As shown in **Table 6B**, all freeway mainline segments and ramp junctions within the study area currently operate at LOS "C" or better for Year 2040 Rancheria Master Plan AM and PM peak hour periods.

TABLE 6B
YEAR 2040 RANCHERIA MASTER PLAN CONDITIONS:
US 101 MAINLINE AND RAMP JUNCTION LEVEL OF SERVICE

Freeway Mainline Segment	No. Lanes	Target LOS	AM Peak Hour			PM Peak Hour		
			Volume	Density, (pc/mi/ln)	LOS	Volume	Density, (pc/mi/ln)	LOS
US 101 NB north of Main Street	2	C	331	4.4	A	642	8.6	A
US 101 NB south of Main Street	2	C	756	10.1	A	1,040	13.9	B
US 101 SB north of Main Street	2	C	331	4.4	A	606	8.1	A
US 101 SB south of Main Street	2	C	498	6.6	A	1,011	13.5	B

TABLE 6B (CONTINUED)
YEAR 2040 RANCHERIA MASTER PLAN CONDITIONS:
US 101 MAINLINE AND RAMP JUNCTION LEVEL OF SERVICE

Interchange Location	Target LOS	Junction Type	AM Peak Hour Density (pc/mi/ln)	AM Peak Hour LOS	PM Peak Hour Density (pc/mi/ln)	PM Peak Hour LOS
US 101 Ramps @ 6th Avenue I/C						
U.S. Route 101 Northbound On-Ramp	C	Merge	12.2	B	15.5	B
U.S. Route 101 Northbound Off-Ramp	C	Diverge	10.2	B	14.4	B
U.S. Route 101 Southbound On-Ramp	C	Merge	9.4	A	14.7	B
U.S. Route 101 Southbound Off-Ramp	C	Diverge	8.3	A	14.8	B
US 101 Ramps @ Main Street I/C						
U.S. Route 101 Northbound On-Ramp	C	Merge	7.3	A	10.6	B
U.S. Route 101 Northbound Off-Ramp	C	Diverge	11.5	A	15.1	B
U.S. Route 101 Southbound On-Ramp	C	Merge	9.0	A	14.4	B
U.S. Route 101 Southbound Off-Ramp	C	Diverge	6.2	A	9.6	A

CHER-AE LANE INTERCHANGE

As noted in the previous analysis, with the addition of trips associated with the Rancheria Master Plan, the intersections on Main Street interchange are forecasted to operate at unacceptable LOS E or worse conditions under both Year 2020 and Year 2040 conditions. Without the Rancheria Master Plan trips, all of the study locations are projected to operate at acceptable LOS. Therefore, within this study, traffic operations analysis is evaluated with an interchange that provides direct access to the Rancheria and Westhaven Drive. This new interchange will be located approximately 0.7 miles south of the Main Street interchange.

For the purposes of the analysis a tight diamond interchange is assumed at the new interchange, which is referred to as the Cher-Ae Lane interchange. A two lane overcrossing is assumed with all-way stops at the two ramp locations. Easterly extension of Cher-Ae Lane past the interchange to intersect at a "T" intersection with Westhaven Drive is also assumed.

It should be noted that the spacing between the existing Main Street interchange and the proposed Cher-Ae Lane interchange does not meet the spacing requirements and a design exception would be necessary. However, the objective of this study is to analyze transportation operations associated with the new interchange and the design details and exceptions will be prepared in a Project Study Report, which will be prepared at a later time.

Weaving Analysis

Caltrans District 1 Traffic Operations performed a weaving analysis for the proposed Cher-Ae Lane Interchange on U.S. 101, approximately 0.7 miles south of the Trinidad interchange. The Leisch Method, referred to in Index 504.7 of the Caltrans Highway Design Manual (HDM), 6th Edition, was used in this analysis. Figure 504.7A from the HDM, which demonstrates this method, is provided in the appendix. The results of this analysis provided by Caltrans District 1 Traffic Operations are summarized below.

The overall conclusion from this analysis is that there is adequate distance on U.S. 101 between the proposed interchange ramps and the existing Trinidad interchange ramps to accommodate the interaction of entering and exiting traffic (current and projected) on U.S. 101 in both the north and south directions while maintaining acceptable Level of Service (LOS) on the freeway. Auxiliary lanes will not be needed on U.S. 101 if a new interchange is constructed near PM 100.2.

Using the post mile locations for the ramp connections of the Trinidad interchange and proposed Cher-Ae Lane interchange, the on and off ramps would be separated by approximately 2,600 feet (0.49 miles) and 2,500 feet (0.47 miles) for the northbound and southbound portions of the freeway, respectively. According to Index 504.5, Paragraph 2, of the HDM, "auxiliary lanes should be provided in all cases when the weaving distance is less than 2000 feet." Under these criteria, auxiliary lanes would not be required for northbound (NB) and southbound (SB) U.S. 101 between the Trinidad interchange and the proposed interchange.

The weaving analysis prepared by Caltrans District 1 Traffic Operations was based on the Year 2020 and 2040 volume information presented in the appendix. The data used was in the units of vehicles per hour (vph) and was taken from the afternoon PM peak hour. Year 2020 plus interchange northbound weaving volumes was calculated at 233 vph (80 vph NB onramp + 153 vph NB off ramp). Southbound weaving was calculated at 244 vph PM peak (151 vph SB onramp + 93 vph SB off ramp). Year 2040 plus interchange northbound weaving volumes was calculated at 292 vph (139 NB onramp + 153 vph NB off ramp). Southbound weaving was calculated at 339 vph (212 vph SB onramp + 127 vph SB off ramp).

HDM Section 504.7, Paragraph 3, gives a rough approximation for length of a weaving section, "one foot of length per weaving vehicle per hour (vph)." The largest weaving volume, 339 vph for Year 2040 in the southbound direction, would only require a 339 foot weaving section, which is much less than the 2500 and 2600 feet distances that exist between on and off ramps in the NB and SB directions, respectively. The distances between the ramps are more than adequate to accommodate the interaction of through traffic, traffic entering the freeway, and traffic exiting the freeway between the proposed and existing interchanges; therefore, auxiliary lanes would not be necessary.

The Leisch Method was used to determine Level of Service (LOS). The results from the method nomograph (HDM Figure 504.7A, provided in the appendix) show that the Year 2040 southbound weaving volume of 339 vph, or 401 passenger cars per hour (pcph), would result in LOS A. Being that the Year 2040 northbound weaving volume and the Year 2020 volumes are all less than 339 vph (401 pcph), LOS A would exist in both directions for the weaving section lengths between the interchanges for Year 2020 and 2040 conditions.

Design Exceptions

To promote uniform practice on a statewide basis, the Caltrans HDM identifies standards that shall be considered during project planning. When design features or elements deviate from HDM mandatory standards, approval from the appropriate Caltrans Design Coordinator shall be obtained. The authority to approve exceptions to advisory standards rests with the District Director (District 1).

Design exception approval must be obtained prior to Caltrans approval of a Project Study Report (PSR). When project development is initiated with approval of a Project Study Report – Project Development Support (PSR-PDS) document, approval of applicable design exceptions can be deferred to the Project Report (PR) phase.

Table 82.1A of the HDM lists mandatory standards subject to the above approval requirements. A screening-level review of the standards resulted in development of the below list of potential exceptions to mandatory standards for this project:

HDM Index	Standard	Comment
101.1	Selection of Design Speed	Local roads at interchanges may not meet standards.
201.1	Sight Distance Standards	Local roads at interchanges may not meet standards.
202.2	Superelevation	Local roads and ramp termini may not meet standards.
203.1	Horizontal Alignment	Local roads may not meet standards.
204.1	Local Facility Grades	Local road grades may not meet standards.
309.1	Clear Recovery Zone	Existing topographic features may not meet standards.
501.3	Interchange Spacing	A new interchange will require an exception.
504.3	Distance Between Ramp & Frontage Roads	Not met at existing interchanges. May not be met at new interchange.

Table 82.1B of the HDM lists advisory standards subject to the above approval requirements. A screening-level review of the standards resulted in development of the below list of potential exceptions to advisory standards for this project:

HDM Index	Standard	Comment
101.1	Selection of Design Speed	Local roads at interchanges may not meet standards.
105.4	Two ADA Ramp Design	One access ramp is often appropriate at signalized freeway ramps.
203.1	Horizontal Alignment	Local roads may not meet standards.
204.1	Local Facility Grades	Local road grades may not meet standards.

304.1	Side Slopes 1:4 or Flatter	Existing and proposed slopes may exceed 1:4.
309.1	Clear Recovery Zone	Existing topographic features may not meet standards.
504.3	Distance Between Ramp & Frontage Roads	Not met at existing interchanges. May not be met at new interchange.

YEAR 2020 RANCHERIA MASTER PLAN WITH CHER-AE LANE INTERCHANGE CONDITIONS (YEAR 2020 RANCHERIA MP WITH IC CONDITIONS)

Year 2020 proposed Rancheria Master Plan development trips identified in **Table 4B** have been added to Year 2020 Base traffic volumes based on the trip distribution presented in **Figure 9** to derive Year 2020 Rancheria Master Plan with Cher-Ae Lane Interchange Conditions (Year 2020 Rancheria Master Plan with IC conditions). Traffic volumes will be redistributed based on the addition of a new freeway interchange at the Trinidad Rancheria. **Figure 15** (in the appendix) depicts the intersection volumes and **Figure 16** (in the appendix) depicts the freeway mainline and ramp volumes.

Intersections

Year 2020 Rancheria MP with IC conditions peak-hour traffic operations were quantified for the study intersections. **Table 7A** summarizes Year 2020 Rancheria Master Plan with IC conditions AM and PM peak hour intersection LOS values with Year 2020 traffic volumes (shown on **Figure 15**) and lane geometrics and control (shown on **Figure 14**).

TABLE 7A
YEAR 2020 RANCHERIA MASTER PLAN WITH IC CONDITIONS: INTERSECTIONS LEVEL OF SERVICE

#	Intersection	Control Type[1,2]	Target LOS	AM Peak Hour			PM Peak Hour		
				Delay	LOS	Warrant Met?[3]	Delay	LOS	Warrant Met?[3]
1	6th Avenue & Kay Avenue	TWSC	C	9.2	A	-	9.5	A	-
2	6th Avenue & Kahlstrom Avenue	TWSC	C	9.6	A	-	9.1	A	-
3	Kay Avenue & US 101 SB Ramps	TWSC	C	9.8	A	-	9.3	A	-
4	Kahlstrom Avenue & 7th Avenue	TWSC	C	9.6	A	-	1.9	A	-
5	Scenic Drive & Main Street	TWSC	C	13.2	B	-	14.4	B	-
6	Westhaven Drive & US 101 SB Ramps	TWSC	C	9.7	A	-	9.8	A	-
7	Westhaven Drive & US 101 NB Ramps	TWSC	C	10.9	B	-	11.5	B	-
8	Westhaven Drive & Frontage Road	TWSC	C	9.8	A	-	9.7	A	-
9	Scenic Drive & Baker Ranch Drive	TWSC	C	2.1	A	-	8.7	A	-
10	Scenic Drive & Cheer-Ae Hieght Casino	TWSC	C	9.1	A	-	8.8	A	-
11	Scenic Drive & Cher-AE Lane	TWSC	C	9.1	A	-	9.5	A	-
12	Scenic Drive & Landford Road	TWSC	C	8.9	A	-	9.3	A	-
13	Cher AE Lane & US 101 NB Ramps	AWSC	C	8.4	A	-	9.5	A	-
14	Cher AE Lane & US 101 SB Ramps	AWSC	C	8.2	A	-	10.1	B	-
15	Cher AE Lane & Westhaven Drive	TWSC	C	9.0	A	-	9.2	A	-

Notes:
1. TWSC = Two Way Stop Control
2. LOS = Delay based on worst minor street approach for TWSC intersections
3. Warrant = Based on California MUTCD Warrant 3

As indicated in **Table 7A**, all of the following study intersections are found to be operating at acceptable LOS C or better conditions under Year 2020 Rancheria MP with IC conditions based on the intersection delay and the corresponding LOS.

Year 2020 Rancheria Master Plan Freeway and Ramp Junction Operating Conditions

US 101 freeway mainline and ramp junction peak-hour traffic operations were also quantified applying methods documented in the HCM-*2010* with the existing conditions LOS presented in **Table 7B**. As shown in **Table 7B**, all freeway mainline segments and ramp junctions within the study area currently operate at LOS "C" or better for Year 2020 Rancheria MP with IC conditions AM and PM peak hour periods.

TABLE 7B
YEAR 2020 RANCHERIA MASTER PLAN WITH IC CONDITIONS:
US 101 MAINLINE AND RAMP JUNCTION LEVEL OF SERVICE

			AM Peak Hour			PM Peak Hour		
	No.	Target		Density,			Density,	
Freeway Mainline Segment	Lanes	LOS	Volume	(pc/mi/ln)	LOS	Volume	(pc/mi/ln)	LOS
US 101 NB north of Main Street	2	C	254	3.4	A	464	6.2	A
US 101 NB south of Main Street	2	C	379	5.1	A	618	8.2	A
US 101 SB north of Main Street	2	C	221	2.9	A	484	6.5	A
US 101 SB south of Main Street	2	C	348	4.6	A	600	8.0	A
US 101 NB south of Cher-Ae Lane	2	C	518	6.9	A	779	10.4	B
US 101 SB south of Cher-Ae Lane	2	C	372	5.0	A	715	9.5	A

TABLE 7B (CONTINUED)
YEAR 2020 RANCHERIA MASTER PLAN WITH IC CONDITIONS:
US 101 MAINLINE AND RAMP JUNCTION LEVEL OF SERVICE

			AM Peak Hour		PM Peak Hour	
	Target	Junction	Density		Density	
Interchange Location	LOS	Type	(pc/mi/ln)	LOS	(pc/mi/ln)	LOS
US 101 Ramps @ 6th Avenue I/C						
U.S. Route 101 Northbound On-Ramp	C	Merge	10.0	A	12.6	B
U.S. Route 101 Northbound Off-Ramp	C	Diverge	7.5	A	11.3	B
U.S. Route 101 Southbound On-Ramp	C	Merge	8.0	A	11.5	B
U.S. Route 101 Southbound Off-Ramp	C	Diverge	6.7	A	11.0	B
US 101 Ramps @ Cher-Ae Lane I/C						
U.S. Route 101 Northbound On-Ramp	C	Merge	8.2	A	10.9	B
U.S. Route 101 Northbound Off-Ramp	C	Diverge	8.5	A	11.8	A
U.S. Route 101 Southbound On-Ramp	C	Merge	8.0	A	10.3	B
U.S. Route 101 Southbound Off-Ramp	C	Diverge	6.4	A	9.6	A
US 101 Ramps @ Main Street I/C						
U.S. Route 101 Northbound On-Ramp	C	Merge	6.5	A	8.9	A
U.S. Route 101 Northbound Off-Ramp	C	Diverge	6.8	A	9.8	A
U.S. Route 101 Southbound On-Ramp	C	Merge	7.2	A	10.4	B
U.S. Route 101 Southbound Off-Ramp	C	Diverge	4.8	A	8.1	A

YEAR 2040 RANCHERIA MASTER PLAN WITH CHER-AE LANE INTERCHANGE CONDITIONS (YEAR 2040 RANCHERIA MASTER PLAN WITH IC CONDITIONS)

Year 2040 proposed Rancheria Master Plan development trips identified in **Table 4A** have been added to Year 2040 Base traffic volumes based on the trip distribution presented in **Figure 9** (in the Appendix) to derive Year 2040 Rancheria Master Plan with Cher-Ae Lane Interchange Conditions (Year 2040 Rancheria Master Plan with IC conditions). Traffic volumes will be redistributed based on the addition of

a new freeway interchange at the Trinidad Rancheria. **Figure 17** (in the appendix) depicts the intersection volumes and **Figure 18** (in the appendix) depicts the freeway mainline and ramp volumes.

Intersections

Year 2040 Rancheria MP with IC conditions peak-hour traffic operations were quantified for the study intersections. **Table 8A** summarizes Year 2040 Rancheria MP with IC conditions AM and PM peak hour intersection LOS values with Year 2040 traffic volumes (shown on **Figure 17**) and lane geometrics and control (shown on **Figure 14**).

TABLE 8A
YEAR 2040 RANCHERIA MASTER PLAN WITH IC CONDITIONS: INTERSECTIONS LEVEL OF SERVICE

#	Intersection	Control Type[1,2]	Target LOS	AM Peak Hour			PM Peak Hour		
				Delay	LOS	Warrant Met?[3]	Delay	LOS	Warrant Met?[3]
1	6th Avenue & Kay Avenue	TWSC	C	9.3	A	-	9.5	A	-
2	6th Avenue & Kahlstrom Avenue	TWSC	C	9.3	A	-	9.2	A	-
3	Kay Avenue & US 101 SB Ramps	TWSC	C	9.9	A	-	9.6	A	-
4	Kahlstrom Avenue & 7th Avenue	TWSC	C	9.4	A	-	1.9	A	-
5	Scenic Drive & Main Street	TWSC	C	16.7	C	-	18.7	C	-
6	Westhaven Drive & US 101 SB Ramps	TWSC	C	10.1	B	-	10.4	B	-
7	Westhaven Drive & US 101 NB Ramps	TWSC	C	12.6	B	-	13.2	B	-
8	Westhaven Drive & Frontage Road	TWSC	C	10.2	B	-	10.1	B	-
9	Scenic Drive & Baker Ranch Drive	TWSC	C	2.1	A	-	8.8	A	-
10	Scenic Drive & Cheer-Ae Hieght Casino	TWSC	C	9.1	A	-	8.9	A	-
11	Scenic Drive & Cher-AE Lane	TWSC	C	9.5	A	-	10.0	A	-
12	Scenic Drive & Landford Road	TWSC	C	9.0	A	-	9.5	A	-
13	Cher AE Lane & US 101 NB Ramps	AWSC	C	10.3	B	-	11.6	B	-
14	Cher AE Lane & US 101 SB Ramps	AWSC	C	9.5	A	-	10.1	B	-
15	Cher AE Lane & Westhaven Drive	TWSC	C	9.3	A	-	9.5	A	-

Notes:
1. TWSC = Two Way Stop Control
2. LOS = Delay based on worst minor street approach for TWSC intersections
3. Warrant = Based on California MUTCD Warrant 3

As indicated in **Table 8A**, all of the study intersections are found to be operating at acceptable LOS C or better conditions under Year 2040 Rancheria MP with IC conditions based on the intersection delay and the corresponding LOS. :

Year 2040 Rancheria Master Plan Freeway and Ramp Junction Operating Conditions

US 101 freeway mainline and ramp junction peak-hour traffic operations were also quantified applying methods documented in the HCM-*2010 w*ith the existing conditions LOS presented in **Table 8B**. As shown in **Table 8B**, all freeway mainline segments and ramp junctions within the study area currently operate at LOS "C" or better for Year 2040 Rancheria MP with IC conditions AM and PM peak hour periods.

TABLE 8B
YEAR 2040 RANCHERIA MASTER PLAN WITH IC CONDITIONS:
US 101 MAINLINE AND RAMP JUNCTION LEVEL OF SERVICE

			AM Peak Hour			PM Peak Hour		
Freeway Mainline Segment	No. Lanes	Target LOS	Volume	Density, (pc/mi/ln)	LOS	Volume	Density, (pc/mi/ln)	LOS
US 101 NB north of Main Street	2	C	331	4.4	A	642	8.6	A
US 101 NB south of Main Street	2	C	494	6.6	A	850	11.3	B
US 101 SB north of Main Street	2	C	331	4.4	A	606	8.1	A
US 101 SB south of Main Street	2	C	488	6.5	A	783	10.4	A
US 101 NB south of Cher-Ae Lane	2	C	759	10.1	B	1,045	13.9	B
US 101 SB south of Cher-Ae Lane	2	C	501	6.7	A	1,015	13.5	B

TABLE 8B (CONTINUED)
YEAR 2040 RANCHERIA MASTER PLAN WITH IC CONDITIONS:
US 101 MAINLINE AND RAMP JUNCTION LEVEL OF SERVICE

			AM Peak Hour		PM Peak Hour	
Interchange Location	Target LOS	Junction Type	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
US 101 Ramps @ 6th Avenue I/C						
U.S. Route 101 Northbound On-Ramp	C	Merge	12.2	B	15.6	B
U.S. Route 101 Northbound Off-Ramp	C	Diverge	10.2	B	14.4	B
U.S. Route 101 Southbound On-Ramp	C	Merge	9.4	A	14.7	B
U.S. Route 101 Southbound Off-Ramp	C	Diverge	8.3	A	14.8	B
US 101 Ramps @ Cher-Ae Lane I/C						
U.S. Route 101 Northbound On-Ramp	C	Merge	9.6	A	13.5	B
U.S. Route 101 Northbound Off-Ramp	C	Diverge	11.6	B	15.2	B
U.S. Route 101 Southbound On-Ramp	C	Merge	9.5	A	14.6	B
U.S. Route 101 Southbound Off-Ramp	C	Diverge	8.2	A	11.9	B
US 101 Ramps @ Main Street I/C						
U.S. Route 101 Northbound On-Ramp	C	Merge	7.3	A	10.9	B
U.S. Route 101 Northbound Off-Ramp	C	Diverge	8.2	A	12.7	B
U.S. Route 101 Southbound On-Ramp	C	Merge	9.5	A	12.4	B
U.S. Route 101 Southbound Off-Ramp	C	Diverge	6.2	A	9.6	A

MAIN STREET INTERCHANGE IMPROVEMENTS WITHOUT CHER-AE LANE INTERCHANGE

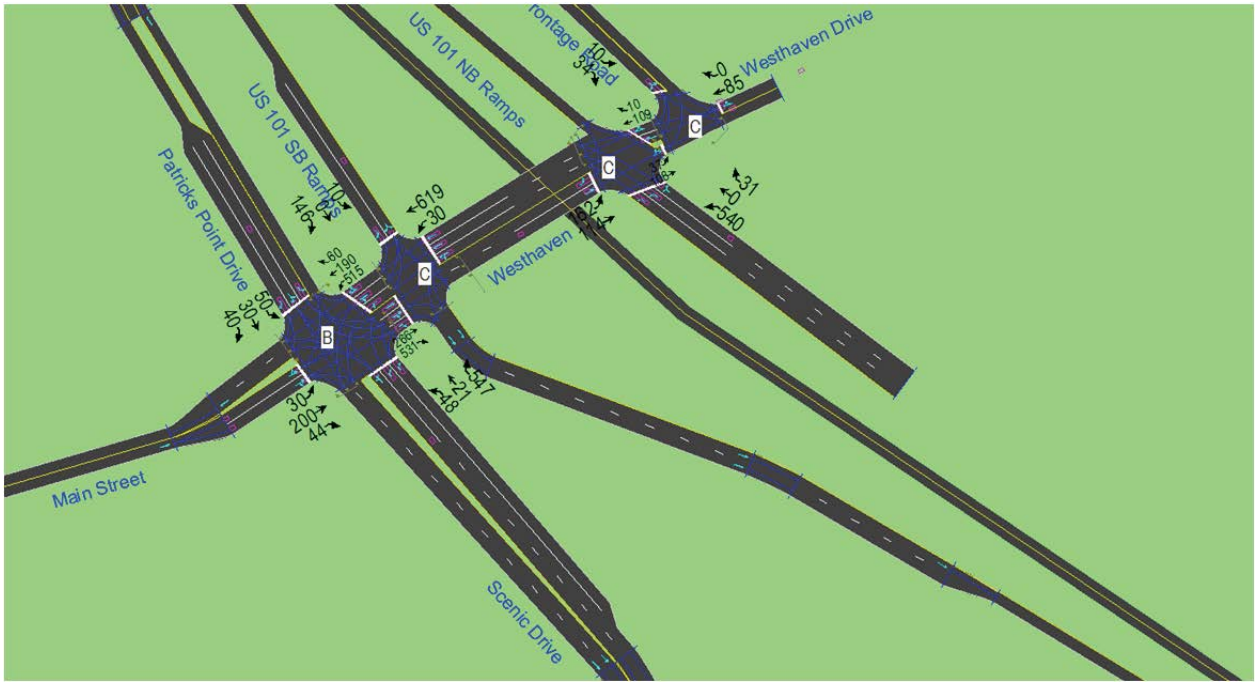
As noted previously (*Year 2020 and 2040 Rancheria Master Plan Conditions)*, with the addition of trips from the proposed Rancheria Master Plan, intersections on the Main Street corridor and the project entrance on Scenic Drive are forecasted to operate at unacceptable LOS. This section identifies intersection improvements that will provide acceptable operations through Year 2040 Rancheria Master Plan conditions.

While intersection delay, on which LOS is derived, is a valid measure of delay and congestion, the proposed improvements are unique. Due to the closely spaced nature of the intersections and signalization proposed on the Main Street Corridor intersections, operations at one intersection significantly impacts operations at adjacent intersections. Furthermore, the close proximity of the intersections within this area and short turn pocket lengths greatly increases the likelihood that a critical movement at an intersection will block adjacent intersections. This behavior is not captured within the isolated intersection analysis in Synchro and needs to be documented using microsimualtion analysis.

Synchro is bundled with microsimulation software, SimTraffic, which uses the Synchro network as the direct input data. The intersection operations for Main Street corridor intersections was performed in SimTraffic.

When compared to AM peak hour volumes, the PM peak hour volumes were significantly higher on the Main Street Corridor. Therefore, the analysis was performed for PM peak hour conditions. The proposed intersection improvements on the Main Street corridor are shown on **Figure 19** and the intersection LOS for Year 2020 and Year 2040 PM Peak hour conditions are provided in Table 9.

Figure 19 – Main Street Interchange Improvements to accommodate Year 2020 and 2040 Rancheria Master Plan Conditions Traffic Volumes



Main Street/Scenic Drive

- Signalize and coordinate the intersection with other Main Street corridor intersections

- Provide dual northbound right turns and one shared left-thru lane
- Provide left turn and right turn lanes and a shared left-thru lane in the southbound direction
- Provide a shared left-thru lane and a thru-right lane in the eastbound direction
- Provide dual left turn lanes and a thru-right lane in the westbound direction

Main Street/US 101 SB Ramps

- Signalize and coordinate the intersection with other Main Street corridor intersections
- Provide a left-right lane and right turn lanes in the southbound direction
- Provide a thru lane ,a thru-right lane and an exclusive right turn lane in the eastbound direction
- Provide a shared left-thru lane, and dual thru lanes westbound direction

Main Street/US 101 NB Ramps

- Signalize and coordinate the intersection with other Main Street corridor intersections
- Provide dual left lanes and a shared left-right lane in the southbound direction
- Provide a left turn lane and a thru lane in the eastbound direction
- Provide a thru lane and a shared thru-right lane in the westbound direction

Westhaven Drive/Frontage Road

- Signalize and coordinate the intersection with other Main Street corridor intersections

Scenic Drive/Cher-Ae Lane

- Signalize the intersection
- Provide a 350 feet left turn lane and a left-thru lane in the southbound direction
- Provide a left turn and a right turn lane in the westbound direction

TABLE 9
RANCHERIA MASTER PLAN WITH MAIN STREET CORRIDOR IMPROVEMENTS: INTERSECTIONS LEVEL OF SERVICE

#	Intersection	Control Type[1,2]	Target LOS	2020 PM Peak Hour			2040 PM Peak Hour		
				Delay	LOS	Warrant Met?[3]	Delay	LOS	Warrant Met?[3]
5	Scenic Drive & Main Street	Signal	C	12.3	B	-	21.8	C	-
6	Westhaven Drive & US 101 SB Ramps	Signal	C	14.2	B	-	15.7	B	-
7	Westhaven Drive & US 101 NB Ramps	Signal	C	15.8	B	-	18.6	B	-
8	Westhaven Drive & Frontage Road	Signal	C	13.3	B	-	13.6	B	-
11	Scenic Drive & Cher-Ae Lane	Signal	C	17.8	B	-	29.9	C	-

As indicated in **Table 9**, all of the study intersections are found to be operating at acceptable LOS C or better conditions with the proposed Main Street corridor improvements based on the intersection delay and the corresponding LOS. All of the other intersections are projected to operate acceptable LOS under both Year 2030 and 2040 conditions. Please refer to Tables 5A and 6A for the intersection delay and the corresponding LOS for the other study intersections.

CHER-AE LANE INTERCHANGE IMPROVEMENTS

The analysis of Year 2020 and 2040 Rancheria Master Plan Conditions with the Cher-Ae Lane interchange has been documented in Tables **7A**, **7B**, **8A** and **8B**. This section reiterates the intersection improvements that were assumed for the Year 2020 and 2040 Rancheria Master Plan Conditions with the Cher-Ae Lane interchange and Figure **20** provides a schematic of these improvements. A modern

roundabout at these two locations will provide superior LOS compared to all-way stop. No additional improvements beyond those identified in Figure **20** are required for Cher-Ae Lane.

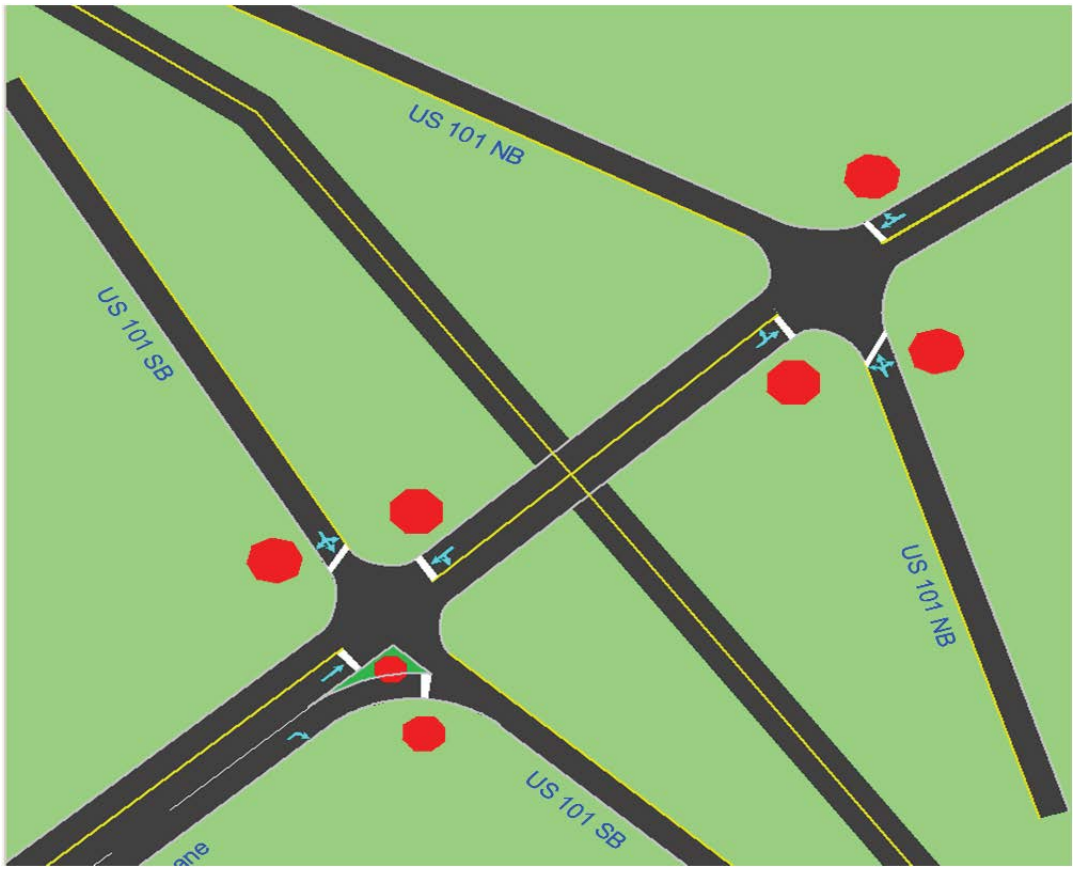
Cher-Ae Lane/US 101 NB Ramps

- All-way Stop Control at the intersection

Cher-Ae Lane/US 101 SB Ramps

- All-way Stop Control at the intersection
- Channelized eastbound right pocket

Figure 20 – Cher-Ae Lane Interchange Improvements to accommodate Year 2020 and 2040 Rancheria Master Plan Conditions Traffic Volumes



RECOMMENDATION

A Project Study Report - Project Development Support (PSR-PDS) should be prepared to define the cost, schedule, scope, impacts and benefits of the alternatives identified in this study.

Although improvements to Main Street corridor (as noted within the *Main Street Interchange Improvements Without Cher-Ae Lane Interchange* section*)* provide acceptable operations with the buildout of the area including the Rancheria Master Plan, we recommend the implementation of the Cher-Ae Lane interchange improvements for the following reasons:

(1) Improving the Main Street Interchange will require significant right of way acquisition and change the character of the gateway to the coastal community of Trinidad
(2) Geometry (Close spacing) of intersections on Main Street is undesirable
(3) Cher-Ae Lane interchange improvements provide *superior operations* when compared to the Main Street Interchange Improvements
(4) A new Cher-Ae Lane interchange will reduce travel times by providing a more efficient connection between the Trinidad Rancheria and the US101 corridor

APPENDIX

FIGURES

SYNCHRO REPORTS

WARRANT WORKSHEETS

WEAVING ANALYSIS

APPENDIX H

LIMITED EVALUATION OF WATER SUPPLY

LAWRENCE
& ASSOCIATES
ENGINEERS & GEOLOGISTS

019112.00

December 30, 2019

Ms. Jacque Hostler-Carmesin
Chief Executive Officer
Trinidad Rancheria
27 Scenic Drive
Trinidad, CA 95570

Dear Ms. Hostler-Carmesin:

SUBJECT: LIMITED EVALUATION OF WATER-SUPPLY EVALUATION, TRINIDAD RANCHERIA HOTEL PROJECT, TRINIDAD, CALIFORNIA

INTRODUCTION

This letter presents the results of Lawrence & Associates (L&A) limited evaluation of potential well interference from pumping a new water-supply well for the Trinidad Rancheria's proposed hotel project (Project), near Trinidad, California. The work was conducted to evaluate whether operation of the new wells drilled and installed in November and December 2019 will adversely affect neighboring wells.

