Section 3.10
Transportation and Traffic

3.10.1 Introduction

This section identifies and evaluates potential transportation and traffic impacts related to the proposed Shell Guadalupe Dunes Gravel Remediation In-Lieu Proposal. Because the Proposed Project does not require any construction or operational activities, no traffic report has been conducted. Traffic-related impacts that would result from the alternatives, however, are analyzed based on information provided by the Applicant (AECOM 2010). For any impacts, mitigation measures are identified.

The information in this section is based on the 1982 Final Environmental Impact Report (EIR), associated studies, information provided by the Dunes Center and the City of Santa Maria, and regional information available in previous environmental impact reports prepared by the County.

3.10.2 Environmental Setting

This section discusses the existing conditions related to transportation and traffic for the Proposed Project.

3.10.2.1 Roadway System

Regional access to the Project Site from locations to the north, south and east is available via State Route (SR) 1, located approximately 4 miles east of the Project Site, and via U.S. Highway 101 (US-101) located approximately 13 miles east of the Project Site. SR 166, a two-lane highway, currently serves as an east/west link between the City of Santa Maria and community of Guadalupe, and also between SR 1 and US-101. West of SR 1, SR 166 continues as West Main Street, a County-owned and operated roadway, providing direct access to Rancho Guadalupe County Park and the Project access road.

West Main Street, which is designated by the County Comprehensive Plan as a "minor road," is currently a two-lane roadway built-out to its designated width, ranging from 16 to 24 feet. The configuration of West Main Street extending westward from Guadalupe is generally straight; however, there are two 30 degree curves (one right and one left) located approximately 1 and 1.5 miles west of Guadalupe. These curves, although not significantly sharp, have been the location of a number of traffic accidents. Approximately 3 miles west of Guadalupe there is a 90 degree curve (to the left) in the roadway with a designated speed limit of 15 miles per hour. Although site distances around this sharp curve are limited by tall roadside vegetation, the number of traffic accidents at this location has been characteristically quite low.

Initially, when West Main Street was constructed, it was designed in accordance with its "minor road" designation which was intended to facilitate light vehicular and limited truck access to coastal areas, particularly the Rancho Guadalupe County Park and the Gordon Sand Company. As such, in many areas the subsurface roadway materials, thickness, compaction, and overall design are inadequate to accommodate frequent use by heavy trucks. Expansion of oil operations by Husky and

Union Oil, and associated increases in heavy vehicular activity, resulted in a rapid deterioration of several segments along West Main Street. Some segments along this route are currently in very poor condition, as evidenced by large surficial cracks and numerous potholes.

The Gordon Sand Company access road is largely a compact sandy road that branches off from the Gordon Sand Company operation area and continues southwest through the Rancho Guadalupe Dunes Preserve. It is used by heavy equipment year round. The road is approximately 30 feet wide and passes the various sites that were originally proposed for remediation, but does not provide direct access to each site. Site D is located approximately 240 feet from the access road.

SR 1 is the closest major north/south highway to the Project Site. This roadway consists of one lane in each direction with 6-foot Class II bike lanes on both sides of the street. North of West Main Street, SR 1 passes through a mixed industrial/commercial/residential corridor in downtown Guadalupe. Within the Guadalupe corridor, parking is available on both sides of the street. North of Guadalupe, SR 1 provides access to Union Oil's Santa Maria refinery (approximately 7 miles away from the Project Site) and US-101 (approximately 12 miles away from the Project Site). South of West Main Street, SR 1 provides access to Orcutt, Lompoc and a number of predominantly rural areas.

The junction between SR 1 and SR 166/West Main Street is currently controlled by a four-way stop sign.

3.10.2.2 Existing Traffic Volumes

SR 1 and SR 166/West Main Street are the two busiest roadways that provide access to the Project Site. In 2010, SR 1 experienced 5,800 average annual daily vehicle trips (AADT) north of West Main Street and 2,100 AADT South of West Main Street. West Main Street experienced 9,300 AADT east of SR 1, and no data is available for West Main Street west of SR 1. US-101 at the SR 166 interchange experienced 60,000 AADT.

