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## VII. ALTERNATIVES TO THE PROPOSED PROJECT

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### INTRODUCTION

The *CEQA Guidelines* require that EIRs identify and evaluate a reasonable range of alternatives designed to reduce the significant environmental impacts of the project while still meeting project objectives. The *CEQA Guidelines* also set forth the intent and extent of alternatives analysis to be provided in an EIR. Those considerations are discussed below.

### ALTERNATIVES TO THE PROPOSED PROJECT

Section 15126.6(a) of the *CEQA Guidelines* states: "An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparable merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation. An EIR is not required to consider alternatives which are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason."

#### Purpose

Section 15126.6(b) of the *CEQA Guidelines* states, "Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment, the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of project objectives, or would be more costly."

#### Project Objectives

As stated above, the range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic project objectives. The ten objectives of the proposed project are to:

- Construct a replacement asphalt facility capable of receiving, processing, and providing a variety of asphalt, recycled asphalt products, and general construction materials such as sand and rock.
- Construct a facility with capacity similar to the temporary facility, capable of continuing to meet the asphalt and construction material demands of private and government projects in southern Sonoma County and Marin County.
- Reduce truck trips by locating the facility within reasonable distance of source quarries located in Sonoma County and Marin Counties, as well as within reasonable proximity of the southern Sonoma County and Marin County markets.
- Locate the facility in proximity to a naturally deep-water site along the Petaluma River where a barge and off-load facilities can accommodate deliveries of aggregate by water.

- Locate the facility in proximity to any railroad tracks for efficient distribution of material if the railroad option becomes feasible in the future.
- Provide easy access to and from Highway 101 in both the north-bound and south-bound directions to minimize the plant's effect on local traffic unless delivering a finished product for local needs.
- Locate the facility among surrounding industrial or manufacturing land uses that are compatible with the proposed asphalt and recycling operations.
- Locate the facility away from downtown areas and commercial and office land uses.
- Minimize visibility of operations occurring on the site by screening the site from the highway and nearby residences.
- Locate, design and operate the facility in a manner that will create minimal disturbance of critical habitat such as wetlands and the Petaluma River.

### **Selection of a Reasonable Range of Alternatives**

Section 15126.6(c) of the *CEQA Guidelines* states: "The range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. The EIR should briefly describe the rationale for selecting the alternatives to be discussed. The EIR should also identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination. Additional information explaining the choice of alternatives may be included in the administrative record. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts."

### **Overview of Selected Alternatives**

The alternatives to be analyzed in comparison to the proposed project include:

- Alternative A: No Project Alternative
- Alternative B: Reduced Production Alternative
- Alternative C: Modified Site Plan Alternative
- Alternative D: Alternative Site

### **Alternatives Rejected as Infeasible**

As described above, Section 15126.6(c) of the *CEQA Guidelines* requires EIRs to identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process, and briefly explain the reasons underlying the lead agency's determination. The following alternatives were rejected as infeasible.

**Public Access**

An alternative was analyzed that would construct the project as proposed and also provide the public with recreational access to the Petaluma River at Area A (beyond the current access available to the residential units located along the River). This alternative would increase the number of trips to the site and would therefore increase impacts to air quality, noise, and traffic. This alternative was rejected as infeasible because of the increased risk to public safety associated with the public crossing the railroad tracks and the project operations that would occur at Area A. A public access alternative would not necessarily be compatible with the proposed project, would not meet any of the project objectives, and would not reduce or eliminate any of the project's significant and unavoidable impacts.

**Upland**

An alternative was analyzed that would construct the project so that the barge off-loading facility would be developed on Area A instead of within the Petaluma River as proposed by the project. This alternative was rejected as infeasible because the differences in elevation between the barges and Area A would require the construction of a bulkhead along the River, similar to the Shamrock Facility to the north. The bulkhead could require the filling or modifications to the tidal inlet at Area A. Ultimately, this alternative would result in greater impacts to biological resources, hydrology, and water quality compared to the proposed project, and would not reduce or eliminate any of the project's significant and unavoidable impacts.

**Freight**

An alternative was analyzed that would develop Areas B, C, and D as proposed but would receive materials via freight train instead of barge, and would deliver materials via a combination of freight train and trucks depending on the location of the materials to be delivered. Area A would not be developed. Under this alternative, the proposed conveyor system over the railroad tracks would not be constructed. An alternative involving freight trains would both reduce and increase impacts associated with the proposed project. For example, it would reduce the visual impacts to Shollenberger Park users and residents along the River associated with the conveyor and the barge off-loading at Area A. It would also reduce the impacts to noise, biological resources and hydrology and water quality associated with the development of Area A. However, this alternative would result in an increase in freight trips with an associated increase in air quality and noise impacts. While this alternative would meet all but two of the project objectives, it would create new significant impacts, and rely on the use of railroad tracks that are currently out of service.

The North Coast Railroad Authority (NCRA) released a Notice of Preparation to prepare an EIR for the North Coast Railroad Authority Russian River Division Freight Rail Project in July of 2007. NCRA proposes to resume freight rail service along a 142-mile corridor from Willits, Mendocino County, southward to Lombard, Napa County.<sup>1</sup> The NCRA hopes to complete repairs on the 62-mile section of rail from Napa County to Windsor by the summer of 2008.

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<sup>1</sup> NCRA Website <http://www.northcoastrailroad.org/index.html>. Retrieved by CAJA Staff on October 3, 2007.