Per your email to me, dated November 15, 2019, the following tasks were performed:

- Review project documents.
- Review pertinent groundwater and geologic reports and area well logs.
- Consult with other Project consultants regarding the well test and data requirements.
- If needed to verify geologic conditions and locations of nearby wells, perform a site/area visit.
- Develop a rough groundwater balance, including local groundwater demand and estimate of annual recharge.
- Estimate the potential extent of pumping impact from the well using the pump-test data collected by others.
- Summarizing findings and conclusions in memo report.

All of the above work was conducted under the supervision of Bonnie E. Lampley, California Certified Hydrogeologist No. 626. The actual well testing and field work were conducted by others.

SUMMARY

The long-term yield of Well #1 may be 3 gpm or less for the long term, although calculation of long-term yield using the pump testing data suggests the long-term yield is less than 1 gpm. It will not sustain pumping rates of 5 gpm or higher for the long term.

The long-term yield of Well #2 is approximately 5 to 6 gpm. Taken together, the two wells may be able to supply the Project's estimated demand of 9,500 gpd (6.6 gpm). If the demand is actually higher than this estimate or if groundwater levels are lower than observed during the testing period (November and December 2019), however, the two wells likely would not be able to supply the new Hotel. We recommend that the Project have a back-up water supply.

Neither well will cause interference with the other or on neighboring wells.Interference impacts from Well #1 will not be felt beyond approximately 20 feet from the well. Interference impacts from Well #2 will not be felt beyond approximately 50 feet from the well.

The new hotel demand will not exceed the probable annual recharge to the aquifer. The potential total annual demand for the new hotel is approximately 11 acre-feet/year (existing demand on the Rancheria is supplied by the City of Trinidad). Adding this to the assumed existing groundwater demand (approximately 20 acre-feet/year) gives a total groundwater demand of approximately 31 acre-feet/year. This is well below the estimated annual recharge volume of 174 acre-feet/year.

SITE DESCRIPTION

The Project site is located approximately 0.75 miles south of the town of Trinidad, Humboldt County, California (**Figure 1**). The Rancheria covers approximately 43 acres in Township 8 North, Range 1 West, Section 25 of the Humboldt Meridian.

The proposed hotel is planned to have 100 rooms. Water demand is estimated to be at least 9,500 gallons per day (gpd).[1] This equates to approximately 11 acre-feet per year (9,500 gpd × 365 days/year ÷ 325851 gallons/acre-foot). L&A did not evaluate the potential water demand.

Figures 1 and **3** show the surface-water drainage area of the Rancheria site. The drainage area covers approximately 174 acres. Within this area, there appear to be 18 possible domestic wells, based on the presence of structures as seen on an aerial photo (**Figure 3**).

The site is located atop a coastal bluff. Geologic materials underlying the site were described as part of the Geotechnical Report for the Environmental Assessment: *The site is underlain by Pleistocene marine terrace sediments deposited on a wave-cut bench in rock of the Jura-Cretaceous Franciscan Complex. The marine terrace sediments are generally comprised of pebbly sand, silt and clay. The underlying Franciscan Complex is comprised of weathered/sheared shale.*[2]

[1] Pers. comm., Ms. Jacque Hostler-Carmesin, December 2019.

[2] Bureau of Indian Affairs, September 2018, *Environmental Assessment, Trinidad Rancheria Economic Development Corporation, Hotel Development Project*, Appendix B: Crawford & Associates, Taber, November 2016, *Draft Geotechnical Feasibility and Preliminary Design Report*.

Drilling logs for the two new water-supply wells installed for the Project show a similar stratigraphy to the geotechnical borings. **Figure 2** shows the well locations; **Attachment A** contains the driller's logs. The boring for Well #1 showed nine feet of marine terrace sediment overlying bedrock to a total depth of 80 feet below ground surface (bgs); the boring for Well #2 showed 32 feet of marine terrace sediment overlying bedrock to a depth of 35 feet bgs. The driller's logs describe the bedrock as soft to hard blue or black shale, consistent with the previous geotechnical borings.

Well #1 ("Louie's Property") was completed at 80 feet bgs in August 2019. First water was at 26 feet bgs, within the Franciscan bedrock. Static water level in December was approximately 20 feet bgs. The driller test pumped Well #1 at 3 gpm, for 24 hours, upon its completion, although drawdown was not measured. Additional test pumping was conducted in December 2019, as described in the Results & Discussion section, below.

Well #2 ("Sundberg Property") was completed at 35 feet bgs in November 2019. First water was at 12 feet bgs, within the marine terrace deposits. Static water level in December was approximately 16 feet bgs. Test pumping of Well #2 is described in the Results & Discussion section, below.

RESULTS & DISCUSSION

Stepped- and constant-rate discharge tests were conducted on both wells. Rich Drilling, McKinleyville, California, conducted the testing. **Table 1** lists the testing conducted. **Figures 4** through **9** show graphs of data and interpretations of the above tests.

Table 1. Summary of Well Tests

Well	Date	Test Type	Pumping Rate
Well 1 (Louie's Property)	12/13/19	Stepped discharge	1, 2, & 3 gpm
	12/13/19	Constant discharge, 8 hours	2 gpm
	12/19/19	Stepped discharge	5 & 8 gpm (8 gpm not sustained for entire step)
	12/20/19	Constant discharge, 24 hours	5 gpm (not sustained for 24 hours)
Well 2 (Sundberg's Property)	11/22/19	Stepped discharge	6, 10, & 13 gpm
	11/25/19	Constant discharge, 8 hours	10 gpm
	12/11/19	Constant discharge, 8 hours	7 gpm

WELL #1

Two stepped-discharge tests were conducted on Well #1. The first (12/13/19) was at 1, 2, and 3 gpm, and the second (12/19/19) at 5 and 8 gpm. Two constant-discharge tests were conducted, at 2 gpm (12/13/19) and 5 gpm (12/20/19). **Figures 4** through **6** show the graphs and interpretation of these tests.

For pumping rates of 3 gpm or less, the water levels showed an initial drop, but then began to rise (**Figure 4**). During the second stepped-discharge test (which had an initial pumping rate of 10 gpm because the valve was bumped), the water level declined gradually at 5 gpm and for the first portion of the 8 gpm step. Once the water level reached approximately 40 feet bgs, however, the rate of drawdown increased rapidly (**Figure 5**). The faster rate of drawdown at approximately 40 feet also was observed during the 24-hour constant discharge test at 5 gpm. During this test, the water level dropped to the pump intake after approximately 10 hours of pumping. The driller kept the pump on, however, and the well would recover enough to pump a bit, then drop, off and on for the remainder of the test. The driller reported an average pumping rate of 4.4 gpm for the latter part of the test.

At the completion of the constant-rate test, the water level returned to 90% of its static level within three hours, and to near full static level within 24 hours.

Figure 6 shows the calculation of aquifer parameters and long-term yield for Well #1. Using a simplified analytical solution to the Theis equation (a standard hydrogeologic equation often used to estimate aquifer parameters), the transmissivity[3] of the water-bearing formation in Well #1 is estimated to be 91 gpd/foot. This is a relatively low value, showing that this bedrock aquifer is of low yield (high-yield aquifers can show values in the tens of thousands).

Using the data from the 12/20/19 test (at 5 gpm), the long-term yield of Well #1 is approximately 0.8 gpm. The long-term yield was calculated by extrapolating the drawdown curve out to 180 days (representing the dry season) to predict the theoretical drawdown if pumping had continued at the test-pumping rate (**Figure 6**). The theoretical drawdown is then used in the following equation to estimate the long-term yield at 180 days:

Long-term yield	=	(Maximum allowable drawdown ÷ predicted drawdown) × Test Discharge
	=	(15 feet / 92 feet) × 5 gpm
	=	0.8 gpm

The foregoing analysis used the part of the test data from later in the test, but before the drawdown increased rapidly below approximately 40 feet bgs. The portion of the curve from earlier in the test was not used because it generally is assumed to not be representative of longer term pumping. Nonetheless, the tests at the lower pumping rates (less than 3 gpm) showed that water levels above approximately 40 feet could be maintained. It may be that this well will sustain pumping rates of 3 gpm or less for the long term. It will not sustain pumping rates of 5 gpm or higher for the long term.

WELL #2

One stepped-discharge tests was conducted on Well #2. On 11/22/19, Well #2 was pumped at 6, 10, and 13 gpm. Two constant-discharge tests were conducted, at 10 gpm (11/25/19) and 7

[3] Transmissivity is a measure of how much water an aquifer can transmit and it depends, in part, on the aquifer thickness (a thinner aquifer cannot transmit as much water as a thicker aquifer).

gpm (12/11/19), both for 8 hours. **Figures 7** through **9** show the graphs and interpretation of these tests.

During the stepped-discharge test, the water level declined gradually during the steps at 6 and 10 gpm; the water level declined rapidly during the 13 gpm step. Once the water level reached approximately 22 feet bgs, the rate of drawdown increased rapidly and fell below the pump intake at 32 feet (**Figure 7**).

During the two constant discharge tests, the water level remained above 20 to 25 feet, and the drawdown rate remained relatively steady.

Figures 8 and **9** show the calculation of aquifer parameters and long-term yield for Well #2, using data from both constant-discharge tests. Because transmissivity is dependent on the aquifer thickness (a thinner aquifer cannot transmit as much water as a thicker aquifer), the 10 gpm test showed a transmissivity of 249 gpd/foot, while the 7 gpm test showed 672 gpd/foot. Again, these are relatively low values, showing that the marine-terrace aquifer also is of low yield, although slightly higher than the bedrock aquifer supplying Well #1.

The long-term yield of Well #2 is approximately 5 to 6 gpm, using the same methodology described above (calculations shown in **Figures 8** and **9**).

WELL INTERFERENCE

Figures 10 and **11** show calculations for well interference at varying distances, using the Theis equation. Because both of the wells are of low yield and will not sustain high pumping rates, the radius of influence for both are small. Interference impacts from Well #1 will not be felt beyond approximately 20 feet from the well. Interference impacts from Well #2 will not be felt beyond approximately 50 feet from the well. Thus, neither well will cause interference with the other or on neighboring wells.

GROUNDWATER SUPPLY

To evaluate the overall groundwater supply, and whether there may be a sufficient groundwater supply for existing users and the new hotel, we developed an approximate groundwater balance. The groundwater balance includes inflows (mainly recharge from precipitation) and outflows (pumping by users and evapotranspiration by plants) for the area of the groundwater "basin".

We first assume that the groundwater "basin" is defined by the surface-water drainage area of the Rancheria property (**Figures 1** and **3**). Assuming that a groundwater basin is defined by the overlying surface-water drainage area is a common assumption in the absence of data that may more closely define the groundwater basin, especially for clastic aquifers. This may not be the case here, in that one of the wells is completed in the bedrock aquifer.

Within and near the groundwater "basin" as defined herein, there appear to be at least 20 structures or residences that may use groundwater (**Figure 3**). Typical water use for a residential property is less than one acre-foot per year (about 0.6 gpm; current estimates of

domestic water use are less than half of that)[4]. Thus, groundwater useage in the "basin" may be on the order of 20 acre-feet per year or less.

Recharge to groundwater is assumed to be mainly from percolation of precipitation. Average annual precipitation in the Trinidad area is approximately 52 inches.[5] Not all of this precipitation is available for groundwater recharge. Some is used for evapotranspiration by plants and some runs off. Average annual evapotranspiration (ET) along the California coast is approximately 33 inches.[6] Subtracting the annual ET from the precipitation leaves approximately 19 inches available for recharge and runoff. Research in other areas of the northern California coast has shown that there is approximately 12 inches of deep percolation of precipitation annually.[7]

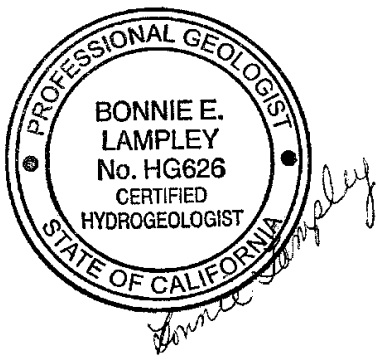
Assuming 12 inches of deep percolation to groundwater gives an annual recharge of approximately 174 acre-feet (174 acres of drainage area × 1 foot of deep percolation). The potential total annual demand for the new hotel is approximately 11 acre-feet/year (existing demand on the Rancheria is supplied by the City of Trinidad). Adding this to the assumed existing groundwater demand (approximately 20 acre-feet/year) gives a total groundwater demand of approximately 31 acre-feet/year. This is well below the assumed annual recharge volume of 174 acre-feet/year.

Please do not hesitate to contact me at (530) 275-4800 or blampley@lwrnc.com if you have any questions regarding this report.

Sincerely,

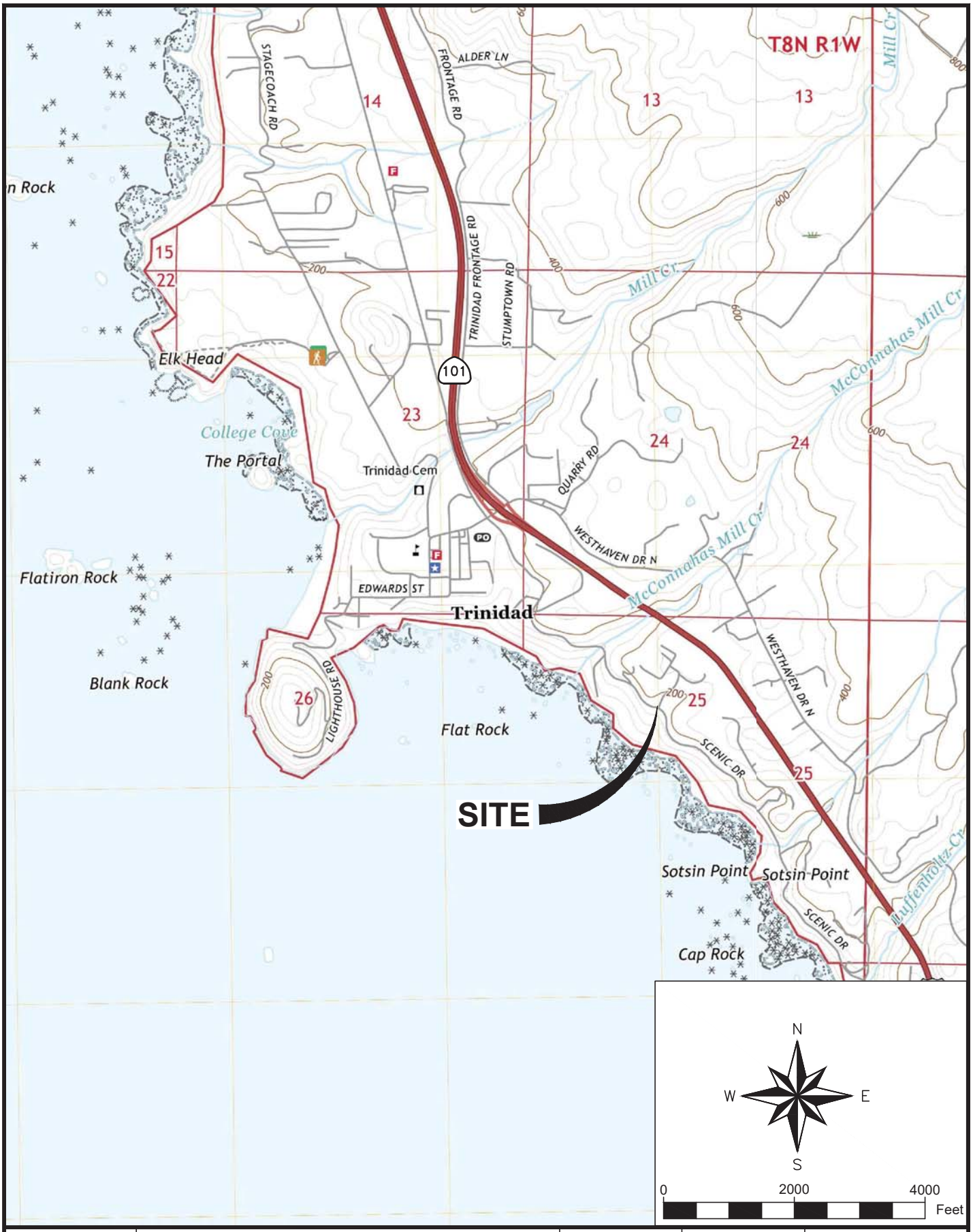
Bonnie E. Lampley

Bonnie E. Lampley
Principal Hydrogeologist, CHG 626



Attachments:
Figure 1. Site Location Map
Figure 2. Site Plan
Figure 3. Drainage Area and Local Wells
Figure 4. Well #1, 12/13/19, Stepped- & Constant-Discharge Depth to Water
Figure 5. Well #1, 12/19-20/19, Stepped- & Constant-Discharge Depth to Water
Figure 6. Well #1, Calculation of Aquifer Parameters & Long-Term Yield
Figure 7. Well #2, 11/22-25/19, Stepped- & Constant-Discharge Depth to Water
Figure 8. Well #2, 11/25/19, Calculation of Aquifer Parameters & Long-Term Yield
Figure 9. Well #2, 12/11/19, Calculation of Aquifer Parameters & Long-Term Yield
Figure 10. Drawdown/Interference Calculations, Well #1
Figure 11. Drawdown/Interference Calculations, Well #2
Attachment A. Driller's Logs

[4] https://www.usgs.gov/special-topic/water-science-school/science/water-qa-how-much-water-do-i-use-home-each-day?qt-science_center_objects=0#qt-science_center_objects
[5] http://cdec.water.ca.gov/dynamicapp/QueryDaily?end=2019-12-30&s=ork
[6] California Department of Water Resources, August 2000, *Estimating Irrigation Water Needs of Landscape Plantings in California, Appendix A – Table 1*.
[7] Questa Engineering, 2004, *Groundwater Modeling Study of the Mendocino Headlands, Mendocino, California*.



LAWRENCE & ASSOCIATES
ENGINEERS & GEOLOGISTS

SITE LOCATION MAP

MAP ADAPTED FROM U.S.G.S.
7.5-MINUTE TOPOGRAPHIC QUADS:
TRINIDAD AND CRANNELL, CA.

PROJECT NAME: WATER SUPPLY EVALUATION	PROJECT NO: 019112.00	DATE: 12/13/2019
CLIENT: TRINIDAD RANCHERIA	DRAWN BY: J. BEERS	FIGURE 1
SCALE: 1" = 2,000'	CHECKED BY: B. LAMPLEY	

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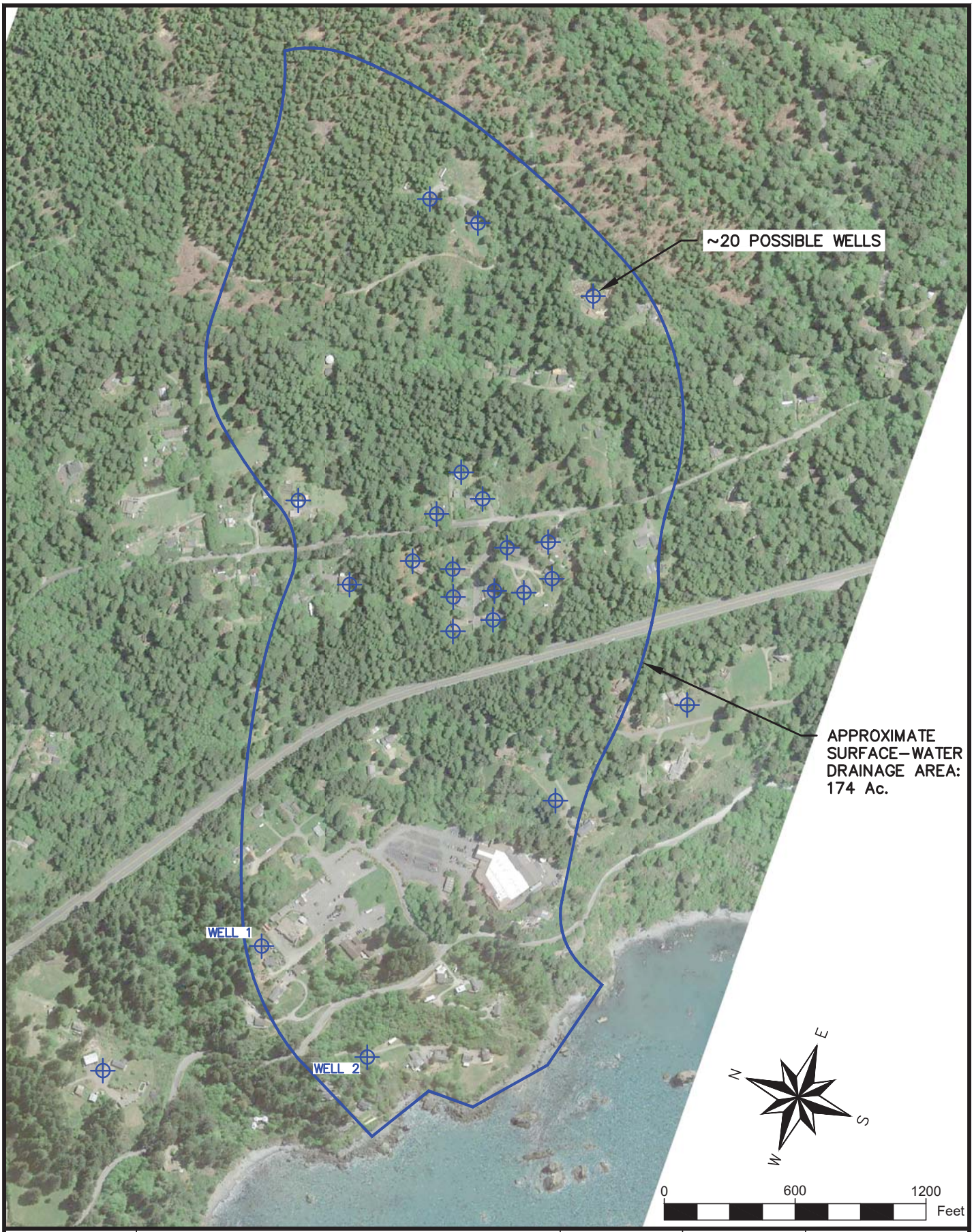

LAWRENCE & ASSOCIATES
ENGINEERS & GEOLOGISTS

APPROXIMATE SURFACE WATER DRAINAGE AREA & WELLS

PROJECT NAME: WATER SUPPLY EVALUATION	PROJECT NO: 019112.00	DATE: 12/30/2019
CLIENT: TRINIDAD RANCHERIA	DRAWN BY: J. BEERS	FIGURE 3
SCALE: 1" = 600'	CHECKED BY: B. LAMPLEY	

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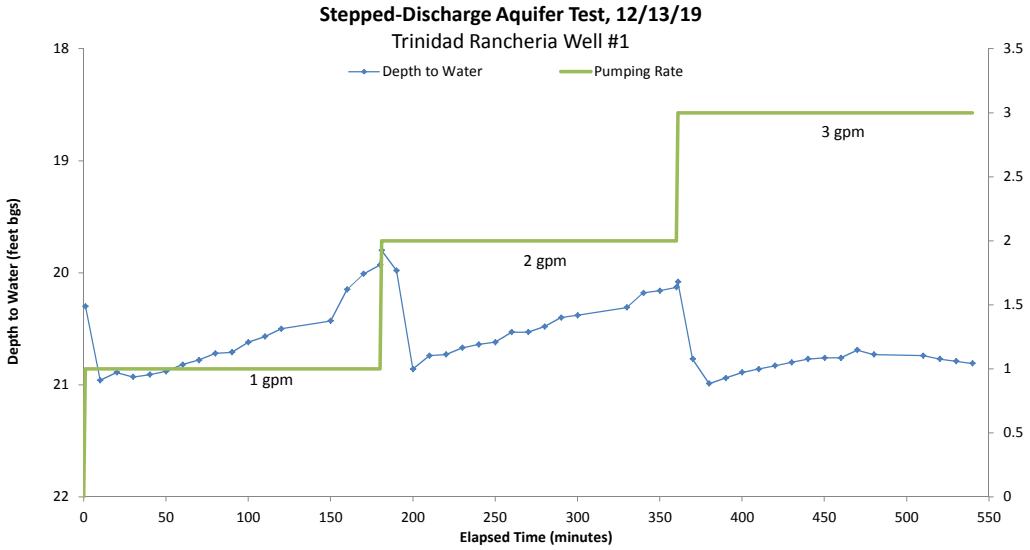
Trinidad Rancheria
Well #1 Testing



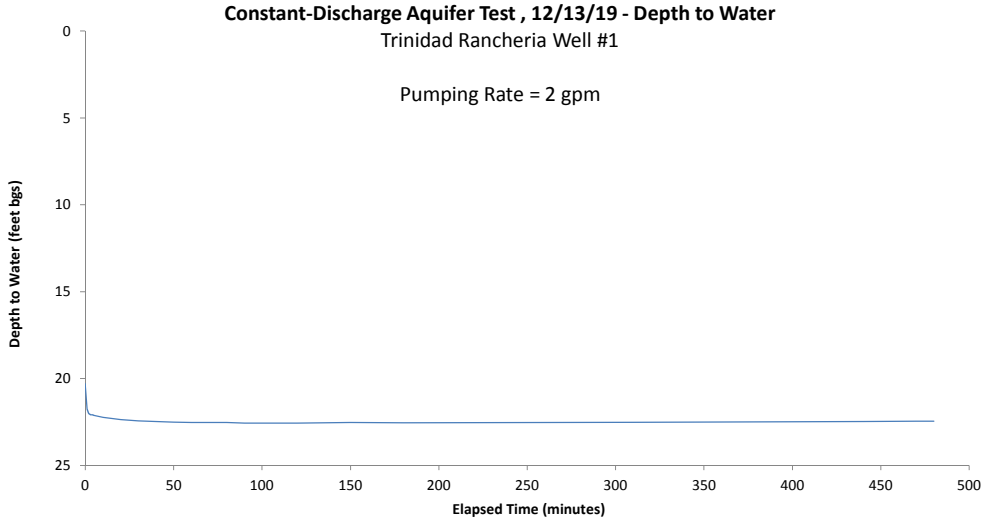
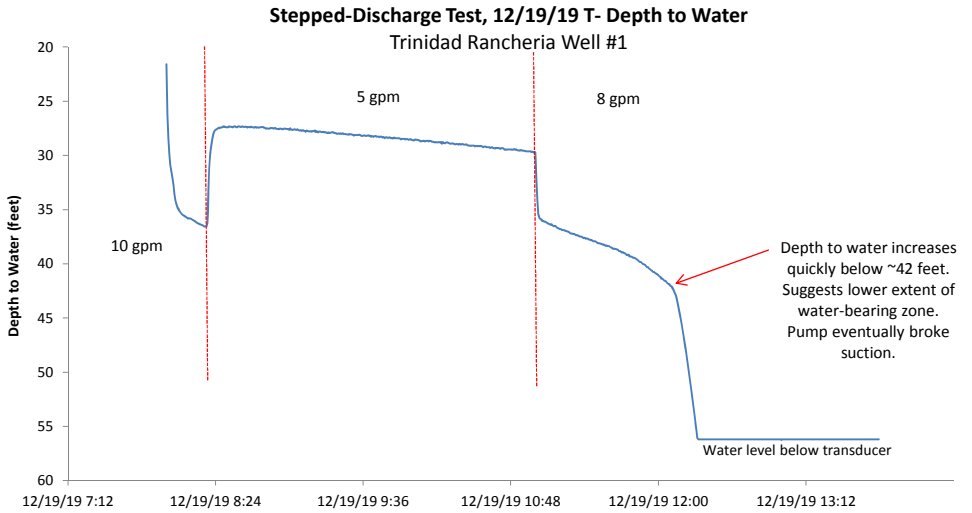


FIGURE 4

Trinidad Rancheria
Well #1 Testing



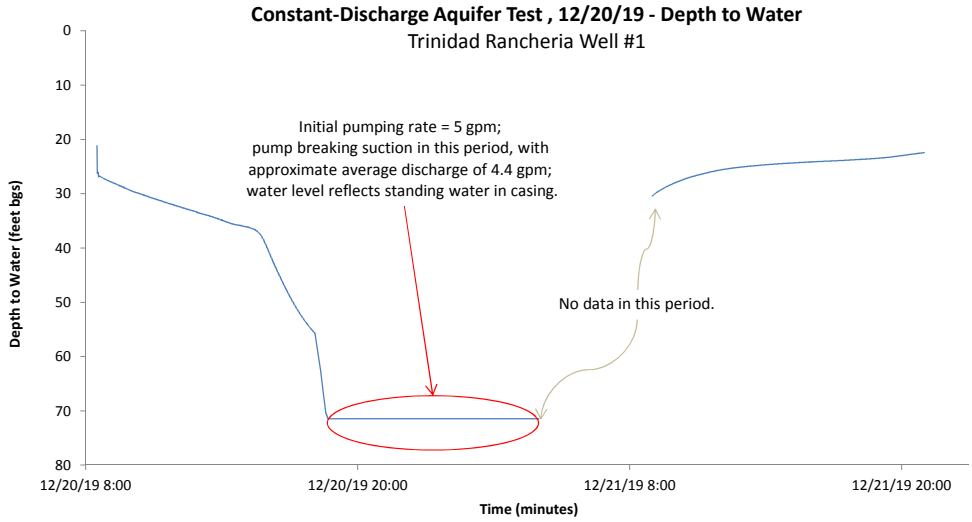
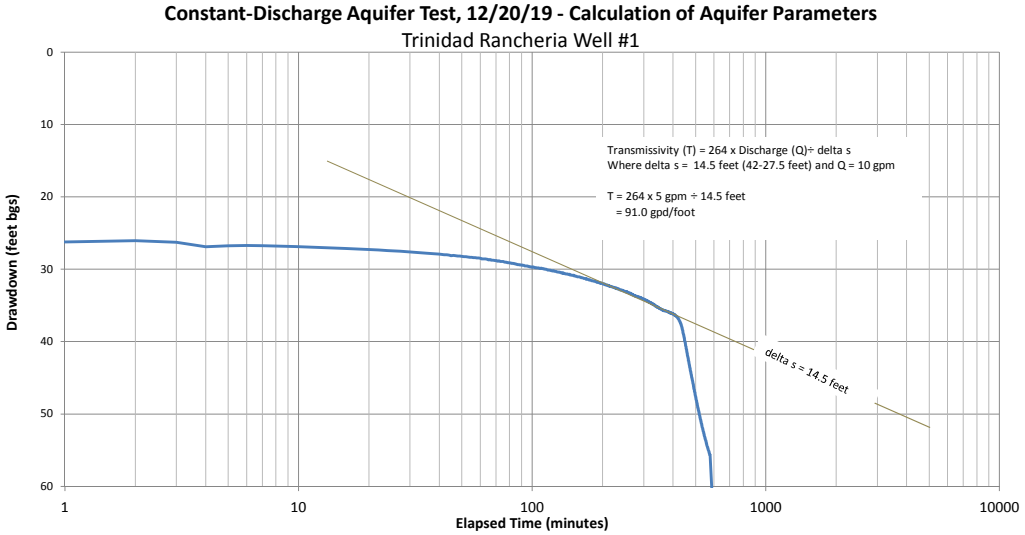


FIGURE 5

Trinidad Rancheria
Well #1 Testing



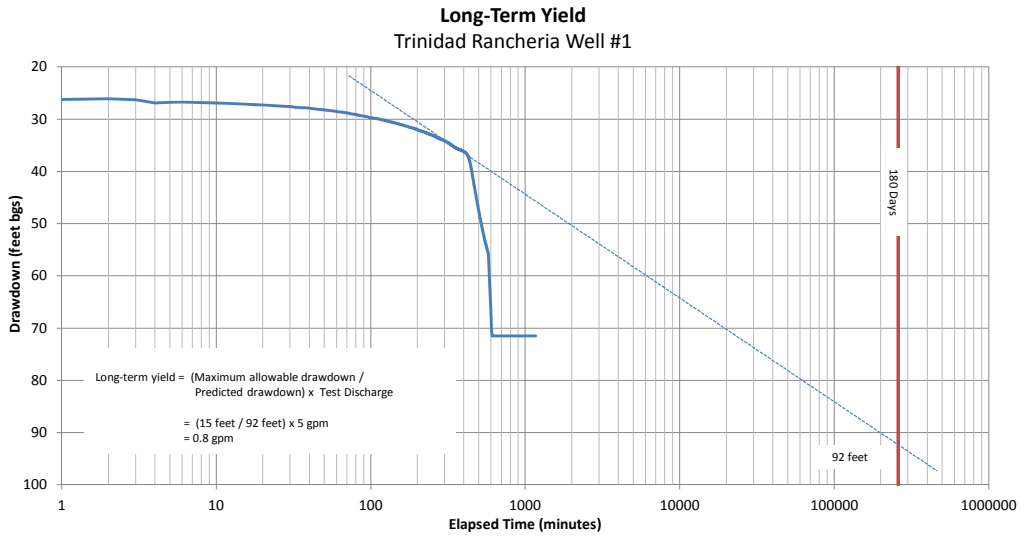
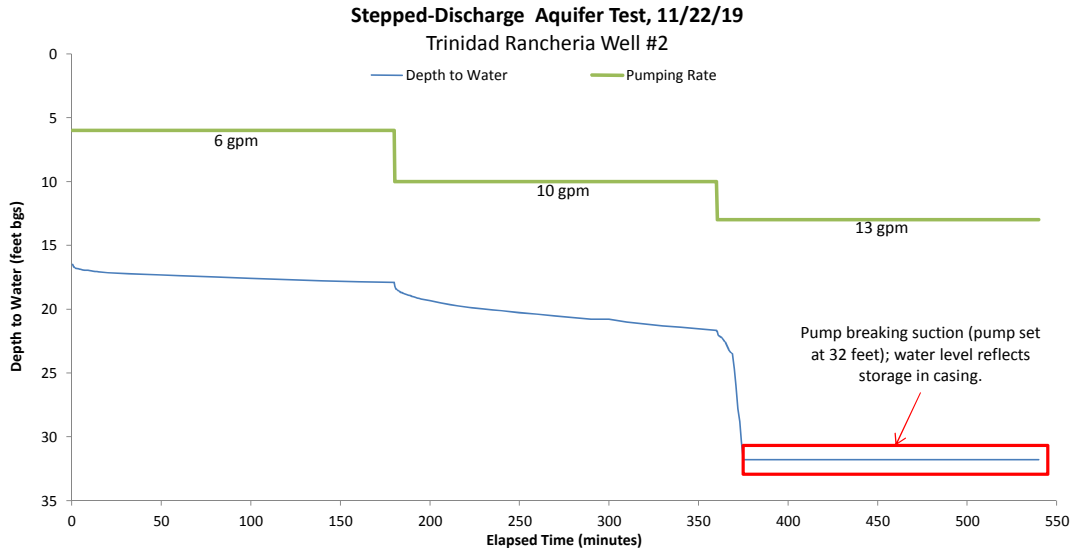