3.10.2.3 Alternative Transportation

The Project Site is surrounded by agriculture land in rural Santa Barbara County. No public transit service is available in the vicinity of the proposed the Project Site. Non-motorized transportation, such as bikeways and pedestrian sidewalks, was not identified in the Project Site. The closest public airports are the Santa Maria Public Airport, located approximately 6 miles northwest of the proposed Solar Facility and approximately 12 miles southeast of the Project Site, and the Oceano County Public Airport District, located approximately 10 miles north of the Project Site. The Oceano Specific Plan and the Santa Barbara County Airport Land Use Plan (Santa Barbara County Airport Land Use Commission 2012) show that the Project Site is well outside of any of the airport's safety zones and is not in the direct flight path for approach or departure from the airport.

3.10.3 Regulatory Setting

3.10.3.1 State

Caltrans is the administrating agency for the following regulations:

- California Vehicle Code (CVC) Sections 34500, 34501, 34501.2, 34501.3, 34501.4, 34501.10, 34505.5-7, 34506, 34507.5, and 34510-11 regulate the safe operation of vehicles, including those used to transport hazardous materials.
- California Street and Highways Code (S&HC) Sections 660, 670, 1450, 1460 et seq. 1470, and 1480, regulates right-of-way encroachment and granting of permits for encroachments on state and county roads.
- S&HC, Sections 117 and 660-711, and CVC, Sections 35780 et seq., require permits to transport oversized loads on county roads. California S&HC Sections 117 and 660 to 711 require permits for any construction, maintenance, or repair involving encroachment on state highway rights-of-way. CVC Section 35780 requires approval for a permit to transport oversized or excessive loads over state highways.
- Caltrans weight and load limitations for state highways apply to all state and local roadways. The weight and load limitations are specified in the CVC Sections 35550 to 35559. The following provisions, from the CVC, apply to all roadways and are therefore applicable to this Project:

  General Provisions:

  – The gross weight imposed upon the highway by the wheels on any axle of a vehicle shall not exceed 20,000 pounds and the gross weight upon any one wheel, or wheels, supporting one end of an axle, and resting upon the roadway, shall not exceed 10,500 pounds.

  – The maximum wheel load is the lesser of the following:

    a. The load limit established by the tire manufacturer

    b. A load of 620 pounds per lateral inch of tire width, as determined by the manufacturer's rated tire width

  Vehicles with Trailers or Semitrailers:

  – The gross weight imposed upon the highway by the wheels on any one axle of a vehicle shall not exceed 18,000 pounds and the gross weight upon any one wheel, or wheels, supporting one end of an axle and resting upon the roadway, shall not exceed 9,500 pounds, except that the gross weight imposed upon the highway by the wheels on any front steering axle of a motor vehicle shall not exceed 12,500 pounds.
- All construction in the public right-of-way must comply with the "Manual of Traffic Control Devices" (Caltrans and Federal Highway Administration [FHWA], 2003).

Santa Barbara County Association of Governments (SBCAG) is responsible for maintaining the performance and standards of the Congestion Management Program (CMP) roadway system in the County for State Highway facilities that are part of that system. SBCAG strives to maintain level of service (LOS) D operations on all CMP-monitored facilities. (SBCAG 2009).

3.10.3.2 Local

State law requires that any development in Santa Barbara County should be consistent with the Santa Barbara County Comprehensive Plan. The Circulation Element of the Comprehensive Plan provides specific policies related to traffic and transportation implications of proposed development. Refer to Section 3.7, *Land Use and Planning*, for an additional discussion on the policies.

If any frontage road improvements are required on public roads inside the County ROW, then an encroachment permit would be required from the County. A Traffic Management Plan (TMP) is required to lay out the requirements and provisions to be implemented in the process of achieving the most efficient and safe movement of vehicles on the public roads and highways around the site in conjunction with the efficient movement of vehicles onto and off the site, over the period of the construction.

The SBCAG has been designated as the Congestion Management Agency for the County and is therefore responsible for administration of the CMP. The CMP establishes a minimum level of service along roadways and intersections that are included in the CMP network, including all state highways. Construction vehicle trips are is exempt from the evaluation of CMP LOS deficiencies. SBCAG has developed a set of traffic impact thresholds to assess the impacts of land use decisions made by local jurisdictions on regional transportation facilities located within the CMP roadway system.

The County of Santa Barbara Environmental Thresholds and Guidelines Manual (County of Santa Barbara 2008) and the Santa Barbara County Comprehensive Plan (County of Santa Barbara 2010) established guidelines to determine the project-related traffic impacts on County roadways.