Additionally, the Sonoma Marin Area Rail Transit District (SMART) is preparing a Supplemental EIR that will analyze higher levels of freight rail services as part of the cumulative context, among other changes proposed since the SMART Final EIR was certified in July 2006. Comments on the Notice of Preparation were due on October 23, 2007.

Although rail improvements are proposed, until they have been approved and completed, this would not be a feasible alternative for the distribution of materials to and from the project site. Additionally, this alternative is likely infeasible for importing materials from the Dutra quarry in San Rafael to the project site because the railroad tracks are not located near the Dutra quarry in San Rafael. Specifically, the railroad tracks are situated along Highway 101 approximately 3 miles west of the quarry, requiring trucks to haul materials to the railroad tracks via Point San Pedro Road. This would not meet the project objective to reduce truck trips, and would increase impacts to traffic, air quality, and noise due to the increased truck trips. Additionally, using current technology, this alternative would require construction of a separate railway spur line onto the project site for offloading, which would compromise the area needed for the proposed on-site facilities. This alternative could also require construction of a separate railway spur in San Rafael which could result in additional environmental impacts depending on the location of such improvements. As a result, importation and exportation of material by freight may become feasible in the future, but is not feasible now.

#### ***Below Grade Conveyor***

An alternative was analyzed to construct the project as proposed with the exception that the conveyor system would be below grade beneath the railroad tracks. This alternative would have similar impacts to biological resources, cultural resources, geology and soils, hazards and hazardous materials, land use, and traffic. This alternative would reduce the aesthetic, air quality, and noise impacts associated with an elevated conveyor over the railroad tracks. However, this alternative would present significant maintenance challenges and could require the construction of a railroad bridge over the below grade conveyor. This alternative was rejected as infeasible because the high groundwater table below the project site would be encountered during construction and operation of a below grade conveyor, resulting in increased hydrology and potential flooding impacts.

#### ***Shamrock River Access***

An alternative was analyzed to develop Areas B, C, and D as proposed but to receive aggregate materials via barge utilizing the existing barge off-loading facility on the adjacent Shamrock property. Under this alternative, the proposed conveyor system over the railroad tracks would not be constructed and Area A would not be developed. Instead, off-loaded materials would be transported from the existing Shamrock barge facility to the site via truck. This alternative would have similar impacts to cultural resources, geology and soils, hazards and hazardous materials, and land use policy. This alternative would reduce aesthetic impacts to Shollenberger Park users and residents on the River but would increase truck trips to the existing barge off-loading facility, which would increase air quality, noise, and traffic impacts. This alternative would eliminate impacts to biological resources and hydrology and water quality associated with development of Area A. However, in a letter from Landing Way Depot (Shamrock Materials) to The Dutra Group dated February 28, 2007, Shamrock indicated that their facility is designed to maximize the storage capacity for concrete aggregates and that there is no excess capacity available for non-conforming aggregate (e.g. asphalt aggregate). Therefore, this alternative was rejected as infeasible.

### ***Area A Only***

An alternative to develop only Area A of the project site was rejected as infeasible because, as described above, Area A is not large enough to accommodate the proposed project. This alternative also would not meet the objectives of the proposed project.

### ***Areas B, C and D Only***

An alternative to develop only Areas B, C and D of the site would reduce the project's significant impacts at Area A (i.e., biological, visual, noise from tugboats). However, without using Area A, the project would have to find alternative means to provide materials for processing, therefore this alternative would not meet the project objective to reduce truck trips, which would increase impacts from traffic, noise and air quality. Additionally, this alternative was rejected as infeasible because it would not meet the applicant's primary objective: Locate the facility in proximity to a naturally deep-water site along the Petaluma River where a barge and off-load facilities can accommodate deliveries of aggregate by water.

### ***Off-Site Relocation***

The following off-site locations were analyzed as potential alternatives sites for the proposed project.

- **Downtown Petaluma:** An alternative site in downtown Petaluma was analyzed. This alternative was rejected as infeasible because no property of suitable size could be identified. Additionally, much of the waterfront in downtown Petaluma is being converted from industrial to commercial and/or residential mixed uses and the proposed asphalt facility would be incompatible with these uses. Truck traffic in the downtown area could create significant traffic congestion and safety hazards on local surface streets.
- **Shollenberger Park:** An alternative site at Shollenberger Park was analyzed. This alternative was rejected as infeasible because Shollenberger Park is dedicated open space.
- **Port Sonoma:** An alternative site at Port Sonoma was analyzed. This alternative was rejected as infeasible because it would require constant dredging to support large deep water barges, and thus would not provide barge access. Additionally, the site currently includes a recreational boating marina that raise compatibility issues for an asphalt plant with associated truck and barge traffic. This site would also increase the delivery time to the southern Sonoma County market without decreasing the time to serve the Marin County market, resulting in additional truck traffic on area highways. The visibility of this site would also require extensive screening to mitigate the plant's proximity from both east bound and west bound site lines.
- **Lakeville Highway/Highway 37:** An alternative site at Lakeville Highway/Highway 37 was analyzed. This alternative was rejected as infeasible because of traffic congestion, truck access issues, and travel times to the market. In addition, while there are some waterways and sloughs providing access to San Pablo Bay, barge access would not be feasible. Siltation rates from San Pablo Bay are very high, requiring continual dredging to maintain access. Furthermore, the north portion of San Pablo Bay is very shallow, and a mile or more of channel would need to be constructed and continually dredged in order to maintain access to the Bay.
- **Redwood Landfill Marin County:** An alternative site at the Redwood Landfill was analyzed. This site was rejected as infeasible because the Landfill has extensive habitat areas, and access to the Petaluma River would require new facilities and extensive dredging. The distance from the Petaluma

River to Highway 101 is over one mile at this site, further increasing truck miles to deliver the finished product. This alternative site would not meet the project objective to reduce truck trips, nor would it meet the objective to locate the facility near deep water for barge access. Additionally, this alternative would require cooperation from the County of Marin.