FIGURE 6

Trinidad Rancheria
Well #2 Testing



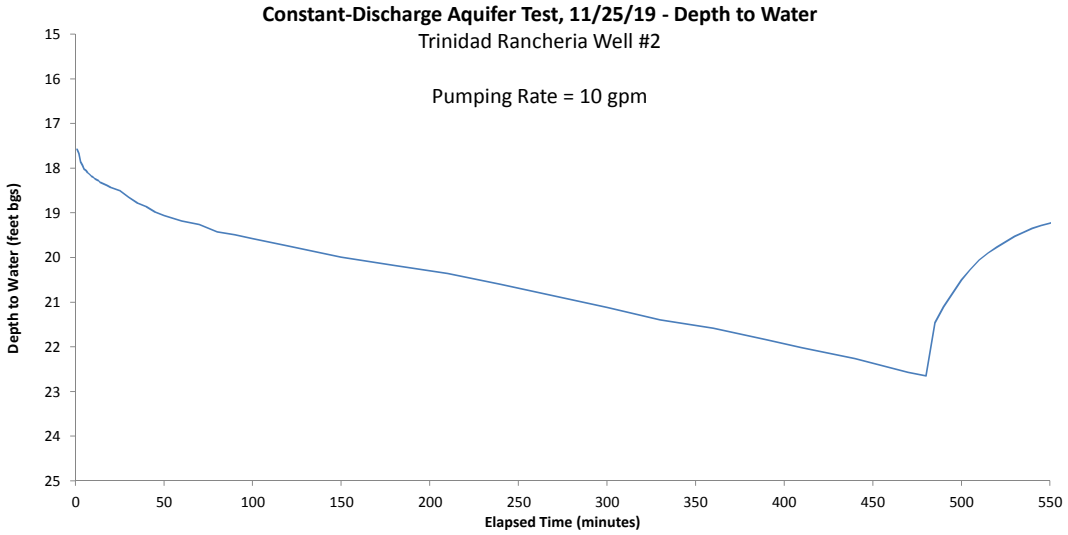
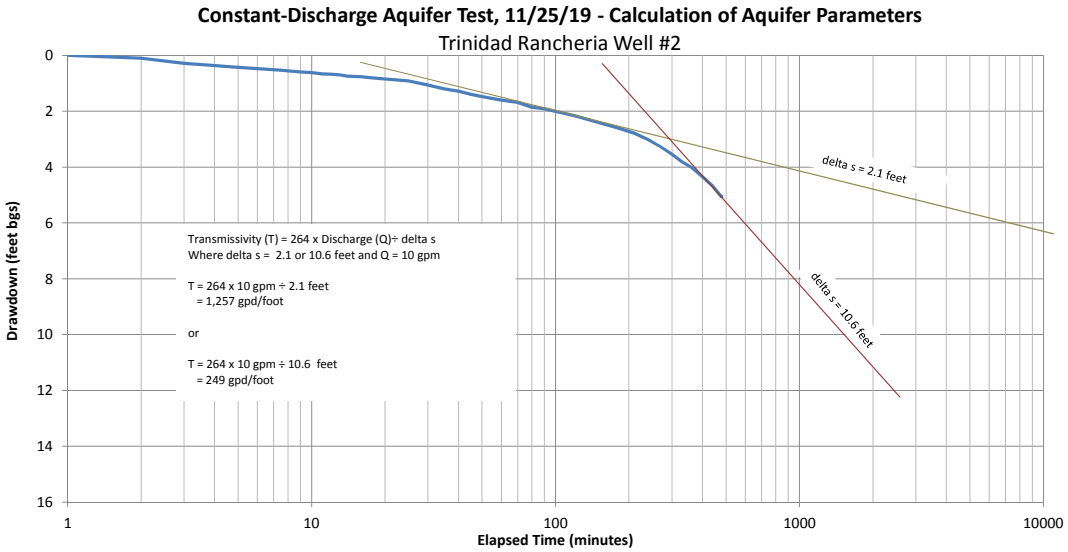


FIGURE 7

Trinidad Rancheria
Well #2 Testing



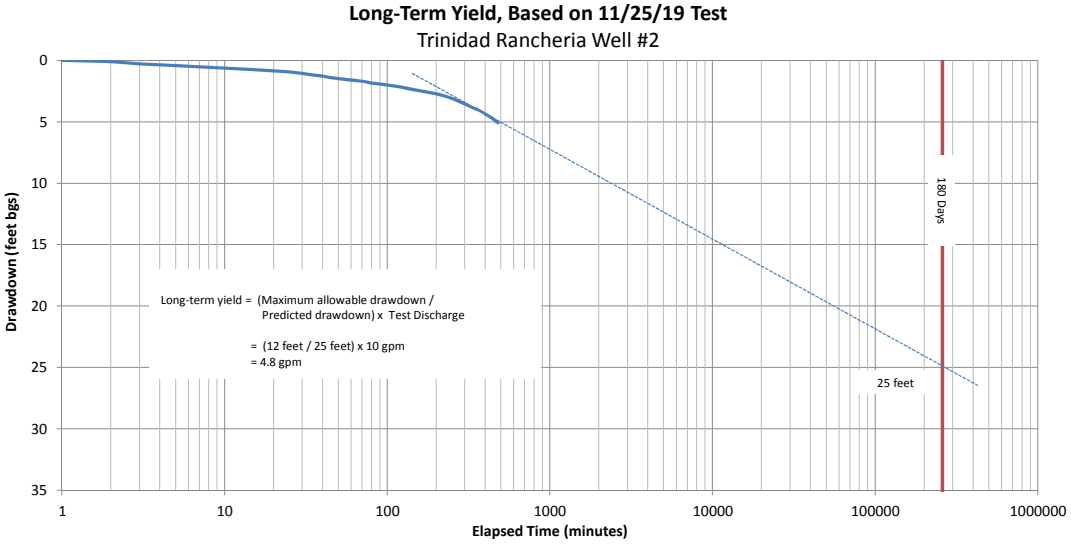
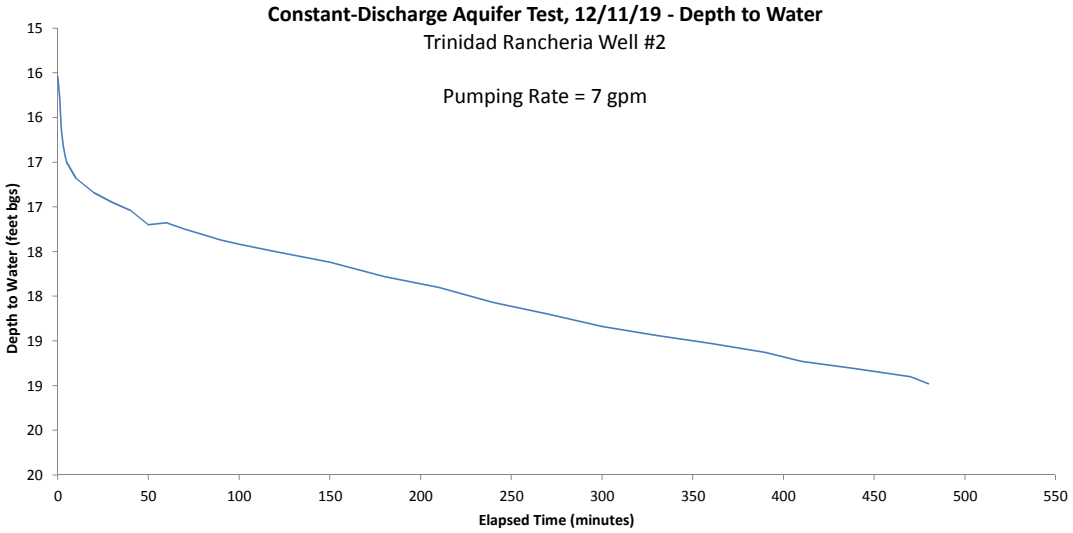
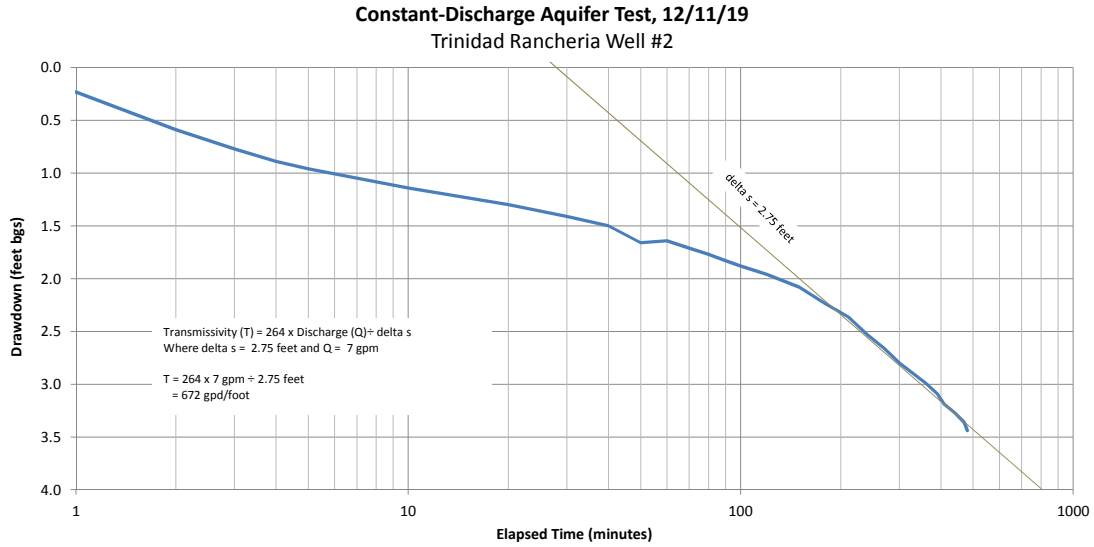


FIGURE 8

Trinidad Rancheria
Well #2 Testing





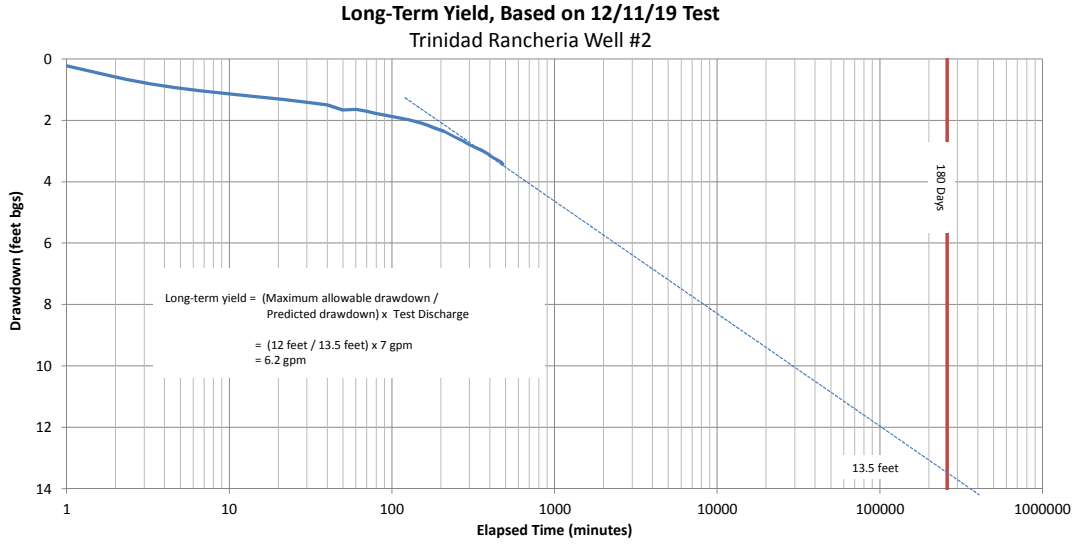


FIGURE 9

TRINIDAD RANCHERIA WELL #1 (80 feet TD; Louie's Property)

Drawdown at Distances

	Well #1, Predicted	5 Feet	10 Feet	20 Feet	50 Feet	100 Feet	200 Feet	400 Feet
Transmissvity, in gpd/ft., **T**	91	91	91	91	91	91	91	91
Storage coefficient, unitless, **S** (assumed)	3.00E-01	3.00E-01	3.00E-01	3.00E-01	3.00E-01	3.00E-01	3.00E-01	3.00E-01
Discharge, in gpm, **Q**	1	1	1	1	1	1	1	1
Length of pumping period, days	180	180	180	180	180	180	180	180

Parameter	**Units**	**Pumping Well #1, Predicted**	At 5 Feet	At 10 Feet	At 20 Feet	At 50 Feet	At 100 Feet	At 200 Feet	At 400 Feet
Distance from center of well	r, ft	0.2	5	10	20	50	100	200	400
Storage coefficient	S, di'less	3.00E-01	3.00E-01	3.00E-01	3.00E-01	3.00E-01	3.00E-01	3.00E-01	3.00E-01
Transmissivity	T, gpd/ft	91	91.0	91.0	91.0	91.0	91.0	91.0	91.0
Pumping time	t, minutes	259200	259200	259200	259200	259200	259200	259200	259200
	t, days	180	3	3	3	3	3	3	3
Discharge	Q, gpm	1	1	1	1	1	1	1	1
u = [1.87r^2S/Tt]	u	1.49E-06	5.14E-02	2.05E-01	8.22E-01	5.14E+00	2.05E+01	8.22E+01	3.29E+02
Well function of u	W(u)	12.84	2.44	1.18	ERROR	ERROR	ERROR	ERROR	ERROR
Drawdown, theoretical = [s1=114.6QW(u)/T]	s1, ft	16.17	3.07	1.49	0.00	0.00	0.00	0.00	0.00
Well efficiency	eff., percent	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Calculated drawdown from pumping well	s2, ft	**16.17**	**3.07**	**1.49**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Note: ERROR indicates that the calculation is out of range; that is, the calculation indicates that there would be no effect at that distance.

FIGURE 10

TRINIDAD RANCHERIA WELL #2 (35 feet TD; Sundberg's Property)

Drawdown at Distances

	Well #2, Predicted	5 Feet	10 Feet	20 Feet	50 Feet	100 Feet	200 Feet	400 Feet
Transmissvity, in gpd/ft., **T**	672	672	672	672	672	672	672	672
Storage coefficient, unitless, **S** (assumed)	3.00E-01	3.00E-01	3.00E-01	3.00E-01	3.00E-01	3.00E-01	3.00E-01	3.00E-01
Discharge, in gpm, **Q**	6	6	6	6	6	6	6	6
Length of pumping period, days	180	180	180	180	180	180	180	180

Parameter	**Units**	**Pumping Well #2, Predicted**	At 5 Feet	At 10 Feet	At 20 Feet	At 50 Feet	At 100 Feet	At 200 Feet	At 400 Feet
Distance from center of well	r, ft	0.2	5	10	20	50	100	200	400
Storage coefficient	S, di'less	3.00E-01	3.00E-01	3.00E-01	3.00E-01	3.00E-01	3.00E-01	3.00E-01	3.00E-01
Transmissivity	T, gpd/ft	672	672.0	672.0	672.0	672.0	672.0	672.0	672.0
Pumping time	t, minutes	259200	259200	259200	259200	259200	259200	259200	259200
	t, days	180	3	3	3	3	3	3	3
Discharge	Q, gpm	6	6	6	6	6	6	6	6
u = [1.87r^2S/Tt]	u	2.01E-07	6.96E-03	2.78E-02	1.11E-01	6.96E-01	2.78E+00	1.11E+01	4.45E+01
Well function of u	W(u)	14.84	4.40	3.03	1.72	ERROR	ERROR	ERROR	ERROR
Drawdown, theoretical = [s1=114.6QW(u)/T]	s1, ft	15.19	4.50	3.10	1.76	0.00	0.00	0.00	0.00
Well efficiency	eff., percent	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Calculated drawdown from pumping well	s2, ft	**15.19**	**4.50**	**3.10**	**1.76**	**0.00**	**0.00**	**0.00**	**0.00**

Note: ERROR indicates that the calculation is out of range; that is, the calculation indicates that there would be no effect at that distance.

FIGURE 11

APPENDIX A

DRILLER'S LOGS

State of California

Well Completion Report

Form DWR 188 Submitted 11/14/2019

WCR2019-016273

Owner's Well Number 1 | Date Work Began 08/21/2019 | Date Work Ended 09/09/2019

Local Permit Agency Humboldt County Department of Health & Human Services - Land Use Program

Secondary Permit Agency | Permit Number 00-000 | Permit Date 08/02/2019

Well Owner (must remain confidential pursuant to Water Code 13752)

Name TRINIDAD RANCHERIA,

Mailing Address 1 Cher-Ae Ln.

City Trinidad | State Ca | Zip 95570

Planned Use and Activity

Activity New Well

Planned Use Water Supply Domestic

Well Location

Address 0 Cher-Ae LN

City Trinidad | Zip 95570 | County Humboldt

Latitude 41 Deg. 3 Min. 21.09 Sec. N | Longitude -124 Deg. 7 Min. 55.27 Sec. W

Dec. Lat. 41.0558583 | Dec. Long. -124.1320194

Vertical Datum | Horizontal Datum WGS84

Location Accuracy | Location Determination Method

APN 000-000-000-

Township 08 N

Range 01 W

Section 25

Baseline Meridian Humboldt

Ground Surface Elevation

Elevation Accuracy

Elevation Determination Method

Borehole Information

Orientation Vertical | Specify

Drilling Method Direct Rotary | Drilling Fluid Air

Total Depth of Boring 80 Feet

Total Depth of Completed Well 80 Feet

Water Level and Yield of Completed Well

Depth to first water 26 (Feet below surface)

Depth to Static Water Level (Feet) | Date Measured

Estimated Yield* 3 (GPM) | Test Type Pump

Test Length 24 (Hours) | Total Drawdown (feet)

*May not be representative of a well's long term yield.

Geologic Log - Free Form

Depth from Surface Feet to Feet		Description
0	2	top Soil
2	9	Soft Brown Silty Clay
9	18	Hard Grey Rock
18	26	Hard Blue Shale / Green Rock
26	49	water and Hard Rock Grey
49	53	Shale W/ Quartz
53	57	Soft Shale
57	60	Hard Black Shale
60	80	Soft Shale

Casings

Casing #	Depth from Surface Feet to Feet		Casing Type	Material	Casings Specificatons	Wall Thickness (inches)	Outside Diameter (inches)	Screen Type	Slot Size if any (inches)	Description
1	0	53	Blank	PVC	OD: 4.950 in. | SDR: 17 | Thickness: 0.291 in.	0.291	4.95			
1	53	73	Screen	PVC	OD: 4.950 in. | SDR: 17 | Thickness: 0.291 in.	0.291	4.95	Milled Slots	0.032	
1	73	80	Blank	PVC	OD: 4.950 in. | SDR: 17 | Thickness: 0.291 in.	0.291	4.95			W/ Cap On Bottom

Annular Material

Depth from Surface Feet to Feet		Fill	Fill Type Details	Filter Pack Size	Description
0	20	Bentonite	Non Hydrated Bentonite		3/8 Hole Plug
20	80	Filter Pack	Other Gravel Pack	3/8	Pea Gravel

Other Observations:

Borehole Specifications

Depth from Surface Feet to Feet		Borehole Diameter (inches)
0	80	9

Certification Statement

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief

Name: RICH WELL DRILLING & PUMP SERVICE INC (Person, Firm or Corporation)

1251 RAILROAD DRIVE (Address) | MC (City) | CA (State) | 95519 (Zip)

Signed: *electronic signature received* (C-57 Licensed Water Well Contractor) | 11/14/2019 (Date Signed) | 902702 (C-57 License Number)

DWR Use Only

CSG #	State Well Number	Site Code	Local Well Number

N — Latitude Deg/Min/Sec

W — Longitude Deg/Min/Sec

TRS:

APN:

State of California

Well Completion Report

Form DWR 188 Submitted 11/26/2019

WCR2019-016882

Owner's Well Number 2 | Date Work Began 11/20/2019 | Date Work Ended 11/21/2019

Local Permit Agency Humboldt County Department of Health & Human Services - Land Use Program

Secondary Permit Agency | Permit Number 00-000 | Permit Date

Well Owner (must remain confidential pursuant to Water Code 13752)

Name Trinidad Rancheria

Mailing Address 0 Cher-Ae Ln

City Trinidad State CA Zip 95570

Planned Use and Activity

Activity New Well

Planned Use Water Supply Domestic

Well Location

Address 0 Cher-Ae LN

City Trinidad Zip 95570 County Humboldt

	Deg.	Min.	Sec.		Deg.	Min.	Sec.	
Latitude	41	3	14.3809	N	Longitude -124	7	57.145	W

Dec. Lat. 41.0539947 Dec. Long. -124.1325403

Vertical Datum Horizontal Datum WGS84

Location Accuracy Location Determination Method

APN 000-000-000

Township 08 N

Range 01 W

Section 25

Baseline Meridian Humboldt

Ground Surface Elevation

Elevation Accuracy 10 Ft

Elevation Determination Method

Borehole Information

Orientation Vertical Specify

Drilling Method Direct Rotary Drilling Fluid Air

Total Depth of Boring 35 Feet

Total Depth of Completed Well 35 Feet

Water Level and Yield of Completed Well

Depth to first water 12 (Feet below surface)

Depth to Static Water Level 17 (Feet) Date Measured 11/25/2019

Estimated Yield* 10 (GPM) Test Type Pump

Test Length 8 (Hours) Total Drawdown 4 (feet)

*May not be representative of a well's long term yield.

Geologic Log - Free Form

Depth from Surface Feet to Feet		Description
0	12	Brown Clay
12	15	Sand w/ Small Gravels
15	25	Gravels
25	32	Larger Gravel
32	35	Bedrock

Casings

Casing #	Depth from Surface Feet to Feet		Casing Type	Material	Casings Specificatons	Wall Thickness (inches)	Outside Diameter (inches)	Screen Type	Slot Size if any (inches)	Description
1	0	22	Blank	Low Carbon Steel	N/A	0.188	8.625			other
1	22	32	Screen	Low Carbon Steel	N/A	0.188	8.625	Torched Slots	0.1875	other
1	32	35	Blank	Low Carbon Steel	N/A	0.188	8.625			other

Annular Material

Depth from Surface Feet to Feet		Fill	Fill Type Details	Filter Pack Size	Description
0	12	Bentonite	Other Bentonite	3/8	3/8 hole plug
12	35	Filter Pack	Other Gravel Pack		

Other Observations:

Borehole Specifications

Depth from Surface Feet to Feet		Borehole Diameter (inches)
0	35	12

Certification Statement

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief

Name: RICH WELL DRILLING & PUMP SERVICE INC (Person, Firm or Corporation)

1251 RAILROAD DRIVE (Address) | MC (City) | CA (State) | 95519 (Zip)

Signed: *electronic signature received* (C-57 Licensed Water Well Contractor) | 11/26/2019 (Date Signed) | 902702 (C-57 License Number)

DWR Use Only

CSG #	State Well Number	Site Code	Local Well Number

N — Latitude Deg/Min/Sec

W — Longitude Deg/Min/Sec

TRS:

APN:

APPENDIX I

TRAFFIC IMPACT ANALYSIS

2019 TRAFFIC IMPACT ANALYSIS

TRINIDAD RANCHERIA HOTEL

Completed for the:

Cher-Ae Heights Indian Community

of the Trinidad Rancheria

Prepared by:

RED PLAINS PROFESSIONAL, INC.

ELROD ENGINEERING

REGISTERED PROFESSIONAL ENGINEER
NANCY L. ELROD
61881
EXP. 9-30-19
CIVIL
STATE OF CALIFORNIA

INTRODUCTION

Red Plains Professional, Inc. (RPP) was hired by the Cher-Ae Heights Indian Community of the Trinidad Rancheria to evaluate the traffic impacts of the proposed 100-Room Trinidad Rancheria Hotel. The Hotel is proposed for construction adjacent to and on the same site as the Cher-Ae Heights Casino and Bingo Facility. For this study Red Plains is utilizing a current year (2019) horizon date for this development. The analysis was performed independently from the 2014 Trinidad Area Freeway Master Plan Study Report and the Traffic Impact Analysis detailed in that report.

In January 2019, Red Plains Professional, Inc. performed mechanical traffic counts, manual peak-hour turning movement counts, trip generations and traffic analysis detailed herein representing the 2019 Traffic Impact Analysis (TIA). The 2019 TIA is focused solely on the impacts of the proposed hotel on the existing transportation network with the assumption made that the hotel construction and operation will pre-date any potential new interchange location. Per Caltrans "Guide for the Preparation of Traffic Impact Studies", the Study Area has been identified as those intersections and transportation facilities, "upstream and downstream" of the development. The Traffic Impact Analysis Map details the Study Area and the transportation facilities and intersections impacted by the anticipated development.



Per Caltrans recommended analysis procedures this study will analyze and evaluate four (4) scenarios:

1. **Existing Conditions (current year)**
2. **Forecast 1 - Existing Conditions with Development Slated for 2019.**
3. **Forecast 2 – 20 Year Projection to 2039 with No Development**
4. **Forecast 3 – 20 Year Projection to 2039 with Development**

The combination of forecasts will provide the true short and long-term impacts of the hotel development in relation to the baseline projected increased traffic demand on the intersections and roads forecasted based on area population growth and general traffic growth trends for the area.

The analysis herein will focus on the following roads and intersections within the study area:

Roadways:

- Patrick's Point Drive
- Main Street
- US 101 Exit 728 Ramps
- N Westhaven Drive
- S Westhaven Drive
- Trinidad Frontage Road
- Trinidad Scenic Drive
- Cher-Ae Lane

Intersections:

- Site #1 – Patrick's Point Drive / Scenic Drive / Main Street
- Site #2 – US101 Exit 728 Southbound Off-On Ramps / Main Street
- Site #3 - US101 Exit 728 Northbound Off-On Ramps / S Westhaven Drive
- Site #4 – US101 Exit 728 Northbound Off Ramp / Trinidad Frontage Road / N Westhaven Drive
- Site #5 – Scenic Drive / Cher-Ae Lane
- Site #6 – Scenic Drive / S Westhaven Drive
- Site #7 – US101 Exit 726A Northbound Off Ramp / S Westhaven Drive



Intersection Descriptions

Site 1 – Intersection of Patrick's Point Dr to the north, Main St to the east and west and Scenic Dr to the south. There are stop signs eastbound on Main St, southbound on Patrick's Point Rd and northbound on Scenic Dr. No stop sign westbound on Main St as 101 South exit ramp is directly adjacent.



Site 2 – Intersection of 101 South off-ramp to the north, Main St to the east and west and 101 South on-ramp to the south. One stop sign at end of 101 South off-ramp at Main St.



Site 3 – Intersection of N Westhaven Dr to the east and west and on-ramp to 101 North.



Site 4 – Intersection of N Westhaven Dr to the east and west, 101 North off-ramp from the south, and Trinidad Frontage Rd to the north. No stop sign from westerly direction on N Westhaven Dr. Stop signs exist from the other three directions.



Site 5 - Three-way intersection of Scenic Dr to the north and south and Cher-Ae Ln from the east. Cher-Ae Ln is main access road to casino and Tribal Administration. One stop sign at Cher-Ae Ln from east at Scenic Dr.



Site 6 – Three-way intersection of Scenic Dr to the north and south and S Westhaven Dr from the east. Just to the east on S Westhaven Dr is the intersection of the off-ramp from 101 North (See Site 7). Further south on Scenic Dr is the on-ramp to 101 South.



Site 7 – Three-way intersection of S Westhaven Dr to the east and west and the off-ramp from 101 North. One stop sign at junction of off-ramp and S Westhaven Dr.



EXISTING CONDITION

It has been well documented in past traffic analysis, reports, roadway safety audits, and other studies prepared by the Cher-Ae Heights Indian Community of the Trinidad Rancheria, that Scenic Drive and the overall supporting transportation network in its existing condition, is in functional condition but is in need of significant improvements. As the areas continue to develop simply based on Population growth and other regional growth factors, the supporting transportation network of the Cher-Ae Heights Indian Community of the Trinidad Rancheria will be functionally obsolete within the next 20 years if significant engineering and roadway improvements are not realized. Alternative access must be considered due to the engineering and geotechnical challenges related to Scenic Drive, which presently acts as the main rural arterial providing ingress and egress to the Tribal Community.

MECHANICAL TRAFFIC COUNTS (MTC'S)

The traffic count locations (14 sites) and volumes are illustrated on the 24-Hour Mechanical Traffic Count Map. RPP utilized Jamar TraxMite pneumatic traffic counters and TraxPro software to collect and analyze the traffic volumes and the vehicular classifications of user vehicles. The raw counts were then adjusted using a seasonal adjustment factor which takes a 24-hour volume count and adjusts it to yield an Average Annual Daily Traffic volume (AADT). Specifically for this study, RPP utilized both a daily (day of the week) and Monthly (month of the year) combined adjustment factor. In the simplest of terms, the seasonal adjustment factors take into account the day of week and month of year and adjust a 24-hour count to reflect an average annual traffic volume on that road. For instance, in Trinidad, a rural destination

community on the Pacific Coast, a count collected in winter would likely need a multiplier to increase it for an annual average including the typically higher traffic volumes experienced during summer months. Likewise, traffic volumes vary from day to day within a week typically. A count on Friday will likely require a divisor to decrease it for a weekly average including the typical slower traffic days of Tuesday and Wednesdays. The seasonal adjustment factors used take into account both the month and day in which the 24-hour volumes were collected to yield the AADT at each location. The Trinidad Field data collection was performed in January 2019 during regular business days of the week (Monday through Friday). To responsibly estimate the average annual traffic volumes, Red Plains applied a multiplier to inflate these counts accordingly. Adjustment factors were applied to each specific MTC and TMC prior to analysis. Red Plains used a compounding 2% per year growth rate determined to be conservatively (overestimating) regional traffic pattern growth. Analysis of the traffic volumes in the region resulted in an average 0.6-1.0% per year growth rate.

24-Hour Traffic Count Summary Table

Count Number	Raw Count	Day/Month Seasonal Adjustment Factor*	Average Annual Daily Traffic AADT	2019 AADT w/ Hotel	20-Year Projected AADT**	20-Yer Projected AADT w/ Hotel
1	1,225	1.20	1470	1535	2183	2279
2	2,279	1.20	2735	2863	4061	4252
3	269	1.20	323	354	479	526
4	2,957	1.20	3548	4158	5269	6175
5	1,975	1.20	2370	2577	3519	3827
6	230	1.20	276	292	410	434
7	1,996	1.20	2395	2629	3557	3904
8	820	1.19	976	1088	1449	1616
9	337	1.19	401	411	596	610
10	1,244	1.19	1480	2283	2198	3390
11	864	1.19	1028	1864	1527	2768
12	380	1.19	452	485	672	720
13	811	1.19	965	989	1433	1469
14	782	1.19	931	942	1382	1399

* Day and Month Seasonal Adjustment Factors - All Counts in January (x1.179) on Tuesday (x1.02) or Wednesday (1.01)
**20-Year Projected AADT assumes a compounding 2% per year population growth rate

TURNING MOVEMENT COUNTS (TMC'S)

The turning movement counts (7 intersections) were collected manually during AM and PM Peak Hours of traffic. The AM Peak Hour Count was collected between 7:00-9:00AM while the PM Peak Hour Count was collected between 4:00-6:00PM. The purpose of the TMC's are to measure and quantify the directional traffic flow through an intersection. The resulting data provides the support for Level of Service (LOS) analysis on the intersection's various movements while also providing detailed traffic flow patterns allowing for proper trip distribution through intersections. RPP utilized McTrans Highway Capacity Software Plus to perform LOS analysis on all seven (7) main intersection within the analysis area. Understanding the existing traffic patterns upstream and downstream of the proposed development allows to better model existing traffic patterns while also allowing for the analysis of how the future development will affect the transportation network.