The County uses the Intersection Capacity Utilization (ICU) methodology to calculate the volume–capacity ratio (v/c) and the associated LOS for signalized intersections. Although the County has not established an acceptable LOS standard and impact criteria for stop-controlled intersections, this analysis utilizes the LOS standard and impact criteria for signalized intersections.

3.10.4 Environmental Impact Analysis

This section discusses the potential transportation and traffic impacts associated with the construction and operation of the Proposed Project and alternatives. Transportation and traffic impacts associated with the Proposed Project and alternatives are summarized in Table 3.10-1.

3.10.4.1 Thresholds of Significance

CEQA Guidelines

According to Appendix G of the State California Environmental Quality Act (CEQA) Guidelines, a project would normally have a significant impact on the environment if it would result in any of the following.

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.
- Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

- Substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- Result in inadequate emergency access.
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

County of Santa Barbara Initial Environmental Thresholds and Guidelines Manual

The County's threshold criteria are intended to provide a basis for improved analyses of the potential traffic impacts of proposed projects. It should be noted that the following criteria are guidelines for the majority of potential traffic impacts. The list of criteria is not intended to be all inclusive as the potential for impact may vary depending upon the environmental setting and the nature of the project.

1. The impacts of project-generated traffic are assessed against the following County thresholds. A significant traffic impact occurs when:

   a. The addition of project traffic to an intersection increases the V/C ratio by the value provided below or sends at least 5, 10, or 15 trips to at LOS F, E, or D.

Level of Service (including project)	**Increase in V/C Greater Than**
A	0.20
B	0.15
C	0.10
	Or the addition of:
D	15 trips
E	10 trips
F	5 trips

   b. Project access to a major road or arterial road would require a driveway that would create an unsafe situation or a new traffic signal or major revisions to an existing traffic signal.

   c. Project adds traffic to a roadway that has design features (e.g., narrow width, road side ditches, sharp curves, poor sight distance, inadequate pavement structure) or receives use which would be incompatible with substantial increases in traffic (e.g., rural roads with use by farm equipment, livestock, horseback riding, or residential roads with heavy pedestrian or recreational use, etc.) that will become potential safety problems with the addition of project or cumulative traffic. Exceedance of the roadways designated Circulation Element Capacity may indicate the potential for the occurrence of the above impacts.

   d. Project traffic would utilize a substantial portion of an intersection(s) capacity where the intersection is currently operating at acceptable levels of service (A-C) but with cumulative traffic would degrade to or approach LOS D (V/C 0.81) or lower. Substantial is defined as a minimum change of 0.03 for intersections which would operate from 0.80 to 0.85 and a

change of 0.02 for intersections which would operate from 0.86 to 0.90, and 0.01 for intersections operating at anything lower.

State Highway Intersection Thresholds of Significance

While Caltrans has not established traffic thresholds of significance at State Highway intersections, this traffic analysis utilizes the following traffic threshold of significance:

- A significant project impact occurs at a State Highway study intersection when the addition of project-generated trips causes the peak hour level of service of the study intersection to change from acceptable operation (LOS A, B, or C) to deficient operation (LOS D, E, or F).

3.10.4.2 Project Impacts

The Proposed Project would not involve any construction-related or operational impacts to traffic. Because no construction activity would occur at the Project Site or elsewhere under the Proposed Project, there would be no short-term construction related impacts typically associated with construction activities, such as blocking of roads, increased congestion due to construction workers driving to the site, or damage to roads due to heavy hauling trucks traveling to and from the site. The Proposed Project would not alter existing road networks. Lastly, the Proposed Project would not result in any operational changes, and therefore would not result in any long-term increase or decrease in vehicle traffic at or near the Project Site.

3.10.4.3 No Project Alternative Impacts

Impact ALT1-TT-1. Traffic congestion impacts from mining and removal activities

The No Project Alternative would remove all the gravel from the Project Site (Upper Area, Road Site, Site 2, and Site D), pursuant to Permit Condition #31 of 82-CP-75(cz). Activities associated with this alternative would include mining of the sand areas containing gravel, a mobile wet screening operation, off-site disposal of the gravel, and return of sand to the mining areas. These activities are expected to take approximately 5 to 7 months to complete and are expected to generate varying levels of traffic.