- **Existing Temporary Dutra Site:** An alternative site at Dutra's temporary facility was analyzed. The applicant recently sold this property and is leasing the property for a period of three years. The County has indicated that it is not possible for the applicant to get an extension on the lease. In addition, this alternative site was rejected as infeasible because it is not of sufficient size to accommodate the proposed project.

### **Assumptions and Methodology**

The alternatives analysis is presented as a comparative analysis to the proposed project and assumes that all applicable mitigation measures proposed for the project would apply to each alternative. To develop project alternatives in this Draft EIR, the preparers reviewed the significant and unavoidable impacts in Section V of this Draft EIR and identified those impacts that could be substantially avoided or reduced through an alternative, and determined the modifications that would be needed. The modifications were then considered in light of the project objectives to ensure that the alternatives would still meet most of the basic objectives.

The following alternatives analysis compares the potential significant environmental impacts of three alternatives with those of the proposed project for each of the environmental topics analyzed in detail in Section V (Environmental Impact Analysis) of the EIR.

### **Significant and Unavoidable Project Impacts**

Based on the analysis contained in this Draft EIR, implementation of the proposed project would result in significant unavoidable project-specific impacts related to: aesthetics (scenic vistas, visual character), air quality (operational emissions and inconsistency with the Clean Air Plan), land use (conflict with applicable plans, land use incompatibility), traffic (access for neighboring residential land uses) and noise (from barge unloading facility, asphalt plant, recycling facility and operation of all equipment simultaneously). All other project-specific impacts would either be less than significant or less than significant with mitigation.

## **A. NO PROJECT ALTERNATIVE**

### **Description**

As required by CEQA, this subsection analyzes a "No Project" Alternative (Alternative A). The proposed project represents the only land use application for the project site at this time. Therefore, under Alternative A, the proposed project would not be constructed, and the project site would remain in its current condition (i.e., undeveloped with several unpaved roads and varied topography, a hill, trees, wetlands, native grasses, brush, and shrubs). The analysis of Alternative A assumes the continuation of existing conditions as well as development of the related projects described in Section III.B (Related Projects). Alternative A does take into consideration the impacts in September 2005 when unauthorized grading occurred on-site, and that such impacts would still be mitigated. The potential environmental impacts associated with Alternative A are described below and are compared to the significant environmental impacts associated with the proposed project.

**Aesthetics**

Under Alternative A, no further development would occur on the project site and the existing aesthetic characteristics would remain unchanged. There would be no significant and unavoidable impacts to scenic views or visual character, and no mitigation would be required for the less-than-significant impacts from new sources of light and glare at the site. Therefore, Alternative A would eliminate the project's significant impacts to aesthetics.

**Air Quality**

Under Alternative A, no further grading would occur at the site and no facilities would be constructed. Thus, this alternative would not generate any fugitive dust or other pollutant emissions associated with construction activities at the site. Implementation of Alternative A would eliminate the project's mitigated to less-than-significant air quality impacts resulting from short-term construction activities, and would eliminate the project's significant and unavoidable operational air quality impacts. However, while Alternative A would reduce air quality impacts on a local level, such impacts would continue to occur on a regional level as a result of the use of other asphalt plants in Sonoma County and Marin County.

**Biological Resources**

Because the project site would not be developed under Alternative A, no new structures would be built and no human activities would potentially disturb wildlife on or near the site. Thus, this alternative would eliminate the proposed project's mitigated to less-than-significant impacts related to special-status wildlife species, riparian habitat and sensitive natural communities, and wildlife movement and corridors. However, impacts to jurisdictional wetlands have already occurred. Unauthorized grading removed vegetation, disturbed surface soils, and resulted in modifications to some of the existing jurisdictional wetlands and waters on the site. Mitigation measures for past significant impacts to wetlands would still be required under Alternative A, but the proposed enhancement of wetlands in the southern portion of the site would not occur under Alternative A. All other mitigated to less-than-significant impacts would be eliminated under Alternative A.

**Cultural Resources**

Under Alternative A, no ground-disturbing activities would occur. Therefore, this alternative would not have the potential to damage or destroy known and unknown archaeological resources or known and unknown paleontological resources and human remains. Thus, the proposed project's mitigated to less-than-significant impacts to cultural resources would be eliminated under this alternative.

**Geology & Soils**

Under Alternative A, no development would occur on the site. Therefore, this alternative would eliminate the project's impacts related to bedrock rippability and seismic groundshaking, and the project's significant but mitigatable impacts related to other soil/geologic instabilities (i.e., fault rupture; liquefaction, lateral spreading, and post-liquefaction reconsolidation; geologic and soil instabilities; soil erosion/loss of topsoil; expansive soils; differential compaction; and soils supporting stormwater and wastewater effluent embankments).