Summary Table - Level of Service Intersection Analysis					
Intersection	Analysis Type	Turning Movement LOS Rating			
		Eastbound	Westbound	Northbound	Southbound
Traffic Intersection Description w/Year					
TMC #1 - AM Peak Hour 2019	TWSC	C	A	C	B
TMC #1 - PM Peak Hour 2019	TWSC	C	A	C	E
TMC #1 - PM Peak Hour 2019 w/Development	TWSC	C	A	C	F
TMC #1 - PM Peak Hour 2039 Projection	TWSC	C	A	F	F
TMC #1 - PM Peak Hour 2039 Projection w/Development	TWSC	C	A	F	F
TMC #1 - PM Peak Hour 2019	AWSC	C	C	B	B
TMC #1 - PM Peak Hour 2019 w/Development	AWSC	C	D	B	B
TMC #1 - PM Peak Hour 2039 Projection	AWSC	F	F	C	C
TMC #1 - PM Peak Hour 2039 Projection w/Development	AWSC	F	F	C	C
TMC #2 - AM Peak Hour 2019	TWSC	A	A		B
TMC #2 - PM Peak Hour 2019	TWSC	A	A		B
TMC #2 - PM Peak Hour 2019 w/Development	TWSC	A	A		B
TMC #2 - PM Peak Hour 2039 Projection	TWSC	A	A		C
TMC #2 - PM Peak Hour 2039 Projection w/Development	TWSC	A	A		C
TMC #3 - AM Peak Hour 2019	TWSC	A	A		
TMC #3 - PM Peak Hour 2019	TWSC	A	A		
TMC #3 - PM Peak Hour 2019 w/Development	TWSC	A	A		
TMC #3 - PM Peak Hour 2039 Projection	TWSC	A	A		
TMC #3 - PM Peak Hour 2039 Projection w/Development	TWSC	A	A		
TMC #4 - AM Peak Hour 2019	TWSC	A	A	B	A
TMC #4 - PM Peak Hour 2019	TWSC	A	A	C	B
TMC #4 - PM Peak Hour 2019 w/Development	TWSC	A	A	C	B
TMC #4 - PM Peak Hour 2039 Projection	TWSC	A	A	F	B
TMC #4 - PM Peak Hour 2039 Projection w/Development	TWSC	A	A	F	B
TMC #5 - AM Peak Hour 2019	TWSC		A	A	A
TMC #5 - PM Peak Hour 2019	TWSC		B	A	A
TMC #5 - PM Peak Hour 2019 w/Development	TWSC		B	A	A
TMC #5 - PM Peak Hour 2039 Projection	TWSC		B	A	A
TMC #5 - PM Peak Hour 2039 Projection w/Development	TWSC		B	A	A
TMC #6 - AM Peak Hour 2019	TWSC		A	A	A
TMC #6 - PM Peak Hour 2019	TWSC		A	A	A
TMC #6 - ALL PROJECTIONS	TWSC		A	A	A
TMC #7 - AM Peak Hour 2019	TWSC	A	A	A	
TMC #7 - PM Peak Hour 2019	TWSC	A	A	A	
TMC #7 - ALL PROJECTIONS	TWSC	A	A	A	

TWSC - Two Way Stop Control

AWSC - All Way Stop Control (provided as an alternative analysis on TMC#1 Intersection)

Blue is a modified finding to account for the 3-way stop intersection

Green indicates and existing or projected issue with poor LOS rating WHICH ARE NOT RELATED TO THE PROPOSED DEVELOPMENT

Red indicates a degredation of LOS due to proposed hotel development

TRIP GENERATION ANALYSIS

For purposes of this study, RPP utilized the information provided by the Tribe to understand and size and scope of the proposed Hotel development. From the development plans, RPP performed trip generation analysis on the proposed land use to analyze and assign generated traffic trips. To do so RPP utilized the Institute of Traffic Engineers (ITE) Trip Generation Manuals, 10th Edition, Volumes 1-3 for this analysis. Analysis concluded that the proposed 100-Room Hotel will generate an estimated 836 trips per day, of which 60 of those trips would occur during the PM Peak Hour of traffic. The detailed analysis and land use break down is provided on the Trip Generation Table. Total Trips Generated is the total number of vehicle trips to and from the new development in a typical weekday. Trip Generation Analysis is an engineering planning tool and is the professional-discipline-approved method for understanding the potential impacts of a development on the existing transportation network. This allows the community and transportation stakeholders the ability to forecast transportation system improvements that will be needed in support of the development. Often times, traffic analysis also identifies system improvements which will be required in the future, regardless of the potential impacts of the development. It is recommended that post development analysis be performed to completely understand the actual impacts of a development of any kind.

Trip Generation Table - Trinidad Rancheria Hotel Development

Land Use	ITE Code*	ITE Description	Intensity	Units	Trip Generation Rate (Daily)	PM Peak Hour Average Rate	PM In	PM Out	Daily Trips Generated	PM Peak Hours	PM In	PM Out
Trinidad Rancheria Proposed Hotel	310	Lodging Hotel	100	Rooms	8.36	0.60	0.51	0.49	836	60	31	29
Total Daily Trips Generated**									836			

*Institute of Traffic Engineers (ITE) Trip Generation Manuals, 10th Edition, Volumes 1-3 were utilized for this analysis.

** Total Trips Generated is the total number up vehicle trips to and from all of the planned development in a typical weekday. This calculation takes into consideration a 0.0% "internal capture" rate for those guests utilizing the hotel and casino simultaneously. It is possible with the development of the hotel, that the existing trips generated by the casino itself decreases for those guest remaining at the casino for extended overnight stays instead of commutting to and from the casino more frequestly. The opposing discussion can also be had in that, the Hotel may result in increased trip levels to the Casino's existing trips generated as more people will utilize the Casino now that it will have a hotel. For these

Trip Generation Analysis is for planning purposes only, it is recommended that follow up traffic studies be perfomred once the hotel is up and running to further verify the impacts of the development of the hotel and how the Hotel and Casino combine to impact the area traffic volumes and patterns.

SEASONAL ADJUSTMENT FACTORS USED TO CONVERT ADT'S TO AADT'S

Day of Week Multiplier

Monday	1.043
Tuesday	1.020
Wednesday	1.010
Thursday	1.000
Friday	0.940

Month of Year Multiplier

January	1.179
February	1.161
March	1.133
April	1.083
May	1.064
June	1.009
July	1.015
August	1.000
September	1.037
October	1.078

CALTRANS 2016 AND 2017 AADT'S - REFERENCED FOR REGIONAL GROWTH ANALYSIS

2016 Traffic Volumes on California State Highways

Dist	Route	County	Postmile	Description	Back Peak Hour	Back Peak Month	Back AADT	Ahead Peak Hour	Ahead Peak Month	Ahead AADT
01	101	HUM	98.067	WESTHAVEN DRIVE	1300	14000	11000	1050	11900	9000
01	101	HUM	98.355	SIXTH STREET	1050	11900	9000	1150	12400	9100
01	101	HUM	100.705	TRINIDAD ROAD	1150	12400	9100	690	6600	4600
01	101	HUM R	103.378	SEAWOOD DRIVE	690	6600	4600	670	6600	4300
01	101	HUM R	106.069	PATRICKS POINT	670	6600	4300	700	7500	5000
01	101	HUM	108.22	BIG LAGOON PARK ROAD	700	7500	5000	570	5500	4100
01	101	HUM	109.55	GEORGIA PACIFIC ROAD	570	5500	4100	580	5500	4000



2017 Traffic Volumes (for ALL vehicles on CA State Highways)

2017 Volumes Home | View

Return to Census Program or Jump to 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017

Dist	Rte	CO	Post Mile	Description	Back Peak Hour	Back Peak Month	Back AADT	Ahead Peak Hour	Ahead Peak Month	Ahead AADT
01	101	HUM R	91.473	MC KINLEYVILLE, SCHOOL ROAD	2300	23400	19300	1850	19500	16400
01	101	HUM R	93.000	MC KINLEYVILLE, MURRAY ROAD	1850	19500	16400	1450	13300	12900
01	101	HUM R	93.852	MC KINLEYVILLE, AIRPORT ROAD	1450	13300	12900	1300	13200	11300
01	101	HUM R	95.620	NORTH CENTRAL AVENUE	1300	13200	11300	1300	14000	11100
01	101	HUM R	97.020	CRANNELL ROAD	1500	14000	11100	1500	13800	10800
01	101	HUM	98.067	WESTHAVEN DRIVE	1500	14400	11300	1050	12200	9200



2016 Traffic Volumes (for ALL vehicles on CA State Highways)

2016 Volumes Home | View

Return to Census Program or Jump to 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017

Dist	Rte	CO	Post Mile	Description	Back Peak Hour	Back Peak Month	Back AADT	Ahead Peak Hour	Ahead Peak Month	Ahead AADT
01	101	HUM R	91.473	MC KINLEYVILLE, SCHOOL ROAD	2250	23000	19000	1800	19000	16000
01	101	HUM R	93	MC KINLEYVILLE, MURRAY ROAD	1800	19000	16000	1400	13000	12600
01	101	HUM R	93.852	MC KINLEYVILLE, AIRPORT ROAD	1400	13000	12600	1350	13500	11600
01	101	HUM R	95.62	NORTH CENTRAL AVENUE	1350	13500	11600	1300	13100	11300
01	101	HUM R	97.02	CRANNELL ROAD	1300	13100	11300	1300	14000	11000
01	101	HUM	98.067	WESTHAVEN DRIVE	1300	14000	11000	1050	11900	9000

CONCLUSIONS

The 2019 Cher-Ae Heights Indian Community of the Trinidad Rancheria – Hotel Traffic Impact Analysis has identified several notable findings in relation to both the existing and the proposed traffic patterns and conditions. They are as follows:

1. The Trinidad Rancheria Hotel has little to no impact on the existing transportation network and traffic patterns.
    a. At the intersection #1 - Main Street/Scenic Drive/Patrick's Point Drive the Level of Service for the intersection is already operating in relatively poor condition with LOS ratings of:
        i. “C, A ,C, E” from a two-way-stop-control analysis
        ii. “C, C, B, B” from an all-way-stop-control analysis
    b. At the Intersection #1 - Main Street/Scenic Drive/Patrick's Point Drive the Level of Service for the intersection is minimally impacted by the proposed hotel development:
        i. Two-way-stop-control analysis identifies the Southbound LOS reduces from an “E” already poor rating, to an “F” poor rating.
        ii. All-way-stop-control analysis identifies the Southbound LOS reduced from a “C” average but acceptable to a “D” below average rating.
    c. No other intersections or roadways show any reduced state of operation due to the proposed Hotel development.
2. Area Transportation Improvements not related to the Development project are needed to improve, or at a minimum, maintain the existing functionality of the transportation network.
    a. 20-Year Projected LOS analysis, assuming a realistic 2% per year traffic growth rate and with no significant regional developments identifies the following issues:
        i. Intersection #1 – Main Street/Scenic Drive/ Patrick's Point Drive will be operating in failing condition in year 2039 regardless of development, if no improvements are made.
        ii. Intersection #4 – N Westhaven Drive/Trinidad Frontage Road/US101 northbound Off Ramp will be operating in failing condition in year 2039 regardless of development, if no improvements are made.
        iii. All other intersections and roadways analyzed in this report, if maintained to their current condition, adequately serve the area from a LOS analysis perspective

APPENDIX A

MECHANICAL TRAFFIC COUNT RECORDS AND ANALYSIS

Prepared by:

RED PLAINS PROFESSIONAL, INC.

ELROD ENGINEERING

24-Hour Traffic Count Summary Table						
Count Number	Raw Count	Day/Month Seasonal Adjustment Factor*	Average Annual Daily Traffic AADT	2019 AADT w/ Hotel	20-Year Projected AADT**	20-Yer Projected AADT w/ Hotel
1	1,225	1.20	1470	1535	2183	2279
2	2,279	1.20	2735	2863	4061	4252
3	269	1.20	323	354	479	526
4	2,957	1.20	3548	4158	5269	6175
5	1,975	1.20	2370	2577	3519	3827
6	230	1.20	276	292	410	434
7	1,996	1.20	2395	2629	3557	3904
8	820	1.19	976	1088	1449	1616
9	337	1.19	401	411	596	610
10	1,244	1.19	1480	2283	2198	3390
11	864	1.19	1028	1864	1527	2768
12	380	1.19	452	485	672	720
13	811	1.19	965	989	1433	1469
14	782	1.19	931	942	1382	1399

* Day and Month Seasonal Adjustment Factors - All Counts in January (x1.179) on Tuesday (x1.02) or Wednesday (1.01)

**20-Year Projected AADT assumes a compounding 2% per year population growth rate

Red Plains Professional, Inc.
Start Date: 1/8/2019
Start Time: 11:00:00 AM
Site Code: 1
Intersection:

Trinidad Rancheria Hotel Traffic Impact Analysis
2019

Number	Date	Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	TOTALS
1	1/8/2019	11:00 AM	1	36	30	0	13	0	0	0	0	0	0	0	0	0	**80**
2	1/8/2019	12:00 PM	2	71	16	0	11	0	0	0	0	0	0	0	0	0	**100**
3	1/8/2019	01:00 PM	1	57	23	0	8	0	0	1	0	0	0	0	0	1	**91**
4	1/8/2019	02:00 PM	0	53	20	0	8	0	0	0	0	0	0	0	0	0	**81**
5	1/8/2019	03:00 PM	0	63	23	0	14	0	0	0	0	0	0	0	0	0	**100**
6	1/8/2019	04:00 PM	0	68	28	1	8	0	0	0	0	0	0	0	0	0	**105**
7	1/8/2019	05:00 PM	0	79	14	0	8	0	0	0	0	0	0	0	0	0	**101**
8	1/8/2019	06:00 PM	0	64	22	0	4	0	0	0	0	0	0	0	0	0	**90**
9	1/8/2019	07:00 PM	0	42	6	0	5	0	0	0	0	0	0	0	0	0	**53**
10	1/8/2019	08:00 PM	0	41	8	0	1	0	0	0	0	0	0	0	0	0	**50**
11	1/8/2019	09:00 PM	0	29	3	0	3	0	0	0	0	0	0	0	0	0	**35**
12	1/8/2019	10:00 PM	0	7	2	0	2	0	0	0	0	0	0	0	0	0	**11**
13	1/8/2019	11:00 PM	0	10	5	0	1	0	0	0	0	0	0	0	0	0	**16**
14	1/9/2019	12:00 AM	0	5	1	0	2	0	0	0	0	0	0	0	0	0	**8**
15	1/9/2019	01:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	0	**4**
16	1/9/2019	02:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	0	**4**
17	1/9/2019	03:00 AM	0	4	0	0	1	0	0	0	0	0	0	0	0	0	**5**
18	1/9/2019	04:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	0	**4**
19	1/9/2019	05:00 AM	0	5	0	0	4	0	0	0	0	0	0	0	0	0	**9**
20	1/9/2019	06:00 AM	0	8	10	0	6	0	0	0	0	0	0	0	0	0	**24**
21	1/9/2019	07:00 AM	0	28	8	1	7	0	0	0	0	0	0	0	0	1	**45**
22	1/9/2019	08:00 AM	0	45	16	0	8	0	0	2	0	0	0	0	0	0	**71**
23	1/9/2019	09:00 AM	3	43	13	0	13	1	0	3	0	0	0	0	0	0	**76**
24	1/9/2019	10:00 AM	1	37	9	0	14	0	0	0	0	0	0	0	0	1	**62**
TOTALS			**8**	**807**	**257**	**2**	**141**	**1**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**3**	
Percent Heavy Vehicles			12%														

Raw ADT	**1,225**
Seasonal Adjustment Factor	**1.20**
AADT	**1,470**
Annual Growth Rate	**2.0%**
20 Year Projected AADT	**2,183**

Red Plains Professional, Inc.
Start Date: 1/8/2019
Start Time: 11:00:00 AM
Site Code: 2
Intersection:

Trinidad Rancheria Hotel Traffic Impact Analysis
2019

Number	Date	Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	TOTALS
1	1/8/2019	11:00 AM	3	76	38	5	18	2	1	4	0	0	0	0	1	12	**160**
2	1/8/2019	12:00 PM	2	115	38	1	15	2	0	3	2	0	0	0	0	11	**189**
3	1/8/2019	01:00 PM	1	89	39	3	12	4	0	0	1	0	0	0	0	18	**167**
4	1/8/2019	02:00 PM	4	113	32	2	6	2	0	0	0	0	0	0	0	19	**178**
5	1/8/2019	03:00 PM	1	142	41	1	11	1	0	1	0	0	0	0	0	19	**217**
6	1/8/2019	04:00 PM	5	152	48	1	15	1	0	0	0	0	0	0	0	17	**239**
7	1/8/2019	05:00 PM	3	105	24	4	7	1	0	0	0	0	0	0	0	24	**168**
8	1/8/2019	06:00 PM	1	44	12	1	5	1	0	0	0	0	0	0	0	9	**73**
9	1/8/2019	07:00 PM	2	37	6	0	2	0	0	0	0	0	0	0	0	2	**49**
10	1/8/2019	08:00 PM	4	20	7	0	3	0	0	0	0	0	0	0	0	3	**37**
11	1/8/2019	09:00 PM	0	13	3	0	2	0	0	0	0	0	0	0	0	1	**19**
12	1/8/2019	10:00 PM	0	5	4	0	0	0	0	0	0	0	0	0	0	3	**12**
13	1/8/2019	11:00 PM	0	3	4	0	0	0	0	0	0	0	0	0	0	1	**8**
14	1/9/2019	12:00 AM	0	1	1	0	0	1	0	0	0	0	0	0	0	2	**5**
15	1/9/2019	01:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	1	**4**
16	1/9/2019	02:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1	**2**
17	1/9/2019	03:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
18	1/9/2019	04:00 AM	1	1	1	0	0	0	0	0	0	0	0	0	0	0	**3**
19	1/9/2019	05:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	3	**6**
20	1/9/2019	06:00 AM	4	16	3	1	1	2	0	0	0	0	0	0	0	5	**32**
21	1/9/2019	07:00 AM	5	56	20	3	4	0	0	0	0	0	0	0	0	8	**96**
22	1/9/2019	08:00 AM	17	209	48	9	12	5	2	2	0	0	0	0	0	31	**335**
23	1/9/2019	09:00 AM	3	83	37	5	15	3	0	2	0	0	0	0	0	10	**158**
24	1/9/2019	10:00 AM	3	79	22	4	6	0	1	1	0	0	0	0	0	6	**122**
TOTALS			**59**	**1365**	**429**	**40**	**134**	**25**	**4**	**13**	**3**	**0**	**0**	**0**	**1**	**206**	
Percent Heavy Vehicles			10%														

Raw ADT	**2,279**
Seasonal Adjustment Factor	**1.20**
AADT	**2,735**
Annual Growth Rate	**2.0%**
20 Year Projected AADT	**4,061**

Red Plains Professional, Inc.
Start Date: 1/8/2019
Start Time: 12:00:00 PM
Site Code: 3
Intersection:

Trinidad Rancheria Hotel Traffic Impact Analysis
2019

Number	Date	Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	TOTALS
1	1/8/2019	12:00 PM	0	22	9	0	1	0	0	0	0	0	0	0	0	0	**32**
2	1/8/2019	01:00 PM	1	11	9	0	0	0	0	0	0	0	0	0	0	0	**21**
3	1/8/2019	02:00 PM	0	16	4	0	2	0	0	0	0	0	0	0	0	0	**22**
4	1/8/2019	03:00 PM	0	14	8	0	1	1	0	0	0	0	0	0	0	0	**24**
5	1/8/2019	04:00 PM	0	15	5	0	2	0	0	1	0	0	0	0	0	0	**23**
6	1/8/2019	05:00 PM	1	20	5	0	0	0	0	0	0	0	0	0	0	0	**26**
7	1/8/2019	06:00 PM	0	8	3	0	0	0	0	0	0	0	0	0	0	0	**11**
8	1/8/2019	07:00 PM	0	7	1	0	1	0	0	0	0	0	0	0	0	0	**9**
9	1/8/2019	08:00 PM	0	4	0	0	0	0	0	0	0	0	0	0	0	0	**4**
10	1/8/2019	09:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
11	1/8/2019	10:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	**2**
12	1/8/2019	11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
13	1/9/2019	12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
14	1/9/2019	01:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
15	1/9/2019	02:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
16	1/9/2019	03:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
17	1/9/2019	04:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
18	1/9/2019	05:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	**2**
19	1/9/2019	06:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	0	**4**
20	1/9/2019	07:00 AM	0	10	0	0	0	0	0	0	1	0	0	0	0	0	**11**
21	1/9/2019	08:00 AM	1	14	5	0	2	0	0	0	0	0	0	0	0	0	**22**
22	1/9/2019	09:00 AM	0	11	2	0	0	1	0	0	0	0	0	0	0	0	**14**
23	1/9/2019	10:00 AM	0	10	4	0	0	0	0	0	0	0	0	0	0	0	**14**
24	1/9/2019	11:00 AM	1	16	9	0	0	0	0	0	0	0	0	0	0	0	**26**
TOTALS			**4**	**187**	**65**	**0**	**9**	**2**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	
Percent Heavy Vehicles			5%														

Raw ADT	**269**
Seasonal Adjustment Factor	**1.20**
AADT	**323**
Annual Growth Rate	**2.0%**
20 Year Projected AADT	**479**

Red Plains Professional, Inc.
Start Date: 1/8/2019
Start Time: 1:00:00 PM
Site Code: 4
Intersection:

Trinidad Rancheria Hotel Traffic Impact Analysis
2019

Number	Date	Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	TOTALS
1	1/8/2019	01:00 PM	3	121	50	0	33	0	0	1	0	0	0	0	0	2	**210**
2	1/8/2019	02:00 PM	1	129	57	0	35	1	0	2	0	0	0	0	0	7	**232**
3	1/8/2019	03:00 PM	3	146	58	1	25	3	0	0	0	0	0	0	0	4	**240**
4	1/8/2019	04:00 PM	2	142	76	3	36	2	0	3	0	0	0	0	0	5	**269**
5	1/8/2019	05:00 PM	0	193	38	1	21	1	0	0	0	0	0	0	0	3	**257**
6	1/8/2019	06:00 PM	0	88	46	2	21	0	0	0	0	0	0	0	0	1	**158**
7	1/8/2019	07:00 PM	2	71	20	1	6	0	0	0	0	0	0	0	0	0	**100**
8	1/8/2019	08:00 PM	0	47	12	0	6	0	0	0	0	0	0	0	0	1	**66**
9	1/8/2019	09:00 PM	7	35	14	0	6	0	0	0	0	0	0	0	0	2	**64**
10	1/8/2019	10:00 PM	0	21	13	0	5	0	0	0	0	0	0	0	0	1	**40**
11	1/8/2019	11:00 PM	0	9	8	0	6	0	0	0	0	0	0	0	0	0	**23**
12	1/9/2019	12:00 AM	1	7	1	0	3	0	0	0	0	0	0	0	0	0	**12**
13	1/9/2019	01:00 AM	0	7	2	0	2	1	0	0	0	0	0	0	0	0	**12**
14	1/9/2019	02:00 AM	0	3	1	0	1	0	0	0	0	0	0	0	0	0	**5**
15	1/9/2019	03:00 AM	0	3	6	0	0	0	0	0	0	0	0	0	0	0	**9**
16	1/9/2019	04:00 AM	0	4	6	0	2	0	0	0	0	0	0	0	0	0	**12**
17	1/9/2019	05:00 AM	0	6	9	0	5	0	0	0	0	0	0	0	0	1	**21**
18	1/9/2019	06:00 AM	0	19	18	0	8	0	0	0	2	0	0	0	0	1	**48**
19	1/9/2019	07:00 AM	6	58	38	3	16	0	0	1	1	0	0	0	0	0	**123**
20	1/9/2019	08:00 AM	2	140	97	0	34	1	0	4	1	0	0	0	0	1	**280**
21	1/9/2019	09:00 AM	2	92	59	2	39	4	0	4	0	0	0	0	0	7	**209**
22	1/9/2019	10:00 AM	0	74	50	0	22	5	0	1	1	0	0	0	0	2	**155**
23	1/9/2019	11:00 AM	2	89	57	3	28	1	0	2	0	0	0	0	0	1	**183**
24	1/9/2019	12:00 PM	3	93	80	1	48	0	0	2	0	0	0	0	0	2	**229**
TOTALS			**34**	**1597**	**816**	**17**	**408**	**19**	**0**	**20**	**5**	**0**	**0**	**0**	**0**	**41**	
Percent Heavy Vehicles			16%														

Raw ADT	**2,957**
Seasonal Adjustment Factor	**1.20**
AADT	**3,548**
Annual Growth Rate	**2.0%**
20 Year Projected AADT	**5,269**

Red Plains Professional, Inc.
Start Date: 1/8/2019
Start Time: 1:00:00 PM
Site Code: 5
Intersection:

Trinidad Rancheria Hotel Traffic Impact Analysis
2019

Number	Date	Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	TOTALS
1	1/8/2019	01:00 PM	1	90	35	1	16	1	0	2	0	0	0	0	0	0	**146**
2	1/8/2019	02:00 PM	2	70	37	0	14	0	0	0	0	0	0	0	0	2	**125**
3	1/8/2019	03:00 PM	0	101	35	1	22	0	0	1	0	0	0	0	0	4	**164**
4	1/8/2019	04:00 PM	0	97	47	1	10	1	0	2	0	0	0	0	0	1	**159**
5	1/8/2019	05:00 PM	1	105	35	0	12	0	0	1	0	0	0	0	0	5	**159**
6	1/8/2019	06:00 PM	0	60	14	0	9	0	0	0	0	0	0	0	0	1	**84**
7	1/8/2019	07:00 PM	0	34	6	0	8	1	0	0	0	0	0	0	0	2	**51**
8	1/8/2019	08:00 PM	0	37	11	1	1	0	0	0	0	0	0	0	0	0	**50**
9	1/8/2019	09:00 PM	0	24	6	0	0	0	0	0	0	0	0	0	0	2	**32**
10	1/8/2019	10:00 PM	0	43	14	2	5	1	0	0	0	0	0	0	0	1	**66**
11	1/8/2019	11:00 PM	0	18	7	0	1	0	0	0	0	0	0	0	0	2	**28**
12	1/9/2019	12:00 AM	2	16	6	0	1	0	0	0	0	0	0	0	0	0	**25**
13	1/9/2019	01:00 AM	0	5	2	0	2	0	0	0	0	0	0	0	0	1	**10**
14	1/9/2019	02:00 AM	0	6	2	0	1	0	0	0	0	0	0	0	0	0	**9**
15	1/9/2019	03:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	0	**4**
16	1/9/2019	04:00 AM	0	5	2	0	0	0	0	0	0	0	0	0	0	1	**8**
17	1/9/2019	05:00 AM	0	10	2	0	2	0	0	0	0	0	0	0	0	0	**14**
18	1/9/2019	06:00 AM	0	19	13	1	4	0	0	0	0	0	0	0	0	1	**38**
19	1/9/2019	07:00 AM	0	64	23	2	3	1	0	0	0	1	0	0	0	3	**97**
20	1/9/2019	08:00 AM	0	114	36	1	13	1	1	0	3	0	0	0	0	4	**173**
21	1/9/2019	09:00 AM	0	73	34	4	18	0	0	1	0	0	0	0	0	4	**134**
22	1/9/2019	10:00 AM	1	81	20	2	16	1	1	0	1	0	0	0	0	0	**123**
23	1/9/2019	11:00 AM	1	67	26	2	12	2	1	1	0	0	0	0	1	1	**114**
24	1/9/2019	12:00 PM	3	102	30	3	17	1	0	3	0	0	0	0	0	3	**162**
TOTALS			**11**	**1244**	**444**	**21**	**187**	**10**	**3**	**11**	**4**	**1**	**0**	**0**	**1**	**38**	
Percent Heavy Vehicles			12%														

Raw ADT	**1,975**
Seasonal Adjustment Factor	**1.20**
AADT	**2,370**
Annual Growth Rate	**2.0%**
20 Year Projected AADT	**3,519**

Red Plains Professional, Inc.
Start Date: 1/8/2019
Start Time: 12:00:00 PM
Site Code: 6
Intersection:

Trinidad Rancheria Hotel Traffic Impact Analysis
2019

Number	Date	Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	TOTALS
1	1/8/2019	12:00 PM	0	15	2	0	1	0	0	1	0	0	0	0	0	0	**19**
2	1/8/2019	01:00 PM	1	9	5	0	3	0	0	0	0	0	0	0	0	0	**18**
3	1/8/2019	02:00 PM	1	12	6	0	2	0	0	0	0	0	0	0	0	0	**21**
4	1/8/2019	03:00 PM	3	14	2	0	1	0	0	0	0	0	0	0	0	0	**20**
5	1/8/2019	04:00 PM	0	13	4	0	0	0	0	0	0	0	0	0	0	0	**17**
6	1/8/2019	05:00 PM	1	10	1	2	0	0	0	0	0	0	0	0	0	0	**14**
7	1/8/2019	06:00 PM	0	10	2	0	0	0	0	0	0	0	0	0	0	0	**12**
8	1/8/2019	07:00 PM	0	2	1	0	0	0	0	0	0	0	0	0	0	1	**4**
9	1/8/2019	08:00 PM	0	4	1	0	0	0	0	0	0	0	0	0	0	0	**5**
10	1/8/2019	09:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	**2**
11	1/8/2019	10:00 PM	0	4	0	0	1	0	0	0	0	0	0	0	0	0	**5**
12	1/8/2019	11:00 PM	0	2	1	0	0	0	0	0	0	0	0	0	0	0	**3**
13	1/9/2019	12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
14	1/9/2019	01:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
15	1/9/2019	02:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
16	1/9/2019	03:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
17	1/9/2019	04:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	**2**
18	1/9/2019	05:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	0	**3**
19	1/9/2019	06:00 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
20	1/9/2019	07:00 AM	0	7	1	0	2	0	0	0	1	0	0	0	0	0	**11**
21	1/9/2019	08:00 AM	0	11	3	0	0	0	0	0	0	0	0	0	0	0	**14**
22	1/9/2019	09:00 AM	1	12	3	0	2	0	0	1	0	0	0	0	0	0	**19**
23	1/9/2019	10:00 AM	0	7	4	1	1	0	0	0	0	0	0	0	0	0	**13**
24	1/9/2019	11:00 AM	1	9	7	1	2	0	0	1	0	0	0	0	0	0	**21**
TOTALS			**8**	**149**	**48**	**4**	**16**	**0**	**0**	**3**	**1**	**0**	**0**	**0**	**0**	**1**	
Percent Heavy Vehicles			10%														

Raw ADT	**230**
Seasonal Adjustment Factor	**1.20**
AADT	**276**
Annual Growth Rate	**2.0%**
20 Year Projected AADT	**410**

Red Plains Professional, Inc.
Start Date: 1/8/2019
Start Time: 2:00:00 PM
Site Code: 7
Intersection:

Trinidad Rancheria Hotel Traffic Impact Analysis
2019

Number	Date	Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	TOTALS
1	1/8/2019	2:00 PM	1	62	77	1	30	0	0	1	0	0	0	0	0	1	**173**
2	1/8/2019	3:00 PM	0	62	61	1	22	0	0	0	0	0	0	0	0	0	**146**
3	1/8/2019	4:00 PM	1	75	67	1	32	0	0	0	1	0	0	0	0	4	**181**
4	1/8/2019	5:00 PM	1	94	70	1	20	1	0	1	0	0	0	0	0	1	**189**
5	1/8/2019	6:00 PM	0	54	51	0	16	0	0	0	0	0	0	0	0	2	**123**
6	1/8/2019	7:00 PM	0	33	25	1	4	0	0	0	0	0	0	0	0	0	**63**
7	1/8/2019	8:00 PM	0	20	13	0	6	0	0	1	0	0	0	0	0	0	**40**
8	1/8/2019	9:00 PM	1	22	16	0	10	0	0	0	0	0	0	0	0	0	**49**
9	1/8/2019	10:00 PM	0	14	14	0	1	0	0	0	0	0	0	0	0	0	**29**
10	1/8/2019	11:00 PM	0	2	9	0	6	0	0	0	0	0	0	0	0	1	**18**
11	1/9/2019	12:00 AM	1	2	4	0	3	0	0	0	0	0	0	0	0	0	**10**
12	1/9/2019	1:00 AM	0	4	4	0	2	0	0	0	0	0	0	0	0	1	**11**
13	1/9/2019	2:00 AM	0	2	0	0	1	0	0	0	0	0	0	0	0	1	**4**
14	1/9/2019	3:00 AM	0	1	3	0	0	0	0	0	0	0	0	0	0	0	**4**
15	1/9/2019	4:00 AM	0	3	2	0	2	0	0	0	0	0	0	0	0	0	**7**
16	1/9/2019	5:00 AM	0	2	7	0	5	0	0	0	0	0	0	0	0	1	**15**
17	1/9/2019	6:00 AM	0	10	14	1	7	0	1	1	1	0	0	0	0	1	**36**
18	1/9/2019	7:00 AM	0	19	30	1	9	0	0	1	2	0	0	0	0	1	**63**
19	1/9/2019	8:00 AM	5	52	105	1	28	2	0	2	0	0	0	0	0	4	**199**
20	1/9/2019	9:00 AM	0	28	65	2	34	1	0	2	0	0	0	0	0	1	**133**
21	1/9/2019	10:00 AM	0	22	54	0	24	0	0	0	1	0	0	0	0	0	**101**
22	1/9/2019	11:00 AM	0	19	63	1	23	2	0	1	0	1	0	0	0	1	**111**
23	1/9/2019	12:00 PM	2	16	103	0	38	1	0	1	0	0	0	0	0	1	**162**
24	1/9/2019	1:00 PM	1	19	84	4	20	0	0	1	0	0	0	0	0	0	**129**
TOTALS			**13**	**637**	**941**	**15**	**343**	**7**	**1**	**12**	**5**	**1**	**0**	**0**	**0**	**21**	
Percent Heavy Vehicles			19%														

Raw ADT	**1,996**
Seasonal Adjustment Factor	**1.20**
AADT	**2,395**
Annual Growth Rate	**2.0%**
20 Year Projected AADT	**3,557**

Red Plains Professional, Inc.