This alternative is expected to generate traffic during mining and screening operations due to workers traveling to and from the site. The anticipated maximum number of onsite employees during construction is likely to be 10 or less workers. Therefore, there are expected to be 10 or less trips generated in the A.M. peak hour and 10 or less trips generated in the P.M. peak hour.

The No Project Alternative would involve removal of approximately 1,237 cubic yards (cy) of remnant gravel, which would be hauled from the site in trucks. Based on the production rate achieved during the Pilot Test, approximately two 20-cy roll off bins may be filled and transported off site on a daily basis. This would result in no more than two outbound and two inbound trips daily related to gravel transport and a total daily trip generation of four trucks related to gravel transport. Based on the total amount of gravel to be removed, this alternative would require 62 round trips, or 124 total trips over a period of 5 to 7 months. Assuming hauling activities take place 22 days a month, there would be an average of 1.1 total truck trips per day. These hauling activities would occur concurrently with on-site operations. Therefore, a maximum of four daily trips associated with hauling and 20 daily worker trips would result in a maximum of 24 total daily trips generated. This would incrementally increase congestion along West Main Street and the access road. However,

the segment of West Main Street that provides access to the Project site is lightly travelled and is primarily used by workers at the Gordon Sand facility and hikers at the Guadalupe-Nipomo Dunes Park. It is not expected that 24 daily trips would result in a significant impact to congestion. Additionally, it is not expected that the increase in vehicles would cause safety problems, as the road is already used by similar vehicles for industrial purposes. Therefore, impacts related to traffic congestion would be less than significant (Class III). Standard County conditions that ensure compliance with haul permit requirements would further minimize transportation impacts associated with export of gravel from the Project Site, see Section 3.10.4.1.

Impact ALT1-TT-2. Roadway Degradation.