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**Hazards & Hazardous Materials**

Under Alternative A, no hazardous materials would be stored on or transported to and from the project site. Additionally, no further grading would occur that could cause a release of potential soil contaminants or creation of safety hazards to construction workers or the general public. Therefore, this alternative would eliminate the project's less-than-significant hazards and hazardous materials impacts with mitigation.

**Hydrology & Water Quality**

Under Alternative A, no development would occur on the site. Therefore, no drainage patterns would be altered, no water quality would be degraded, no structures would be placed within 100-year flood zones, and no significant cumulative impacts would occur. Therefore, this alternative would eliminate the project's significant but mitigatable impacts related to hydrology and water quality, but not the project's cumulatively considerable impact relative to phosphorous emissions in the Petaluma River.

**Land Use & Planning**

Because Alternative A would not involve any development or amendments to zoning and general plan designations, this alternative would not result in any impacts related to policy inconsistencies. Additionally there would be no impacts related to land use compatibilities. As such, no significant land use impacts would occur under Alternative A.

**Noise**

Because Alternative A would not include any new construction, there would not be any temporary significant but mitigatable impacts related to construction noise. Additionally noises related to the on-going operations of the asphalt plant, recycling facility, and barge off-loading activities would not occur under this alternative, which would eliminate the project's significant and unavoidable impacts related to these long-term operations.

**Transportation/Traffic**

Under Alternative A, no development on the project site would occur. As such, there would be no increased traffic from the proposed project, and no improved infrastructure relating to project needs. Therefore, the significant but mitigatable traffic impact related to the project would not occur. Under Alternative A, all of these project-specific impacts would be eliminated. However, while Alternative A would reduce truck traffic impacts on a local level, such impacts would continue to occur on a regional level as a result of the use of other asphalt plants in Sonoma County and Marin County.

**Relationship of the Alternative to the Objectives**

Alternative A would not meet any of the project objectives.

**B. REDUCED PRODUCTION ALTERNATIVE****Description**

Alternative B would reduce the size of the recycling and production facilities by approximately 25 percent, resulting in a reduction in asphalt production capacity and recycled concrete and asphalt products similar to the start-up phase of the project described in Section III (Project Description). Under this alternative, the

allowed exports of asphalt product, sand, and aggregate would be approximately 35 percent less than the project at full build out, and import and export of RAP would be 67 percent less. The total number of barge trips would be reduced commensurately. The Reduced Production Alternative would also prohibit night-time operations at Area A, including the off-loading of the barge, as well as overall night-time operations on Areas B and C.

The reduction of aggregate production would allow for smaller stockpiles and a conveyor system on Area C that would be lower in height compared to the proposed project. Roadway alignments and associated grading and drainage improvements would be similar to the proposed project. Likewise, the size, massing, height, and design of the facilities would be similar to that described in Section III, with the exception of the stockpiles and Area C conveyor system.

Except as described above, other characteristics (e.g. lighting, landscaping, and utility connections) would be similar as those of the proposed project, for the purpose of analyzing this alternative. The analysis of Alternative B assumes development of the related projects described in Section III.B (Related Projects). The potential environmental impacts associated with this alternative are described below and are compared to the significant environmental impacts associated with the proposed project. All applicable mitigation measures recommended for the proposed project are incorporated into Alternative B.

### **Aesthetics**

The reduction in asphalt production associated with Alternative B (Reduced Production Alternative) would result in slightly lower stockpiles and conveyor system on Area C. This would result in a reduction but not an elimination of the project's significant and unavoidable impacts to scenic vistas and visual character. By prohibiting night-time operations at the project site, Alternative B would further reduce the project's significant but mitigable impacts related to light and glare.

### **Air Quality**

As the construction footprint would be similar to the proposed project, this alternative would result in similar air quality impacts during construction as the proposed project, which were found to be potentially significant but mitigated to less-than-significant levels. Alternative B would also result in a reduction of the project's operational significant and unavoidable impacts related to air pollutant emissions. While Alternative B would reduce air quality impacts on a local level, such impacts would continue to occur on a regional level as a result of the use of other asphalt plants in Sonoma County and Marin County.

### **Biological Resources**

Given the construction footprint under this alternative would be similar to the proposed project, biological resource impacts associated with Alternative B would be similar to the proposed project which were either found to be less than significant, or less than significant with mitigation. However, because this alternative prohibits night-time operations year-round, Alternative B would further reduce the projects's significant but mitigable impact related to wildlife movement.

**Cultural Resources**

Given the construction footprint under this alternative would be similar to the proposed project, cultural resource impacts (i.e. archaeological, paleontological, and human remains) associated with Alternative B would be similar to the proposed project, which were found to be less than significant with mitigation.

**Geology & Soils**

Alternative B includes a site plan that is similar to the proposed project. Therefore, this alternative would result in similar impacts related to geology and soils (e.g. bedrock rippability, seismic ground shaking, liquefaction, etc.) as would occur under the proposed project, which were determined to be less than significant with mitigation.

**Hazards & Hazardous Materials**

Given the construction footprint and operational characteristics under this alternative would be similar to the proposed project, hazards and hazardous materials impacts associated with Alternative B would be similar to the proposed project, which were found to be less than significant with mitigation.

**Hydrology & Water Quality**

Hydrology and water quality impacts associated with Alternative B would be similar to the proposed project, which were found to be less than significant with mitigation, with the exception of the project's cumulatively considerable impact relative to phosphorous emissions in the Petaluma River.

