City of Ventura

Olivas Park Drive Extension Project

Final

Environmental Impact Report

SCH # 1995081004

Volume II: Appendices

June 2014

rincon

Environmental Scientists Planners Engineers

City of Ventura

Olivas Park Drive Extension Project

Final
Environmental Impact Report

SCH# 1995081004
Project #1805
EIR–11–10–4397
GPA-3-13-15080
Z-3-13-15081
SPA-3-13-15082
Anex-3-13-15083

Volume II: Appendices

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City of Ventura
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Ventura, CA 93001

Prepared with the assistance of:

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Ventura, California 93003

June 2014

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City of Ventura
Olivas Park Drive Extension Project

Environmental Impact Report

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Appendix A

Notice of Preparation, Responses, and Initial Study

Revised Notice of Preparation

To: Interested Parties

From: City of San Buenaventura
Public Works Department
501 Poli Street
P.O. Box 99
Ventura, CA 93002-0099

Subject: Revised Notice of Preparation of a Draft Environmental Impact Report
Olivas Park Drive Extension Project

On December 8, 2010, a Notice of Preparation (NOP) for the proposed project was distributed to the State Clearinghouse, responsible agencies, and interested parties for a 30-day review period that ended on January 7, 2011. This revised NOP is being circulated because the project has been revised to include additional acreage, as well as the proposed land use changes that would allow for additional development, and abandonment of infrastructure systems.

The City of San Buenaventura (Ventura) will be the Lead Agency for the preparation of a draft environmental impact report (EIR) for the proposed Olivas Park Drive Extension Project. The proposed project would involve three primary elements, including: (1) an approximately 4,500 linear foot extension of Olivas Park Drive between Golf Course Drive and Johnson Drive; (2) an approximately 5,800 linear-foot levee/floodwall; and (3) a General Plan Amendment and Zone Change for several parcel within an approximately 79.88-acre area located northwest of the proposed Olivas Park Drive extension and levee. The proposed land use changes would allow for the development of the project areas with approximately 1,258,000 square feet of commercial uses and 75,000 square feet of industrial uses. Additionally, the proposed roadway extension and levee construction would trigger the closure and abandonment of the of the Montalvo Municipal Improvement District's wastewater treatment facility and the construction of appurtenant infrastructure to redirect wastewater flows to the City of Ventura Wastewater Treatment Plant. The overall objectives of the Olivas Park Drive Extension project are to:

- *To improve circulation in the area by providing a link between Johnson Drive and the current terminus of Olivas Park Drive*
- *To protect existing and future development in the project site vicinity from flooding along the Santa Clara River*
- *To allow for the logical development of the project site vicinity with commercial uses compatible with those within and around the Ventura Auto Center*
- *To allow for commercial development that would provide local jobs and increase the City's sales tax base*

The Draft EIR will examine the following issue areas on the City's environmental checklist:

- *Aesthetics*
- *Agricultural Resources*
- *Air Quality/Greenhouse Gas Emissions*

- *Biological Resources*
- *Hazards and Hazardous Materials*
- *Hydrology and Water Quality*
- *Land Use and Planning*
- *Transportation/Traffic*
- *Water and Sewer Services*

The project description, location, and discussion of the project's potential environmental effects are contained in the attached Initial Study.

The City is seeking input on the scope of the environmental analysis for the proposed project. Please send your response to Lucho Rodriguez, Project Manager, Public Works Department, at the address shown above. Mr. Rodriguez can be reached at (805) 654-7742. Please provide the name of a contact person in your agency when responding. Materials related to the Olivas Park Drive Extension Project are available for review at the City of Ventura Public Works Department, Ventura City Hall, 501 Poli Street in Ventura. Background materials can also be viewed online at http://www.ci.ventura.ca.us.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than January 21, 2013.

Project Title: Olivas Park Drive Extension

Project Applicant: City of Ventura, Public Works Department

Date 12/21/12

Signature

Title Principal, Rincon Consultants
(consultant to City)

Telephone (805) 644-4455

VENTURA COUNTY
AIR POLLUTION CONTROL DISTRICT
Memorandum

TO: Laura Hocking/Dawnyelle Addison, Planning

DATE: January 19, 2011

FROM: Alicia Stratton

SUBJECT: Request for Review of Notice of Preparation for an Environmental Impact Report for the Olivas Park Extension Project, City of Ventura (Reference No. 10-043)

Air Pollution Control District staff has reviewed the subject Notice of Preparation for an Environmental Impact Report (NOP), which is a proposal to extend Olivas Park Drive between Perkin Avenue and Johnson Drive for approximately 4,500 ft., a 5,800-ft. levee/floodwall or an alternate 7,000 ft. levee/floodwall extending to a point upstream of U.S. Highway 101, along the north side of the Santa Clara River, and a General Plan amendment for an approximately 25.4-acre area between the proposed Olivas Park Drive extension and levee. The objective of the project is to improve circulation by providing a link between Johnson Drive and the terminus of Olivas Park Drive, to protect existing and future development from flooding, to allow for the logical development of the vicinity with commercial uses compatible with those within the Ventura auto Center, and to allow for commercial development that would provide local jobs and increase the City's sales tax base.

District staff recommends that the air quality section of the draft EIR be prepared in accordance with the 2003 *Ventura County Air Quality Assessment Guidelines* (2003 Guidelines). The air quality analysis should evaluate all potential air quality impacts that may result from the project, both short-term (construction) and long-term (operational based on project buildout). Specifically, the air quality assessment should consider reactive organic compound, nitrogen oxide and fugitive dust, including PM10, emissions from all project-related motor vehicles and construction equipment.

A carbon monoxide screening analysis should be conducted for any project-impacted roadway intersection that are currently operating, or that are expected to operate at, Levels of Service D, E, or F, or at any project-impacted roadway intersection that may be a CO hotspot. If a potential hotspot is identified, the District recommends that a complete CALINE3 or CALINE4 carbon monoxide analysis be conducted for that intersection.

The air quality chapter should also address greenhouse gas emissions from the project.

If the project is determined to have a significant impact on regional and/or local air quality, the EIR should include all feasible mitigation measures.

If you have any questions, please call me at (805) 645-1426.

PUBLIC WORKS AGENCY
TRANSPORTATION DEPARTMENT
Traffic, Advance Planning & Permits Division

M E M O R A N D U M

DATE: January 7, 2011

TO: RMA – Planning Division
Attention: Laura Hocking

FROM: Behnam Emami, Engineering Manager II

SUBJECT: REVIEW OF DOCUMENT 10-043
Notice of Preparation (NOP) of Draft Environmental Impact Report (DEIR) for the Olivas Park Drive Extension (Case EIR-11-10-4397) and Draft Initial Study (DIS). Road construction/extension, levee/floodway construction and coordination with City of Oxnard, storm drain construction, and General Plan amendment for 25.4 acres. Olivas Park Drive from Perkin Avenue to Johnson Drive / Auto Center Drive, Ventura (city).
Lead Agency: **City of Ventura**
APNs 138-0-230-75, 138-0-238-20, 139-0-0105-70, 179-0-050-020/030/130

Pursuant to your request, the Public Works Agency -- Transportation Department has reviewed the subject Notice of Preparation (NOP) of Draft Environmental Impact Report (DEIR) for the Olivas Park Drive Extension (Case EIR-11-10-4397) and Draft Initial Study (DIS).

The proposed project is the: (1) construction of approximately 4,500 lineal feet of Olivas Park Drive from Perkin Avenue to Johnson Drive in the City of Ventura; (2) construction of 5,800 or 7,000 lineal feet of levee/floodwall along the north side of the Santa Clara River; (3) coordination with the City of Oxnard for construction of a levee/floodway on the south side of the Santa Clara River; (4) construction of a 24-inch storm drain; and (5) a General Plan amendment to redesignate approximately 25.4 acres between the road extension and proposed levee from "Agriculture" to "Commerce". The land is in the unincorporated area of the county and the City of Ventura is currently processing an application through the Ventura Local Agency Formation Commission (LAFCO) to annex the land.

We offer the following comments:

1. We concur with the proposed project for those areas under the purview of the Transportation Department. The extension of Olivas Park Drive would be an enhancement to the County's Regional Road Network; therefore we support the road extension as proposed. Furthermore, the road extension listed as a Mid-Term Project for the Fiscal Years 2015/16 through Fiscal Year 2024/25 on Page 165 of the 2009 Update to the Ventura County Congestion Management Program adopted on July 10, 2009 (RTP #5A0723).

2. We support the annexation of the land area between the Olivas Park Drive Extension and the proposed levee/floodway. The DEIR should include provisions and conditions concerning the annexation to avoid the creation of county "islands". LAFCO guidelines under Section 3.2.1 state that cities shall annex entire roadway sections and complete intersections adjacent to the territory proposed to be annexed.

3. The cumulative impact of this project, when considered with the cumulative impact of all other approved (or anticipated) development projects in the County, is potentially significant. The condition for paying the County Traffic Impact Mitigation Fee (TIMF) to address the cumulative impacts of this project on the County Regional Road Network should be included in the DEIR in accordance with the terms of the Reciprocal Traffic Agreement between the City of Ventura and the County. The DEIR should address the duration of construction and construction related trips so that the TIMF may be computed. The amount of the TIMF will be based on construction related trips.

4. Please provide the Transportation Department with a copy of the draft DEIR when it becomes available for our review and comment.

Our review is limited to the impacts this project may have on the County's Regional Road Network.

Please contact me at 654-2087 if you have questions.

F:\transpor\LanDev\Non_County\10-043 (VTA city).doc

RESOURCE MANAGEMENT AGENCY

county of ventura

Planning Division
Kimberly L. Prillhart
Director

January 21, 2011

City of Ventura
Public Works Dept.
Attn.: Mr. Lucho Rodriguez
501 Poli Street
Ventura, CA 93001

E-mail: lrodriguez@ci.ventura.ca.us

Subject: Comments on the NOP of a DEIR for the Olivas Park Drive Extension Project

Dear Mr. Rodriguez:

Thank you for the opportunity to review and comment on the subject document. Attached are the comments that we have received resulting from intra-county review of the subject document. Additional comments may have been sent directly to you by other County agencies.

Your proposed responses to these comments should be sent directly to the commenter, with a copy to Laura Hocking, Ventura County Planning Division, L#1740, 800 S. Victoria Avenue, Ventura, CA 93009.

If you have any questions regarding any of the comments, please contact the appropriate respondent. Overall questions may be directed to Laura Hocking at (805) 654-2443.

Sincerely,

Tricia Maier

Tricia Maier, Manager
Program Administration Section

Attachment

County RMA Reference Number 10-043

STATE OF CALIFORNIA Edmund G. Brown Jr., Governor

PUBLIC UTILITIES COMMISSION
320 WEST 4TH STREET, SUITE 500
LOS ANGELES, CA 90013

January 21, 2011

Lucho Rodriguez
City of Ventura
Public Works Department
501 Poli Street
Ventura, CA 93002

Dear Mr. Rodriguez:

Re: Olivas Park Drive Extension Project SCH 1995081004

The California Public Utilities Commission (Commission) has jurisdiction over the safety of highway-rail crossings (crossings) in California. The California Public Utilities Code Section 1201-1205, requires Commission approval for the construction or alteration of crossings and grants the Commission exclusive power on the design, alteration, and closure of crossings.

Commission's Rail Crossings Engineering Section (RCES) is in receipt of the *Notice of Preparation & Environmental Document Transmittal- Draft Initial Study* from the State Clearinghouse for the proposed Olivas Park Drive Extension Project.

After reviewing the project's Transportation/Traffic section, RCES needs clarification if the widening of Auto Center Drive will include the grade separated Union Pacific Rail Road (UPRR) tracks. This grade separated crossing is identified as Auto Center Drive, CPUC No. 001E-400.90-B, DOT No. 745835N.

The City should arrange a meeting with RCES and UPRR to discuss relevant safety issues concerning the crossing aforementioned and the process for requesting authority to modify a crossing. Modifications to existing crossings, including grade separations are within the scope of Commission GO 88-B: "Rules for Altering Public Highway-Rail Crossings." A request for authorization must be submitted to the Commission through RCES.

If you have any questions, please contact me at sal@cpuc.ca.gov, 213-576-7085, or Rosa Munoz, Senior Utilities Engineer at 213-576-7078, rxm@cpuc.ca.gov.

Sincerely,

Sergio Licon
Utilities Engineer
Rail Crossings Engineering Section
Consumer Protection & Safety Division

CC: UPRR

State of California – The Natural Resources Agency Edmund G. Brown, Jr., Governor
DEPARTMENT OF FISH AND GAME John McCamman, Director
South Coast Region
4949 Viewridge Avenue
San Diego, CA 92123
(858) 467-4201
www.dfg.ca.gov

January 21, 2011

Mr. Lucho Rodriguez
City of San Buenaventura
501 Poli Street, P.O. Box 99
Ventura, California 93002
Fax No.: 805-641-2775

Subject: Notice of Preparation of an Environmental Impact Report for the Olivas Park Drive Extension in Ventura, SCH 1995081004, Ventura County

Dear Mr. Rodriguez:

The Department of Fish and Game (Department) has reviewed the Initial Study (IS) and Notice of Preparation prepared by the City of San Buenaventura (City) to address impacts associated with the construction of an approximately 4,500 linear-foot extension of Oliva Park Drive between Perkin Avenue and Johnson Drive. The project also includes the construction of an approximately 5,800 linear-foot levee/floodwall, or an alternate 7,000 linear-foot levee/floodwall extending upstream of U.S. Highway 101, along the north side of the Santa Clara River. The project also requires a General Plan amendment for an approximately 25.4-acre area between the proposed Olivas Park Drive Extension and levee. The proposed levee system would be designed to meet Federal Emergency Management Agency requirements and would primarily be a compacted earth levee, though it would also include a concrete or block flood wall at its eastern and western ends.

The Department is California's Trustee Agency for fish and wildlife resources, holding these resources in trust for the People of the State pursuant to various provisions of the California Fish and Game Code (Fish & G. Code, §§ 711.7, subd. (a), 1802.). The Department submits these comments in that capacity under the California Environmental Quality Act (CEQA) (See generally Pub. Resources Code, §§ 21070; 21080.4.). Given its related permitting authority under the California Endangered Species Act (CESA) and Fish and Game Code section 1600 et seq., the Department also submits these comments likely as a Responsible Agency for the project under CEQA (Id., § 21069.).

The California Wildlife Action Plan, a recent Department guidance document, identified the following stressors affecting wildlife and habitats within the project area: 1) growth and development; 2) water management conflicts and degradation of aquatic ecosystems; 3) invasive species; 4) altered fire regimes; and 5) recreational pressures. The Department looks forward to working with the City to minimize impacts to fish and wildlife resources with a focus on these stressors. Please let Department staff know if you would like a copy of the plan to review.

The Santa Clara River in the vicinity of the proposed project provides habitat for State and Federally listed species as well as many locally sensitive wildlife species and the river also acts as a wildlife corridor. See paragraphs below for details on species survey needs. Early project design should include an alternative that places the levee outside of the river's active channel, to the greatest extent practicable, to allow for increase channel capacity, additional riparian

habitat establishment, and to provide additional natural flood protection. Set backs or buffers should be established between the top of the levee and any future development, thus providing refugia during storm flows and greater protection to wildlife which utilizes the river corridor.

To enable Department staff to adequately review and comment on the project we recommend the following information, where applicable, be considered during the preparation of the DEIR:

1. A complete, recent assessment of flora and fauna within and adjacent to the project area, with particular emphasis upon identifying endangered, threatened, and locally unique species and sensitive habitats (See Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities at: http://www.dfg.ca.gov/habcon/plant/).

a. A thorough recent assessment of rare plants and rare natural communities, following the Department's Guidelines for Assessing Impacts to Rare Plants and Rare Natural Communities.

b. A complete, recent assessment of sensitive fish, wildlife, reptile, and amphibian species. Seasonal variations in use within the project area should also be addressed. Recent, focused, species-specific surveys, conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, are required. Acceptable species-specific survey procedures should be developed in consultation with the Department and U.S. Fish and Wildlife Service.

c. Endangered, rare, and threatened species to address should include all those species which meet the related definition under the CEQA Guidelines. (See Cal. Code Regs., tit. 14, § 15380.)

d. The Department's Biogeographic Data Branch in Sacramento should be contacted at (916) 322-2493 (www.dfg.ca.gov/biogeodata) to obtain current information on any previously reported sensitive species and habitats, including Significant Natural Areas identified under Chapter 12 of the Fish and Game Code. Also, any Significant Ecological Areas (SEAs) or Environmentally Sensitive Habitats (ESHs) or any areas that are considered sensitive by the local jurisdiction that are located in or adjacent to the project area must be addressed.

2. A thorough discussion of direct, indirect, and cumulative impacts expected to adversely affect biological resources, with specific measures to offset such impacts. This discussion should focus on maximizing avoidance, and minimizing impacts.

a. CEQA Guidelines, Section 15125(a), direct that knowledge of the regional setting is critical to an assessment of environmental impacts and that special emphasis should be placed on resources that are rare or unique to the region.

b. Project impacts should also be analyzed relative to their effects on off-site habitats and populations. Specifically, this should include nearby public lands, open space, adjacent natural habitats, and riparian ecosystems. Impacts to and maintenance of wildlife corridor/movement areas, including access to undisturbed habitat in adjacent areas are of concern to the Department and should be fully evaluated and provided. The analysis should also include a discussion of the potential for impacts resulting from such effects as increased vehicle traffic, outdoor artificial lighting, noise and vibration.

c. A cumulative effects analysis should be developed as described under CEQA Guidelines, Section 15130. General and specific plans, as well as past, present, and anticipated future projects, should be analyzed relative to their impacts on similar plant communities and wildlife habitats.

d. Impacts to migratory wildlife affected by the project should be fully evaluated including proposals to remove/disturb native and ornamental landscaping and other nesting habitat for native birds. Impact evaluation may also include such elements as migratory butterfly roost sites and neo-tropical bird and waterfowl stop-over and staging sites. All migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (50 C.F.R. Section 10.13). Sections 3503, 3503.5 and 3513 of the California Fish and Game Code prohibit take of birds and their active nests, including raptors and other migratory nongame birds as listed under the MBTA.

e. Impacts to all habitats from City or County required Fuel Modification Zones (FMZ). Areas slated as mitigation for loss of habitat shall not occur within the FMZ.

f. Proposed project activities (including disturbances to vegetation) should take place outside of the breeding bird season (February 1- September 1) to avoid take (including disturbances which would cause abandonment of active nests containing eggs and/or young). If project activities cannot avoid the breeding bird season, nest surveys should be conducted and active nests should be avoided and provided with a minimum buffer as determined by a biological monitor (the Department recommends a minimum 500-foot buffer for all active raptor nests).

3. A range of alternatives should be analyzed to ensure that alternatives to the proposed project are fully considered and evaluated. A range of alternatives which avoid or otherwise minimize impacts to sensitive biological resources including wetlands/riparian habitats, alluvial scrub, coastal sage scrub, should be included. Specific alternative locations should also be evaluated in areas with lower resource sensitivity where appropriate.

a. Mitigation measures for project impacts to sensitive plants, animals, and habitats should emphasize evaluation and selection of alternatives which avoid or otherwise minimize project impacts. Compensation for unavoidable impacts through acquisition and protection of high quality habitat elsewhere should be addressed with off-site mitigation locations clearly identified.

b. The Department considers Rare Natural Communities as threatened habitats having both regional and local significance. Thus, these communities should be fully avoided and otherwise protected from project-related impacts (attached).

c. The Department generally does not support the use of relocation, salvage, and/or transplantation as mitigation for impacts to rare, threatened, or endangered species. Department studies have shown that these efforts are experimental in nature and largely unsuccessful.

4. An Incidental Take Permit (ITP) from the Department may be required if the project, project construction, or any project-related activity during the life of the project will result in "take," as defined by the Fish and Game Code, of any species protected by CESA (Fish & G. Code, §§86, 2080, 2081, subd. (b), (c).). Early consultation with Department regarding potential

permitting obligations under CESA with respect to the project is encouraged (Cal. Code Regs., tit. 14, § 783.2, subd. (b).). It is imperative with these potential permitting obligations that the DEIR prepared by the City in the present case includes a thorough and robust analysis of the potentially significant impacts to endangered, rare, and threatened species, and their habitat, that may occur as a result of the proposed project. For any such potentially significant impacts the City should also analyze and describe specific, potentially feasible mitigation measures to avoid or substantially lessen any such impacts as required by CEQA and, if an ITP is necessary, as required by the relevant permitting criteria prescribed by Fish and Game Code section 2081, subdivisions (b) and (c). The failure to include this analysis in the project DEIR could preclude the Department from relying on the City's analysis to issue an ITP without the Department first conducting its own, separate Lead Agency subsequent or supplemental analysis for the project (See, e.g., Cal. Code Regs., tit. 14, § 15096, subd. (f); Pub. Resources Code, § 21166.). For these reasons, the following information is requested:

a. Biological mitigation monitoring and reporting proposals should be of sufficient detail and resolution to satisfy the requirements for a CESA Permit.

b. A Department-approved Mitigation Agreement and Mitigation Plan are required for plants listed as rare under the Native Plant Protection Act.

5. The Department opposes the elimination of watercourses (including concrete channels) and/or the canalization of natural and manmade drainages or conversion to subsurface drains. All wetlands and watercourses, whether intermittent, ephemeral, or perennial, must be retained and provided with substantial setbacks which preserve the riparian and aquatic habitat values and maintain their value to on-site and off-site wildlife populations. The Department recommends a minimum natural buffer of 100 feet from the outside edge of the riparian zone on each side of drainage.

a. The Department also has regulatory authority with regard to activities occurring in streams and/or lakes that could adversely affect any fish or wildlife resource. For any activity that will divert or obstruct the natural flow, or change the bed, channel, or bank (which may include associated riparian resources) or a river or stream or use material from a streambed, the project applicant (or "entity") must provide written notification to the Department pursuant to Section 1602 of the Fish and Game Code. Based on this notification and other information, the Department then determines whether a Lake and Streambed Alteration Agreement (LSA) is required. The Department's issuance of an LSA is a project subject to CEQA. To facilitate issuance of an LSA, if necessary, the DEIR should fully identify the potential impacts to the lake, stream or riparian resources and provide adequate avoidance, mitigation, monitoring and reporting commitments for issuance of the LSA. Early consultation is recommended, since modification of the proposed project may be required to avoid or reduce impacts to fish and wildlife resources. Again, the failure to include this analysis in the project DEIR could preclude the Department from relying on the City's analysis to issue an LSA without the Department first conducting its own, separate Lead Agency subsequent or supplemental analysis for the project.

Thank you for this opportunity to provide comments. Please contact Mr. Daniel Blankenship, Staff Environmental Scientist, at (661) 259-3750 if you should have any questions and for further coordination on the proposed project.

Sincerely,

Edmund Pert
Regional Manager
South Coast Region

cc: Department of Fish and Game
Betty Courtney, Newhall
Helen Birss, Santa Barbara
Dan Blankenship, Valencia
Jeff Humble, Ventura

State Clearinghouse
Scott Morgan, Sacramento

Sensitivity of Top Priority Rare Natural Communities in Southern California

Sensitivity rankings are determined by the Department of Fish and Game, California Natural Diversity Data Base and based on either number of known occurrences (locations) and/or amount of habitat remaining (acreage). The three rankings used for these top priority rare natural communities are as follows:

S1.# Fewer than 6 known locations and/or on fewer than 2,000 acres of habitat remaining.

S2.# Occurs in 6-20 known locations and/or 2,000-10,000 acres of habitat remaining.

S3.# Occurs in 21-100-known locations and/or 10,000-50,000 acres of habitat remaining.

The number to the right of the decimal point after the ranking refers to the degree of threat posed to that natural community regardless of the ranking. For example:

S1.1 = very threatened
S2.2 = threatened
S3.3 = no current threats known

Sensitivity Rankings (February 1992)

Rank	Community Name
S1.1	Mojave Riparian Forest
	Sonoran Cottonwood Willow Riparian
	Mesquite Bosque
	Elephant Tree Woodland
	Crucifixion Thorn Woodland
	Allthorn Woodland
	Arizonan Woodland
	Southern California Walnut Forest
	Mainland Cherry Forest
	Southern Bishop Pine Forest
	Torrey Pine Forest
	Desert Mountain White Fir Forest
	Southern Dune Scrub
	Southern Coastal Bluff Scrub
	Maritime Succulent Scrub
	Riversidean Alluvial Fan Sage Scrub
	Southern Maritime Chaparral
	Valley Needlegrass Grassland
	Great Basin Grassland
	Mojave Desert Grassland
	Pebble Plains
	Southern Sedge Bog
	Cismontane Alkali Marsh

VENTURA COUNTY
AIR POLLUTION CONTROL DISTRICT
Memorandum

TO: Laura Hocking, Planning DATE: January 16, 2013

FROM: Alicia Stratton

SUBJECT: Request for Review of Revised Notice of Preparation for an Environmental Impact Report for the Olivas Park Extension Project, City of Ventura (Reference No. 10-043-1)

Air Pollution Control District staff has reviewed the revised Notice of Preparation for an Environmental Impact Report (NOP), which originally proposed to extend Olivas Park Drive between Perkin Avenue and Johnson Drive for approximately 4,500 ft., a 5,800-ft. levee/floodwall or an alternate 7,000 ft. levee/floodwall extending to a point upstream of U.S. Highway 101, along the north side of the Santa Clara River, and a General Plan amendment for an approximately 25.4-acre area between the proposed Olivas Park Drive extension and levee. The revisions to the project description include additional acreage, as well as land use changes that would allow for additional development and abandonment of infrastructure systems. The objective of the project is to improve circulation by providing a link between Johnson Drive and the terminus of Olivas Park Drive, to protect existing and future development from flooding, to allow for the logical development of the vicinity with commercial uses compatible with those within the Ventura auto Center, and to allow for commercial development that would provide local jobs and increase the City's sales tax base. Approximately 1,258,000 sq. ft. of commercial uses and 75,000 sq. ft. of industrial uses would be proposed, as well as the proposed roadway extension and levee construction would trigger closure and abandonment of the Montalvo Municipal Improvement District's wastewater treatment facility and construction of appurtenant infrastructure to redirect wastewater flows to the City of Ventura Wastewater Treatment Plant.

District staff still recommends that the air quality section of the draft EIR be prepared in accordance with the 2003 *Ventura County Air Quality Assessment Guidelines* (2003 Guidelines). The air quality analysis should evaluate all potential air quality impacts that may result from the project, both short-term (construction) and long-term, now to include the commercial and industrial uses proposed (operational based on project buildout). Specifically, the air quality assessment should consider reactive organic compound, nitrogen oxide and fugitive dust, including PM10, emissions from all project-related motor vehicles and construction equipment.

A carbon monoxide screening analysis should be conducted for any project-impacted roadway intersection that are currently operating, or that are expected to operate at, Levels of Service D, E, or F, or at any project-impacted roadway intersection that may be a CO hotspot. If a potential hotspot is identified, the District recommends that a complete CALINE3 or CALINE4 carbon monoxide analysis be conducted for that intersection.

The air quality chapter should also address greenhouse gas emissions from the project.

If the project is determined to have a significant impact on regional and/or local air quality, the EIR should include all feasible mitigation measures.

If you have any questions, please call me at (805) 645-1426.

PUBLIC WORKS AGENCY
TRANSPORTATION DEPARTMENT
Traffic, Advance Planning & Permits Division

MEMORANDUM

DATE: January 9, 2013

TO: RMA – Planning Division
Attention: Laura Hocking

FROM: Transportation Department

SUBJECT: **REVIEW OF DOCUMENT 10-043-1** Revised Notice of Preparation of Draft Environmental Impact Report (RNOP/DEIR) for the Olivas Park Drive Extension Project.
Road construction/extension, levee/floodway construction, General Plan amendment and Zone Change.
Olivas Park Drive from Perkin Avenue to Johnson Drive / Auto Center Drive, Ventura (city).
Lead Agency: City of Ventura

Pursuant to your request, the Public Works Agency – Transportation Department has reviewed the RNOP/DEIR for the Olivas Park Drive Extension Project.

The proposed project is the: (1) construction of approximately 4,500 lineal feet of Olivas Park Drive from Perkin Avenue to Johnson Drive in the City of Ventura; (2) construction of 5,800 lineal feet of levee/floodwall along the Santa Clara River; and (3) a General Plan (GP) amendment and Zone Change (ZC) for several parcels (approximately 80 acres) located northwest of the road extension. The GP amendment and ZC would allow for the development of 80 acres of land and construction of approximately 1,258,000 SF for commercial uses and 75,000 SF for industrial uses. The construction of the road extension would require the closure and abandonment of the Montalvo Wastewater Treatment Plant.

We offer the following comments:

1. Our previous comments dated January 7, 2011, are still valid and applicable.

2. The Olivas Park Drive Extension Project would be an enhancement to the County's Regional Road Network. The project is listed in the Ventura County 2009 Congestion Management Program dated July 10, 2009, on Page 165 as a Mid-Term Project (RTP #5A0723) for Fiscal Years 2015/16 through 2024/25.

3. LAFCO guidelines under Section 3.2.1 state that cities shall annex entire roadway sections and complete intersections adjacent to the territory proposed to be annexed. The DEIR should address the potential for creating a County "island" north of the road extension when the Montalvo Wastewater Treatment Plant is abandoned.

Our review is limited to the impacts this project may have on the County's Regional Road Network.

VENTURA COUNTY WATERSHED PROTECTION DISTRICT
PLANNING AND REGULATORY DIVISION
800 South Victoria Avenue, Ventura, California 93009
Tom Wolfington, Permit Manager – (805) 654-2061

MEMORANDUM

DATE: January 17, 2013

TO: Laura Hocking, Case Planner
Resource Management Agency, Planning Division

FROM: Tom Wolfington, P.E. – Permit Section TW
(805) 654-2061

SUBJECT: RMA 10-043-1 – Olivas Park Drive Extension – Revised Notice of Preparation (NOP) and a Draft Environmental Impact Report (DEIR)
City of San Buenaventura EIR-11-10-4397
APN 138-0-230-750, 40.38 Acres, Hofer Properties
APN 138-0-230-820, 7.16 Acres, MBL Golf Course LLC
APN 138-0-230-650, 12.51 Acres, Hofer Properties
APN 138-0-230-160, 3.03 Acres, Hofer Industries LLC Lessor
APN 138-0-230-150, 1.297 Acres, Hofer Vineyards LLC
APN 138-0-230-740, 0.77 Acres, Hofer Vineyards LLC
APN 138-0-230-130, 3.87 Acres, Hofer Vineyards LLC
APN 138-0-230-730, 1.84 Acres, Hofer Properties
APN 138-0-230-760, 5.92 Acres, Hofer Properties
APN 138-0-230-210, 7.31 Acres, Hofer Paul B ET AL
APN 139-0-010-575, 1.49 Acres, San Buenaventura City of
APN 179-0-050-030, 6.65 Acres, Montalvo Municipal Imp Dist
APN 179-0-050-160, 37.28 Acres, Ventura Olivas Co.
APN 179-0-050-150, 11.99 Acres, Ventura Olivas Co
Public Right-of-Way for Olivas Park Drive, Ventura Road, Ventura County Flood Control District, Auto Center Drive, Johnson Drive and Highway 101

The Ventura County Watershed Protection District (District) has reviewed the City of Ventura's request for technical input on the scope of the environmental analysis for the Draft Environmental Impact Report for the proposed Olivas Park Drive Extension, as requested in the City's Revised Notice of Preparation, dated December 21, 2012. The above listing of Assessor's Parcel Numbers was taken from available County of Ventura GIS resources and it is noted that the 2010 Draft Initial Study (EIR-11-10-4397) included somewhat different Assessor's Parcel Numbers.

PROJECT LOCATION

The project site is located adjacent to and northerly of the Santa Clara River, adjacent to and southerly of Auto Center Drive, and adjacent to and westerly of Perkin Avenue and Johnson Drive in the City of Ventura. A portion of the proposed Olivas Park Drive extension is in unincorporated Ventura County (parcel APN 179-0-050-030, Montalvo Municipal Imp District). The proposed extension would also encroach onto properties within the jurisdictional boundaries of the City of Ventura owned by Hofer Properties (parcel APN 138-0-230-750), the Ventura Olivas Co. (parcel APN 179-0-050-160), and the City of Ventura (parcel APN 139-0-010-575). It would also traverse Moon Ditch which is a District jurisdictional red line channel.

WATERSHED PROTECTION DISTRICT PROJECT COMMENTS:

The District originally provided comments to the City of Ventura's Olivas Park Drive Extension Draft Initial Study (RMA 10-043) on January 19, 2011. Comments addressed floodplain and regulatory floodway conditions, conceptual design and construction of the levee/ floodwall and impacts to Moon Ditch, the District's standard of stormwater runoff, geotechnical considerations for road and building construction, protection of biological breeding areas, and bikeways and multi-purpose trails. These comments remain valid and should be included in the DEIR and revised Initial Study:

1. In an exhibit prepared by the City of Ventura's engineering consultant, Hawks and Associates entitled "Olivas Park Drive Extension Proposed Setback Levee: Preliminary Plan and Profile" dated December 14, 2011 it was illustrated that the proposed levee/floodwall will cover a major portion of Moon Ditch and the alignment of Olivas Park Drive will cross over Moon Ditch. The DEIR should address the following items:

    (a) Acknowledge that Moon Ditch is a major flood control channel that is under the jurisdiction of the District. It is referred to as a red line jurisdictional channel.

    (b) All design alternatives for the road alignment and levee/floodwall presented in the DEIR should include an analysis of the impacts on this facility in terms of construction, cover, capacity and similar matters. Local drainage should be directed, to the extent possible, to City storm drain facilities which in turn connect to Moon Ditch or the Santa Clara River.

(c) Acknowledge that any development activity including a drainage connection and site grading that is proposed at any time in, on, over, under, or across the jurisdictional red line channel will require a permit from the Ventura County Watershed Protection District.

2. The DEIR should describe the effective floodplain and the regulatory floodway of the project site under existing conditions. Also, a discussion should be included regarding the on-going FEMA Santa Clara River Flood Insurance Re-study effort and its potential impact on the floodplain and floodway of the project site. Anticipated changes of floodplain and floodway under the proposed conditions, along with such effects as potentially increased bank erosion, should be described.

3. The DEIR should discuss the City of Oxnard levee construction plan that is currently being proposed.

4. The DEIR and Draft Initial Study should address the impacts of potential flooding along the Oxnard side of the Santa Clara River. Particular attention should be paid for the potential to impact the design of the deficient levee on the Oxnard side from the impacts of removing a large area of Ventura property from the floodway, and that the timing of the projects needs to coincide. A discussion of the coordination between the Cities and the District in the conceptual and design stages should be discussed in the DEIR as well as timing and funding issues. Any study including preliminary hydraulics should insure the use of the latest available flowrate values for this reach of the Santa Clara River.

5. The proposed Olivas Park Drive Extension and the levee/floodwall would encroach into the floodplain and the regulatory floodway of the Santa Clara River. Therefore, this project is subject to the Code of Federal Regulations (CFR) Title 44--Emergency Management and Assistance, Section 60.3 (d) (3) - Floodway Encroachment. Consequently, the levee and floodwall will need to meet both U.S. Army Corps of Engineers and FEMA standards, including vegetation and landscaping, which could impact the alignment and design and should be covered during the scoping process.

6. Modification of the regulatory floodway at the project site, in addition to the above mentioned regulations, should be achieved through consultation with FEMA, City of Oxnard, the County of Ventura floodplain manager, the District, and other stakeholders.

7. The Ventura County Watershed Protection District should be included in the DEIR as an approval requirement since the District is both a property and a facility owner. This is above and beyond the regulation of a storm drain connection to the Santa Clara River. As a special district, the District should be differentiated from other County Agencies.

8. The DEIR should address the amount of disturbance to the Santa Clara River to remove and recompact soils to make the site suitable for development and in particular for levees and floodwalls. It is understood that this area may contain unpermitted fill and may have been the location of a wood, mulch, and debris recycling company for a number of years.

9. Alternative transportation features and all recreational options should be discussed as part of the DEIR. The District is frequently approached for joint use of service roads as bikeways or multi-use trails. While frequently recognized as a public benefit, such use can impact the District's ability to maintain its flood control facilities. Any conceptual or proposed alternative routes for bikeways or multi-purpose trails should be identified and discussed within the DEIR to allow evaluation of impacts before plans are formalized.

10. The DEIR should include preliminary exhibits showing the extent of the existing and proposed floodplain and floodway, all existing and proposed utilities, and all related infrastructure features.

END OF TEXT

RESOURCE MANAGEMENT AGENCY

county of ventura

Planning Division
Kimberly L. Prillhart
Director

January 22, 2012

City of Ventura
Planning Division
Attn.: Lucho Rodriguez
501 Poli St.
Ventura, CA 93001

E-mail: LRodriguez@ci.ventura.ca.us

Subject: Comments on the Revised NOP of DEIR for the Olivas Park Drive Extension Project

Dear Mr. Rodriguez;

Thank you for the opportunity to review and comment on the subject document. Attached are the comments that we have received resulting from intra-county review of the subject document. Additional comments may have been sent directly to you by other County agencies.

Your proposed responses to these comments should be sent directly to the commenter, with a copy to Laura Hocking, Ventura County Planning Division, L#1740, 800 S. Victoria Avenue, Ventura, CA 93009.

If you have any questions regarding any of the comments, please contact the appropriate respondent. Overall questions may be directed to Laura Hocking at (805) 654-2443.

Sincerely,

Tricia Maier, Manager
Planning Programs Section

Attachments

County RMA Reference Number 10-043-1

VENTURA LOCAL AGENCY FORMATION COMMISSION
COUNTY GOVERNMENT CENTER ● HALL OF ADMINISTRATION
800 S. VICTORIA AVENUE ● VENTURA, CA 93009-1850
TEL (805) 654-2576 ● FAX (805) 477-7101
WWW.VENTURA.LAFCO.CA.GOV

January 17, 2013

Lucho Rodriguez, Project Manager
San Buenaventura Public Works Department
501 Poli Street
Ventura, CA 93001

Subject: Revised Notice of Preparation of Draft EIR – Olivas Park Drive Extension

Dear Mr. Rodriguez:

Thank you for providing the Ventura LAFCo with the opportunity to review the Revised NOP for the above-referenced project. Please note that these comments are solely those of the LAFCo staff; the document has not been reviewed by the Commission.

Project Description

The project description includes three primary elements; construction of a 4,500-foot extension to Olivas Park Drive to connect it with the southern terminus of Johnson Drive, construction of a 5,800-foot levee along the Santa Clara River, and a General Plan amendment and zone change on approximately 80 acres of land located within the City.

The road extension and levee will cross a parcel on which the Montalvo Community Services District's (CSD) wastewater treatment plant is located, necessitating its closure. We understand that sewer treatment services for the CSD are to be taken over by the City. The Montalvo CSD parcel is located outside both the City sphere of influence and boundary. It abuts the City to the north, east, and west. Construction of the road and levee across this parcel would result a 400 to 500-foot segment of the road and levee being located in unincorporated County jurisdiction. Such jurisdictional segmentation can result in operational and maintenance inefficiencies, as well as jurisdictional confusion on the part of emergency service providers. To avoid these issues, staff recommends that the City annex the Montalvo CSD parcel. Staff from the Ventura County Transportation Department has also indicated that the jurisdictional segmentation of the road should be avoided.

Thus, the project description should be amended to reflect the following LAFCo changes of organization, collectively referred to as a reorganization:

- A sphere of influence amendment to include the Montalvo CSD parcel.
- Annexation of the same territory to the City.

- Detachment of the same territory from the Ventura County Resource Conservation District, the Ventura County Fire Protection District, and County Service Areas 32 and 33.

As a result, the EIR should identify LAFCo as a responsible agency whose approval is required in conjunction with the development of the proposed project. It appears that the topics identified for study in the EIR are sufficient to address those general areas and items important to LAFCo review. Please note that LAFCo staff will review the Draft EIR when it is available and, if necessary, provide further comments.

Please feel free to contact me should you have any questions.

Sincerely,

Kai Luoma, AICP
Deputy Executive Officer

c: LAFCo Commissioners
Dave Ward, City of San Buenaventura
Dave Fleisch, County Transportation Department

The Nature Conservancy
Protecting nature. Preserving life.™

Ventura Office
532 E. Main Street, Suite 200
Ventura, CA 93001

tel [805] 642-0345
fax [805] 642-3421

nature.org

Sender's Direct Line 626-403-9755

January 28, 2013

Mr. Joe Powers
Rincon Consultants

Via Email: jpowers@rinconconsultants.com

Re: NOP Olivas Park Drive Extension Project

Dear Mr. Powers:

I just today received an email that included the Notice of Preparation for the above referenced project. I assume notice is given by mail to adjacent property owners for this sort of activity but I have not received one. In any event I appreciate the opportunity to provide comments on topics that need to be addressed in the EIR document.

The Nature Conservancy owns several properties downstream of the project site. The closest is a 42 acre parcel within the river floodway (APN 179-0-070-07). We also own property immediately upstream of the Highway 101 bridge. These properties were acquired to protect and conserve riparian habitat and plant and animal species that use the properties. Some species occurring on the properties may be protected under the Federal Endangered Species Act and other laws.

As owners of adjacent properties we are very concerned that the activities being considered as part of the project may impact them. Therefore, we ask that the Environmental Impact Report include an analysis of the following potential impacts.

1. Hydrology and hydrologic changes to flows in the Santa Clara River resulting from the project including upstream and downstream impacts such as changes in velocities, depth, erosion, and flooding. We are particularly concerned that the construction of a levee will result in scouring of habitat on our properties. Therefore, the EIR must show what the changes to these components of the river's flows will be and what impact those changes may have.

2. Impacts to biological resources including impacts to riparian vegetation, animal species including avian and aquatic species, impacts to other native species found in the area and the potential for introduction of non-native species.

3. Water quality impacts from the proposed project both during construction and after.

4. Impacts created by increased human access to the river due to the project. This may include impacts caused by placing a road in the vicinity of the river that may result in the

illegal dumping of trash, illegal motorized activities in the river, and general trespassing including illegal camping.

5. The provision of long term maintenance of any levee structures constructed as part of the project. Impacts to people, property and nature will depend upon proper long term maintenance of the levee. Currently there are not adequate government resources to maintain existing levees on the river so a permanent source of funding to maintain this project should be considered.

Thank you for considering these impacts in the Environmental Impact Report. Please include me in future notices regarding this project. My contact information is above.

Sincerely,

E. J. Remson
Senior Program Manager

City of San Buenaventura

Olivas Park Drive Extension

Draft

Initial Study

January 2013

rincon

Environmental Scientists Planners Engineers

OLIVAS PARK DRIVE EXTENSION

Draft
INITIAL STUDY

Prepared by:

City of San Buenaventura
Public Works Department
501 Poli Street
Ventura, CA 93002
Contact: Lucho Rodriguez (805) 654-7742

Prepared with the assistance of:

Rincon Consultants, Inc.
180 North Ashwood Avenue
Ventura, California 93003

January 2013

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CITY OF SAN BUENAVENTURA
INITIAL STUDY

I. BACKGROUND:

A. Case No.: EIR- 11-10-4397

B. Lead Agency Name/Address: City of San Buenaventura
501 Poli Street
PO Box 99
Ventura, CA 93002

Staff Planner/Telephone Number: Lucho Rodriguez / (805) 654-7742

Project Applicant Name/Address: City of Ventura
Public Works Department
501 Poli Street
Ventura, CA 93002-0099

C. Recommendation:

Based on the information contained in this Initial Study, attachments, and the findings set forth in Section P. *Mandatory Findings of Significance*, staff has concluded that implementation of the Olivas Park Drive Extension Project would have a potentially significant effect on the environment and an Environmental Impact Report should be prepared.

D. Project Description:

The proposed project involves: (1) the extension of Olivas Park Drive as a four-lane Secondary Arterial between Golf Course Drive and Auto Center Drive; (2) a levee/floodwall that is approximately 5,400 linear feet in length along the north side of the Santa Clara River that terminates 350 feet south of the Southern Pacific Railroad; (3) General Plan amendments for land use changes for parcels within the 111.8-acre project boundary, a General Plan amendment for the reclassification of the Olivas Park Drive roadway extension, and a Specific Plan amendment to revise the boundaries of the Auto Center Specific Plan; and (4) zone changes for parcels within the project boundary. The proposed extension will transition to join the existing improvements at the Johnson Drive/U.S. 101 southbound ramps interchange. No improvements other than the transition are proposed as part of this project at the Johnson Drive/U.S. 101 interchange.

Figure 1 shows the location of the project site within the region and Figure 2

shows the project components within their local context.

Olivas Park Drive will have a cross-section that varies between 82 feet and 88 feet, and includes two 11-foot travel lanes, two 12-foot travel lanes, a 14-foot median, and two 6-foot bike lanes. Between Golf Course Drive and Perkin Avenue, Olivas Park Drive will have 8-foot sidewalks on both sides of the street. East of Perkin Avenue, Olivas Park Drive will have a 10-foot sidewalk on the north side and no sidewalk amenities on the south side. The new sidewalk at Olivas Park Drive will tie in with the existing sidewalk at Auto Center Drive. The proposed roadway extension would also include a new storm drain connection to the Santa Clara River. As part of a separate action, the existing wastewater treatment components at the MMID would be abandoned and removed. Wastewater currently treated at this facility would be diverted to the City's main reclamation facility via a new sewer line that would be connected to an existing sewer main in Perkin Avenue.

The proposed project would include the construction of a levee/floodwall that would be located along the southern and eastern boundaries of the project site. The proposed levee design would vary in height from 5 feet up to 13 feet above ground, and would include a 17-foot wide roadway along the top of the levee for use by maintenance vehicles. The levee bank and toe protection adjacent to the Santa Clara River would primarily consist of rock riprap and vegetated slopes, but will vary in size and depth depending on the calculated design flow velocities. The floodwall would be constructed of concrete and masonry. The proposed levee would be approximately 5,400 feet in length, and would extend from the intersection of Golf Course Drive and Olivas Park Drive along the northeastern boundary of the Buenaventura Golf Course and the northwestern bank of the Santa Clara River. A floodwall design would be used for the first 600 feet of this portion of the levee, transitioning to a levee with a vegetated slope (1,000 linear feet), then to a levee with rock riprap on the face adjacent to the Santa Clara River (3,200 linear feet), and terminating with a floodway (450 linear feet) along the north side of the roadway extension and terminate at a point just west of the intersection of Auto Center Drive and Johnson Drive. At the northern location where the levee transitions to a floodwall, the proposed roadway extension would be elevated and cross over the top of the levee and descend to connect with Johnson Drive. At this location, the roadway would effectively serve as the levee for approximately 100 linear feet.

The levee would be constructed above the river and would not affect the floodway or channel of the river. The levee would provide flood protection from a 100-year flood for properties north of the levee.

The City of Oxnard is also contemplating construction of a levee on the south side of the Santa Clara River. This levee would be approximately 2.1 miles in length and would extend southwest from the U.S. Highway 101 overpass to near the South Victoria Avenue overpass. Although not part of the proposed project, the design of this levee would be coordinated with the proposed levee on the

Ventura side of the Santa Clara River. This environmental review will consider potential impacts of the proposed Ventura levee both with and without the levee proposed by the City of Oxnard.

The proposed General Plan amendments would involve re-designation of eight parcels in the 111.8-acre project area. A summary of these changes is provided below in Table 1. The proposed project would also rezone nine parcels. The proposed changes are also summarized in Table 1. The proposed General Plan land use designations and zoning would allow development of the site with a range of commercial and industrial uses. The Commerce and Industry land use standards in the General Plan do not include a maximum development density. However, zoning designations limit lot coverage to 50 percent and building height is limited to 75 feet. Based on an assumed maximum floor-to-area ration (FAR) of 0.33:1, the 111.8-acre area could accommodate up to 1,258,000 square feet of commercial development, and 75,000 square feet of industrial development.

Table 1 Proposed General Plan Amendments and Zone Changes

Parcel	APN[1]	Acreage	General Plan Change	Zoning Change
1	138-0-230-150	1.3	Remain Commerce	Remain CPD
2	138-0-230-740	0.77	Remain Commerce	Remain CPD
3	138-0-230-730	1.84	Specific Plan to Commerce	Remain CPD
4	138-0-230-130	3.87	Remain Commerce	Remain CPD
5	138-0-230-210	7.31	Remain Commerce	M1 to CPD
6	179-0-050-150	11.99	Industry to Commerce	M2 to CPD
7	179-0-050-160	16.67[2]	Agriculture to Commerce	M2 to CPD
8	138-0-230-760	3.64[3]	Remain Commerce	R-1-1AC to CPD
9	139-0-230-480	2.75	Specific Plan to Commerce	Remain CPD
10	138-0-230-750	37.32[4]	Agriculture to Commerce	R-1-1AC to CPD
11	138-0-230-650	12.51	Remain Commerce	R-1-1AC to CPD
12	179-0-050-030	3.18[5]	Agriculture to Commerce	Agriculture to CPD
13	139-0-010-575	1.49	Industry to Commerce	MPD to CPD
14	139-0-230-820	7.16	Agriculture to Industry	R-1-1AC to MPD

1. APN – Assessors Parcel Number
2. Total parcel is 37.28 acres
3. Total parcel is 5.92 acres
4. Total parcel is 40.38 acres
5. Total parcel is 6.65 acres

II. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors highlighted in **bold** below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages:

Aesthetics	**Greenhouse Gas Emissions**	Population and Housing
Agricultural Resources	**Hazards/Hazardous Materials**	Public Services and Recreation
Air Quality	**Hydrology and Water Quality**	**Transportation/Traffic**
Biological Resources	**Land Use and Planning**	Utilities and Service Systems
Cultural Resources	Mineral Resources	Mandatory Findings of Significance
Geology/Soils	Noise	

III. PROJECT SCOPE:

1. **Location:** The proposed project involves: (1) the extension of Olivas Park Drive as a four-lane Secondary Arterial between Golf Course Drive and Auto Center Drive; (2) a levee/floodwall that is approximately 5,400 linear feet in length along the north side of the Santa Clara River that terminates 350 feet south of the Southern Pacific Railroad; (3) a General Plan amendment for land use changes for parcels within the 111.8 acre project boundary, a General Plan amendment for the reclassification of the Olivas Park Drive roadway extension, and a Specific Plan amendment to revise the boundaries of the Auto Center Specific Plan; and (4) zone changes for parcels within the project boundary. The proposed extension will transition to join the existing improvements at the Johnson Drive/U.S. 101 southbound ramps interchange. No improvements other than the transition are proposed as part of this project at the Johnson Drive/U.S. 101 interchange.