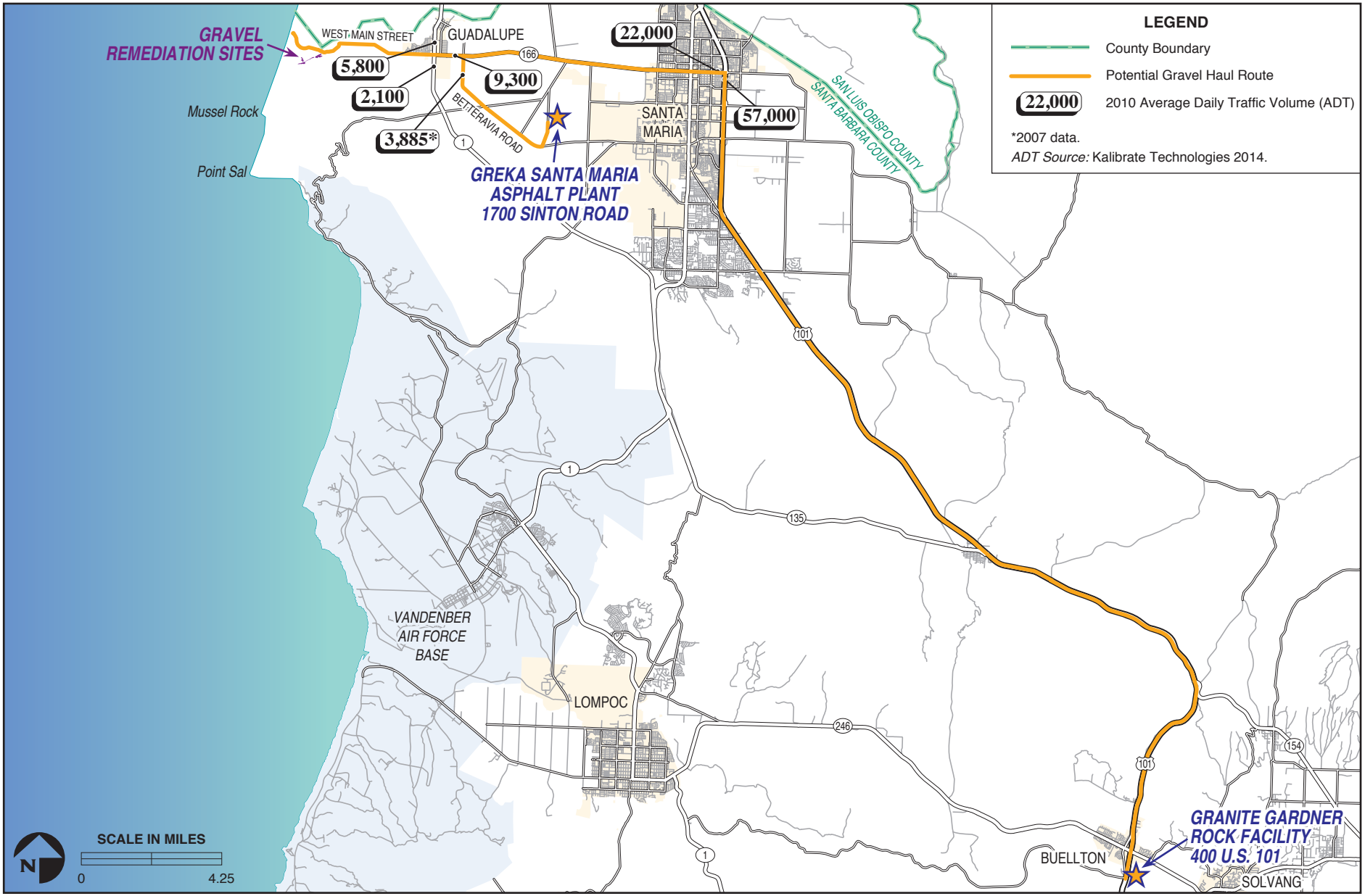
Access to the Project Site is provided via roadways managed and operated by Caltrans and the County and does not require construction of any new roads. West Main Street is a county-managed roadway. As described in Impact ALT1-TT-1, hauling activities for gravel removal associated with the No Project Alternative would result in a total of 124 heavy truck trips. The two potential drop-off locations for the gravel would be Greka Energy, at 1700 Sinton Road, Santa Maria, CA and Granite Gardner Facility at 400 US-101, Buellton, CA (see Figure 3.10-1). These routes are approximately 10 and 43 miles long respectively. The primary roadways that would be affected would be the access road and West Main Street. Other roadways that could potentially be affected depending on the choice of the drop-off site include Ray Road and Sinton Road for the Greka location and SR 1, Clark Avenue, US-101, and Jonata Road for the Granite Gardner Ranch Facility. These truck trips would occur over the course of 5 to 7 months, for 5 days a week and could potentially result in degradation of the roads. However, delivery trucks would not be allowed to exceed the Caltrans General Rule of gross weight of 20,000 pounds per axle. On-site installation equipment would not exceed maximum permitted delivery truck weights. Additionally, while West Main Street would be the most susceptible street to roadway degradation under this alternative, mitigation measures in the 1982 Final EIR and conditions in the original permit issued to the Husky Oil Company required that the applicant provide funds for the repair, reconstruction, and upkeep of West Main Street. Therefore, impacts related to roadway degradation would be less than significant (Class III). Standard County conditions that ensure compliance with haul permit requirements would further minimize transportation impacts associated with hauling of gravel from the Project Site, see Section 3.10.4.1.

3.10.4.4 Partial Gravel Removal Impacts

Impact ALT2-TT-1. Traffic congestion impacts from mining and removal activities

The Partial Gravel Removal Alternative would involve removing gravel from Site D and the eastern portion of the Road Site. This Alternative would involve the removal of gravel from the most visually prominent areas, as observed by recreational users of Rancho Guadalupe Dunes County Park. This would result in the removal of approximately 688 cy of gravel. The remaining 549 cy of gravel would be left in place. Similar to the No Project Alternative, activities associated with this alternative would include mining of the sand areas containing gravel, a mobile wet screening operation, off-site disposal of the gravel, and return of sand to the mining areas. These activities are expected to take approximately 2 to 3 months to complete and are expected to generate varying levels of traffic.

This alternative is expected to generate traffic during mining and screening operations due to workers traveling to and from the site. The anticipated maximum number of onsite employees during construction is likely to be 10 or less workers. Therefore, there are expected to be 10 or less trips generated in the A.M. peak hour and 10 or less trips generated in the P.M. peak hour.