Start Date: 1/9/2019

Start Time: 12:00:00 PM

Site Code: 8

Intersection:

Trinidad Rancheria Hotel Traffic Impact Analysis
2019

Number	Date	Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	TOTALS
1	1/9/2019	12:00 PM	2	32	14	0	6	0	0	0	0	0	0	0	0	3	**57**
2	1/9/2019	01:00 PM	1	38	12	0	3	0	0	0	0	0	0	0	0	1	**55**
3	1/9/2019	02:00 PM	2	54	18	0	6	0	0	0	0	0	0	0	0	1	**81**
4	1/9/2019	03:00 PM	0	56	12	0	5	0	0	1	0	0	0	0	0	3	**77**
5	1/9/2019	04:00 PM	0	72	19	0	5	0	0	0	0	0	0	0	0	1	**97**
6	1/9/2019	05:00 PM	0	38	16	0	3	0	0	0	0	0	0	0	0	2	**59**
7	1/9/2019	06:00 PM	0	18	6	0	3	0	0	0	0	0	0	0	0	1	**28**
8	1/9/2019	07:00 PM	0	25	2	0	3	0	0	0	0	0	0	0	0	1	**31**
9	1/9/2019	08:00 PM	2	20	6	0	0	0	0	0	0	0	0	0	0	1	**29**
10	1/9/2019	09:00 PM	0	12	2	0	0	0	0	0	0	0	0	0	0	0	**14**
11	1/9/2019	10:00 PM	0	10	2	0	0	0	0	0	0	0	0	0	0	0	**12**
12	1/9/2019	11:00 PM	0	4	0	0	0	0	0	0	0	0	0	0	0	0	**4**
13	1/10/2019	12:00 AM	0	1	4	0	0	0	0	0	0	0	0	0	0	0	**5**
14	1/10/2019	01:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
15	1/10/2019	02:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	**2**
16	1/10/2019	03:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
17	1/10/2019	04:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	**2**
18	1/10/2019	05:00 AM	0	2	1	0	1	0	0	0	0	0	0	0	0	0	**4**
19	1/10/2019	06:00 AM	0	10	1	0	0	0	0	0	0	0	0	0	0	1	**12**
20	1/10/2019	07:00 AM	1	19	6	1	0	1	0	0	1	0	0	0	0	1	**30**
21	1/10/2019	08:00 AM	0	40	15	0	3	1	0	0	0	0	0	0	0	3	**62**
22	1/10/2019	09:00 AM	2	27	13	0	5	0	0	0	0	0	0	0	0	5	**52**
23	1/10/2019	10:00 AM	0	38	16	0	3	0	0	0	0	0	0	0	0	1	**58**
24	1/10/2019	11:00 AM	0	29	15	0	2	0	0	1	0	0	0	0	0	0	**47**
TOTALS			**10**	**548**	**183**	**1**	**48**	**2**	**0**	**2**	**1**	**0**	**0**	**0**	**0**	**25**	
Percent Heavy Vehicles			7%														

Raw ADT	**820**
Seasonal Adjustment Factor	**1.19**
AADT	**976**
Annual Growth Rate	**2.0%**
20 Year Projected AADT	**1,449**

Red Plains Professional, Inc.

Start Date: 1/9/2019

Start Time: 1:00:00 PM

Site Code: 9

Intersection:

Trinidad Rancheria Hotel Traffic Impact Analysis
2019

Number	Date	Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	TOTALS
1	1/9/2019	01:00 PM	0	5	5	0	4	0	0	0	0	0	0	0	0	0	14
2	1/9/2019	02:00 PM	0	20	11	0	4	0	0	0	0	0	0	0	0	2	37
3	1/9/2019	03:00 PM	0	20	4	0	2	0	0	0	0	0	0	0	0	1	27
4	1/9/2019	04:00 PM	0	20	8	0	4	0	0	0	0	0	0	0	0	0	32
5	1/9/2019	05:00 PM	0	10	6	0	3	0	0	0	0	0	0	0	0	0	19
6	1/9/2019	06:00 PM	0	13	3	0	3	0	0	0	0	0	0	0	0	0	19
7	1/9/2019	07:00 PM	0	10	3	0	5	0	0	0	0	0	0	0	0	0	18
8	1/9/2019	08:00 PM	0	2	5	0	2	0	0	0	0	0	0	0	0	0	9
9	1/9/2019	09:00 PM	0	1	3	0	2	0	0	0	0	0	0	0	0	0	6
10	1/9/2019	10:00 PM	0	4	1	0	1	0	0	0	0	0	0	0	0	0	6
11	1/9/2019	11:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
12	1/10/2019	12:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
13	1/10/2019	01:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
14	1/10/2019	02:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	1/10/2019	03:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	1/10/2019	04:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
17	1/10/2019	05:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
18	1/10/2019	06:00 AM	0	2	1	0	1	0	0	0	0	0	0	0	0	0	4
19	1/10/2019	07:00 AM	1	12	5	0	6	0	0	1	0	0	0	0	0	1	26
20	1/10/2019	08:00 AM	0	11	5	0	4	0	0	0	0	0	0	0	0	0	20
21	1/10/2019	09:00 AM	0	9	7	0	5	1	0	0	0	0	0	0	0	1	23
22	1/10/2019	10:00 AM	0	9	7	0	2	0	0	0	0	0	0	0	0	0	18
23	1/10/2019	11:00 AM	0	11	5	0	7	0	0	0	0	0	0	0	0	0	23
24	1/10/2019	12:00 PM	0	16	5	0	3	0	0	0	0	0	0	0	0	0	24
TOTALS			**1**	**183**	**88**	**0**	**58**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**5**	
Percent Heavy Vehicles			18%														

Raw ADT	**337**
Seasonal Adjustment Factor	**1.19**
AADT	**401**
Annual Growth Rate	**2.0%**
20 Year Projected AADT	**596**

Red Plains Professional, Inc.

Start Date: 1/9/2019

Start Time: 2:00:00 PM

Site Code: 10

Intersection:

Trinidad Rancheria Hotel Traffic Impact Analysis

2019

Number	Date	Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	TOTALS
1	1/9/2019	02:00 PM	0	59	16	0	12	0	0	1	1	0	0	0	0	4	93
2	1/9/2019	03:00 PM	0	77	23	2	13	2	0	0	0	0	0	0	0	2	119
3	1/9/2019	04:00 PM	0	82	19	0	5	0	0	2	0	0	0	0	0	6	114
4	1/9/2019	05:00 PM	3	62	17	0	7	0	0	0	0	0	0	0	0	2	91
5	1/9/2019	06:00 PM	2	44	12	2	3	0	0	0	0	0	0	0	0	1	64
6	1/9/2019	07:00 PM	0	39	10	0	3	0	0	0	0	0	0	0	0	1	53
7	1/9/2019	08:00 PM	1	32	6	1	2	1	0	0	0	0	0	0	0	1	44
8	1/9/2019	09:00 PM	2	38	14	0	0	0	0	0	0	0	0	0	0	1	55
9	1/9/2019	10:00 PM	2	48	12	0	2	0	0	0	0	0	0	0	0	0	64
10	1/9/2019	11:00 PM	0	32	8	0	2	0	0	0	0	0	0	0	0	0	42
11	1/10/2019	12:00 AM	1	16	7	0	2	0	0	0	0	0	0	0	0	0	26
12	1/10/2019	01:00 AM	0	13	1	0	3	0	0	0	0	0	0	0	0	0	17
13	1/10/2019	02:00 AM	0	11	2	0	1	0	0	0	0	0	0	0	0	0	14
14	1/10/2019	03:00 AM	0	3	3	0	1	0	0	0	0	0	0	0	0	0	7
15	1/10/2019	04:00 AM	0	5	3	2	0	0	0	0	0	0	0	0	0	0	10
16	1/10/2019	05:00 AM	0	4	4	0	2	0	0	0	0	0	0	0	0	0	10
17	1/10/2019	06:00 AM	0	10	10	1	2	0	0	0	0	0	0	0	0	0	23
18	1/10/2019	07:00 AM	0	18	9	2	3	0	0	0	0	0	0	0	0	1	33
19	1/10/2019	08:00 AM	3	35	13	0	3	0	0	0	0	0	0	0	0	0	54
20	1/10/2019	09:00 AM	0	23	12	1	2	0	0	2	0	0	0	0	0	1	41
21	1/10/2019	10:00 AM	0	26	9	0	8	1	0	1	0	0	0	0	0	2	47
22	1/10/2019	11:00 AM	2	48	12	0	11	0	0	1	1	0	0	0	0	1	76
23	1/10/2019	12:00 PM	1	39	23	0	9	3	0	0	1	0	0	0	0	0	76
24	1/10/2020	12:00 PM	2	37	21	1	8	1	0	1	0	0	0	0	0	0	71
TOTALS			**19**	**801**	**266**	**12**	**104**	**8**	**0**	**8**	**3**	**0**	**0**	**0**	**0**	**23**	
Percent Heavy Vehicles			11%														

Raw ADT	**1,244**
Seasonal Adjustment Factor	**1.19**
AADT	**1,480**
Annual Growth Rate	**2.0%**
20 Year Projected AADT	**2,198**

Red Plains Professional, Inc.

Start Date: 1/9/2019

Start Time: 2:00:00 PM

Site Code: 11

Intersection:

Trinidad Rancheria Hotel Traffic Impact Analysis

2019

Number	Date	Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	TOTALS
1	1/9/2019	02:00 PM	2	42	9	0	2	1	0	1	1	0	0	0	0	0	58
2	1/9/2019	03:00 PM	2	47	15	1	5	2	0	0	0	0	0	0	0	2	74
3	1/9/2019	04:00 PM	4	51	12	0	6	0	0	0	0	0	0	0	0	3	76
4	1/9/2019	05:00 PM	3	51	10	0	5	0	0	0	0	0	0	0	0	1	70
5	1/9/2019	06:00 PM	0	38	8	2	1	0	0	0	0	0	0	0	0	3	52
6	1/9/2019	07:00 PM	1	31	8	0	1	0	0	0	0	0	0	0	0	0	41
7	1/9/2019	08:00 PM	1	25	5	0	1	0	0	0	0	0	0	0	0	0	32
8	1/9/2019	09:00 PM	2	30	7	0	0	0	0	0	0	0	0	0	0	4	43
9	1/9/2019	10:00 PM	0	29	6	4	0	0	0	0	0	0	0	0	0	6	45
10	1/9/2019	11:00 PM	0	21	3	2	3	0	0	0	0	0	0	0	0	1	30
11	1/10/2019	12:00 AM	0	14	5	0	1	1	0	0	0	0	0	0	0	1	22
12	1/10/2019	01:00 AM	0	6	1	0	2	0	0	0	0	0	0	0	0	0	9
13	1/10/2019	02:00 AM	0	7	1	0	1	0	0	0	0	0	0	0	0	2	11
14	1/10/2019	03:00 AM	0	4	2	0	0	1	0	0	0	0	0	0	0	0	7
15	1/10/2019	04:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	3
16	1/10/2019	05:00 AM	0	2	4	0	0	0	0	0	0	0	0	0	0	0	6
17	1/10/2019	06:00 AM	0	10	7	1	0	0	0	0	0	0	0	0	0	0	18
18	1/10/2019	07:00 AM	0	15	6	2	0	0	0	0	0	0	0	0	0	0	23
19	1/10/2019	08:00 AM	1	26	6	0	1	0	0	0	0	0	0	0	0	2	36
20	1/10/2019	09:00 AM	1	11	7	1	1	0	0	2	0	0	0	0	0	2	25
21	1/10/2019	10:00 AM	1	20	6	0	5	0	0	0	0	0	0	0	0	1	33
22	1/10/2019	11:00 AM	1	34	11	0	2	2	0	0	0	0	0	0	0	3	53
23	1/10/2019	12:00 PM	0	21	14	2	5	2	0	0	1	0	0	0	0	5	50
24	1/10/2019	01:00 PM	2	28	17	0	0	0	0	0	0	0	0	0	0	0	47
TOTALS			**21**	**564**	**172**	**15**	**42**	**9**	**0**	**3**	**2**	**0**	**0**	**0**	**0**	**36**	
Percent Heavy Vehicles			8%														

Raw ADT	**864**
Seasonal Adjustment Factor	**1.19**
AADT	**1,028**
Annual Growth Rate	**2.0%**
20 Year Projected AADT	**1,527**

Red Plains Professional, Inc.

Start Date: 1/9/2019

Start Time: 3:00:00 PM

Site Code: 12

Intersection:

Trinidad Rancheria Hotel Traffic Impact Analysis
2019

Number	Date	Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	TOTALS
1	1/9/2019	03:00 PM	0	32	6	0	2	0	0	0	0	0	0	0	0	0	**40**
2	1/9/2019	04:00 PM	0	33	6	0	3	0	0	2	0	0	0	0	0	0	**44**
3	1/9/2019	05:00 PM	0	14	4	0	0	0	0	0	0	0	0	0	0	0	**18**
4	1/9/2019	06:00 PM	0	6	4	0	1	0	0	0	0	0	0	0	0	0	**11**
5	1/9/2019	07:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	**2**
6	1/9/2019	08:00 PM	0	3	1	0	0	0	0	0	0	0	0	0	0	0	**4**
7	1/9/2019	09:00 PM	0	7	0	0	0	0	0	0	0	0	0	0	0	0	**7**
8	1/9/2019	10:00 PM	0	5	4	0	0	0	0	0	0	0	0	0	0	0	**9**
9	1/9/2019	11:00 PM	0	3	0	0	1	0	0	0	0	0	0	0	0	0	**4**
10	1/10/2019	12:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	0	**6**
11	1/10/2019	01:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	**2**
12	1/10/2019	02:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
13	1/10/2019	03:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
14	1/10/2019	04:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	0	**5**
15	1/10/2019	05:00 AM	0	3	2	0	0	0	0	0	0	0	0	0	0	0	**5**
16	1/10/2019	06:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	**2**
17	1/10/2019	07:00 AM	0	4	2	0	1	0	0	0	0	0	0	0	0	0	**7**
18	1/10/2019	08:00 AM	0	18	6	0	0	0	0	0	0	0	0	0	0	0	**24**
19	1/10/2019	09:00 AM	0	16	3	0	0	0	0	0	0	0	0	0	0	0	**19**
20	1/10/2019	10:00 AM	1	20	5	0	1	0	0	1	0	0	0	0	0	0	**28**
21	1/10/2019	11:00 AM	0	15	4	0	3	0	0	1	0	0	0	0	0	0	**23**
22	1/10/2019	12:00 PM	0	22	10	0	2	0	0	0	0	0	0	0	0	0	**34**
23	1/10/2019	01:00 PM	0	25	10	0	1	0	0	1	0	0	0	0	0	0	**37**
24	1/10/2020	01:00 PM	1	28	15	0	2	0	0	2	0	0	0	0	0	0	**48**
TOTALS			**2**	**269**	**85**	**0**	**17**	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	
Percent Heavy Vehicles			6%														

Raw ADT	**380**
Seasonal Adjustment Factor	**1.19**
AADT	**452**
Annual Growth Rate	**2.0%**
20 Year Projected AADT	**672**

Red Plains Professional, Inc.

Start Date: 1/9/2019

Start Time: 4:00:00 PM

Site Code: 13

Intersection:

Trinidad Rancheria Hotel Traffic Impact Analysis

2019

Number	Date	Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	TOTALS
1	1/9/2019	04:00 PM	0	64	17	0	4	0	0	0	0	0	0	0	0	0	85
2	1/9/2019	05:00 PM	0	56	13	1	4	0	0	1	0	0	0	0	0	0	75
3	1/9/2019	06:00 PM	0	39	17	0	3	0	0	0	0	0	0	0	0	0	59
4	1/9/2019	07:00 PM	0	31	10	1	2	0	0	0	0	0	0	0	0	0	44
5	1/9/2019	08:00 PM	0	21	4	0	0	0	0	0	0	0	0	0	0	0	25
6	1/9/2019	09:00 PM	0	17	3	0	0	0	0	0	0	0	0	0	0	0	20
7	1/9/2019	10:00 PM	0	8	4	0	0	0	0	0	0	0	0	0	0	0	12
8	1/9/2019	11:00 PM	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
9	1/10/2019	12:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
10	1/10/2019	01:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
11	1/10/2019	02:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	0	4
12	1/10/2019	03:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
13	1/10/2019	04:00 AM	0	2	1	0	1	0	0	0	0	0	0	0	0	0	4
14	1/10/2019	05:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
15	1/10/2019	06:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
16	1/10/2019	07:00 AM	0	6	3	0	3	0	0	1	0	0	0	0	0	0	13
17	1/10/2019	08:00 AM	0	16	14	1	7	0	0	1	0	0	0	0	0	0	39
18	1/10/2019	09:00 AM	0	33	16	1	1	0	0	0	0	0	0	0	0	0	51
19	1/10/2019	10:00 AM	0	26	8	0	5	0	0	0	0	0	0	0	0	0	39
20	1/10/2019	11:00 AM	0	42	8	0	1	0	0	0	0	0	0	0	0	1	52
21	1/10/2019	12:00 PM	0	44	12	1	3	0	0	0	0	0	0	0	0	1	61
22	1/10/2019	01:00 PM	0	46	15	0	1	0	0	0	0	0	0	0	0	0	62
23	1/10/2019	02:00 PM	0	58	9	1	3	0	0	0	0	0	0	0	0	0	71
24	1/10/2020	02:00 PM	0	62	13	1	4	0	0	0	0	0	0	0	0	0	80
TOTALS			**0**	**586**	**171**	**7**	**42**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**2**	
Percent Heavy Vehicles			6%														

Raw ADT	**811**
Seasonal Adjustment Factor	**1.19**
AADT	**965**
Annual Growth Rate	**2.0%**
20 Year Projected AADT	**1,433**

Red Plains Professional, Inc.

Start Date: 1/9/2019

Start Time: 4:00:00 PM

Site Code: 14

Intersection:

Trinidad Rancheria Hotel Traffic Impact Analysis
2019

Number	Date	Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	TOTALS
1	1/9/2019	04:00 PM	0	36	6	0	1	0	0	0	0	0	0	0	0	0	43
2	1/9/2019	05:00 PM	0	42	9	0	3	0	0	0	0	0	0	0	0	0	54
3	1/9/2019	06:00 PM	0	22	7	0	1	0	0	0	0	0	0	0	0	0	30
4	1/9/2019	07:00 PM	0	16	1	1	0	0	0	0	0	0	0	0	0	0	18
5	1/9/2019	08:00 PM	0	4	0	1	0	0	0	0	0	0	0	0	0	0	5
6	1/9/2019	09:00 PM	0	13	2	0	1	0	0	0	0	0	0	0	0	0	16
7	1/9/2019	10:00 PM	0	13	2	0	0	0	0	0	0	0	0	0	0	0	15
8	1/9/2019	11:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
9	1/10/2019	12:00 AM	0	3	2	0	1	0	0	0	0	0	0	0	0	0	6
10	1/10/2019	01:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
11	1/10/2019	02:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
12	1/10/2019	03:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	1/10/2019	04:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
14	1/10/2019	05:00 AM	0	4	2	0	0	0	0	0	0	0	0	0	0	0	6
15	1/10/2019	06:00 AM	0	14	2	1	1	0	0	0	0	0	0	0	0	0	18
16	1/10/2019	07:00 AM	0	43	10	1	4	0	0	0	0	0	0	0	0	0	58
17	1/10/2019	08:00 AM	0	62	13	0	2	1	0	1	0	0	0	0	0	1	80
18	1/10/2019	09:00 AM	0	46	8	2	6	0	0	0	0	0	0	0	0	0	62
19	1/10/2019	10:00 AM	0	37	9	0	4	0	0	0	0	0	0	0	0	0	50
20	1/10/2019	11:00 AM	0	50	11	0	3	0	0	0	0	0	0	0	0	0	64
21	1/10/2019	12:00 PM	0	39	14	1	5	0	0	0	0	0	0	0	0	0	59
22	1/10/2019	01:00 PM	0	43	17	0	2	0	0	1	0	0	0	0	0	0	63
23	1/10/2019	02:00 PM	0	50	16	0	2	0	0	1	0	0	0	0	0	0	69
24	1/10/2020	02:00 PM	0	46	12	0	1	0	0	0	0	0	0	0	0	0	59
TOTALS			**0**	**587**	**145**	**7**	**38**	**1**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**1**	
Percent Heavy Vehicles			6%														

Raw ADT	**782**
Seasonal Adjustment Factor	**1.19**
AADT	**931**
Annual Growth Rate	**2.0%**
20 Year Projected AADT	**1,382**

APPENDIX B

TURNING MOVEMENT COUNT RECORDS AND ANALYSIS

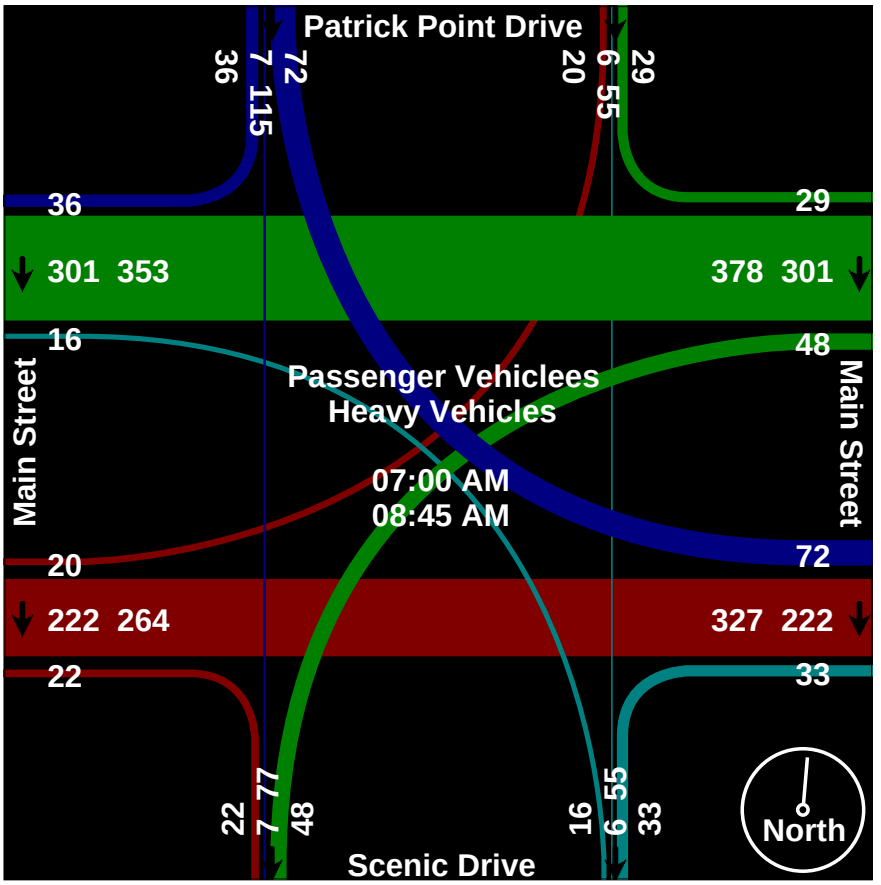


Prepared by:

RED PLAINS
PROFESSIONAL, INC.

ELROD ENGINEERING

File Name : Site 1 AM
Site Code : 00000001
Start Date : 1/8/2019
Page No : 1



HCS+: Unsignalized Intersections Release 5.5

TWO-WAY STOP CONTROL SUMMARY

Analyst: Chris Robideau
Agency/Co.: Red Plains Professional, Inc.
Date Performed: 2/6/2019
Analysis Time Period: AM Peak Hour
Intersection: Site #1
Jurisdiction: Trinidad Rancheria
Units: U. S. Customary
Analysis Year: 2019
Project ID: Trinidad Hotel TIA
East/West Street: Main Street
North/South Street: Patrick Point / Scenic Drive
Intersection Orientation: EW Study period (hrs): 2.00

Vehicle Volumes and Adjustments

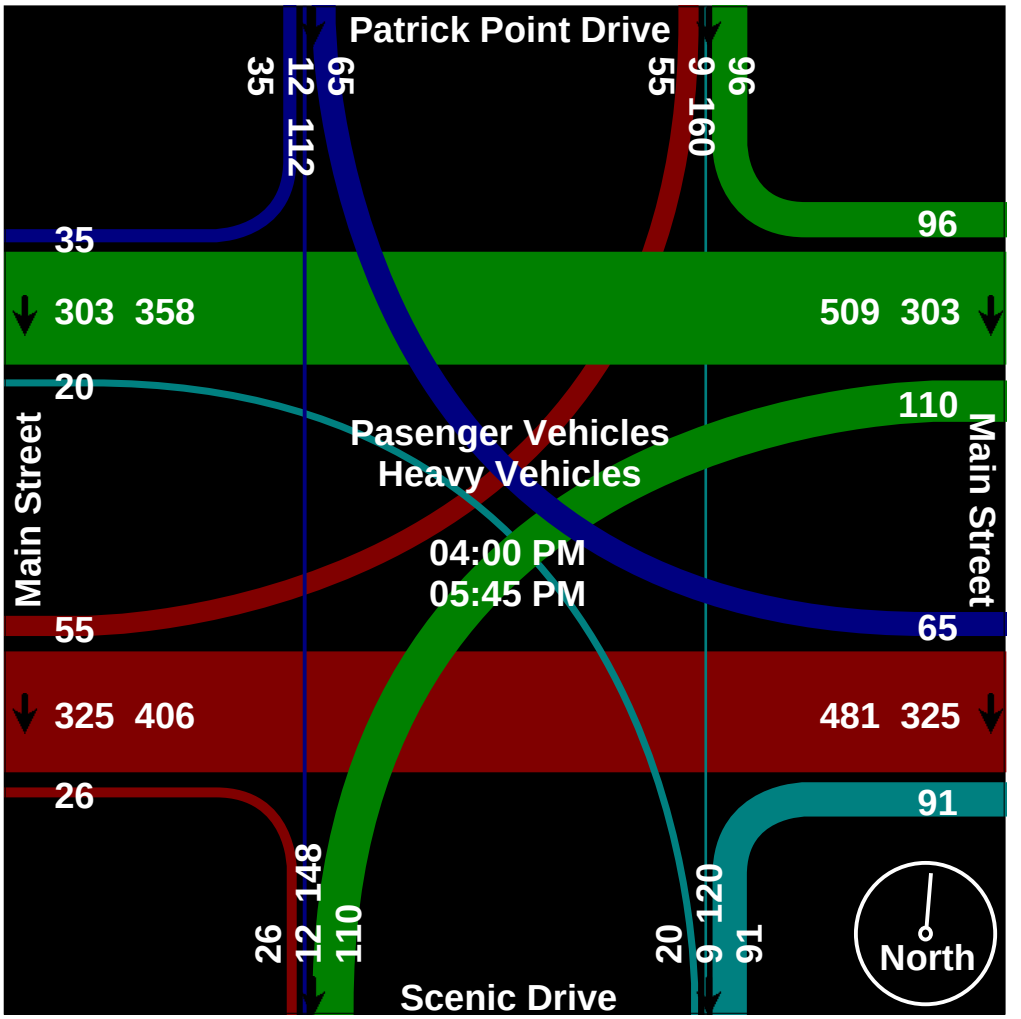
Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	20	222	22	48	301	29
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	20	222	22	48	301	29
Percent Heavy Vehicles	10	--	--	0	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	16	55	33	0	7	36
Peak Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	16	55	33	0	7	36
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No /			No /	
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR		LTR			LTR	
v (vph)	20	48		104			43	
C(m) (vph)	1186	1334		413			617	
v/c	0.02	0.04		0.25			0.07	
95% queue length	0.05	0.11		1.01			0.22	
Control Delay	8.1	7.8		16.6			11.3	
LOS	A	A		C			B	
Approach Delay				16.6			11.3	
Approach LOS				C			B	

File Name : Site 1 PM
Site Code : 00000001
Start Date : 1/8/2019
Page No : 1



HCS+: Unsignalized Intersections Release 5.5

TWO-WAY STOP CONTROL SUMMARY

Analyst:	Chris Robideau
Agency/Co.:	Red Plains Professional, Inc.
Date Performed:	2/6/2019
Analysis Time Period:	PM Peak Hour
Intersection:	Site #1
Jurisdiction:	Trinidad Rancheria
Units: U. S. Customary	
Analysis Year:	2019
Project ID: Trinidad Hotel TIA	
East/West Street:	Main Street
North/South Street:	Patrick Point / Scenic Drive
Intersection Orientation: EW	Study period (hrs): 2.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	55	325	26	110	303	96
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	55	325	26	110	303	96
Percent Heavy Vehicles	10	--	--	0	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration	LTR			LTR		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	20	9	91	65	12	35
Peak Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	20	9	91	65	12	35
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No /			No /	
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR		LTR			LTR	
v (vph)	55	110		120			112	
C(m) (vph)	1118	1219		402			201	
v/c	0.05	0.09		0.30			0.56	
95% queue length	0.16	0.30		1.27			3.63	
Control Delay	8.4	8.2		17.8			45.1	
LOS	A	A		C			E	
Approach Delay				17.8			45.1	
Approach LOS				C			E	

HCS+: Unsignalized Intersections Release 5.5

TWO-WAY STOP CONTROL SUMMARY

Analyst: Chris Robideau
Agency/Co.: Red Plains Professional, Inc.
Date Performed: 2/6/2019
Analysis Time Period: PM Peak Hour
Intersection: Site #1
Jurisdiction: Trinidad Rancheria
Units: U. S. Customary
Analysis Year: 2019 w/Development
Project ID: Trinidad Hotel TIA
East/West Street: Main Street
North/South Street: Patrick Point / Scenic Drive
Intersection Orientation: EW Study period (hrs): 2.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	55	325	32	134	303	96
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	55	325	32	134	303	96
Percent Heavy Vehicles	10	--	--	0	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	24	11	111	65	15	35
Peak Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	24	11	111	65	15	35
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No /			No /	
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR		LTR			LTR	
v (vph)	55	134		146			115	
C(m) (vph)	1118	1213		377			174	
v/c	0.05	0.11		0.39			0.66	
95% queue length	0.16	0.37		1.88			5.36	
Control Delay	8.4	8.3		20.6			64.8	
LOS	A	A		C			F	
Approach Delay				20.6			64.8	
Approach LOS				C			F	

HCS+: Unsignalized Intersections Release 5.5

TWO-WAY STOP CONTROL SUMMARY

Analyst: Chris Robideau
Agency/Co.: Red Plains Professional, Inc.
Date Performed: 2/6/2019
Analysis Time Period: PM Peak Hour
Intersection: Site #1
Jurisdiction: Trinidad Rancheria
Units: U. S. Customary
Analysis Year: 2039
Project ID: Trinidad Hotel TIA
East/West Street: Main Street
North/South Street: Patrick Point / Scenic Drive
Intersection Orientation: EW Study period (hrs): 2.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	82	483	39	163	450	143
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	82	483	39	163	450	143
Percent Heavy Vehicles	10	--	--	0	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	30	13	135	97	18	52
Peak Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	30	13	135	97	18	52
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No /			No /	
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR		LTR			LTR	
v (vph)	82	163		178			167	
C(m) (vph)	945	1055		182			65	
v/c	0.09	0.15		0.98			2.57	
95% queue length	0.28	0.55		21.19			106.70	
Control Delay	9.2	9.0		252.1			5799	
LOS	A	A		F			F	
Approach Delay				252.1			5799	
Approach LOS				F			F	

HCS+: Unsignalized Intersections Release 5.5

TWO-WAY STOP CONTROL SUMMARY

Analyst: Chris Robideau
Agency/Co.: Red Plains Professional, Inc.
Date Performed: 2/6/2019
Analysis Time Period: PM Peak Hour
Intersection: Site #1
Jurisdiction: Trinidad Rancheria
Units: U. S. Customary
Analysis Year: 2039 w/ Development
Project ID: Trinidad Hotel TIA
East/West Street: Main Street
North/South Street: Patrick Point / Scenic Drive
Intersection Orientation: EW Study period (hrs): 2.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	82	483	45	187	450	143
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	82	483	45	187	450	143
Percent Heavy Vehicles	10	--	--	0	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration	LTR			LTR		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	34	15	155	97	21	52
Peak Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	34	15	155	97	21	52
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No /			No /	
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR		LTR			LTR	
v (vph)	82	187		204			170	
C(m) (vph)	945	1049		158			54	
v/c	0.09	0.18		1.29			3.15	
95% queue length	0.28	0.65		56.78			120.24	
Control Delay	9.2	9.2		1169			7901	
LOS	A	A		F			F	
Approach Delay				1169			7901	
Approach LOS				F			F	

Phone: Fax:
E-Mail:

ALL-WAY STOP CONTROL(AWSC) ANALYSIS

Analyst: Chris Robideau
Agency/Co.: Red Plains Professional, Inc.
Date Performed: 2/7/2019
Analysis Time Period: PM Peak Hours
Intersection: Site #1
Jurisdiction: Trinidad Rancheria
Units: U. S. Customary
Analysis Year: 2019
Project ID: Trindad Rancheria Hotel TIA
East/West Street: Main Street
North/South Street: Patrick Point / Scenic Drive

Worksheet 2 - Volume Adjustments and Site Characteristics

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	55	325	26	110	303	96	20	9	91	65	12	35
% Thrus Left Lane												

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LTR		LTR	
PHF	1.00		1.00		1.00		1.00	
Flow Rate	406		509		120		112	
% Heavy Veh	0		0		0		0	
No. Lanes	1		1		1		1	
Opposing-Lanes	1		1		1		1	
Conflicting-lanes	1		1		1		1	
Geometry group	1		1		1		1	

Duration, T 2.00 hrs.