2. **Assessor's Parcel Numbers:** 1380230150, 1380230740, 1380230730, 1380230130, 1380230210, 1790050150, 1790050160, 1380230760, 1390230480, 1380230750, 1380230650, 1790050030, 1390010575, 1380230820

3. **Land Use Characteristics and Adjacent Land Use:** The project site includes parcels that are currently developed with row crops, auto sales and related uses, gaming club, recreational vehicle sales, vehicle/truck storage, and the Montalvo Municipal Improvement District wastewater treatment facility. The remainder of the parcels within the project site consist of undeveloped, disturbed land. Surrounding uses include auto sales to the north, commercial uses to the northwest, and a golf course to the southwest. Auto Center Drive, the Southern Pacific Railroad, and the U.S. 101 are to the north of the project site, and the Santa Clara River lies to the south and east.

4. **Current General Plan Land Use Designation:** Agriculture, Commerce, Specific Plan, and Industry

5. **Proposed General Plan Land Use Designation:** Commerce and Industry

6. **Current Zoning:** Commercial Planned Development (CPD), General Industrial (M-2), Limited Industrial (M-1), Manufacturing Planned Development (M-P-D), and Single Family (R-1-1AC).

7. **Proposed Zoning:** CPD and MPD

6. **Discretionary Permits and Approvals Required:**

   a. Certification of the Environmental Impact Report
   b. General Plan Map Amendment for Figure 4-3, Roadway Classification Plan to revise the classification of Olivas Park Drive between Golf Course Drive and Auto Center from "collector" to "secondary arterial"
   c. General Plan Amendment to revise Figure 6-1, Public Facilities, to eliminate the linear park shown on the southern side of Olivas Park Drive between Victoria Avenue and Johnson Drive
   d. General Plan Amendment to re-designate parcels from Agriculture to Commerce, Specific Plan to Commerce, Industry to Commerce, and Agriculture to Industry
   e. Rezone from M-P-D, M-1, M-2, Agricultural, and R-1-1AC to CPD and R-1-1AC to MPD
   f. Specific Plan Amendment to revise the boundaries of the Auto Center Specific Plan

7. **Approvals required by other public agencies:**

   a. Ventura County Watershed Protection District approval of new storm drain to Santa Clara River
   b. Letter of Map Revision (LOMR), Watershed Permit (FEMA)
   c. Section 404 Permit, Army Corps of Engineers (ACOE)
   d. Section 1603 Permit (Streambed Alteration Agreement), California Department of Fish and Game
   e. Caltrans Encroachment Permit for any work associated with the Johnson Drive southbound on- and off-ramps from U.S. Highway 101

IV. <u>CONCLUSION AND ACTION</u>:

On the basis of the information contained in this Initial Study/Environmental Assessment, the Planning Commission finds that:

____ The proposed project is EXEMPT from further CEQA review under Section ____ of the state CEQA Guidelines.

____ The project, as proposed, WOULD NOT have a significant effect on the environment, and a PROPOSED NEGATIVE DECLARATION will be prepared and forwarded to the Planning Commission for approval of a FINAL NEGATIVE DECLARATION.

____ Although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the attached mitigation measures and monitoring program have been added to the project. A PROPOSED MITIGATED NEGATIVE DECLARATION will be prepared and forwarded to the City Council for approval of a FINAL MITIGATED NEGATIVE DECLARATION.

____ The proposed project MAY have a significant effect on the environment and an EXPANDED INITIAL STUDY/ENVIRONMENTAL ASSESSMENT will be prepared to address:

__X__ The proposed project MAY have a significant effect on the environment and an ENVIRONMENTAL IMPACT REPORT should be prepared.

____ The proposed project is a SUBSEQUENT USE of a previously prepared EIR and any environmental impacts have been addressed in EIR-_____.

_____ On the basis of the information contained in the Initial Study, and on the record as a whole, a finding has been made that there is no evidence that there will be an adverse effect on fish or wildlife habitats or resources pursuant to Section 3 of EIRC Resolution No. 93-5.

EVALUATION OF ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factor as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including offsite as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.

4) Negative Declaration: “Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063 (c)(3)(D). In this case, a brief discussion within this Initial Study identifies the following:

   a) The earlier analysis used and where it is available for review.

   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) Mitigation Measures. For effects that are “Less than Significant with Mitigation Measures Incorporated,” describe the mitigation measures, which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) The explanation of each issue should identify: a) The significance criteria or threshold, if any, used to evaluate each question; and b) the mitigation measure identified, if any, to reduce the impact to less than significance

This Initial Study has been prepared in accordance with the CEQA Guidelines and relevant provisions of the California Environmental Act (CEQA) of 1970, as amended. Section 15063(c) of the CEQA Guidelines defines an Initial Study as the proper preliminary method of analyzing the potential environmental consequences of a project. Among the purposes of an Initial Study are:

1) To provide the Lead Agency (the City of San Buenaventura) with the necessary information to decide whether to prepare an Environmental Impact Report (EIR) or a Negative Declaration;

2) To enable the Lead Agency to modify a project, mitigating adverse impacts, thus avoiding the need to prepare an EIR (if possible); and

3) Assist in the preparation of an EIR, if one is required.

V. ENVIRONMENTAL IMPACT EVALUATION:

(References used to respond to the topic areas in Section II include those that are identified by capital letters in Section VII of this Initial Study. If emphasis is placed on a particular reference, the capital letter corresponding to that reference may be noted in parenthesis beneath each topic area heading.)

A. Aesthetics:

Would the project:	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
1. Have a substantial adverse effect on a scenic vista?	X			
2. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	X			
3. Substantially degrade the existing visual character or quality of the site and its surroundings?	X			
4. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	X			

Impact Discussion:

1., 2. The proposed project is in close proximity to U.S. Highway 101, which is identified in the City of Ventura's 2005 General Plan as a View Corridor (City of Ventura General Plan, 2005). In addition, Olivas Park Drive is listed in the 2005 General Plan as a View Corridor (City of Ventura General Plan, 2005). Policy 4D of the 2005 General Plan requires the protection of views along View Corridors. In addition, U.S.101 is eligible for a state Scenic Highway designation from SR 27 in Los Angeles County to SR 46 in San Luis Obispo County (City of Ventura General Plan, 2005).

Currently, views from U.S. Highway 101 in the vicinity of the project site include automobile dealerships and industrial uses along the south side of U.S. Highway 101 (Rincon site visit, 2009). The proposed project would not alter views along the U.S. Highway 101 corridor. Along the existing Olivas Park Drive alignment, views of farmland dominate the viewshed on the north and south sides of the roadway between Harbor Boulevard and Seaborg Avenue (Rincon site visit, 2009). The Buenaventura Golf Course is visible on the south side of Olivas Park Drive between Seaborg Avenue

and Perkin Avenue, while vacant land and automobile dealership buildings are visible to the north of the roadway (Rincon site visit, 2009). Construction of the proposed roadway extension would not change the character of the viewshed. However, construction of the proposed levee may alter views along the existing Olivas Park Drive alignment. In addition, the proposed General Plan amendments and zoning changes would allow for commercial development within the project area, which could further alter views from U.S. Highway 101. The project could result in **potentially significant** impacts by altering views along a designated scenic roadway. This issue will be further analyzed in an EIR.

3. As discussed above under item A.1, the proposed roadway extension involves the development of a roadway between Golf Course Drive and Johnson Drive to complete the Olivas Park Drive alignment, construction of a 5,800 linear-foot levee/floodwall, General Plan amendments to re-designate eight parcels, and zone changes for nine parcels. The proposed levee may result in a change to the visual character of the area by permanently interrupting the viewshed along the horizon in the project area. Furthermore, the proposed General Plan amendments and zone changes would allow commercial and industrial development in an area that was previously used for agriculture. This would permanently change the visual character of the site. Impacts would be **potentially significant** and will be further analyzed in an EIR.

4. Development of the proposed roadway extension would introduce new roadway lighting. The proposed General Plan amendments and zone changes would also facilitate the potential for new commercial and industrial development on the project site. Any new development would introduce new light and could result in potential glare impacts. These impacts are **potentially significant** and will be analyzed further in an EIR.

Mitigation/Residual Impact(s): Based on the above discussion, the proposed project could have potentially significant impacts to aesthetic resources. Potential impacts and any proposed mitigation will be discussed in an EIR.

B. <u>Agricultural Resources</u>:

Would the project:	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
1. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	X			

Would the project:	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
2. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	X			
3. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?	X			

1. The project site consists of land that is designated as Urban Land, Prime Farmland, and Farmland of Statewide Importance (California Department of Conservation, 2008). In addition, the proposed General Plan amendments and zone changes would result in the conversion of Prime Farmland and Farmland of Statewide Importance to commercial and industrial uses.

   The proposed roadway extension was envisioned in the 2005 General Plan Update and is shown as a conceptual roadway and bicycle facility on Figures 4-1 and 4-3 (City of Ventura General Plan, 2005). In conjunction with adoption of the 2005 Ventura General Plan, the City Council considered the conversion of agricultural lands within the City's sphere of influence and determined that public benefits of the General Plan outweigh certain unavoidable adverse environmental effects, including the conversion of prime agricultural land. A Statement of Overriding Consideration was adopted to support this conclusion. However, conversion of land being considered for General Plan land use designation changes and zone changes were not considered as part of the 2005 General Plan. Therefore, impacts related to the potential conversion of this land to non-agricultural uses is a **potentially significant** impact that will be analyzed further in an EIR.

2. No portion of the project site is under Williamson Act Contract. However, the proposed project would involve the redesignation of currently designated Agriculture to Commerce and Industry. Impacts related to this proposed redesignation would be **potentially significant** and will be discussed further in an EIR.

3. In November 1995, Ventura voters passed the Save Our Agricultural Resources (SOAR) Ordinance, also called the Agricultural Lands Preservation Initiative. This measure prevents changes in specified land use categories unless the land use change is approved by a majority of voters or the Ventura City Council makes certain findings. The City SOAR Ordinance reaffirms and readopts the Agriculture designations defined in the current Comprehensive Plan until the year 2030.

   The southern portion of the project site is subject to SOAR. Neither the road extension nor the proposed levee requires a General Plan amendment; therefore,

neither is subject to SOAR. However, the General Plan amendments to re-designate agricultural uses would subject to SOAR. As part of the approval process for the General Plan amendments, the City council would need to make findings in support of conversion of SOAR designated land. Information relevant to these findings will be included in the discussion in the Land Use analysis in the EIR. Impacts related to this General Plan amendment would be **potentially significant** and will be analyzed further in an EIR.

Mitigation/Residual Impact(s): Based on the above discussion, the proposed project could have potentially significant impacts with regard to agricultural resources. These impacts and any proposed mitigation will be discussed in an EIR.

C. Air Quality:

Would the project:	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
1. Conflict with or obstruct implementation of the applicable air quality plan?				X
2. Violate any air quality standards or contribute substantially to an existing or projected air quality violation?	X			
3. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	X			
4. Expose sensitive receptors to substantial pollutant concentrations?				X
5. Create objectionable odors affecting a substantial number of people?				X

Impact Discussion:

1. Vehicle use, energy consumption, and associated air pollutant emissions are directly related to population growth. The population forecasts upon which the Ventura County Air Quality Management Plan (AQMP) is based are used to estimate future emissions and devise appropriate strategies to attain state and federal air quality standards. The Ventura County Air Pollution Control District (APCD) adopted an updated AQMP in May 2008. When population growth exceeds the forecasts upon which the AQMP is based, emission inventories could be surpassed, which could affect attainment of standards.

   The Ventura County AQMP relies on the most recent population estimates developed by the Metropolitan Planning Organization (MPO). SCAG acts as the MPO for Ventura County. According to SCAG's Adopted 2008 Regional Transportation Plan (RTP) population forecasts, the projected 2010 population for the City of Ventura is 112,044.

   The proposed project would not result in the construction of any residential units in the City. Therefore, it would not cause an increase in population that would exceed SCAG projections. The project would have **no impact** related to conflicts with the AQMP.

2. The project site is located within the Ventura County Air Basin and is under the jurisdiction of two air quality management agencies – the California Air Resources Board (CARB) and Ventura County Air Pollution Control District (VCAPCD). The CARB is responsible for the control of the project site's mobile emission sources, and the VCAPCD has oversight on the regulation of stationary sources.

   Significant construction-related air quality impacts would result if fugitive dust emissions are generated in such quantities as to cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which may endanger the comfort, repose, health, or safety of any such person or the public. Construction of the proposed road, levee, and future commercial or industrial development would result in temporary air quality impacts due to the use of heavy construction equipment, potential generation of fugitive dust, and truck trips to import soil, particularly for the levee. These impacts would be **potentially significant** and will be further analyzed in an EIR.

3. Neither the proposed roadway extension nor the proposed levee would be expected to generate operational emissions. However, future commercial and industrial development would generate operational emissions due to increased traffic and energy use. Thus, the project would have a **potentially significant** impact with respect to causing a cumulatively considerable net increase in criteria pollutants for which the region has non-attainment status. This impact will be studied further in an EIR.

4. Sensitive receptors include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses.

Examples include schools, hospitals, and daycare centers. The proposed project area includes none of these land uses and is in an area characterized primarily by commercial and industrial land uses. The sensitive receptor population closest to the project site is Del Rio Norte Elementary School, located about 0.5 miles east of the project site on the east side of the Santa Clara River. Therefore, the proposed project would have **no impact** and further study of this issue in an EIR is not warranted.

5. The proposed project involves construction of a roadway extension and levee, and possible future development of commercial and industrial uses. No odor-sensitive receptors are located in the project site vicinity and no component of the project would be expected to generate objectionable odors that would affect people. Therefore, **no impact** would occur and further study of this issue in an EIR is not warranted.

Mitigation/Residual Impact(s): Based on the above discussion, the proposed project could have a potentially significant impact to air quality. This issue and any proposed mitigation will be discussed in an EIR.

D. <u>Biological Resources</u>:

Would the project:	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	X			
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	X			
3. Have a substantial adverse effect on federally protected wetlands through direct removal, filling, hydrological interruption, or other means?	X			

Would the project:	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
4. 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?	X			
5. Conflict with local, regional, or state conservation plans or other local policies or ordinances protecting biological resources?	X			
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	X			

Impact Discussion:

1.-4. The proposed project would involve construction of a roadway and a levee/floodwall, as well as General Plan amendments and zone changes that would permit commercial and industrial development on a portion of the project site. Although the project site is largely disturbed and lacks native biotic habitats, it is adjacent to the Santa Clara River. Construction activities, operation of the roadway, introduction of a levee, and new commercial and industrial development could potentially interfere with habitat or species on and around the project site. The project has the potential for indirect adverse effects to protected species, habitat, and wetlands. Therefore, impacts related species, habitat, and wetlands would be **potentially significant** and will be explored further in an EIR.

5., 6. There are not any conservation plans that apply to the proposed project site. However, construction of the proposed project has the potential to adversely affect biological resources located adjacent to the project site that are protected by local policies or ordinances. Biological resources associated with the Santa Clara River could be adversely affected by construction activities near the river or operational activities associated with the roadway and future development. Therefore, impacts would be **potentially significant** and this issue will be evaluated in an EIR.

Mitigation/Residual Impact(s): Based on the above discussion, the proposed project would have potentially significant impacts with regard to biological resources. As such, impacts and any proposed mitigation will be analyzed further in an EIR.

E. Cultural Resources:

Would the project:	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
1. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?				X
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?			X	
3. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X	
4. Disturb any human remains, including those interred outside of formal cemeteries?			X	

Impact Discussion:

1. The existing project site consists of vacant land, industrial property, and a wastewater treatment facility. The wastewater treatment facility components, including an above ground tank, below ground tanks and percolation ponds would be abandoned and demolished once the wastewater is diverted to the City's main treatment facility. The office building would remain in operation after the roadway is constructed. The wastewater treatment facility property was acquired and developed in 1975 (City of San Buenaventura/Impact Sciences, 1995); therefore, treatment components are less than 40 years old and do not qualify for consideration as historical resources. **No impact** to historical resources would result.

2. The project site contains no unique geologic features and is located on alluvium deposited by the Santa Clara River. A Phase I archaeological study involving field reconnaissance, and a record search was conducted by W and S Consultants in 1995. The Phase I archaeological study and record search did not identify any evidence of archaeological resources (W and S Consultants, 1995). No known archaeological resources or human remains are present on the project site. The likelihood that such resources are present is low since the area has been highly disturbed by past agricultural activity and urban uses and has already been surveyed for archaeological resources with negative results. In the event that archaeological resources are unearthed during project construction, it is standard City practice to temporarily suspend work until an archaeologist has evaluated the nature and significance of the

find pursuant to General Plan Action 9.15. If resources are encountered, General Plan Action 9.15 requires the developer to hire an archaeologist to oversee the handling of archaeological materials with coordination with the Ventura County Archaeological Society and local Native American organizations as appropriate. Therefore, impacts to archaeological resources would be **less than significant.**

3. The project site lies atop alluvium deposited by the Santa Clara River (California Department of Conservation, 2003). Holocene (less than 10,000 years ago) river alluvium associated with the Santa Clara River has a low potential to contain paleontological resources. Therefore, the project would have a **less than significant** impact with respect to destruction of unique geological features and paleontological resources.

4. See item E.2 above. If human remains are unearthed, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). Therefore, impacts would be **less than significant.**

Mitigation/Residual Impact(s): Based on the above discussion, the proposed project would have a less than significant impact with regard to cultural resources. Mitigation would not be required.

F. <u>Geology and Soils</u>:

Would the project:	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
1. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: a. Rupture of a known earthquake fault?				X
b. Strong seismic ground shaking?			X	
c. Seismic-related ground failure, including liquefaction or landslides?			X	

Would the project:	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
d. Seismic-related inundation from tsunami or seiche?				X
2. Result in substantial soil erosion or loss of topsoil?			X	
3. Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?			X	
4. Be located on expansive soil creating substantial risk to life or property?			X	
5. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X

Impact Discussion:

1[a] No known faults cross the project site, nor does the project site lie within a known fault hazard zone (City of Ventura General Plan FEIR, 2005). The closest fault is the McGrath Fault, located approximately 0.3 miles north of the project site (City of Ventura General Plan FEIR, 2005). Another fault within proximity to the project is the Oak Ridge Fault, located about one mile north of the McGrath Fault within the City of Ventura. These local faults are classified as active or potentially active. Potentially significant adverse impacts would occur if structures were proposed for construction overlaying a fault due to the potential for surface rupture. However, since no faults are located within the project alignment, **no impact** with respect to fault rupture is anticipated.

1[b] Future seismic events could produce groundshaking throughout the City, including the proposed project site. Ground shaking could create adverse safety effects through damage to the roadway extension and underlying infrastructure, the levee, or any new development resulting from the General Plan amendments or zone changes. However, compliance with City policies, requirements of the Uniform Building Code (UBC) and the California Building Code (CBC), and other applicable requirements, would reduce this potentially impact to a **less than significant** level.

1[c]., 3. The project site, along with the majority of the City of Ventura, is located within a

liquefaction hazard zone as designated on the Seismic Hazards Zone Map from the California Department of Conservation (California Department of Conservation, 2006). The City requires a standard soils engineering investigation as part of the development permit process. The City Building Official will require any design measures related to foundation stability for the proposed project. Impacts associated with liquefaction, subsidence, lateral spreading and collapse would be reduced to a **less than significant** level with adherence to adopted regulations, CBC requirements and planning review. See additional discussion on soils under item F.4, below.

1[d] The project site is not located within a designated tsunami or seiche inundation area (City of Ventura General Plan FEIR, 2005). Thus, there would be **no impact** from these hazards.

2. The project area is generally flat. However, construction of the proposed levee would require extensive grading and fill activities and new commercial or industrial development on-site would require grading. Loss of topsoil resulting from site preparation would be largely addressed through standard erosion control best management practices (BMPs) required during project construction. Exposed soils would not be present after construction. Potential off-site soil erosion resulting from site runoff is discussed in Section H, *Hydrology and Water Quality*. As concluded in that section, project stormwater would not be conveyed to areas subject to potential soil erosion. Therefore, impacts would be **less than significant**.

4. Expansive soils or other soil conditions may lead to subsidence, resulting in structural distress and cracking. Soil expansion hazards at the project site are considered low (City of Ventura General Plan FEIR, 2005). All components of the proposed project would be required to comply with applicable construction standards, including CBC and UBC requirements. As a result, impacts are **less than significant** with respect to expansive soil hazards.

5. No septic or alternative sewer system is proposed as part of the roadway extension or levee and any future commercial or industrial development would connect to the City sewer system; therefore, **no impact** would result.

Mitigation/Residual Impact(s): Based on the above discussion, project implementation would have a less than significant impact with regard to geology and soils. As such, mitigation measures would not be required.

G. Greenhouse Gas Emissions:

Would the project:	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	X			
2. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	X			

Impact Discussion:

1. The proposed roadway extension and levee would not be expected to generate additional traffic or otherwise result in operational greenhouse gas (GHG) emissions. However, the General Plan amendments and zone changes to allow commercial and industrial uses on the project site would introduce new sources of traffic and energy consumption, which would indirectly increase greenhouse gas (GHG) emissions. This **potentially significant** impact will be analyzed further in an EIR.

2. It is not anticipated that any component of the proposed project would conflict with applicable plans, policies, or regulations adopted for the purpose of reducing GHG emissions. Nevertheless, impacts related to compliance with applicable plans, and policies would be **potentially significant** and will be studied further in an EIR.

Mitigation/Residual Impact(s): Based on the above discussion, the proposed project would have potentially significant impacts with regard to GHG emissions. As such, impacts and any proposed mitigation will be studied further in an EIR.

H. Hazards and Hazardous Materials:

Would the project:	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	X			

Would the project:	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
2. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	X			
3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
4. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	X			
5. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
6. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
7. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
8. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X

Impact Discussion:

1. The proposed project involves the construction of a roadway extension between Perkin Avenue and Johnson Drive, the construction of a levee from Golf Course Drive northeast to the U.S. Highway 101 Highway, and General Plan amendments and zone changes to re-designate parcels within the project site to allow for commercial and industrial development. Industrial development could potentially result in the transport, use, storage, or disposal of hazardous materials on-site. In addition, the project area was previously used for agricultural production and portions of the site are currently used for industrial operations and wastewater treatment. Soil contamination could potentially be present. Therefore, impacts related to hazardous materials would be **potentially significant**. This issue will be evaluated in an EIR.

2. Portions of the project site have been used for agricultural cultivation, industrial use, and wastewater treatment. Therefore, pesticides may have been applied to the site. During construction, pesticides could be released into the environment. Such pesticides have the potential to cause adverse effects to human health and risk resulting from exposure. Therefore, impacts related to the release of potentially hazardous materials into the environment would be **potentially significant**. This issue will be evaluated in an EIR.

3. The school closest to the project site is Rio Del Norte Elementary School in Oxnard. This school is about 0.5 miles east of the project site. Therefore, **no impact** related to hazardous materials within ¼ mile of a school would occur. Further discussion of this issue in an EIR is not warranted.

4. The project site could potentially contain hazardous materials, as discussed in item 2. Therefore, impacts would be **potentially significant** and will be discussed further in an EIR. As part of the EIR analysis, a records review will be conducted to determine if the project site is included on a list of hazardous materials sites.

5., 6. The project site is located over two miles north of the Oxnard Airport and is outside the boundaries of the Oxnard Airport safety zone (Jorge Rubio, 2010). There are no private airstrips within the vicinity of the proposed project. There would be **no impact** and further study of this issue in an EIR is not warranted.

7. The proposed road extension would improve the operational efficiency of the existing roadway system by providing increased connectivity between existing roads. The proposed levee would not interfere with any emergency plans as it would not affect any roadways. New development resulting from the proposed project would be required to comply with emergency response plans and evacuation routes through the City's Building and Safety Division review. Therefore, impacts to emergency plans would be **less than significant**. Further study of this issue in an EIR is not warranted.

8. The project site is not located in proximity to any wildland area (City of Ventura General Plan FEIR, 2005). Thus, no wildland fire hazard exists. **No impact** would result and further analysis of this issue in an EIR is not warranted.

Mitigation/Residual Impact(s): Based on the above discussion, the proposed project would have potentially significant impacts related to hazardous materials. These impacts and proposed mitigation will be discussed in an EIR.

I. Hydrology and Water Quality:

Would the project:	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
1. Violate any water quality standards or waste discharge requirements?	X			
2. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level?	X			
3. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in substantial erosion or siltation on- or off-site?	X			
4. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	X			
5. Otherwise substantially degrade water quality?	X			
6. Place housing within a 100-year flood plain?				X
7. Place within the 100-year flood plain structures that would impede or redirect flood flows?	X			

Would the project:	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
8. Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam, or involving inundation by seiche, tsunami, or mudflow?	X			

Impact Discussion:

1. The proposed project has the potential to contribute pollutants to the Santa Clara River during construction, as well as upon completion due to proximity and the construction of a storm drain that would outlet at the edge of the Santa Clara River. Therefore, the project could potentially violate water quality standards and/or waste discharge requirements. Impacts would be **potentially significant** and this issue will be evaluated in an EIR.

2. The proposed project would create new impervious surfaces through the construction of the roadway extension and future commercial and industrial development facilitated by the proposed General Plan amendments and zone changes. In addition, the proposed roadway alignment would necessitate abandonment of the existing wastewater treatment facility, including the percolation ponds. Therefore, the wastewater that currently percolates into the ground at the site would be diverted to the City's treatment facility. These are considered **potentially significant** impacts that will be studied further in an EIR.

3., 4. The project site's existing drainage pattern primarily consists of sheet flow across soil. The project would not substantially alter the course of a stream or a river. However, a new storm drain is proposed that would facilitate drainage from the areas north of the roadway and would outlet at the edge of the Santa Clara River. In addition, as discussed under item H.1, there is the potential for pollutants such as sediment during construction and oil/grease during operation of the proposed roadway and future commercial and industrial uses. Therefore, the effects related to storm water drainage would be **potentially significant** and this issue will be studied further in an EIR.

5. As discussed above, the existing drainage pattern of the project site primarily consists of sheet flow across soil. The proposed roadway extension and levee, and future development facilitated by the proposed General Plan amendments and zone changes would alter this existing pattern. The project would be subject to the requirements of the National Pollution Discharge Elimination System (NPDES) permit for municipal storm water runoff issued to the City of Ventura. Nonetheless, impacts would be **potentially significant** and will be analyzed further in an EIR.

6. The proposed project does not include the construction of housing. Therefore, the project would not place housing in a floodplain. **No impact** would occur and further analysis of this issue in an EIR is not warranted.

7., 8. The proposed project includes construction of a roadway and a levee/floodwall, as well as General Plan amendments and zone changes that would facilitate new commercial and industrial development. The addition of a levee along any waterway has the potential to alter the flood pattern in the area. If the levee on the Oxnard side of the Santa Clara River being contemplated by the City of Oxnard is not constructed, the proposed Ventura levee could potentially increase flood potential along the Oxnard side of the river. Therefore, impacts related to the potential for increased flooding and loss of life/property due to the levee installation would be **potentially significant** and will be discussed further in an EIR.

Mitigation/Residual Impact(s): Based on the above discussion, the proposed project would have potentially significant impacts with regard to hydrology and water quality. As such, impacts and proposed mitigation will be discussed in an EIR.

J. <u>Land Use and Planning</u>:

Would the project:	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
1. Physically divide an established community?				X
2. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the General Plan, a specific plan, local coastal program, Hillside Management Program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	X			
3. Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

Impact Discussion:

1. The project site consists of vacant land and land developed with commercial and industrial uses, including a wastewater treatment plant. No portion of the project would physically divide an existing community. Furthermore, the proposed project

would create a beneficial impact in relation to urban connectivity by linking development on Johnson Drive to development on Olivas Park Drive. Therefore, **no impact** would occur and further analysis of this issue in an EIR is not warranted.

2. The roadway extension is envisioned in the 2005 General Plan and is shown as a conceptual roadway and bicycle facility on General Plan Figures 4-1 and 4-3 (City of Ventura General Plan, 2005). The conceptual designations delineated this roadway segment as an arterial roadway with a Class I bike facility; however, during design, City staff determined that a collector segment with Class II lanes on either side of the roadway were more feasible.

   The project involves General Plan amendments to re-designate approximately eight parcels, as well as rezone nine parcels. Refer to Table 1 for a description of the proposed General Plan amendments and zone changes. The project site is also located on land that is protected under SOAR, as discussed under Item B.3. Impacts related to these issues would be **potentially significant** and will be discussed further in an EIR.

3. No portion of the proposed project is subject to any habitat conservation plan or natural community conservation plan. Therefore, **no impact** would occur and further analysis of this issue in an EIR is not warranted.

Mitigation/Residual Impacts: Based on the above discussion, project implementation could have a potentially significant impact with regard to land use and planning. As such, further evaluation and any proposed mitigation will be discussed further in an EIR.

K. <u>Mineral Resources</u>:

Would the project:	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
1. Result in the loss of availability of known mineral resource that would be of value to the region and the residents of the state?				X
2. Result in the loss of availability of a locally-important mineral resource recovery site delineated on the General Plan, specific plan, or other land use plan?				X

Impact Discussion:

1. The 2005 General Plan FEIR indicates no known mineral resources within the project site vicinity. **No impact** would occur and further analysis of this issue in an EIR is not warranted.

2. The 2005 General Plan FEIR indicates no known mineral resources within the project site vicinity. **No impact** would occur and further analysis of this issue in an EIR is not warranted.

Mitigation/Residual Impact(s): Based on the above discussion, project implementation would have a less than significant impact with regard to mineral resources. As such, mitigation measures would not be required.

L. <u>Noise</u>:

Would the project result in:	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
1. Exposure of persons to a generation of noise levels in excess of standards established in the General Plan or noise ordinance?			X	
2. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			X	
3. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
4. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
5. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
6. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X

Impact Discussion:

1.-4. The proposed project involves the construction of a roadway extension and levee/floodwall through an area consisting of vacant, commercial, and industrial properties adjacent to the Santa Clara River and in close proximity to U.S. Highway 101. The proposed project would also include General Plan amendments and zone changes that would allow commercial and industrial development. The project site vicinity is designated as Noise Zone IV, and has an allowable noise level of 70 dBA.

The project does not involve the placement of sensitive receptors in a potentially noisy environment, nor would it generate traffic noise that could affect sensitive receptors given the commercial/industrial character of adjacent development. Therefore, the project would have a **less than significant** effect with respect to operational noise and further analysis of this issue in an EIR is not warranted.

Construction of individual project components would generate temporary construction noise (typically in the range from about 78 to 88 dBA at 50 feet from the construction site) (U.S. Environmental Protection Agency, 1971). Temporary construction noise would be audible on adjacent properties; however, none of the adjacent properties are occupied by noise-sensitive uses. In addition, construction noise is exempt from the City's noise ordinance provided that it occurs between 7 A.M. and 8 P.M. Therefore, effects related to noise would be **less than significant** and further study of this issue in an EIR is not warranted.

5., 6. The proposed project does not fall within the noise contours of Oxnard Airport (Jorge Rubio, 2010). There are no private airstrips within the project vicinity. There would be **no impact** and further analysis of these issues in an EIR is not warranted.

Mitigation/Residual Impact(s): Based on the above discussion, project implementation would have a less than significant impact with regard to noise. As such, mitigation measures would not be required.

M. <u>Population and Housing</u>:

Would the project:	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
1. Induce substantial population growth in an area, either directly or indirectly?				X
2. Displace substantial numbers of existing housing or people, necessitating the construction of replacement housing elsewhere?				X

Impact Discussion:

1. The proposed project would not directly induce population growth as it does not involve any residential development. Jobs generated by the commercial and industrial development that could be accommodated onsite would be expected to be filled by the local work force. **No impact** would occur and further study of this issue in an EIR is not warranted.

2. No residential development is located on or in the vicinity of the project site. Therefore, there would be **no impact** with respect to displacement of people or housing and further study of this issue in an EIR is not warranted.

Mitigation/Residual Impact(s): Based on the above discussion, project implementation would result in no impact with regard to population and housing. As such, mitigation measures would not be required.

N. <u>Public Services & Recreation</u>:

Would the project:	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
1. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction which would cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following: a. Fire protection?			X	
b. Police protection?			X	
c. Schools?			X	
d. Neighborhood or regional parks or other recreational facilities?			X	
e. Maintenance of public facilities including roads?			X	

Would the project:	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
2. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
3. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

Impact Discussion:

1.-3. The proposed project would not result in a population increase and, therefore, would not increase demand for schools or parks. Future commercial and industrial development onsite may incrementally increase police and fire service calls, but would not require the construction of new police or fire facilities. By extending Olivas Park Drive, the proposed roadway extension may incrementally improve emergency response in the site vicinity, as well as access to recreational facilities in the area, such as Buenaventura Golf Course. Furthermore, the proposed levee may reduce the need for emergency responses during floods by providing flood protection for properties in the 100-year flood zone near the Santa Clara River. Impacts would be **less than significant** and further study of this issue in an EIR is not warranted.

Mitigation/Residual Impact(s):
Based on the above discussion, project implementation would have a less than significant impact with regard to public services and recreation. As such, mitigation measures would not be required.

O. Transportation/Traffic:

Would the project:	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
1. 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?	X			
2. 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?	X			
3. 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?				X
4. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
5. Result in inadequate emergency access?			X	
6. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?				X

Impact Discussion:

1., 2. The proposed roadway extension and levee would not add traffic to the area, but would allow drivers traveling along Olivas Park Drive seeking to access Johnson Drive to avoid a trip through the Auto Center. The proposed roadway extension would not generate additional traffic and is expected to enhance levels of service in the Auto Center area by improving the connectivity of the area circulation network. However, construction of the proposed project, and specifically the levee, could generate temporary impacts to traffic in the area as it would require truck trips to import soil. In addition, the proposed General Plan amendments and rezones would facilitate the development of commercial and industrial uses, which would be expected to generate new traffic in the project site vicinity. These impacts would be **potentially significant** and will be further analyzed in an EIR.

3. The proposed project would not affect air traffic patterns. There would be **no impact** and further study of this issue in an EIR is not warranted.

4. The proposed Olivas Park Drive extension would not be expected to increase hazards due to design feature or incompatible use. The roadway extension will be designed to City standards and includes a gentle curve. The roadway would be designed to meet applicable standards and does not present any apparent traffic safety hazards. Therefore, impacts related to traffic hazards would be **less than significant** and further study of this issue in an EIR is not warranted.

5. The proposed project would not interfere with emergency access in the area. In addition, the roadway would be beneficial with respect to emergency access because it would allow vehicles to reach the existing Olivas Park Drive roadway from Johnson Drive more quickly and enhance the connectivity of the local circulation network. Further, the project site is in close proximity to U.S. Highway 101, which could serve as an emergency route. Any commercial or industrial development facilitated by the proposed General Plan amendment would be required to submit site plans for approval to the City's Building & Safety Division. The permitting process would ensure adequate emergency access is provided for any new development. Impacts would be **less than significant** and further study of this issue in an EIR is not warranted.

6. The proposed project would not conflict with any adopted policies, plans, or programs supporting alternative transportation. The proposed roadway extension would facilitate additional bike lanes and would foster future bus access. Any future commercial or industrial development facilitated by the proposed General Plan amendments or rezones would comply with applicable policies and requirements pertaining to alternative transportation. **No impact** would occur and further study of this issue in an EIR is not warranted.

Mitigation/Residual Impact(s): Project implementation could have a potentially significant impact with regard to transportation and circulation. As such, traffic and any proposed mitigation will be discussed further in an EIR.

P. Utilities and Service Systems:

Would the project:	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impacts
1. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			X	
2. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
3. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	X			
4. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			X	
5. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			X	
6. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
7. Comply with federal, state, and local statutes and regulations related to solid waste?			X	

Impact Discussion:

As part of a separate action, the Montalvo Municipal Wastewater Treatment facility, which processes about 260,000 gallons/day of wastewater (Personal Communication, Kelly Polk, 2009), is proposed for abandonment. Because the alignment of the proposed roadway extension and levee/floodwall intersects the Montalvo Municipal Improvement District Property, the City of Ventura has agreed to divert the wastewater that is currently processed at the Montalvo facility through a tie-in via a 15-inch sewer line to the existing 36-inch Bristol Relief Sewer located in Golf Course Drive. The Olivas Park Drive extension would include wastewater infrastructure to link the existing sewer lines located in Perkin Avenue with the wastewater that is received at the Montalvo facility. All wastewater from this vicinity would then be treated at the City's main treatment facility (Ventura Water Reclamation Facility) at Harbor Boulevard.

1., 2., 5. Local wastewater services are provided to the project site vicinity by the City of Ventura. The Ventura Water Reclamation Facility (WRF) is a permitted tertiary treatment plant with a capacity of 14 million gallons per day (MGD), located at 1400 Spinnaker Drive, in the Ventura Harbor area near the mouth of the Santa Clara River. A minimum of 5.6 MGD of the effluent is discharged to the Santa Clara Estuary as required by the existing Regional Water Quality Control Broad (RWQCB) National Pollution Discharge Elimination System (NPDES) Permit. The remaining effluent is either transferred to recycling ponds, where a portion is delivered as reclaimed water, or lost through percolation or evaporation. Methods for treatment of residual solids include thickening, anaerobic digestion and dewatering by filter presses prior to land application.

Currently, the Ventura WRF is averaging approximately 10 MGD (Don Burt, 2008). With a designed capacity of 14 MGD, this leaves a 4 MGD surplus. Neither the proposed road extension nor the proposed levee would generate wastewater. The commercial development facilitated by the proposed General Plan amendment (up to 1,258,000 square feet) would generate an estimated 352,240 gallons of wastewater per day (based on 280 gallons per 1,000 square feet of non-residential development, per the 2005 General Plan Final EIR). The industrial development facilitated by the proposed General Plan amendment (up to 75,000 square feet) would generate an estimated 21,000 gallons of wastewater per day. The total estimated wastewater generated per day would be approximately 373,240 gallons.

The proposed road extension would traverse through a wastewater treatment facility, which would be abandoned. The wastewater treatment facility on the project site has a capacity of 360,000 gallons per day and treats approximately 260,000 gallons per day (Personal Communication, Kelly Polk, 2009). The wastewater that is currently treated at this wastewater treatment facility would be treated at the Ventura WRF. The additional 260,000 gallons per day would be about 15 percent of the surplus capacity of the Ventura WRF.

The 633,240 gallons of additional wastewater anticipated to be sent to the Ventura WRF (260,000 gallons diverted from the Montalvo Municipal Improvement District and

373,240 gallons generated by future commercial and industrial development) would be within the Ventura WRF capacity. Therefore, project implementation would not require expansion or upgrade of the Ventura WRF. Impacts related to exceeding the capacity of the Ventura WRF would be **less than significant**.

3. The proposed project would involve construction of stormwater infrastructure. The project would be required to comply with the County of Ventura Stormwater Quality Urban Impact Mitigation Plan (SQUIMP) requirements. Nevertheless, as discussed under items H.1, H.3, and H.4, the potential for adverse effects related to stormwater conveyance and discharge will be discussed and analyzed further in an EIR. The impact is considered **potentially significant** and will be studied further as part of a hydrology/water quality analysis.

4. Local water service is provided by the City of Ventura. Commercial development facilitated by the proposed General Plan amendment would incrementally increase water demand. Based on a water duty factor of 250 gallons per day (gpd) per 1,000 square feet of development , the commercial component of the project would generate demand for about 314,500 gallons per day or 352 acre-feet of water per year (AFY). Based on a water duty factor of 315 gpd per 1,000 square feet, the industrial component would generate demand for approximately 23,625 gpd or 27 AFY. The total water demand generated by development facilitated through the General Plan amendments and rezones would be 338,125 gpd or 379 AFY. This is within the 7,831 acre-feet per year surplus projected in the City's 2008 Biennial Water Supply Report (September 2008). As such, project development would have a **less than significant** effect on water supply and further study of this issue in an EIR is not warranted.

6., 7. The proposed General Plan amendment would allow commercial and industrial uses in the project area, which would incrementally increase solid waste generation from the project site. The City is primarily served by Toland Landfill, which has a projected closure date of 2027. The landfill would have sufficient capacity to serve temporary waste generated by project construction, as well as long term service for commercial and industrial development. In addition, the project would not conflict with regulations regarding solid waste. Impacts would be **less than significant.**

Mitigation/Residual Impact(s): Based on the above discussion, project implementation would result in less than significant impacts to utilities and service systems. As such, mitigation measures are not required.

Q. Mandatory Findings of Significance:

	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
1. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	X			
2. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	X			
3. Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	X			

Findings Discussion:

1. Based on the information obtained in the preparation of this Initial Study, project implementation would not eliminate important examples of the major periods of California history or prehistory. No cultural resources were found on the project site (Phase I Study, Simon and Whitley, 1995). However, biological impacts would be **potentially significant** and will be studied further in an EIR.

2. The proposed project involves a roadway extension, a levee, General Plan amendments and zone changes to allow commercial and industrial uses on the project

site. As discussed in this Initial Study, the project would have potentially significant impacts in several issue areas. These impacts may contribute to significant cumulative impacts. As such, cumulative impacts would be **potentially significant** and will be studied further in an EIR.

3. Project implementation could have **potentially significant** impacts with respect to aesthetics, agricultural resources, air quality, biological resources, greenhouse gas emissions, hazards, hydrology/water quality, land use and planning, and transportation/traffic. These impacts would be **potentially significant** and will be studied further in an EIR.

VI. CIRCULATE TO THE FOLLOWING AGENCIES/PERSONS:

VENTURA COUNTY

Agricultural Commissioner (Rita Graham)	[X]	Ventura County Clerk/Recorder* (hand deliver – 1 original, 4 copies)	[X]
Ventura County Watershed Protection District*	[X]	Local Agency Formation Commission (LAFCO)	[X]
County of Ventura Resource Management Agency, Attn: Planning* Director (1 hard copy, 6 CDs)	[X]	Ventura County Transportation Commission* (VCTC)	[X]

ADJACENT COUNTIES

Kern County Planning & Development Services	[ ]	County of Santa Barbara Planning Division	[ ]
County of Los Angeles Dept. of Regional Planning Impact Analysis Section	[ ]		

ADJACENT CITIES

City of Oxnard	[X]	City of Ojai	[ ]

OTHER PUBLIC AGENCIES

Air Pollution Control District*	[X]	Ventura County Organization of Government (VCOG)	[X]
Ventura County Solid Waste Management Department	[ ]	Ventura Regional Sanitation District*	[X]
Casitas Mutual Water District	[ ]	South Coast Area Transit (SCAT)	[X]
Ventura Unified School District	[ ]		

LIBRARIES

Avenue Branch Library*	[X]	H.P. Wright Branch Library	[ ]
E.P. Foster Branch Library*	[X]		

STATE AGENCIES

California Coastal Commission South Central Coast Area Office	[ ]	Southern California Association of Governments (SCAG)* (3 copies)	[X]
California Dept. of Fish & Game (Santa Barbara)	[X]	Caltrans District 7 Environmental Section	[X]
California Regional Water Quality Control Board	[X]	State Department of Parks and Recreation	[ ]
California Integrated Waste Management Board, Permits Section	[ ]	Dept. of Boating & Waterways	[ ]
California Department of Toxic Substances Control	[X]	State Clearinghouse (15 copies)	[X]

FEDERAL AGENCIES

U.S. Army Corps of Engineers	[X]	U.S. Fish & Wildlife Service	[X]

CITIZEN GROUPS

Audubon Society	[X]	Sierra Club	[X]
Building Industry Association Greater Los Angeles/Ventura Region of Southern California, Inc.	[ ]	California Trout	[X]
		Surfrider Foundation	[ ]
Environmental Coalition	[ ]	Friends of the Ventura River	[ ]
Environmental Defense Center	[ ]	League of Women Voters	[ ]
Friends of the Santa Clara River	[X]	Santa Ynez Band of Mission Indians	[X]
Ventureano Canaliano Chumash	[X]	Owl Clan Consultants	[X]
Candelaria American Indian Council	[X]	Montalvo Property Owners Association	[X]
Ventura County Archaeological Society	[X]	Foothill Road Homeowners Association	[ ]
Westside Community Council	[ ]	East Ventura Community Council	[ ]
Downtown Community Council	[ ]	Midtown Community Council	[ ]
Pierpont Community Council	[ ]		

*Indicates agency/person always receives notice.

VII. LIST OF REFERENCES:

These references and those previously cited within the text of this Initial Study/Environmental Assessment are intended to provide a list of Supporting Information Sources and/or evidence staff has relied upon in completing this document and in reaching the conclusions contained herein. In addition, the materials that were submitted by the applicant have also been used in completing this document.

If any person or entity reviewing this Initial Study/Environmental Assessment has a question regarding the supporting information source and/or evidence, they may contact the staff planner at the address and telephone number noted on the front page of this document during the public review period.

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VIII. ATTACHMENTS:

Figures 1 and 2

Basemap Source: ESRI Data, 2009, and USGS/CDFG, 2002.

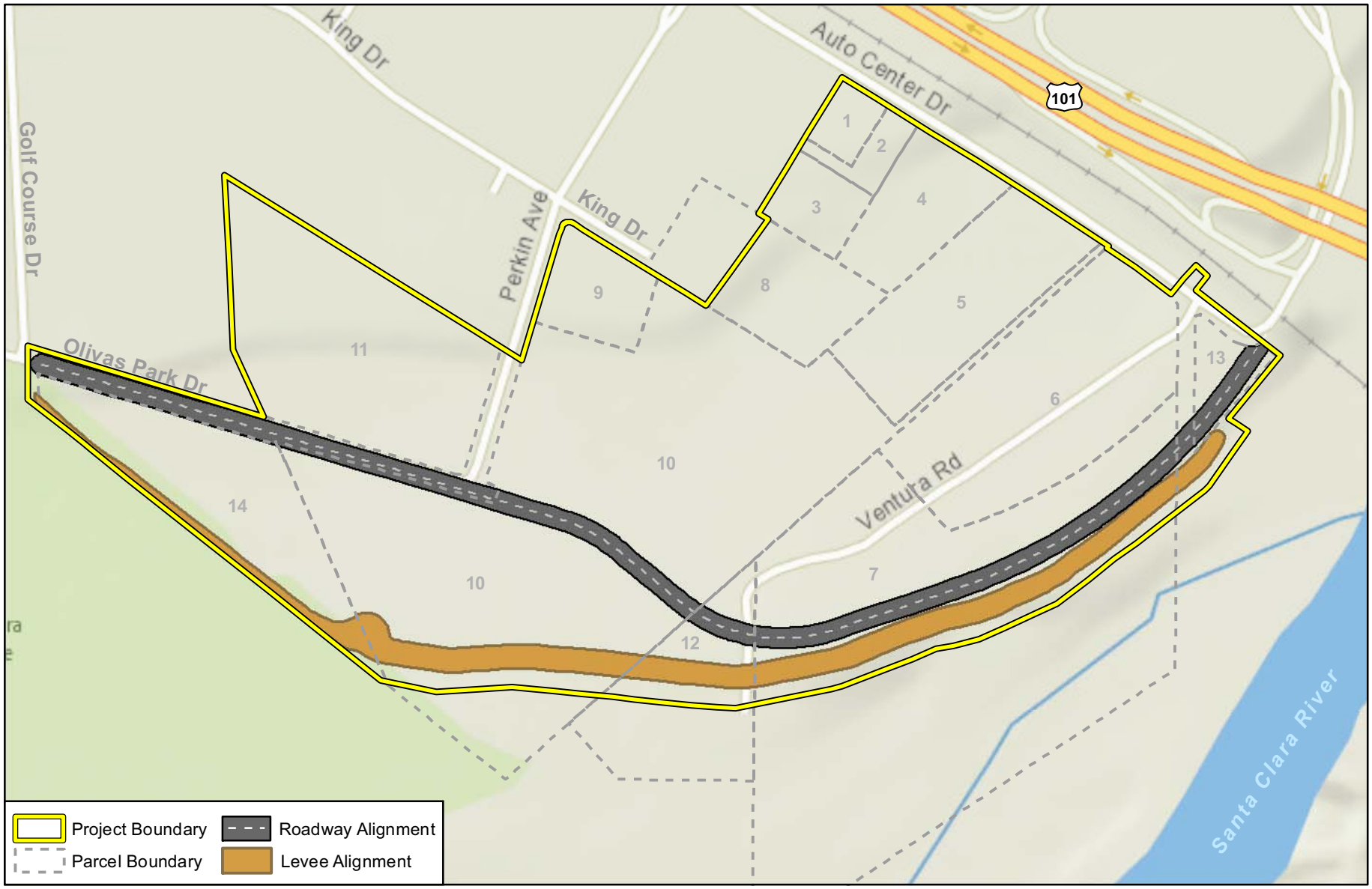
Project Location

N

0 4 8 Miles

Regional Location

Figure 1



Basemap Credits: Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, iPC, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, 2012

Physical Project Components

0 300 600 Feet

N

Figure 2

Appendix B

Air Quality and Greenhouse Gas Emissions Calculations

Olivas Park Drive Extension Project

Ventura County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
General Light Industry	75	1000sqft
Regional Shopping Center	1258	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Utility Company**	Southern California Edison
Climate Zone	8	**Precipitation Freq (Days)**	31		

1.3 User Entered Comments

Project Characteristics - Operational year of 2020, to approximate likely buildout timeline.

Land Use - Unit amounts from EIR project description. Acreages from Rasmussen & Associates (May 2012).

Vehicle Trips - Traip rates estimated from ADT from traffic study: 34.34 for commercial, 6.97 for industrial.

Construction Phase - Site Prep: 5/21/13-8/12/13; Grading: 8/13/13-3/17/14; Construction: 3/18/14-2/24/20; Paving: 2/25/20-7/27/20; Arch Coating: 7/28/20-12/28/20

Grading - Soil is expected to be balanced on-site.