**Land Use & Planning**

Alternative B would slightly reduce the project's impacts to air quality, noise, aesthetics, and barge trips, which in turn would reduce but not fully eliminate the project's significant and unavoidable land use compatibility impacts. Elimination of night-time operations would also reduce but not eliminate the project's significant and unavoidable land use compatibility impacts. However, this alternative would not remove the project's inconsistencies with land use policies for criteria required for changing the land use designation from Limited Commercial to Limited Industrial.

**Noise**

Alternative B would result in a reduction of the project's significant impacts related to noise emissions from the asphalt plant and recycling facility. The Reduced Production Alternative would also reduce truck trips, which in turn would reduce the project's less-than-significant noise impacts related to vehicle emissions. However, daytime noise impacts from the barge off-loading facility would still be significant and unavoidable under this alternative, similar to the proposed project.

**Transportation/Traffic**

Due to the decrease in production associated with this alternative, it would require fewer barge trips and truck trips than the proposed project. However, traffic impacts would still be either significant and unavoidable, less than significant with mitigation, or less than significant under this alternative, similar to the proposed project. While Alternative B would reduce truck traffic impacts on a local level, such impacts would continue to occur on a regional level as a result of the use of other asphalt plants in Sonoma County and Marin County.

## **Relationship of the Alternative to the Objectives**

Alternative B appears to meet all of the project objectives.

## **C. MODIFIED SITE PLAN ALTERNATIVE**

### **Description**

Alternative C would modify the existing site plan to reduce project impacts related to air quality, noise, aesthetics, land use compatibility, hydrology and water quality, and biological resources. The following modifications are made to the proposed project under this alternative:

- Elimination of the recycling facility and relocation of asphalt plant stockpiles to the southern portion of Area C on the project site;
- Relocation of the asphalt plant further south in Area C, with the conveyor extending across the drainage ditch to stockpiles at the originally-proposed recycle yard;
- Relocation of the barge off-loading facility slightly to the north to avoid the mouth of the tidal inlet at Area A, which would also involve moving the barge docking slightly further north; and
- Realignment of the conveyor at Area A so that it would be situated north of the tidal inlet. The conveyor would run from the pier towards the railroad tracks, turn to the south and run parallel to the tracks before crossing above the tracks and connecting to Area B.

The Modified Site Plan Alternative would also prohibit night-time operations at Area A, including the off-loading of the barge, as well as overall night-time operations on Areas B and C. The modified site plan would eliminate the project's expected production capabilities for recycled products, but would not change asphalt production. Except as described above, other characteristics would be similar to those of the proposed project. This analysis assumes development of the related projects described in Section III.B (Related Projects). The potential environmental impacts associated with this alternative are described below and are compared to the significant environmental impacts associated with the proposed project. All applicable mitigation measures recommended for the proposed project are incorporated into Alternative C.

### **Aesthetics**

By shifting the pier and conveyor at Area A further north, and by moving the asphalt plant and stockpiles further south (associated with the elimination of the recycling facility), this alternative would be less visible from off-site locations such as Highway 101, Petaluma Boulevard South, the Petaluma River, and Shollenberger Park. Also, these site plan modifications would better preserve the views of the River, Sonoma Mountain Range and hills on the west side of Highway 101, potentially minimizing the need for landscape screening which can obstruct scenic vistas. These modifications would reduce, but not completely mitigate the project's significant and unavoidable impacts related to scenic vistas and visual character. Also, because this alternative prohibits night-time operations, it would avoid the project's significant but mitigable impacts related to light and glare.

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**Air Quality**

The construction footprint for Alternative C would be slightly smaller than the proposed project's footprint. Thus, this alternative would result in slightly fewer air quality impacts during construction as the proposed project, which were found to be potentially significant but mitigable to less-than-significant levels. Due to the elimination of the recycle facility under this alternative, odors associated with such a facility would be eliminated, whereas the proposed project would result in less-than-significant impacts related to odors. Shifting the asphalt plant further south and the barge off-loading facility to the north would also reduce the exposure of asphalt plant and barge emissions to the residents along the River. This alternative would also reduce but not eliminate the project's significant operational air quality impacts.

**Biological Resources**

The prohibition of night-time operations year round as well as the relocation of the barge off-loading facility to the north would reduce the project's significant but mitigable impacts to wildlife movement. All other impacts to biological resources under this alternative would either be less than significant, or less than significant with mitigation, similar to the proposed project.

**Cultural Resources**

Given the construction footprint would be smaller under this alternative compared to the proposed project, cultural resource impacts associated with Alternative C would be slightly less than the proposed project, but would still be less than significant with mitigation, similar to the proposed project.

**Geology & Soils**

Alternative C includes a modified site plan that involves less grading compared to the proposed project. The removal of the recycling facility from this alternative could result in slightly fewer employees on the site, which is subject to seismic groundshaking, surface instability, and other geotechnical hazards. Therefore, Alternative C would result in slightly fewer impacts related to geology and soils compared to the proposed project, which were determined to be less than significant with mitigation.

**Hazards & Hazardous Materials**

Given the elimination of the recycle yard under Alternative B, this alternative is anticipated to result in slightly fewer impacts related to hazards and hazardous materials. These impacts would still be less than significant with mitigation, similar to the proposed project.