Worksheet 3 - Saturation Headway Adjustment Worksheet

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rates:								
Total in Lane	406		509		120		112	
Left-Turn	55		110		20		65	
Right-Turn	26		96		91		35	
Prop. Left-Turns	0.1		0.2		0.2		0.6	
Prop. Right-Turns	0.1		0.2		0.8		0.3	
Prop. Heavy Vehicle	0.0		0.0		0.0		0.0	
Geometry Group	1		1		1		1	
Adjustments Exhibit 17-33:								
hLT-adj	0.2		0.2		0.2		0.2	

hRT-adj	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7
hadj, computed	-0.0	-0.1	-0.4	-0.1

Worksheet 4 - Departure Headway and Service Time

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow rate	406		509		120		112	
hd, initial value	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.36		0.45		0.11		0.10	
hd, final value	5.43		5.24		6.17		6.54	
x, final value	0.61		0.74		0.21		0.20	
Move-up time, m	2.0		2.0		2.0		2.0	
Service Time	3.4		3.2		4.2		4.5	

Worksheet 5 - Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rate	406		509		120		112	
Service Time	3.4		3.2		4.2		4.5	
Utilization, x	0.61		0.74		0.21		0.20	
Dep. headway, hd	5.43		5.24		6.17		6.54	
Capacity	639		672		370		362	
Delay	16.96		22.95		10.77		11.20	
LOS	C		C		B		B	
Approach:								
Delay	16.96		22.95		10.77		11.20	
LOS	C		C		B		B	

Intersection Delay 18.41 Intersection LOS C

Phone: Fax:
E-Mail:

ALL-WAY STOP CONTROL(AWSC) ANALYSIS

Analyst: Chris Robideau
Agency/Co.: Red Plains Professional, Inc.
Date Performed: 2/7/2019
Analysis Time Period: PM Peak Hours
Intersection: Site #1
Jurisdiction: Trinidad Rancheria
Units: U. S. Customary
Analysis Year: 2019 w/Development
Project ID: Trindad Rancheria Hotel TIA
East/West Street: Main Street
North/South Street: Patrick Point / Scenic Drive

Worksheet 2 - Volume Adjustments and Site Characteristics

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	55	325	32	134	303	96	24	11	111	65	15	35
% Thrus Left Lane												

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LTR		LTR	
PHF	1.00		1.00		1.00		1.00	
Flow Rate	412		533		146		115	
% Heavy Veh	0		0		0		0	
No. Lanes	1		1		1		1	
Opposing-Lanes	1		1		1		1	
Conflicting-lanes	1		1		1		1	
Geometry group	1		1		1		1	

Duration, T 2.00 hrs.

Worksheet 3 - Saturation Headway Adjustment Worksheet

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rates:								
Total in Lane	412		533		146		115	
Left-Turn	55		134		24		65	
Right-Turn	32		96		111		35	
Prop. Left-Turns	0.1		0.3		0.2		0.6	
Prop. Right-Turns	0.1		0.2		0.8		0.3	
Prop. Heavy Vehicle	0.0		0.0		0.0		0.0	
Geometry Group	1		1		1		1	
Adjustments Exhibit 17-33:								
hLT-adj	0.2		0.2		0.2		0.2	

hRT-adj	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7
hadj, computed	-0.0	-0.1	-0.4	-0.1

Worksheet 4 - Departure Headway and Service Time

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow rate	412		533		146		115	
hd, initial value	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.37		0.47		0.13		0.10	
hd, final value	5.64		5.43		6.36		6.81	
x, final value	0.65		0.80		0.26		0.22	
Move-up time, m	2.0		2.0		2.0		2.0	
Service Time	3.6		3.4		4.4		4.8	

Worksheet 5 - Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rate	412		533		146		115	
Service Time	3.6		3.4		4.4		4.8	
Utilization, x	0.65		0.80		0.26		0.22	
Dep. headway, hd	5.64		5.43		6.36		6.81	
Capacity	614		650		396		365	
Delay	18.85		30.08		11.58		11.70	
LOS	C		D		B		B	
Approach:								
Delay	18.85		30.08		11.58		11.70	
LOS	C		D		B		B	
Intersection Delay	22.25		Intersection LOS		C			

Phone: Fax:
E-Mail:

ALL-WAY STOP CONTROL(AWSC) ANALYSIS

Analyst: Chris Robideau
Agency/Co.: Red Plains Professional, Inc.
Date Performed: 2/7/2019
Analysis Time Period: PM Peak Hours
Intersection: Site #1
Jurisdiction: Trinidad Rancheria
Units: U. S. Customary
Analysis Year: 2039
Project ID: Trindad Rancheria Hotel TIA0
East/West Street: Main Street
North/South Street: Patrick Point / Scenic Drive

Worksheet 2 - Volume Adjustments and Site Characteristics

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	82	483	39	163	450	143	30	13	135	97	18	52
% Thrus Left Lane												

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LTR		LTR	
PHF	1.00		1.00		1.00		1.00	
Flow Rate	604		756		178		167	
% Heavy Veh	0		0		0		0	
No. Lanes	1		1		1		1	
Opposing-Lanes	1		1		1		1	
Conflicting-lanes	1		1		1		1	
Geometry group	1		1		1		1	

Duration, T 2.00 hrs.

Worksheet 3 - Saturation Headway Adjustment Worksheet

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rates:								
Total in Lane	604		756		178		167	
Left-Turn	82		163		30		97	
Right-Turn	39		143		135		52	
Prop. Left-Turns	0.1		0.2		0.2		0.6	
Prop. Right-Turns	0.1		0.2		0.8		0.3	
Prop. Heavy Vehicle	0.0		0.0		0.0		0.0	
Geometry Group	1		1		1		1	
Adjustments Exhibit 17-33:								
hLT-adj	0.2		0.2		0.2		0.2	

hRT-adj	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7
hadj, computed	-0.0	-0.1	-0.4	-0.1

Worksheet 4 - Departure Headway and Service Time

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow rate	604		756		178		167	
hd, initial value	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.54		0.67		0.16		0.15	
hd, final value	6.56		6.50		7.69		8.07	
x, final value	1.10		1.37		0.38		0.37	
Move-up time, m	2.0		2.0		2.0		2.0	
Service Time	4.6		4.5		5.7		6.1	

Worksheet 5 - Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rate	604		756		178		167	
Service Time	4.6		4.5		5.7		6.1	
Utilization, x	1.10		1.37		0.38		0.37	
Dep. headway, hd	6.56		6.50		7.69		8.07	
Capacity	604		756		428		417	
Delay	434.64		1349		15.40		15.89	
LOS	F		F		C		C	
Approach:								
Delay	434.64		1349		15.40		15.89	
LOS	F		F		C		C	

Intersection Delay 755.36 Intersection LOS F

Phone: Fax:
E-Mail:

ALL-WAY STOP CONTROL(AWSC) ANALYSIS

Analyst: Chris Robideau
Agency/Co.: Red Plains Professional, Inc.
Date Performed: 2/7/2019
Analysis Time Period: PM Peak Hours
Intersection: Site #1
Jurisdiction: Trinidad Rancheria
Units: U. S. Customary
Analysis Year: 2039
Project ID: Trindad Rancheria Hotel TIA0
East/West Street: Main Street
North/South Street: Patrick Point / Scenic Drive

Worksheet 2 - Volume Adjustments and Site Characteristics

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	82	483	45	187	450	143	34	15	155	97	21	52
% Thrus Left Lane												

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LTR		LTR	
PHF	1.00		1.00		1.00		1.00	
Flow Rate	610		780		204		170	
% Heavy Veh	0		0		0		0	
No. Lanes	1		1		1		1	
Opposing-Lanes	1		1		1		1	
Conflicting-lanes	1		1		1		1	
Geometry group	1		1		1		1	

Duration, T 2.00 hrs.

Worksheet 3 - Saturation Headway Adjustment Worksheet

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rates:								
Total in Lane	610		780		204		170	
Left-Turn	82		187		34		97	
Right-Turn	45		143		155		52	
Prop. Left-Turns	0.1		0.2		0.2		0.6	
Prop. Right-Turns	0.1		0.2		0.8		0.3	
Prop. Heavy Vehicle	0.0		0.0		0.0		0.0	
Geometry Group	1		1		1		1	
Adjustments Exhibit 17-33:								
hLT-adj	0.2		0.2		0.2		0.2	

hRT-adj	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7
hadj, computed	-0.0	-0.1	-0.4	-0.1

Worksheet 4 - Departure Headway and Service Time

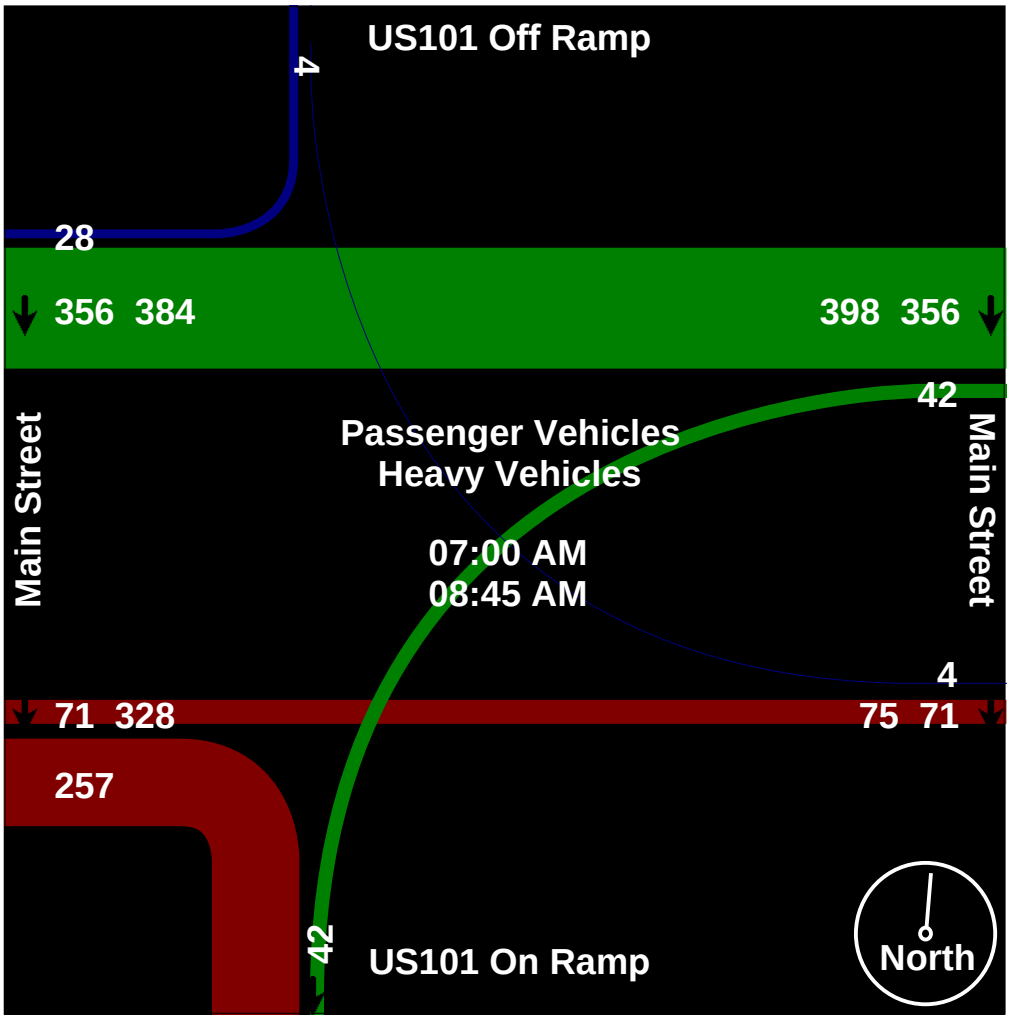
	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow rate	610		780		204		170	
hd, initial value	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.54		0.69		0.18		0.15	
hd, final value	6.74		6.69		7.73		8.23	
x, final value	1.14		1.45		0.44		0.39	
Move-up time, m	2.0		2.0		2.0		2.0	
Service Time	4.7		4.7		5.7		6.2	

Worksheet 5 - Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rate	610		780		204		170	
Service Time	4.7		4.7		5.7		6.2	
Utilization, x	1.14		1.45		0.44		0.39	
Dep. headway, hd	6.74		6.69		7.73		8.23	
Capacity	610		780		454		420	
Delay	568.73		1650		16.73		16.44	
LOS	F		F		C		C	
Approach:								
Delay	568.73		1650		16.73		16.44	
LOS	F		F		C		C	

Intersection Delay 929.74 Intersection LOS F

File Name : Site 2 AM
Site Code : 00000002
Start Date : 1/8/2019
Page No : 1



HCS+: Unsignalized Intersections Release 5.5

TWO-WAY STOP CONTROL SUMMARY

Analyst: Chris Robideau
Agency/Co.: Red Plains Professional, Inc.
Date Performed: 2/6/2019
Analysis Time Period: AM Peak Hour
Intersection: Site #2
Jurisdiction: Trinidad Rancheria
Units: U. S. Customary
Analysis Year: 2019
Project ID: Trinidad Hotel TIA
East/West Street: Main Street
North/South Street: US101 ON/OFF RAMPS
Intersection Orientation: EW Study period (hrs): 2.00

Vehicle Volumes and Adjustments

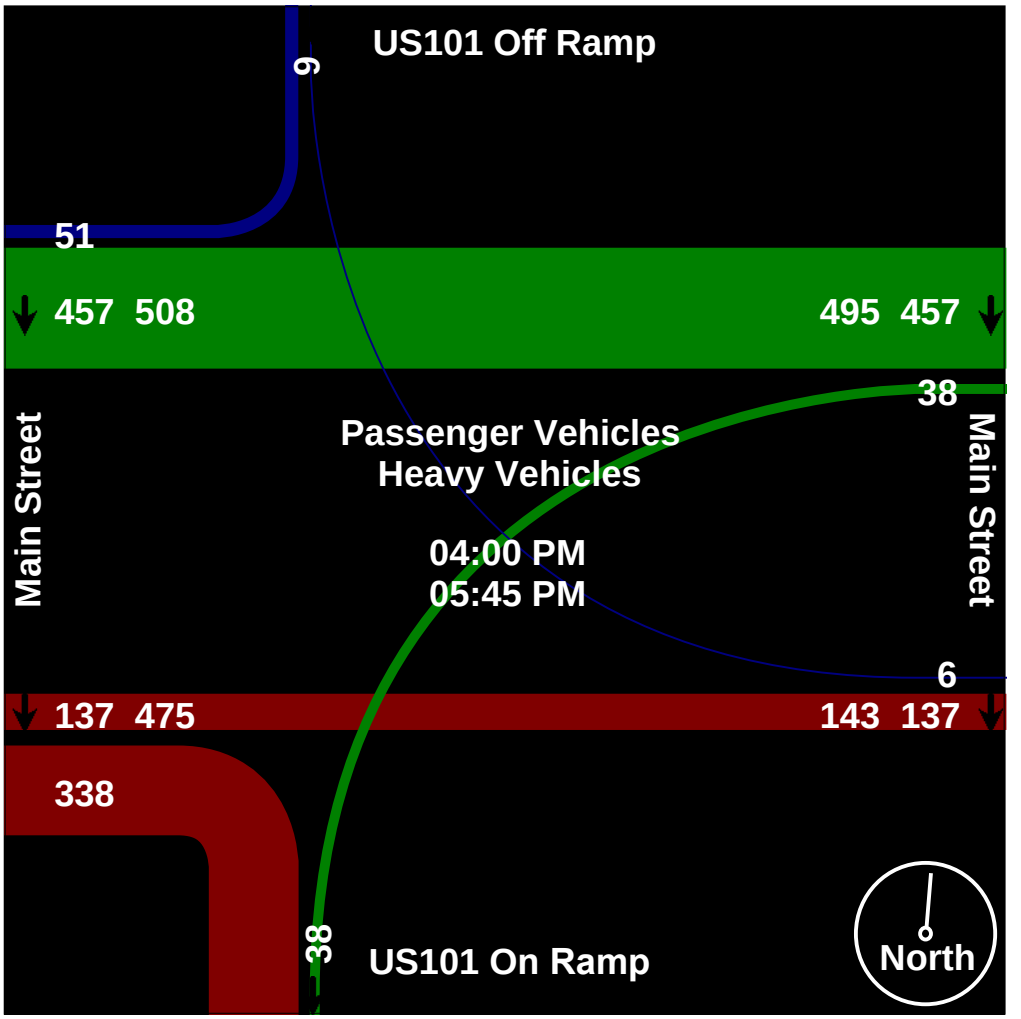
Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		71	257	42	356	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR		71	257	42	356	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		1 0		0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				4	0	28
Peak Hour Factor, PHF				1.00	1.00	1.00
Hourly Flow Rate, HFR				4	0	28
Percent Heavy Vehicles				0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/		No	/
Lanes				0	1 0	
Configuration					LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT					LTR	
v (vph)		42					32	
C(m) (vph)		1243					643	
v/c		0.03					0.05	
95% queue length		0.10					0.16	
Control Delay		8.0					10.9	
LOS		A					B	
Approach Delay							10.9	
Approach LOS							B	

File Name : Site 2 PM
Site Code : 00000002
Start Date : 1/8/2019
Page No : 1



HCS+: Unsignalized Intersections Release 5.5

TWO-WAY STOP CONTROL SUMMARY

Analyst: Chris Robideau
Agency/Co.: Red Plains Professional, Inc.
Date Performed: 2/6/2019
Analysis Time Period: PM Peak Hour
Intersection: Site #2
Jurisdiction: Trinidad Rancheria
Units: U. S. Customary
Analysis Year: 2019
Project ID: Trinidad Hotel TIA
East/West Street: Main Street
North/South Street: US101 ON/OFF RAMPS
Intersection Orientation: EW Study period (hrs): 2.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		137	338	38	457	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR		137	338	38	457	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes		1	0	0	1	
Configuration			TR		LT	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				6	0	51
Peak Hour Factor, PHF				1.00	1.00	1.00
Hourly Flow Rate, HFR				6	0	51
Percent Heavy Vehicles				0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/		No	/
Lanes				0	1	0
Configuration					LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT					LTR	
v (vph)		38					57	
C(m) (vph)		1098					558	
v/c		0.03					0.10	
95% queue length		0.11					0.34	
Control Delay		8.4					12.2	
LOS		A					B	
Approach Delay							12.2	
Approach LOS							B	

HCS+: Unsignalized Intersections Release 5.5

TWO-WAY STOP CONTROL SUMMARY

Analyst: Chris Robideau
Agency/Co.: Red Plains Professional, Inc.
Date Performed: 2/6/2019
Analysis Time Period: PM Peak Hour
Intersection: Site #2
Jurisdiction: Trinidad Rancheria
Units: U. S. Customary
Analysis Year: 2019 w/Development
Project ID: Trinidad Hotel TIA
East/West Street: Main Street
North/South Street: US101 ON/OFF RAMPS
Intersection Orientation: EW Study period (hrs): 2.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		143	353	38	477	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR		143	353	38	477	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes		1 0		0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				6	0	53
Peak Hour Factor, PHF				1.00	1.00	1.00
Hourly Flow Rate, HFR				6	0	53
Percent Heavy Vehicles				0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/		No	/
Lanes				0	1 0	
Configuration					LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT					LTR	
v (vph)		38					59	
C(m) (vph)		1078					542	
v/c		0.04					0.11	
95% queue length		0.11					0.37	
Control Delay		8.5					12.5	
LOS		A					B	
Approach Delay							12.5	
Approach LOS							B	

HCS+: Unsignalized Intersections Release 5.5

TWO-WAY STOP CONTROL SUMMARY

Analyst: Chris Robideau
Agency/Co.: Red Plains Professional, Inc.
Date Performed: 2/6/2019
Analysis Time Period: PM Peak Hour
Intersection: Site #2
Jurisdiction: Trinidad Rancheria
Units: U. S. Customary
Analysis Year: 2039
Project ID: Trinidad Hotel TIA
East/West Street: Main Street
North/South Street: US101 ON/OFF RAMPS
Intersection Orientation: EW Study period (hrs): 2.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		203	502	56	679	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR		203	502	56	679	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				9	0	76
Peak Hour Factor, PHF				1.00	1.00	1.00
Hourly Flow Rate, HFR				9	0	76
Percent Heavy Vehicles				0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/		No	/
Lanes				0	1	0
Configuration					LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT					LTR	
v (vph)		56					85	
C(m) (vph)		902					393	
v/c		0.06					0.22	
95% queue length		0.20					0.83	
Control Delay		9.3					16.7	
LOS		A					C	
Approach Delay							16.7	
Approach LOS							C	

HCS+: Unsignalized Intersections Release 5.5

TWO-WAY STOP CONTROL SUMMARY

Analyst: Chris Robideau
Agency/Co.: Red Plains Professional, Inc.
Date Performed: 2/6/2019
Analysis Time Period: PM Peak Hour
Intersection: Site #2
Jurisdiction: Trinidad Rancheria
Units: U. S. Customary
Analysis Year: 2039 w/Development
Project ID: Trinidad Hotel TIA
East/West Street: Main Street
North/South Street: US101 ON/OFF RAMPS
Intersection Orientation: EW Study period (hrs): 2.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		209	517	56	699	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR		209	517	56	699	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes		1	0	0	1	
Configuration			TR		LT	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				9	0	
Peak Hour Factor, PHF				1.00	1.00	1.00
Hourly Flow Rate, HFR				9	0	76
Percent Heavy Vehicles				0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0	1	0
Configuration					LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT					LTR	
v (vph)		56					85	
C(m) (vph)		886					380	
v/c		0.06					0.22	
95% queue length		0.20					0.86	
Control Delay		9.3					17.2	
LOS		A					C	
Approach Delay							17.2	
Approach LOS							C	

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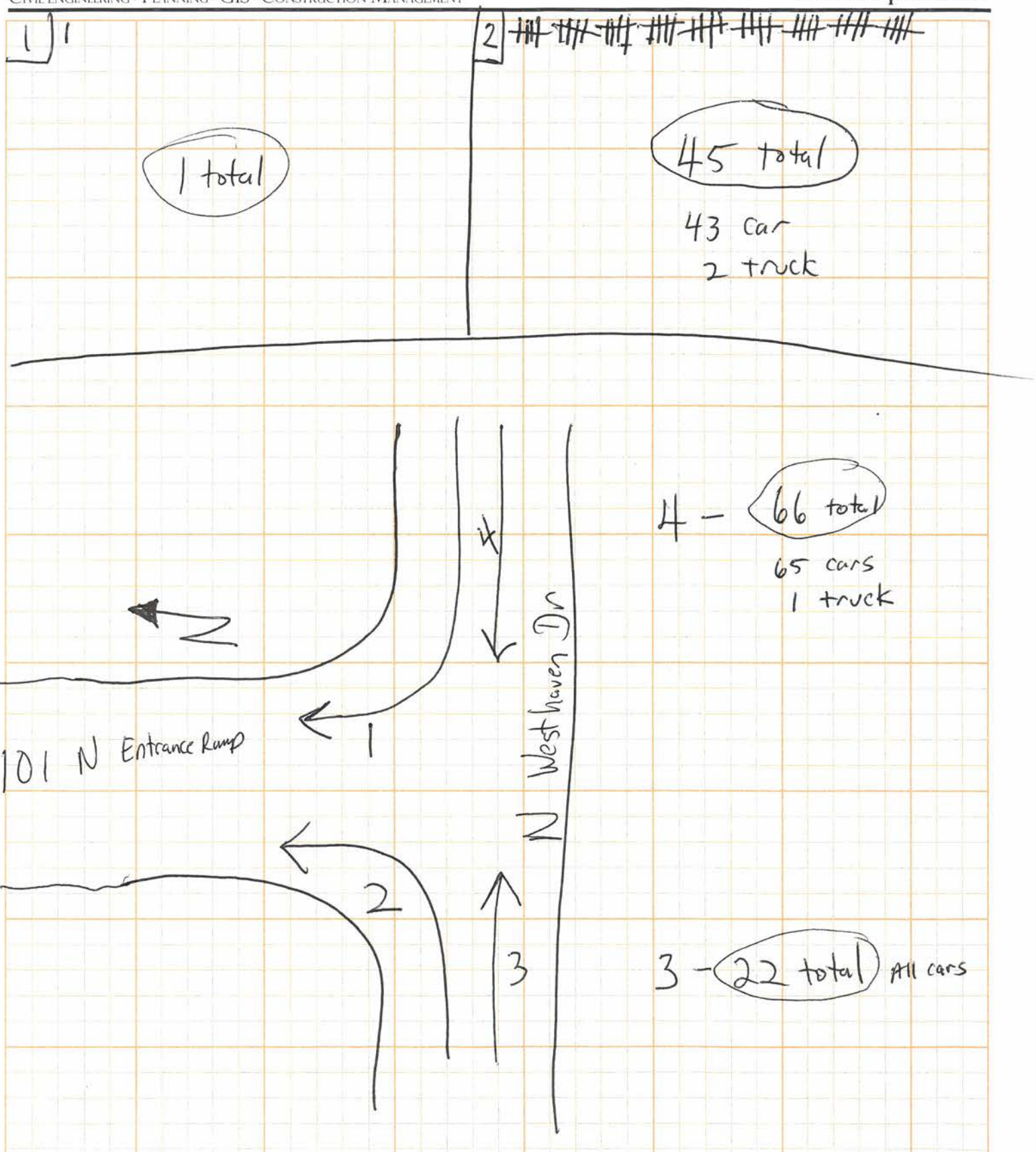
Trinidad TMC

Site 3 AM



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HCS+: Unsignalized Intersections Release 5.5

TWO-WAY STOP CONTROL SUMMARY

Analyst: Chris Robideau
Agency/Co.: Red Plains Professional, Inc.
Date Performed: 2/6/2019
Analysis Time Period: AM Peak Hour
Intersection:
Jurisdiction: Trinidad Rancheria
Units: U. S. Customary
Analysis Year: 2019
Project ID: Trinidad Hotel TIA
East/West Street: N. Westhaven Drive
North/South Street: US101 ON RAMP
Intersection Orientation: EW Study period (hrs): 2.00

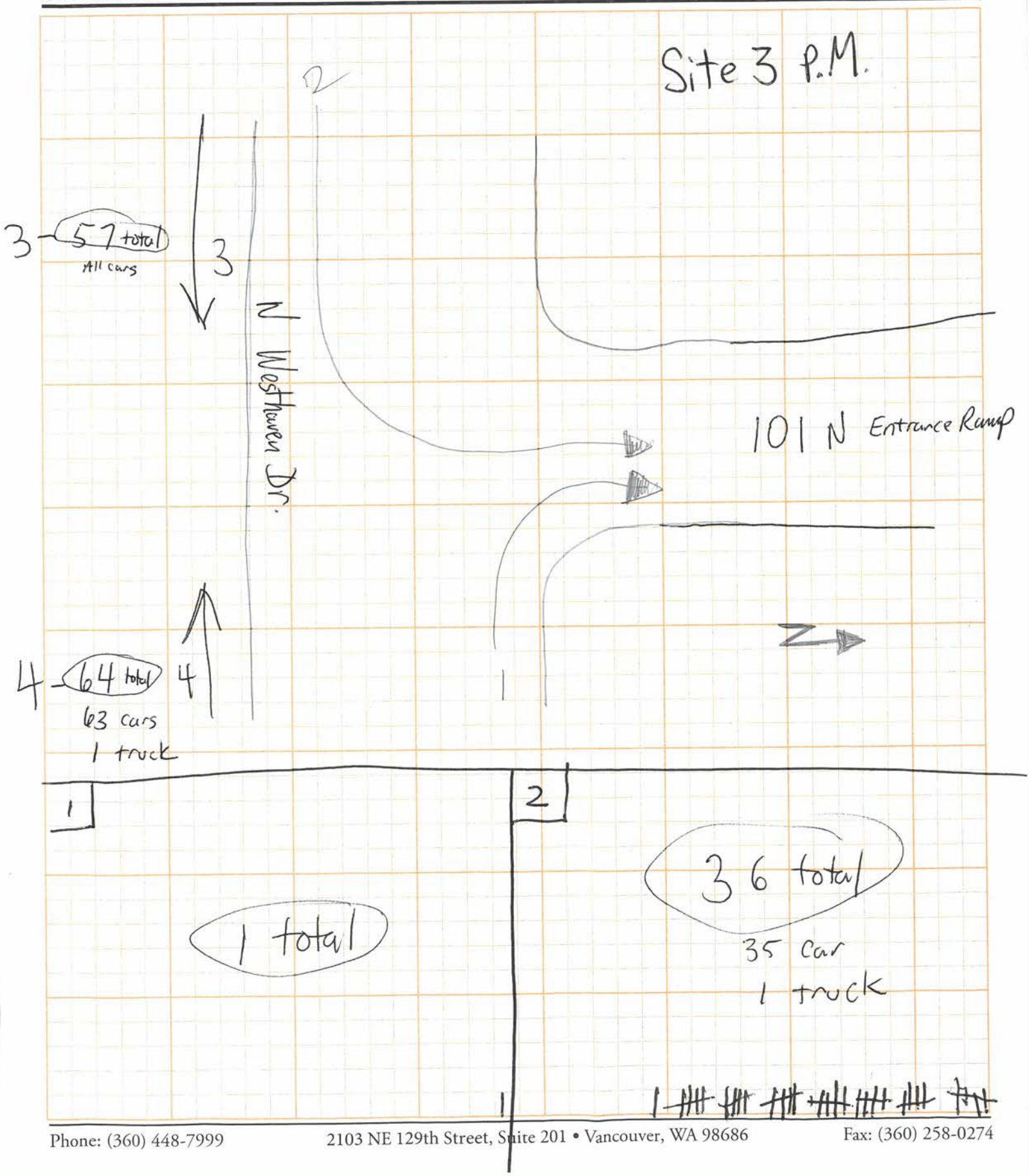
Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	45	22	0	0	66	1
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	45	22	0	0	66	1
Percent Heavy Vehicles	10	--	--	0	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration	LTR			LTR		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	0	0	0	0
Peak Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	0	0	0	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No /			No /	
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR	LTR			LTR		
v (vph)	45	0	0			0		
C(m) (vph)	1485	1607						
v/c	0.03	0.00						
95% queue length	0.09	0.00						
Control Delay	7.5	7.2						
LOS	A	A						
Approach Delay								
Approach LOS								


Site 3 P.M.
2
3
57 total
All cars
3
N Westhaven Dr.
101 N Entrance Ramp
4
64 total
63 cars
1 truck
4
1
1
2
1 total
36 total
35 car
1 truck
1

HCS+: Unsignalized Intersections Release 5.5

TWO-WAY STOP CONTROL SUMMARY

Analyst: Chris Robideau
Agency/Co.: Red Plains Professional, Inc.
Date Performed: 2/6/2019
Analysis Time Period: PM Peak Hour
Intersection: Site #3
Jurisdiction: Trinidad Rancheria
Units: U. S. Customary
Analysis Year: 2019
Project ID: Trinidad Hotel TIA
East/West Street: N. Westhaven Drive
North/South Street: US101 ON RAMP
Intersection Orientation: EW Study period (hrs): 2.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	36	57	0	0	64	1
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	36	57	0	0	64	1
Percent Heavy Vehicles	10	--	--	0	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	0	0	0	0
Peak Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	0	0	0	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No /			No /	
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR		LTR			LTR	
v (vph)	36	0		0			0	
C(m) (vph)	1488	1560						
v/c	0.02	0.00						
95% queue length	0.07	0.00						
Control Delay	7.5	7.3						
LOS	A	A						
Approach Delay								
Approach LOS								

HCS+: Unsignalized Intersections Release 5.5

TWO-WAY STOP CONTROL SUMMARY

Analyst: Chris Robideau
Agency/Co.: Red Plains Professional, Inc.
Date Performed: 2/6/2019
Analysis Time Period: PM Peak Hour
Intersection: Site #3
Jurisdiction: Trinidad Rancheria
Units: U. S. Customary
Analysis Year: 2019 w/Development
Project ID: Trinidad Hotel TIA
East/West Street: N. Westhaven Drive
North/South Street: US101 ON RAMP
Intersection Orientation: EW Study period (hrs): 2.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	67	0	0	75	1
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	0	67	0	0	75	1
Percent Heavy Vehicles	10	--	--	0	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration	LTR			LTR		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	0	0	0	0
Peak Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	0	0	0	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No /			No /	
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR		LTR			LTR	
v (vph)	0	0		0			0	
C(m) (vph)	1474	1547						
v/c	0.00	0.00						
95% queue length	0.00	0.00						
Control Delay	7.4	7.3						
LOS	A	A						
Approach Delay								
Approach LOS								

HCS+: Unsignalized Intersections Release 5.5

TWO-WAY STOP CONTROL SUMMARY

Analyst: Chris Robideau
Agency/Co.: Red Plains Professional, Inc.
Date Performed: 2/6/2019
Analysis Time Period: PM Peak Hour
Intersection: Site #3
Jurisdiction: Trinidad Rancheria
Units: U. S. Customary
Analysis Year: 2039
Project ID: Trinidad Hotel TIA
East/West Street: N. Westhaven Drive
North/South Street: US101 ON RAMP
Intersection Orientation: EW Study period (hrs): 2.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	85	0	0	95	1
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	0	85	0	0	95	1
Percent Heavy Vehicles	10	--	--	0	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	0	0	0	0
Peak Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	0	0	0	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No /			No /	
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR		LTR			LTR	
v (vph)	0	0		0			0	
C(m) (vph)	1449	1524						
v/c	0.00	0.00						
95% queue length	0.00	0.00						
Control Delay	7.5	7.4						
LOS	A	A						
Approach Delay								
Approach LOS								

HCS+: Unsignalized Intersections Release 5.5

TWO-WAY STOP CONTROL SUMMARY

Analyst: Chris Robideau
Agency/Co.: Red Plains Professional, Inc.
Date Performed: 2/6/2019
Analysis Time Period: PM Peak Hour
Intersection: Site #3
Jurisdiction: Trinidad Rancheria
Units: U. S. Customary
Analysis Year: 2039 w/Development
Project ID: Trinidad Hotel TIA
East/West Street: N. Westhaven Drive
North/South Street: US101 ON RAMP
Intersection Orientation: EW Study period (hrs): 2.00