Energy Use -

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					
2013	0.90	7.33	4.11	0.01	1.23	0.35	1.58	0.58	0.35	0.93	0.00	727.96	727.96	0.07	0.00	729.50
2014	1.35	8.98	8.30	0.02	1.40	0.43	1.83	0.32	0.43	0.75	0.00	1,556.59	1,556.59	0.10	0.00	1,558.63
2015	1.21	7.49	8.16	0.02	0.90	0.36	1.26	0.05	0.36	0.41	0.00	1,613.94	1,613.94	0.08	0.00	1,615.71
2016	1.12	6.86	7.77	0.02	0.90	0.32	1.23	0.05	0.32	0.37	0.00	1,609.09	1,609.09	0.08	0.00	1,610.71
2017	1.03	6.29	7.35	0.02	0.90	0.29	1.19	0.05	0.29	0.34	0.00	1,595.52	1,595.52	0.07	0.00	1,597.00
2018	0.96	5.82	7.05	0.02	0.90	0.26	1.16	0.02	0.25	0.27	0.00	1,594.62	1,594.62	0.07	0.00	1,595.99
2019	0.90	5.39	6.77	0.02	0.90	0.23	1.13	0.02	0.22	0.24	0.00	1,588.12	1,588.12	0.06	0.00	1,589.39
2020	15.79	2.05	2.34	0.01	0.20	0.13	0.33	0.00	0.13	0.13	0.00	437.00	437.00	0.03	0.00	437.56
Total	**23.26**	**50.21**	**51.85**	**0.14**	**7.33**	**2.37**	**9.71**	**1.09**	**2.35**	**3.44**	**0.00**	**10,722.84**	**10,722.84**	**0.56**	**0.00**	**10,734.49**

2.1 Overall Construction

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					
2013	0.90	7.33	4.11	0.01	1.21	0.35	1.57	0.58	0.35	0.93	0.00	727.96	727.96	0.07	0.00	729.50
2014	1.35	8.98	8.30	0.02	0.71	0.43	1.14	0.32	0.43	0.75	0.00	1,556.59	1,556.59	0.10	0.00	1,558.63
2015	1.21	7.49	8.16	0.02	0.05	0.36	0.41	0.05	0.36	0.41	0.00	1,613.94	1,613.94	0.08	0.00	1,615.71
2016	1.12	6.86	7.77	0.02	0.05	0.32	0.37	0.05	0.32	0.37	0.00	1,609.09	1,609.09	0.08	0.00	1,610.71
2017	1.03	6.29	7.35	0.02	0.05	0.29	0.34	0.05	0.29	0.34	0.00	1,595.52	1,595.52	0.07	0.00	1,597.00
2018	0.96	5.82	7.05	0.02	0.05	0.26	0.31	0.02	0.25	0.27	0.00	1,594.62	1,594.62	0.07	0.00	1,595.99
2019	0.90	5.39	6.77	0.02	0.05	0.23	0.28	0.02	0.22	0.24	0.00	1,588.12	1,588.12	0.06	0.00	1,589.39
2020	15.79	2.05	2.34	0.01	0.01	0.13	0.14	0.00	0.13	0.13	0.00	437.00	437.00	0.03	0.00	437.56
Total	**23.26**	**50.21**	**51.85**	**0.14**	**2.18**	**2.37**	**4.56**	**1.09**	**2.35**	**3.44**	**0.00**	**10,722.84**	**10,722.84**	**0.56**	**0.00**	**10,734.49**

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	6.75	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
Energy	0.02	0.21	0.17	0.00		0.00	0.02		0.00	0.02	0.00	5,109.52	5,109.52	0.23	0.09	5,141.50
Mobile	24.18	36.06	181.03	0.39	41.74	1.65	43.39	0.64	1.58	2.22	0.00	29,140.92	29,140.92	1.22	0.00	29,166.49
Waste						0.00	0.00		0.00	0.00	1,153.86	0.00	1,153.86	68.19	0.00	2,585.88
Water						0.00	0.00		0.00	0.00	0.00	1,939.36	1,939.36	14.19	0.38	2,356.01
Total	**30.95**	**36.27**	**181.20**	**0.39**	**41.74**	**1.65**	**43.41**	**0.64**	**1.58**	**2.24**	**1,153.86**	**36,189.80**	**37,343.66**	**83.83**	**0.47**	**39,249.88**

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	6.75	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
Energy	0.02	0.21	0.17	0.00		0.00	0.02		0.00	0.02	0.00	5,109.52	5,109.52	0.23	0.09	5,141.50
Mobile	24.18	36.06	181.03	0.39	41.74	1.65	43.39	0.64	1.58	2.22	0.00	29,140.92	29,140.92	1.22	0.00	29,166.49
Waste						0.00	0.00		0.00	0.00	1,153.86	0.00	1,153.86	68.19	0.00	2,585.88
Water						0.00	0.00		0.00	0.00	0.00	1,939.36	1,939.36	14.19	0.38	2,356.01
Total	**30.95**	**36.27**	**181.20**	**0.39**	**41.74**	**1.65**	**43.41**	**0.64**	**1.58**	**2.24**	**1,153.86**	**36,189.80**	**37,343.66**	**83.83**	**0.47**	**39,249.88**

3.0 Construction Detail

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2013

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					0.54	0.00	0.54	0.30	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.30	2.40	1.36	0.00		0.12	0.12		0.12	0.12	0.00	217.60	217.60	0.02	0.00	218.11
Total	**0.30**	**2.40**	**1.36**	**0.00**	**0.54**	**0.12**	**0.66**	**0.30**	**0.12**	**0.42**	**0.00**	**217.60**	**217.60**	**0.02**	**0.00**	**218.11**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.03	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	4.57	4.57	0.00	0.00	4.57
Total	**0.00**	**0.00**	**0.03**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**4.57**	**4.57**	**0.00**	**0.00**	**4.57**

3.2 Site Preparation - 2013

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					0.54	0.00	0.54	0.30	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.30	2.40	1.36	0.00		0.12	0.12		0.12	0.12	0.00	217.60	217.60	0.02	0.00	218.11
Total	**0.30**	**2.40**	**1.36**	**0.00**	**0.54**	**0.12**	**0.66**	**0.30**	**0.12**	**0.42**	**0.00**	**217.60**	**217.60**	**0.02**	**0.00**	**218.11**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.57	4.57	0.00	0.00	4.57
Total	**0.00**	**0.00**	**0.03**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**4.57**	**4.57**	**0.00**	**0.00**	**4.57**

3.3 Grading - 2013

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					0.67	0.00	0.67	0.28	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.60	4.92	2.67	0.01		0.23	0.23		0.23	0.23	0.00	497.24	497.24	0.05	0.00	498.26
Total	**0.60**	**4.92**	**2.67**	**0.01**	**0.67**	**0.23**	**0.90**	**0.28**	**0.23**	**0.51**	**0.00**	**497.24**	**497.24**	**0.05**	**0.00**	**498.26**

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	0.00	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
Vendor	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
Worker	0.01	0.01	0.06	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	8.55	8.55	0.00	0.00	8.56
Total	**0.01**	**0.01**	**0.06**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**8.55**	**8.55**	**0.00**	**0.00**	**8.56**

3.3 Grading - 2013

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					0.67	0.00	0.67	0.28	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.60	4.92	2.67	0.01		0.23	0.23		0.23	0.23	0.00	497.24	497.24	0.05	0.00	498.26
Total	**0.60**	**4.92**	**2.67**	**0.01**	**0.67**	**0.23**	**0.90**	**0.28**	**0.23**	**0.51**	**0.00**	**497.24**	**497.24**	**0.05**	**0.00**	**498.26**

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	0.00	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
Vendor	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
Worker	0.01	0.01	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.55	8.55	0.00	0.00	8.56
Total	**0.01**	**0.01**	**0.06**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**8.55**	**8.55**	**0.00**	**0.00**	**8.56**

3.3 Grading - 2014

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					0.67	0.00	0.67	0.28	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.30	2.45	1.37	0.00		0.11	0.11		0.11	0.11	0.00	265.85	265.85	0.02	0.00	266.37
Total	**0.30**	**2.45**	**1.37**	**0.00**	**0.67**	**0.11**	**0.78**	**0.28**	**0.11**	**0.39**	**0.00**	**265.85**	**265.85**	**0.02**	**0.00**	**266.37**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.03	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	4.47	4.47	0.00	0.00	4.47
Total	**0.00**	**0.00**	**0.03**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**4.47**	**4.47**	**0.00**	**0.00**	**4.47**

3.3 Grading - 2014

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					0.67	0.00	0.67	0.28	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.30	2.45	1.37	0.00		0.11	0.11		0.11	0.11	0.00	265.85	265.85	0.02	0.00	266.37
Total	**0.30**	**2.45**	**1.37**	**0.00**	**0.67**	**0.11**	**0.78**	**0.28**	**0.11**	**0.39**	**0.00**	**265.85**	**265.85**	**0.02**	**0.00**	**266.37**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.47	4.47	0.00	0.00	4.47
Total	**0.00**	**0.00**	**0.03**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**4.47**	**4.47**	**0.00**	**0.00**	**4.47**

3.4 Building Construction - 2014

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	0.49	3.32	2.40	0.00		0.21	0.21		0.21	0.21	0.00	379.28	379.28	0.04	0.00	380.12
Total	**0.49**	**3.32**	**2.40**	**0.00**		**0.21**	**0.21**		**0.21**	**0.21**	**0.00**	**379.28**	**379.28**	**0.04**	**0.00**	**380.12**

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	0.00	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
Vendor	0.29	2.98	2.21	0.01	0.19	0.09	0.28	0.02	0.09	0.11	0.00	535.38	535.38	0.01	0.00	535.65
Worker	0.26	0.24	2.29	0.00	0.53	0.01	0.54	0.02	0.01	0.04	0.00	371.61	371.61	0.02	0.00	372.02
Total	**0.55**	**3.22**	**4.50**	**0.01**	**0.72**	**0.10**	**0.82**	**0.04**	**0.10**	**0.15**	**0.00**	**906.99**	**906.99**	**0.03**	**0.00**	**907.67**

3.4 Building Construction - 2014

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	0.49	3.32	2.40	0.00		0.21	0.21		0.21	0.21	0.00	379.28	379.28	0.04	0.00	380.12
Total	**0.49**	**3.32**	**2.40**	**0.00**		**0.21**	**0.21**		**0.21**	**0.21**	**0.00**	**379.28**	**379.28**	**0.04**	**0.00**	**380.12**

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	0.00	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
Vendor	0.29	2.98	2.21	0.01	0.02	0.09	0.11	0.02	0.09	0.11	0.00	535.38	535.38	0.01	0.00	535.65
Worker	0.26	0.24	2.29	0.00	0.02	0.01	0.04	0.02	0.01	0.04	0.00	371.61	371.61	0.02	0.00	372.02
Total	**0.55**	**3.22**	**4.50**	**0.01**	**0.04**	**0.10**	**0.15**	**0.04**	**0.10**	**0.15**	**0.00**	**906.99**	**906.99**	**0.03**	**0.00**	**907.67**

3.4 Building Construction - 2015

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	0.57	3.80	3.00	0.01		0.23	0.23		0.23	0.23	0.00	478.23	478.23	0.05	0.00	479.20
Total	**0.57**	**3.80**	**3.00**	**0.01**		**0.23**	**0.23**		**0.23**	**0.23**	**0.00**	**478.23**	**478.23**	**0.05**	**0.00**	**479.20**

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	0.00	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
Vendor	0.33	3.42	2.53	0.01	0.24	0.11	0.34	0.02	0.11	0.13	0.00	677.82	677.82	0.01	0.00	678.13
Worker	0.31	0.27	2.63	0.01	0.67	0.02	0.69	0.03	0.02	0.05	0.00	457.89	457.89	0.02	0.00	458.38
Total	**0.64**	**3.69**	**5.16**	**0.02**	**0.91**	**0.13**	**1.03**	**0.05**	**0.13**	**0.18**	**0.00**	**1,135.71**	**1,135.71**	**0.03**	**0.00**	**1,136.51**

3.4 Building Construction - 2015

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	0.57	3.80	3.00	0.01		0.23	0.23		0.23	0.23	0.00	478.23	478.23	0.05	0.00	479.20
Total	**0.57**	**3.80**	**3.00**	**0.01**		**0.23**	**0.23**		**0.23**	**0.23**	**0.00**	**478.23**	**478.23**	**0.05**	**0.00**	**479.20**

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	0.00	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
Vendor	0.33	3.42	2.53	0.01	0.02	0.11	0.13	0.02	0.11	0.13	0.00	677.82	677.82	0.01	0.00	678.13
Worker	0.31	0.27	2.63	0.01	0.03	0.02	0.05	0.03	0.02	0.05	0.00	457.89	457.89	0.02	0.00	458.38
Total	**0.64**	**3.69**	**5.16**	**0.02**	**0.05**	**0.13**	**0.18**	**0.05**	**0.13**	**0.18**	**0.00**	**1,135.71**	**1,135.71**	**0.03**	**0.00**	**1,136.51**

3.4 Building Construction - 2016

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	0.52	3.46	2.97	0.01		0.21	0.21		0.21	0.21	0.00	478.23	478.23	0.04	0.00	479.11
Total	**0.52**	**3.46**	**2.97**	**0.01**		**0.21**	**0.21**		**0.21**	**0.21**	**0.00**	**478.23**	**478.23**	**0.04**	**0.00**	**479.11**

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	0.00	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
Vendor	0.31	3.15	2.36	0.01	0.24	0.10	0.33	0.02	0.10	0.12	0.00	681.66	681.66	0.01	0.00	681.94
Worker	0.29	0.25	2.43	0.01	0.67	0.02	0.69	0.03	0.02	0.05	0.00	449.20	449.20	0.02	0.00	449.66
Total	**0.60**	**3.40**	**4.79**	**0.02**	**0.91**	**0.12**	**1.02**	**0.05**	**0.12**	**0.17**	**0.00**	**1,130.86**	**1,130.86**	**0.03**	**0.00**	**1,131.60**

3.4 Building Construction - 2016

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	0.52	3.46	2.97	0.01		0.21	0.21		0.21	0.21	0.00	478.23	478.23	0.04	0.00	479.11
Total	**0.52**	**3.46**	**2.97**	**0.01**		**0.21**	**0.21**		**0.21**	**0.21**	**0.00**	**478.23**	**478.23**	**0.04**	**0.00**	**479.11**

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	0.00	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
Vendor	0.31	3.15	2.36	0.01	0.02	0.10	0.12	0.02	0.10	0.12	0.00	681.66	681.66	0.01	0.00	681.94
Worker	0.29	0.25	2.43	0.01	0.03	0.02	0.05	0.03	0.02	0.05	0.00	449.20	449.20	0.02	0.00	449.66
Total	**0.60**	**3.40**	**4.79**	**0.02**	**0.05**	**0.12**	**0.17**	**0.05**	**0.12**	**0.17**	**0.00**	**1,130.86**	**1,130.86**	**0.03**	**0.00**	**1,131.60**

3.4 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	0.48	3.13	2.94	0.01		0.18	0.18		0.18	0.18	0.00	476.40	476.40	0.04	0.00	477.20
Total	**0.48**	**3.13**	**2.94**	**0.01**		**0.18**	**0.18**		**0.18**	**0.18**	**0.00**	**476.40**	**476.40**	**0.04**	**0.00**	**477.20**

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	0.00	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
Vendor	0.29	2.94	2.19	0.01	0.24	0.09	0.33	0.02	0.09	0.11	0.00	681.22	681.22	0.01	0.00	681.49
Worker	0.27	0.22	2.22	0.01	0.66	0.02	0.68	0.03	0.02	0.05	0.00	437.90	437.90	0.02	0.00	438.31
Total	**0.56**	**3.16**	**4.41**	**0.02**	**0.90**	**0.11**	**1.01**	**0.05**	**0.11**	**0.16**	**0.00**	**1,119.12**	**1,119.12**	**0.03**	**0.00**	**1,119.80**

3.4 Building Construction - 2017

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	0.48	3.13	2.94	0.01		0.18	0.18		0.18	0.18	0.00	476.40	476.40	0.04	0.00	477.20
Total	**0.48**	**3.13**	**2.94**	**0.01**		**0.18**	**0.18**		**0.18**	**0.18**	**0.00**	**476.40**	**476.40**	**0.04**	**0.00**	**477.20**

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	0.00	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
Vendor	0.29	2.94	2.19	0.01	0.02	0.09	0.11	0.02	0.09	0.11	0.00	681.22	681.22	0.01	0.00	681.49
Worker	0.27	0.22	2.22	0.01	0.03	0.02	0.05	0.03	0.02	0.05	0.00	437.90	437.90	0.02	0.00	438.31
Total	**0.56**	**3.16**	**4.41**	**0.02**	**0.05**	**0.11**	**0.16**	**0.05**	**0.11**	**0.16**	**0.00**	**1,119.12**	**1,119.12**	**0.03**	**0.00**	**1,119.80**

3.4 Building Construction - 2018

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	0.44	2.84	2.93	0.01		0.16	0.16		0.16	0.16	0.00	478.23	478.23	0.04	0.00	478.97
Total	**0.44**	**2.84**	**2.93**	**0.01**		**0.16**	**0.16**		**0.16**	**0.16**	**0.00**	**478.23**	**478.23**	**0.04**	**0.00**	**478.97**

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	0.00	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
Vendor	0.27	2.77	2.07	0.01	0.24	0.08	0.32	0.01	0.08	0.08	0.00	685.89	685.89	0.01	0.00	686.13
Worker	0.26	0.20	2.05	0.01	0.67	0.02	0.69	0.01	0.02	0.03	0.00	430.50	430.50	0.02	0.00	430.89
Total	**0.53**	**2.97**	**4.12**	**0.02**	**0.91**	**0.10**	**1.01**	**0.02**	**0.10**	**0.11**	**0.00**	**1,116.39**	**1,116.39**	**0.03**	**0.00**	**1,117.02**

3.4 Building Construction - 2018

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	0.44	2.84	2.93	0.01		0.16	0.16		0.16	0.16	0.00	478.23	478.23	0.04	0.00	478.97
Total	**0.44**	**2.84**	**2.93**	**0.01**		**0.16**	**0.16**		**0.16**	**0.16**	**0.00**	**478.23**	**478.23**	**0.04**	**0.00**	**478.97**

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	0.00	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
Vendor	0.27	2.77	2.07	0.01	0.02	0.08	0.10	0.01	0.08	0.08	0.00	685.89	685.89	0.01	0.00	686.13
Worker	0.26	0.20	2.05	0.01	0.03	0.02	0.05	0.01	0.02	0.03	0.00	430.50	430.50	0.02	0.00	430.89
Total	**0.53**	**2.97**	**4.12**	**0.02**	**0.05**	**0.10**	**0.15**	**0.02**	**0.10**	**0.11**	**0.00**	**1,116.39**	**1,116.39**	**0.03**	**0.00**	**1,117.02**

3.4 Building Construction - 2019

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	0.40	2.57	2.92	0.01		0.13	0.13		0.13	0.13	0.00	478.23	478.23	0.03	0.00	478.91
Total	**0.40**	**2.57**	**2.92**	**0.01**		**0.13**	**0.13**		**0.13**	**0.13**	**0.00**	**478.23**	**478.23**	**0.03**	**0.00**	**478.91**

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	0.00	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
Vendor	0.26	2.63	1.95	0.01	0.24	0.08	0.31	0.01	0.07	0.08	0.00	687.82	687.82	0.01	0.00	688.04
Worker	0.24	0.19	1.90	0.01	0.67	0.02	0.69	0.01	0.02	0.03	0.00	422.08	422.08	0.02	0.00	422.44
Total	**0.50**	**2.82**	**3.85**	**0.02**	**0.91**	**0.10**	**1.00**	**0.02**	**0.09**	**0.11**	**0.00**	**1,109.90**	**1,109.90**	**0.03**	**0.00**	**1,110.48**

3.4 Building Construction - 2019

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	0.40	2.57	2.92	0.01		0.13	0.13		0.13	0.13	0.00	478.23	478.23	0.03	0.00	478.91
Total	**0.40**	**2.57**	**2.92**	**0.01**		**0.13**	**0.13**		**0.13**	**0.13**	**0.00**	**478.23**	**478.23**	**0.03**	**0.00**	**478.91**

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	0.00	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
Vendor	0.26	2.63	1.95	0.01	0.02	0.08	0.10	0.01	0.07	0.08	0.00	687.82	687.82	0.01	0.00	688.04
Worker	0.24	0.19	1.90	0.01	0.03	0.02	0.05	0.01	0.02	0.03	0.00	422.08	422.08	0.02	0.00	422.44
Total	**0.50**	**2.82**	**3.85**	**0.02**	**0.05**	**0.10**	**0.15**	**0.02**	**0.09**	**0.11**	**0.00**	**1,109.90**	**1,109.90**	**0.03**	**0.00**	**1,110.48**

3.4 Building Construction - 2020

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	0.05	0.35	0.43	0.00		0.02	0.02		0.02	0.02	0.00	71.46	71.46	0.00	0.00	71.55
Total	**0.05**	**0.35**	**0.43**	**0.00**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**71.46**	**71.46**	**0.00**	**0.00**	**71.55**

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	0.00	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
Vendor	0.04	0.37	0.28	0.00	0.04	0.01	0.05	0.00	0.01	0.01	0.00	103.04	103.04	0.00	0.00	103.07
Worker	0.03	0.03	0.26	0.00	0.10	0.00	0.10	0.00	0.00	0.00	0.00	61.90	61.90	0.00	0.00	61.95
Total	**0.07**	**0.40**	**0.54**	**0.00**	**0.14**	**0.01**	**0.15**	**0.00**	**0.01**	**0.01**	**0.00**	**164.94**	**164.94**	**0.00**	**0.00**	**165.02**

3.4 Building Construction - 2020

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	0.05	0.35	0.43	0.00		0.02	0.02		0.02	0.02	0.00	71.46	71.46	0.00	0.00	71.55
Total	**0.05**	**0.35**	**0.43**	**0.00**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**71.46**	**71.46**	**0.00**	**0.00**	**71.55**

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	0.00	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
Vendor	0.04	0.37	0.28	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00	103.04	103.04	0.00	0.00	103.07
Worker	0.03	0.03	0.26	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	61.90	61.90	0.00	0.00	61.95
Total	**0.07**	**0.40**	**0.54**	**0.00**	**0.00**	**0.01**	**0.02**	**0.00**	**0.01**	**0.01**	**0.00**	**164.94**	**164.94**	**0.00**	**0.00**	**165.02**

3.5 Paving - 2020

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	0.19	1.19	1.09	0.00		0.09	0.09		0.09	0.09	0.00	145.54	145.54	0.02	0.00	145.87
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.19**	**1.19**	**1.09**	**0.00**		**0.09**	**0.09**		**0.09**	**0.09**	**0.00**	**145.54**	**145.54**	**0.02**	**0.00**	**145.87**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.03	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	6.03	6.03	0.00	0.00	6.04
Total	**0.00**	**0.00**	**0.03**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**6.03**	**6.03**	**0.00**	**0.00**	**6.04**

3.5 Paving - 2020

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	0.19	1.19	1.09	0.00		0.09	0.09		0.09	0.09	0.00	145.54	145.54	0.02	0.00	145.87
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.19**	**1.19**	**1.09**	**0.00**		**0.09**	**0.09**		**0.09**	**0.09**	**0.00**	**145.54**	**145.54**	**0.02**	**0.00**	**145.87**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.03	6.03	0.00	0.00	6.04
Total	**0.00**	**0.00**	**0.03**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**6.03**	**6.03**	**0.00**	**0.00**	**6.04**

3.6 Architectural Coating - 2020

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	15.43					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.09	0.10	0.00		0.01	0.01		0.01	0.01	0.00	14.03	14.03	0.00	0.00	14.05
Total	**15.44**	**0.09**	**0.10**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**14.03**	**14.03**	**0.00**	**0.00**	**14.05**

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	0.00	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
Vendor	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
Worker	0.02	0.01	0.15	0.00	0.06	0.00	0.06	0.00	0.00	0.00	0.00	35.00	35.00	0.00	0.00	35.03
Total	**0.02**	**0.01**	**0.15**	**0.00**	**0.06**	**0.00**	**0.06**	**0.00**	**0.00**	**0.00**	**0.00**	**35.00**	**35.00**	**0.00**	**0.00**	**35.03**

3.6 Architectural Coating - 2020

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	15.43					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.09	0.10	0.00		0.01	0.01		0.01	0.01	0.00	14.03	14.03	0.00	0.00	14.05
Total	**15.44**	**0.09**	**0.10**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**14.03**	**14.03**	**0.00**	**0.00**	**14.05**

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	0.00	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
Vendor	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
Worker	0.02	0.01	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.00	35.00	0.00	0.00	35.03
Total	**0.02**	**0.01**	**0.15**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**35.00**	**35.00**	**0.00**	**0.00**	**35.03**

4.0 Mobile Detail

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	24.18	36.06	181.03	0.39	41.74	1.65	43.39	0.64	1.58	2.22	0.00	29,140.92	29,140.92	1.22	0.00	29,166.49
Unmitigated	24.18	36.06	181.03	0.39	41.74	1.65	43.39	0.64	1.58	2.22	0.00	29,140.92	29,140.92	1.22	0.00	29,166.49
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	522.75	99.00	51.00	1,152,686	1,152,686
Regional Shopping Center	43,199.72	43,199.72	43199.72	75,742,278	75,742,278
Total	43,722.47	43,298.72	43,250.72	76,894,963	76,894,963

4.3 Trip Type Information

	Miles			Trip %		
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
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00

5.0 Energy Detail

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						0.00	0.00		0.00	0.00	0.00	4,885.29	4,885.29	0.22	0.08	4,915.91
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	4,885.29	4,885.29	0.22	0.08	4,915.91
NaturalGas Mitigated	0.02	0.21	0.17	0.00		0.00	0.02		0.00	0.02	0.00	224.23	224.23	0.00	0.00	225.59
NaturalGas Unmitigated	0.02	0.21	0.17	0.00		0.00	0.02		0.00	0.02	0.00	224.23	224.23	0.00	0.00	225.59
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	tons/yr										MT/yr					
General Light Industry	1.623e+006	0.01	0.08	0.07	0.00		0.00	0.01		0.00	0.01	0.00	86.61	86.61	0.00	0.00	87.14
Regional Shopping Center	2.5789e+006	0.01	0.13	0.11	0.00		0.00	0.01		0.00	0.01	0.00	137.62	137.62	0.00	0.00	138.46
Total		**0.02**	**0.21**	**0.18**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**	**0.00**	**224.23**	**224.23**	**0.00**	**0.00**	**225.60**

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	tons/yr										MT/yr					
General Light Industry	1.623e+006	0.01	0.08	0.07	0.00		0.00	0.01		0.00	0.01	0.00	86.61	86.61	0.00	0.00	87.14
Regional Shopping Center	2.5789e+006	0.01	0.13	0.11	0.00		0.00	0.01		0.00	0.01	0.00	137.62	137.62	0.00	0.00	138.46
Total		**0.02**	**0.21**	**0.18**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**	**0.00**	**224.23**	**224.23**	**0.00**	**0.00**	**225.60**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
General Light Industry	693000					201.57	0.01	0.00	202.84
Regional Shopping Center	1.61024e+007					4,683.72	0.21	0.08	4,713.07
Total						**4,885.29**	**0.22**	**0.08**	**4,915.91**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
General Light Industry	693000					201.57	0.01	0.00	202.84
Regional Shopping Center	1.61024e+007					4,683.72	0.21	0.08	4,713.07
Total						**4,885.29**	**0.22**	**0.08**	**4,915.91**

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	6.75	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
Unmitigated	6.75	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
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	1.54					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	5.21					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	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
Total	**6.75**	**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**

6.2 Area by SubCategory

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	1.54					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	5.21					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	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
Total	**6.75**	**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**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					1,939.36	14.19	0.38	2,356.01
Unmitigated					1,939.36	14.19	0.38	2,356.01
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
General Light Industry	368.77 / 0					1,400.83	11.32	0.30	1,732.51
Regional Shopping Center	93.1832 / 57.1123					538.53	2.87	0.08	623.50
Total						**1,939.36**	**14.19**	**0.38**	**2,356.01**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
General Light Industry	368.77 / 0					1,400.83	11.32	0.30	1,732.51
Regional Shopping Center	93.1832 / 57.1123					538.53	2.87	0.08	623.50
Total						**1,939.36**	**14.19**	**0.38**	**2,356.01**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					1,153.86	68.19	0.00	2,585.88
Unmitigated					1,153.86	68.19	0.00	2,585.88
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
General Light Industry	4363.4					885.73	52.35	0.00	1,984.98
Regional Shopping Center	1320.9					268.13	15.85	0.00	600.90
Total						**1,153.86**	**68.20**	**0.00**	**2,585.88**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
General Light Industry	4363.4					885.73	52.35	0.00	1,984.98
Regional Shopping Center	1320.9					268.13	15.85	0.00	600.90
Total						**1,153.86**	**68.20**	**0.00**	**2,585.88**

9.0 Vegetation

Olivas Park Drive Extension Project

Ventura County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
General Light Industry	75	1000sqft
Regional Shopping Center	1258	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Utility Company**	Southern California Edison
Climate Zone	8	**Precipitation Freq (Days)**	31		

1.3 User Entered Comments

Project Characteristics - Operational year of 2020, to approximate likely buildout timeline.

Land Use - Unit amounts from EIR project description. Acreages from Rasmussen & Associates (May 2012).

Vehicle Trips - Traip rates estimated from ADT from traffic study: 34.34 for commercial, 6.97 for industrial.

Construction Phase - Site Prep: 5/21/13-8/12/13; Grading: 8/13/13-3/17/14; Construction: 3/18/14-2/24/20; Paving: 2/25/20-7/27/20; Arch Coating: 7/28/20-12/28/20

Grading - Soil is expected to be balanced on-site.

Energy Use -

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					
2013	11.98	97.58	53.98	0.10	18.30	4.59	22.24	9.94	4.59	13.88	0.00	11,054.14	0.00	1.07	0.00	11,076.61
2014	11.33	90.75	64.71	0.14	8.93	4.18	13.12	3.32	4.18	7.50	0.00	13,947.86	0.00	1.01	0.00	13,969.14
2015	9.11	57.73	60.68	0.14	7.67	2.75	10.42	0.37	2.75	3.12	0.00	13,877.28	0.00	0.71	0.00	13,892.15
2016	8.46	52.86	57.74	0.14	7.67	2.47	10.14	0.37	2.47	2.84	0.00	13,832.33	0.00	0.65	0.00	13,846.05
2017	7.84	48.66	54.87	0.14	7.67	2.21	9.88	0.37	2.21	2.58	0.00	13,765.72	0.00	0.60	0.00	13,778.34
2018	7.29	44.88	52.38	0.14	7.67	1.98	9.65	0.13	1.92	2.04	0.00	13,702.80	0.00	0.55	0.00	13,714.45
2019	6.80	41.57	50.27	0.14	7.67	1.76	9.44	0.13	1.71	1.83	0.00	13,644.76	0.00	0.51	0.00	13,655.56
2020	281.20	38.62	48.47	0.14	7.67	1.66	9.25	0.13	1.66	1.66	0.00	13,590.77	0.00	0.48	0.00	13,600.75
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

2.1 Overall Construction (Maximum Daily Emission)

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					
2013	11.98	97.58	53.98	0.10	18.08	4.59	22.02	9.94	4.59	13.88	0.00	11,054.14	0.00	1.07	0.00	11,076.61
2014	11.33	90.75	64.71	0.14	8.68	4.18	12.87	3.32	4.18	7.50	0.00	13,947.86	0.00	1.01	0.00	13,969.14
2015	9.11	57.73	60.68	0.14	0.37	2.75	3.12	0.37	2.75	3.12	0.00	13,877.28	0.00	0.71	0.00	13,892.15
2016	8.46	52.86	57.74	0.14	0.37	2.47	2.84	0.37	2.47	2.84	0.00	13,832.33	0.00	0.65	0.00	13,846.05
2017	7.84	48.66	54.87	0.14	0.37	2.21	2.58	0.37	2.21	2.58	0.00	13,765.72	0.00	0.60	0.00	13,778.34
2018	7.29	44.88	52.38	0.14	0.37	1.98	2.34	0.13	1.92	2.04	0.00	13,702.80	0.00	0.55	0.00	13,714.45
2019	6.80	41.57	50.27	0.14	0.37	1.76	2.13	0.13	1.71	1.83	0.00	13,644.76	0.00	0.51	0.00	13,655.56
2020	281.20	38.62	48.47	0.14	0.37	1.66	1.94	0.13	1.66	1.66	0.00	13,590.77	0.00	0.48	0.00	13,600.75
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	36.98	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.12	1.13	0.95	0.01		0.00	0.09		0.00	0.09		1,354.36		0.03	0.02	1,362.60
Mobile	135.08	195.98	949.37	2.25	255.64	9.09	264.73	3.56	8.71	12.27		185,788.61		7.12		185,938.19
Total	**172.18**	**197.11**	**950.32**	**2.26**	**255.64**	**9.09**	**264.82**	**3.56**	**8.71**	**12.36**		**187,142.97**		**7.15**	**0.02**	**187,300.79**

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	36.98	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.12	1.13	0.95	0.01		0.00	0.09		0.00	0.09		1,354.36		0.03	0.02	1,362.60
Mobile	135.08	195.98	949.37	2.25	255.64	9.09	264.73	3.56	8.71	12.27		185,788.61		7.12		185,938.19
Total	**172.18**	**197.11**	**950.32**	**2.26**	**255.64**	**9.09**	**264.82**	**3.56**	**8.71**	**12.36**		**187,142.97**		**7.15**	**0.02**	**187,300.79**

3.0 Construction Detail

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2013

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					18.07	0.00	18.07	9.93	0.00	9.93						0.00
Off-Road	9.90	79.99	45.35	0.07		3.93	3.93		3.93	3.93		7,997.69		0.89		8,016.38
Total	**9.90**	**79.99**	**45.35**	**0.07**	**18.07**	**3.93**	**22.00**	**9.93**	**3.93**	**13.86**		**7,997.69**		**0.89**		**8,016.38**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.11	0.10	1.02	0.00	0.23	0.01	0.24	0.01	0.01	0.01		177.73		0.01		177.94
Total	**0.11**	**0.10**	**1.02**	**0.00**	**0.23**	**0.01**	**0.24**	**0.01**	**0.01**	**0.01**		**177.73**		**0.01**		**177.94**

3.2 Site Preparation - 2013

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					18.07	0.00	18.07	9.93	0.00	9.93						0.00
Off-Road	9.90	79.99	45.35	0.07		3.93	3.93		3.93	3.93	0.00	7,997.69		0.89		8,016.38
Total	**9.90**	**79.99**	**45.35**	**0.07**	**18.07**	**3.93**	**22.00**	**9.93**	**3.93**	**13.86**	**0.00**	**7,997.69**		**0.89**		**8,016.38**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.11	0.10	1.02	0.00	0.01	0.01	0.01	0.01	0.01	0.01		177.73		0.01		177.94
Total	**0.11**	**0.10**	**1.02**	**0.00**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**		**177.73**		**0.01**		**177.94**

3.3 Grading - 2013

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					8.67	0.00	8.67	3.31	0.00	3.31						0.00
Off-Road	11.85	97.47	52.85	0.10		4.59	4.59		4.59	4.59		10,856.66		1.06		10,878.90
Total	**11.85**	**97.47**	**52.85**	**0.10**	**8.67**	**4.59**	**13.26**	**3.31**	**4.59**	**7.90**		**10,856.66**		**1.06**		**10,878.90**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.12	0.11	1.13	0.00	0.26	0.01	0.27	0.01	0.01	0.02		197.48		0.01		197.71
Total	**0.12**	**0.11**	**1.13**	**0.00**	**0.26**	**0.01**	**0.27**	**0.01**	**0.01**	**0.02**		**197.48**		**0.01**		**197.71**

3.3 Grading - 2013

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					8.67	0.00	8.67	3.31	0.00	3.31						0.00
Off-Road	11.85	97.47	52.85	0.10		4.59	4.59		4.59	4.59	0.00	10,856.66		1.06		10,878.90
Total	**11.85**	**97.47**	**52.85**	**0.10**	**8.67**	**4.59**	**13.26**	**3.31**	**4.59**	**7.90**	**0.00**	**10,856.66**		**1.06**		**10,878.90**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.12	0.11	1.13	0.00	0.01	0.01	0.02	0.01	0.01	0.02		197.48		0.01		197.71
Total	**0.12**	**0.11**	**1.13**	**0.00**	**0.01**	**0.01**	**0.02**	**0.01**	**0.01**	**0.02**		**197.48**		**0.01**		**197.71**

3.3 Grading - 2014

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					8.67	0.00	8.67	3.31	0.00	3.31						0.00
Off-Road	11.22	90.65	50.83	0.10		4.18	4.18		4.18	4.18		10,856.65		1.00		10,877.72
Total	**11.22**	**90.65**	**50.83**	**0.10**	**8.67**	**4.18**	**12.85**	**3.31**	**4.18**	**7.49**		**10,856.65**		**1.00**		**10,877.72**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.12	0.10	1.03	0.00	0.26	0.01	0.27	0.01	0.01	0.02		193.11		0.01		193.32
Total	**0.12**	**0.10**	**1.03**	**0.00**	**0.26**	**0.01**	**0.27**	**0.01**	**0.01**	**0.02**		**193.11**		**0.01**		**193.32**

3.3 Grading - 2014

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					8.67	0.00	8.67	3.31	0.00	3.31						0.00
Off-Road	11.22	90.65	50.83	0.10		4.18	4.18		4.18	4.18	0.00	10,856.65		1.00		10,877.72
Total	**11.22**	**90.65**	**50.83**	**0.10**	**8.67**	**4.18**	**12.85**	**3.31**	**4.18**	**7.49**	**0.00**	**10,856.65**		**1.00**		**10,877.72**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.12	0.10	1.03	0.00	0.01	0.01	0.02	0.01	0.01	0.02		193.11		0.01		193.32
Total	**0.12**	**0.10**	**1.03**	**0.00**	**0.01**	**0.01**	**0.02**	**0.01**	**0.01**	**0.02**		**193.11**		**0.01**		**193.32**

3.4 Building Construction - 2014

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	4.74	32.06	23.20	0.04		2.02	2.02		2.02	2.02		4,040.61		0.42		4,049.51
Total	**4.74**	**32.06**	**23.20**	**0.04**		**2.02**	**2.02**		**2.02**	**2.02**		**4,040.61**		**0.42**		**4,049.51**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	2.67	29.16	19.06	0.05	2.01	0.91	2.91	0.15	0.91	1.06		5,716.80		0.13		5,719.51
Worker	2.50	2.18	22.46	0.04	5.66	0.14	5.81	0.21	0.14	0.35		4,190.44		0.22		4,195.02
Total	**5.17**	**31.34**	**41.52**	**0.09**	**7.67**	**1.05**	**8.72**	**0.36**	**1.05**	**1.41**		**9,907.24**		**0.35**		**9,914.53**

3.4 Building Construction - 2014

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	4.74	32.06	23.20	0.04		2.02	2.02		2.02	2.02	0.00	4,040.61		0.42		4,049.51
Total	**4.74**	**32.06**	**23.20**	**0.04**		**2.02**	**2.02**		**2.02**	**2.02**	**0.00**	**4,040.61**		**0.42**		**4,049.51**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	2.67	29.16	19.06	0.05	0.15	0.91	1.06	0.15	0.91	1.06		5,716.80		0.13		5,719.51
Worker	2.50	2.18	22.46	0.04	0.21	0.14	0.35	0.21	0.14	0.35		4,190.44		0.22		4,195.02
Total	**5.17**	**31.34**	**41.52**	**0.09**	**0.36**	**1.05**	**1.41**	**0.36**	**1.05**	**1.41**		**9,907.24**		**0.35**		**9,914.53**

3.4 Building Construction - 2015

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	4.34	29.16	22.98	0.04		1.80	1.80		1.80	1.80		4,040.61		0.39		4,048.81
Total	**4.34**	**29.16**	**22.98**	**0.04**		**1.80**	**1.80**		**1.80**	**1.80**		**4,040.61**		**0.39**		**4,048.81**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	2.43	26.60	17.21	0.05	2.01	0.82	2.82	0.15	0.82	0.97		5,740.97		0.12		5,743.42
Worker	2.33	1.98	20.48	0.04	5.66	0.14	5.81	0.21	0.14	0.35		4,095.70		0.20		4,099.92
Total	**4.76**	**28.58**	**37.69**	**0.09**	**7.67**	**0.96**	**8.63**	**0.36**	**0.96**	**1.32**		**9,836.67**		**0.32**		**9,843.34**

3.4 Building Construction - 2015

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	4.34	29.16	22.98	0.04		1.80	1.80		1.80	1.80	0.00	4,040.61		0.39		4,048.81
Total	**4.34**	**29.16**	**22.98**	**0.04**		**1.80**	**1.80**		**1.80**	**1.80**	**0.00**	**4,040.61**		**0.39**		**4,048.81**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	2.43	26.60	17.21	0.05	0.15	0.82	0.97	0.15	0.82	0.97		5,740.97		0.12		5,743.42
Worker	2.33	1.98	20.48	0.04	0.21	0.14	0.35	0.21	0.14	0.35		4,095.70		0.20		4,099.92
Total	**4.76**	**28.58**	**37.69**	**0.09**	**0.36**	**0.96**	**1.32**	**0.36**	**0.96**	**1.32**		**9,836.67**		**0.32**		**9,843.34**

3.4 Building Construction - 2016

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	3.99	26.52	22.80	0.04		1.58	1.58		1.58	1.58		4,040.61		0.36		4,048.10
Total	**3.99**	**26.52**	**22.80**	**0.04**		**1.58**	**1.58**		**1.58**	**1.58**		**4,040.61**		**0.36**		**4,048.10**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	2.27	24.53	15.96	0.06	2.01	0.74	2.75	0.15	0.74	0.90		5,774.04		0.11		5,776.31
Worker	2.20	1.80	18.97	0.04	5.66	0.15	5.81	0.21	0.15	0.36		4,017.68		0.19		4,021.64
Total	**4.47**	**26.33**	**34.93**	**0.10**	**7.67**	**0.89**	**8.56**	**0.36**	**0.89**	**1.26**		**9,791.72**		**0.30**		**9,797.95**

3.4 Building Construction - 2016

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	3.99	26.52	22.80	0.04		1.58	1.58		1.58	1.58	0.00	4,040.61		0.36		4,048.10
Total	**3.99**	**26.52**	**22.80**	**0.04**		**1.58**	**1.58**		**1.58**	**1.58**	**0.00**	**4,040.61**		**0.36**		**4,048.10**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	2.27	24.53	15.96	0.06	0.15	0.74	0.90	0.15	0.74	0.90		5,774.04		0.11		5,776.31
Worker	2.20	1.80	18.97	0.04	0.21	0.15	0.36	0.21	0.15	0.36		4,017.68		0.19		4,021.64
Total	**4.47**	**26.33**	**34.93**	**0.10**	**0.36**	**0.89**	**1.26**	**0.36**	**0.89**	**1.26**		**9,791.72**		**0.30**		**9,797.95**

3.4 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	3.66	24.08	22.64	0.04		1.39	1.39		1.39	1.39		4,040.61		0.33		4,047.45
Total	**3.66**	**24.08**	**22.64**	**0.04**		**1.39**	**1.39**		**1.39**	**1.39**		**4,040.61**		**0.33**		**4,047.45**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	2.12	22.93	14.80	0.06	2.01	0.68	2.69	0.15	0.68	0.84		5,793.14		0.10		5,795.25
Worker	2.07	1.64	17.43	0.04	5.66	0.15	5.81	0.21	0.15	0.36		3,931.96		0.17		3,935.64
Total	**4.19**	**24.57**	**32.23**	**0.10**	**7.67**	**0.83**	**8.50**	**0.36**	**0.83**	**1.20**		**9,725.10**		**0.27**		**9,730.89**

3.4 Building Construction - 2017

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	3.66	24.08	22.64	0.04		1.39	1.39		1.39	1.39	0.00	4,040.61		0.33		4,047.45
Total	**3.66**	**24.08**	**22.64**	**0.04**		**1.39**	**1.39**		**1.39**	**1.39**	**0.00**	**4,040.61**		**0.33**		**4,047.45**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	2.12	22.93	14.80	0.06	0.15	0.68	0.84	0.15	0.68	0.84		5,793.14		0.10		5,795.25
Worker	2.07	1.64	17.43	0.04	0.21	0.15	0.36	0.21	0.15	0.36		3,931.96		0.17		3,935.64
Total	**4.19**	**24.57**	**32.23**	**0.10**	**0.36**	**0.83**	**1.20**	**0.36**	**0.83**	**1.20**		**9,725.10**		**0.27**		**9,730.89**

3.4 Building Construction - 2018

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	3.34	21.78	22.50	0.04		1.20	1.20		1.20	1.20		4,040.62		0.30		4,046.87
Total	**3.34**	**21.78**	**22.50**	**0.04**		**1.20**	**1.20**		**1.20**	**1.20**		**4,040.62**		**0.30**		**4,046.87**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	1.99	21.60	13.81	0.06	2.01	0.63	2.64	0.05	0.58	0.63		5,811.04		0.09		5,813.00
Worker	1.96	1.50	16.07	0.04	5.66	0.15	5.81	0.08	0.14	0.21		3,851.14		0.16		3,854.58
Total	**3.95**	**23.10**	**29.88**	**0.10**	**7.67**	**0.78**	**8.45**	**0.13**	**0.72**	**0.84**		**9,662.18**		**0.25**		**9,667.58**

3.4 Building Construction - 2018

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	3.34	21.78	22.50	0.04		1.20	1.20		1.20	1.20	0.00	4,040.62		0.30		4,046.87
Total	**3.34**	**21.78**	**22.50**	**0.04**		**1.20**	**1.20**		**1.20**	**1.20**	**0.00**	**4,040.62**		**0.30**		**4,046.87**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	1.99	21.60	13.81	0.06	0.15	0.63	0.79	0.05	0.58	0.63		5,811.04		0.09		5,813.00
Worker	1.96	1.50	16.07	0.04	0.21	0.15	0.36	0.08	0.14	0.21		3,851.14		0.16		3,854.58
Total	**3.95**	**23.10**	**29.88**	**0.10**	**0.36**	**0.78**	**1.15**	**0.13**	**0.72**	**0.84**		**9,662.18**		**0.25**		**9,667.58**

3.4 Building Construction - 2019

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	3.05	19.73	22.36	0.04		1.03	1.03		1.03	1.03		4,040.62		0.27		4,046.36
Total	**3.05**	**19.73**	**22.36**	**0.04**		**1.03**	**1.03**		**1.03**	**1.03**		**4,040.62**		**0.27**		**4,046.36**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	1.88	20.46	12.98	0.06	2.01	0.59	2.59	0.05	0.54	0.59		5,827.95		0.09		5,829.79
Worker	1.87	1.38	14.94	0.04	5.66	0.15	5.81	0.08	0.14	0.21		3,776.19		0.15		3,779.42
Total	**3.75**	**21.84**	**27.92**	**0.10**	**7.67**	**0.74**	**8.40**	**0.13**	**0.68**	**0.80**		**9,604.14**		**0.24**		**9,609.21**

3.4 Building Construction - 2019

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	3.05	19.73	22.36	0.04		1.03	1.03		1.03	1.03	0.00	4,040.62		0.27		4,046.36
Total	**3.05**	**19.73**	**22.36**	**0.04**		**1.03**	**1.03**		**1.03**	**1.03**	**0.00**	**4,040.62**		**0.27**		**4,046.36**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	1.88	20.46	12.98	0.06	0.15	0.59	0.74	0.05	0.54	0.59		5,827.95		0.09		5,829.79
Worker	1.87	1.38	14.94	0.04	0.21	0.15	0.36	0.08	0.14	0.21		3,776.19		0.15		3,779.42
Total	**3.75**	**21.84**	**27.92**	**0.10**	**0.36**	**0.74**	**1.10**	**0.13**	**0.68**	**0.80**		**9,604.14**		**0.24**		**9,609.21**

3.4 Building Construction - 2020

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	2.80	17.88	22.24	0.04		0.88	0.88		0.88	0.88		4,040.62		0.25		4,045.85
Total	**2.80**	**17.88**	**22.24**	**0.04**		**0.88**	**0.88**		**0.88**	**0.88**		**4,040.62**		**0.25**		**4,045.85**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	1.79	19.47	12.28	0.06	2.01	0.55	2.56	0.05	0.51	0.56		5,843.43		0.08		5,845.15
Worker	1.78	1.27	13.95	0.04	5.66	0.15	5.81	0.08	0.14	0.21		3,706.73		0.14		3,709.74
Total	**3.57**	**20.74**	**26.23**	**0.10**	**7.67**	**0.70**	**8.37**	**0.13**	**0.65**	**0.77**		**9,550.16**		**0.22**		**9,554.89**

3.4 Building Construction - 2020

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	2.80	17.88	22.24	0.04		0.88	0.88		0.88	0.88	0.00	4,040.62		0.25		4,045.85
Total	**2.80**	**17.88**	**22.24**	**0.04**		**0.88**	**0.88**		**0.88**	**0.88**	**0.00**	**4,040.62**		**0.25**		**4,045.85**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	1.79	19.47	12.28	0.06	0.15	0.55	0.71	0.05	0.51	0.56		5,843.43		0.08		5,845.15
Worker	1.78	1.27	13.95	0.04	0.21	0.15	0.36	0.08	0.14	0.21		3,706.73		0.14		3,709.74
Total	**3.57**	**20.74**	**26.23**	**0.10**	**0.36**	**0.70**	**1.07**	**0.13**	**0.65**	**0.77**		**9,550.16**		**0.22**		**9,554.89**

3.5 Paving - 2020

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	3.50	21.64	19.87	0.03		1.65	1.65		1.65	1.65		2,917.65		0.31		2,924.25
Paving	0.00					0.00	0.00		0.00	0.00						0.00
Total	**3.50**	**21.64**	**19.87**	**0.03**		**1.65**	**1.65**		**1.65**	**1.65**		**2,917.65**		**0.31**		**2,924.25**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.06	0.04	0.48	0.00	0.20	0.01	0.20	0.00	0.00	0.01		128.11		0.00		128.22
Total	**0.06**	**0.04**	**0.48**	**0.00**	**0.20**	**0.01**	**0.20**	**0.00**	**0.00**	**0.01**		**128.11**		**0.00**		**128.22**

3.5 Paving - 2020

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	3.50	21.64	19.87	0.03		1.65	1.65		1.65	1.65	0.00	2,917.65		0.31		2,924.25
Paving	0.00					0.00	0.00		0.00	0.00						0.00
Total	**3.50**	**21.64**	**19.87**	**0.03**		**1.65**	**1.65**		**1.65**	**1.65**	**0.00**	**2,917.65**		**0.31**		**2,924.25**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.06	0.04	0.48	0.00	0.01	0.01	0.01	0.00	0.00	0.01		128.11		0.00		128.22
Total	**0.06**	**0.04**	**0.48**	**0.00**	**0.01**	**0.01**	**0.01**	**0.00**	**0.00**	**0.01**		**128.11**		**0.00**		**128.22**

3.6 Architectural Coating - 2020

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	280.60					0.00	0.00		0.00	0.00						0.00
Off-Road	0.24	1.68	1.83	0.00		0.11	0.11		0.11	0.11		281.19		0.02		281.65
Total	**280.84**	**1.68**	**1.83**	**0.00**		**0.11**	**0.11**		**0.11**	**0.11**		**281.19**		**0.02**		**281.65**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.36	0.25	2.80	0.01	1.14	0.03	1.17	0.02	0.03	0.04		743.05		0.03		743.66
Total	**0.36**	**0.25**	**2.80**	**0.01**	**1.14**	**0.03**	**1.17**	**0.02**	**0.03**	**0.04**		**743.05**		**0.03**		**743.66**

3.6 Architectural Coating - 2020

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	280.60					0.00	0.00		0.00	0.00						0.00
Off-Road	0.24	1.68	1.83	0.00		0.11	0.11		0.11	0.11	0.00	281.19		0.02		281.65
Total	**280.84**	**1.68**	**1.83**	**0.00**		**0.11**	**0.11**		**0.11**	**0.11**	**0.00**	**281.19**		**0.02**		**281.65**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.36	0.25	2.80	0.01	0.04	0.03	0.07	0.02	0.03	0.04		743.05		0.03		743.66
Total	**0.36**	**0.25**	**2.80**	**0.01**	**0.04**	**0.03**	**0.07**	**0.02**	**0.03**	**0.04**		**743.05**		**0.03**		**743.66**

4.0 Mobile Detail

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	135.08	195.98	949.37	2.25	255.64	9.09	264.73	3.56	8.71	12.27		185,788.61		7.12		185,938.19
Unmitigated	135.08	195.98	949.37	2.25	255.64	9.09	264.73	3.56	8.71	12.27		185,788.61		7.12		185,938.19
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	522.75	99.00	51.00	1,152,686	1,152,686
Regional Shopping Center	43,199.72	43,199.72	43199.72	75,742,278	75,742,278
Total	43,722.47	43,298.72	43,250.72	76,894,963	76,894,963

4.3 Trip Type Information

	Miles			Trip %		
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
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00

5.0 Energy Detail

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	0.12	1.13	0.95	0.01		0.00	0.09		0.00	0.09		1,354.36		0.03	0.02	1,362.60
NaturalGas Unmitigated	0.12	1.13	0.95	0.01		0.00	0.09		0.00	0.09		1,354.36		0.03	0.02	1,362.60
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	lb/day										lb/day					
General Light Industry	4446.58	0.05	0.44	0.37	0.00		0.00	0.03		0.00	0.03		523.13		0.01	0.01	526.31
Regional Shopping Center	7065.48	0.08	0.69	0.58	0.00		0.00	0.05		0.00	0.05		831.23		0.02	0.02	836.29
Total		**0.13**	**1.13**	**0.95**	**0.00**		**0.00**	**0.08**		**0.00**	**0.08**		**1,354.36**		**0.03**	**0.03**	**1,362.60**

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	lb/day										lb/day					
General Light Industry	4.44658	0.05	0.44	0.37	0.00		0.00	0.03		0.00	0.03		523.13		0.01	0.01	526.31
Regional Shopping Center	7.06548	0.08	0.69	0.58	0.00		0.00	0.05		0.00	0.05		831.23		0.02	0.02	836.29
Total		**0.13**	**1.13**	**0.95**	**0.00**		**0.00**	**0.08**		**0.00**	**0.08**		**1,354.36**		**0.03**	**0.03**	**1,362.60**

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	36.98	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Unmitigated	36.98	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	8.46					0.00	0.00		0.00	0.00						0.00
Consumer Products	28.53					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**36.99**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

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	8.46					0.00	0.00		0.00	0.00						0.00
Consumer Products	28.53					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**36.99**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

Olivas Park Drive Extension Project

Ventura County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
General Light Industry	75	1000sqft
Regional Shopping Center	1258	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Utility Company**	Southern California Edison
Climate Zone	8	**Precipitation Freq (Days)**	31		

1.3 User Entered Comments

Project Characteristics - Operational year of 2020, to approximate likely buildout timeline.