**Hydrology & Water Quality**

The reduction in the amount of new construction on-site, including the elimination of the recycling facility, would reduce the potential for sedimentation and increased runoff under Alternative C. Potential water quality impacts would be less under this alternative by relocating the barge off-loading facility and overhead conveyor away from the drainage channel at Area A of the site. Overall, Alternative C would further reduce the project's significant but mitigable hydrology and water quality impacts, with the exception of the project's cumulatively considerable impact relative to phosphorous emissions in the Petaluma River.

**Land Use & Planning**

Alternative C would include moving the conveyor and pier at Area A to the north, thus creating a larger buffer between operations on that parcel with the off-site residential uses along the River. The relocation of the asphalt plant and stockpiles to the south of Area C would also provide more distance between such project facilities and the homes along the River. These modifications would reduce the project's impacts to air quality, noise, aesthetics, and barge trips, which in turn would reduce but not fully eliminate the project's significant and unavoidable land use compatibility impacts. Elimination of night-time operations year round would further reduce but not eliminate the compatibility of project operations with the adjacent residences. However, this alternative would not remove the project's inconsistencies with land use policies for criteria required for changing the land use designation from Limited Commercial to Limited Industrial.

**Noise**

The elimination of the recycle yard under this alternative would avoid the project's significant noise impacts from this project component upon nearby sensitive receptors. Similarly, the increased buffer provided between the homes along the River and the facilities on Area A would reduce but not completely eliminate the project's significant and unavoidable noise impact from the barge off-loading facility. Moving the asphalt plant to the south would also reduce the project's significant noise impacts from the plant to nearby sensitive uses. Significant project noise impacts related operation of all facilities simultaneously would also be reduced but not eliminated under this alternative.

**Transportation/Traffic**

Alternative C would generate slightly fewer vehicle trips due to the elimination of the recycle yard. The decreased building intensity on-site provided under this alternative would also allow for more room for on-site circulation of trucks and other vehicles. Overall, traffic impacts under this alternative would either be significant and unavoidable, less than significant or less than significant with mitigation, similar to the proposed project.

**Relationship of the Alternative to the Objectives**

Alternative C appears to meet all of the project objectives with the exception that it would not meet the objective to provide recycled asphalt products.

**D. ALTERNATIVE PROJECT SITE**

Although access to Highway 101 is limited, and parcels east of the highway have limited development potential due to floodplains, biotic resources along the River, and Scenic Design overlay zoning, areas southeast of the site along the Petaluma River were analyzed for alternative project sites.

An alternative was analyzed to develop Areas B, C, and D as proposed but to receive aggregate materials via barge utilizing APN 019-320-020, a 15.53-acre parcel situated east of Areas C and D of the project site (along the railroad tracks) and along the Petaluma River (see Figure V.H-2). The applicant does not own this parcel and the owner is apparently not willing to sell the property to the applicant. This parcel would include barge off-loading facilities and the starting point for the overhead conveyor instead of Area A of the project site.

No development would occur on Area A, which is owned by the project applicant, under this alternative.<sup>2</sup> The predominantly undeveloped parcel (APN 019-320-020) is zoned M3 and includes an unpaved road along the River. The unpaved road provides access to at least two additional parcels down the River (e.g. APNs 019-320-006 and 019-320-007).

Under this alternative, the starting point of the proposed conveyor system over the railroad tracks would be relocated from Area A to APN 019-320-020, and the conveyor would extend into Area C of the project site, whereas the project requires the conveyor to extend into Areas B and C. The relocation of these various project components from Area A to APN 019-320-020 would not change production capacity.

Except as described above, other characteristics would be similar as those of the proposed project, for the purpose of analyzing this alternative. The analysis of Alternative D assumes development of the related projects described in Section III.B (Related Projects). The potential environmental impacts associated with this alternative are described below and are compared to the significant environmental impacts associated with the proposed project. All applicable mitigation measures recommended for the proposed project are incorporated into Alternative D.

### **Aesthetics**

Under Alternative D, the barge off-loading facility and conveyor would still be highly visible by visitors to Shollenberger Park further south along the Park trail. While the barge off-loading facilities and conveyor would be less visible from Highway 101, Alternative D would still result in significant impact relative to scenic vistas and visual character. Additionally, the barge off-loading facilities would still emit new sources of light in an area that currently has no development, resulting in similar light and glare impacts compared to the project. Therefore, Alternative D would not eliminate the project's significant impacts to aesthetics.

### **Air Quality**

As the construction footprint would be similar to the proposed project, Alternative D would result in similar air quality impacts during construction as the proposed project, which were found to be potentially significant but mitigated to less-than-significant levels. Given that production levels would be the same as the project under Alternative D, this alternative would result in similar air quality impacts associated with the operational phase of the project.

### **Biological Resources**

By eliminating development from Area A and by not requiring the conveyor facility to be within Area B of the project site, this alternative reduces the project's significant impacts to wildlife movement with regard to the existing egret/heron colony in Area B. All other impacts to biological resources under this alternative would either be less than significant, or less than significant with mitigation, similar to the proposed project.

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<sup>2</sup>

*An alternative involving the entire project on APN 019-320-020 was rejected as infeasible because it does not provide convenient access to the highway and ultimately would require trucks to use Landing Way and to cross the railroad tracks.*

**Cultural Resources**

Moving the barge off-loading facilities to APN -020 would still involve construction and ground disturbing activities. Therefore, cultural resource impacts associated with Alternative D would likely remain the same as the proposed project, but would still be less than significant with mitigation, similar to the proposed project.