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Potential Gravel Haul Routes and Average Daily Traffic Volumes (ADTs)
Shell Guadalupe Dunes Gravel Remediation In-lieu Project

FIGURE 3.10-1

This alternative would involve removal of approximately 688 cubic yards of remnant gravel, which will be hauled from the site in trucks. Based on the production rate achieved during the Pilot Test, approximately two 20-cubic yard roll off bins may be filled and transported off site on a daily basis. This would result in no more than two daily outbound and two daily inbound trips related to gravel transport, with a total daily trip generation of four trucks related to gravel transport. Based on the total amount of gravel to be removed, there would be 35 round trips, or 70 total trips required under this alternative with construction activities occurring over 2 to 3 months. Assuming 70 trips takes place over 2 months, and assuming hauling activities take place 22 days per month, there would be an average of 1.6 truck round trips per day. These hauling activities would occur concurrently with on-site operations. Therefore, a maximum of four daily trips associated with hauling and 20 daily worker trips would result in a maximum of 24 total daily trips generated. This would incrementally increase congestion along West Main Street and the access road. However, the segment of West Main Street that provides access to the Project site is lightly travelled and is primarily used by workers at the Gordon Sand facility and hikers at the Guadalupe-Nipomo Dunes Park. It is not expected that 24 daily trips would result in a significant impact to congestion. Additionally, it is not expected that the increase in vehicles would cause safety problems, as the road is already used by similar vehicles for industrial purposes. Therefore, impacts related to traffic congestion would be less than significant (Class III). Standard County conditions which ensure compliance with haul permit requirements would further minimize transportation impacts associated with hauling of gravel from the Project Site, see Section 3.10.4.1.

Impact ALT2-TT-2. Roadway Degradation.

Access to the Project Site is provided via roadways managed and operated by Caltrans and the County and does not require construction of any new roads. West Main Street is a County-managed roadway. As described in Impact ALT2-TT-1, hauling activities for gravel removal associated with the No Project Alternative would result in a total of 70 heavy truck trips. The two potential drop-off locations for the gravel would be Greka Energy, at 1700 Sinton Road, Santa Maria, CA and Granite Gardner Facility at 400 US-101, Buellton, CA. These routes are approximately 10 and 43 miles long respectively. The primary roadways that would be affected would be the access road and W Main St. Other roadways that could potentially be affected depending on the choice of the drop-off site include Ray Road and Sinton Road for the Greka location and SR 1, Clark Avenue, US-101, and Jonata Road for the Granite Gardner Ranch Facility. These truck trips would occur over the course of 5 to 7 months, for 5 days a week and could potentially result in degradation of the roads. However, delivery trucks would not be allowed to exceed the Caltrans General Rule of gross weight of 20,000 pounds per axle. On-site installation equipment would not exceed maximum permitted delivery truck weights. Additionally, while West Main Street would be the most susceptible street to roadway degradation under this alternative, mitigation measures in the 1982 Final EIR and conditions in the original permit issued to the Husky Oil Company required that the applicant provide funds for the repair, reconstruction, and upkeep of West Main Street. Therefore, impacts related to roadway degradation would be less than significant (Class III). Standard County conditions that ensure compliance with haul permit requirements would further minimize transportation impacts associated with hauling of gravel from the Project Site, see Section 3.10.4.1.

3.10.4.5 Standard County Conditions

Standard County Haul Permit Requirements

Prior to the commencement of construction activity, the Applicant shall apply for a haul permit from the County Department of Public Works, providing the haul route, dates and hours of hauling, type and capacity of hauling equipment, and the type as well as the volume of material being hauled.

TIMING: The Applicant shall submit the haul permit application no later than 14 days prior to the start of hauling operations.

MONITORING: County inspection personnel will document the condition of the roadway prior to the commencement of any hauling and Road Division personnel shall perform inspection within applicable County road rights-of-way.

Table 3.10-1. Summary of Transportation and Traffic Impacts

Transportation and Traffic Impacts	Mitigation Measure	Residual Significance
Proposed Project		
No Impact	N/A	N/A
No Project Alternative		
Impact ALT1-TT-1. Traffic congestion impacts from mining and removal activities	Standard County Haul Permit Requirements	Less than Significant (Class III)
Impact ALT1-TT-2. Roadway Degradation	Standard County Haul Permit Requirements	Less than Significant (Class III)
Partial Gravel Removal Alternative		
Impact ALT2-TT-1. Traffic congestion impacts from mining and removal activities	Standard County Haul Permit Requirements	Less than Significant (Class III)
Impact ALT2-TT-2. Roadway Degradation	Standard County Haul Permit Requirements	Less than Significant (Class III)