Land Use - Unit amounts from EIR project description. Acreages from Rasmussen & Associates (May 2012).

Vehicle Trips - Traip rates estimated from ADT from traffic study: 34.34 for commercial, 6.97 for industrial.

Construction Phase - Site Prep: 5/21/13-8/12/13; Grading: 8/13/13-3/17/14; Construction: 3/18/14-2/24/20; Paving: 2/25/20-7/27/20; Arch Coating: 7/28/20-12/28/20

Grading - Soil is expected to be balanced on-site.

Energy Use -

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					
2013	11.99	97.60	53.97	0.10	18.30	4.59	22.24	9.94	4.59	13.88	0.00	11,040.92	0.00	1.07	0.00	11,063.38
2014	11.35	90.77	67.64	0.14	8.93	4.18	13.12	3.32	4.18	7.50	0.00	13,631.41	0.00	1.01	0.00	13,652.69
2015	9.64	58.90	63.52	0.14	7.67	2.77	10.44	0.37	2.77	3.13	0.00	13,564.83	0.00	0.71	0.00	13,579.75
2016	8.96	53.84	60.48	0.14	7.67	2.48	10.15	0.37	2.48	2.85	0.00	13,523.93	0.00	0.65	0.00	13,537.68
2017	8.32	49.48	57.54	0.14	7.67	2.23	9.90	0.37	2.23	2.59	0.00	13,461.12	0.00	0.60	0.00	13,473.77
2018	7.74	45.57	54.98	0.14	7.67	1.99	9.66	0.13	1.93	2.05	0.00	13,401.67	0.00	0.56	0.00	13,413.33
2019	7.22	42.14	52.83	0.14	7.67	1.77	9.44	0.13	1.72	1.84	0.00	13,346.68	0.00	0.51	0.00	13,357.47
2020	281.25	39.08	50.98	0.14	7.67	1.66	9.25	0.13	1.66	1.66	0.00	13,295.46	0.00	0.48	0.00	13,305.44
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

2.1 Overall Construction (Maximum Daily Emission)

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					
2013	11.99	97.60	53.97	0.10	18.08	4.59	22.02	9.94	4.59	13.88	0.00	11,040.92	0.00	1.07	0.00	11,063.38
2014	11.35	90.77	67.64	0.14	8.68	4.18	12.87	3.32	4.18	7.50	0.00	13,631.41	0.00	1.01	0.00	13,652.69
2015	9.64	58.90	63.52	0.14	0.37	2.77	3.13	0.37	2.77	3.13	0.00	13,564.83	0.00	0.71	0.00	13,579.75
2016	8.96	53.84	60.48	0.14	0.37	2.48	2.85	0.37	2.48	2.85	0.00	13,523.93	0.00	0.65	0.00	13,537.68
2017	8.32	49.48	57.54	0.14	0.37	2.23	2.59	0.37	2.23	2.59	0.00	13,461.12	0.00	0.60	0.00	13,473.77
2018	7.74	45.57	54.98	0.14	0.37	1.99	2.35	0.13	1.93	2.05	0.00	13,401.67	0.00	0.56	0.00	13,413.33
2019	7.22	42.14	52.83	0.14	0.37	1.77	2.14	0.13	1.72	1.84	0.00	13,346.68	0.00	0.51	0.00	13,357.47
2020	281.25	39.08	50.98	0.14	0.37	1.66	1.95	0.13	1.66	1.66	0.00	13,295.46	0.00	0.48	0.00	13,305.44
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	36.98	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.12	1.13	0.95	0.01		0.00	0.09		0.00	0.09		1,354.36		0.03	0.02	1,362.60
Mobile	147.02	211.12	1,012.83	2.12	255.64	9.15	264.79	3.56	8.75	12.31		175,519.01		7.40		175,674.31
Total	**184.12**	**212.25**	**1,013.78**	**2.13**	**255.64**	**9.15**	**264.88**	**3.56**	**8.75**	**12.40**		**176,873.37**		**7.43**	**0.02**	**177,036.91**

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	36.98	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.12	1.13	0.95	0.01		0.00	0.09		0.00	0.09		1,354.36		0.03	0.02	1,362.60
Mobile	147.02	211.12	1,012.83	2.12	255.64	9.15	264.79	3.56	8.75	12.31		175,519.01		7.40		175,674.31
Total	**184.12**	**212.25**	**1,013.78**	**2.13**	**255.64**	**9.15**	**264.88**	**3.56**	**8.75**	**12.40**		**176,873.37**		**7.43**	**0.02**	**177,036.91**

3.0 Construction Detail

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2013

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					18.07	0.00	18.07	9.93	0.00	9.93						0.00
Off-Road	9.90	79.99	45.35	0.07		3.93	3.93		3.93	3.93		7,997.69		0.89		8,016.38
Total	**9.90**	**79.99**	**45.35**	**0.07**	**18.07**	**3.93**	**22.00**	**9.93**	**3.93**	**13.86**		**7,997.69**		**0.89**		**8,016.38**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.13	0.12	1.01	0.00	0.23	0.01	0.24	0.01	0.01	0.01		165.83		0.01		166.03
Total	**0.13**	**0.12**	**1.01**	**0.00**	**0.23**	**0.01**	**0.24**	**0.01**	**0.01**	**0.01**		**165.83**		**0.01**		**166.03**

3.2 Site Preparation - 2013

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					18.07	0.00	18.07	9.93	0.00	9.93						0.00
Off-Road	9.90	79.99	45.35	0.07		3.93	3.93		3.93	3.93	0.00	7,997.69		0.89		8,016.38
Total	**9.90**	**79.99**	**45.35**	**0.07**	**18.07**	**3.93**	**22.00**	**9.93**	**3.93**	**13.86**	**0.00**	**7,997.69**		**0.89**		**8,016.38**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.13	0.12	1.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01		165.83		0.01		166.03
Total	**0.13**	**0.12**	**1.01**	**0.00**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**		**165.83**		**0.01**		**166.03**

3.3 Grading - 2013

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					8.67	0.00	8.67	3.31	0.00	3.31						0.00
Off-Road	11.85	97.47	52.85	0.10		4.59	4.59		4.59	4.59		10,856.66		1.06		10,878.90
Total	**11.85**	**97.47**	**52.85**	**0.10**	**8.67**	**4.59**	**13.26**	**3.31**	**4.59**	**7.90**		**10,856.66**		**1.06**		**10,878.90**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.14	0.13	1.12	0.00	0.26	0.01	0.27	0.01	0.01	0.02		184.26		0.01		184.48
Total	**0.14**	**0.13**	**1.12**	**0.00**	**0.26**	**0.01**	**0.27**	**0.01**	**0.01**	**0.02**		**184.26**		**0.01**		**184.48**

3.3 Grading - 2013

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					8.67	0.00	8.67	3.31	0.00	3.31						0.00
Off-Road	11.85	97.47	52.85	0.10		4.59	4.59		4.59	4.59	0.00	10,856.66		1.06		10,878.90
Total	**11.85**	**97.47**	**52.85**	**0.10**	**8.67**	**4.59**	**13.26**	**3.31**	**4.59**	**7.90**	**0.00**	**10,856.66**		**1.06**		**10,878.90**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.14	0.13	1.12	0.00	0.01	0.01	0.02	0.01	0.01	0.02		184.26		0.01		184.48
Total	**0.14**	**0.13**	**1.12**	**0.00**	**0.01**	**0.01**	**0.02**	**0.01**	**0.01**	**0.02**		**184.26**		**0.01**		**184.48**

3.3 Grading - 2014

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					8.67	0.00	8.67	3.31	0.00	3.31						0.00
Off-Road	11.22	90.65	50.83	0.10		4.18	4.18		4.18	4.18		10,856.65		1.00		10,877.72
Total	**11.22**	**90.65**	**50.83**	**0.10**	**8.67**	**4.18**	**12.85**	**3.31**	**4.18**	**7.49**		**10,856.65**		**1.00**		**10,877.72**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.13	0.12	1.02	0.00	0.26	0.01	0.27	0.01	0.01	0.02		180.16		0.01		180.36
Total	**0.13**	**0.12**	**1.02**	**0.00**	**0.26**	**0.01**	**0.27**	**0.01**	**0.01**	**0.02**		**180.16**		**0.01**		**180.36**

3.3 Grading - 2014

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					8.67	0.00	8.67	3.31	0.00	3.31						0.00
Off-Road	11.22	90.65	50.83	0.10		4.18	4.18		4.18	4.18	0.00	10,856.65		1.00		10,877.72
Total	**11.22**	**90.65**	**50.83**	**0.10**	**8.67**	**4.18**	**12.85**	**3.31**	**4.18**	**7.49**	**0.00**	**10,856.65**		**1.00**		**10,877.72**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.13	0.12	1.02	0.00	0.01	0.01	0.02	0.01	0.01	0.02		180.16		0.01		180.36
Total	**0.13**	**0.12**	**1.02**	**0.00**	**0.01**	**0.01**	**0.02**	**0.01**	**0.01**	**0.02**		**180.16**		**0.01**		**180.36**

3.4 Building Construction - 2014

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	4.74	32.06	23.20	0.04		2.02	2.02		2.02	2.02		4,040.61		0.42		4,049.51
Total	**4.74**	**32.06**	**23.20**	**0.04**		**2.02**	**2.02**		**2.02**	**2.02**		**4,040.61**		**0.42**		**4,049.51**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	2.89	30.21	22.33	0.05	2.01	0.92	2.93	0.15	0.92	1.08		5,681.31		0.14		5,684.23
Worker	2.87	2.53	22.12	0.04	5.66	0.14	5.81	0.21	0.14	0.35		3,909.48		0.21		3,913.91
Total	**5.76**	**32.74**	**44.45**	**0.09**	**7.67**	**1.06**	**8.74**	**0.36**	**1.06**	**1.43**		**9,590.79**		**0.35**		**9,598.14**

3.4 Building Construction - 2014

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	4.74	32.06	23.20	0.04		2.02	2.02		2.02	2.02	0.00	4,040.61		0.42		4,049.51
Total	**4.74**	**32.06**	**23.20**	**0.04**		**2.02**	**2.02**		**2.02**	**2.02**	**0.00**	**4,040.61**		**0.42**		**4,049.51**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	2.89	30.21	22.33	0.05	0.15	0.92	1.08	0.15	0.92	1.08		5,681.31		0.14		5,684.23
Worker	2.87	2.53	22.12	0.04	0.21	0.14	0.35	0.21	0.14	0.35		3,909.48		0.21		3,913.91
Total	**5.76**	**32.74**	**44.45**	**0.09**	**0.36**	**1.06**	**1.43**	**0.36**	**1.06**	**1.43**		**9,590.79**		**0.35**		**9,598.14**

3.4 Building Construction - 2015

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	4.34	29.16	22.98	0.04		1.80	1.80		1.80	1.80		4,040.61		0.39		4,048.81
Total	**4.34**	**29.16**	**22.98**	**0.04**		**1.80**	**1.80**		**1.80**	**1.80**		**4,040.61**		**0.39**		**4,048.81**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	2.63	27.46	20.43	0.05	2.01	0.83	2.83	0.15	0.83	0.98		5,703.71		0.13		5,706.35
Worker	2.67	2.29	20.11	0.04	5.66	0.14	5.81	0.21	0.14	0.35		3,820.51		0.19		3,824.59
Total	**5.30**	**29.75**	**40.54**	**0.09**	**7.67**	**0.97**	**8.64**	**0.36**	**0.97**	**1.33**		**9,524.22**		**0.32**		**9,530.94**

3.4 Building Construction - 2015

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	4.34	29.16	22.98	0.04		1.80	1.80		1.80	1.80	0.00	4,040.61		0.39		4,048.81
Total	**4.34**	**29.16**	**22.98**	**0.04**		**1.80**	**1.80**		**1.80**	**1.80**	**0.00**	**4,040.61**		**0.39**		**4,048.81**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	2.63	27.46	20.43	0.05	0.15	0.83	0.98	0.15	0.83	0.98		5,703.71		0.13		5,706.35
Worker	2.67	2.29	20.11	0.04	0.21	0.14	0.35	0.21	0.14	0.35		3,820.51		0.19		3,824.59
Total	**5.30**	**29.75**	**40.54**	**0.09**	**0.36**	**0.97**	**1.33**	**0.36**	**0.97**	**1.33**		**9,524.22**		**0.32**		**9,530.94**

3.4 Building Construction - 2016

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	3.99	26.52	22.80	0.04		1.58	1.58		1.58	1.58		4,040.61		0.36		4,048.10
Total	**3.99**	**26.52**	**22.80**	**0.04**		**1.58**	**1.58**		**1.58**	**1.58**		**4,040.61**		**0.36**		**4,048.10**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	2.45	25.23	19.12	0.05	2.01	0.75	2.76	0.15	0.75	0.91		5,735.19		0.12		5,737.63
Worker	2.52	2.09	18.56	0.04	5.66	0.15	5.81	0.21	0.15	0.36		3,748.12		0.18		3,751.94
Total	**4.97**	**27.32**	**37.68**	**0.09**	**7.67**	**0.90**	**8.57**	**0.36**	**0.90**	**1.27**		**9,483.31**		**0.30**		**9,489.57**

3.4 Building Construction - 2016

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	3.99	26.52	22.80	0.04		1.58	1.58		1.58	1.58	0.00	4,040.61		0.36		4,048.10
Total	**3.99**	**26.52**	**22.80**	**0.04**		**1.58**	**1.58**		**1.58**	**1.58**	**0.00**	**4,040.61**		**0.36**		**4,048.10**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	2.45	25.23	19.12	0.05	0.15	0.75	0.91	0.15	0.75	0.91		5,735.19		0.12		5,737.63
Worker	2.52	2.09	18.56	0.04	0.21	0.15	0.36	0.21	0.15	0.36		3,748.12		0.18		3,751.94
Total	**4.97**	**27.32**	**37.68**	**0.09**	**0.36**	**0.90**	**1.27**	**0.36**	**0.90**	**1.27**		**9,483.31**		**0.30**		**9,489.57**

3.4 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	3.66	24.08	22.64	0.04		1.39	1.39		1.39	1.39		4,040.61		0.33		4,047.45
Total	**3.66**	**24.08**	**22.64**	**0.04**		**1.39**	**1.39**		**1.39**	**1.39**		**4,040.61**		**0.33**		**4,047.45**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	2.29	23.49	17.91	0.06	2.01	0.69	2.70	0.15	0.69	0.85		5,752.77		0.11		5,755.03
Worker	2.37	1.90	16.98	0.04	5.66	0.15	5.81	0.21	0.15	0.36		3,667.74		0.17		3,671.28
Total	**4.66**	**25.39**	**34.89**	**0.10**	**7.67**	**0.84**	**8.51**	**0.36**	**0.84**	**1.21**		**9,420.51**		**0.28**		**9,426.31**

3.4 Building Construction - 2017

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	3.66	24.08	22.64	0.04		1.39	1.39		1.39	1.39	0.00	4,040.61		0.33		4,047.45
Total	**3.66**	**24.08**	**22.64**	**0.04**		**1.39**	**1.39**		**1.39**	**1.39**	**0.00**	**4,040.61**		**0.33**		**4,047.45**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	2.29	23.49	17.91	0.06	0.15	0.69	0.85	0.15	0.69	0.85		5,752.77		0.11		5,755.03
Worker	2.37	1.90	16.98	0.04	0.21	0.15	0.36	0.21	0.15	0.36		3,667.74		0.17		3,671.28
Total	**4.66**	**25.39**	**34.89**	**0.10**	**0.36**	**0.84**	**1.21**	**0.36**	**0.84**	**1.21**		**9,420.51**		**0.28**		**9,426.31**

3.4 Building Construction - 2018

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	3.34	21.78	22.50	0.04		1.20	1.20		1.20	1.20		4,040.62		0.30		4,046.87
Total	**3.34**	**21.78**	**22.50**	**0.04**		**1.20**	**1.20**		**1.20**	**1.20**		**4,040.62**		**0.30**		**4,046.87**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	2.15	22.06	16.87	0.06	2.01	0.64	2.65	0.05	0.59	0.64		5,769.15		0.10		5,771.26
Worker	2.24	1.74	15.62	0.04	5.66	0.15	5.81	0.08	0.14	0.21		3,591.90		0.16		3,595.20
Total	**4.39**	**23.80**	**32.49**	**0.10**	**7.67**	**0.79**	**8.46**	**0.13**	**0.73**	**0.85**		**9,361.05**		**0.26**		**9,366.46**

3.4 Building Construction - 2018

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	3.34	21.78	22.50	0.04		1.20	1.20		1.20	1.20	0.00	4,040.62		0.30		4,046.87
Total	**3.34**	**21.78**	**22.50**	**0.04**		**1.20**	**1.20**		**1.20**	**1.20**	**0.00**	**4,040.62**		**0.30**		**4,046.87**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	2.15	22.06	16.87	0.06	0.15	0.64	0.80	0.05	0.59	0.64		5,769.15		0.10		5,771.26
Worker	2.24	1.74	15.62	0.04	0.21	0.15	0.36	0.08	0.14	0.21		3,591.90		0.16		3,595.20
Total	**4.39**	**23.80**	**32.49**	**0.10**	**0.36**	**0.79**	**1.16**	**0.13**	**0.73**	**0.85**		**9,361.05**		**0.26**		**9,366.46**

3.4 Building Construction - 2019

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	3.05	19.73	22.36	0.04		1.03	1.03		1.03	1.03		4,040.62		0.27		4,046.36
Total	**3.05**	**19.73**	**22.36**	**0.04**		**1.03**	**1.03**		**1.03**	**1.03**		**4,040.62**		**0.27**		**4,046.36**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	2.04	20.81	15.99	0.06	2.01	0.60	2.60	0.05	0.55	0.60		5,784.53		0.09		5,786.50
Worker	2.13	1.59	14.49	0.04	5.66	0.15	5.81	0.08	0.14	0.21		3,521.53		0.15		3,524.61
Total	**4.17**	**22.40**	**30.48**	**0.10**	**7.67**	**0.75**	**8.41**	**0.13**	**0.69**	**0.81**		**9,306.06**		**0.24**		**9,311.11**

3.4 Building Construction - 2019

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	3.05	19.73	22.36	0.04		1.03	1.03		1.03	1.03	0.00	4,040.62		0.27		4,046.36
Total	**3.05**	**19.73**	**22.36**	**0.04**		**1.03**	**1.03**		**1.03**	**1.03**	**0.00**	**4,040.62**		**0.27**		**4,046.36**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	2.04	20.81	15.99	0.06	0.15	0.60	0.75	0.05	0.55	0.60		5,784.53		0.09		5,786.50
Worker	2.13	1.59	14.49	0.04	0.21	0.15	0.36	0.08	0.14	0.21		3,521.53		0.15		3,524.61
Total	**4.17**	**22.40**	**30.48**	**0.10**	**0.36**	**0.75**	**1.11**	**0.13**	**0.69**	**0.81**		**9,306.06**		**0.24**		**9,311.11**

3.4 Building Construction - 2020

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	2.80	17.88	22.24	0.04		0.88	0.88		0.88	0.88		4,040.62		0.25		4,045.85
Total	**2.80**	**17.88**	**22.24**	**0.04**		**0.88**	**0.88**		**0.88**	**0.88**		**4,040.62**		**0.25**		**4,045.85**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	1.94	19.73	15.24	0.06	2.01	0.56	2.57	0.05	0.51	0.57		5,798.56		0.09		5,800.41
Worker	2.04	1.47	13.50	0.04	5.66	0.15	5.81	0.08	0.14	0.21		3,456.29		0.14		3,459.17
Total	**3.98**	**21.20**	**28.74**	**0.10**	**7.67**	**0.71**	**8.38**	**0.13**	**0.65**	**0.78**		**9,254.85**		**0.23**		**9,259.58**

3.4 Building Construction - 2020

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	2.80	17.88	22.24	0.04		0.88	0.88		0.88	0.88	0.00	4,040.62		0.25		4,045.85
Total	**2.80**	**17.88**	**22.24**	**0.04**		**0.88**	**0.88**		**0.88**	**0.88**	**0.00**	**4,040.62**		**0.25**		**4,045.85**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	1.94	19.73	15.24	0.06	0.15	0.56	0.71	0.05	0.51	0.57		5,798.56		0.09		5,800.41
Worker	2.04	1.47	13.50	0.04	0.21	0.15	0.36	0.08	0.14	0.21		3,456.29		0.14		3,459.17
Total	**3.98**	**21.20**	**28.74**	**0.10**	**0.36**	**0.71**	**1.07**	**0.13**	**0.65**	**0.78**		**9,254.85**		**0.23**		**9,259.58**

3.5 Paving - 2020

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	3.50	21.64	19.87	0.03		1.65	1.65		1.65	1.65		2,917.65		0.31		2,924.25
Paving	0.00					0.00	0.00		0.00	0.00						0.00
Total	**3.50**	**21.64**	**19.87**	**0.03**		**1.65**	**1.65**		**1.65**	**1.65**		**2,917.65**		**0.31**		**2,924.25**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.07	0.05	0.47	0.00	0.20	0.01	0.20	0.00	0.00	0.01		119.46		0.00		119.56
Total	**0.07**	**0.05**	**0.47**	**0.00**	**0.20**	**0.01**	**0.20**	**0.00**	**0.00**	**0.01**		**119.46**		**0.00**		**119.56**

3.5 Paving - 2020

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	3.50	21.64	19.87	0.03		1.65	1.65		1.65	1.65	0.00	2,917.65		0.31		2,924.25
Paving	0.00					0.00	0.00		0.00	0.00						0.00
Total	**3.50**	**21.64**	**19.87**	**0.03**		**1.65**	**1.65**		**1.65**	**1.65**	**0.00**	**2,917.65**		**0.31**		**2,924.25**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.07	0.05	0.47	0.00	0.01	0.01	0.01	0.00	0.00	0.01		119.46		0.00		119.56
Total	**0.07**	**0.05**	**0.47**	**0.00**	**0.01**	**0.01**	**0.01**	**0.00**	**0.00**	**0.01**		**119.46**		**0.00**		**119.56**

3.6 Architectural Coating - 2020

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	280.60					0.00	0.00		0.00	0.00						0.00
Off-Road	0.24	1.68	1.83	0.00		0.11	0.11		0.11	0.11		281.19		0.02		281.65
Total	**280.84**	**1.68**	**1.83**	**0.00**		**0.11**	**0.11**		**0.11**	**0.11**		**281.19**		**0.02**		**281.65**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.41	0.29	2.71	0.01	1.14	0.03	1.17	0.02	0.03	0.04		692.85		0.03		693.43
Total	**0.41**	**0.29**	**2.71**	**0.01**	**1.14**	**0.03**	**1.17**	**0.02**	**0.03**	**0.04**		**692.85**		**0.03**		**693.43**

3.6 Architectural Coating - 2020

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	280.60					0.00	0.00		0.00	0.00						0.00
Off-Road	0.24	1.68	1.83	0.00		0.11	0.11		0.11	0.11	0.00	281.19		0.02		281.65
Total	**280.84**	**1.68**	**1.83**	**0.00**		**0.11**	**0.11**		**0.11**	**0.11**	**0.00**	**281.19**		**0.02**		**281.65**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.41	0.29	2.71	0.01	0.04	0.03	0.07	0.02	0.03	0.04		692.85		0.03		693.43
Total	**0.41**	**0.29**	**2.71**	**0.01**	**0.04**	**0.03**	**0.07**	**0.02**	**0.03**	**0.04**		**692.85**		**0.03**		**693.43**

4.0 Mobile Detail

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	147.02	211.12	1,012.83	2.12	255.64	9.15	264.79	3.56	8.75	12.31		175,519.01		7.40		175,674.31
Unmitigated	147.02	211.12	1,012.83	2.12	255.64	9.15	264.79	3.56	8.75	12.31		175,519.01		7.40		175,674.31
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	522.75	99.00	51.00	1,152,686	1,152,686
Regional Shopping Center	43,199.72	43,199.72	43199.72	75,742,278	75,742,278
Total	43,722.47	43,298.72	43,250.72	76,894,963	76,894,963

4.3 Trip Type Information

	Miles			Trip %		
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
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00

5.0 Energy Detail

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	0.12	1.13	0.95	0.01		0.00	0.09		0.00	0.09		1,354.36		0.03	0.02	1,362.60
NaturalGas Unmitigated	0.12	1.13	0.95	0.01		0.00	0.09		0.00	0.09		1,354.36		0.03	0.02	1,362.60
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	lb/day										lb/day					
General Light Industry	4446.58	0.05	0.44	0.37	0.00		0.00	0.03		0.00	0.03		523.13		0.01	0.01	526.31
Regional Shopping Center	7065.48	0.08	0.69	0.58	0.00		0.00	0.05		0.00	0.05		831.23		0.02	0.02	836.29
Total		**0.13**	**1.13**	**0.95**	**0.00**		**0.00**	**0.08**		**0.00**	**0.08**		**1,354.36**		**0.03**	**0.03**	**1,362.60**

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	lb/day										lb/day					
General Light Industry	4.44658	0.05	0.44	0.37	0.00		0.00	0.03		0.00	0.03		523.13		0.01	0.01	526.31
Regional Shopping Center	7.06548	0.08	0.69	0.58	0.00		0.00	0.05		0.00	0.05		831.23		0.02	0.02	836.29
Total		**0.13**	**1.13**	**0.95**	**0.00**		**0.00**	**0.08**		**0.00**	**0.08**		**1,354.36**		**0.03**	**0.03**	**1,362.60**

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	36.98	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Unmitigated	36.98	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	8.46					0.00	0.00		0.00	0.00						0.00
Consumer Products	28.53					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**36.99**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

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	8.46					0.00	0.00		0.00	0.00						0.00
Consumer Products	28.53					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**36.99**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

Olivas Park Drive Extension Project - Levee & Roadway

Ventura County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Other Asphalt Surfaces	9.89	Acre
User Defined Parking	11.59	User Defined Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Utility Company**	Southern California Edison
Climate Zone	8	**Precipitation Freq (Days)**	31		

1.3 User Entered Comments

Project Characteristics - Operational year of 2014, based on expected construction schedule.

Land Use - Other Asphalt = roadway ext; User Defined = levee. Acreages calculated from GIS data, and include temporary disturbance area estimates.

Construction Phase - Construction estimated to last approx. 8 mo. Default phase lengths increased proportionately to total 8 mo. Construction assumed to being in late 2013.

Grading - Levee infill = 77,309 CY; Levee excavation = 48,298; Roadway fill = 4,163. Soil is assumed to be balanced on-site where possible, resulting in 33,174 CY of import.

Vehicle Trips - No operational vehicle trips.

Energy Use -

Trips and VMT - Soil hauling vehicles assumed to carry 12CY/load.

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					
2013	0.69	5.71	3.23	0.01	1.35	0.27	1.61	0.30	0.27	0.56	0.00	610.51	610.51	0.05	0.00	611.63
2014	0.22	1.35	0.85	0.00	0.30	0.10	0.39	0.16	0.10	0.25	0.00	128.48	128.48	0.02	0.00	128.82
Total	**0.91**	**7.06**	**4.08**	**0.01**	**1.65**	**0.37**	**2.00**	**0.46**	**0.37**	**0.81**	**0.00**	**738.99**	**738.99**	**0.07**	**0.00**	**740.45**

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					
2013	0.69	5.71	3.23	0.01	0.55	0.27	0.82	0.30	0.27	0.56	0.00	610.51	610.51	0.05	0.00	611.63
2014	0.22	1.35	0.85	0.00	0.29	0.10	0.39	0.16	0.10	0.25	0.00	128.48	128.48	0.02	0.00	128.82
Total	**0.91**	**7.06**	**4.08**	**0.01**	**0.84**	**0.37**	**1.21**	**0.46**	**0.37**	**0.81**	**0.00**	**738.99**	**738.99**	**0.07**	**0.00**	**740.45**

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	0.00	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
Energy	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
Mobile	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
Waste						0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water						0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**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**

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	0.00	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
Energy	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
Mobile	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
Waste						0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water						0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**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

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2013

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					0.26	0.00	0.26	0.14	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.13	1.08	0.61	0.00		0.05	0.05		0.05	0.05	0.00	97.92	97.92	0.01	0.00	98.15
Total	**0.13**	**1.08**	**0.61**	**0.00**	**0.26**	**0.05**	**0.31**	**0.14**	**0.05**	**0.19**	**0.00**	**97.92**	**97.92**	**0.01**	**0.00**	**98.15**

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	0.06	0.63	0.40	0.00	0.78	0.03	0.81	0.00	0.03	0.03	0.00	99.89	99.89	0.00	0.00	99.95
Vendor	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
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.06	2.06	0.00	0.00	2.06
Total	**0.06**	**0.63**	**0.41**	**0.00**	**0.78**	**0.03**	**0.81**	**0.00**	**0.03**	**0.03**	**0.00**	**101.95**	**101.95**	**0.00**	**0.00**	**102.01**

3.2 Site Preparation - 2013

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					0.26	0.00	0.26	0.14	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.13	1.08	0.61	0.00		0.05	0.05		0.05	0.05	0.00	97.92	97.92	0.01	0.00	98.15
Total	**0.13**	**1.08**	**0.61**	**0.00**	**0.26**	**0.05**	**0.31**	**0.14**	**0.05**	**0.19**	**0.00**	**97.92**	**97.92**	**0.01**	**0.00**	**98.15**

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	0.06	0.63	0.40	0.00	0.00	0.03	0.03	0.00	0.03	0.03	0.00	99.89	99.89	0.00	0.00	99.95
Vendor	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
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.06	2.06	0.00	0.00	2.06
Total	**0.06**	**0.63**	**0.41**	**0.00**	**0.00**	**0.03**	**0.03**	**0.00**	**0.03**	**0.03**	**0.00**	**101.95**	**101.95**	**0.00**	**0.00**	**102.01**

3.3 Grading - 2013

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					0.29	0.00	0.29	0.16	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.49	4.00	2.17	0.00		0.19	0.19		0.19	0.19	0.00	403.70	403.70	0.04	0.00	404.53
Total	**0.49**	**4.00**	**2.17**	**0.00**	**0.29**	**0.19**	**0.48**	**0.16**	**0.19**	**0.35**	**0.00**	**403.70**	**403.70**	**0.04**	**0.00**	**404.53**

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	0.00	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
Vendor	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
Worker	0.01	0.00	0.05	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	6.94	6.94	0.00	0.00	6.95
Total	**0.01**	**0.00**	**0.05**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**6.94**	**6.94**	**0.00**	**0.00**	**6.95**

3.3 Grading - 2013

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					0.29	0.00	0.29	0.16	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.49	4.00	2.17	0.00		0.19	0.19		0.19	0.19	0.00	403.70	403.70	0.04	0.00	404.53
Total	**0.49**	**4.00**	**2.17**	**0.00**	**0.29**	**0.19**	**0.48**	**0.16**	**0.19**	**0.35**	**0.00**	**403.70**	**403.70**	**0.04**	**0.00**	**404.53**

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	0.00	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
Vendor	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
Worker	0.01	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.94	6.94	0.00	0.00	6.95
Total	**0.01**	**0.00**	**0.05**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**6.94**	**6.94**	**0.00**	**0.00**	**6.95**

3.3 Grading - 2014

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					0.29	0.00	0.29	0.16	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.06	0.50	0.28	0.00		0.02	0.02		0.02	0.02	0.00	54.15	54.15	0.01	0.00	54.26
Total	**0.06**	**0.50**	**0.28**	**0.00**	**0.29**	**0.02**	**0.31**	**0.16**	**0.02**	**0.18**	**0.00**	**54.15**	**54.15**	**0.01**	**0.00**	**54.26**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.91	0.91	0.00	0.00	0.91
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.91**	**0.91**	**0.00**	**0.00**	**0.91**

3.3 Grading - 2014

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					0.29	0.00	0.29	0.16	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.06	0.50	0.28	0.00		0.02	0.02		0.02	0.02	0.00	54.15	54.15	0.01	0.00	54.26
Total	**0.06**	**0.50**	**0.28**	**0.00**	**0.29**	**0.02**	**0.31**	**0.16**	**0.02**	**0.18**	**0.00**	**54.15**	**54.15**	**0.01**	**0.00**	**54.26**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.91	0.91	0.00	0.00	0.91
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.91**	**0.91**	**0.00**	**0.00**	**0.91**

3.4 Paving - 2014

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	0.14	0.85	0.55	0.00		0.07	0.07		0.07	0.07	0.00	70.12	70.12	0.01	0.00	70.36
Paving	0.01					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.15**	**0.85**	**0.55**	**0.00**		**0.07**	**0.07**		**0.07**	**0.07**	**0.00**	**70.12**	**70.12**	**0.01**	**0.00**	**70.36**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.29	3.29	0.00	0.00	3.29
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.29**	**3.29**	**0.00**	**0.00**	**3.29**

3.4 Paving - 2014

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	0.14	0.85	0.55	0.00		0.07	0.07		0.07	0.07	0.00	70.12	70.12	0.01	0.00	70.36
Paving	0.01					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.15**	**0.85**	**0.55**	**0.00**		**0.07**	**0.07**		**0.07**	**0.07**	**0.00**	**70.12**	**70.12**	**0.01**	**0.00**	**70.36**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.29	3.29	0.00	0.00	3.29
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.29**	**3.29**	**0.00**	**0.00**	**3.29**

4.0 Mobile Detail

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	0.00	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
Unmitigated	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
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
User Defined Parking	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %		
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
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00
User Defined Parking	9.50	7.30	7.30	0.00	0.00	0.00

5.0 Energy Detail

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						0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NaturalGas Mitigated	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
NaturalGas Unmitigated	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
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	tons/yr										MT/yr					
Other Asphalt Surfaces	0	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
User Defined Parking	0	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
Total		**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**

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	tons/yr										MT/yr					
Other Asphalt Surfaces	0	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
User Defined Parking	0	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
Total		**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**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Other Asphalt Surfaces	0					0.00	0.00	0.00	0.00
User Defined Parking	0					0.00	0.00	0.00	0.00
Total						**0.00**	**0.00**	**0.00**	**0.00**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Other Asphalt Surfaces	0					0.00	0.00	0.00	0.00
User Defined Parking	0					0.00	0.00	0.00	0.00
Total						**0.00**	**0.00**	**0.00**	**0.00**

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	0.00	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
Unmitigated	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
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	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
Total	**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**

6.2 Area by SubCategory

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	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	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
Total	**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**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					0.00	0.00	0.00	0.00
Unmitigated					0.00	0.00	0.00	0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Other Asphalt Surfaces	0 / 0					0.00	0.00	0.00	0.00
User Defined Parking	0 / 0					0.00	0.00	0.00	0.00
Total						**0.00**	**0.00**	**0.00**	**0.00**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Other Asphalt Surfaces	0 / 0					0.00	0.00	0.00	0.00
User Defined Parking	0 / 0					0.00	0.00	0.00	0.00
Total						**0.00**	**0.00**	**0.00**	**0.00**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					0.00	0.00	0.00	0.00
Unmitigated					0.00	0.00	0.00	0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Other Asphalt Surfaces	0					0.00	0.00	0.00	0.00
User Defined Parking	0					0.00	0.00	0.00	0.00
Total						**0.00**	**0.00**	**0.00**	**0.00**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Other Asphalt Surfaces	0					0.00	0.00	0.00	0.00
User Defined Parking	0					0.00	0.00	0.00	0.00
Total						**0.00**	**0.00**	**0.00**	**0.00**

9.0 Vegetation

Olivas Park Drive Extension Project - Levee & Roadway

Ventura County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Other Asphalt Surfaces	9.89	Acre
User Defined Parking	11.59	User Defined Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Utility Company**	Southern California Edison
Climate Zone	8	**Precipitation Freq (Days)**	31		

1.3 User Entered Comments

Project Characteristics - Operational year of 2014, based on expected construction schedule.

Land Use - Other Asphalt = roadway ext; User Defined = levee. Acreages calculated from GIS data, and include temporary disturbance area estimates.

Construction Phase - Construction estimated to last approx. 8 mo. Default phase lengths increased proportionately to total 8 mo. Construction assumed to being in late 2013.

Grading - Levee infill = 77,309 CY; Levee excavation = 48,298; Roadway fill = 4,163. Soil is assumed to be balanced on-site where possible, resulting in 33,174 CY of import.

Vehicle Trips - No operational vehicle trips.

Energy Use -

Trips and VMT - Soil hauling vehicles assumed to carry 12CY/load.

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					
2013	14.37	127.64	73.98	0.15	83.94	5.89	89.83	10.25	5.89	16.14	0.00	16,345.18	0.00	1.12	0.00	16,368.64
2014	11.33	90.75	51.87	0.10	6.53	4.18	10.71	3.32	4.18	7.50	0.00	11,049.76	0.00	1.01	0.00	11,071.04
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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					
2013	14.37	127.64	73.98	0.15	19.38	5.89	25.26	10.25	5.89	16.14	0.00	16,345.18	0.00	1.12	0.00	16,368.64
2014	11.33	90.75	51.87	0.10	6.28	4.18	10.46	3.32	4.18	7.50	0.00	11,049.76	0.00	1.01	0.00	11,071.04
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Mobile	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
Total	**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**

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	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Mobile	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
Total	**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

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2013

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					19.08	0.00	19.08	9.96	0.00	9.96						0.00
Off-Road	9.90	79.99	45.35	0.07		3.93	3.93		3.93	3.93		7,997.69		0.89		8,016.38
Total	**9.90**	**79.99**	**45.35**	**0.07**	**19.08**	**3.93**	**23.01**	**9.96**	**3.93**	**13.89**		**7,997.69**		**0.89**		**8,016.38**

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	4.36	47.56	27.61	0.08	64.62	1.95	66.57	0.29	1.95	2.23		8,169.76		0.22		8,174.33
Vendor	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
Worker	0.11	0.10	1.02	0.00	0.23	0.01	0.24	0.01	0.01	0.01		177.73		0.01		177.94
Total	**4.47**	**47.66**	**28.63**	**0.08**	**64.85**	**1.96**	**66.81**	**0.30**	**1.96**	**2.24**		**8,347.49**		**0.23**		**8,352.27**

3.2 Site Preparation - 2013

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					19.08	0.00	19.08	9.96	0.00	9.96						0.00
Off-Road	9.90	79.99	45.35	0.07		3.93	3.93		3.93	3.93	0.00	7,997.69		0.89		8,016.38
Total	**9.90**	**79.99**	**45.35**	**0.07**	**19.08**	**3.93**	**23.01**	**9.96**	**3.93**	**13.89**	**0.00**	**7,997.69**		**0.89**		**8,016.38**

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	4.36	47.56	27.61	0.08	0.29	1.95	2.23	0.29	1.95	2.23		8,169.76		0.22		8,174.33
Vendor	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
Worker	0.11	0.10	1.02	0.00	0.01	0.01	0.01	0.01	0.01	0.01		177.73		0.01		177.94
Total	**4.47**	**47.66**	**28.63**	**0.08**	**0.30**	**1.96**	**2.24**	**0.30**	**1.96**	**2.24**		**8,347.49**		**0.23**		**8,352.27**

3.3 Grading - 2013

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					6.27	0.00	6.27	3.31	0.00	3.31						0.00
Off-Road	11.85	97.47	52.85	0.10		4.59	4.59		4.59	4.59		10,856.66		1.06		10,878.90
Total	**11.85**	**97.47**	**52.85**	**0.10**	**6.27**	**4.59**	**10.86**	**3.31**	**4.59**	**7.90**		**10,856.66**		**1.06**		**10,878.90**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.12	0.11	1.13	0.00	0.26	0.01	0.27	0.01	0.01	0.02		197.48		0.01		197.71
Total	**0.12**	**0.11**	**1.13**	**0.00**	**0.26**	**0.01**	**0.27**	**0.01**	**0.01**	**0.02**		**197.48**		**0.01**		**197.71**

3.3 Grading - 2013

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					6.27	0.00	6.27	3.31	0.00	3.31						0.00
Off-Road	11.85	97.47	52.85	0.10		4.59	4.59		4.59	4.59	0.00	10,856.66		1.06		10,878.90
Total	**11.85**	**97.47**	**52.85**	**0.10**	**6.27**	**4.59**	**10.86**	**3.31**	**4.59**	**7.90**	**0.00**	**10,856.66**		**1.06**		**10,878.90**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.12	0.11	1.13	0.00	0.01	0.01	0.02	0.01	0.01	0.02		197.48		0.01		197.71
Total	**0.12**	**0.11**	**1.13**	**0.00**	**0.01**	**0.01**	**0.02**	**0.01**	**0.01**	**0.02**		**197.48**		**0.01**		**197.71**

3.3 Grading - 2014

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					6.27	0.00	6.27	3.31	0.00	3.31						0.00
Off-Road	11.22	90.65	50.83	0.10		4.18	4.18		4.18	4.18		10,856.65		1.00		10,877.72
Total	**11.22**	**90.65**	**50.83**	**0.10**	**6.27**	**4.18**	**10.45**	**3.31**	**4.18**	**7.49**		**10,856.65**		**1.00**		**10,877.72**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.12	0.10	1.03	0.00	0.26	0.01	0.27	0.01	0.01	0.02		193.11		0.01		193.32
Total	**0.12**	**0.10**	**1.03**	**0.00**	**0.26**	**0.01**	**0.27**	**0.01**	**0.01**	**0.02**		**193.11**		**0.01**		**193.32**

3.3 Grading - 2014

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					6.27	0.00	6.27	3.31	0.00	3.31						0.00
Off-Road	11.22	90.65	50.83	0.10		4.18	4.18		4.18	4.18	0.00	10,856.65		1.00		10,877.72
Total	**11.22**	**90.65**	**50.83**	**0.10**	**6.27**	**4.18**	**10.45**	**3.31**	**4.18**	**7.49**	**0.00**	**10,856.65**		**1.00**		**10,877.72**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.12	0.10	1.03	0.00	0.01	0.01	0.02	0.01	0.01	0.02		193.11		0.01		193.32
Total	**0.12**	**0.10**	**1.03**	**0.00**	**0.01**	**0.01**	**0.02**	**0.01**	**0.01**	**0.02**		**193.11**		**0.01**		**193.32**

3.4 Paving - 2014

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	5.20	32.09	20.70	0.03		2.74	2.74		2.74	2.74		2,917.65		0.47		2,927.48
Paving	0.49					0.00	0.00		0.00	0.00						0.00
Total	**5.69**	**32.09**	**20.70**	**0.03**		**2.74**	**2.74**		**2.74**	**2.74**		**2,917.65**		**0.47**		**2,927.48**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.09	0.08	0.78	0.00	0.20	0.00	0.20	0.01	0.00	0.01		144.83		0.01		144.99
Total	**0.09**	**0.08**	**0.78**	**0.00**	**0.20**	**0.00**	**0.20**	**0.01**	**0.00**	**0.01**		**144.83**		**0.01**		**144.99**

3.4 Paving - 2014

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	5.20	32.09	20.70	0.03		2.74	2.74		2.74	2.74	0.00	2,917.65		0.47		2,927.48
Paving	0.49					0.00	0.00		0.00	0.00						0.00
Total	**5.69**	**32.09**	**20.70**	**0.03**		**2.74**	**2.74**		**2.74**	**2.74**	**0.00**	**2,917.65**		**0.47**		**2,927.48**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.09	0.08	0.78	0.00	0.01	0.00	0.01	0.01	0.00	0.01		144.83		0.01		144.99
Total	**0.09**	**0.08**	**0.78**	**0.00**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**		**144.83**		**0.01**		**144.99**

4.0 Mobile Detail

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	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
Unmitigated	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
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
User Defined Parking	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %		
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
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00
User Defined Parking	9.50	7.30	7.30	0.00	0.00	0.00

5.0 Energy Detail

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	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
NaturalGas Unmitigated	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	lb/day										lb/day					
Other Asphalt Surfaces	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
User Defined Parking	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total		**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**	**0.00**	**0.00**

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	lb/day										lb/day					
Other Asphalt Surfaces	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
User Defined Parking	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total		**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**	**0.00**	**0.00**

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	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Unmitigated	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.00					0.00	0.00		0.00	0.00						0.00
Consumer Products	0.00					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

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	0.00					0.00	0.00		0.00	0.00						0.00
Consumer Products	0.00					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

Olivas Park Drive Extension Project - Levee & Roadway

Ventura County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Other Asphalt Surfaces	9.89	Acre
User Defined Parking	11.59	User Defined Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Utility Company**	Southern California Edison
Climate Zone	8	**Precipitation Freq (Days)**	31		

1.3 User Entered Comments

Project Characteristics - Operational year of 2014, based on expected construction schedule.

Land Use - Other Asphalt = roadway ext; User Defined = levee. Acreages calculated from GIS data, and include temporary disturbance area estimates.

Construction Phase - Construction estimated to last approx. 8 mo. Default phase lengths increased proportionately to total 8 mo. Construction assumed to being in late 2013.

Grading - Levee infill = 77,309 CY; Levee excavation = 48,298; Roadway fill = 4,163. Soil is assumed to be balanced on-site where possible, resulting in 33,174 CY of import.

Vehicle Trips - No operational vehicle trips.

Energy Use -

Trips and VMT - Soil hauling vehicles assumed to carry 12CY/load.