Vehicle Volumes and Adjustments

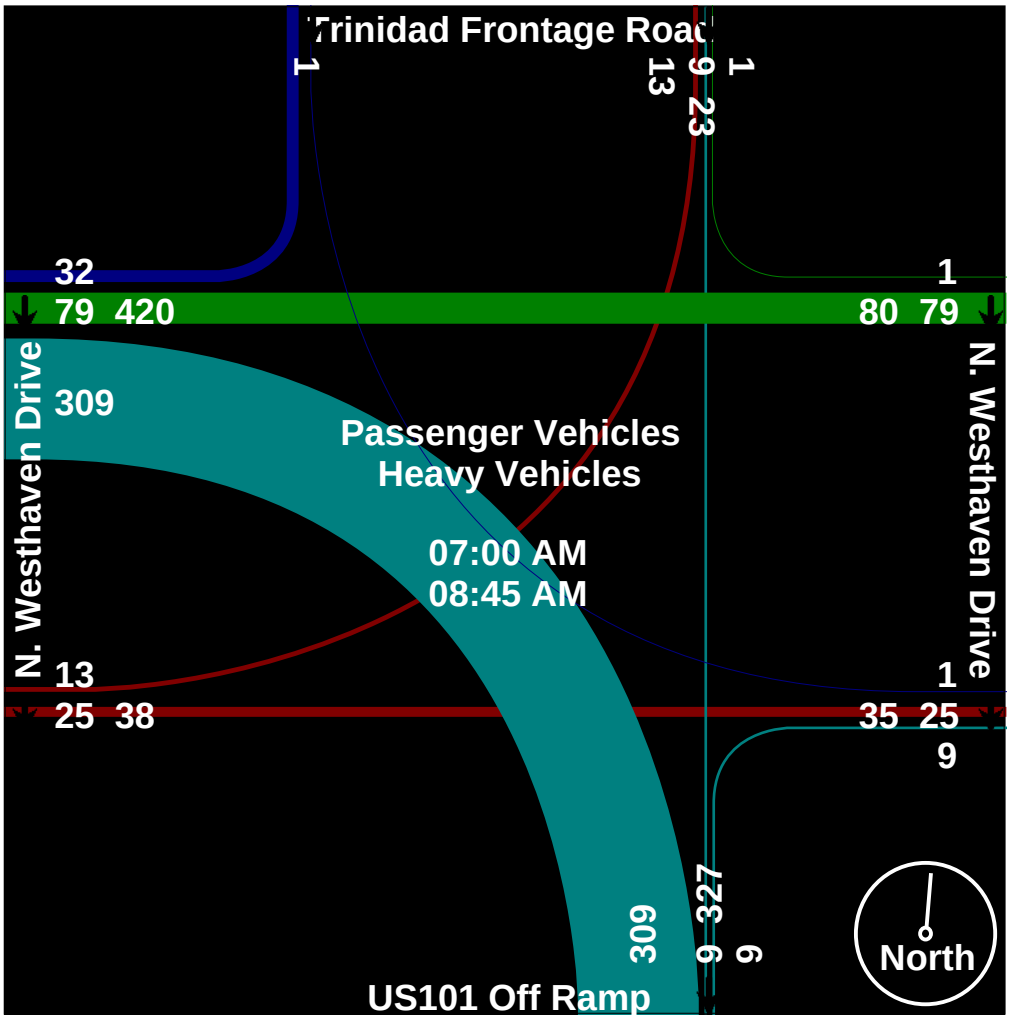
Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	59	95	0	0	106	1
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	59	95	0	0	106	1
Percent Heavy Vehicles	10	--	--	0	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	0	0	0	0
Peak Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	0	0	0	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No /			No /	
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR		LTR			LTR	
v (vph)	59	0		0			0	
C(m) (vph)	1435	1512						
v/c	0.04	0.00						
95% queue length	0.13	0.00						
Control Delay	7.6	7.4						
LOS	A	A						
Approach Delay								
Approach LOS								

File Name : Site 4 AM
Site Code : 00000004
Start Date : 1/10/2019
Page No : 1



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TWO-WAY STOP CONTROL SUMMARY

Analyst: Chris Robideau
Agency/Co.: Red Plains Professional, Inc.
Date Performed: 2/6/2019
Analysis Time Period: AM Peak Hour
Intersection: Site #4
Jurisdiction: Trinidad Rancheria
Units: U. S. Customary
Analysis Year: 2019
Project ID: Trinidad Hotel TIA
East/West Street: N. Westhaven Drive
North/South Street: Trinidad Frtg Rd/US101 ON RAMP
Intersection Orientation: EW Study period (hrs): 2.00

Vehicle Volumes and Adjustments

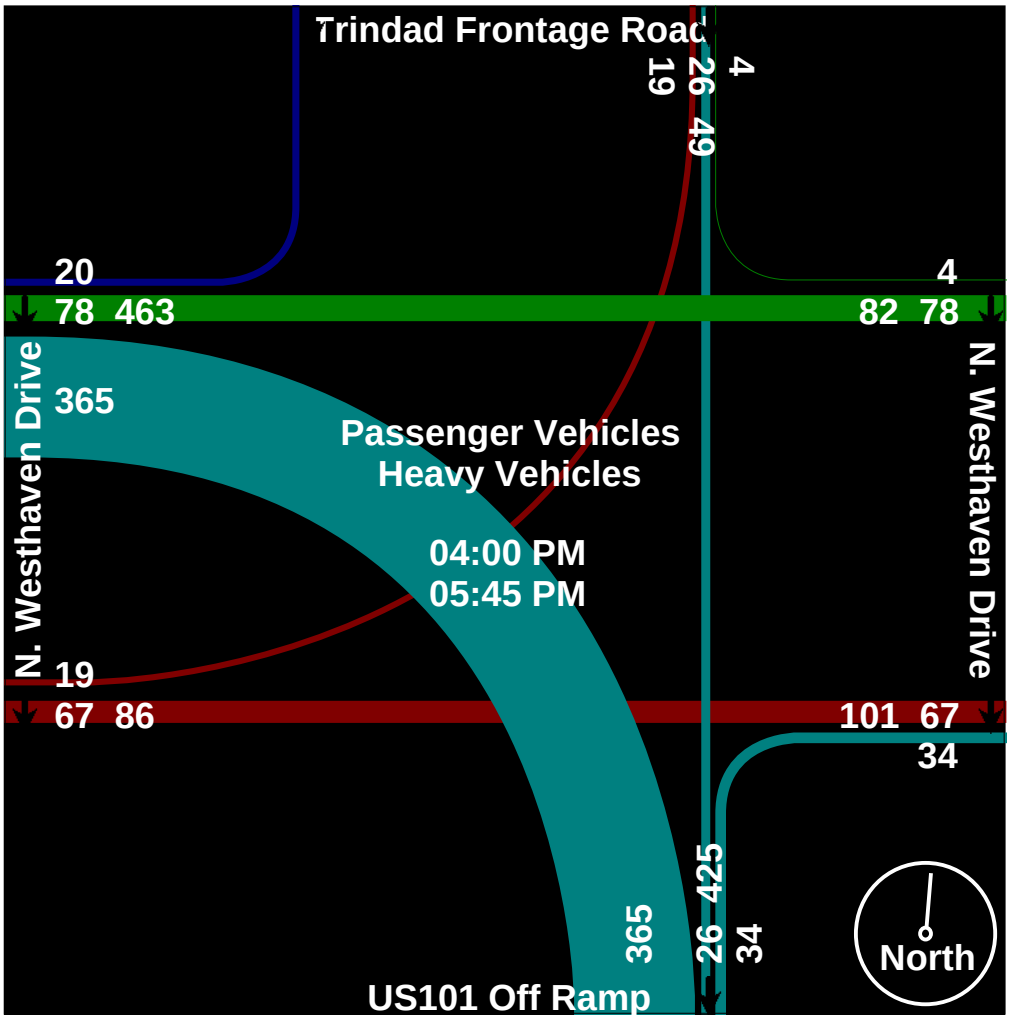
Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	13	25			79	1
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Hourly Flow Rate, HFR	13	25			79	1
Percent Heavy Vehicles	10	--	--		--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	309	9	9	32		1
Peak Hour Factor, PHF	1.00	1.00	1.00	1.00		1.00
Hourly Flow Rate, HFR	309	9	9	32		1
Percent Heavy Vehicles	0	0	0	0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No /				No /
Lanes	0	1	0	0		0
Configuration		LTR			LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT			LTR			LR	
v (vph)	13			327			33	
C(m) (vph)	1469			841			819	
v/c	0.01			0.39			0.04	
95% queue length	0.03			1.90			0.13	
Control Delay	7.5			12.0			9.6	
LOS	A			B			A	
Approach Delay				12.0			9.6	
Approach LOS				B			A	

File Name : Site 4 PM
Site Code : 00000004
Start Date : 1/9/2019
Page No : 1



HCS+: Unsignalized Intersections Release 5.5

TWO-WAY STOP CONTROL SUMMARY

Analyst: Chris Robideau
Agency/Co.: Red Plains Professional, Inc.
Date Performed: 2/6/2019
Analysis Time Period: PM Peak Hour
Intersection: Site #4
Jurisdiction: Trinidad Rancheria
Units: U. S. Customary
Analysis Year: 2019
Project ID: Trinidad Hotel TIA
East/West Street: N. Westhaven Drive
North/South Street: Trinidad Frtg Rd/US101 ON RAMP
Intersection Orientation: EW Study period (hrs): 2.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	19	67			78	4
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Hourly Flow Rate, HFR	19	67			78	4
Percent Heavy Vehicles	10	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	365	26	34	20		0
Peak Hour Factor, PHF	1.00	1.00	1.00	1.00		1.00
Hourly Flow Rate, HFR	365	26	34	20		0
Percent Heavy Vehicles	0	0	0	0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No	/			No /
Lanes	0	1	0	0		0
Configuration		LTR			LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT			LTR			LR	
v (vph)	19			425			20	
C(m) (vph)	1466			782			693	
v/c	0.01			0.54			0.03	
95% queue length	0.04			3.54			0.09	
Control Delay	7.5			15.1			10.3	
LOS	A			C			B	
Approach Delay				15.1			10.3	
Approach LOS				C			B	

HCS+: Unsignalized Intersections Release 5.5

TWO-WAY STOP CONTROL SUMMARY

Analyst: Chris Robideau
Agency/Co.: Red Plains Professional, Inc.
Date Performed: 2/6/2019
Analysis Time Period: PM Peak Hour
Intersection: Site #4
Jurisdiction: Trinidad Rancheria
Units: U. S. Customary
Analysis Year: 2019 w/Development
Project ID: Trinidad Hotel TIA
East/West Street: N. Westhaven Drive
North/South Street: Trinidad Frtg Rd/US101 ON RAMP
Intersection Orientation: EW Study period (hrs): 2.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	20	70			82	4
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Hourly Flow Rate, HFR	20	70			82	4
Percent Heavy Vehicles	10	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	383	26	34	21		0
Peak Hour Factor, PHF	1.00	1.00	1.00	1.00		1.00
Hourly Flow Rate, HFR	383	26	34	21		0
Percent Heavy Vehicles	0	0	0	0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No	/			No /
Lanes	0	1	0	0		0
Configuration		LTR			LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT			LTR			LR	
v (vph)	20			443			21	
C(m) (vph)	1461			771			683	
v/c	0.01			0.57			0.03	
95% queue length	0.04			4.00			0.10	
Control Delay	7.5			15.9			10.4	
LOS	A			C			B	
Approach Delay				15.9			10.4	
Approach LOS				C			B	

HCS+: Unsignalized Intersections Release 5.5

TWO-WAY STOP CONTROL SUMMARY

Analyst: Chris Robideau
Agency/Co.: Red Plains Professional, Inc.
Date Performed: 2/6/2019
Analysis Time Period: PM Peak Hour
Intersection: Site #4
Jurisdiction: Trinidad Rancheria
Units: U. S. Customary
Analysis Year: 2039
Project ID: Trinidad Hotel TIA
East/West Street: N. Westhaven Drive
North/South Street: Trinidad Frtg Rd/US101 ON RAMP
Intersection Orientation: EW Study period (hrs): 2.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	28	99			116	6
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Hourly Flow Rate, HFR	28	99			116	6
Percent Heavy Vehicles	10	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	542	39	50	30		0
Peak Hour Factor, PHF	1.00	1.00	1.00	1.00		1.00
Hourly Flow Rate, HFR	542	39	50	30		0
Percent Heavy Vehicles	0	0	0	0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No	/			No /
Lanes	0	1	0	0		0
Configuration		LTR			LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT			LTR			LR	
v (vph)	28			631			30	
C(m) (vph)	1417			685			567	
v/c	0.02			0.92			0.05	
95% queue length	0.06			24.21			0.17	
Control Delay	7.6			62.2			11.7	
LOS	A			F			B	
Approach Delay				62.2			11.7	
Approach LOS				F			B	

HCS+: Unsignalized Intersections Release 5.5

TWO-WAY STOP CONTROL SUMMARY

Analyst: Chris Robideau
Agency/Co.: Red Plains Professional, Inc.
Date Performed: 2/6/2019
Analysis Time Period: PM Peak Hour
Intersection: Site #4
Jurisdiction: Trinidad Rancheria
Units: U. S. Customary
Analysis Year: 2039 w/Development
Project ID: Trinidad Hotel TIA
East/West Street: N. Westhaven Drive
North/South Street: Trinidad Frtg Rd/US101 ON RAMP
Intersection Orientation: EW Study period (hrs): 2.00

Vehicle Volumes and Adjustments

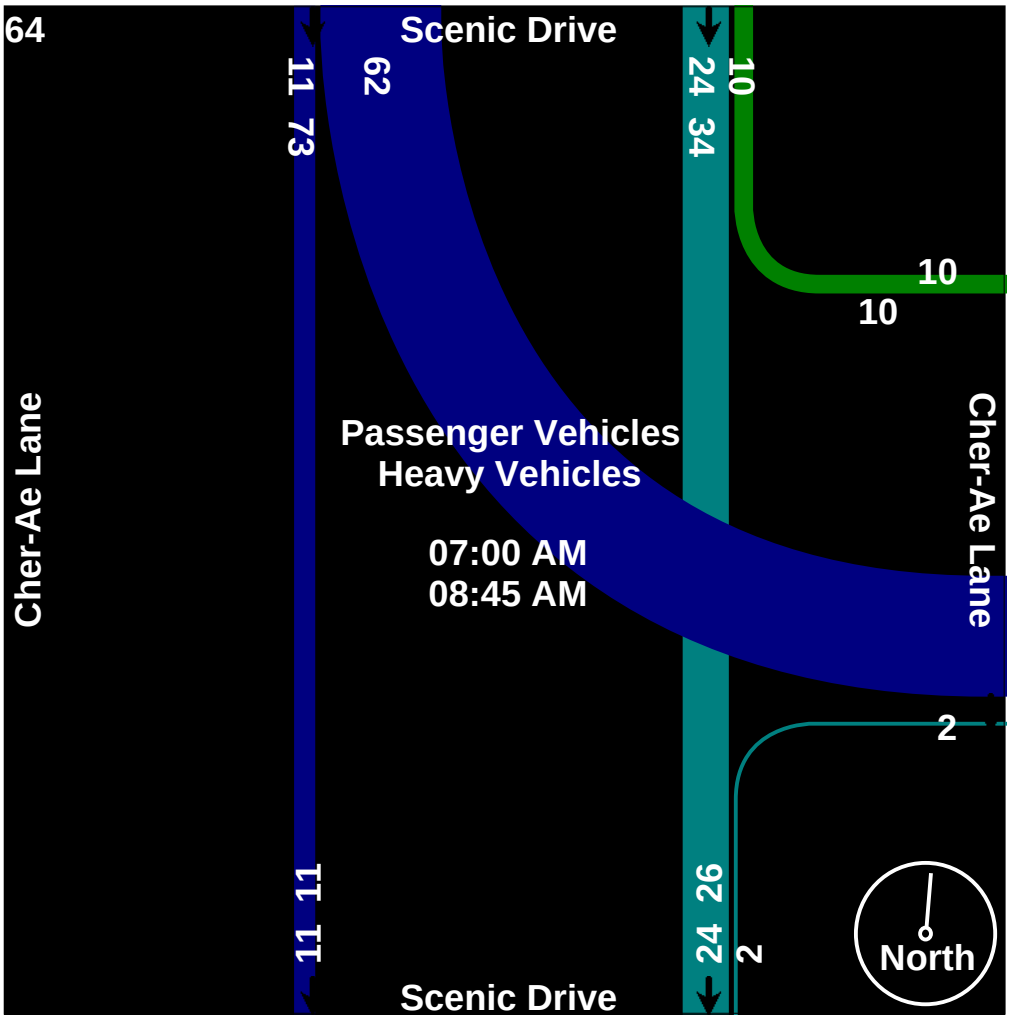
Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	29	102			120	6
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Hourly Flow Rate, HFR	29	102			120	6
Percent Heavy Vehicles	10	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	560	39	50			0
Peak Hour Factor, PHF	1.00	1.00	1.00	1.00		1.00
Hourly Flow Rate, HFR	560	39	50	30		0
Percent Heavy Vehicles	0	0	0	0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No	/			No /
Lanes	0	1	0	0		0
Configuration		LTR			LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT			LTR			LR	
v (vph)	29			649			30	
C(m) (vph)	1412			675			559	
v/c	0.02			0.96			0.05	
95% queue length	0.06			33.00			0.17	
Control Delay	7.6			93.5			11.8	
LOS	A			F			B	
Approach Delay				93.5			11.8	
Approach LOS				F			B	

File Name : Site 5 AM
Site Code : 00000005
Start Date : 1/10/2019
Page No : 1



HCS+: Unsignalized Intersections Release 5.5

TWO-WAY STOP CONTROL SUMMARY

Analyst:	Chris Robideau
Agency/Co.:	Red Plains Professional, Inc.
Date Performed:	2/6/2019
Analysis Time Period:	AM Peak Hour
Intersection:	Site #5
Jurisdiction:	Trinidad Rancheria
Units: U. S. Customary	
Analysis Year:	2019
Project ID: Trinidad Hotel TIA	
East/West Street:	Cher-Ae Lane
North/South Street:	Scenic Drive
Intersection Orientation: NS	Study period (hrs): 2.00

Vehicle Volumes and Adjustments

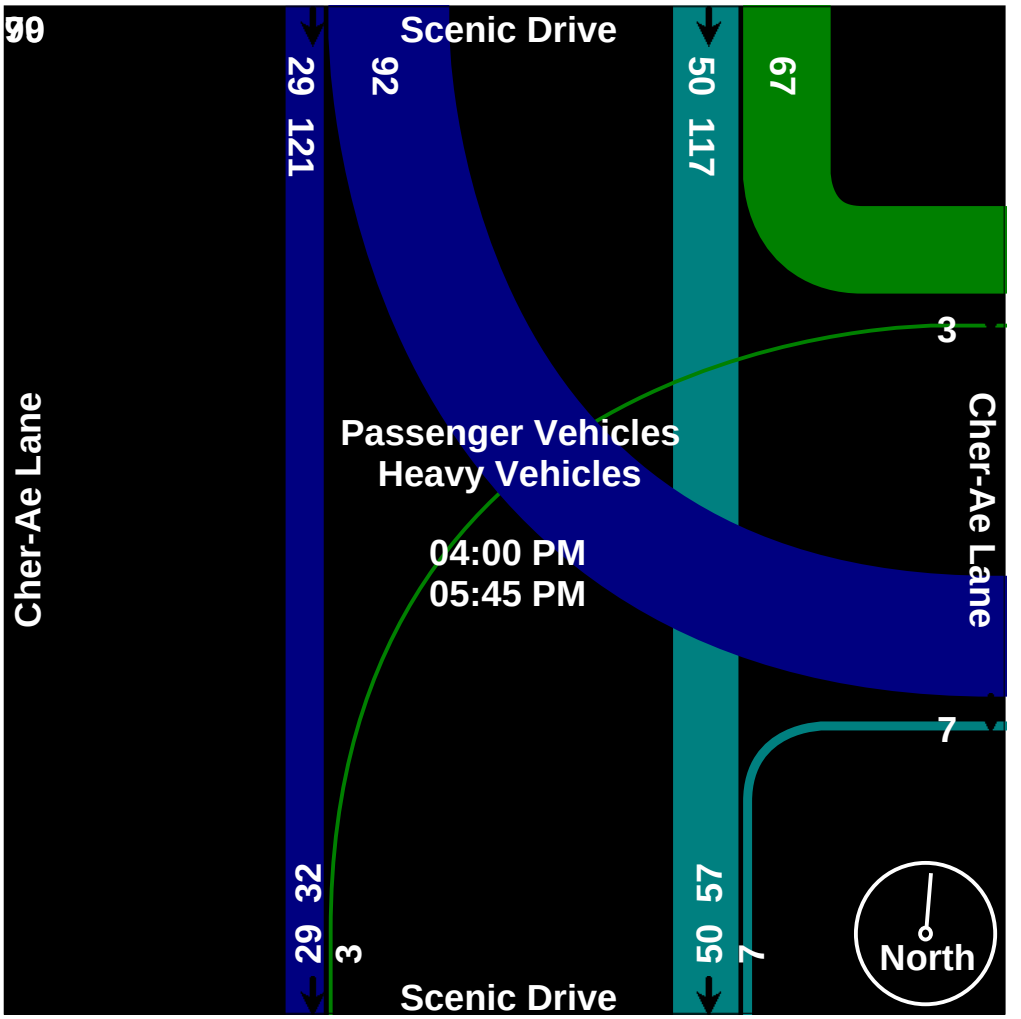
Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		24	2	62	11	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR		24	2	62	11	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		1	0	0	1	
Configuration			TR		LT	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0		10			
Peak Hour Factor, PHF	1.00		1.00			
Hourly Flow Rate, HFR	0		10			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes	1		1			
Configuration	L		R			

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT	L		R			
v (vph)		62	0		10			
C(m) (vph)		1601	804		1057			
v/c		0.04	0.00		0.01			
95% queue length		0.12	0.00		0.03			
Control Delay		7.3	9.5		8.4			
LOS		A	A		A			
Approach Delay				8.4				
Approach LOS				A				

File Name : Site 5 PM
Site Code : 00000005
Start Date : 1/9/2019
Page No : 1



HCS+: Unsignalized Intersections Release 5.5

TWO-WAY STOP CONTROL SUMMARY

Analyst: Chris Robideau
Agency/Co.: Red Plains Professional, Inc.
Date Performed: 2/6/2019
Analysis Time Period: PM Peak Hour
Intersection: Site #5
Jurisdiction: Trinidad Rancheria
Units: U. S. Customary
Analysis Year: 2019
Project ID: Trinidad Hotel TIA
East/West Street: Cher-Ae Lane
North/South Street: Scenic Drive
Intersection Orientation: NS Study period (hrs): 2.00

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		50	7	92	29	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR		50	7	92	29	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		1	0	0	1	
Configuration			TR		LT	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	3		67			
Peak Hour Factor, PHF	1.00		1.00			
Hourly Flow Rate, HFR	3		67			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes	1		1			
Configuration	L		R			

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT	L		R			
v (vph)		92	3		67			
C(m) (vph)		1560	684		1019			
v/c		0.06	0.00		0.07			
95% queue length		0.19	0.01		0.21			
Control Delay		7.5	10.3		8.8			
LOS		A	B		A			
Approach Delay			8.8					
Approach LOS			A					

HCS+: Unsignalized Intersections Release 5.5

TWO-WAY STOP CONTROL SUMMARY

Analyst:	Chris Robideau
Agency/Co.:	Red Plains Professional, Inc.
Date Performed:	2/6/2019
Analysis Time Period:	PM Peak Hour
Intersection:	Site #5
Jurisdiction:	Trinidad Rancheria
Units: U. S. Customary	
Analysis Year:	2019 w/Development
Project ID: Trinidad Hotel TIA	
East/West Street:	Cher-Ae Lane
North/South Street:	Scenic Drive
Intersection Orientation: NS	Study period (hrs): 2.00

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		50	9	125	29	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR		50	9	125	29	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		1	0	0	1	
Configuration			TR		LT	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	4		91			
Peak Hour Factor, PHF	1.00		1.00			
Hourly Flow Rate, HFR	4		91			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes	1		1			
Configuration	L		R			

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT	L		R			
v (vph)		125	4		91			
C(m) (vph)		1558	613		1019			
v/c		0.08	0.01		0.09			
95% queue length		0.26	0.02		0.29			
Control Delay		7.5	10.9		8.9			
LOS		A	B		A			
Approach Delay				9.0				
Approach LOS				A				

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TWO-WAY STOP CONTROL SUMMARY

Analyst: Chris Robideau
Agency/Co.: Red Plains Professional, Inc.
Date Performed: 2/6/2019
Analysis Time Period: PM Peak Hour
Intersection: Site #5
Jurisdiction: Trinidad Rancheria
Units: U. S. Customary
Analysis Year: 2039
Project ID: Trinidad Hotel TIA
East/West Street: Cher-Ae Lane
North/South Street: Scenic Drive
Intersection Orientation: NS Study period (hrs): 2.00

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		74	10	137	43	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR		74	10	137	43	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	4		99			
Peak Hour Factor, PHF	1.00		1.00			
Hourly Flow Rate, HFR	4		99			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes	1		1			
Configuration	L		R			

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT	L		R			
v (vph)		137	4		99			
C(m) (vph)		1526	558		987			
v/c		0.09	0.01		0.10			
95% queue length		0.30	0.02		0.33			
Control Delay		7.6	11.5		9.1			
LOS		A	B		A			
Approach Delay			9.1					
Approach LOS			A					

HCS+: Unsignalized Intersections Release 5.5

TWO-WAY STOP CONTROL SUMMARY

Analyst: Chris Robideau
Agency/Co.: Red Plains Professional, Inc.
Date Performed: 2/6/2019
Analysis Time Period: PM Peak Hour
Intersection: Site #5
Jurisdiction: Trinidad Rancheria
Units: U. S. Customary
Analysis Year: 2039 w/Development
Project ID: Trinidad Hotel TIA
East/West Street: Cher-Ae Lane
North/South Street: Scenic Drive
Intersection Orientation: NS Study period (hrs): 2.00

Vehicle Volumes and Adjustments

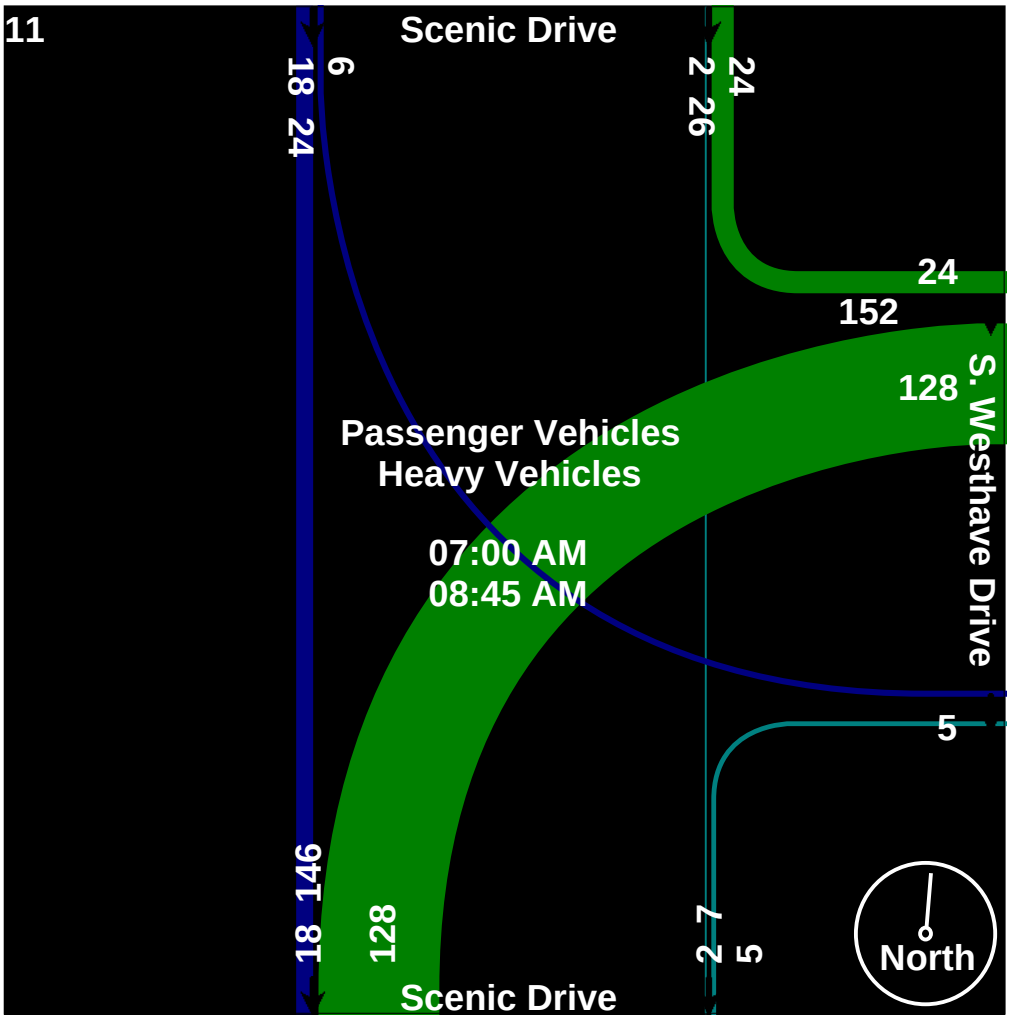
Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		74	12	170	43	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR		74	12	170	43	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	5		123			
Peak Hour Factor, PHF	1.00		1.00			
Hourly Flow Rate, HFR	5		123			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes	1		1			
Configuration	L		R			

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT	L		R			
v (vph)		170	5		123			
C(m) (vph)		1523	498		986			
v/c		0.11	0.01		0.12			
95% queue length		0.38	0.03		0.43			
Control Delay		7.7	12.3		9.2			
LOS		A	B		A			
Approach Delay			9.3					
Approach LOS			A					

File Name : Site 6 AM
Site Code : 00000006
Start Date : 1/11/2019
Page No : 1



HCS+: Unsignalized Intersections Release 5.5

TWO-WAY STOP CONTROL SUMMARY

Analyst: Chris Robideau
Agency/Co.: Red Plains Professional, Inc.
Date Performed: 2/6/2019
Analysis Time Period: AM Peak Hour
Intersection: Site #6
Jurisdiction: Trinidad Rancheria
Units: U. S. Customary
Analysis Year: 2019
Project ID: Trinidad Hotel TIA
East/West Street: S. Westhaven Drive
North/South Street: Scenic Drive
Intersection Orientation: NS Study period (hrs): 2.00

Vehicle Volumes and Adjustments

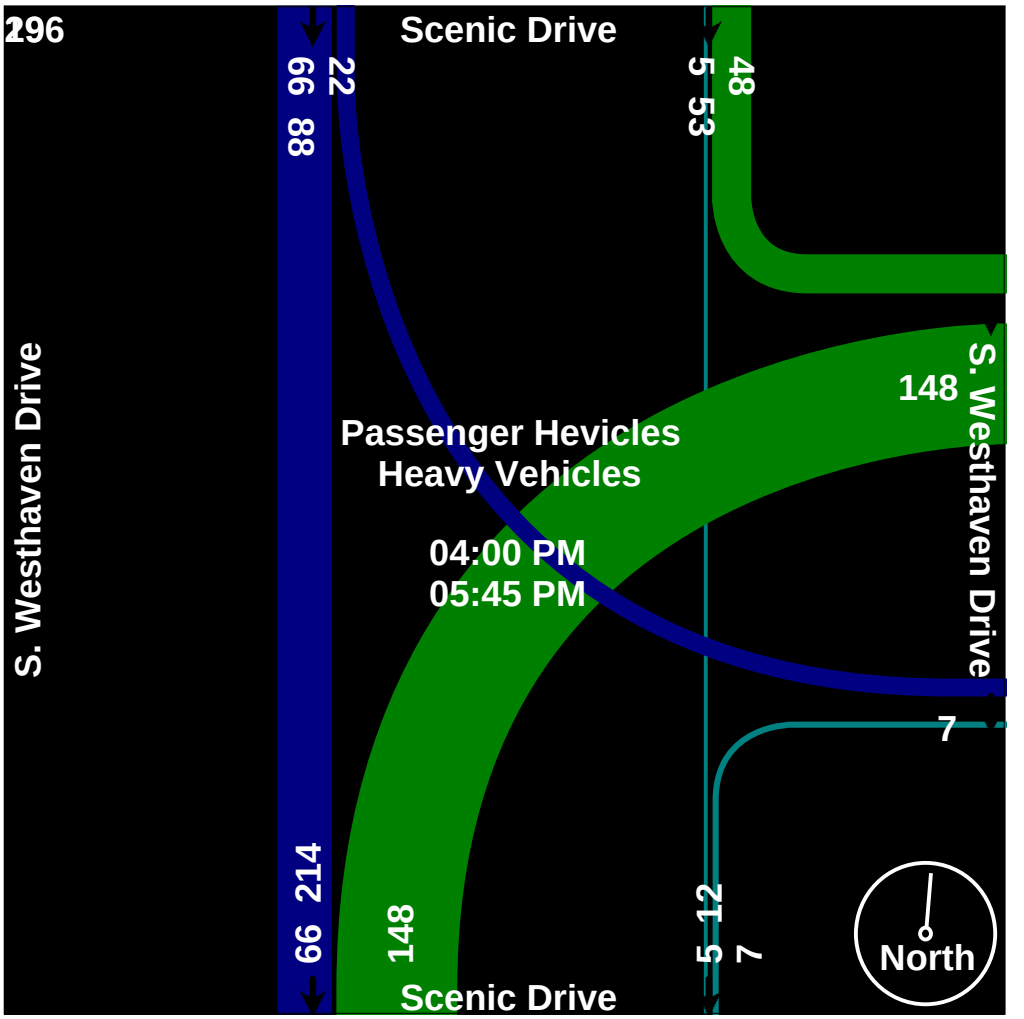
Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		2	5	6	18	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR		2	5	6	18	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		1	0	0	1	
Configuration			TR		LT	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	128		24			
Peak Hour Factor, PHF	1.00		1.00			
Hourly Flow Rate, HFR	128		24			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes	1		1			
Configuration	L		R			