**Geology & Soils**

Alternative D would not change the project's potential impacts from seismic groundshaking, surface instability, and other geotechnical hazards. However, these impacts were determined to be less than significant with mitigation.

**Hazards & Hazardous Materials**

Under Alternative D, project impacts related to hazards and hazardous materials would still be less than significant with mitigation, similar to the proposed project.

**Hydrology & Water Quality**

Unlike the proposed project, Alternative D would not involve any development on Area A of the project site, which includes a small tidal inlet. APN -020 does not include tidal inlets. Therefore, Alternative D would reduce the project's less-than-significant impacts related to the potential obstruction of tidal flow in and out of an inlet due to the project's barge off-loading facility proposed to be constructed at the mouth of the inlet. All other hydrology and water quality impacts associated with Alternative D would be similar to the proposed project, which were found to be less than significant with mitigation, with the exception of the project's cumulatively considerable impact relative to phosphorous emissions in the Petaluma River.

**Land Use & Planning**

Alternative D would include moving the conveyor and barge off-loading facilities at Area A to APN -020, thus creating a larger buffer between these operations and off-site residential uses along the River. The modifications associated with Alternative D would reduce the project's impacts to noise, which in turn would reduce but not fully eliminate the project's significant and unavoidable land use compatibility impacts. However, this alternative would not remove the project's inconsistencies with land use policies for criteria required for changing the land use designation from Limited Commercial to Limited Industrial.

**Noise**

Alternative D would move the barge off-loading facilities and conveyor from Area A to south of the existing residences along the River. The increased buffer provided between the homes along the River and the facilities would reduce but not completely eliminate the project's significant and unavoidable noise impacts.

**Transportation/Traffic**

Alternative D would not substantially change the project's impacts related to traffic. APN -020 is further south along the River, which would require maintenance vehicles for barge facilities to drive a bit further, however this would not be significant. Overall, traffic impacts under this alternative would either be significant and unavoidable, less than significant or less than significant with mitigation, similar to the proposed project.

### **Relationship of the Alternative to the Objectives**

Alternative D appears to meet all of the project objectives.

### **E. ENVIRONMENTALLY SUPERIOR ALTERNATIVE**

In addition to the discussion and comparison of impacts of the proposed project and the alternatives, Section 15126.6 of the *CEQA Guidelines* requires that an "environmentally superior" alternative be selected and the reasons for such a selection disclosed. In general, the environmentally superior alternative is the alternative that would be expected to generate the least amount of significant impacts. In this case, Alternative A (No Project Alternative) would result in the least amount of significant environmental impacts (see Table VII-1). However, Section 15126.6 of the *CEQA Guidelines* requires that an environmentally superior alternative be selected other than the No Project Alternative. Based on the alternatives analysis provided above and the Alternatives Comparison Table (Table VII-1), it has been determined that Alternative D would result in the least amount of adverse impacts and thus has been chosen as the environmentally superior alternative.

**Table VII-1  
Alternatives Comparison**

Impact Area	Impacts of the Proposed Project	Alternative A (No Project)	Alternative B (Reduced Production)	Alternative C (Modified Site Plan)	Alternative D (Alternate Site)
<b>Aesthetics</b>					
Scenic Vistas	SU	No Impact	SU	SU	SU
Visual Character	SU	No Impact	SU	SU	SU
Light and Glare	LTS w/Mit.	No Impact	LTS	LTS	LTS w/Mit.
<b>Air Quality</b>					
Construction Emissions	LTS w/Mit.	No Impact	LTS w/Mit.	LTS w/Mit.	LTS w/Mit.
Operational Emissions	SU	No Impact	SU	SU	SU
CO Hotspots	LTS	No Impact	LTS	LTS	LTS
Project Operation Emissions of TACs	LTS	No Impact	LTS	LTS	LTS
Odors	LTS	No Impact	LTS	LTS	LTS
Conflict with or Obstruct Implementation of an Applicable Air Quality Plan	SU	No Impact	SU	SU	SU
<b>Biological Resources</b>					
Special-Status Plant Species	LTS w/Mit.	No Impact	LTS w/Mit.	LTS w/Mit.	LTS w/Mit.
Special-Status Wildlife Species	LTS w/Mit.	No Impact	LTS w/Mit.	LTS w/Mit.	LTS w/Mit.
Riparian Habitat and Sensitive Natural Community	LTS w/Mit.	No Impact	LTS w/Mit.	LTS w/Mit.	LTS w/Mit.
Jurisdictional Wetlands and Waters	LTS w/Mit.	LTS w/ Mit. (Impact occurred Sept. 2005)	LTS w/Mit.	LTS w/Mit.	LTS w/Mit.
Wildlife Movements and Corridors	LTS w/Mit.	No Impact	LTS w/Mit.	LTS w/Mit.	LTS w/Mit.
Wildlife Nursery	LTS w/Mit.	No Impact	LTS w/Mit.	LTS w/Mit.	LTS w/Mit.
Conflict with Local Policies and Ordinances	LTS	No Impact	LTS	LTS	LTS
Conflict with Habitat Conservation Plan	LTS	No Impact	LTS	LTS	LTS