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					
2013	14.54	129.75	76.56	0.15	83.94	5.90	89.84	10.25	5.90	16.15	0.00	16,301.44	0.00	1.13	0.00	16,325.07
2014	11.35	90.77	51.85	0.10	6.53	4.18	10.71	3.32	4.18	7.50	0.00	11,036.81	0.00	1.01	0.00	11,058.09
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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					
2013	14.54	129.75	76.56	0.15	19.38	5.90	25.28	10.25	5.90	16.15	0.00	16,301.44	0.00	1.13	0.00	16,325.07
2014	11.35	90.77	51.85	0.10	6.28	4.18	10.46	3.32	4.18	7.50	0.00	11,036.81	0.00	1.01	0.00	11,058.09
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Mobile	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
Total	**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**

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	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Mobile	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
Total	**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

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2013

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					19.08	0.00	19.08	9.96	0.00	9.96						0.00
Off-Road	9.90	79.99	45.35	0.07		3.93	3.93		3.93	3.93		7,997.69		0.89		8,016.38
Total	**9.90**	**79.99**	**45.35**	**0.07**	**19.08**	**3.93**	**23.01**	**9.96**	**3.93**	**13.89**		**7,997.69**		**0.89**		**8,016.38**

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	4.51	49.65	30.21	0.08	64.62	1.96	66.58	0.29	1.96	2.25		8,137.92		0.23		8,142.66
Vendor	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
Worker	0.13	0.12	1.01	0.00	0.23	0.01	0.24	0.01	0.01	0.01		165.83		0.01		166.03
Total	**4.64**	**49.77**	**31.22**	**0.08**	**64.85**	**1.97**	**66.82**	**0.30**	**1.97**	**2.26**		**8,303.75**		**0.24**		**8,308.69**

3.2 Site Preparation - 2013

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					19.08	0.00	19.08	9.96	0.00	9.96						0.00
Off-Road	9.90	79.99	45.35	0.07		3.93	3.93		3.93	3.93	0.00	7,997.69		0.89		8,016.38
Total	**9.90**	**79.99**	**45.35**	**0.07**	**19.08**	**3.93**	**23.01**	**9.96**	**3.93**	**13.89**	**0.00**	**7,997.69**		**0.89**		**8,016.38**

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	4.51	49.65	30.21	0.08	0.29	1.96	2.25	0.29	1.96	2.25		8,137.92		0.23		8,142.66
Vendor	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
Worker	0.13	0.12	1.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01		165.83		0.01		166.03
Total	**4.64**	**49.77**	**31.22**	**0.08**	**0.30**	**1.97**	**2.26**	**0.30**	**1.97**	**2.26**		**8,303.75**		**0.24**		**8,308.69**

3.3 Grading - 2013

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					6.27	0.00	6.27	3.31	0.00	3.31						0.00
Off-Road	11.85	97.47	52.85	0.10		4.59	4.59		4.59	4.59		10,856.66		1.06		10,878.90
Total	**11.85**	**97.47**	**52.85**	**0.10**	**6.27**	**4.59**	**10.86**	**3.31**	**4.59**	**7.90**		**10,856.66**		**1.06**		**10,878.90**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.14	0.13	1.12	0.00	0.26	0.01	0.27	0.01	0.01	0.02		184.26		0.01		184.48
Total	**0.14**	**0.13**	**1.12**	**0.00**	**0.26**	**0.01**	**0.27**	**0.01**	**0.01**	**0.02**		**184.26**		**0.01**		**184.48**

3.3 Grading - 2013

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					6.27	0.00	6.27	3.31	0.00	3.31						0.00
Off-Road	11.85	97.47	52.85	0.10		4.59	4.59		4.59	4.59	0.00	10,856.66		1.06		10,878.90
Total	**11.85**	**97.47**	**52.85**	**0.10**	**6.27**	**4.59**	**10.86**	**3.31**	**4.59**	**7.90**	**0.00**	**10,856.66**		**1.06**		**10,878.90**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.14	0.13	1.12	0.00	0.01	0.01	0.02	0.01	0.01	0.02		184.26		0.01		184.48
Total	**0.14**	**0.13**	**1.12**	**0.00**	**0.01**	**0.01**	**0.02**	**0.01**	**0.01**	**0.02**		**184.26**		**0.01**		**184.48**

3.3 Grading - 2014

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					6.27	0.00	6.27	3.31	0.00	3.31						0.00
Off-Road	11.22	90.65	50.83	0.10		4.18	4.18		4.18	4.18		10,856.65		1.00		10,877.72
Total	**11.22**	**90.65**	**50.83**	**0.10**	**6.27**	**4.18**	**10.45**	**3.31**	**4.18**	**7.49**		**10,856.65**		**1.00**		**10,877.72**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.13	0.12	1.02	0.00	0.26	0.01	0.27	0.01	0.01	0.02		180.16		0.01		180.36
Total	**0.13**	**0.12**	**1.02**	**0.00**	**0.26**	**0.01**	**0.27**	**0.01**	**0.01**	**0.02**		**180.16**		**0.01**		**180.36**

3.3 Grading - 2014

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					6.27	0.00	6.27	3.31	0.00	3.31						0.00
Off-Road	11.22	90.65	50.83	0.10		4.18	4.18		4.18	4.18	0.00	10,856.65		1.00		10,877.72
Total	**11.22**	**90.65**	**50.83**	**0.10**	**6.27**	**4.18**	**10.45**	**3.31**	**4.18**	**7.49**	**0.00**	**10,856.65**		**1.00**		**10,877.72**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.13	0.12	1.02	0.00	0.01	0.01	0.02	0.01	0.01	0.02		180.16		0.01		180.36
Total	**0.13**	**0.12**	**1.02**	**0.00**	**0.01**	**0.01**	**0.02**	**0.01**	**0.01**	**0.02**		**180.16**		**0.01**		**180.36**

3.4 Paving - 2014

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	5.20	32.09	20.70	0.03		2.74	2.74		2.74	2.74		2,917.65		0.47		2,927.48
Paving	0.49					0.00	0.00		0.00	0.00						0.00
Total	**5.69**	**32.09**	**20.70**	**0.03**		**2.74**	**2.74**		**2.74**	**2.74**		**2,917.65**		**0.47**		**2,927.48**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.10	0.09	0.76	0.00	0.20	0.00	0.20	0.01	0.00	0.01		135.12		0.01		135.27
Total	**0.10**	**0.09**	**0.76**	**0.00**	**0.20**	**0.00**	**0.20**	**0.01**	**0.00**	**0.01**		**135.12**		**0.01**		**135.27**

3.4 Paving - 2014

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	5.20	32.09	20.70	0.03		2.74	2.74		2.74	2.74	0.00	2,917.65		0.47		2,927.48
Paving	0.49					0.00	0.00		0.00	0.00						0.00
Total	**5.69**	**32.09**	**20.70**	**0.03**		**2.74**	**2.74**		**2.74**	**2.74**	**0.00**	**2,917.65**		**0.47**		**2,927.48**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.10	0.09	0.76	0.00	0.01	0.00	0.01	0.01	0.00	0.01		135.12		0.01		135.27
Total	**0.10**	**0.09**	**0.76**	**0.00**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**		**135.12**		**0.01**		**135.27**

4.0 Mobile Detail

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	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
Unmitigated	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
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
User Defined Parking	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %		
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
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00
User Defined Parking	9.50	7.30	7.30	0.00	0.00	0.00

5.0 Energy Detail

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	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
NaturalGas Unmitigated	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	lb/day										lb/day					
Other Asphalt Surfaces	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
User Defined Parking	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total		**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**	**0.00**	**0.00**

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	lb/day										lb/day					
Other Asphalt Surfaces	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
User Defined Parking	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total		**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**	**0.00**	**0.00**

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	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Unmitigated	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.00					0.00	0.00		0.00	0.00						0.00
Consumer Products	0.00					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

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	0.00					0.00	0.00		0.00	0.00						0.00
Consumer Products	0.00					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

Greenhouse Gas Emission Worksheet

N20 Mobile Emissions Olivas Park

From URBEMIS 2007 Vehicle Fleet Mix Output:

Annual VMT: 76,894,963

Vehicle Type	Percent Type	CH4 Emission Factor (g/mile)*	CH4 Emission (g/mile)**	N2O Emission Factor (g/mile)*	N2O Emission (g/mile)**
Light Auto	53.6%	0.04	0.02144	0.04	0.02144
Light Truck < 3750 lbs	6.8%	0.05	0.0034	0.06	0.00408
Light Truck 3751-5750 lbs	22.8%	0.05	0.0114	0.06	0.01368
Med Truck 5751-8500 lbs	10.0%	0.12	0.012	0.2	0.02
Lite-Heavy Truck 8501-10,000 lbs	1.5%	0.12	0.0018	0.2	0.003
Lite-Heavy Truck 10,001-14,000 lbs	0.5%	0.09	0.00045	0.125	0.000625
Med-Heavy Truck 14,001-33,000 lbs	0.9%	0.06	0.00054	0.05	0.00045
Heavy-Heavy Truck 33,001-60,000 lbs	0.5%	0.06	0.0003	0.05	0.00025
Other Bus	0.1%	0.06	0.00006	0.05	0.00005
Urban Bus	0.1%	0.06	0.00006	0.05	0.00005
Motorcycle	2.3%	0.09	0.00207	0.01	0.00023
School Bus	0.1%	0.06	0.00006	0.05	0.00005
Motor Home	0.8%	0.09	0.00072	0.125	0.001
Total	**100.0%**		**0.0543**		**0.064905**

Total Emissions (metric tons) =
Emission Factor by Vehicle Mix (g/mi) x Annual VMT(mi) x 0.000001 metric tons/g

Conversion to Carbon Dioxide Equivalency (CO2e) Units based on Global Warming Potential (GWP)

CH4	21	GWP
N2O	310	GWP
1 ton (short, US) =	0.90718474	metric ton

Annual Mobile Emissions:

	Total Emissions		Total CO2e units	
N20 Emissions:	4.9909	metric tons N2O	**1,547.17**	metric tons CO2e
		Project Total:	***1,547.17***	***metric tons CO2e***

References

* from Table C.4: Methane and Nitrous Oxide Emission Factors for Mobile Sources by Vehicle and Fuel Type (g/mile).
in California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1, January 2009.
Assume Model year 2000-present, gasoline fueled.
** Source: California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1, January 2009.
*** From URBEMIS 2007 results for mobile sources

Greenhouse Gas Emission Worksheet
Construction Emissions

Olivas Park

Annual Mobile Emissions:

Project Total:	***11,474***	***metric tons CO2e***
Amortarized (30 years)	**382.47**	

References
CalEEMod Output

Appendix C

Biological Resources Data

Appendix C-1

Regulatory Setting

REGULATORY SETTING

Special-status habitats are vegetation types, associations, or sub-associations that support concentrations of special-status plant or wildlife species, are of relatively limited distribution, or are of particular value to wildlife.

Listed species are those taxa that are formally listed as endangered or threatened by the federal government (e.g. U.S. Fish and Wildlife Service [USFWS]), pursuant to the Federal Endangered Species Act (FESA) or as endangered, threatened, or rare (for plants only) by the State of California (i.e. California Fish and Game Commission), pursuant to the California Endangered Species Act or the California Native Plant Protection Act. Some species are considered rare (but not formally listed) by resource agencies, organizations with biological interests/expertise (e.g. Audubon Society, CNPS, The Wildlife Society), and the scientific community.

The following is a brief summary of the regulatory context under which biological resources are managed at the federal, state, and local levels. A number of federal and state statutes provide a regulatory structure that guides the protection of biological resources. Agencies with the responsibility for protection of biological resources within the project site include:

- *U.S. Army Corps of Engineers (wetlands and other waters of the United States);*
- *Regional Water Quality Control Board (waters of the State);*
- *U.S. Fish and Wildlife Service (federally listed species and migratory birds);*
- *California Department Fish and Wildlife (riparian areas and other waters of the State, state-listed species);*

U.S. Army Corps of Engineers. Under Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers (USACE) has authority to regulate activities that could discharge fill of material or otherwise adversely modify wetlands or other "waters of the United States." Perennial and intermittent creeks are considered waters of the United States if they are hydrologically connected to other jurisdictional waters. The USACE also implements the federal policy embodied in Executive Order 11990, which is intended to result in no net loss of wetland value or acres. In achieving the goals of the Clean Water Act, the USACE seeks to avoid adverse impacts and offset unavoidable adverse impacts on existing aquatic resources. Any fill or adverse modification of wetlands that are hydrologically connected to jurisdictional waters would require a permit from the USACE prior to the start of work. Typically, when a project involves impacts to waters of the United States, the goal of no net loss of wetland acres or values is met through compensatory mitigation involving creation or enhancement of similar habitats.

Regional Water Quality Control Board. The State Water Resources Control Board (SWRCB) and the local Lahontan Regional Water Quality Control Board (RWQCB) have

jurisdiction over "waters of the State," pursuant to the Porter-Cologne Water Quality Control Act, which are defined as any surface water or groundwater, including saline waters, within the boundaries of the State. The SWRCB has issued general Waste Discharge Requirements (WDRs) regarding discharges to "isolated" waters of the State (Water Quality Order No. 2004-0004-DWQ, Statewide General Waste Discharge Requirements for Dredged or Fill Discharges to Waters Deemed by the U.S. Army Corps of Engineers to be Outside of Federal Jurisdiction). The RWQCB enforces actions under this general order for isolated waters not subject to federal jurisdiction, and is also responsible for the issuance of water quality certifications pursuant to Section 401 of the Clean Water Act for waters subject to federal jurisdiction.

United States Fish and Wildlife Service. The USFWS implements the Migratory Bird Treaty Act (16 United States Code [USC] Section 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668). The USFWS and National Marine Fisheries Service (NMFS) share responsibility for implementing the Federal Endangered Species Act (FESA) (16 USC § 153 *et seq.)*. The USFWS generally implements the FESA for terrestrial and freshwater species, while the NMFS implements the FESA for marine and anadramous species. Projects that would result in "take" of any federally listed threatened or endangered species are required to obtain permits from the USFWS or NMFS through either Section 7 (interagency consultation with a federal nexus) or Section 10 (Habitat Conservation Plan [HCP]) of FESA, depending on the involvement by the federal government in permitting and/or funding of the project.

Section 7 of the FESA provides for the issuance of an incidental take permit subject to mitigating requirements where a federal agency has direct permit responsibility for the action. This consultation process includes a Biological Assessment of the predicted impacts of a project on the species with measures to minimize and mitigate for such impacts. The result is a Biological Opinion rendered by USFWS that includes a specified allowable incidental take, as well as terms and conditions to minimize and offset such take. Section 10(a) of the FESA provides for the submittal of a voluntary HCP where direct federal jurisdiction is lacking, but the mitigation requirements are similar as for Section 7. An incidental take permit may be issued pursuant to a finding that take will be minimized and mitigated to the maximum extent practicable and that the taking will not appreciably reduce the likelihood of the survival and recovery of the taxa in the wild. Conveyance of the take permit includes development of an HCP for protecting and enhancing the federally listed species at a specific location in perpetuity. Under Section 10(a), an HCP is required to contain:

- The impact likely to occur due to the action;
- Steps taken to minimize and mitigate impacts and the funding that will be available to implement those steps;
- Alternative actions considered and reasons why such alternatives are not utilized; and

- Any measures or conditions required by the federal government as being necessary or appropriate.

Section 9(a)(2) of the FESA contains the prohibitions against take of listed plant species, while Section 9(a)(1) contains the restrictions regarding fish and wildlife. Because of differences in these two code sections, federal control over change in habitat land use for plants under the FESA is limited. While animals are protected no matter where they are located, protection for plants extends only to those areas in federal jurisdiction, or where listed plants are removed in knowing violation of state law.

The permitting process is used to determine if a project would jeopardize the continued existence of a listed species and what measures would be required to avoid jeopardizing the species. "Take" under federal definition means to harass, harm (which includes habitat modification), pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Proposed or candidate species do not have the full protection of FESA; however, the USFWS and NMFS advise project applicants that they could be elevated to listed status at any time.

California Department of Fish and Wildlife. The CDFW derives its authority from the Fish and Game Code of California. The California Endangered Species Act (CESA) (Fish and Game Code Section 2050 *et. seq.)* prohibits take of state listed threatened, endangered or fully protected species. Take under CESA is restricted to direct mortality of a listed species and does not prohibit indirect harm by way of habitat modification. The CDFW also prohibits take for species designated as Fully Protected under the Code.

CESA take restrictions are encoded at Section 2080, while Section 2081 details the requirements regarding incidental take. The following criteria regarding "incidental take" are relevant per Section 2081 and the CDFW Code of Regulations (Section 783.4):

- The take will be incidental to an otherwise lawful activity.
- The applicant will minimize and fully mitigate the impacts of the authorized take. Measures to meet this obligation are to be roughly proportional to the extent of authorized take. Where various measures are available, measures shall maintain the applicant's objectives to the greatest extent possible. All required measures shall be capable of successful implementation.
- The applicant is to ensure adequate funding to implement the measures and to monitor compliance and effectiveness of the measures.
- No incidental take permit shall be issued if such issuance would jeopardize the continued existence of the species.

California Fish and Game Code sections 3503, 3503.5, and 3511 describe unlawful take, possession, or destruction of birds, nests, and eggs. Fully protected birds (Section 3511) may

not be taken or possessed except under specific permit. Section 3503.5 of the Code protects all birds-of-prey and their eggs and nests against take, possession, or destruction of nests or eggs.

Species of Special Concern (SSC) is a category used by the CDFW for those species which are considered to be indicators of regional habitat changes or are considered to be potential future protected species. Species of Special Concern do not have any special legal status except that which may be afforded by the Fish and Game Code as noted above. The SSC category is intended by the CDFW for use as a management tool to include these species into special consideration when decisions are made concerning the development of natural lands. The CDFW also has authority to administer the Native Plant Protection Act (NPPA) (Fish and Game Code Section 1900 *et seq.*). The NPPA requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Under Section 1913(c) of the NPPA, the owner of land where a rare or endangered native plant is growing is required to notify the department at least 10 days in advance of changing the land use to allow for salvage of plant.

Perennial and intermittent streams and associated riparian vegetation, when present, also fall under the jurisdiction of the CDFW. Section 1600 et seq. of the Fish and Game Code (Lake and Streambed Alteration Agreements) gives the CDFW regulatory authority over work within the stream zone (which could extend to the 100-year flood plain) consisting of, but not limited to, the diversion or obstruction of the natural flow or changes in the channel, bed, or bank of any river, stream or lake.

Appendix C-2

Special Status Wildlife Species Evaluation Tables

Table C-1. Special Status Wildlife Species Recorded in CNDDB or Otherwise Known to Occur Within the Project Vicinity

Scientific Name Common Name	Federal/ State	G-Rank/ S-Rank	Habitat Preferences/Requirements	Potential To Occur Within The Project Site
Fish				
Catostomus santaanae Santa Ana sucker	FT/SSC	G1/S1	Habitat generalists in small to medium sized streams that flow year-round of varying depth. Prefer cool water with sand-rubble-boulder bottoms and algae.	**Low.** Limited suitable habitat associated with Moon Ditch outflow culvert to the Santa Clara River in the eastern portion of the site. Recorded occurrences within the Santa Clara River near project site (CNDDB; Impact Sciences, 1996).
Gila orcuttii Arroyo chub	-/SSC	G2/S2	Perennial or permanent stream channels commonly in slow flowing or backwater areas with sand or mud substrate.	**Low.** Limited suitable habitat associated with Moon Ditch outflow culvert to the Santa Clara River in the eastern portion of the site. Recorded occurrences within the Santa Clara River near project site (Impact Sciences, 1996).
Eucyclogobius newberryi Tidewater goby	FE/SSC	G3/S2S3	Coastal lagoons, estuaries, marshes, tidal streams with fairly still but not stagnant water and high oxygen levels.	**Low.** Limited suitable habitat associated with Moon Ditch outflow culvert to the Santa Clara River in the eastern portion of the site. Recorded occurrences within the Santa Clara River near project site (CNDDB; Impact Sciences, 1996).
Gasterosteus aculeatus williamsoni Unarmored threespine stickleback	FE/SE, FP	G5T1/S1	Weedy pools, backwaters, and among emergent vegetation at the stream edge in small streams.	**Low.** Limited suitable habitat associated with Moon Ditch outflow culvert to the Santa Clara River in the eastern portion of the site. Recorded occurrences within the Santa Clara River north of project site (CNDDB).
Oncorhynchus mykiss irideus Southern steelhead - Southern California ESU	FE/SSC	G5T2Q/S2	Perennial or permanent stream channels; permanent pools required for over-summering juveniles; gravel substrate for spawning.	**Low.** Limited suitable habitat associated with Moon Ditch outflow culvert to the Santa Clara River in the eastern portion of the site. Critical habitat throughout Santa Clara River (CNDDB).
Reptiles				
Anniella pulchra pulchra Silvery legless lizard	-/SSC	G3G4T3T4Q/ S3	Stabilized dunes, beaches, dry washes, pine, oak, and riparian woodlands, and chaparral. Prefers sandy or loose loamy soils under sparse vegetation. High soil moisture essential.	**Moderate.** Suitable habitat and soils associated with riparian and scrub habitats in the eastern portion of the site. Recorded occurrences within 5 miles of the site (CNDDB). Not observed.
Emys marmorata Western pond turtle	-/SSC	G3G4/ S3	Aquatic habitats with permanent pools and vegetation, and exposed areas for basking. Can be found in upland terrestrial habitats.	**High.** Limited suitable habitat associated with Moon Ditch outflow culvert to the Santa Clara River in the eastern portion of the site. Recorded occurrences within the Santa Clara River (CNDDB; Impact Sciences, 1996).

Table C-1. Special Status Wildlife Species Recorded in CNDDB or Otherwise Known to Occur Within the Project Vicinity

Scientific Name Common Name	Federal/ State	G-Rank/ S-Rank	Habitat Preferences/Requirements	Potential To Occur Within The Project Site
Phrynosoma blainvillii Coast horned lizard	-/SSC	G4G5/ S3S4	Open sandy soils and low vegetation in valleys, foothills, semiarid mountains including grasslands, coniferous forests, woodlands, chaparral; often near harvester ant colonies.	**Present**. Suitable habitat associated with mulefat scrub habitats in the eastern portion of the site and fallow agricultural habitat in the southwestern portion of the site. Observed within the mulefat scrub habitat in and adjacent to the eastern portion of the site (Rincon, 2012; Impact Sciences, 1996).
Thamnophis hammondii Two-striped garter snake	-/SSC	G3/ S2	Perennial and intermittent streams having rocky or sandy beds and artificially-created aquatic habitats; requires dense riparian vegetation but can be found several miles from open water.	**Moderate.** Limited suitable habitat associated with riparian habitats in the eastern portion of the site. Known to occur within the Santa Clara River habitat. Not observed.
Birds				
Athene cunicularia Burrowing owl	-/SSC Burrow sites & some wintering sites	G4/S2	Inhabits open, dry, annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Sub-terranean nester, dependent upon burrowing mammals, most notably the California ground squirrel.	**Present.** Suitable habitat and burrows present throughout undeveloped portions of the site (ruderal, fallow agricultural, and agricultural berms). Wintering individual(s) observed within the eastern ruderal and northwestern agricultural habitats of the site (Rincon, 2012). Not known to breed within the Ventura/Oxnard area.
Coccyzus americanus occidentalis Western yellow-billed cuckoo	FC/SE	G5T3Q/ S1	Summer resident of riparian forests along broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with dense lower story vegetation of blackberry and nettles.	**Low**. Limited suitable foraging and nesting riparian habitat in the eastern portion of the site. Suitable habitat east of the site. Last tracked occurrence south of the project site in 1942 (CNDDB). Not observed.
Elanus leucurus White-tailed kite	-/FP	G5/S3	Occurs in low elevation grassland, agricultural, wetland, oak-woodland, or savannah habitats. riparian areas adjacent to open areas also used; roosts communally; forages on small prey in open habitats.	**Present.** Suitable foraging habitat throughout undeveloped portions of the project site; suitable nesting and roosting habitat in the larger trees within and adjacent to the site. Several individuals observed within and adjacent to the ruderal and riparian habitats in the eastern portion of the site (Rincon, 2012; Impact Sciences, 1996).
Empidonax traillii extimus Southwestern willow flycatcher	FE/SE	G5T1T2/ S1	Mid to late summer resident in moist, shrubby areas (willow thickets), often with standing or running water along river corridors.	**Moderate.** Suitable foraging and nesting riparian habitat in the eastern portion of the site and study area. Known to occur upstream within the Santa Clara River habitat. Critical habitat throughout Santa Clara River (CNDDB). Not observed.
Icteria virens Yellow-breasted chat	-/SSC Nesting	G5/S3	Summer resident that prefers open over-story and dense, brushy understory, including shrubby habitat along riparian and forest edges, and fencerows and upland thickets.	**Moderate.** Suitable foraging and nesting scrub habitat in the eastern portion of the site and study area. Known to occur within the Santa Clara River. Not observed.

Table C-1. Special Status Wildlife Species Recorded in CNDDB or Otherwise Known to Occur Within the Project Vicinity

Scientific Name Common Name	Federal/ State	G-Rank/ S-Rank	Habitat Preferences/Requirements	Potential To Occur Within The Project Site
Lanius ludovicianus Loggerhead shrike	-/SSC Nesting	G4/S4	Occurs in open habitats utilizing shrubs, trees, posts, fences, and low utility lines for perches. Prefers open foothill and valley woodlands with some canopy cover. Forages in edge habitats, and in particular prefers shrubs adjacent to grasslands.	**Present.** Suitable foraging habitat within the ruderal and fallow agricultural habitats within project boundary. Suitable nesting habitat within the mulefat scrub habitat in the eastern portion of the site. Observed in fallow agricultural and golf course habitat on the southwestern side of the site (Rincon 2012, Impact Sciences, 1996).
Setophaga petechial Yellow warbler	-/SSC Nesting	G5T3?/ S2	Summer resident most commonly found in wet, deciduous thickets, especially those dominated by willows, and in disturbed and early successional habitats.	**Moderate.** Suitable foraging and nesting riparian habitat in the eastern portion of the site and study area. Suitable habitat east of the site. Known to occur within the Santa Clara River. Not observed.
Vireo bellii pusillus Least Bell's vireo	FE/SE	G5T2/ S2	Summer resident of southern California in low riparian in vicinity of water or in dry river bottoms. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, *Baccharis*, mesquite.	**High**. Suitable foraging and nesting riparian habitat in the eastern portion of the site and study area. Recorded occurrences within the Santa Clara River adjacent to eastern portion of the site (CNDDB) and along the southern bank of the river, south of the project site (Ventura County Watershed Protection District).
Mammals				
Neotoma bryanti intermedia Northern Bryant's woodrat (formerly San Diego desert woodrat, *Lepida intermedia*)	-/SSC	G5T3?/ S3?	Associated with cacti in coastal sage scrub, chaparral, oak woodlands; prefers rocky outcroppings and boulders.	**High.** Suitable habitat within the mulefat scrub, ruderal berm, and riparian habitats within and adjacent to the eastern portion of the site. Observed within the mulefat thickets northwest of the site within the study area boundary (Impact Sciences, 1996).

Regional Vicinity refers to within a 5 mile radius of site.

FE = Federally Endangered
FT = Federally Threatened
FC = Federal Candidate
SE = State Endangered
FP = Fully Protected
SSC = Species of Special Concern

G-Rank/S-Rank = Global Rank and State Rank as per NatureServe and CDFW's CNDDB RareFind3.
For Global-Rank and State-Rank definitions, refer to Appendix C-3.

APPENDIX C-3

Listing Status Definitions

SPECIAL STATUS DEFINITIONS

Special status habitats are vegetation types, associations, or sub-associations that support concentrations of special status plant or wildlife species, are of relatively limited distribution, or are of particular value to wildlife. Listed species are those taxa that are formally listed as endangered or threatened by the federal government (e.g. U.S. Fish and Wildlife Service [USFWS]), pursuant to the Federal Endangered Species Act (FESA) or as endangered, threatened, or rare (for plants only) by the State of California (i.e. California Fish and Game Commission), pursuant to the California Endangered Species Act (CESA) or the California Native Plant Protection Act. Some species are considered rare (but not formally listed) by resource agencies, organizations with biological interests/expertise (e.g. Audubon Society, CNPS, The Wildlife Society), and the scientific community.

The CNPS' Inventory of Rare and Endangered Vascular Plants of California (CNPS 2001, 2006) categorizes rare California plants based on the California Rare Plant Rank List (CRPR). The CRPR places plants into one of five ranks (1A, 1B, 2, 3, and 4) representing five levels of species status, indicating its status of rarity or endangerment and distribution. Most taxa also receive a threat rank extension following the rank (e.g. 1B.1, 2.3). The following tables provides a definition for each CRPR rank number and define the Threat rank extensions that indicate the level of endangerment within the state as determined by this organization. Please note that the CNPS *Inventory* is used as a tool by CDFW to help identify those plants that may qualify for listing under the CESA, with the formal list kept by CDFW being the *Special Vascular Plants, Bryophytes and Lichens List*.

California Rare Plant Rank (CRPR) Definitions

CNPS CRPR	Definition
1A	Presumed Extinct in California
1B	Rare, Threatened, or Endangered in California and elsewhere
2	Rare, Threatened, or Endangered in California, but more common elsewhere
3	Need more information (a Review List)
4	Plants of Limited Distribution (a Watch List)

California Native Plant Society List Threat Rank Extensions

CNPS Rare Plant Rank Extension	Definition
.1	Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2	Fairly endangered in California (20-80% occurrences threatened)
.3	Not very endangered in California (<20% of occurrences threatened)

The CNDDB Element Ranking system provides a numeric global and state-ranking system for all special status species tracked by the CNDDB. The global rank (G-rank) is a reflection of the overall condition of an element (species or natural community) throughout its global range. The state rank (S-rank) is assigned much the same way as the global rank, except state ranks in California often also contain a threat designation attached to the S-rank.

California Natural Diversity Database Element Ranking System

Global Ranking (G)	
G1	Less than 6 viable element occurrences (pops for species), OR less than 1,000 individuals, OR <809.4 hectares (ha) (2,000 acres [ac]).
G2	6 to 20 element occurrences OR 809.4 to 4,047 ha (2,000 to 10,000 ac).
G3	21 to 100 occurrences OR 3,000 to 10,000 individuals OR 4,047 to 20,235 ha (10,000 to 50,000 ac).
G4	Apparently secure; rank lower than G3, factors exist to cause some concern (i.e. there is some threat, or somewhat narrow habitat).
G5	Population, or stand, demonstrably secure to ineradicable due to being commonly found in the world.
GH	All sites are historic; the element has not been seen for at least 20 years, but suitable habitat still exists.
GX	All sites are extirpated; this element is extinct in the wild.
GXC	Extinct in the wild; exists in cultivation.
G1Q	The element is very rare, but there is a taxonomic question associated with it.
Subspecies Level: Subspecies receive a T-rank attached to the G-rank. With the subspecies, the G-rank reflects the condition of the entire species, whereas the T-rank reflects the global situation of just the subspecies or variety. For example: *Chorizanthe robusta* var. *hartwegii* is ranked G2T1. The G-rank refers to the whole species range (*Chorizanthe robusta*), whereas the T-rank refers only to the global condition of the variety (var. *hartwegii*).	
State Ranking (S)	
S1	Less than 6 element occurrences (S1.1 = very threatened) OR less than 1,000 individuals (S1.2 = threatened) OR less than 809.4 ha (2,000 ac; S1.3 = no current threats known).
S2	6 to 20 element occurrences (S2.1 = very threatened) OR 3,000 individuals (S2.2 = threatened) OR 809.4 to 4,047 ha (2,000 to 10,000 ac; S2.3 = no current threats known).
S3	21 to 100 element occurrences (S3.1 = very threatened) OR 3,000 to 10,000 individuals (S3.2 = threatened) OR 4,047 to 20,235 ha (10,000 to 50,000 ac; S3.3 = no current threats known).
S4	Apparently secure within California; this rank is clearly lower than S3 but factors exist to cause some concern (i.e., there is some threat, or somewhat narrow habitat). NO THREAT RANK.
S5	Demonstrably secure to ineradicable in California. NO THREAT RANK.
SH	All California sites are historic; the element has not been seen for at least 20 years, but suitable habitat still exists.
SX	All California sites are extirpated; this element is extinct in the wild.
Notes	
1. Other considerations used when ranking a species or natural community include the pattern of distribution of the element on the landscape, fragmentation of the population/stands, and historical extent as compared to its modern range. It is important to take an aerial view when ranking sensitive elements rather than simply counting element occurrences.	
2. Uncertainty about the rank of an element is expressed in two major ways: by expressing the rank as a range of values (e.g. S2S3 means the rank is somewhere between S2 and S3), and by adding a ? to the rank (e.g. S2?). This represents more certainty than S2S3, but less than S2.	

Appendix C-4

Floral and Faunal Compendia

Botanical Compendium

Family Name	Scientific Name	Common Name	Growth Habit
Anacardiaceae	*Toxicodendron diversilobum*	Western Poison Oak	S/V
Apiaceae	*Conium maculatum**	Poison Hemlock	BH
	*Foeniculum vulgare**	Sweet Fennel	PH
Asteraceae	*Ambrosia psilostachya*	Western Ragweed	BH
	Artemisia californica	California Sagebrush	S
	Artemisia douglasiana	Mugwort	PH
	Baccharis pilularis	Coyote Brush	S
	Baccharis salicifolia	Mulefat, Seep-willow, Water-wally	S
	*Carduus pycnocephalus**	Italian Thistle	AH
	*Centaurea melitensis**	Tocalote, Napa Thistle	AH
	Corethrogyne (Lessingia) filaginifolia	California Cudweed-aster	PH
	*Delairea odorata (Senecio mikanioides)**	Cape or German Ivy	PV
	*Erigeron (Conyza) bonariensis**	Flax-leaved Fleabane, South American Horseweed	AH
	Erigeron (Conyza) canadensis	Horseweed	AH
	Hazardia squarrosa var. *grindelioides*	Sawtooth Goldenbush	S
	Heterotheca grandiflora	Telegraph Weed	PH
	Heterotheca sessiliflora ssp. *echioides*	Hairy Golden-Aster	PH
	*Helminthotheca (Picris) echioides**	Bristly Ox-tongue	AH
	Corethrogyne filaginifolia	California Aster+	PH
	Pseudognaphalium californicum	Green Everlasting	A/BH
	Xanthium strumarium	Cocklebur, Rough Cockleburr+	AH
Boraginaceae	*Heliotropium curassavicum* L.	Alkali Heliotrope, Chinese Pusley	PH
	*Nerium oleander**	Oleander	S
Brassicaceae	*Brassica nigra* *	Black Mustard	AH
	*Hirschfeldia incana**	Summer Mustard	PH
Chenopodiaceae	*Atriplex lentiformis* ssp. *breweri*	Brewer Big Saltbush or Quailbrush	S
	*Atriplex semibaccata**	Australian Saltbush	PH
	*Chenopodium album**	Lamb's Quarters, Pigweed, White Goosefoot	AH
	*Salsola tragus**	Russian Thistle, Tumbleweed	AH
Convolvulaceae	*Convolvulus arvensis**	Bindweed	PV
Euphorbiaceae	*Euphorbia (Chamaesyce) albomarginata*	Rattlesnake Spurge	AH
	*Ricinus communis**	Castor Bean	S
Fabaceae	*Astragalus trichopodus* var. *phoxus*	Antisell Three-pod Milkvetch	PH
	Acmispon glaber var. glaber (Lotus scoparius var. scoparius)	Deerweed, California Broom	PH
	*Melilotus alba**	White Sweetclover	A/BH
Geraniaceae	*Erodium botrys**	Broadleaf Filaree	AH
	Erodium bracycarpum	Short-beaked Filaree	AH
	*Erodium cicutarium**	Redstem Filaree	AH
Hydrophyllaceae	*Phacelia cicutaria* var. *hispida*	Hispid Caterpillar Phacelia	AH
Lamiaceae	*Marrubium vulgare**	White Horehound	S

Botanical Compendium

Family Name	Scientific Name	Common Name	Growth Habit
Malvaceae	*Malva parviflora**	Cheeseweed	AH
Platanaceae	*Platanus racemosa*	California or Western Sycamore	T
Poaceae	*Arundo donax**	Giant Reed	PG
	*Bromus diandrus**	Ripgut Grass	AG
	*Bromus hordeaceus**	Soft Chess	AG
	*Cynodon dactylon**	Bermuda Grass	PG
	*Stipa (Piptatherum) miliaceum**	Smilo Grass	PG
Polygonaceae	*Rumex crispus**	Curly Dock	PH
Rosaceae	*Rubus ursinus*	California Blackberry+	PV
Salicaceae	*Populus (balsamifera) trichocarpa*	Black Cottonwood	T
	Salix exigua	Narrow-leaved Willow	S
	Salix laevigata	Red Willow	T
	Salix lasiolepis	Arroyo Willow	T
Scrophulariaceae	*Myoporum laetum**	Myoporum, Wax Myrtle	S
Solanaceae	*Datura wrightii* Regel	Jimson Weed	AH
	*Nicotiana glauca**	Tree Tobacco	S
	Solanum douglasii	Douglas Nightshade	PH
	Solanum xantii	Chaparral Nightshade	S
Typhaceae	*Typha domingensis*	Southern Cattail	PH
Urticaceae	*Urtica urens**	Dwarf or Dog Nettle	AH

Habit definitions:
AG = annual grass or graminoid.
AH = annual herb.
BH = biennial herb.
PG = perennial grass or graminoid.
PH = perennial herb.
PV = perennial vine.
S = shrub.
T = tree.

* Indicates nonnative species
+ Observed by Impact Sciences, as reported in the 1996 Draft Olivas Park Drive Extension Project EIR

AVIAN AND WILDLIFE COMPENDIUM

Family Name	Scientific Name	Common Name
Birds		
Ardeidae: Herons, Egrets, Bitterns	*Ardea alba*	great egret
	Ardea herodias	great blue heron
	Egretta thula	snowy egret
Anatidae: Ducks, Geese, Swans	*Anas americana*	American wigeon
	Anas clypeata	northern shoveler
	Anas platyrhynchos	mallard
	Anas strepera	gadwall
	Aythya affinis	lesser scaup
	Branta canadensis	Canada goose
	Bucephala albeola	bufflehead
Cathartidae: New World Vultures	*Cathartes aura*	turkey vulture
Accipitridae: Kites, Hawks, Eagles	*Accipiter cooperii*	Cooper's hawk[4]
	Buteo jamaicensis	red-tailed hawk
	Buteo lineatus	red-shouldered hawk
	Elanus leucurus	white-tailed kite[1]
Falconidae: Falcons and Caracaras	*Falco sparverius*	American kestrel
Odontophoridae: Partridge, Quail	*Callipepla californica*	California quail
Rallidae: Rails, Coots, Gallinules	*Fulica americana*	American coot
Charadriidae: Plovers and Lapwings	*Charadrius vociferus*	killdeer+
Scolopacidae: Sandpipers, Phalaropes, and Allies	*Calidris minutilla*	least sandpiper
Laridae: Gulls	*Larus occidentalis*	western gull
Columbidae: Pigeons, Doves	*Columba livia*	rock pigeon
	Zenaida macroura	mourning dove
Strigidae: Owls	*Athene cunicularia*	burrowing owl[3]
Apodidae: Swifts	*Aeronautes saxatalis*	white-throated swift
Trochilidae: Hummingbirds	*Calypte anna*	Anna’s hummingbird
	Selasphorus sasin	Allen's hummingbird[2]
Picidae: Woodpeckers	*Colaptes auratus*	northern flicker
	Picoides nuttallii	Nuttall’s woodpecker[2]
Tyrannidae: Tyrant Flycatchers	*Sayornis nigricans*	black phoebe
	Sayornis saya	Say's phoebe
	Tyrannus vociferans	Cassin's kingbird
Laniidae: Shrikes	*Lanius ludovicianus*	loggerhead shrike[3]
Corvidae: Jays, Crows, Magpies	*Corvus corax*	common raven

AVIAN AND WILDLIFE COMPENDIUM

Family Name	Scientific Name	Common Name
Alaudidae: Larks	*Eremophila alpestris*	horned lark
Hirundinidae: Swallows	*Petrochelidon pyrrhonota*	cliff swallow+
Aegithalidae: Bushtits	*Psaltriparus minimus*	bushtit
Troglodytidae: Wrens	*Thryomanes bewickii*	Bewick's wren
Regulidae: Kinglets	*Regulus calendula*	ruby-crowned kinglet
Poliptilidae: Gnatcatchers	*Polioptila caerulea*	blue-gray gnatcatcher
Turdidae: Thrushes	*Catharus guttatus*	hermit thrush
Mimidae: Mockingbirds, Thrashers	*Mimus polyglottos*	northern mockingbird
	Toxostoma redivivum	California thrasher
Motacillidae: Pipits, Wagtails	*Anthus rubescens*	American pipit
Sturnidae: Starlings	*Sturnus vulgaris*	European starling
Parulidae: Wood-warblers	*Dendroica coronata*	yellow-rumped warbler
	Geothlypis trichas	common yellowthroat
	Oreothlypis celata	orange-crowned warbler
Emberizidae: Sparrows, Buntings and Relatives	*Melospiza melodia*	song sparrow
	Passerculus sandwichensis	savannah sparrow
	Melozone crissalis	California towhee
	Pipilo maculatus	spotted towhee
	Zonotrichia leucophrys	white-crowned sparrow
Icteridae: Blackbirds and Allies	*Agelaius phoeniceus*	red-winged blackbird
	Euphagus cyanocephalus	Brewer's blackbird+
	Sturnella neglecta	western meadowlark
Fringillidae: Finches	*Carpodacus mexicanus*	house finch
	Spinus psaltria	lesser goldfinch
Mammals		
Canidae: Canids	*Canis latrans*	coyote
Didelphidae: Opossums	*Didelphis virginiana*	opossum
Felidae: Cats	*Lynx rufus*	bobcat+
Geomyidae: Pocket Gophers	*Thomomys bottae*	Botta's pocket gopher
Leporidae: Rabbits, Hares	Sylvilagus auduboni	desert cottontail rabbit
Procyonidae: Raccoons and ringtails	*Procyon lotor*	raccoon
Sciuridae: Squirrels	*Spermophilus beecheyi*	California ground squirrel
Muridae: Mice, Voles, Lemmings, Rats	*Dipodomys agilis*	agile kangaroo rat+
	Mus musculus	house mouse+
	Neotoma fuscipes	dusky-footed woodrat +
	Neotoma bryanti intermedia	Bryant's woodrat+

AVIAN AND WILDLIFE COMPENDIUM

Family Name	Scientific Name	Common Name
Muridae: Mice, Voles, Lemmings, Rats	*Peromyscus boylii*	brush mouse+
	Peromyscus maniculatus	deer mouse+
	Reithrodontomys megalotis	western harvest mouse+
Amphibians		
Hylidae: Tree Frogs	*Hyla* sp.	tree frog
Reptiles		
Phrynosomatidae: Lizards	*Phrynosom coronaturn* *Sceloporus occidentalis* *Uta stansburiana*	coast horned lizard+ western fence lizard side-blotched lizard+
Emydidae: Pond or Marsh Turtles	*Emys marmorata*	southwestern pond turtle+
Fish		
Poeciliidae	*Gambusia affinis*	mosquito fish+
Gasterosteidae	*Gasterosteus aculeatus aculeatus*	three-spined stickleback+
Gobiidae	*Eucyclogobius newberryi*	tidewater goby+
Cyprinidae	*Gila orcutti*	arroyo chub+
Catostomidae	*Catostomus san taanae*	Santa Ana sucker+

1 = CDFW Fully Protected

2 = CDFW Special Animal

3= CDFW Species of Special Concern

4 = CDFW Watch List (Nesting)

+ Observed by Impact Sciences, as reported in the 1996 Draft Olivas Park Drive Extension Project EIR

Appendix C-5

Site Photographs

Photograph 1: View northeast of the riparian and scrub habitat near the Moon Ditch culvert along the Santa Clara River on the east side of the site.

Photograph 2: View southwest of the riparian and scrub habitats and the concrete bank in the northeastern portion of the project site along the river.

Photograph 3: View southwest of the Moon Ditch culvert outflow that discharges to the Santa Clara River in the eastern portion of the site.

Photograph 4: View south of the Santa Clara River's mulefat scrub and riparian habitat east of the ruderal berm in the eastern portion of the site.

Photograph 5: View southwest of the ruderal habitat and MMID facility located in the southeastern portion of the project site.

Photograph 6: View northwest of the active agricultural fields, agricultural ditch, and development areas in the western center of the project site.

Photograph 7: View southwest from Olivas Park Road of the fallow agricultural field and associated agricultural ditch in the center of the site.

Photograph 8: View west of the detention basin located in the southwestern portion of the project site and the adjacent golf course.

Appendix D

Phase II Environmental Site Assessment

Prepared by Rincon Consultants, Inc.

SOIL ASSESSMENT

Olivas Park Drive Extension
Ventura, California

Prepared for:

City of San Buenaventura

Prepared by:

Rincon Consultants, Inc.
February 11, 2011

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February 11, 2011
Project 09-63950

Mark Garcia
City of San Buenaventura
P.O. Box 99
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Soil Assessment
Olivas Park Drive Extension
Ventura, California

Dear Mr. Garcia:

This report presents the findings of a Soil Assessment performed by Rincon Consultants, Inc., on behalf of the City of San Buenaventura, of the proposed Olivas Park Drive Extension located in Ventura, California. The soil assessment was performed in accordance with the Professional Services Agreement between Rincon and the City of San Buenaventura dated July 9, 2009. The purpose of this assessment was to determine if the current and former land uses along the proposed project alignment have impacted the soil with contaminants.

Please contact us with any questions regarding this report or this project.

Sincerely,
Rincon Consultants, Inc.

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Project Manager, Environmental Services

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VENTURA, CALIFORNIA

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EXECUTIVE SUMMARY

This report presents the results of soil sampling conducted by Rincon Consultants, Inc. along the proposed Olivas Park Drive Extension alignment in Ventura, California (Figure 1). The proposed Olivas Park Drive Extension project would extend Olivas Park Drive from where it turns into Perkin Avenue to Auto Center Drive. The land use along the proposed alignment is comprised of agriculture, a wastewater treatment facility, vacant land, and a truck repair facility (MP Enterprises). Access is available to the subject property from a driveway on Ventura Road and from a dirt road off Perkin Avenue.

The subject property is located in the jurisdictional area of the Los Angeles Regional Water Quality Control Board (RWQCB). The current assessment while not required by the RWQCB, was performed in accordance with their protocol. In that manner, if you wish to provide these results to the RWQCB at some future date, we would expect that the data will be deemed reliable.

The purpose of this assessment was to determine if the current and former land uses along the proposed project alignment have impacted the soil with contaminants. Soil samples were analyzed for total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs), metals, and pesticides.

On September 14, 2009, a Geoprobe drill rig was utilized to drill 28 borings along the proposed project alignment. Borings locations were either randomly selected by dividing the area into a grid or were selected to target potential sources of contamination or field observations of contamination. Soil samples were collected at 0.5 feet below grade, 3 feet below grade, 5 feet below grade, and 10 feet below grade. The exact sample collection depths were adjusted in the field based on field evidence of contamination, changes in lithology, and refusal depths. Groundwater was not encountered in the borings. A total of 66 soil samples were collected from the 28 Geoprobe borings.

On September 14, 2009, a hand auger and hand digging tools were utilized to drill five borings on the MP Enterprises site in areas that were not accessible by the Geoprobe drill rig. The hand auger boring locations were selected based on the location of waste storage, parts washing, and a above ground storage tank on the MP Enterprises site. Soil samples were collected at 0.5 feet below grade and at 5 feet below grade. The exact sample collection depths were adjusted in the field based on field evidence of contamination, changes in lithology, and refusal depths. A total of 10 soil samples were collected from the 5 hand auger borings.

Strong hydrocarbon odors and discoloration were noted in the soil obtained from borings RB1 and RB16. No obvious staining or odors indicative of contamination were noted in the soil samples collected from the other borings and non-detect PID readings were measured in the soil samples. The soil encountered in the borings consisted of sandy soils with varying amounts of silt, clay, and gravel. Groundwater was not encountered in the borings.

Forty-seven soil samples were analyzed for total extractable petroleum hydrocarbons (TEPH) by EPA Method 8015M, ten soil samples were analyzed for TPH as gasoline range organics (TPHg) by EPA Method 8015M, twenty-five soil samples were analyzed for volatile organic compounds (VOCs) by EPA Method 8260B, twenty-nine soil samples were analyzed for metals by EPA Method 6000/7000, and twenty-one soil samples were analyzed for pesticides by EPA Method 8081A.

Concentrations of constituents detected in the soil samples were compared to action levels used by the RWQCB.

MP Enterprises

MP Enterprises is a truck repair facility located on Ventura Road at the northern end of the proposed project alignment. TPH as diesel range organics (TPHd) was detected at a concentration exceeding the RWQCB action level for TPHd of 100 mg/kg in one soil sample (RB16-0.5, the soil sample collected from boring RB16 at 0.5 feet below grade). TPH as oil range organics (TPHo) were detected at concentrations exceeding the RWQCB action level for TPHo of 1,000 mg/kg in 6 soil samples (0.5 foot below grade samples in boring RB16 through RB21). Borings RB16 through RB21 were drilled in an asphalted area of the MP Enterprises site. It is possible that the TPHd and TPHo concentrations detected in the soil samples is the result of asphalt in the soil. There was visual staining and odors in the soil at the location of boring RB16.

Borings RB11 through RB15 were advanced in a currently vacant area adjacent to the MP Enterprises site. It is our understanding that the area was formerly used for storage. TPH, VOCs, and metals were not detected in the soil samples at concentrations exceeding RWQCB action levels in this area.

Vacant Land

Borings RB5 through RB10 were drilled on the portion of land located between MP Enterprises and the wastewater treatment plant. Low concentrations of TPHo were detected in soil samples collected from borings RB5, RB6, and RB7. VOCs were not detected in the soil samples collected from borings RB5 through RB10. Toxaphene was detected at a concentration of 1,110 μg/kg in the soil sample collected from boring RB9 at 0.5 feet below grade. The detected Toxaphene concentration exceeds the soil screening level (SL) for toxaphene at residential (R) sites of 440 μg/kg. Gamma-chlordane, alpha-chlordane, DDD, DDE, and DDT were also detected in the soil samples collected from borings RB5 through RB10 at concentrations below the SL-R. Metals were detected within background levels for metals in California soils in the soil samples collected from borings RB6 through RB10.

Wastewater Treatment Site

Borings RB1 through RB4 were located at the wastewater treatment site. Soil samples from borings RB1 through RB4 were analyzed for TPH. Boring RB1 was located adjacent to the fill port on a diesel above ground storage tank (AST). Soil samples collected from boring RB1 were

visually stained and contained strong hydrocarbon odors. However, TPHd and TPHo were detected at low concentrations in the soil samples collected from 5 feet below grade in boring RB1 and were not detected in the soil samples collected from 0.5 feet below grade, 3 feet below grade, and 10 feet below grade in boring RB1. A low concentration (18.6J mg/kg) was detected in the sample collected from boring RB2 at 3 feet below grade. TPH was not detected in any of the other soil samples collected from borings RB1 through RB4.

Agricultural Land

Borings RB25 through RB28 were located on agricultural land. The soil samples were analyzed for pesticides. Toxaphene was detected at concentrations exceeding the SL-R for toxaphene of 440 μg/kg in the soil samples collected from 0.5 feet below grade in borings RB26, RB27, and RB28. No other pesticides where detected above SLs in the soil samples collected from borings RB25 through RB28.

Based on the findings of the soil assessment we have the following recommendations:

- The former land use of the area between the wastewater treatment site and the MP Enterprises site is unknown. Based on the industrial land uses in this area it is possible that portions of the area were formerly used for industrial purposes. It is recommended that a Phase I ESA study be completed for this portion of the proposed project alignment.
- The detection of toxaphene on the agricultural land and TPHo at the MP Enterprises site warrants the preparation of a Soil Management Plan prior to site grading.
- Field evidence of contamination in the soil at the location of the diesel AST on the wastewater treatment site warrants proper disposal of the soil at this location. In addition, a document review should be completed for the wastewater treatment site to determine the locations of any other former fuel and waste storage locations on the site. During the soil assessment, a groundwater monitoring well was observed at the wastewater treatment site. It may be warranted to analyze groundwater samples from this location for TPH and VOCs.
- The detection of lead at four locations (RB16, RB22, HA3, and HA5) warrants the analysis of soil samples from these locations for STLC lead prior to the removal of any soil from these locations. The purpose of the STLC analysis is to determine if the soil should be disposed as a hazardous waste.

INTRODUCTION

This Phase II Environmental Site Assessment Report presents the findings of soil sampling conducted by Rincon Consultants, Inc. within the boundaries of the Olivas Park Drive Extension alignment in Ventura, California (Figure 1). It is our understanding that the proposed project involves: (1) an approximately 4,500 linear-foot extension of Olivas Park Drive between Perkin Avenue and Johnson Drive; (2) a levee/floodwall that involves two design alternatives, Design Alternative 1 is an approximately 5,800 linear-foot levee/flood wall along the north side of the Santa Clara River that terminates 400 feet south of the Southern Pacific Railroad Bridge, and

Design Alternative 2 continues for approximately 1,700 linear feet north/northwest from this termination point, under the Southern Pacific Railroad Bridge and the U.S. Highway 101 Bridge and terminating adjacent to Johnson Drive ; and (3) a General Plan amendment and zone change for an approximately 25.4-acre area between the proposed Olivas Park Drive extension and levee. This report describes soil sampling and analysis conducted within the proposed project alignment.