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT	L		R			
v (vph)		6	128		24			
C(m) (vph)		1627	980		1085			
v/c		0.00	0.13		0.02			
95% queue length		0.01	0.45		0.07			
Control Delay		7.2	9.2		8.4			
LOS		A	A		A			
Approach Delay				9.1				
Approach LOS				A				

File Name : Site 6 PM
Site Code : 00000006
Start Date : 1/10/2019
Page No : 1



HCS+: Unsignalized Intersections Release 5.5

TWO-WAY STOP CONTROL SUMMARY

Analyst: Chris Robideau
Agency/Co.: Red Plains Professional, Inc.
Date Performed: 2/6/2019
Analysis Time Period: PM Peak Hour
Intersection: Site #6
Jurisdiction: Trinidad Rancheria
Units: U. S. Customary
Analysis Year: 2019
Project ID: Trinidad Hotel TIA
East/West Street: S. Westhaven Drive
North/South Street: Scenic Drive
Intersection Orientation: NS Study period (hrs): 2.00

Vehicle Volumes and Adjustments

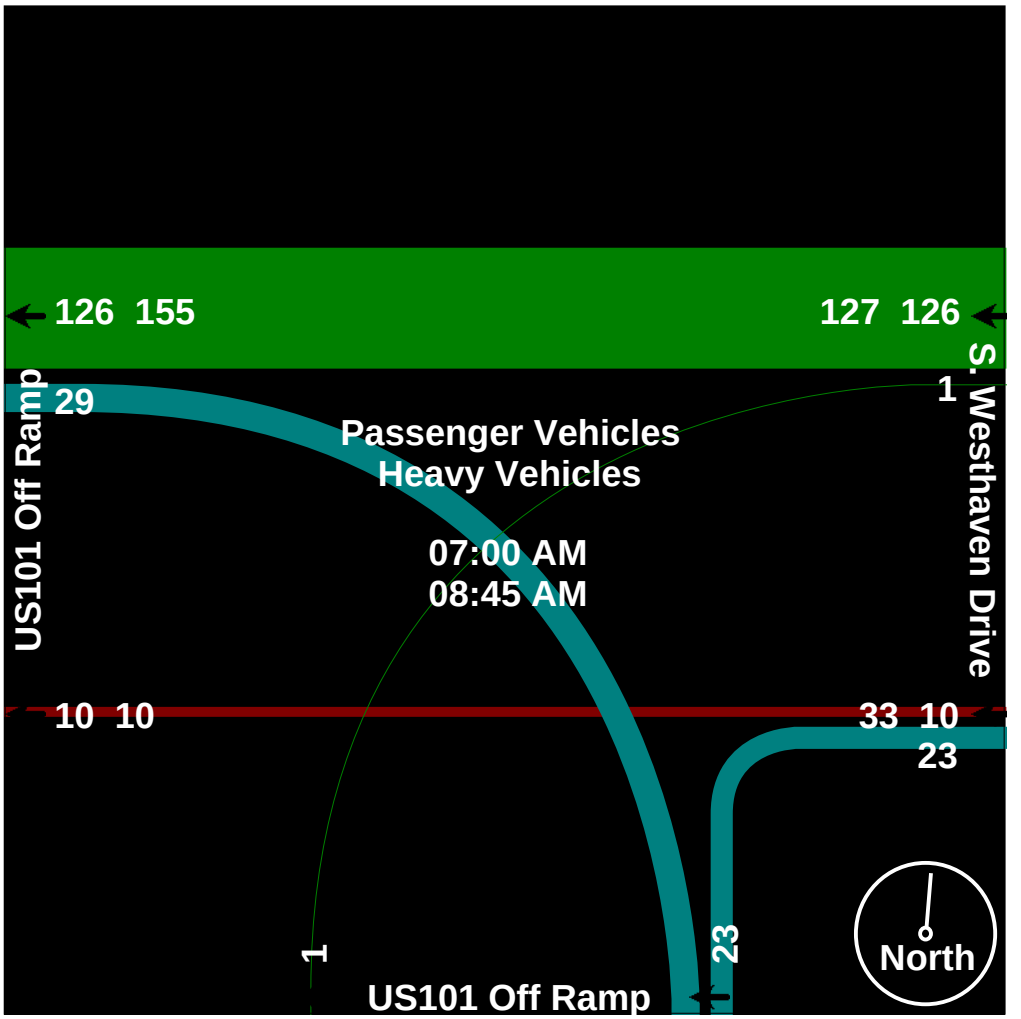
Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		5	7	22	66	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR		5	7	22	66	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		1	0	0	1	
Configuration			TR		LT	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	148		48			
Peak Hour Factor, PHF	1.00		1.00			
Hourly Flow Rate, HFR	148		48			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes	1		1			
Configuration	L		R			

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT	L		R			
v (vph)		22	148		48			
C(m) (vph)		1620	871		1080			
v/c		0.01	0.17		0.04			
95% queue length		0.04	0.61		0.14			
Control Delay		7.3	10.0-		8.5			
LOS		A	A		A			
Approach Delay				9.6				
Approach LOS				A				

File Name : Site 7 AM
Site Code : 00000007
Start Date : 1/11/2019
Page No : 1



HCS+: Unsignalized Intersections Release 5.5

TWO-WAY STOP CONTROL SUMMARY

Analyst: Chris Robideau
Agency/Co.: Red Plains Professional, Inc.
Date Performed: 2/6/2019
Analysis Time Period: AM Peak Hour
Intersection: Site #7
Jurisdiction: Trinidad Rancheria
Units: U. S. Customary
Analysis Year: 2019
Project ID: Trinidad Hotel TIA
East/West Street: S. Westhaven Drive
North/South Street: US101 Off Ramp
Intersection Orientation: EW Study period (hrs): 2.00

Vehicle Volumes and Adjustments

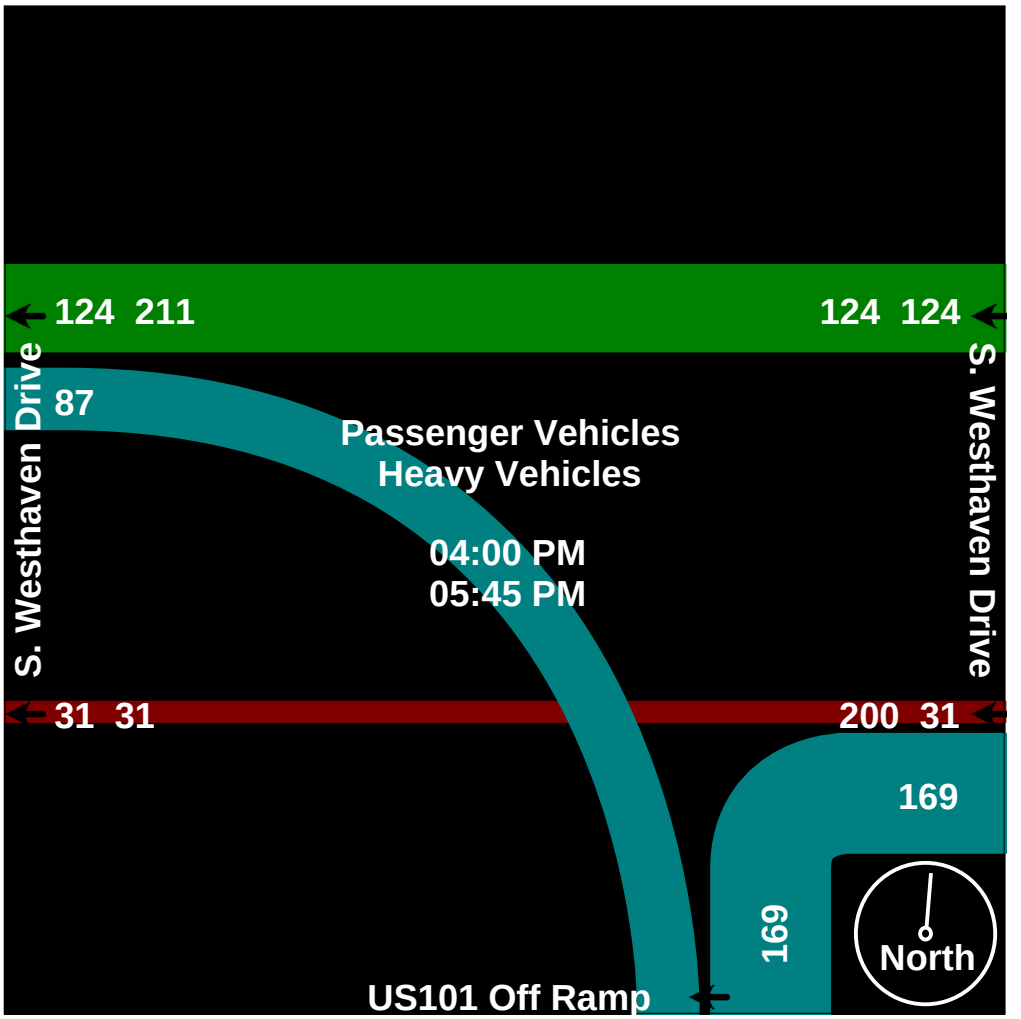
Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		10			127	
Peak-Hour Factor, PHF		1.00			1.00	
Hourly Flow Rate, HFR		10			127	
Percent Heavy Vehicles		--	--		--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes		1			1	
Configuration		T			T	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	29					
Peak Hour Factor, PHF	1.00		1.00			
Hourly Flow Rate, HFR	29		0			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes	1		1			
Configuration	L		R			

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config			L		R			
v (vph)			29		0			
C(m) (vph)			861		1077			
v/c			0.03		0.00			
95% queue length			0.10		0.00			
Control Delay			9.3		8.3			
LOS			A		A			
Approach Delay				9.3				
Approach LOS				A				

File Name : Site 7 PM
Site Code : 00000007
Start Date : 1/10/2019
Page No : 1



HCS+: Unsignalized Intersections Release 5.5

TWO-WAY STOP CONTROL SUMMARY

Analyst:	Chris Robideau
Agency/Co.:	Red Plains Professional, Inc.
Date Performed:	2/6/2019
Analysis Time Period:	PM Peak Hour
Intersection:	Site #7
Jurisdiction:	Trinidad Rancheria
Units: U. S. Customary	
Analysis Year:	2019
Project ID:	Trinidad Hotel TIA
East/West Street:	S. Westhaven Drive
North/South Street:	US101 Off Ramp
Intersection Orientation: EW	Study period (hrs): 2.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		31			124	
Peak-Hour Factor, PHF		1.00			1.00	
Hourly Flow Rate, HFR		31			124	
Percent Heavy Vehicles		--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		1			1	
Configuration		T			T	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	87		169			
Peak Hour Factor, PHF	1.00		1.00			
Hourly Flow Rate, HFR	87		169			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes	1		1			
Configuration	L		R			

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config			L		R			
v (vph)			87		169			
C(m) (vph)			841		1049			
v/c			0.10		0.16			
95% queue length			0.35		0.58			
Control Delay			9.8		9.1			
LOS			A		A			
Approach Delay				9.3				
Approach LOS				A				

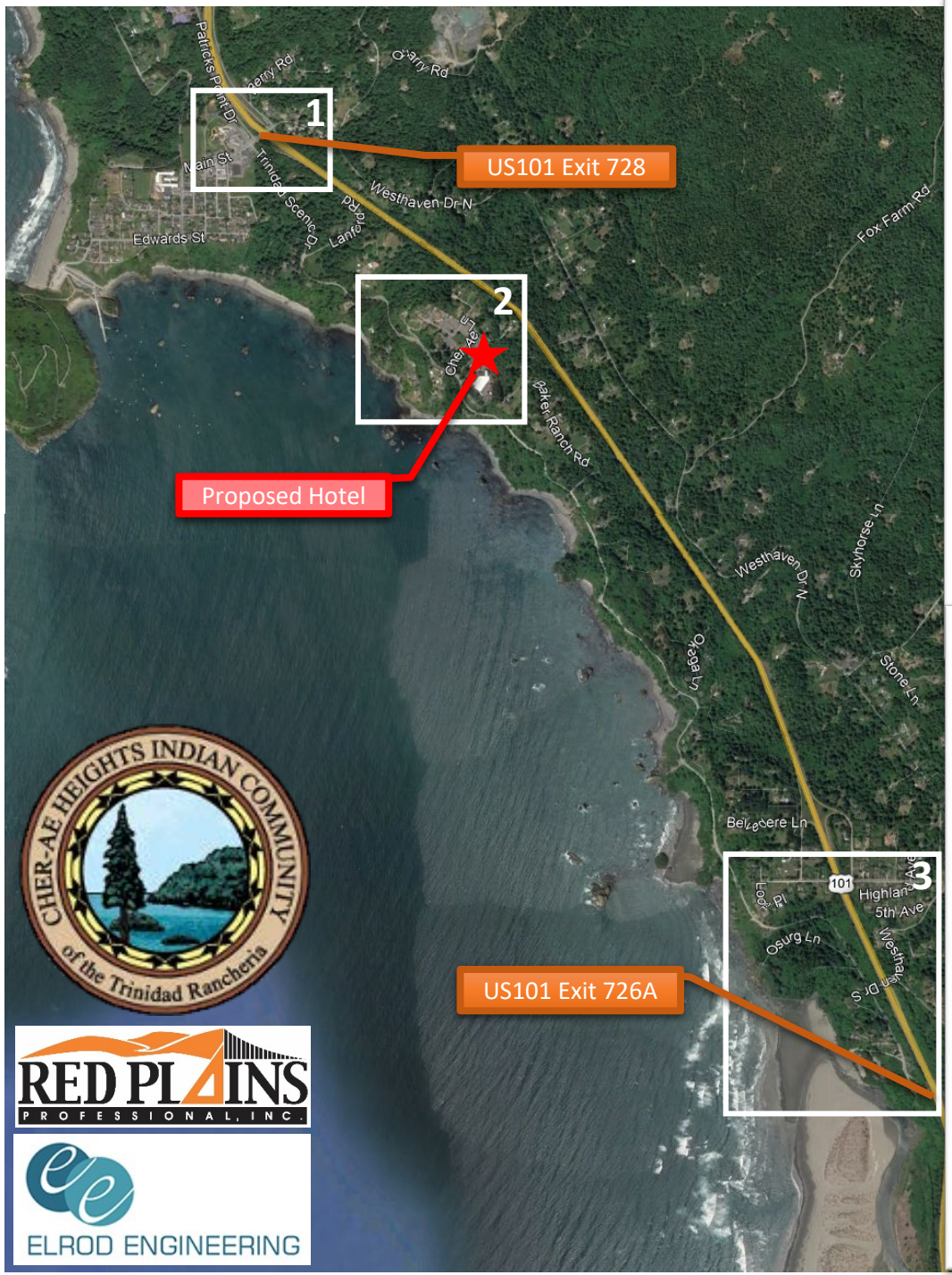
APPENDIX C

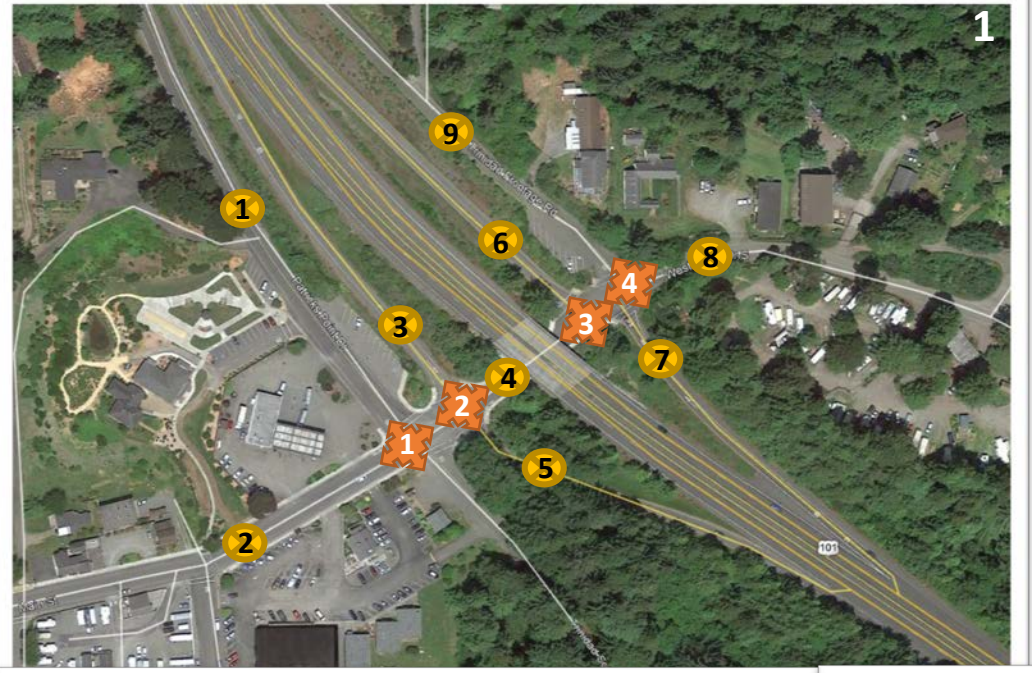
TRAFFIC ANALYSIS MAPS

Prepared by:

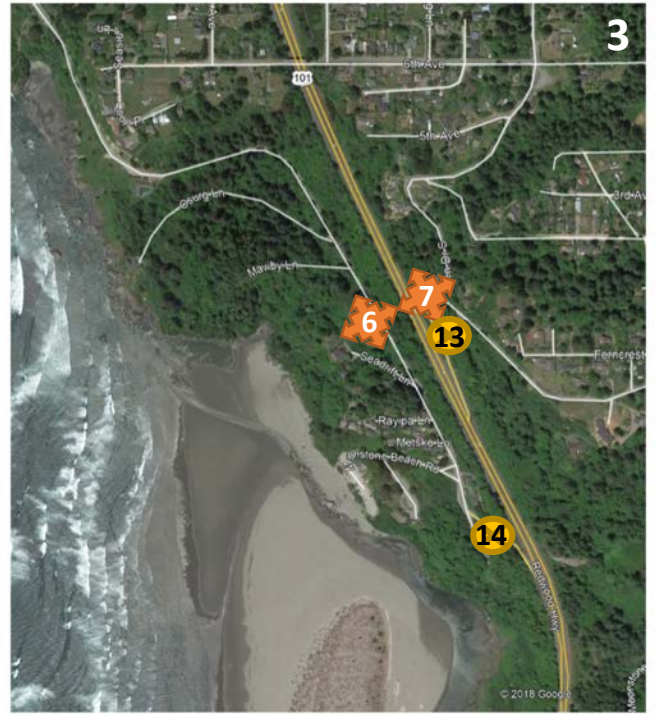
RED PLAINS PROFESSIONAL, INC.

ELROD ENGINEERING









Count Location Map

Cher Ae Heights Hotel
Cher Ae Heights Indian Community
Trinidad Rancheria

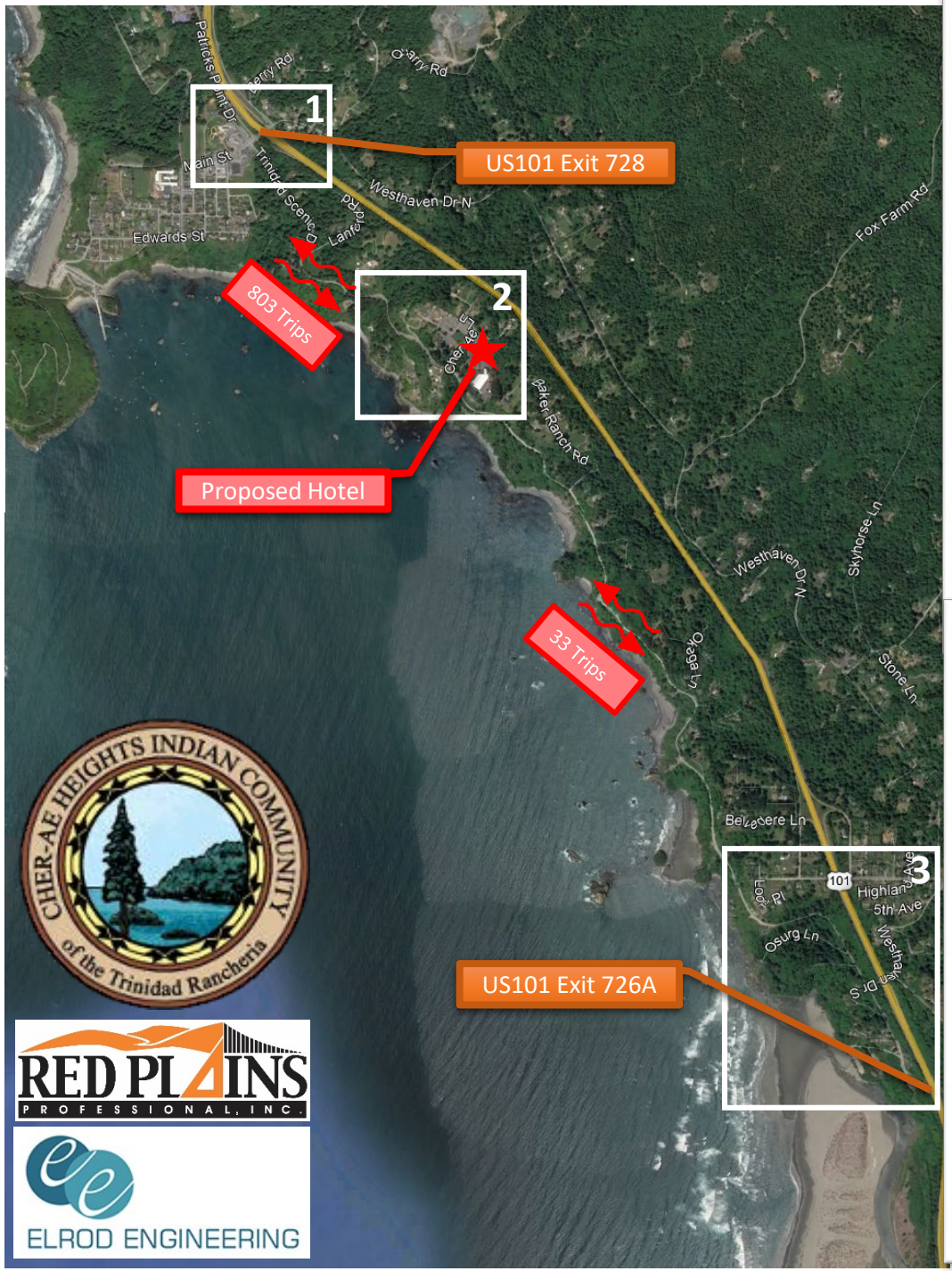
LEGEND

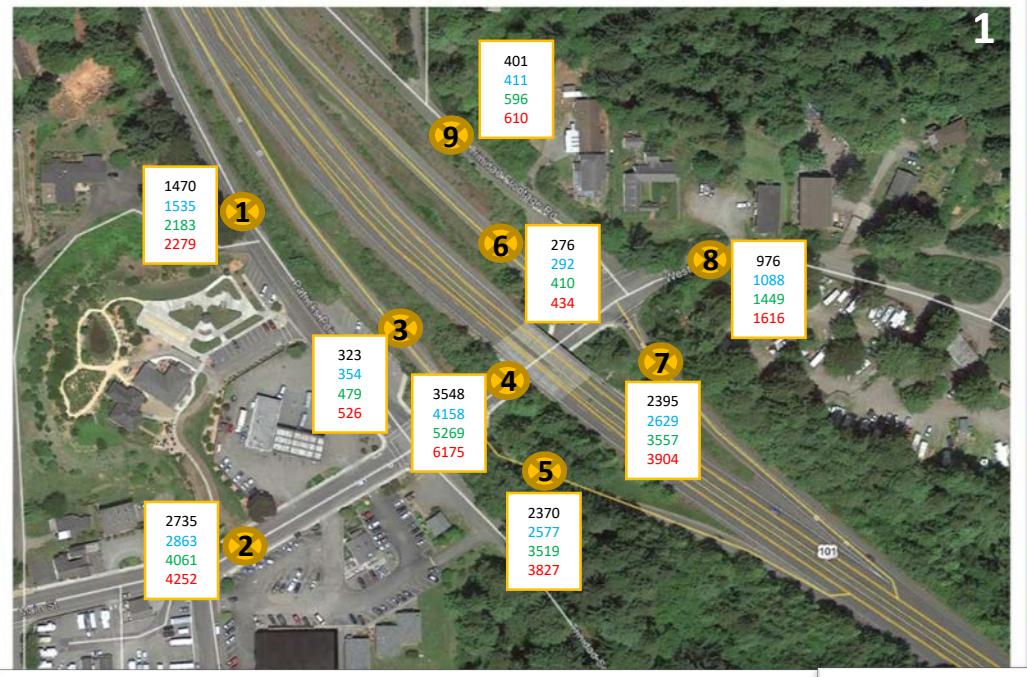
- Manual AM/PM Peak Hour Turning Movement Count (7)
- Mechanical 24 Hour Traffic Count (14)

CHER-AE HEIGHTS INDIAN COMMUNITY of the Trinidad Rancheria

RED PLAINS PROFESSIONAL, INC.

ELROD ENGINEERING









24-Hour Mechanical Traffic Count Map

Cher Ae Heights Hotel

Cher Ae Heights Indian Community

Trinidad Rancheria

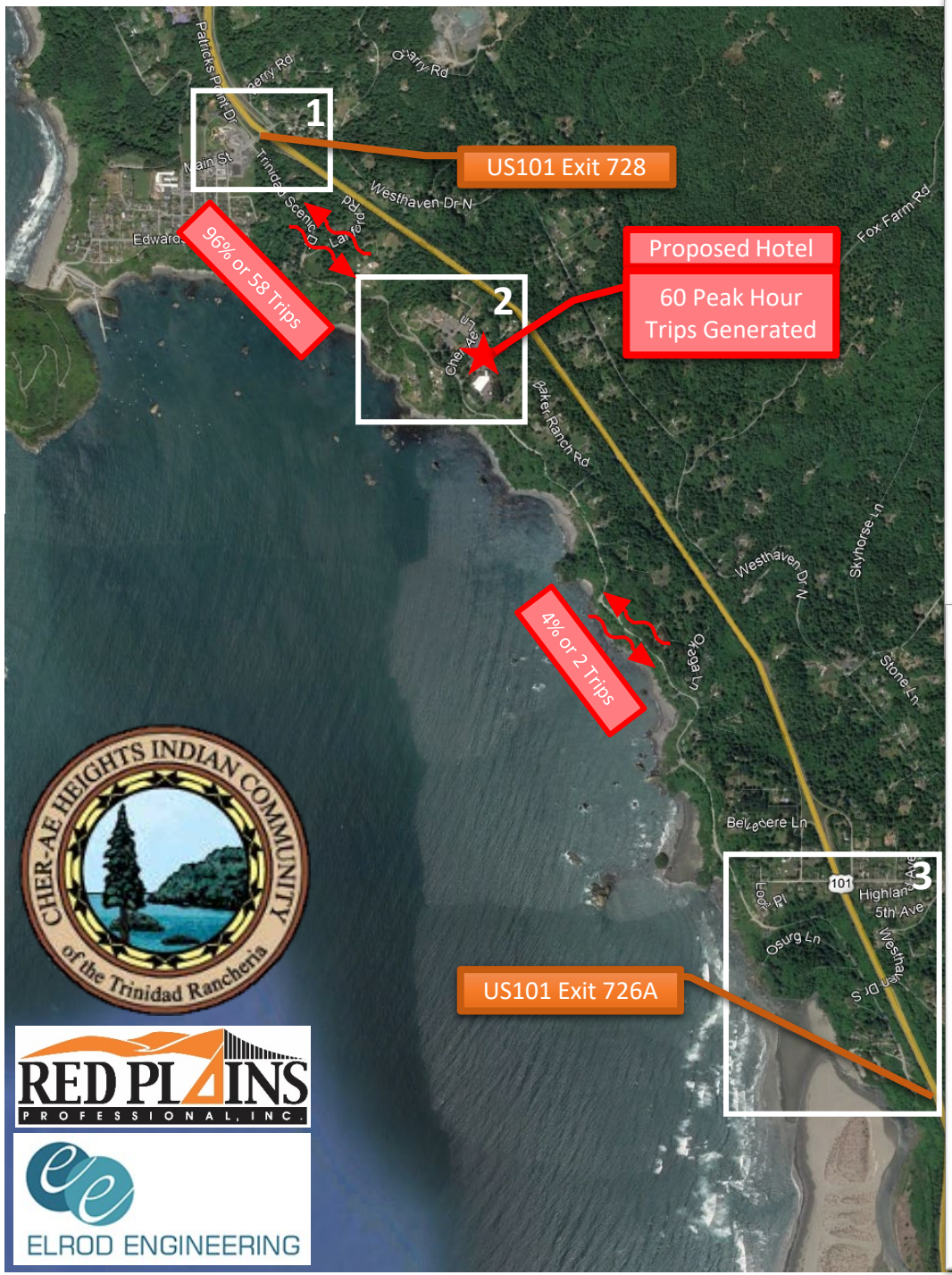
LEGEND

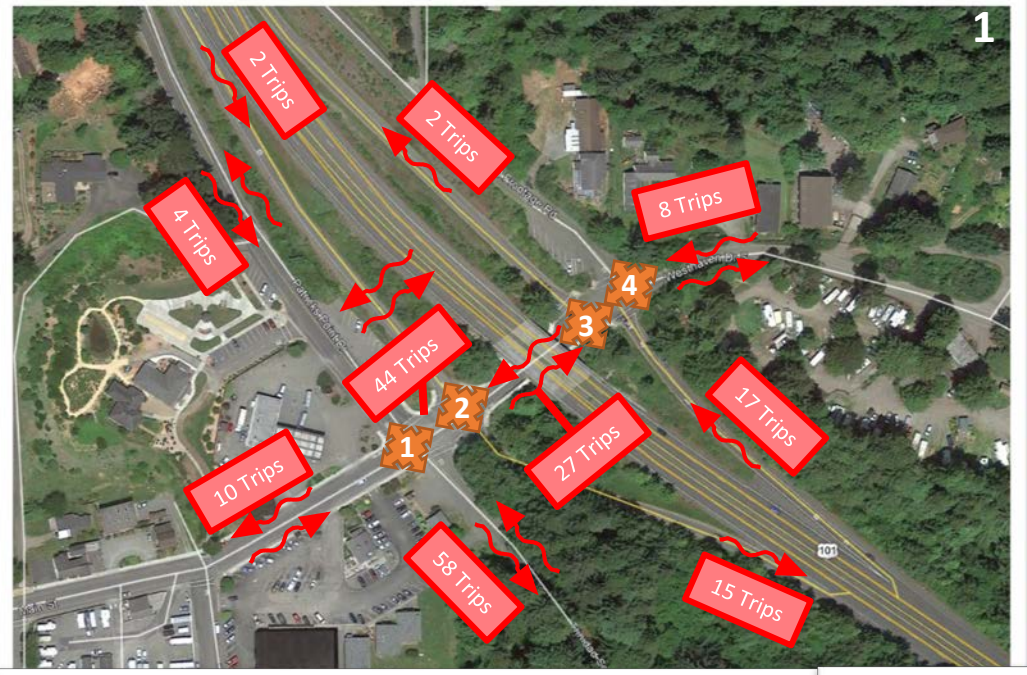
1	Site Code (24-Hour Ct)
000	2019 AADT
000	2019 AADT w/Hotel
000	2039 (AADT Projected)
000	2039 (AADT Proj w/Hotel)

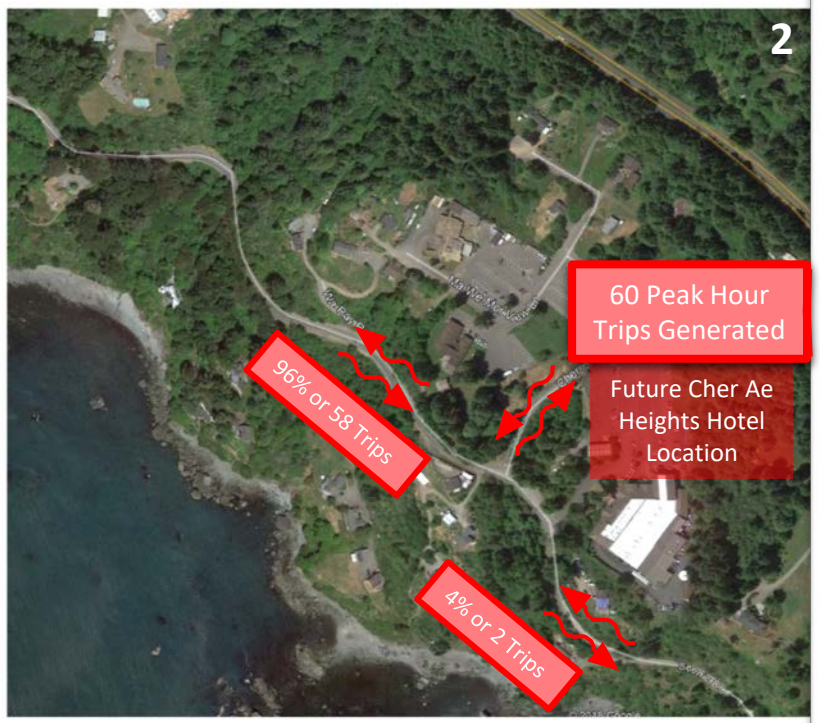
CHER-AE HEIGHTS INDIAN COMMUNITY of the Trinidad Rancheria

RED PLAINS PROFESSIONAL, INC.

ELROD ENGINEERING









PM PEAK HOURS Additional Trips Generated Map

Cher Ae Heights Hotel
Cher Ae Heights Indian Community
Trinidad Rancheria

LEGEND

- Manual AM/PM Peak Hour Turning Movement Count (7)
- Generated Trip Distribution

CHER-AE HEIGHTS INDIAN COMMUNITY of the Trinidad Rancheria

RED PLAINS PROFESSIONAL, INC.

ELROD ENGINEERING