**Table VII-1  
Alternatives Comparison**

Impact Area	Impacts of the Proposed Project	Alternative A (No Project)	Alternative B (Reduced Production)	Alternative C (Modified Site Plan)	Alternative D (Alternate Site)
<b>Cultural Resources</b>					
Historical	LTS w/Mit.	No Impact	LTS w/Mit.	LTS w/Mit.	LTS
Archaeological	LTS w/Mit.	No Impact	LTS w/Mit.	LTS w/Mit.	LTS w/Mit.
Paleontological	LTS w/Mit.	No Impact	LTS w/Mit.	LTS w/Mit.	LTS w/Mit.
Human Remains	LTS w/Mit.	No Impact	LTS w/Mit.	LTS w/Mit.	LTS w/Mit.
<b>Geology &amp; Soils</b>					
Seismic Groundshaking	LTS w/Mit.	No Impact	LTS w/Mit.	LTS w/Mit.	LTS w/Mit.
Surface Instability	LTS w/Mit.	No Impact	LTS w/Mit.	LTS w/Mit.	LTS w/Mit.
Ground Failure and Cracking	LTS w/Mit.	No Impact	LTS w/Mit.	LTS w/Mit.	LTS w/Mit.
Expansive Soils and Differential Settlement	LTS w/Mit.	No Impact	LTS w/Mit.	LTS w/Mit.	LTS w/Mit.
<b>Hazards &amp; Hazardous Materials</b>					
On-site Use, Storage, and Disposal	LTS w/Mit.	No Impact	LTS w/Mit.	LTS w/Mit.	LTS w/Mit.
Release of Potential Soil Contaminants	LTS w/Mit.	No Impact	LTS w/Mit.	LTS w/Mit.	LTS w/Mit.
Creation of Safety Hazards	LTS w/Mit.	No Impact	LTS w/Mit.	LTS w/Mit.	LTS w/Mit.
Transportation	LTS w/Mit.	No Impact	LTS w/Mit.	LTS w/Mit.	LTS w/Mit.
<b>Hydrology &amp; Water Quality</b>					
Alter the Drainage Pattern Resulting in Substantial Erosion or Siltation	LTS w/Mit.	No Impact	LTS w/Mit.	LTS w/Mit.	LTS w/Mit.
Alter the Drainage Pattern Resulting in Increase of Rate or Amount of Surface Runoff	LTS	No Impact	LTS	LTS	LTS
Wetland Maintenance	LTS w/Mit.	No Impact	LTS w/Mit.	LTS w/Mit.	LTS w/Mit.
Degrade Water Quality	LTS w/Mit.	No Impact	LTS w/Mit.	LTS w/Mit.	LTS w/Mit.
Structures within 100-Year Flood Zone	LTS	No Impact	LTS	LTS	LTS

**Table VII-1  
Alternatives Comparison**

Impact Area	Impacts of the Proposed Project	Alternative A (No Project)	Alternative B (Reduced Production)	Alternative C (Modified Site Plan)	Alternative D (Alternate Site)
<b>Land Use</b>					
Conflict with Applicable Plans, Policies, or Regulations	SU	No Impact	SU	SU	SU
Land Use Compatibility	SU	No Impact	SU	SU	SU
<b>Noise</b>					
Temporary or Periodic Increases - Construction	LTS w/Mit.	No Impact	LTS w/Mit.	LTS w/Mit.	LTS w/Mit.
Exposure of Persons to Existing Excessive Noise Levels	LTS	No Impact	LTS	LTS	LTS
Construction-Related Groundborne Vibration	LTS	No Impact	LTS	LTS	LTS
Excessive Operational Groundborne Vibration	LTS	No Impact	LTS	LTS	LTS
Off-site Traffic Noise	LTS	No Impact	LTS	LTS	LTS
Operational Permanent Increase - Asphalt Plant	SU	No Impact	SU	SU	SU
Operational Permanent Increase - Recycling Plant	SU	No Impact	SU	N/A	SU
Operational Permanent Increase - Barge Unloading Facility	SU	No Impact	SU	SU	SU
Operational Permanent Increase - Fire Dept.	LTS	No Impact	LTS	N/A	LTS
Operational Permanent Increase - Combined Operations	SU	No Impact	SU	SU	SU
<b>Transportation &amp; Traffic</b>					
Intersection Level of Service Impacts	LTS	No Impact	LTS	LTS	LTS
Queuing Impacts	LTS	No Impact	LTS	LTS	LTS

**Table VII-1  
Alternatives Comparison**

<b>Impact Area</b>	<b>Impacts of the Proposed Project</b>	<b>Alternative A (No Project)</b>	<b>Alternative B (Reduced Production)</b>	<b>Alternative C (Modified Site Plan)</b>	<b>Alternative D (Alternate Site)</b>
Highway Impacts	LTS w/Mit.	No Impact	LTS w/Mit.	LTS w/Mit.	LTS w/Mit.
Safety Impacts	LTS w/Mit.	No Impact	LTS w/Mit.	LTS w/Mit.	LTS w/Mit.
Barge Operation Impacts	LTS	No Impact	LTS	LTS	LTS
Transportation Policy Impacts	LTS w/Mit.	No Impact	LTS w/Mit.	LTS w/Mit.	LTS w/Mit.
Access for Neighboring Residential Uses	SU	No Impact	SU	SU	SU

*Notes: SU = Significant and Unavoidable, LTS w/Mit. = Less than Significant with Mitigation, LTS = Less than Significant, N/A = Not Applicable.*