This assessment was completed in accordance with the Professional Services Agreement between Rincon and the City of San Buenaventura dated July 9, 2009. It is our understanding that the findings of this soil assessment will be used by the City of San Buenaventura in the proposed Olivas Park Drive Extension.

The following sections provide an overview of the project history, describe the purpose and scope of the project, the physical setting, and sampling and analytical testing methodologies, provide the results of the sampling and testing program, and provide conclusions and recommendations.

PROJECT STRATEGY

The subject property is within the jurisdiction of the Ventura County Environmental Health Division (VCEHD) and the Los Angeles Regional Water Quality Control Board (RWQCB). Although this assessment is not required by a regulatory agency, it was performed in accordance with the protocol of the RWQCB and the VCEHD. In that manner, if you wish to provide these results to the RWQCB or the VCEHD at some future date, we would expect that the data will be deemed reliable.

PROJECT HISTORY

The following environmental documents were reviewed during preparation of this Phase II ESA:

- *Results of the Limited Phase II Soil and Groundwater Assessment,* MP Enterprises, 3348 Ventura Road, Ventura, California prepared by ENSR, August 31, 1999.
- *Limited Phase II Environmental Site Assessment,* Wastewater Treatment Site, 3555 Ventura Road, Ventura, California prepared by Applied Environmental Technologies, Inc. (AET), June 27, 2007.

MP Enterprises

At the time of the August 31, 1999, Phase II, the MP Enterprises site was used for the same use that is currently operating at the site: the maintenance of trucks. The August 1999 report notes the existence of several 55-gallon metal drums storing used motor oil, diesel fuel, hydraulic fluids, and used ethylene glycol coolant at the truck maintenance area. Additionally, ENSR notes that they observed a solvent parts washer, a 550 gallon waste oil above ground storage tank

(AST), and several areas of concrete staining. ENSR reports that the vacant lot immediately to the east of the MP Enterprises site contained various pieces of scrap metal, plastic debris, used oil filters, and wood. Several areas of surficial staining were noted by ENSR in the rear portion of the facility.

On August 8, 1999, Vironex utilized a Geoprobe drill rig to advance 5 continuously cored borings at the MP Enterprises site under the direction of ENSR. Soil samples were collected from the borings at 3 feet below grade and at 20 feet below grade. Groundwater samples were collected from two of the borings (GP-1 and GP-4) at approximately 24 feet below grade. The 10 soil samples were analyzed for TPH by EPA Method 8015 modified for fuel fingerprint analysis, the soil samples obtained from 3 feet below grade were additionally analyzed for CAM metals by EPA Method 6010/7000, and the soil samples obtained from 20 feet below grade were additionally analyzed for VOCs by EPA Method 8260. The two groundwater samples were analyzed for TPH by EPA Method 8015M, VOCs by EPA Method 8260, and CAM metals by EPA Method 6010/7000.

Figure 2, Soil Boring Location Map, of the ENSR report depicts the 5 borings as being located in an unpaved area to the west of the maintenance sheds. Boring GP-4 was located adjacent to a concrete pad that is located beneath the maintenance sheds.

ENSR encountered soil that appeared to be fill material from the surface to approximately 8 feet below grade. The fill material was reportedly comprised of dense sands and gravels with layers of crushed asphalt base materials and interbedded trash. Native material comprised of interbedded fine to coarse sands with gravel transitioning to fine sandy gravels were encountered below 8 feet below grade and to 19.5 feet below grade. From 19.5 feet below grade to the bottom of the borings (20 to 24 feet below grade) the soil was comprised of a saturated dark gray to black coarse sand that reportedly contained decayed wood fibers and had a sewer odor.

Petroleum hydrocarbons and VOCs were not detected above practical quantitation limits in the soil samples. Low concentrations of metals were detected in the soil and groundwater samples. Low concentrations of toluene (0.51 μg/L and 0.56 μg/L) were detected in the two groundwater samples and a low concentration of 1,2,3-Trichloropropane (0.61 μg/L) was detected in one of the groundwater samples. Petroleum hydrocarbons were not detected in the groundwater samples.

ENSR concluded that fill material exists beneath the subject property to 8 feet below grade and groundwater exists at approximately 19.5 feet below grade. ENSR found no analytical evidence to suggest there was a release of petroleum hydrocarbons and VOCs to the subsurface soils. ENSR recommended that soil sampling be performed following demolition and prior to soil removal in stained areas and those areas where chemicals were stored or used for parts cleaning. In addition, ENSR recommended that vapor monitoring should be conducted during excavation activities in areas that have not been assessed.

Wastewater Treatment Site

On June 13, 2007, AET directed the drilling of two Geoprobe borings and one hand auger boring in the vicinity of a sodium hydroxide tank and chlorine storage area formerly located near a storage building on the wastewater treatment site. The Geoprobe borings were advanced to 15 feet below grade with soil samples obtained at 5 foot intervals commencing at 5 feet below grade. The hand auger boring was advanced to approximately 4 feet below grade in a pit located adjacent to the north of the former storage area. The soil encountered in the borings consisted of sand to 14 feet below grade and gravelly sand to 15 feet below grade.

The soil samples were analyzed for chlorides by EPA Method 300, soil and waste pH by EPA Method 9045C, and sodium by EPA Method 6010B.

Chlorides were detected in the soil samples at concentrations up to 35.1 mg/kg, sodium was detected in the soil samples at concentrations up to 438 mg/kg, and pH was measured between 9.37 and 10. AET concluded that based on there being no standards for chlorides and sodium in the soil and the detected concentrations being in the 4 thousandths of a percent and 5 hundredths of a percent that the detected concentrations of chlorides and sodium in the soil are considered insignificant. The pH values were compared to values set by the California Code of Regulations Title 22, Environmental Health Standards for the Management of Hazardous Waste. Based on the Standards, soil containing a pH value of less than or equal to 2 or greater than or equal to 12.5 is considered a hazardous waste. AET concluded that the measured pH values (9.37 to 10) are not considered significant.

Geotracker

There are three closed leaking underground fuel tank (LUFT) sites listed on the Geotracker database near the northern area of the proposed project alignment.

- IDA Swift, 3355 Ventura Road. Gasoline UST site that potentially affected groundwater and was closed on August 11, 1997. No documents uploaded to Geotracker.
- United Nottingham, 3467 Ventura Road. Gasoline UST site that potentially affected the soil and was closed on November 5, 1996. No documents uploaded to Geotracker.
- Ventura Olivas, 3355 Ventura Road. Gasoline UST site that was closed on November 29, 2007. UST removal report is uploaded to the Geotracker database. Soil was overexcavated from beneath the UST and Oxygen Releasing Compound (ORC) was mixed with the backfill material.

PURPOSE AND SCOPE

The purpose of this soil matrix assessment is to determine if TEPH, VOCs, pesticides, and metals exist in the soil matrix along the proposed Olivas Park Drive extension at concentrations exceeding regulatory criteria.

Our scope of work included the following:

- Prepare a health and safety plan for the subject property. The plan contains information on chemical and physical hazards, personal protective equipment, decontamination procedures, personnel responsibilities, and emergency response protocols.

- Premark boring locations and contact Underground Service Alert (USA) to mark areas where underground public utilities might be located in the drilling area.

- Notify the City of San Buenaventura and the occupants of MP Enterprises, the wastewater treatment site, and the owner of the agricultural site of the work schedule.

- On September 14, 2009, a Geoprobe drill rig was utilized to advance 28 borings along the proposed Olivas Park Drive extension and a hand auger was utilized to advance 5 borings at the MP Enterprises site located at Auto Center Drive.
    - Borings were advanced to depths up to 10 feet below grade.
    - Soil samples were collected at 0.5 feet below grade, at 3 feet below grade, at 5 feet below grade, and at 10 feet below grade. Sample collected depths were adjusted based on the target constituents for each sampling area. Sample collection depths were also adjusted based on field evidence of contamination, changes in lithology and refusal depths.
    - Groundwater was not encountered in any of the borings.

- Soil Sample Analysis
    - Select soil samples were analyzed for the following:
        - 47 soil samples for TEPH by EPA Method 8015M
        - 10 soil samples for TPHg by EPA Method 8015M
        - 25 soil samples for VOCs by EPA Method 8260B
        - 29 soil samples for Title 22 Metals by EPA Method 6010B/7471A
        - 21 soil samples for pesticides by EPA Method 8081A

- Prepare this report documenting our findings.

PHYSICAL SETTING

Topography

The current USGS topographic map (Oxnard Quadrangle, 1949, photorevised 1967) indicates that the proposed Olivas Park Drive extension alignment is situated at an elevation of approximately 65 feet above mean sea level. The topography along proposed Olivas Park Drive extension alignment is generally flat with a gradual slope toward the Santa Clara River to the southeast, south, and southwest (depending on the location along the proposed alignment). The proposed alignment is located between approximately 100 feet to 1,600 feet of the Santa Clara

River. The regional topography generally slopes towards the Santa Clara River and towards the Pacific Ocean to the south.

Geology and Hydrogeology

Site Geology

The project site is located within the Transverse Ranges Geomorphic Province, which is characterized by east-west trending structural features in contrast to the dominant northwest-southeast structural trend of California. The site is situated in the Oxnard Plain Basin, a large structural basin within the Province.

The USDA soil survey for this area (*Ventura Area Soil Survey,* April*,* 1970) indicates that the soil types present in the site vicinity are primarily Pico sandy loam with Pico loam in the northern portion of the site (near MP Enterprises site) and Mocho clay loam in the western portion of the site (current agricultural area). The Pico soils consist of well-drained and somewhat excessively drained sandy loams and loams 60 inches or more deep. These soils formed on alluvial fans and plains, in alluvium derived predominately from sedimentary rocks. The Mocho clay loam soils have moderately slow permeability and are 60 inches or more deep. The Mocho soils formed on alluvial plains and fans, in alluvium derived predominately from sedimentary rocks.

The USDA soil survey for this area (*Ventura Area Soil Survey,* April*,* 1970) indicates that the soil types present along the adjacent Santa Clara River are primarily sandy alluvial land along the banks of the river and riverwash beneath the river. Sandy alluvial land consists of stratified sandy sediments, gravelly and cobbly in places, with excessive drainage. Riverwash consists of highly stratified, water deposited layers of stony and gravelly sand that contain relatively small amounts of silt and clay, with excessive drainage.

According to the August 31, 1999, letter report prepared by ENSR, the MP Enterprises site is underlain by approximately 8 feet of fill material comprised of dense sands and gravels with layers of crushed asphalt base materials and interbedded trash. The soil encountered by ENSR between 8 feet below grade and 19.5 feet below grade was reportedly native alluvial materials comprised of interbedded fine to coarse sands with gravel transitioning to fine sandy gravel. Below 19.5 feet below grade the soil is reported to be comprised of saturated dark gray to black coarse grained sand containing decayed wood fibers and a sewer odor.

The soil encountered during the current soil assessment consisted primarily of sandy soils with varying amounts of silt, clay, and gravel. The soil encountered on the MP Enterprises site was similar to what was encountered by ENSR. Groundwater was not encountered in the borings.

Regional Groundwater Occurrence and Quality

The proposed alignment is located within the Oxnard Plain Pressure Basin, part of the Oxnard Plain Groundwater Basin. The Oxnard Plain Pressure Basin consists of three distinct hydrogeologic units (from top to bottom) - the semi-perched aquifer and clay cap, the Upper Aquifer System, and the Lower Aquifer System.

The semi-perched aquifer extends from the base of developed soil horizons to an average depth of approximately 75 feet beneath most of the Oxnard Plain. This aquifer consists primarily of geologically recent stream-deposited sands and gravels, with minor silt and clay interbeds. The semi-perched groundwater has, in general, limited well yield and poor water quality caused by agricultural return water and evapotranspiration. Groundwater is present at approximately 20 feet below grade along the proposed alignment. Groundwater flow in this semi-perched zone is generally to the southwest but locally fluctuates. Along the proposed alignment it is likely that groundwater flows towards the Santa Clara River to the southeast and south of the proposed alignment.

The clay cap underlies the semi-perched aquifer zone and acts as an aquitard for the underlying Upper Aquifer System (Oxnard Aquifer). The Upper and Lower Aquifer Systems have historically been used for water supply although water quality varies throughout the Basin as a result of seawater intrusion.

Groundwater was encountered in borings drilled by ENSR in August 1999 at 19.5 feet below grade at the MP Enterprises site.

METHODOLOGY

BORINGS AND SAMPLING

A Geoprobe drill rig was utilized to advance 28 borings along the proposed Olivas Park Drive extension alignment and a hand auger was utilized to advance 5 borings at the MP Enterprises site located at Auto Center Drive. Random boring locations were selected at intervals along portions of the Olivas Park Drive extension alignment and targeted boring locations were selected at the MP Enterprises site and at the wastewater treatment plant.

Boring Locations

The boring locations are depicted in Figure 3 and described below:

- Boring RB1 was advanced adjacent to an above ground storage tank utilized to store diesel fuel at the waste water treatment site. The purpose of the boring was to determine if the soil beneath the AST was impacted with petroleum hydrocarbons.
- Borings RB2 through RB4 were advanced near a structure on the southern side of the wastewater treatment site. The purpose of the borings was to determine if the soil in this area was impacted with petroleum hydrocarbons.
- Borings RB5 through RB9 were advanced along an undeveloped area between the waste water treatment site and the MP Enterprises site. The purpose of the borings was to determine if pesticides, metals, VOCs, and petroleum hydrocarbons exist in the soil in this area.

- Borings RB 10 through RB15 were advanced in the area to the south and east of the MP Enterprises site. The purpose of the borings was to determine if the soil was impacted with metals, VOCs, and petroleum hydrocarbons.
- Borings RB16 through RB24 were advanced at the MP Enterprises site. The purpose of the borings was to determine if metals, VOCs, and petroleum hydrocarbons exist in the soil at the MP Enterprises site.
- Borings RB25 through RB28 were advanced on agricultural land to the west of the wastewater treatment site. The purpose of the borings was to determine if the soil was impacted with pesticides.
- Hand auger borings HA1 through HA5 were advanced in areas of the MP Enterprises site that were not accessible with the Geoprobe drill rig. The purpose of the borings was to determine if the soil was impacted with metals, VOCs, and petroleum hydrocarbons.

Geoprobe Borings and Soil Sampling

On September 14, 2009, a Geoprobe drill rig was utilized to advance 28 borings along the proposed Olivas Park Drive extension alignment, by HydroGeoSpectrum of Los Angeles, California, under the direction of Rincon. Soil samples were obtained at 0.5 feet below grade, 3 feet below grade, 5 feet below grade, and 10 feet below grade. The sample depths were adjusted for individual borings based on targeted constituents, field indications of contamination, changes in lithology, and refusal depths. The borings were advanced until no contamination was observed in the soil sample collected from the bottom of the boring. The 28 borings were advanced to maximum depths of 10 feet below grade. The Geoprobe borings were advanced by hydraulically driving a two-inch diameter rod into the ground. When the target sampling depth was reached, a soil sampler was attached to the end of the rod. The soil sampler consists of a one-inch diameter tube containing a four-foot long acetate sleeve liner. By advancing this sampler into the soil, soil is forced into the opening of the sampling tube and a sample is obtained. Once the sampler was filled, it was retrieved and the acetate liner was removed. The designated sampling section (6-inch) length was cut and retained for laboratory analysis. In addition, soil from the acetate sleeve was preserved onsite using EPA method 5035. Soil was collected from the acetate sleeve using a disposable Lock N' Load sampling device. The Lock N' Load soil sample was then placed into 40-milliliter (ml) VOA vials containing either sodium bisulfate preservative or a methanol preservative, provided by the analytical laboratory. The acetate sleeves and VOA vials holding the soil samples were labeled, sealed with Teflon lined caps, and stored in a cooler chilled to 4 degrees Celsius. The samples were couriered to the state certified analytical laboratory American Scientific Laboratories, LLC., of Los Angeles, California, using chain-of-custody protocol.

Following soil sample collection, a photoionization detector (PID) was utilized to screen the soil samples for volatile organic compounds. A portion of the acetate sleeve containing soil that was not retained for laboratory analysis, was capped and allowed to volatilize. After a period of time, the sleeve was opened and the PID probe tip was placed within one-eighth inch of the soil. The PID was calibrated to an isobutylene standard at the start of each day of sampling. PID data are recorded on the soil boring logs included in Appendix 2.

Following collection of samples, all sampling equipment was washed in a soap solution and triple rinsed. Upon completion of sampling, the boreholes were backfilled with bentonite chips. The ground surface was replaced to match the surrounding ground surface.

Sixty-six soil samples were collected during the Geoprobe drilling activities.

Soil sampling was performed under the oversight of a California Professional Geologist.

Hand Auger Borings and Soil Sampling

On September 14, 2009, Rincon utilized a hand auger and digging tools to advance 5 borings at the MP Enterprises site. Soil samples were obtained at 0.5 feet below grade and at 5 feet below grade. Soil sample collection depths were adjusted based on field evidence of contamination, refusal depth, and noted changes in lithology. Borings HA1 through HA4 were advanced to 5 feet below grade and boring HA5 hit refusal at 2.5 feet below grade. When the target sampling depth was reached, a soil sample was collected directly from the hand auger in a 6 inch long by 2 inch diameter brass sleeve. In addition, soil collected directly from the hand auger was preserved onsite using EPA method 5035. Soil was collected from the hand auger using a disposable Lock N' Load sampling device. The Lock N' Load soil sample was then placed into 40-milliliter (ml) VOA vials containing either sodium bisulfate preservative or a methanol preservative, provided by the analytical laboratory. The brass sleeve and VOA vials were sealed with Teflon lined caps, labeled, and stored in a cooler chilled to 4 degrees Celsius. The samples were couriered to the state certified analytical laboratory American Scientific Laboratories, LLC., of Los Angeles, California, using chain-of-custody protocol.

A photoionization detector (PID) was utilized to screen the soil samples for volatile organic compounds. A portion of soil was collected from the hand auger, sealed in a plastic bag, and allowed to volatilize. After a period of time, the bag was opened and the PID probe tip was placed within one-eighth inch of the soil. The PID was calibrated to an isobutylene standard at the start of each day of sampling. PID data are recorded on the soil boring logs included in Appendix 2.

Following collection of samples, all sampling equipment was washed in a soap solution and triple rinsed. Upon completion of sampling, the boreholes were backfilled with native soil. The ground surface was replaced to match the surrounding ground surface.

Ten soil samples were collected during the hand auger drilling activities.

Soil sampling was performed under the oversight of a California Professional Geologist.

LABORATORY ANALYSIS

The 76 soil matrix samples obtained from the borings were transported to American Scientific Laboratories, LLC. of Los Angeles, California under chain-of-custody documentation. The following lists the analyses performed:

- 47 soil samples for TEPH by EPA Method 8015M
- 10 soil samples for TPHg by EPA Method 8015M
- 25 soil samples for VOCs by EPA Method 8260B
- 29 soil samples for Title 22 Metals by EPA Method 6010B/7471A
- 21 soil samples for pesticides by EPA Method 8081A

RESULTS

SOIL SAMPLING

Strong hydrocarbon odors and discoloration were noted in the soil obtained from borings RB1 and RB16. No obvious staining or odors indicative of contamination were noted in the soil samples collected from the other borings and non-detect PID readings were measured in the soil samples. The soil encountered in the borings consisted of sandy soils with varying amounts of silt, clay, and gravel. Groundwater was not encountered in the borings.

TPH

TPH was detected in 20 of the 47 soil samples analyzed for TEPH at concentrations ranging between 17.2J mg/kg and 1,750 mg/kg. The TEPH was primarily detected in the oil range. The highest concentration of TEPH was detected at concentrations exceeding 1,000 mg/kg in the soil samples collected from 0.5 feet below grade in borings RB16, RB17, RB18, RB19, RB20, and RB21.

Note: J is a flag used by the analytical laboratory to indicate that the detection is below the practical quantitation limit.

TPHg

Ten of the 47 soil samples analyzed for TPH were analyzed for TPHg. TPHg was not detected above the method detection limit in the 10 soil samples.

TPHd

TPHd was detected at concentrations of 105 mg/kg and 974 mg/kg in soil samples RB1-5 and RB16-0.5. TPHd was not detected above the method detection limit in 45 of the 47 soil samples analyzed for TPHd.

TPHo

TPHo was detected at concentrations exceeding 1,000 mg/kg in soil samples RB16-0.5, RB17-0.5, RB18-0.5, RB19-0.5, RB20-0.5, and RB21-0.5. The highest concentration of TPHo was detected in soil sample RB16-0.5 at 2,130 mg/kg. TPHo was detected in 20 of the 47 soil samples analyzed for TPHo.

VOCs

Low concentrations of VOCs were detected in 12 of the 25 soil samples analyzed for VOCs. Acetone was detected in 9 soil samples at concentrations ranging from 14.6J μg/kg to 360 μg/kg, benzene was detected in 3 soil samples at concentrations ranging from 1.16J μg/kg to 5.24 μg/kg, and toluene was detected in 5 soil samples at concentrations ranging from 1.14J μg/kg to 5.26 μg/kg.

Pesticides

Pesticides were detected in 10 of the 21 soil samples analyzed for pesticides. Toxaphene was detected at concentrations between 986 μg/kg and 1,280 μg/kg in the soil samples collected from 0.5 feet below grade in borings RB9, RB26, RB27, and RB28. Low concentrations of gamma-Chlordane, alpha-Chlordane, DDD, DDE, DDT, and dieldrin were detected in 10 of the 21 soil samples analyzed for pesticides.

Metals

Varying concentrations of metals were detected in the 29 soil samples analyzed for metals. The following lists the range of metal concentrations detected in the soil samples:

- Antimony was detected in 12 of the 29 soil samples at concentrations ranging from 0.226J mg/kg to 0.754 mg/kg.
- Arsenic was detected in the 29 soil samples at concentrations ranging from 0.35 mg/kg to 4.16 mg/kg.
- Barium was detected in the 29 soil samples at concentrations ranging from 47.5 mg/kg to 343 mg/kg.
- Berylium was detected in 28 of the 29 soil samples at concentrations ranging from 0.0896J mg/kg to 0.335J mg/kg.
- Cadmium was detected in the 29 soil samples at concentrations ranging from 0.457J mg/kg to 1.62 mg/kg.
- Chromium was detected in the 29 soil samples at concentrations ranging from 2.88 mg/kg to 33.3 mg/kg.
- Cobalt was detected in the 29 soil samples at concentrations ranging from 1.25 mg/kg to 8.38 mg/kg.
- Copper was detected in the 29 soil samples at concentrations ranging from 2.71 mg/kg to 23.8 mg/kg.

- Lead was detected in the 29 soil samples at concentrations ranging from 1.27 mg/kg to 195 mg/kg. Lead was detected at concentrations exceeding 50 mg/kg in 4 of the soil samples (RB16-2, RB22-0.5, HA3-0.5, and HA5-0.5).
- Mercury was detected in 27 of the 29 soil samples at concentrations ranging from 0.0106J mg/kg to 0.0786J mg/kg.
- Molybdenum was detected in the 29 soil samples at concentrations ranging from 0.6J mg/kg to 3.91 mg/kg.
- Nickel was detected in the 29 soil samples at concentrations ranging from 4.1 mg/kg to 16.7 mg/kg.
- Silver was detected in 2 of the 29 soil samples at concentrations of 0.374J mg/kg and 0.521 mg/kg.
- Vanadium was detected in the 29 soil samples at concentrations ranging from 6.96 mg/kg to 27.5 mg/kg.
- Zinc was detected in the 29 soil samples at concentrations ranging from 12.4 mg/kg to 229 mg/kg.

Selenium and thallium were not detected above the method detection limit in the 29 soil samples analyzed for metals.

A summary of the soil analytical results is included in Tables 1, 2, 3, and 4. A copy of the soil analytical report is included in Appendix 3.

DISCUSSION

The subject property is ~~under~~ within the jurisdictional area of the Los Angeles Regional Water Quality Control Board (RWQCB). The RWQCB regulates groundwater quality in Ventura County and provides regulatory oversight within Ventura County for the assessment and mitigation of unauthorized hazardous and non-hazardous material releases into the environment. The goal of the RWQCB is to protect human health, water resources, and the environment from unauthorized releases by providing oversight in accordance with the California Health and Safety Code, California Fire Code and California Code of Regulations. The Los Angeles RWQCB has developed an interim guidance document containing numerical site screening levels to determine the need for remediation of petroleum and Volatile Organic Compound (VOC)-impacted soils (*Interim Site Assessment and Cleanup Guidebook*, dated May 1996). The guidance document has been used to determine when a site may require remedial action or to establish an acceptable clean up standard for a particular constituent. The document was developed to simplify the remediation process by facilitating the selection of soil cleanup levels for petroleum and VOC-impacted sites. The RWQCB soil threshold methodology was primarily developed for the protection of groundwater. Site-specific information used to select the appropriate RWQCB screening level includes the hydrocarbon range of the contaminant, and depth to shallow groundwater below the contaminated area.

The RWQCB uses the United State Environmetnal Protection Agency (EPA) Region IX Preliminary Remediation Goals (PRGs) for health based soil screening levels. In 2008 the PRGs

were updated. The EPA developed Screening Levels (SLs) for chemical contaminants at residential (R) and industrial (I) sites. The EPA has developed risk-based SLs for various pollutants in soil, air, and tap water (EPA, 2008). The SLs are not cleanup standards. SLs are meant to assist in the development of site specific PRGs.

If contaminants are detected at concentrations exceeding regulatory criteria it is possible that there is a reporting requirement to a regulatory agency and that additional assessment will be required. The RWQCB generally requires that soil contamination at concentrations exceeding regulatory criteria used by the RWQCB be laterally and vertically delineated.

The RWQCB generally uses the following action levels for the constituents that we have identified at this site:

Chemical	RWQCB Action Level*	Highest Level Detected Onsite
TPH		
TPHd	100 mg/kg	974 mg/kg
TPHo	1,000 mg/kg	2,130 mg/kg
Pesticides		
Toxaphene	440 μg/kg	1,280 μg/kg

* The RWQCB may use site specific action levels that differ from those listed in the above table.

SOIL MATRIX

During this assessment, TPHd was detected at a concentration exceeding 100 mg/kg in one soil sample (RB16-0.5), TPHo was detected at concentrations exceeding 1,000 mg/kg in 6 soil samples (RB16-0.5, RB17-0.5, RB18-0.5, RB19-0.5, RB20-0.5, and RB21-0.5), arsenic was detected at concentrations exceeding the generic USEPA Soil Screening Levels in 28 of the 29 soil samples analyzed for metals, lead was detected at concentrations exceeding 50 mg/kg in 4 soil samples (RB16-2, RB22-0.5, HA3-0.5, and HA5-0.5), and toxaphene was detected at concentrations exceeding 440 μg/kg in 4 soil samples (RB9-0.5, RB26-0.5, RB27-0.5, and RB28-0.5). Low concentrations of VOCs and other metals and pesticides were detected in the soil samples analyzed for VOCs, metals, and pesticides.

TPH

To evaluate the significance of TPH in soil, the levels were compared to threshold screening levels established by the Los Angeles RWQCB. The Los Angeles RWQCB has developed an interim guidance document containing numerical site screening levels to determine the need for remediation of petroleum and Volatile Organic Compound (VOC)-impacted soils (*Interim Site Assessment and Cleanup Guidebook*, dated May 1996). The guidance document has been used to determine when a site may require remedial action or to establish an acceptable clean up standard for a particular constituent. The document was developed to simplify the remediation process by facilitating the selection of soil cleanup levels for petroleum and VOC-impacted sites. The RWQCB soil threshold methodology was primarily developed for the protection of groundwater. Site-specific information used to select the appropriate RWQCB screening level

includes the hydrocarbon range of the contaminant, and depth to shallow groundwater below the contaminated area. Within the Olivas Park Drive Extension alignment, TPH concentrations were detected in the diesel range (C_{10} to C_{28}) in 2 soil samples and in the oil range (C_{28+}) in 20 soil samples. The soil samples were collected at depths that are expected to be less than 20 feet above the shallow groundwater. The laboratory lists the carbon range for diesel range organics as C_{10} to C_{28} and for oil range organics as C_{28+} and the Los Angeles RWQCB provides Maximum Soil Screening Levels (MSSLs) for the carbon range C_{13} to C_{22} and C_{23} to C_{32}. Based on this information, the MSSL for TPHd is 100 to 1,000 mg/kg and the MSSL for TPHo is 1,000 mg/kg.

TPHg

TPHg was not detected above the method detection limit in the 10 soil samples analyzed for TPHg.

TPHd

TPHd was detected above the MSSL for TPHd of 100 mg/kg in the soil sample obtained from boring RB16 at 0.5 feet below grade (974 mg/kg). TPHd was not detected above the method detection limit in the soil sample collected from 2 feet below grade in boring RB16. Boring RB16 was located on the MP Enterprises site near a fence in the southern area of the site. The soil was saturated at the location of boring RB16 and based on the location of a nearby house it appears the area is used as a cleaning area. The soil contained strong hydrocarbon odors and staining. The TPHd concentrations detected in the shallow soil sample (RB16-0.5) are not laterally delineated.

TPHo

TPHo was detected above the MSSL for TPHo of 1,000 mg/kg in 6 soil samples. TPHo was detected at concentrations ranging from 1,040 mg/kg to 2,130 mg/kg in the soil samples collected from 0.5 feet below grade in borings RB16 through RB21. Borings RB16 through RB21 are located on the MP Enterprises site. Borings RB16 through RB21 were through asphalt and gravel surfaces. It is possible that some or all of the oil range hydrocarbons detected in the soil samples is from the asphalt.

VOCs

Low concentrations of VOCs were detected in 12 of the 25 soil samples analyzed for VOCs. The detected concentrations of VOCs in the soil samples did not exceed action levels generally used by the RWQCB.

Benzene

Benzene was detected at low concentrations of 1.16J μg/kg, 5.24 μg/kg, and 2.26 μg/kg in soil samples RB20-5, RB21-0.5, and HA5-2.5. The Los Angeles RWQCB MSSL for benzene in soil less than 20 feet above groundwater is 11 μg/kg. None of the detected benzene concentrations

exceeded the MSSL for benzene of 11 µg/kg. Borings RB20, RB21, and HA5 were located on the MP Enterprises site. Borings RB20 and RB21 were located in the asphalted area to the west of the concrete pad at the maintenance sheds. Boring HA5 was located in the maintenance shed near a solvent parts washer, a 550 gallon waste oil above ground storage tank, and 55-gallon waste oil drums.

Toluene

Toluene was detected at low concentrations between 1.14J µg/kg and 5.36 µg/kg in soil samples RB20-5, RB21-0.5, RB21-5, HA1-0.5, and HA5-2.5. The Los Angeles RWQCB MSSL for toluene in soil less than 20 feet above groundwater is 150 µg/kg. None of the detected toluene concentrations exceeded the MSSL for toluene of 150 µg/kg. Borings RB20, RB21, HA1, and HA5 were located on the MP Enterprises site. Borings RB20 and RB21 were located in the asphalted area to the west of the concrete pad at the maintenance sheds, boring HA1 was located adjacent to a 55-gallon waste oil drum storage area, and boring HA5 was located in the maintenance shed near a solvent parts washer, a 550 gallon waste oil above ground storage tank, and 55-gallon waste oil drums.

Acetone

Acetone was detected at concentrations ranging from 14.6J µg/kg to 360 µg/kg in soil samples RB16-2, RB18-0.5, RB19-0.5, RB20-5, RB23-0.5, RB24-0.5, HA2-5, HA4-0.5, and HA5-2.5. The generic SLs for acetone are 61,000,000 µg/kg for residential sites and 610,000,000 µg/kg for industrial sites. Note: the SLs are described in more detail in the metals subsection of the Discussion section of this report. Based on the USEPA criteria, the soil samples with detected concentrations of acetone do not exceed the generic SLs for acetone. Acetone is often used to clean glassware in laboratories and it has been our experience that acetone can be present in the preservatives in the 40 ml vials used for EPA Method 5035 sample preservation. We suspect that the low concentrations of acetone detected during this assessment are from laboratory interference and not necessarily present in the soil itself.

Pesticides

Soil samples obtained from the borings located in the currently undeveloped vacant land between the wastewater treatment plant and the MP Enterprises site were analyzed for pesticides. Additionally, soil samples obtained from the borings located on land currently utilized for agricultural purposes to the west of the wastewater treatment plant were analyzed for pesticides.

Toxaphene

The generic SL for toxaphene in the soil at residential sites is 440 µg/kg and the generic SL for toxaphene in the soil at industrial sites is 1,600 µg/kg. Toxaphene was detected at concentrations between 986 µg/kg and 1,280 µg/kg in the soil samples collected from 0.5 feet below grade in borings RB9, RB26, RB27, and RB28. The shallow soil samples contained Toxaphene at concentrations exceeding the SL-R for Toxaphene of 440 µg/kg and did not exceed the SL-I for

Toxaphene of 1,600 μg/kg. The soil samples collected from 3 feet below grade in borings RB26, RB27, and RB28 did not contain Toxaphene at detectable concentrations. Boring RB9 met refusal at less than 1 foot below grade. Sample RB9-0.5 is the only soil sample collected from boring RB9. Boring RB9 was located at the northeastern boundary of the currently undeveloped portion of the Olivas Park Drive Extension alignment. Borings RB26, RB27, and RB28 were located in an area that was utilized for agricultural purposes at the time of the assessment.

Toxaphene was not detected in the shallow soil samples collected from borings RB5 through RB8. Borings RB5 through RB9 were located along the undeveloped portion of the Olivas Park Drive Extension. The borings were spaced approximately 200 feet to 400 feet apart. Based on the analytical results toxaphene exists in the shallow soil at the location of boring RB9 at concentrations exceeding the SL-R for toxaphene of 440 μg/kg. The lateral and vertical extent of toxaphene at the location of boring RB9 is not delineated.

Other Pesticides

The pesticides gamma-Chlordane, alpha-Chlordane, DDD, DDE, DDT, and dieldrin were detected in the soil samples. Borings RB5 through RB8 contained low concentrations of gamma-Chlordane, alpha-Chlordane, DDD, DDE, DDT, and dieldrin in the soil samples. DDE and DDT were detected at concentrations of 639 μg/kg and 539 μg/kg in the soil sample collected from RB9 at 0.5 feet below grade. None of the detected concentrations of DDE and DDT exceeded the generic SL-Rs for DDE and DDT of 1,400 μg/kg and 1,700 μg/kg.

DDE was detected concentrations ranging from 572 μg/kg to 846 μg/kg in the soil samples collected from 0.5 feet below grade in borings RB26, RB27, and RB28. DDT was detected at concentrations ranging from 540 μg/kg to 705 μg/kg in the soil samples collected from 0.5 feet below grade in boring RB26, RB27, and RB28. None of the detected concentrations of DDE and DDT exceeded the generic SL-R for DDE and DDT of 1,400 μg/kg and 1,700 μg/kg.

Metals

Varying concentrations of metals were detected in the soil samples. The only metal detected at concentrations exceeding regulatory criteria was arsenic. Arsenic was detected at concentrations ranging from 0.35 mg/kg to 4.16 mg/kg. The SLs for arsenic in the soil at residential sites and at industrial sites are 0.39 mg/kg and 1.6 mg/kg. The concentrations of arsenic detected in the soil at the subject property exceed the residential SL for arsenic and do not exceed the industrial SL for arsenic.

Typical background concentrations of arsenic in soil in California range from 0.6 mg/kg to 11 mg/kg (Kearny Foundation of Soil Science, Division of Agriculture and Natural Resources, University of California, March 1996). All of the detected concentrations of arsenic during the current assessment were within the range of background concentrations. In our experience regulatory agencies do not require the cleanup of soil to below background concentrations.

In addition, the levels of metals were compared to total threshold limit concentration (TTLC)

levels adopted by the DTSC. The TTLC levels are used to determine whether soil would be classified as a hazardous or non-hazardous waste for disposal purposes. Metals concentrations detected for all of the samples analyzed for metals did not exceed their TTLC levels. Lead was detected above 50 mg/kg in four soil samples. Prior to soil disposal, soil samples should be collected and analyzed for soluble threshold limit concentration (STLC) lead in the areas of borings RB16, RB22, HA3, and HA5.

CONCLUSION

With the exception of borings RB1 and RB16, no obvious staining or odors indicative of contamination were noted in the soil samples and non-detect PID readings were measured in the soil samples. The soil encountered in the borings primarily consisted of sandy soils with varying amounts of silt, clay, and gravel.

MP Enterprises

MP Enterprises is a truck repair facility located on Ventura Road at the northern end of the proposed project alignment. TPHd was detected at a concentration exceeding the RWQCB action level for TPHd of 100 mg/kg in one soil sample (RB16-0.5). TPHo was detected at concentrations exceeding the RWQCB action level for TPHo of 1,000 mg/kg in 6 soil samples (0.5 foot below grade samples in boring RB16 through RB21). Borings RB16 through RB21 were drilled in an asphalted area of the MP Enterprises site. It is possible that the TPHd and TPHo concentrations detected in the soil samples is the result of asphalt in the soil. There was staining and odors in the soil at the location of boring RB16.

Borings RB11 through RB15 were advanced in a currently vacant area adjacent to the MP Enterprises site. It is our understanding that the area was formerly used for storage. TPH, VOCs, and metals were not detected in the soil samples at concentrations exceeding RWQCB action levels in this area.

Vacant Land

Borings RB5 through RB10 were drilled on the portion of land located between MP Enterprises and the wastewater treatment plant. Low concentrations of TPHo were detected in soil samples collected from borings RB5, RB6, and RB7. VOCs were not detected in the soil samples collected from borings RB5 through RB10. Toxaphene was detected at a concentration of 1,110 μg/kg in the soil sample collected from boring RB9 at 0.5 feet below grade. The detected Toxaphene concentration exceeds the SL-R for toxaphene of 440 μg/kg. Gamma-chlordane, alpha-chlordane, DDD, DDE, and DDT were also detected in the soil samples collected from borings RB5 through RB10 at concentrations below the SL-R. Metals were detected within background levels for metals in California soils in the soil samples collected from borings RB6 through RB10.

Wastewater Treatment Site

Borings RB1 through RB4 were located at the wastewater treatment site. Soil samples from borings RB1 through RB4 were analyzed for TPH. Boring RB1 was located adjacent to the fill port on a diesel AST. Soil samples collected from boring RB1 were visually stained and contained strong hydrocarbon odors. However, TPHd and TPHo were detected at low concentrations in the soil samples collected from 5 feet below grade in boring RB1 and were not detected in the soil samples collected from 0.5 feet below grade, 3 feet below grade, and 10 feet below grade in boring RB1. A low concentration (18.6J mg/kg) was detected in the sample collected from boring RB2 at 3 feet below grade. TPH was not detected in any of the other soil samples collected from borings RB1 through RB4.

Agricultural Land

Borings RB25 through RB28 were located on agricultural land. The soil samples were analyzed for pesticides. Toxaphene was detected at concentrations exceeding the SL-R for toxaphene of 440 μg/kg in the soil samples collected from 0.5 feet below grade in borings RB26, RB27, and RB28. No other pesticides where detected above SLs in the soil samples collected from borings RB25 through RB28.

RECOMMENDATIONS

Based on the findings of the soil assessment we have the following recommendations:

- The former land use of the area between the wastewater treatment site and the MP Enterprises site is unknown. Based on the industrial land uses in this area it is possible that portions of the area were formerly used for industrial purposes. It is recommended that a Phase I ESA study be completed for this portion of the proposed project alignment.
- The detection of toxaphene on the agricultural land and TPHo at the MP Enterprises site warrants the preparation of a Soil Management Plan prior to site grading. The soil beneath the concrete pad at the MP Enterprises site was not investigated. It is possible that contamination exists beneath the concrete pad. If contamination is encountered when the concrete pad is removed during site grading, the material should be handled in accordance with the Soil Management Plan.
- Field evidence of contamination in the soil at the location of the diesel AST on the wastewater treatment site warrants proper disposal of the soil at this location. In addition, a document review should be completed for the wastewater treatment site to determine the locations of any other former fuel and waste storage locations on the site. During the soil assessment, a groundwater monitoring well was observed at the wastewater treatment site. It may be warranted to analyze groundwater samples from this location for TPH and VOCs.
- The detection of lead at four locations (RB16, RB22, HA3, and HA5) warrants the analysis of soil samples from these locations for STLC lead prior to the removal of any

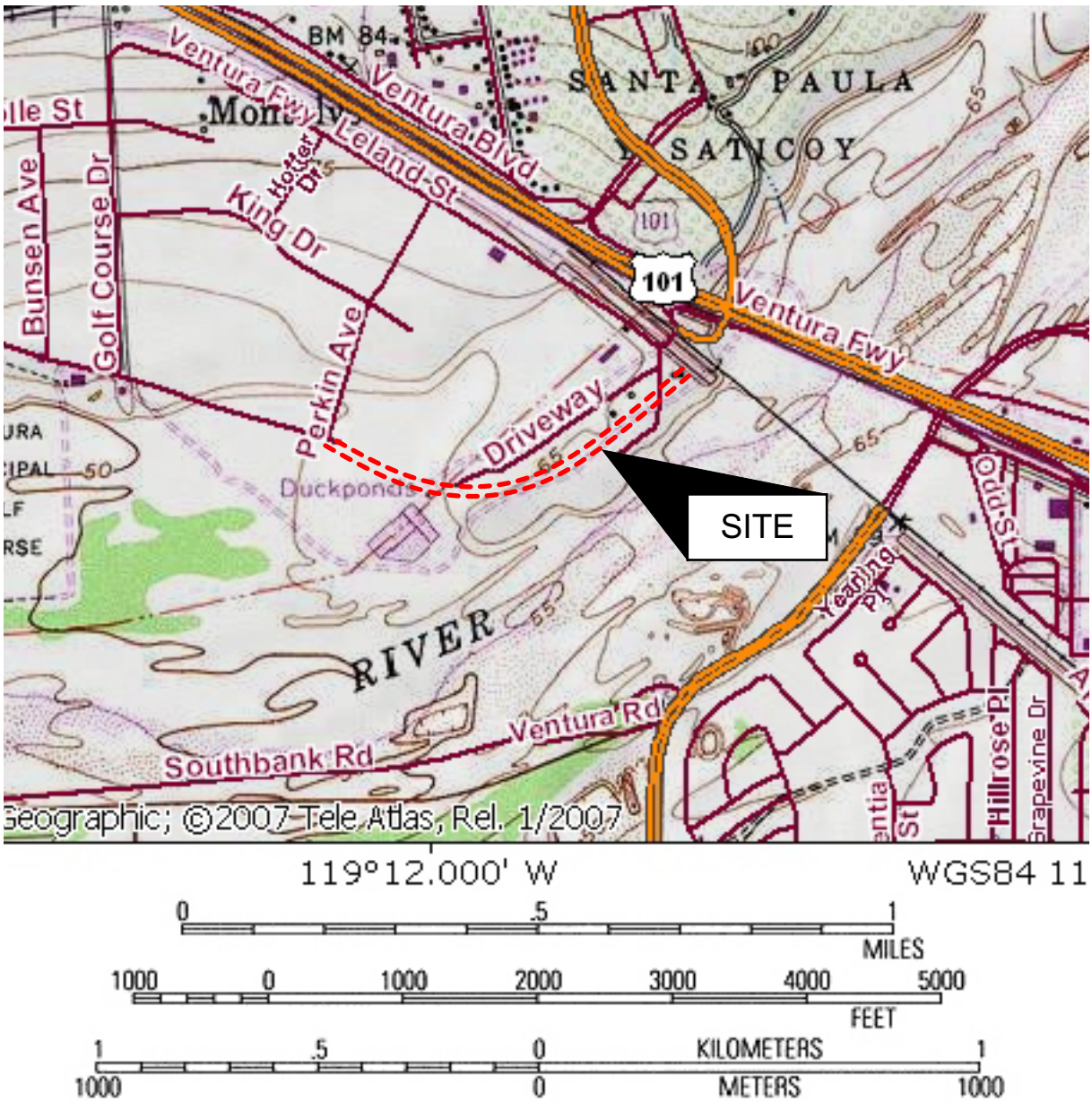
soil from these locations. The purpose of the STLC analysis is to determine if the soil should be disposed as a hazardous waste.

LIMITATIONS

This report has been prepared for and is intended for the exclusive use of the City of San Buenaventura. The contents of this report should not be relied upon by any other party without the written consent of Rincon Consultants, Inc.

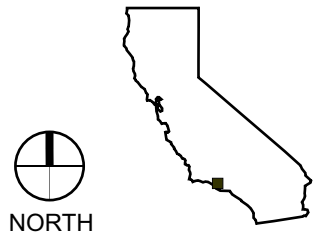
Our conclusions regarding the subject property are based on the results of a limited subsurface sampling program. The results of this evaluation are qualified by the fact that only limited sampling and analytical testing was conducted during this assessment.

This scope was not intended to completely establish the quantities and distribution of contaminants present at the subject property or to determine the cost to remediate the subject property. The concentrations of contaminants measured at any given location may not be representative of conditions at other locations. Further, conditions may change at any particular location as a function of time in response to natural conditions, chemical reactions and other events. Conclusions regarding the condition of the subject property do not represent a warranty that all areas within the subject property are similar to those sampled.



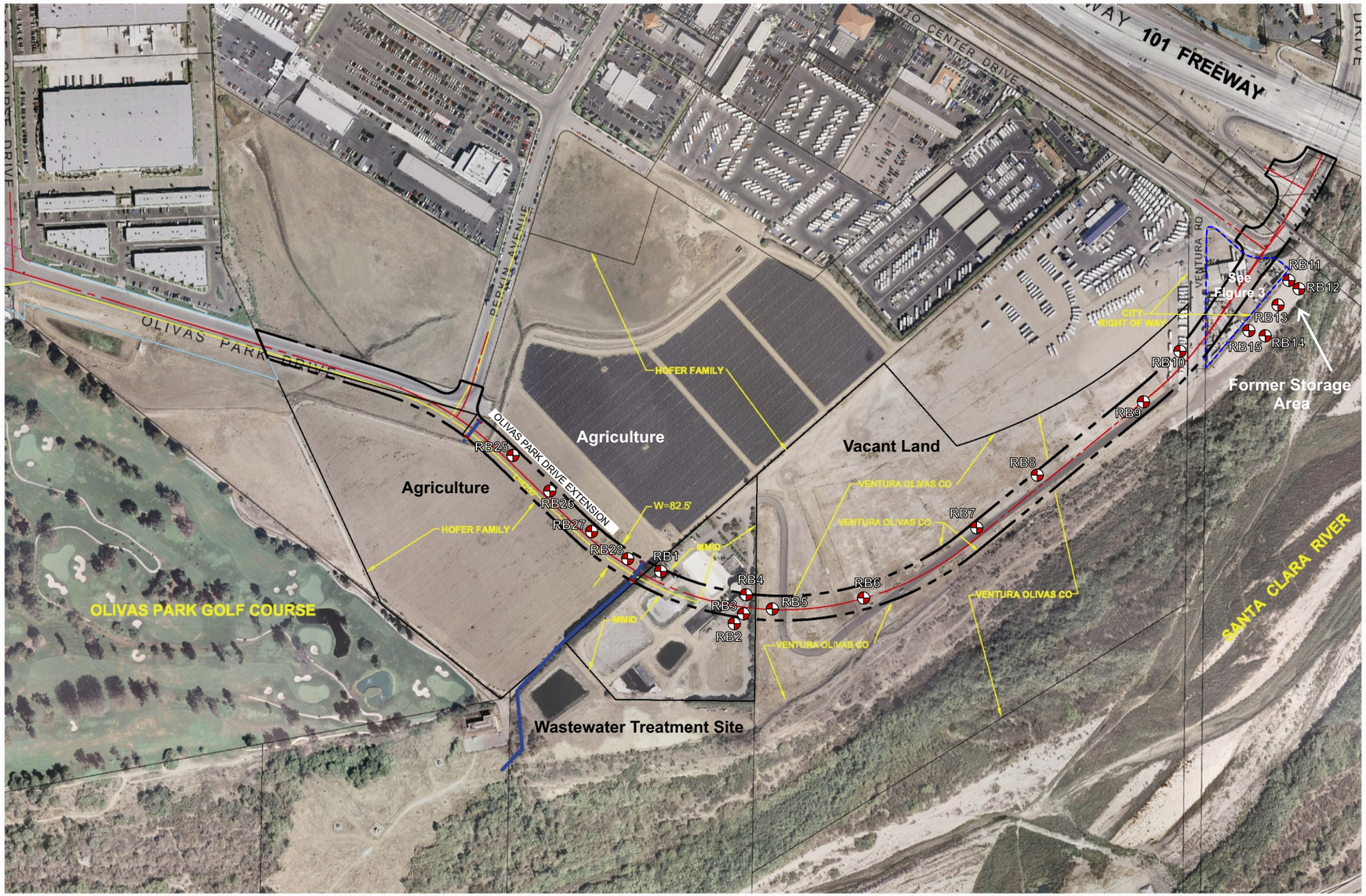
Source: TOPO! 2008 National Geographic; 2007 Tele Atlas, Rel. 1/2007

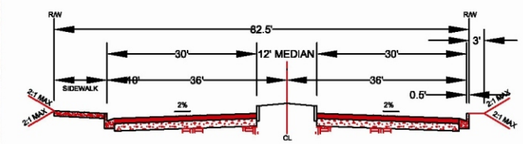
Subject Property



Vicinity Map

Figure 1





OLIVAS PARK DRIVE
FULL STREET SECTION
(NOT TO SCALE)

Proposed Alignment

Proposed New Storm Drain

Geoprobe Boring Location- September 14, 2009

RB12 Geoprobe Boring Identification

MP Enterprises site- see Figure 3 for boring locations

0 200 400 Feet

N

Site Map and Boring Location Map

Drawing Source: City of San Buenaventura, August 2009.

Figure 2

City of Ventura

RB16 Geoprobe Boring Location (September 14, 2009)

HA4 Hand Auger Boring Location (September 14, 2009)

MP Enterprises Boring Locations Map

Basemap Source: 2011 Microsoft Corporation and 2010 NAVTEQ

Figure 3

City of Ventura

Photograph A: View of the boring RB1 located adjacent to a diesel fueled generator at the wastewater treatment site.

Photograph B: View of boring RB3 located adjacent to a bay door on the storage building at the wastewater treatment site.

Photograph C: View of a soil boring located on the vacant land between the wastewater treatment site and the MP Enterprises site.

Photograph D: View of boring RB9 looking northeast. Boring RB9 was located on the vacant land near the intersection with Ventura Road.

Site Photographs

Figure 4

Photograph E: View of the 55-gallon drums located on the concrete pad at the MP Enterprises site.

Photograph F: View of a boring being advanced with a hand auger at the MP Enterprises site.

Photograph G: View of a boring advanced near the loading dock on the MP Enterprises site.

Photograph H: View of a completed boring on the MP Enterprises site.

Site Photographs

Figure 5

Photograph I: View of agricultural land to the north of the proposed Olivas Park Drive Extension. Photograph is looking north.

Photograph J: View of agricultural land to the south of the proposed Olivas Park Drive Extension. Photograph is facing southwest.

Photograph K: View of a boring advanced on the agricultural land.

Photograph L: View of a boring advanced on the agricultural land.

Site Photographs

Figure 6

Table 1 - Soil Analytical Results - TPH
Olivas Park Drive Extension, Ventura, California
results in milligrams per kilogram (mg/kg)

Sample Designation	Sample Depth (feet)	GRO C_6-C_{10}	DRO C_{10}-C_{28}	ORO C_{28+}	TPH C_6-C_{28+}
RB1	0.5	<0.5	<1	<17	ND
	3	<0.5	<1	<17	ND
	5	<0.5	**105**	**120**	**225**
	10	--	<1	<17	ND
RB2	0.5	--	<1	<17	ND
	3	--	<1	**18.6J**	**18.6J**
	5	--	<1	<17	ND
RB3	0.5	--	<1	<17	ND
	3	--	<1	<17	ND
	5	--	<1	<17	ND
RB4	0.5	--	<1	<17	ND
	3	--	<1	<17	ND
	5	--	<1	<17	ND
RB5	0.5	--	<1	<17	ND
	5	--	<1	**17.6J**	**17.6J**
	10	--	<1	<17	ND
RB6	0.5	--	<1	**26.4J**	**26.4J**
	5	--	<1	**17.2J**	**17.2J**
	10	--	<1	<17	ND
RB7	0.5	--	<1	**556**	**556**
	5	--	<1	<17	ND
	10	--	<1	<17	ND
RB8	0.5	--	<1	<17	ND
	5	--	<1	<17	ND
RB9	0.5	--	<1	<17	ND
RB13	0.5		<1	<17	**ND**
RB16	0.5	<0.5	**974**	**2,130**	**3,104**
	2	<0.5	<1	**52.8**	**52.8**
RB17	0.5	<0.5	<1	**1,750**	**1,750**
	5	--	<10	<50	ND
RB18	0.5	<0.5	<1	**1,040**	**1,040**
	5	--	<1	<17	ND
RB19	0.5	<0.5	<1	**1,180**	**1,180**
	5	--	<10	**33.4J**	**33.4J**
RB20	0.5	<0.5	<1	**1,100**	**1,100**
	5	--	<1	<17	ND
RB21	0.5	<0.5	<1	**1,240**	**1,240**
	5	--	<1	<17	ND
RB22	0.5	--	<1	**498**	**498**
RB23	0.5	--	<1	<17	ND
RB24	0.5	--	<1	**150**	**150**
HA1	5	--	<1	<17	ND
HA2	5	--	<1	**279**	**279**
HA3	5	--	<1	<17	ND
HA4	0.5	--	<1	**32.4J**	**32.4J**
HA5	0.5	--	<1	**554**	**554**
	2.5	--	<1	**534**	**534**
	RWQCB MSSL	100	100	1,000	

Soil samples collected on September 14, 2009
Concentrations detected above the laboratory method detection limit are in **bold**
Concentrations detected above the RWQCB MSSL are **highlighted**
RWQCB - Regional Water Quality Control Board Maximum Soil Screening Level (MSSL)
< - Not detected above the laboratory method detection limit
ND - Not Detected
TPH - Total petroleum hydrocarbons
GRO - Gasoline range organics (TPHg)
DRO - Diesel range organics (TPHd)
ORO - Oil range organics (TPHo)
C - Carbon Range
Soil samples analyzed by American Scientific Laboratories, LLC.

Analysis:
TPH by EPA Method 8015M

Table 2 - Soil Analytical Results - Metals
Olivas Park Drive Extension, Ventura, California
results in milligrams per kilogram (mg/kg)

Sample Identification	Sample Depth (feet)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
RB5	0.5	**0.499J**	**2.9**	**86.1**	**0.25J**	**1.16**	**10.8**	**3.86**	**15.5**	**20.7**	**0.0359J**	**0.753**	**13.2**	<0.2	<0.05	<0.15	**17.3**	**138**
	5	<0.2	**0.804**	**47.5**	**0.101J**	**0.473J**	**4.04**	**1.63**	**4.07**	**2.16**	**0.0786**	**0.38J**	**4.65**	<0.2	<0.05	<0.15	**8.5**	**14.6**
RB6	0.5	**0.226J**	**4.16**	**82.9**	**0.238J**	**1.1**	**8.96**	**3.69**	**9.62**	**8.68**	**0.0265J**	**0.84**	**11.2**	<0.2	<0.05	<0.15	**16.9**	**40**
	5	<0.2	**2.54**	**47.8**	**0.149J**	**0.63**	**5.82**	**2.32**	**5.9**	**5.41**	**0.0148J**	**0.84**	**6.95**	<0.2	<0.05	<0.15	**10.8**	**25.6**
RB7	0.5	**0.715**	**4.1**	**107**	**0.24J**	**0.993**	**14.8**	**3.11**	**9.48**	**14.2**	**0.0196J**	**0.186J**	**9.39**	<0.2	<0.05	<0.15	**17**	**40.6**
	5	**0.754**	**2.7**	**85.8**	**0.29J**	**1.08**	**8.98**	**4.73**	**10.1**	**5.57**	**0.0145J**	**0.174J**	**10.9**	<0.2	<0.05	<0.15	**18**	**35**
RB8	0.5	**0.362J**	**2.95**	**115**	**0.335J**	**1.25**	**12.7**	**4.98**	**12.9**	**5.77**	**0.0235J**	**0.614**	**16.7**	<0.2	<0.05	<0.15	**21.5**	**49.2**
	5	<0.2	**1.18**	**48.7**	**0.144J**	**0.607**	**5.15**	**1.89**	**4.63**	**1.94**	**0.03J**	**0.528**	**5.73**	<0.2	<0.05	<0.15	**11.7**	**17.2**
RB9	0.5	<0.2	**1.23**	**52.2**	**0.109J**	**0.697**	**3.89**	**1.63**	**5.28**	**2.52**	**0.0106J**	**0.403J**	**4.58**	<0.2	<0.05	<0.15	**8.64**	**16**
RB12	0.5	<0.2	**1.48**	**97.9**	**0.18J**	**0.868**	**8.02**	**3.12**	**9.1**	**10.5**	**0.0182J**	**0.749**	**11.3**	<0.2	<0.05	<0.15	**22**	**37.8**
RB13	0.5	<0.2	**2.12**	**89.2**	**0.238J**	**1**	**9.12**	**3.58**	**10.7**	**44.1**	**0.0216J**	**0.573**	**11.5**	<0.2	<0.05	<0.15	**16.5**	**47.5**
RB15	0.5	<0.2	**2.3**	**73.2**	**0.189J**	**0.837**	**7.98**	**2.97**	**9.19**	**25.7**	**0.0215J**	**0.505**	**9.48**	<0.2	<0.05	<0.15	**13.6**	**44.5**
RB16	0.5	<0.2	**2.06**	**64.5**	**0.197J**	**0.872**	**8.4**	**2.73**	**13.2**	**11.9**	**0.0291J**	**0.06J**	**9.37**	<0.2	<0.05	<0.15	**18.8**	**34.7**
	2	<0.2	**2.94**	**199**	**0.206J**	**0.783**	**10.3**	**3.07**	**11.1**	**52.9**	**0.0215J**	**0.874**	**7.95**	<0.2	<0.05	<0.15	**17.7**	**82.1**
RB17	0.5	<0.2	**1.04**	**76.4**	**0.0938J**	**0.599**	**7.2**	**4.04**	**8.28**	**11.3**	**0.0209J**	**2.55**	**10.9**	<0.2	<0.05	<0.15	**25.4**	**30.9**
RB18	0.5	<0.2	**0.886**	**65.4**	**0.0907J**	**0.578**	**7.18**	**3.89**	**12.5**	**7.3**	**0.0134J**	**0.638**	**10.1**	<0.2	**0.374J**	<0.15	**20.4**	**28.2**
RB19	0.5	<0.2	**0.936**	**75.3**	**0.0957J**	**0.628**	**7.12**	**3.76**	**16**	**12.8**	**0.016J**	**3.55**	**10.3**	<0.2	**0.521**	<0.15	**24.4**	**39.1**
RB20	0.5	<0.2	**1.29**	**93.9**	**0.148J**	**0.712**	**12.5**	**4.09**	**18.4**	**13.3**	**0.0214J**	**1.29**	**12.7**	<0.2	<0.05	<0.15	**27.5**	**42**
RB21	0.5	**0.248J**	**0.35**	**343**	<0.04	**1.05**	**4.69**	**8.38**	**13**	**3.51**	<0.01	**0.211J**	**8.74**	<0.2	<0.05	<0.15	**22.8**	**39.4**
	5	<0.2	**0.851**	**25.2**	**0.0896J**	**0.457J**	**2.88**	**1.25**	**2.71**	**1.27**	<0.01	**0.251J**	**4.1**	<0.2	<0.05	<0.15	**6.96**	**12.4**
RB22	0.5	**0.593**	**1.62**	**52.8**	**0.11J**	**1.24**	**31.4**	**2.18**	**9.63**	**143**	**0.0206J**	**0.811**	**6.57**	<0.2	<0.05	<0.15	**11.6**	**58.1**
RB23	0.5	<0.2	**1.21**	**87.4**	**0.205J**	**0.913**	**7.1**	**2.52**	**6.51**	**5.07**	**0.0721**	**0.51**	**7.27**	<0.2	<0.05	<0.15	**16.2**	**24.6**
RB24	0.5	**0.592**	**1.75**	**65.9**	**0.17J**	**0.919**	**29.1**	**2.83**	**7.19**	**6.23**	**0.0251J**	**1.04**	**16.6**	<0.2	<0.05	<0.15	**17**	**30.8**
HA1	0.5	**<0.2**	**2.1**	**124**	**0.188J**	**0.798**	**7.87**	**2.54**	**14.2**	**24.2**	**0.0222J**	**0.482J**	**8.1**	<0.2	<0.05	<0.15	**15.3**	**81**
HA2	0.5	**0.374J**	**2.18**	**140**	**0.205J**	**1.12**	**9.53**	**2.65**	**12**	**38.8**	**0.039J**	**0.696**	**9.22**	<0.2	<0.05	<0.15	**22**	**229**
HA3	0.5	**0.516**	**1.88**	**105**	**0.2J**	**1.62**	**33.3**	**3.68**	**22.5**	**86.4**	**0.0218J**	**3.91**	**15.9**	<0.2	<0.05	<0.15	**17.6**	**82.5**
HA4	0.5	**0.232J**	**2.01**	**75.7**	**0.221J**	**1.05**	**8.45**	**3.53**	**12.9**	**14.2**	**0.0195J**	**0.493J**	**9.68**	<0.2	<0.05	<0.15	**16.8**	**130**
HA5	0.5	**0.447J**	**1.8**	**155**	**0.14J**	**0.774**	**6.3**	**2.16**	**8.91**	**195**	**0.0297J**	**0.315J**	**6.52**	<0.2	<0.05	<0.15	**11.2**	**112**
	2.5	<0.2	**2.1**	**84.6**	**0.172J**	**0.822**	**7.89**	**2.73**	**23.8**	**17.4**	**0.0178J**	**0.462J**	**9.6**	<0.2	<0.05	<0.15	**16.9**	**54**
	TTLC	500	500	10,000	75	100	2,500	8,000	2,500	1,000	20	3,500	2,000	100	500	700	2,400	5,000
	SL-R	31	0.39	15,000	160	70	230	nl	3,100	400	6.7	390	1,600	390	390	5.2	550	23,000
	SL-I	410	1.6	190,000	2,000	810	1,400	nl	41,000	nl	28	5,100	20,000	5,100	5,100	66	7,200	310,000
	Background Concentration	0.15-1.95	0.6-11	133-1,400	0.25-2.70	0.05-1.70	23-1,579	2.7-46.9	9.1-96.4	12.4-97.1	0.10-0.90	nl	9-509	0.015-0.430	0.10-8.30	0.17-1.10	39-288	88-236

Soil samples collected on September 14, 2009
Concentrations detected above the laboratory method detection limit are in **bold**
Concentrations detected above the SL-R are **highlighted**
< - Not detected above the laboratory method detection limit
J - Flag indicating the detected concentration is below the laboratory practical quantitation limit
TTLC - Total threshold limit concentration
SL - United States Environmental Protection Agency Screening Levels for Chemical Contaminants at residential (R) and industrial (I) sites (July 2008)
Background Concentration - Kearney, Background Concentrations of Trace and Major Elements in California Soils, University of California, 1996
nl - not listed
Soil samples analyzed by American Scientific Laboratories, LLC.

Analysis:

Title 22 Metals - EPA Method 6010B/7471A

Table 3 - Soil Analytical Results - Pesticides
Olivas Park Drive Extension, Ventura, California

results in micrograms per kilogram (μg/kg)

Sample Designation	Sample Depth (feet)	Gamma Chlordane	aplha-Chlordane	DDD	DDE	DDT	Dieldrin	Toxaphene	Other Pesticides
RB5	0.5	<0.19	<0.2	**26.1**	<0.22	**12.8**	<0.2	<17	ND
	5	<0.19	<0.2	<0.27	<0.22	<0.22	<0.2	<17	ND
RB6	0.5	**2.1**	**2.23**	<0.27	<0.22	<0.22	**6.63**	<17	ND
	5	**1.29J**	<0.2	<0.27	**9.62**	<0.22	**3.62J**	<17	ND
RB7	0.5	<0.19	<0.2	<0.27	**3.94J**	<0.22	<0.2	<17	ND
	5	<0.19	<0.2	<0.27	<0.22	<0.22	<0.2	<17	ND
RB8	0.5	<0.19	<0.2	<0.27	**30.1**	<0.22	<0.2	<17	ND
	5	<0.19	<0.2	<0.27	<0.22	<0.22	<0.2	<17	ND
RB9	0.5	**13.9**	**12.4**	<0.27	**639**	**539**	**9.33**	**1,110**	ND
RB25	0.5	<0.19	<0.2	<0.27	<0.22	<0.22	<0.2	<17	ND
	3	<0.19	<0.2	<0.27	<0.22	<0.22	<0.2	<17	ND
	5	<0.19	<0.2	<0.27	<0.22	<0.22	<0.2	<17	ND
RB26	0.5	**17.2**	**13.7**	<0.27	**846**	**705**	<0.2	**1,230**	ND
	3	<0.19	<0.2	<0.27	<0.22	<0.22	<0.2	<17	ND
	5	<0.19	<0.2	<0.27	<0.22	<0.22	<0.2	<17	ND
RB27	0.5	**18.5**	**15.9**	<0.27	**579**	**551**	<0.2	**986**	ND
	3	<0.19	<0.2	<0.27	<0.22	<0.22	<0.2	<17	ND
	5	<0.19	<0.2	<0.27	**14**	<0.22	<0.2	<17	ND
RB28	0.5	**17.1**	**14.4**	**124**	**572**	**540**	<0.2	**1,280**	ND
	3	<0.19	<0.2	<0.27	<0.22	<0.22	<0.2	<17	ND
	5	<0.19	<0.2	<0.27	<0.22	<0.22	<0.2	<17	ND
	SL-R	1,600	1,600	2,000	1,400	1,700	30	440	Varies
	SL-I	6,500	6,500	7,200	5,100	7,000	110	1,600	Varies

Soil samples collected on September 14, 2009
Concentrations detected above the laboratory method detection limit are in **bold**
Concentrations detected above the SL-R are **highlighted**
< - Not detected above the laboratory method detection limit
J - Flag indicating the detected concentration is below the laboratory practical quantitation limit
SL - United States Environmental Protection Agency Screening Levels for Chemical Contaminants at residential (R) and industrial (I) sites (July 2008)
Soil samples analyzed by American Scientific Laboratories, LLC.

Analysis:

Title 22 Metals - EPA Method 6010B/7471A

Table 4 - Soil Analytical Results - VOCs
Olivas Park Drive Extension, Ventura, California

results in micrograms per kilogram (μg/kg)

Sample Designation	Sample Depth (feet)	Benzene	Toluene	Acetone	Other VOCs
RB5	0.5	<0.93	<1	<12.7	ND
RB6	0.5	<0.93	<1	<12.7	ND
RB7	0.5	<0.93	<1	<12.7	ND
RB8	0.5	<0.93	<1	<12.7	ND
RB9	0.5	<0.93	<1	<12.7	ND
RB13	0.5	<0.93	<1	<12.7	ND
RB16	0.5	<0.93	<1	<12.7	ND
	2	<0.93	<1	**48.6J**	ND
RB17	0.5	<0.93	<1	<12.7	ND
RB18	0.5	<0.93	<1	**91.2**	ND
	5	<0.93	<1	<12.7	ND
RRB19	0.5	<0.93	<1	**67.1**	ND
RB20	0.5	<0.93	<1	<12.7	ND
	5	**1.16J**	**5.36**	**360**	ND
RB21	0.5	**5.24**	**3.98**	<12.7	ND
	5	<0.93	**2.34**	<12.7	ND
RB22	0.5	<0.93	<1	<12.7	ND
RB23	0.5	<0.93	<1	**38.6J**	ND
RB24	0.5	<0.93	<1	**78**	ND
HA1	5	<0.93	**1.14J**	<12.7	ND
HA2	5	<0.93	<1	**119**	ND
HA3	5	<0.93	<1	<12.7	ND
HA4	0.5	<0.93	<1	**14.6J**	ND
HA5	0.5	<0.93	<1	<12.7	ND
	2.5	**2.26**	**2.12**	**129**	ND
	RWQCB MSSL	11	150	NL	Varies

Soil samples collected on September 14, 2009
Concentrations detected above the laboratory method detection limit are in **bold**
< - Not detected above the laboratory method detection limit
J - Flag indicating the detected concentration is below the laboratory practical quantitation limit
RWQCB - Regional Water Quality Control Board Maximum Soil Screening Level (MSSL)
VOCs - Volatile Organic Compounds
Soil samples analyzed by American Scientific Laboratories, LLC.

Analysis:
VOCs by EPA Method 8260B

Appendix 1

Environmental Documents

FAX

TO: Runcorn Cons

FROM: MONTALVO MUNICIPAL IMPROVEMENT DISTRICT
(805) 642-2618/642-5885 (OFFICE)
(805) 642-2898 (FAX)

ATTN: Shawn Decker

PAGES: 13

FAX: 805-641-1072

DATE: 9-15-09

MEMO: The enclosed are the soil samples taken @ Ventura Reg. San Dist facility (WTF) at the termination of lease. If you have any questions, call me.

Kelley Polk

APPLIED ENVIRONMENTAL TECHNOLOGIES INC.
4561 Market St., Suite B • Ventura, CA 93003 • Phone: (805) 650-1400 Fax: (805) 650-1576

June 27, 2007
Ref. No. 1522-01A

Ventura Regional Sanitation District
1001 Partridge Drive, Suite 150
Ventura, CA 93003-0704

Attention: Mr. Jason Siegert
Source Control Inspector

Limited Phase II Environmental Site Assessment
3555 Ventura Road, Ventura, California

Introduction

Applied Environmental Technologies, Inc. (AET) is pleased to present the results of our limited Phase II Environmental Site Assessments (ESA) in the vicinity of the former sodium hydroxide tank and chlorine storage at the former wastewater disposal facility at 3555 Ventura Road in Ventura, California (Plate 1). The limited Phase II assessment was conducted based on our discussions at the Site on May 31, 2007. We were informed that the Ventura Regional Sanitation District is vacating the Site and as part of their due diligence, want to confirm that no residual contamination from the former structures is present. AET's Methodology, Findings and Conclusions are presented below.

Methodology

Prior to field activities the soil probe locations were pre-marked and Underground Services Alert (USA) contacted so that utility companies could locate any of their subsurface utilities in the vicinity of the proposed probes. No subsurface utilities were identified in the area.

Two probe borings (GP-1 and GP-2) were drilled at the reported locations where the sodium hydroxide tank and chlorine storage had been present (Plate 1). In addition a hand auger boring (HA-1) was advanced in the pit to the north and adjacent to the former storage area (Plate 1).

At the probe locations, the borings were advanced using a Geoprobe rig, to a total depth of 15 feet below ground surface (bgs) in GP-1 and to 10 feet bgs in GP-2 because of refusal. Soil samples were collected at 5-foot intervals in each boring. Each probe was advanced using a 1-inch-diameter stainless steel probe that is hydraulically pushed through the soil to specified sampling depths. A

geologist from AET working under the direction of a California Professional Geologist logged the borings.

The hand auger boring was advanced to a depth of approximately 4 feet bgs in the pit (approximately equal to 14 feet bgs in the geoprobe borings. The single soil sample was collected in a brass liner for analysis. The boring was backfilled with the native soil.

The samples were handled under strict chain-of-custody documentation. American Scientific Laboratories LLC of Los Angeles, California analyzed the soil samples for sodium, chlorides and pH.

Findings

The soil encountered in the borings was sand to 14 feet bgs turning to gravelly sand to the terminated depth of the boring (15 feet). No anomalous conditions were observed.

Chlorides were measured in the soil samples with concentrations ranging from not detected to 35.1 milligrams per kilogram (mg/kg) (see Table 1). Sodium concentrations ranged from 138 to 438 mg/kg (Table 1). The pH values measured in the soil samples ranged from 9.37 to 10.0 (Table 1). In general, the concentrations decreased with depth. A copy of the laboratory results is attached to this report as Appendix A.

Conclusions

There are no standards for chlorides or sodium in soil. The values measured in the soil samples (chlorides less than 4 thousandths of a percent and sodium less than 5 hundredths of a percent) are considered insignificant.

According to the California Code of Regulations Title 22, Environmental Health Standards for the Management of Hazardous Waste, a pH value of less than or equal to 2 or greater than or equal to 12.5, the material is a hazardous waste. The results of the laboratory analysis, shows a maximum value of 10.0 for the pH and is not a hazardous waste. This value is not considered significant.

Based on the results of the soil sampling, no further assessment is considered warranted.

Limitations

This report has been prepared for the Ventura Regional Sanitation District as a Limited Phase II soil assessment of subsurface conditions at their former wastewater facility at 3555 Ventura Road, Ventura, California. In performing the professional services, AET applied present engineering and

scientific judgment and used a level of effort consistent with the standard of practice measured on the date of this report and in the locale of the project Site for similar type studies. Applied Environmental Technologies, Inc., makes no warranty, expressed or implied, in fact or by law, whether of merchantability, fitness for any particular purpose, or otherwise, concerning any of the materials or "services" furnished by Applied Environmental Technologies, Inc., to the client.

The analyses and interpretations in this report have been developed based on the review of existing information pertaining to the project site and limited subsurface testing. It should be recognized that subsurface contamination could vary laterally and with depth below a given site.

It has been a pleasure to prepare this report for your consideration. Should you have any questions, please call.

Very truly yours,
Applied Environmental
Technologies, Inc.

Wally A. Jensky, PG
Senior Professional Geologist

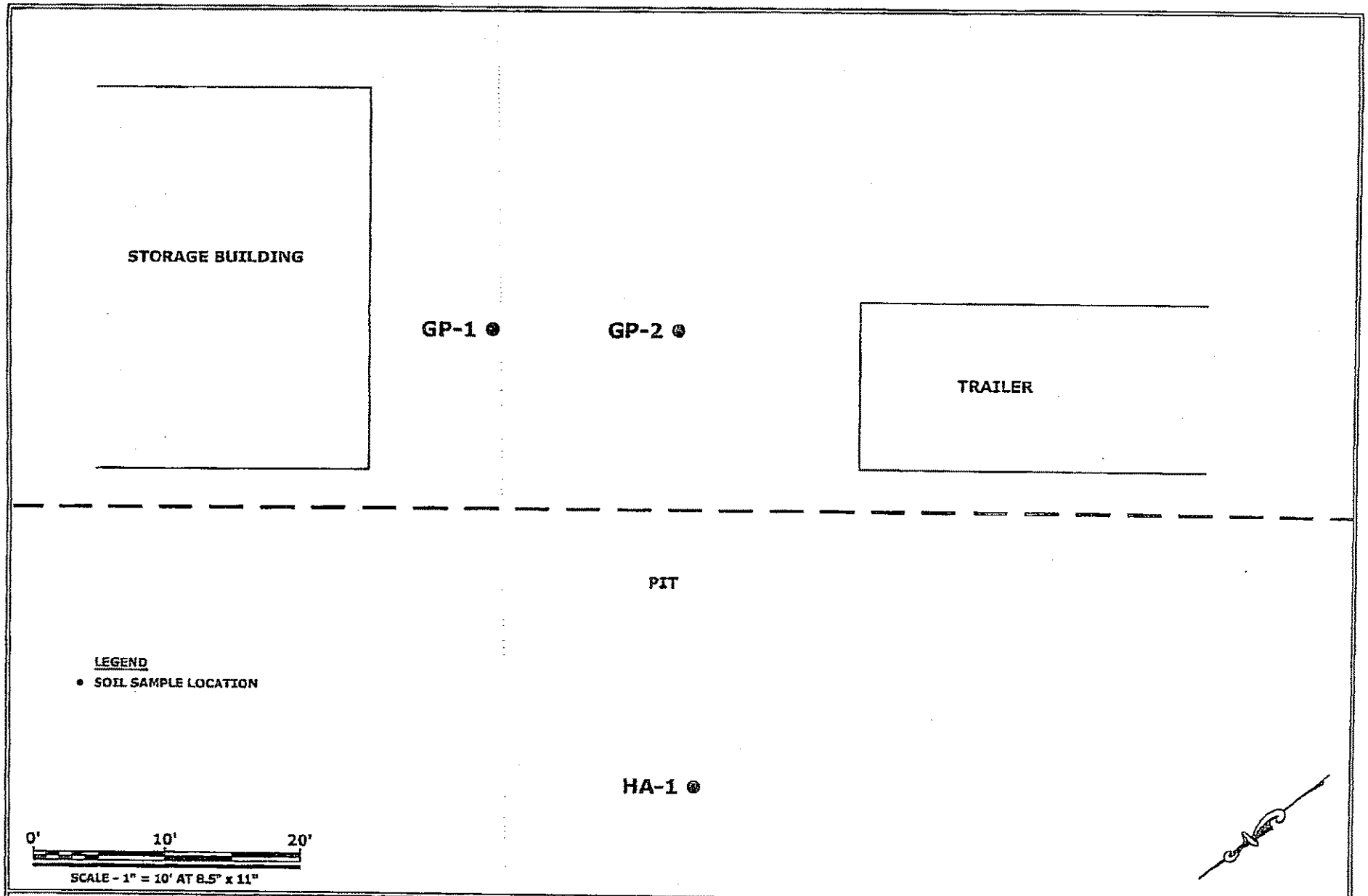
Harry C. Finney, R.E.A.
Vice President

HCF/wd

Attachment: Table 1
Appendix A – Laboratory Results

Table 1
Laboratory Results (mg/kg)

Constituent		GP-1-5'	GP-1-10'	GP-1-15'	GP-2-5'	GP-2-10'	HA-1-14'
Chlorides		18.5	ND	ND	35.1	34.6	23.7
Sodium		438	367	142	190	138	169
PH		10.0	9.76	9.45	9.65	9.56	9.38



Applied Environmental Technologies, Inc.
4561 Market Street, Suite B • Ventura, California 93003
Phone (805)650-1400 Fax (805)650-1576

SOIL SAMPLE LOCATIONS
3555 VENTURA ROAD
VENTURA, CALIFORNIA

PLATE REFERENCE 152201A2B	JULY 2, 2007	PROJECT NUMBER 1522-01

PLATE 2

AMERICAN SCIENTIFIC LABORATORIES, LLC
Environmental Testing Services
2520 N. San Fernando Rd., Los Angeles, CA 90065 Tel: (323) 223-9700 Fax: (323) 223-9500

Ordered By

Applied Enviro. Technologies, Inc.
4561 Market St., Suite B
Ventura, CA 93003

Number of Pages: 7
Date Received: 06/14/2007
Date Reported: 06/22/2007

Telephone (805) 650-1400
Attn Harry Finney

Job Number	Ordered	Client
34213	06/14/2007	AET

#41024

Project ID: 1522-01A
Project Name: 3555 Ventura Road

Enclosed are the results of analyses on 6 samples analyzed as specified on attached chain of custody.

Amolk MOLKY Brar
Laboratory Manager

Rojert G. Araghi
Laboratory Director

American Scientific Laboratories, LLC (ASL) accepts sample materials from clients for analysis with the assumption that all of the information provided to ASL verbally or in writing by our clients (and/or their agents) regarding samples being submitted to ASL is complete and accurate. ASL accepts all samples subject to the following conditions:
1) ASL is not responsible for verifying any client-provided information regarding any samples submitted to the laboratory.
2) ASL is not responsible for any consequences resulting from any inaccuracies, omissions, or misrepresentations contained in client provided information regarding samples submitted to the laboratory.

1522-01A	3555 Ventura Rd.	HCF	JPW	ASL	N/A

CHAIN OF CUSTODY RECORD

Applied Environmental Technologies, Inc.
(805) 650-1400 • FAX (805) 650-1576 • 4561 MARKET ST., SUITE B, VENTURA, CA 93003

Sample Identification	Date	Time	Sample Container (Size/Material) one of the following	Sample Type (Liquid, Soil, etc.)	Preservative	Analyses Requested A	B	C	D	E	F	Laboratory ID#	Comments
GP-1-5'	6/13/07	12:30pm	1½"x6" brass, 2" acetate, or 1" acetate	SOIL	ICE	X	X	X				197143	
GP-1-10'		12:45				X	X	X				197144	
GP-1-15'		1:00				X	X	X				197145	
GP-2-5'		1:20				X	X	X				197146	
GP-2-10'		2:15				X	X	X				197147	
HA-1-14'		1:45				X	X	X				197148	

Relinquished By (Signature)	Date	Time	Received By (Signature)
[signature]	6/13/07	4:15pm	
[signature]	6/14/07	11:15	[signature]

Analyses:
A Chlorides
B Sodium
C Ph
D
E
F

AMERICAN SCIENTIFIC LABORATORIES, LLC
Environmental Testing Services
2520 N. San Fernando Rd., Los Angeles, CA 90065 Tel: (323) 223-9700 Fax: (323) 223-9500

ANALYTICAL RESULTS

Ordered By

Applied Enviro. Technologies, Inc.
4561 Market St., Suite B
Ventura, CA 93003

Telephone: (805)650-1400
Attn: Harry Finney

Page: 2

Project ID: 1522-01A
Project Name: 3555 Ventura Road

ASL Job Number	Submitted	Client
34213	06/14/2007	AET

Method: 300, Chloride by Ion Chromatography

QC Batch No: 061907-2

Our Lab I.D.		197143	197144	197145	197146	197147
Client Sample I.D.		GP-1-5'	GP-1-10'	GP-1-15'	GP-2-5'	GP-2-10'
Date Sampled		06/13/2007	06/13/2007	06/13/2007	06/13/2007	06/13/2007
Date Prepared		06/19/2007	06/19/2007	06/19/2007	06/19/2007	06/19/2007
Preparation Method						
Date Analyzed		06/19/2007	06/19/2007	06/19/2007	06/19/2007	06/19/2007
Matrix		Soil	Soil	Soil	Soil	Soil
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Dilution Factor		1	1	1	1	1
Analytes	PQL	Results	Results	Results	Results	Results
Conventionals						
Chloride	10.00	18.5	ND	ND	35.1	34.6

QUALITY CONTROL REPORT

QC Batch No: 061907-2

Analytes	LCS % REC	LCS DUP % REC	LCS RPD % REC	LCS/LCSD % Limit	LCS RPD % Limit					
Conventionals										
Chloride	106	107	<1	80-120	<20					

AMERICAN SCIENTIFIC LABORATORIES, LLC
Environmental Testing Services
2520 N. San Fernando Rd., Los Angeles, CA 90065 Tel: (323) 223-9700 Fax. (323) 223-9500

ANALYTICAL RESULTS

Ordered By

Applied Enviro. Technologies, Inc.
4561 Market St., Suite B
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Telephone: (805)650-1400
Attn: Harry Finney

Page: 3

Project ID: 1522-01A
Project Name: 3555 Ventura Road

ASL Job Number	Submitted	Client
34213	06/14/2007	AET

Method: 300, Chloride by Ion Chromatography

QC Batch No: 061907-2

Our Lab I.D.		197148				
Client Sample I.D.		HA-1-14'				
Date Sampled		06/13/2007				
Date Prepared		06/19/2007				
Preparation Method						
Date Analyzed		06/19/2007				
Matrix		Soil				
Units		mg/Kg				
Dilution Factor		1				
Analytes	PQL	Results				
Conventionals						
Chloride	10.00	23.7				

QUALITY CONTROL REPORT

QC Batch No: 061907-2

Analytes	LCS % REC	LCS DUP % REC	LCS RPD % REC	LCS/LCSD % Limit	LCS RPD % Limit					
Conventionals										
Chloride	106	107	<1	80-120	<20					

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ANALYTICAL RESULTS

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Page: 4

Project ID: 1522-01A
Project Name: 3555 Ventura Road

ASL Job Number	Submitted	Client
34213	06/14/2007	AET

Method: 9045C, Soil and Waste pH

QC Batch No: 061907-2

Our Lab I.D.		197143	197144	197145	197146	197147
Client Sample I.D.		GP-1-5'	GP-1-10'	GP-1-15'	GP-2-5'	GP-2-10'
Date Sampled		06/13/2007	06/13/2007	06/13/2007	06/13/2007	06/13/2007
Date Prepared		06/15/2007	06/15/2007	06/15/2007	06/15/2007	06/15/2007
Preparation Method						
Date Analyzed		06/15/2007	06/15/2007	06/15/2007	06/15/2007	06/15/2007
Matrix		Soil	Soil	Soil	Soil	Soil
Units		pH Units	pH Units	pH Units	pH Units	pH Units
Dilution Factor		1	1	1	1	1
Analytes	**PQL**	**Results**	**Results**	**Results**	**Results**	**Results**
Conventionals						
pH	1.00	10.0	9.76	9.45	9.65	9.56

QUALITY CONTROL REPORT

QC Batch No: 061907-2

Analytes	LCS % REC	LCS DUP % REC	LCS RPD % REC	LCS/LCSD % Limit	LCS RPD % Limit					
Conventionals										
pH	100	100	<1	80-120						

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ANALYTICAL RESULTS

Ordered By

Applied Enviro. Technologies, Inc.
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Telephone: (805)650-1400
Attn: Harry Finney

Page: 5

Project ID: 1522-01A
Project Name: 3555 Ventura Road

ASL Job Number	Submitted	Client
34213	06/14/2007	AET

Method: 9045C, Soil and Waste pH

QC Batch No: 061907-2

Our Lab I.D.		197148				
Client Sample I.D.		HA-1-14'				
Date Sampled		06/13/2007				
Date Prepared		06/15/2007				
Preparation Method						
Date Analyzed		06/15/2007				
Matrix		Soil				
Units		pH Units				
Dilution Factor		1				
Analytes	PQL	Results				
Conventionals						
pH	1.00	9.37				

QUALITY CONTROL REPORT

QC Batch No: 061907-2

Analytes	LCS % REC	LCS DUP % REC	LCS RPD % REC	LCS/LCSD % Limit	LCS RPD % Limit					
Conventionals										
pH	100	100	<1	80-120						

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ANALYTICAL RESULTS

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Telephone: (805)650-1400
Attn: Harry Finney

Page: 6

Project ID: 1522-01A
Project Name: 3555 Ventura Road

ASL Job Number	Submitted	Client
34213	06/14/2007	AET

Method: 6010B, Sodium (ICP)

Our Lab I.D.		197143	197144	197145	197146	197147
Client Sample I.D.		GP-1-5'	GP-1-10'	GP-1-15'	GP-2-5'	GP-2-10'
Date Sampled		06/13/2007	06/13/2007	06/13/2007	06/13/2007	06/13/2007
Date Prepared		06/19/2007	06/19/2007	06/19/2007	06/19/2007	06/19/2007
Preparation Method						
Date Analyzed		06/22/2007	06/22/2007	06/22/2007	06/22/2007	06/22/2007
Matrix		Soil	Soil	Soil	Soil	Soil
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Dilution Factor		1	1	1	1	1
Analytes	PQL	Results	Results	Results	Results	Results
ICP Metals						
Sodium	25.00	438	367	142	190	138

QUALITY CONTROL REPORT

Analytes	LCS % REC	LCS/LCSD % Limit								
ICP Metals										
Sodium	101	80-120								

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ANALYTICAL RESULTS

Ordered By

Applied Enviro. Technologies, Inc.
4561 Market St., Suite B
Ventura, CA 93003

Telephone: (805)650-1400
Attn: Harry Finney

Page: 7

Project ID: 1522-01A
Project Name: 3555 Ventura Road

ASL Job Number	Submitted	Client
34213	06/14/2007	AET

Method: 6010B, Sodium (ICP)

Our Lab I.D.		197148				
Client Sample I.D.		HA-1-14'				
Date Sampled		06/13/2007				
Date Prepared		06/19/2007				
Preparation Method						
Date Analyzed		06/22/2007				
Matrix		Soil				
Units		mg/Kg				
Dilution Factor		1				
Analytes	PQL	Results				
ICP Metals						
Sodium	25.00	169				

QUALITY CONTROL REPORT

Analytes	LCS % REC	LCS/LCSD % Limit								
ICP Metals										
Sodium	101	80-120								

ENSR

File Johnson (R/W)

Letter of Transmittal

ATTENTION:

Mr. Jay Spurgin
Senior Civil Engineer
Engineering Services
City of San Buenaventura
501 Poli Street, Room 120
Ventura, California 93002-0099

DATE:

September 9, 1999

PROJECT REFERENCE:

Results of the Limited Phase II Soil and Groundwater Assessment at the 3348 Ventura Road (Portion of the Leland Street, Johnson Drive, and U.S. 101 Freeway Interchange Relocation Area), Ventura, California

PROJECT NUMBER:

1621-008-400

WE ARE SENDING YOU THE FOLLOWING:

Number of Originals	Number of Copies	Description
3		Letter report dated August 31, 1999 Results of the Limited Phase II Soil and Groundwater Assessment at the 3348 Ventura Road (Portion of the Leland Street, Johnson Drive, and U.S. 101 Freeway Interchange Relocation Area), Ventura, California

REMARKS:

Please call if you have any questions or concerns.

SIGNATURE:

John R. Cook

MP Enterprises

John R. Cook
Sr. Staff Specialist

Both billed on same PO?

1220 Avenida Acaso
Camarillo, CA 93012
(805) 388-3775
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Document1

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August 31, 1999

Mr. Jay Spurgin
Senior Civil Engineer
Engineering Services
City of San Buenaventura
501 Poli Street, Room 120
Ventura, California 93002-0099

MP Enterprises

Re: **1621-008-400**

Subject: **Results of the Limited Phase II Soil and Groundwater Assessment at the 3348 Ventura Road (Portion of the Leland Street, Johnson Drive, and U.S. 101 Freeway Interchange Relocation Area), Ventura, California**

Dear Mr. Spurgin:

This letter report presents the analytical findings and field documentation for the limited subsurface soil and shallow groundwater assessment conducted by ENSR at the MP Enterprises, Inc., facility at 3348 Ventura Road, Ventura, California (subject site). The purpose of this assessment was to evaluate subsurface conditions below the subject site prior to abandonment and redevelopment as part of the Johnson Drive and Leland Street realignment project. The assessment program was verbally authorized to proceed by the City of Ventura (City) on July 26, 1999 and was performed on August 8, 1999, under the blanket purchase order No. B00-389.

completed? grading? oil removal?

10 years ago

The regional location of the site is shown on Figure 1 - Site Vicinity Map. Location of the subject site and sampling points is shown on Figure 2 – Site Plan. The laboratory analytical results of soil samples collected are presented in Appendix A – Soil and Groundwater Sample Analytical Results.

BACKGROUND

The MP Enterprises facility is located at the southeastern portion of the intersection of Johnson Drive, Leland Street, and the U.S. 101 Freeway (Figure 1). The facility is used for maintenance of trucks and is approximately 25 feet above mean sea level (msl).

While onsite, ENSR observed several 55-gallon metal drums apparently storing used motor oil, diesel fuel, waste hydraulic fluids, and used ethylene glycol coolant at the truck maintenance area. Additionally, ENSR observed a solvent parts washer, a 550-gallon waste oil above storage tank (AST), and several areas of concrete staining (Figure 2). The vacant lot east of the subject site contained various pieces of scrap metal, plastic debris, used oil filters, and wood. The lot was completely enclosed by a chain link fence. Exploratory soil borings could not be drilled in these areas because of limited access. Additionally, several areas of surficial staining

← part of subject prop.

were noted in the rear portion of the facility that could also not be accessed by the drilling equipment.

Did they?

It is ENSR's understanding that the City intends to acquire the northern portion of the MP Enterprises property to realign Johnson Drive and Leland Street (Figure 2). The exploratory drilling program was designed to assess the soil and shallow groundwater below the accessible areas within the portion of the subject site to be acquired by the City.

SOIL AND GROUNDWATER SAMPLING AND TESTING METHODOLOGIES

On August 8, 1999, five (5) continuously cored soil borings (GP-1 through GP-5) were advanced to a depth of 20 feet below ground surface (bgs) using the Geoprobe™ drilling system provided by Vironex Field Services, Inc. (VFS), of El Segundo, California. The Geoprobe™ drilling system consists of a hydraulically operated hammer mounted on the bed of a Ford F250 pickup truck. An ENSR geologist was onsite to direct VFS during the collection of soil and groundwater samples (see below). Soil samples retained for chemical analysis were cut from the cores in each of the five borings at depths of 3 feet and 20 feet bgs. In addition to the soil samples two (2) groundwater samples were collected from borings GP-1 and GP-4 below the water table at a depth of 24 feet bgs. Logs describing subsurface soil conditions are presented in Appendix B – Logs of Soil Borings GP-1 through GP-5.

Soil Sampling. The coring operations were conducted using the Geoprobe™ hammer, which drove a 2.5-inch-diameter by 4 foot-long stainless-steel sampler fitted with pre-sterilized, clear plastic core tubes into the subsurface soils. At the desired sampling depth, the sampler tip was unlocked and driven 4 feet into undisturbed native soil. The sampler was retrieved and the cores were visually logged and classified using the Unified Soil Classification System (ASTM D2488), and field-tested with a photoionization detector (PID) Microtip model HL-100 for the presence volatile organic compounds (VOCs). Soil samples selected for chemical analysis were cut from the cores, capped, sealed, labeled, and placed on artificial ice chilled to approximately 4° Celsius until delivery to the analytical laboratory for analysis. Borings were backfilled with bentonite slurry and capped with surface soils.

Groundwater Sampling. Groundwater samples were collected at a depth of 24 feet from borings GP-1 and GP-4 by pushing a stainless steel, retractable slotted mesh screen sampler through the Geoprobe™ four feet into the saturated soils. The fine mesh screen separates the groundwater from the soil media, which allows the groundwater to flow into the sampler. The sampler was attached to 3/8-inch diameter pre-sterilized Teflon™ tubing to pump the groundwater to the surface. At the surface, groundwater was removed with a 12-volt peristaltic pump. Each sample container was filled at the discharge of the pump. The analytical

laboratory supplied pre-sterilized 40-milliliters VOA vials and 1-liter amber bottles for the groundwater samples. Each filled sample container was sealed, labeled, and placed in a cooler chilled to approximately 4° Celsius until delivery to the analytical laboratory for analysis.

SOIL AND GROUNDWATER SAMPLE ANALYTICAL TESTING METHODS

Soil Sample Analytical Testing. ENSR utilized the services of Capco Analytical Services, Inc. (CAS) of Ventura, California to perform the soil and groundwater sample analytical testing (state license No. 1445). All soil samples collected (10 samples) were analyzed for total petroleum hydrocarbons by U.S. EPA method 8015 modified for fuel fingerprint (TPH-ff). The soil samples collected at 20 feet bgs (5 samples) were additionally tested for VOCs by U.S. EPA method 8260. The soil samples collected at 3 feet bgs (5 samples) were additionally tested for California Assessment Manual Metals (CAM Metals) by U.S. EPA method 6010/7000 series.

Groundwater Sample Testing. The two groundwater samples collected from Borings GP-1 and GP-4 were tested for TPH-ff, VOCs, and CAM Metals by the same analytical methods listed above.

FINDINGS

Field Observations. Artificial fill soils consisting of dense sands and gravels with layers of crushed asphalt base materials and inter-bedded trash (wires, plastic and glass debris) were encountered from surface grade to about 8 feet bgs in all of the borings installed. Below 8 feet bgs, native alluvial materials consisting of interbedded fine to coarse sands with gravel transitioning to fine sandy gravel were encountered to a depth of 19.5 feet bgs in all of the borings drilled. Below 19.5 feet bgs a saturated dark gray to black coarse sand was encountered to the total depth of each boring (20 feet bgs). This sand contained decayed wood fibers and had a sewer-like odor.

PID readings recorded at depths of 3 and 20 feet bgs in the five soil borings ranged from 1.3 to 20.6 parts per million by volume (ppmv). In all cases the PID readings increased in the sample collected at the water table, in some cases as much as an order of magnitude.

Soil and Groundwater Analytical Results. The results of the soil and groundwater analytical testing are presented in Table 1 – Soil and Groundwater Analytical Results.

TABLE 1
Soil and Groundwater Analytical Results
(Date collected: August 8, 1999)

Boring No.	Depth (Feet)	Sample No.	Sample Matrix	Analytical Results are Reported in Milligrams per kilograms (soil) or Milligrams per liter (mg/L) (water)				
				TPH-ff			VOCs[1]	
				$C_{12}-C_{12}$	$C_{13}-C_{22}$	C_{23+}	Toluene	1,2,3-Trichloropropane
GP-1	3	GP-1/3	Soil	ND	ND	ND	NA	NA
	20	GP-1/20	Soil	ND	ND	ND	ND	ND
		GP-1/W	Water	ND	ND	ND	0.00051	0.00061
GP-2	3	GP-2/3	Soil	ND	ND	ND	NA	NA
	20	GP-2/20	Soil	ND	ND	ND	ND	ND
GP-3	3	GP-3/3	Soil	ND	ND	ND	NA	NA
	20	GP-3/20	Soil	ND	ND	ND	ND	ND
GP-4	3	GP-4/3	Soil	ND	ND	ND	NA	NA
	20	GP-4/20	Soil	ND	ND	ND	ND	ND
		GP-4/W	Water	ND	ND	ND	0.00056	ND
GP-5	3	GP-5/3	Soil	ND	ND	ND	NA	NA
	20	GP-5/20	Soil	ND	ND	ND	ND	ND
Detection Limits			Soil	0.5	10	10	0.001	0.005
			Water	0.05	0.5	0.5	0.0005	0.0005
MCLs			Water	NE	NE	NE	1.0	NE

VOCs – Volatile Organic Compounds by U. S. EPA method 8260
TPH-ff – total petroleum hydrocarbons by U.S. EPA method 8015 modified for carbon chain range (C_4-C_{12}, C_{13}-C_{22}, and C_{23+})
MCLs – Maximum Contaminant Levels in drinking water set by the State of California
Note Preliminary Remediation Goal (PRG) for 1,2,3-TCP is 0.0016 µg/l)
ND – Not detected above the laboratory practical quantitation limits
NE – Not established
NA – Not Analyzed
1 – Note: All other 55 VOC compounds tested were not detected above the laboratory detection limit (See Appendix A)

Petroleum hydrocarbons and VOCs were not reported in the 10 soil samples analyzed from borings GP-1 through GP-5 at concentrations above practical quantitation limits (PQLs). Additionally, petroleum hydrocarbons were also not reported above PQLs in the two groundwater samples collected from borings GP-1 and GP-4. However, toluene was reported in groundwater samples from borings GP-1 and GP-4 at concentrations slightly above the PQLs (see Table 1). The reported concentration of toluene did not exceed the Maximum Contaminant Level (MCL) for drinking water in California. In addition to toluene, 1,2,3-trichloropropane (1,2,3-TCP) was reported in the groundwater sample from boring GP-1. The compound 1,2,3-TCP does not have an established MCL. The U.S. EPA-established Preliminary Remedial Goals (PRGs) for 1,2,3-TCP is 0.0016 µg/l for tap water. PRGs have a numerical criteria developed by EPA (Region IX) to provide a screening level assessment of risk along complete exposure pathways.

Summary results of the CAM Metals testing are presented on Table 2 – Soil and Groundwater CAM 17 Metal Analytical Results. Based on the results shown on Table 2 reportable concentrations of Arsenic, Barium, Copper, Lead, Vanadium and Zinc were detected above the laboratory PQLs in soil samples collected at 3 feet from borings GP-1 through GP-5. None of the metals detected in the soil samples analyzed exceeded ten times their Soluble Limit Concentration (STLC). Typically, metals at concentrations in excess of 10 times their STLC in soil would be investigated further to determine if they might be classified as a California hazardous waste upon excavation.

In the groundwater samples collected from borings GP-1 and GP-4, copper, selenium, zinc was detected above the laboratory PQLs. None of the groundwater samples contained metals at concentrations above their respective MCLs.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the limited assessment program, ENSR concludes the following:

- The exploratory boring program revealed the area assessed is underlain by artificial fill to a depth of about 8 feet bgs. Groundwater is present below this area at a depth of approximately 19.5 feet bgs;

- In the areas assessed, there is no evidence to suggest there was a release of petroleum hydrocarbons and VOCs to the subsurface soils;

TABLE 2
Soil and Groundwater CAM Metals Analytical Results
(Date Sampled: August 8, 1999)

	Analytical Results are Reported in milligrams per kilograms (soil) or Milligrams per liter (water)										
Soil Boring	**GP-1**		**GP-2**	**GP-3**	**GP-4**		**GP-5**	**Detection Limits**		**CAM 17 Metal Regulatory Limits**	
Sample No.	**GP-1/3**	**GP-1/w**	**GP-2/3**	**GP-3/3**	**GP-4/3**	**GP-4/w**	**GP-5/3**				
Sample Matrix	soil	water	soil	soil	soil	water	soil	soil	water	STLC	TTLC
Antimony	ND	ND	ND	ND	ND	ND	ND	8	0.1	15	500
Arsenic	**0.9**	ND	**0.8**	**2.1**	**0.8**	ND	**1.9**	0.5	0.03	5	500
Barium	**32**	ND	ND	**37**	**32**	ND	**70**	10	0.06	100	10,000
Beryllium	ND	ND	ND	ND	ND	ND	ND	0.8	0.1	0.75	75
Cadmium	ND	ND	ND	ND	ND	ND	ND	1	0.03	1	100
Chromium	ND	ND	ND	ND	ND	ND	ND	9	0.04	560	2,500
Cobalt	ND	ND	ND	ND	ND	ND	ND	10	0.05	80	8,000
Copper	ND	**0.06**	**15**	ND	ND	ND	**14**	10	0.03	25	2,500
Lead	**2.6**	ND	**2.9**	**11**	**1.6**	ND	**6.2**	0.6	0.09	5	1,000
Mercury	ND	ND	ND	ND	ND	ND	ND	0.1	0.0005	0.2	20
Molybdenum	ND	ND	ND	ND	ND	ND	ND	20	0.08	350	3,500
Nickel	ND	ND	ND	ND	ND	ND	ND	10	0.08	20	2,000
Selenium	ND	**0.025**	ND	ND	ND	**0.036**	ND	0.5	0.01	1	100
Silver	ND	ND	ND	ND	ND	ND	ND	2	0.06	5	500
Thallium	ND	ND	ND	ND	ND	ND	ND	0.2	0.2	7	700
Vanadium	**12**	**0.13**	**29**	**12**	**12**	**0.16**	**24**	7	0.07	24	2,400
Zinc	**23**	**0.26**	**68**	**21**	**13**	ND	**46**	10	0.06	250	5,000

CAM Metals – Title 26 ,California Assessment Manual 17 Metals by U.S. EPA method 6010/7000 series
STLC – Soluble Threshold Limit Concentration in milligrams per liter
TTLC – Ten Times Threshold Limit Concentration in milligrams per liter
ND – Not detected above the laboratory quantity limit

State Highway 101

Unpaved Area

Freeway Onramp

Unpaved Area

Santa Clara River Dike

Freeway Offramp

Johnson Drive

Santa Clara River Channel

Union Pacific Railroad

Railroad Easement

Railroad Bridge

Moon Ditch (Concrete Lined)

Chain Link fence

Ventura Conty Flood Control Easment

Moon Ditch (Concrete Lined)

Ventura Conty Flood Control Easment

GP-2

GP-1

Storage Shed

Maintenance Shed

55-Gallon Diesel DOT Drum

Solvent Auto Parts Washer

Riprap/Rock

Unpaved Area

GP-3

GP-4

Concrete Pad

Maintenance Shed

550-Gallon Waste Oil AST

Chain Link Fence

GP-5

55-Gallon Waste Oil DOT Drum Storage

Leland Street

Proposed Southern Limit of Realignment of Johnson Drive

Storage Area

Unpaved

Storage Area

Crown RV Center

Gate

Loading Dock/ Wharehouse

Santa Clara River Dike

Block Well

MP Enterprises Office

U-Cart Concrete

N

0 25 50

FEET

Approximate Scale

LEGEND

GP-1 Geoprobe Soil Only Sampling Locations

GP-2 Geoprobe Soil and Groundwater Sampling Locations

55-Gallon Waste Oil DOT Drum Location

ENSR

FIGURE 2

Soil Boring Location Map

City of Ventura
Johnson Drive and Leland Street Realignment Project
Ventura, California

Drawn by: J. Cook	Date: 8/31/99	Project Number 1621-008-400	Rev. 00
Figure Name: venjon.dsf	Checked by: M. Flack		

- The five surface soil samples analyzed did not contain metals at concentrations above their respective criteria for classification in California hazardous waste if they were to be excavated. The metals data did not suggest there has been a release in the areas assessed;

- Groundwater has not been significantly impacted by VOCs; toluene is present at low concentrations just above PQLs and below MCLs; the 1,2,3 TCP in one of two samples was reported just above the PQL; TCP is a degreasing solvent;

- The source of the toluene and TCP is uncertain; several commercial, maintenance, and automotive facilities are nearby which may have used this chemical as part of past or current practice.

Based on this limited assessment, ENSR does not recommend any further drilling in the presently accessible area to be acquired as part of the proposed roadway expansion. However, based on the observations of surficial staining, drum storage facilities, and parts washer within the area proposed for expansion and not assessed during this program, ENSR recommends the following:

- Upon demolition of surface structures and pavement, soil sampling should be performed prior to soil removal in the stained areas and those areas where chemicals were stored or used for parts cleaning. The samples should be tested to assess if the soil has been impacted by a release of solvents or petroleum compounds.

- During soil removal activities, vapor monitoring of excavated materials should be conducted in those areas not assessed using a PID to monitor for the presence of VOCs.

LIMITATIONS

This letter report has been prepared as a limited soil and groundwater assessment program for the proposed City of San Buenaventura at the property located at 3448 Valentine Road Ventura, California. In performing our professional services, we have applied present engineering and scientific judgment and used a level of effort consistent with the standard of practice measured on the date the work was performed in the locale of the project site for similar type studies. ENSR makes no warranty, express or implied. ENSR Consulting and Engineering, Inc., are not responsible for potential inaccuracies in data reported by others.

The analyses and interpretations in this report have been developed, based on the results from laboratory analyses of the soil and shallow groundwater samples collected at the site. It should

be recognized that subsurface conditions can vary laterally and with depth below a given site and that contaminant sources can go undetected in any limited subsurface assessment.

If you have any questions regarding the contents of this report, please contact one of the undersigned at (805) 388-3775.

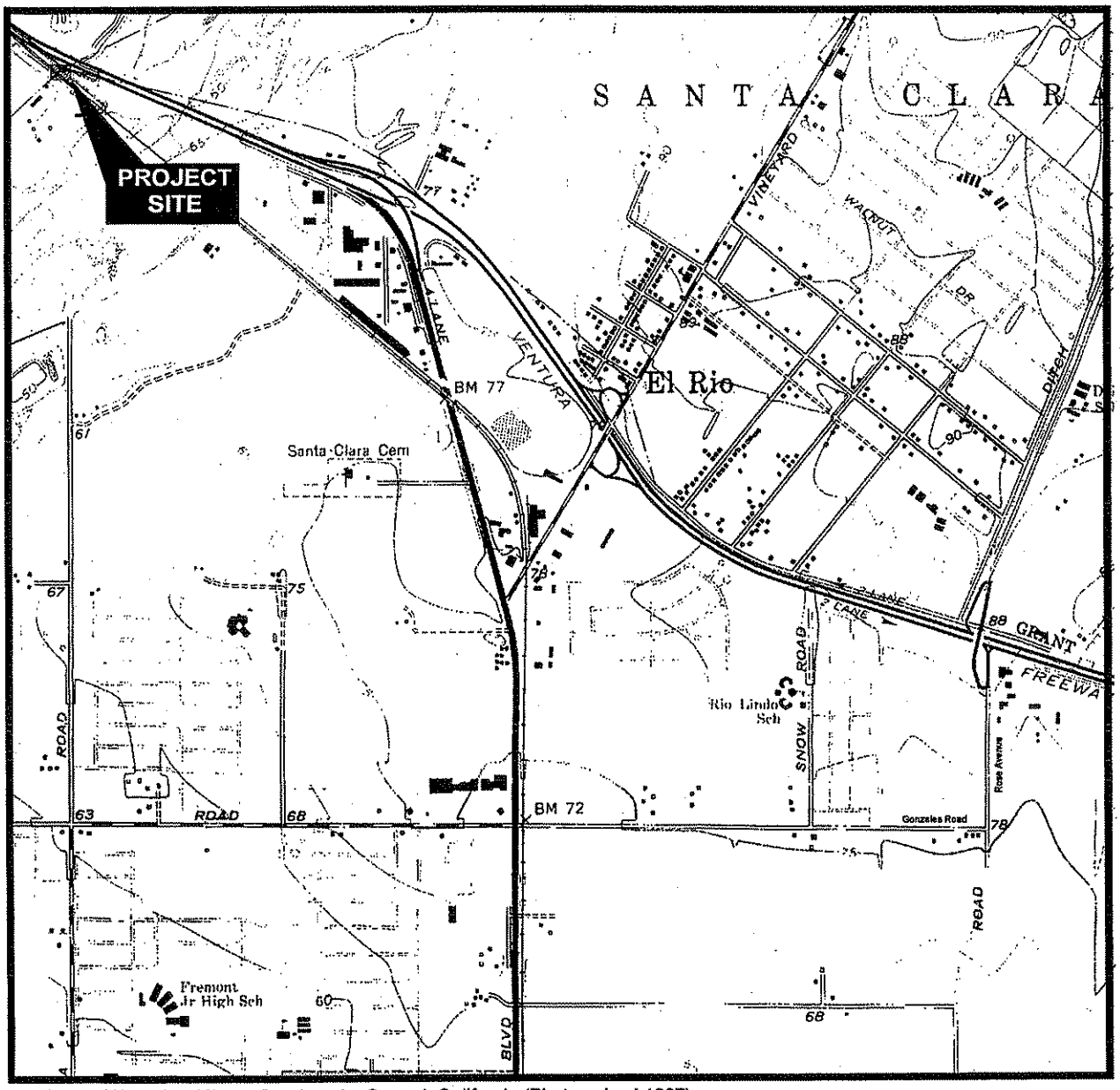
Sincerely,

John R. Cook

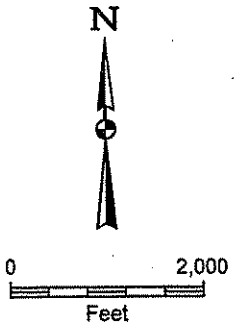
John R. Cook, R.G.
Project Manager

Michael E. Flack, R.G., C.E.G.
Senior Program Manager

Attachments: Tables 1 and 2
Figures 1 and 2
Appendices A and B



SOURCE: USGS 7.5 Minute Quadrangle, Oxnard, California (Photorevised 1967)



ENSR

FIGURE 1

Site Vicinity Map

City of Ventura
Johnson Drive and Leland Street Realignment Project
Ventura, California

Drawn by: J. Cook	Date: 8/31/99	Project Number 1621-008-400
Figure Name: vjonf1.dsf	Checked by: M.Flack	

APPENDIX A

SOIL AND GROUNDWATER SAMPLE ANALYTICAL RESULTS

Capco Analytical Services Incorporated (CAS)
1536 Eastman Avenue, Suite B
Ventura, CA. 93003
(805) 644-1095

Prepared For: ENSR (1621-008-300)
1220 Avenida Acaso
Camarillo, CA 93012

August 13, 1999

ATTENTION: John Cook

Laboratory No: 991317
Date Received: 06-AUG-99
Project: City of Ventura Corner Leland & Johnson Drive

Job No: B05541
Sampled By: Client
ID: See Below

RESULTS

On August 6, 1999, sixteen (16) samples were received for analysis by Capco Analytical Services Inc. The samples were identified and assigned the lab numbers listed below. This report consists of 34 pages excluding the cover letter, and the Chain of Custody.

SAMPLE DESCRIPTION	CAS LAB NUMBER
GP-1/A/3	99131701
GP-1/B/20'	99131702
GP-2/A/3	99131703
GP-2/B/20'	99131704
GP-3/A/3	99131705
GP-3/B/20'	99131706
GP-4/A/3	99131707
GP-4/B/20	99131708
GP-5/A/3	99131709
GP-5/B/20	99131710
GP-4/W	99131711
GP-4/W	99131712
GP-4/W	99131713
GP-1/W	99131714
GP-1/W	99131715
GP-1/W	99131716

Dan A. Farah, Ph.D.
Director - Analytical Operations

This report shall not be reproduced except in full without the written approval of Capco Analytical Services Inc. The test results reported represent only the items being tested and may not represent the entire material from which the sample was taken.

CAPCO Analytical Services, Inc.

Capco Analytical Services INC. (CAS)
1536 Eastman Avenue, Suite B
Ventura CA 93003
(805) 644-1095

Client: ENSR (1621-008-300)
Lab ID: 991317
Matrix: Soil

Analyst: PXY
Date Received: 8/6/99

TOTAL PETROLEUM HYDROCARBONS
EPA METHOD 8015m

Compound	Concentration mg/Kg	Dilution Factor	PQL mg/Kg	Surrogate % Rec.
CAS Lab #: 99131701		**Date Extracted: 8/09/99**		
Client ID: GP-1/A/3		**Date Analyzed: 8/10/99**		
TPH - (C4 - C12)	BQL	1.0	0.5	--
TPH - (C13 - C22)	BQL	1.0	10	97
TPH - (C23+)	BQL			
CAS Lab #: 99131702		**Date Extracted: 8/09/99**		
Client ID: GP-1/B/20'		**Date Analyzed: 8/10/99**		
TPH - (C4 - C12)	BQL	1.0	0.5	--
TPH - (C13 - C22)	BQL	1.0	10	89
TPH - (C23+)	BQL			
CAS Lab #: 99131703		**Date Extracted: 8/09/99**		
Client ID: GP-2/A/3		**Date Analyzed: 8/10/99**		
TPH - (C4 - C12)	BQL	1.0	0.5	--
TPH - (C13 - C22)	BQL	1.0	10	87
TPH - (C23+)	BQL			

Surrogate: n-Undecane
Surrogate Control Limits: 57 - 114 %
PQL: Practical Quantitation Limit
BQL: Below Practical Quantitation Limit

Peter Yu
Principal Analyst

CAPCO Analytical Services, Inc.

Capco Analytical Services INC. (CAS)
1536 Eastman Avenue, Suite B
Ventura CA 93003
(805) 644-1095

Client: ENSR (1621-008-300)
Lab ID: 991317
Matrix: Soil

Analyst: PXY
Date Received: 8/6/99

TOTAL PETROLEUM HYDROCARBONS
EPA METHOD 8015m

Compound	Concentration mg/Kg	Dilution Factor	PQL mg/Kg	Surrogate % Rec.
CAS Lab #: 99131704		**Date Extracted: 8/09/99**		
Client ID: GP-2/B/20'		**Date Analyzed: 8/10/99**		
TPH - (C4 - C12)	BQL	1.0	0.5	--
TPH - (C13 - C22)	BQL	1.0	10	96
TPH - (C23+)	BQL			
CAS Lab #: 99131705		**Date Extracted: 8/09/99**		
Client ID: GP-3/A/3		**Date Analyzed: 8/10/99**		
TPH - (C4 - C12)	BQL	1.0	0.5	--
TPH - (C13 - C22)	BQL	1.0	10	103
TPH - (C23+)	BQL			
CAS Lab #: 99131706		**Date Extracted: 8/09/99**		
Client ID: GP-3/B/20'		**Date Analyzed: 8/10/99**		
TPH - (C4 - C12)	BQL	1.0	0.5	--
TPH - (C13 - C22)	BQL	1.0	10	94
TPH - (C23+)	BQL			

Surrogate: n-Undecane
Surrogate Control Limits: 57 - 114 %
PQL: Practical Quantitation Limit
BQL: Below Practical Quantitation Limit

Peter Yu
Principal Analyst

CAPCO Analytical Services, Inc.

Capco Analytical Services INC. (CAS)
1536 Eastman Avenue, Suite B
Ventura CA 93003
(805) 644-1095

Client: ENSR (1621-008-300)
Lab ID: 991317
Matrix: Soil

Analyst: PXY
Date Received: 8/6/99

TOTAL PETROLEUM HYDROCARBONS
EPA METHOD 8015m

Compound	Concentration mg/Kg	Dilution Factor	PQL mg/Kg	Surrogate % Rec.
CAS Lab #: 99131707		**Date Extracted: 8/09/99**		
Client ID: GP-4/A/3		**Date Analyzed: 8/10/99**		
TPH - (C4 - C12)	BQL	1.0	0.5	--
TPH - (C13 - C22)	BQL	1.0	10	95
TPH - (C23+)	BQL			
CAS Lab #: 99131708		**Date Extracted: 8/09/99**		
Client ID: GP-4/B/20		**Date Analyzed: 8/10/99**		
TPH - (C4 - C12)	BQL	1.0	0.5	--
TPH - (C13 - C22)	BQL	1.0	10	90
TPH - (C23+)	BQL			
CAS Lab #: 99131709		**Date Extracted: 8/09/99**		
Client ID: GP-5/A/3		**Date Analyzed: 8/10/99**		
TPH - (C4 - C12)	BQL	1.0	0.5	--
TPH - (C13 - C22)	BQL	1.0	10	88
TPH - (C23+)	BQL			

Surrogate: n-Undecane
Surrogate Control Limits: 57 - 114 %
PQL: Practical Quantitation Limit
BQL: Below Practical Quantitation Limit

Peter Yu
Principal Analyst

CAPCO Analytical Services, Inc.

Capco Analytical Services INC. (CAS)
1536 Eastman Avenue, Suite B
Ventura CA 93003
(805) 644-1095

Client: ENSR (1621-008-300)
Lab ID: 991317
Matrix: Soil

Analyst: PXY
Date Received: 8/6/99

TOTAL PETROLEUM HYDROCARBONS
EPA METHOD 8015m

Compound	Concentration mg/Kg	Dilution Factor	PQL mg/Kg	Surrogate % Rec.
CAS Lab #: 99131710		**Date Extracted: 8/09/99**		
Client ID: GP-5/B/20		**Date Analyzed: 8/10/99**		
TPH - (C4 - C12)	BQL	1.0	0.5	--
TPH - (C13 - C22)	BQL	1.0	10	95
TPH - (C23+)	BQL			
CAS Lab #: 991317-MB		**Date Extracted: 8/09/99**		
Client ID: Method Blank		**Date Analyzed: 8/10/99**		
TPH - (C4 - C12)	BQL	1.0	0.5	--
TPH - (C13 - C22)	BQL	1.0	10	93
TPH - (C23+)	BQL			

Surrogate: n-Undecane
Surrogate Control Limits: 57 - 114 %
PQL: Practical Quantitation Limit
BQL: Below Practical Quantitation Limit

Peter Yu
Principal Analyst

CAPCO Analytical Services, Inc.

Capco Analytical Services INC. (CAS)
1536 Eastman Avenue, Suite B
Ventura CA 93003
(805) 644-1095

Client: ENSR (1621-008-300)
Lab ID: 991317
Matrix: Water

Analyst: PXY
Date Received: 8/6/99

TOTAL PETROLEUM HYDROCARBONS
EPA METHOD 8015m

Compound	Concentration mg/L	Dilution Factor	PQL mg/L	Surrogate % Rec.
CAS Lab #: 99131711, 12		**Date Extracted: 8/11/99**		
Client ID: GP-4/W		**Date Analyzed: 8/11/99**		
TPH - (C4 - C12)	BQL	1.0	0.05	--
TPH - (C13 - C22)	BQL	1.0	0.50	91
TPH - (C23+)	BQL			
CAS Lab #: 99131714, 15		**Date Extracted: 8/11/99**		
Client ID: GP-1/W		**Date Analyzed: 8/11/99**		
TPH - (C4 - C12)	BQL	1.0	0.05	--
TPH - (C13 - C22)	BQL	1.0	0.50	95
TPH - (C23+)	BQL			
CAS Lab #: 991317-MB		**Date Extracted: 8/11/99**		
Client ID: Method Blank		**Date Analyzed: 8/11/99**		
TPH - (C4 - C12)	BQL	1.0	0.05	--
TPH - (C13 - C22)	BQL	1.0	0.50	78
TPH - (C23+)	BQL			

Surrogate: n-Undecane
Surrogate Control Limits: 54 - 105 %
PQL: Practical Quantitation Limit
BQL: Below Practical Quantitation Limit

Peter Yu

Principal Analyst

CAPCO Analytical Services, Inc.

Capco Analytical Services INC. (CAS)
1536 Eastman Avenue, Suite B
Ventura CA 93003
(805) 644-1095

Client: ENSR (1621-008-300)
Sample ID: GP-1/B/20'
CAS LAB NO: 99131702
Date Received: 8/6/99
Date Sampled: 8/6/99

Date Analyzed: 8/6/99
Analyst: JAC/ST
Sample Matrix: Soil
Date Extracted: N/A
Time Sampled: 1307

VOLATILE ORGANIC COMPOUNDS
EPA Method 8260

Compound	Concentration ug/Kg	Dilution Factor	PQL ug/Kg
Benzene	BQL	1	5
Bromobenzene	BQL	1	10
Bromochloromethane	BQL	1	10
Bromodichloromethane	BQL	1	10
Bromoform	BQL	1	10
Bromomethane	BQL	1	10
N-Butylbenzene	BQL	1	10
sec-Butylbenzene	BQL	1	5
tert-Butylbenzene	BQL	1	5
Carbon Tetrachloride	BQL	1	10
Chlorobenzene	BQL	1	5
Chloroethane	BQL	1	10
Chloroform	BQL	1	5
Chloromethane	BQL	1	10
2-Chlorotoluene	BQL	1	10
4-Chlorotoluene	BQL	1	5
Chlorodibromomethane	BQL	1	10
1,2-Dibromo-3-chloropropane	BQL	1	30
1,2-Dibromoethane (EDB)	BQL	1	10
Dibromomethane	BQL	1	40
1,2-Dichlorobenzene	BQL	1	10
1,3-Dichlorobenzene	BQL	1	5
1,4-Dichlorobenzene	BQL	1	10
Dichlorodifluoromethane	BQL	1	10
1,1-Dichloroethane	BQL	1	5
1,2-Dichloroethane (EDC)	BQL	1	10
1,1-Dichloroethene	BQL	1	10
cis-1,2-Dichloroethene	BQL	1	5
trans-1,2-Dichloroethene	BQL	1	5
1,2-Dichloropropane	BQL	1	10
1,3-Dichloropropane	BQL	1	10
2,2-Dichloropropane	BQL	1	10

Principal Analyst

CAPCO Analytical Services, Inc.

Client: ENSR (1621-008-300)
Sample ID: GP-1/B/20'
CAS LAB NO: 99131702
Date Received: 8/6/99
Date Sampled: 8/6/99

Date Analyzed: 8/6/99
Analyst: JAC/ST
Sample Matrix: Soil
Date Extracted: N/A
Time Sampled: 1307

VOLATILE ORGANIC COMPOUNDS
EPA Method 8260 continued

Compound	Concentration ug/Kg	Dilution Factor	PQL ug/Kg
1,1-Dichloropropene	BQL	1	10
Ethylbenzene	BQL	1	10
Hexachlorobutadiene	BQL	1	10
Isopropylbenzene	BQL	1	5
p-Isopropyltoluene	BQL	1	10
Methylene Chloride	BQL	1	10
Napthalene	BQL	1	10
N-Propylbenzene	BQL	1	5
Styrene	BQL	1	5
1,1,1,2-Tetrachloroethane	BQL	1	10
1,1,2,2-Tetrachloroethane	BQL	1	20
Tetrachloroethene	BQL	1	10
Toluene	BQL	1	10
1,2,3-Trichlorobenzene	BQL	1	20
1,2,4-Trichlorobenzene	BQL	1	20
1,1,1-Trichloroethane	BQL	1	10
1,1,2-Trichloroethane	BQL	1	10
Trichloroethylene	BQL	1	10
Trichlorofluoromethane	BQL	1	10
1,2,3-Trichloropropane	BQL	1	50
1,2,4-Trimethylbenzene	BQL	1	10
1,3,5-Trimethylbenzene	BQL	1	5
Vinyl Chloride	BQL	1	5
total Xylenes	BQL	1	10
MTBE	BQL	1	30

SURROGATE RECOVERY

Surrogate	% Recovery	Control Limits
Dibromofluoromethane	104	80-120%
Toluene-d8	106	81-117%
4-Bromofluorobenzene	89	74-121%

BQL: Below Practical Quantitation Limit
PQL: Practical Quantitation Limit

Principal Analyst

CAPCO Analytical Services, Inc.

Capco Analytical Services INC. (CAS)
1536 Eastman Avenue, Suite B
Ventura CA 93003
(805) 644-1095

Client: ENSR (1621-008-300)
Sample ID: GP-2/B/20'
CAS LAB NO: 99131704
Date Received: 8/6/99
Date Sampled: 8/6/99

Date Analyzed: 8/6/99
Analyst: JAC/ST
Sample Matrix: Soil
Date Extracted: N/A
Time Sampled: 1029

VOLATILE ORGANIC COMPOUNDS
EPA Method 8260

Compound	Concentration ug/Kg	Dilution Factor	PQL ug/Kg
Benzene	BQL	1	5
Bromobenzene	BQL	1	10
Bromochloromethane	BQL	1	10
Bromodichloromethane	BQL	1	10
Bromoform	BQL	1	10
Bromomethane	BQL	1	10
N-Butylbenzene	BQL	1	10
sec-Butylbenzene	BQL	1	5
tert-Butylbenzene	BQL	1	5
Carbon Tetrachloride	BQL	1	10
Chlorobenzene	BQL	1	5
Chloroethane	BQL	1	10
Chloroform	BQL	1	5
Chloromethane	BQL	1	10
2-Chlorotoluene	BQL	1	10
4-Chlorotoluene	BQL	1	5
Chlorodibromomethane	BQL	1	10
1,2-Dibromo-3-chloropropane	BQL	1	30
1,2-Dibromoethane (EDB)	BQL	1	10
Dibromomethane	BQL	1	40
1,2-Dichlorobenzene	BQL	1	10
1,3-Dichlorobenzene	BQL	1	5
1,4-Dichlorobenzene	BQL	1	10
Dichlorodifluoromethane	BQL	1	10
1,1-Dichloroethane	BQL	1	5
1,2-Dichloroethane (EDC)	BQL	1	10
1,1-Dichloroethene	BQL	1	10
cis-1,2-Dichloroethene	BQL	1	5
trans-1,2-Dichloroethene	BQL	1	5
1,2-Dichloropropane	BQL	1	10
1,3-Dichloropropane	BQL	1	10
2,2-Dichloropropane	BQL	1	10

Principal Analyst

CAPCO Analytical Services, Inc.

Client: ENSR (1621-008-300)
Sample ID: GP-2/B/20'
CAS LAB NO: 99131704
Date Received: 8/6/99
Date Sampled: 8/6/99

Date Analyzed: 8/6/99
Analyst: JAC/ST
Sample Matrix: Soil
Date Extracted: N/A
Time Sampled: 1029

VOLATILE ORGANIC COMPOUNDS
EPA Method 8260 continued

Compound	Concentration ug/Kg	Dilution Factor	PQL ug/Kg
1,1-Dichloropropene	BQL	1	10
Ethylbenzene	BQL	1	10
Hexachlorobutadiene	BQL	1	10
Isopropylbenzene	BQL	1	5
p-Isopropyltoluene	BQL	1	10
Methylene Chloride	BQL	1	10
Napthalene	BQL	1	10
N-Propylbenzene	BQL	1	5
Styrene	BQL	1	5
1,1,1,2-Tetrachloroethane	BQL	1	10
1,1,2,2-Tetrachloroethane	BQL	1	20
Tetrachloroethene	BQL	1	10
Toluene	BQL	1	10
1,2,3-Trichlorobenzene	BQL	1	20
1,2,4-Trichlorobenzene	BQL	1	20
1,1,1-Trichloroethane	BQL	1	10
1,1,2-Trichloroethane	BQL	1	10
Trichloroethylene	BQL	1	10
Trichlorofluoromethane	BQL	1	10
1,2,3-Trichloropropane	BQL	1	50
1,2,4-Trimethylbenzene	BQL	1	10
1,3,5-Trimethylbenzene	BQL	1	5
Vinyl Chloride	BQL	1	5
total Xylenes	BQL	1	10
MTBE	BQL	1	30

SURROGATE RECOVERY

Surrogate	% Recovery	Control Limits
Dibromofluoromethane	107	80-120%
Toluene-d8	102	81-117%
4-Bromofluorobenzene	91	74-121%

BQL: Below Practical Quantitation Limit
PQL: Practical Quantitation Limit

Principal Analyst

CAPCO Analytical Services, Inc.

Capco Analytical Services INC. (CAS)
1536 Eastman Avenue, Suite B
Ventura CA 93003
(805) 644-1095

Client: ENSR (1621-008-300)
Sample ID: GP-3/B/20'
CAS LAB NO: 99131706
Date Received: 8/6/99
Date Sampled: 8/6/99

Date Analyzed: 8/6/99
Analyst: JAC/ST
Sample Matrix: Soil
Date Extracted: N/A
Time Sampled: 1119

VOLATILE ORGANIC COMPOUNDS
EPA Method 8260

Compound	Concentration ug/Kg	Dilution Factor	PQL ug/Kg
Benzene	BQL	1	5
Bromobenzene	BQL	1	10
Bromochloromethane	BQL	1	10
Bromodichloromethane	BQL	1	10
Bromoform	BQL	1	10
Bromomethane	BQL	1	10
N-Butylbenzene	BQL	1	10
sec-Butylbenzene	BQL	1	5
tert-Butylbenzene	BQL	1	5
Carbon Tetrachloride	BQL	1	10
Chlorobenzene	BQL	1	5
Chloroethane	BQL	1	10
Chloroform	BQL	1	5
Chloromethane	BQL	1	10
2-Chlorotoluene	BQL	1	10
4-Chlorotoluene	BQL	1	5
Chlorodibromomethane	BQL	1	10
1,2-Dibromo-3-chloropropane	BQL	1	30
1,2-Dibromoethane (EDB)	BQL	1	10
Dibromomethane	BQL	1	40
1,2-Dichlorobenzene	BQL	1	10
1,3-Dichlorobenzene	BQL	1	5
1,4-Dichlorobenzene	BQL	1	10
Dichlorodifluoromethane	BQL	1	10
1,1-Dichloroethane	BQL	1	5
1,2-Dichloroethane (EDC)	BQL	1	10
1,1-Dichloroethene	BQL	1	10
cis-1,2-Dichloroethene	BQL	1	5
trans-1,2-Dichloroethene	BQL	1	5
1,2-Dichloropropane	BQL	1	10
1,3-Dichloropropane	BQL	1	10
2,2-Dichloropropane	BQL	1	10

Principal Analyst

CAPCO Analytical Services, Inc.

Client: ENSR (1621-008-300)
Sample ID: GP-3/B/20'
CAS LAB NO: 99131706
Date Received: 8/6/99
Date Sampled: 8/6/99

Date Analyzed: 8/6/99
Analyst: JAC/ST
Sample Matrix: Soil
Date Extracted: N/A
Time Sampled: 1119

VOLATILE ORGANIC COMPOUNDS
EPA Method 8260 continued

Compound	Concentration ug/Kg	Dilution Factor	PQL ug/Kg
1,1-Dichloropropene	BQL	1	10
Ethylbenzene	BQL	1	10
Hexachlorobutadiene	BQL	1	10
Isopropylbenzene	BQL	1	5
p-Isopropyltoluene	BQL	1	10
Methylene Chloride	BQL	1	10
Napthalene	BQL	1	10
N-Propylbenzene	BQL	1	5
Styrene	BQL	1	5
1,1,1,2-Tetrachloroethane	BQL	1	10
1,1,2,2-Tetrachloroethane	BQL	1	20
Tetrachloroethene	BQL	1	10
Toluene	BQL	1	10
1,2,3-Trichlorobenzene	BQL	1	20
1,2,4-Trichlorobenzene	BQL	1	20
1,1,1-Trichloroethane	BQL	1	10
1,1,2-Trichloroethane	BQL	1	10
Trichloroethylene	BQL	1	10
Trichlorofluoromethane	BQL	1	10
1,2,3-Trichloropropane	BQL	1	50
1,2,4-Trimethylbenzene	BQL	1	10
1,3,5-Trimethylbenzene	BQL	1	5
Vinyl Chloride	BQL	1	5
total Xylenes	BQL	1	10
MTBE	BQL	1	30

SURROGATE RECOVERY

Surrogate	% Recovery	Control Limits
Dibromofluoromethane	100	80-120%
Toluene-d8	105	81-117%
4-Bromofluorobenzene	92	74-121%

BQL: Below Practical Quantitation Limit
PQL: Practical Quantitation Limit

Principal Analyst

CAPCO Analytical Services, Inc.

Capco Analytical Services INC. (CAS)
1536 Eastman Avenue, Suite B
Ventura CA 93003
(805) 644-1095

Client: ENSR (1621-008-300)
Sample ID: GP-4/B/20
CAS LAB NO: 99131708
Date Received: 8/6/99
Date Sampled: 8/6/99

Date Analyzed: 8/6/99
Analyst: JAC/ST
Sample Matrix: Soil
Date Extracted: N/A
Time Sampled: 1220

VOLATILE ORGANIC COMPOUNDS
EPA Method 8260

Compound	Concentration ug/Kg	Dilution Factor	PQL ug/Kg
Benzene	BQL	1	5
Bromobenzene	BQL	1	10
Bromochloromethane	BQL	1	10
Bromodichloromethane	BQL	1	10
Bromoform	BQL	1	10
Bromomethane	BQL	1	10
N-Butylbenzene	BQL	1	10
sec-Butylbenzene	BQL	1	5
tert-Butylbenzene	BQL	1	5
Carbon Tetrachloride	BQL	1	10
Chlorobenzene	BQL	1	5
Chloroethane	BQL	1	10
Chloroform	BQL	1	5
Chloromethane	BQL	1	10
2-Chlorotoluene	BQL	1	10
4-Chlorotoluene	BQL	1	5
Chlorodibromomethane	BQL	1	10
1,2-Dibromo-3-chloropropane	BQL	1	30
1,2-Dibromoethane (EDB)	BQL	1	10
Dibromomethane	BQL	1	40
1,2-Dichlorobenzene	BQL	1	10
1,3-Dichlorobenzene	BQL	1	5
1,4-Dichlorobenzene	BQL	1	10
Dichlorodifluoromethane	BQL	1	10
1,1-Dichloroethane	BQL	1	5
1,2-Dichloroethane (EDC)	BQL	1	10
1,1-Dichloroethene	BQL	1	10
cis-1,2-Dichloroethene	BQL	1	5
trans-1,2-Dichloroethene	BQL	1	5
1,2-Dichloropropane	BQL	1	10
1,3-Dichloropropane	BQL	1	10
2,2-Dichloropropane	BQL	1	10

Principal Analyst

CAPCO Analytical Services, Inc.

Client: ENSR (1621-008-300)
Sample ID: GP-4/B/20
CAS LAB NO: 99131708
Date Received: 8/6/99
Date Sampled: 8/6/99

Date Analyzed: 8/6/99
Analyst: JAC/ST
Sample Matrix: Soil
Date Extracted: N/A
Time Sampled: 1220

VOLATILE ORGANIC COMPOUNDS
EPA Method 8260 continued

Compound	Concentration ug/Kg	Dilution Factor	PQL ug/Kg
1,1-Dichloropropene	BQL	1	10
Ethylbenzene	BQL	1	10
Hexachlorobutadiene	BQL	1	10
Isopropylbenzene	BQL	1	5
p-Isopropyltoluene	BQL	1	10
Methylene Chloride	BQL	1	10
Napthalene	BQL	1	10
N-Propylbenzene	BQL	1	5
Styrene	BQL	1	5
1,1,1,2-Tetrachloroethane	BQL	1	10
1,1,2,2-Tetrachloroethane	BQL	1	20
Tetrachloroethene	BQL	1	10
Toluene	BQL	1	10
1,2,3-Trichlorobenzene	BQL	1	20
1,2,4-Trichlorobenzene	BQL	1	20
1,1,1-Trichloroethane	BQL	1	10
1,1,2-Trichloroethane	BQL	1	10
Trichloroethylene	BQL	1	10
Trichlorofluoromethane	BQL	1	10
1,2,3-Trichloropropane	BQL	1	50
1,2,4-Trimethylbenzene	BQL	1	10
1,3,5-Trimethylbenzene	BQL	1	5
Vinyl Chloride	BQL	1	5
total Xylenes	BQL	1	10
MTBE	BQL	1	30

SURROGATE RECOVERY

Surrogate	% Recovery	Control Limits
Dibromofluoromethane	93	80-120%
Toluene-d8	106	81-117%
4-Bromofluorobenzene	88	74-121%

BQL: Below Practical Quantitation Limit
PQL: Practical Quantitation Limit

Principal Analyst

CAPCO Analytical Services, Inc.

Capco Analytical Services INC. (CAS)
1536 Eastman Avenue, Suite B
Ventura CA 93003
(805) 644-1095

Client: ENSR (1621-008-300)
Sample ID: GP-5/B/20
CAS LAB NO: 99131710
Date Received: 8/6/99
Date Sampled: 8/6/99

Date Analyzed: 8/6/99
Analyst: JAC/ST
Sample Matrix: Soil
Date Extracted: N/A
Time Sampled: 1059

VOLATILE ORGANIC COMPOUNDS
EPA Method 8260

Compound	Concentration ug/Kg	Dilution Factor	PQL ug/Kg
Benzene	BQL	1	5
Bromobenzene	BQL	1	10
Bromochloromethane	BQL	1	10
Bromodichloromethane	BQL	1	10
Bromoform	BQL	1	10
Bromomethane	BQL	1	10
N-Butylbenzene	BQL	1	10
sec-Butylbenzene	BQL	1	5
tert-Butylbenzene	BQL	1	5
Carbon Tetrachloride	BQL	1	10
Chlorobenzene	BQL	1	5
Chloroethane	BQL	1	10
Chloroform	BQL	1	5
Chloromethane	BQL	1	10
2-Chlorotoluene	BQL	1	10
4-Chlorotoluene	BQL	1	5
Chlorodibromomethane	BQL	1	10
1,2-Dibromo-3-chloropropane	BQL	1	30
1,2-Dibromoethane (EDB)	BQL	1	10
Dibromomethane	BQL	1	40
1,2-Dichlorobenzene	BQL	1	10
1,3-Dichlorobenzene	BQL	1	5
1,4-Dichlorobenzene	BQL	1	10
Dichlorodifluoromethane	BQL	1	10
1,1-Dichloroethane	BQL	1	5
1,2-Dichloroethane (EDC)	BQL	1	10
1,1-Dichloroethene	BQL	1	10
cis-1,2-Dichloroethene	BQL	1	5
trans-1,2-Dichloroethene	BQL	1	5
1,2-Dichloropropane	BQL	1	10
1,3-Dichloropropane	BQL	1	10
2,2-Dichloropropane	BQL	1	10

Principal Analyst

CAPCO Analytical Services, Inc.

Client: ENSR (1621-008-300)
Sample ID: GP-5/B/20
CAS LAB NO: 99131710
Date Received: 8/6/99
Date Sampled: 8/6/99

Date Analyzed: 8/6/99
Analyst: JAC/ST
Sample Matrix: Soil
Date Extracted: N/A
Time Sampled: 1059

VOLATILE ORGANIC COMPOUNDS
EPA Method 8260 continued

Compound	Concentration ug/Kg	Dilution Factor	PQL ug/Kg
1,1-Dichloropropene	BQL	1	10
Ethylbenzene	BQL	1	10
Hexachlorobutadiene	BQL	1	10
Isopropylbenzene	BQL	1	5
p-Isopropyltoluene	BQL	1	10
Methylene Chloride	BQL	1	10
Napthalene	BQL	1	10
N-Propylbenzene	BQL	1	5
Styrene	BQL	1	5
1,1,1,2-Tetrachloroethane	BQL	1	10
1,1,2,2-Tetrachloroethane	BQL	1	20
Tetrachloroethene	BQL	1	10
Toluene	BQL	1	10
1,2,3-Trichlorobenzene	BQL	1	20
1,2,4-Trichlorobenzene	BQL	1	20
1,1,1-Trichloroethane	BQL	1	10
1,1,2-Trichloroethane	BQL	1	10
Trichloroethylene	BQL	1	10
Trichlorofluoromethane	BQL	1	10
1,2,3-Trichloropropane	BQL	1	50
1,2,4-Trimethylbenzene	BQL	1	10
1,3,5-Trimethylbenzene	BQL	1	5
Vinyl Chloride	BQL	1	5
total Xylenes	BQL	1	10
MTBE	BQL	1	30

SURROGATE RECOVERY

Surrogate	% Recovery	Control Limits
Dibromofluoromethane	103	80-120%
Toluene-d8	103	81-117%
4-Bromofluorobenzene	91	74-121%

BQL: Below Practical Quantitation Limit
PQL: Practical Quantitation Limit

Principal Analyst

CAPCO Analytical Services, Inc.

Capco Analytical Services Inc. (B)
1536 Eastman Avenue, Suite B
Ventura CA 93003
(805) 644-1095

Client: ENSR (1621-008-300)
Sample ID: Method Blank
CAS LAB NO: 991317-MB

Date Analyzed: 8/6/99
Analyst: JAC/ST
Sample Matrix: MB for Solid

VOLATILE ORGANIC COMPOUNDS
EPA Method 8260

Compound	Concentration ug/Kg	Dilution Factor	PQL ug/Kg
Benzene	BQL	1	5
Bromobenzene	BQL	1	10
Bromochloromethane	BQL	1	10
Bromodichloromethane	BQL	1	10
Bromoform	BQL	1	10
Bromomethane	BQL	1	10
N-Butylbenzene	BQL	1	10
sec-Butylbenzene	BQL	1	5
tert-Butylbenzene	BQL	1	5
Carbon Tetrachloride	BQL	1	10
Chlorobenzene	BQL	1	5
Chloroethane	BQL	1	10
Chloroform	BQL	1	5
Chloromethane	BQL	1	10
2-Chlorotoluene	BQL	1	10
4-Chlorotoluene	BQL	1	5
Chlorodibromomethane	BQL	1	10
1,2-Dibromo-3-chloropropane	BQL	1	30
1,2-Dibromoethane (EDB)	BQL	1	10
Dibromomethane	BQL	1	40
1,2-Dichlorobenzene	BQL	1	10
1,3-Dichlorobenzene	BQL	1	5
1,4-Dichlorobenzene	BQL	1	10
Dichlorodifluoromethane	BQL	1	10
1,1-Dichloroethane	BQL	1	5
1,2-Dichloroethane (EDC)	BQL	1	10
1,1-Dichloroethene	BQL	1	10
cis-1,2-Dichloroethene	BQL	1	5
trans-1,2-Dichloroethene	BQL	1	5
1,2-Dichloropropane	BQL	1	10
1,3-Dichloropropane	BQL	1	10
2,2-Dichloropropane	BQL	1	10

Jim Calderhey
Principal Analyst

Client: ENSR (1621-008-300)
Sample ID: Method Blank
CAS LAB NO: 991317-MB

Date Analyzed: 8/6/99
Analyst: JAC/ST
Sample Matrix: MB for Solid

VOLATILE ORGANIC COMPOUNDS
EPA Method 8260 continued

Compound	Concentration ug/Kg	Dilution Factor	PQL ug/Kg
1,1-Dichloropropene	BQL	1	10
Ethylbenzene	BQL	1	10
Hexachlorobutadiene	BQL	1	10
Isopropylbenzene	BQL	1	5
p-Isopropyltoluene	BQL	1	10
Methylene Chloride	BQL	1	10
Napthalene	BQL	1	10
N-Propylbenzene	BQL	1	5
Styrene	BQL	1	5
1,1,1,2-Tetrachloroethane	BQL	1	10
1,1,2,2-Tetrachloroethane	BQL	1	20
Tetrachloroethene	BQL	1	10
Toluene	BQL	1	10
1,2,3-Trichlorobenzene	BQL	1	20
1,2,4-Trichlorobenzene	BQL	1	20
1,1,1-Trichloroethane	BQL	1	10
1,1,2-Trichloroethane	BQL	1	10
Trichloroethylene	BQL	1	10
Trichlorofluoromethane	BQL	1	10
1,2,3-Trichloropropane	BQL	1	50
1,2,4-Trimethylbenzene	BQL	1	10
1,3,5-Trimethylbenzene	BQL	1	5
Vinyl Chloride	BQL	1	5
total Xylenes	BQL	1	10
MTBE	BQL	1	30

SURROGATE RECOVERY

Surrogate	% Recovery	Control Limits
Dibromofluoromethane	98	80-120%
Toluene-d8	102	81-117%
4-Bromofluorobenzene	93	74-121%

BQL: Below Practical Quantitation Limit
PQL: Practical Quantitation Limit

Principal Analyst

CAPCO Analytical Services, Inc.

Capco Analytical Services INC. (CAS)
1536 Eastman Avenue, Suite B
Ventura CA 93003
(805) 644-1095

Client: ENSR (1621-008-300)
Sample ID: GP-4/W
CAS LAB NO: 99131712
Date Received: 8/6/99
Date Sampled: 8/6/99

Date Analyzed: 8/6/99
Analyst: JAC
Sample Matrix: Water
Date Extracted: N/A
Time Sampled: 1230

VOLATILE ORGANIC COMPOUNDS
EPA Method 8260

Compound	Concentration ug/L	Dilution Factor	PQL ug/L
Benzene	BQL	1	0.5
Bromobenzene	BQL	1	0.5
Bromochloromethane	BQL	1	0.5
Bromodichloromethane	BQL	1	1.0
Bromoform	BQL	1	1.0
Bromomethane	BQL	1	0.5
N-Butylbenzene	BQL	1	0.5
sec-Butylbenzene	BQL	1	0.5
tert-Butylbenzene	BQL	1	0.5
Carbon tetrachloride	BQL	1	0.5
Chlorobenzene	BQL	1	1.0
Chloroethane	BQL	1	1.0
Chloroform	BQL	1	1.0
Chloromethane	BQL	1	0.5
2-Chlorotoluene	BQL	1	0.5
4-Chlorotoluene	BQL	1	0.5
1,2-Dibromo-3-chloropropane	BQL	1	5.0
1,2-Dibromoethane	BQL	1	0.5
Dibromochloromethane	BQL	1	1.0
Dibromomethane	BQL	1	0.5
1,2-Dichlorobenzene	BQL	1	0.5
1,3-Dichlorobenzene	BQL	1	0.5
1,4-Dichlorobenzene	BQL	1	1.0
Dichlorodifluoromethane	BQL	1	0.5
1,1-Dichloroethane	BQL	1	0.5
1,2-Dichloroethane	BQL	1	1.0
1,1-Dichloroethene	BQL	1	0.5
cis-1,2-Dichloroethene	BQL	1	0.5
trans-1,2-Dichloroethene	BQL	1	0.5
1,2-Dichloropropane	BQL	1	0.5
1,3-Dichloropropane	BQL	1	1.0
2,2-Dichloropropane	BQL	1	0.5
1,1-Dichloropropene	BQL	1	0.5

Jim Allen-Ng
Principal Analyst

CAPCO Analytical Services, Inc.

Client: [illegible] Date Analyzed: 8/16/99

Sample ID: GP-4/W
CAS LAB NO: 99131712
Date Received: 8/6/99
Date Sampled: 8/6/99

Analyst: JAC
Sample Matrix: Water
Date Extracted: N/A
Time Sampled: 1230

VOLATILE ORGANIC COMPOUNDS
EPA Method 8260 continued

Compound	Concentration ug/L	Dilution Factor	PQL ug/L
Ethylbenzene	BQL	1	1.0
Hexachlorobutadiene	BQL	1	0.5
Isopropylbenzene	BQL	1	0.5
p-Isopropyltoluene	BQL	1	0.5
Methylene Chloride	BQL	1	2.0
Napthalene	BQL	1	1.0
N-Propylbenzene	BQL	1	1.0
Styrene	BQL	1	0.5
1,1,1,2-Tetrachloroethane	BQL	1	1.0
1,1,2,2-Tetrachloroethane	BQL	1	0.5
Tetrachloroethene	BQL	1	1.0
Toluene	**0.53**	**1**	**0.5**
1,2,3-Trichlorobenzene	BQL	1	1.0
1,2,4-Trichlorobenzene	BQL	1	1.0
1,1,1-Trichloroethane	BQL	1	1.0
1,1,2-Trichloroethane	BQL	1	1.0
Trichloroethene	BQL	1	1.0
Trichloroflouromethane	BQL	1	1.0
1,2,3-Trichloropropane	BQL	1	0.5
1,2,4-Trimethylbenzene	BQL	1	1.0
1,3,5-Trimethylbenzene	BQL	1	1.0
Vinyl Chloride	BQL	1	1.0
Total Xylenes	BQL	1	2.0
MTBE	BQL	1	5.0

SURROGATE RECOVERY

Surrogate	% Recovery	Control Limits
Dibromofluoromethane	99	86-118%
Toluene-d8	110	88-110%
4-Bromofluorobenzene	93	86-115%

BQL: Below Practical Quantitation Limit
PQL: Practical Quantitation Limit

Principal Analyst

CAPCO Analytical Services, Inc.

1536 Eastman Avenue, Suite B
Ventura CA 93003
(805) 644-1095

Client: ENSR (1621-008-300)
Sample ID: GP-1/W
CAS LAB NO: 99131714
Date Received: 8/6/99
Date Sampled: 8/6/99

Date Analyzed: 8/6/99
Analyst: JAC
Sample Matrix: Water
Date Extracted: N/A
Time Sampled: 1330

VOLATILE ORGANIC COMPOUNDS
EPA Method 8260

Compound	Concentration ug/L	Dilution Factor	PQL ug/L
Benzene	BQL	1	0.5
Bromobenzene	BQL	1	0.5
Bromochloromethane	BQL	1	0.5
Bromodichloromethane	BQL	1	1.0
Bromoform	BQL	1	1.0
Bromomethane	BQL	1	0.5
N-Butylbenzene	BQL	1	0.5
sec-Butylbenzene	BQL	1	0.5
tert-Butylbenzene	BQL	1	0.5
Carbon tetrachloride	BQL	1	0.5
Chlorobenzene	BQL	1	1.0
Chloroethane	BQL	1	1.0
Chloroform	BQL	1	1.0
Chloromethane	BQL	1	0.5
2-Chlorotoluene	BQL	1	0.5
4-Chlorotoluene	BQL	1	0.5
1,2-Dibromo-3-chloropropane	BQL	1	5.0
1,2-Dibromoethane	BQL	1	0.5
Dibromochloromethane	BQL	1	1.0
Dibromomethane	BQL	1	0.5
1,2-Dichlorobenzene	BQL	1	0.5
1,3-Dichlorobenzene	BQL	1	0.5
1,4-Dichlorobenzene	BQL	1	1.0
Dichlorodifluoromethane	BQL	1	0.5
1,1-Dichloroethane	BQL	1	0.5
1,2-Dichloroethane	BQL	1	1.0
1,1-Dichloroethene	BQL	1	0.5
cis-1,2-Dichloroethene	BQL	1	0.5
trans-1,2-Dichloroethene	BQL	1	0.5
1,2-Dichloropropane	BQL	1	0.5
1,3-Dichloropropane	BQL	1	1.0
2,2-Dichloropropane	BQL	1	0.5
1,1-Dichloropropene	BQL	1	0.5

Principal Analyst

CAPCO Analytical Services, Inc.

Sample ID: GP-1/W
CAS LAB NO: 99131714
Date Received: 8/6/99
Date Sampled: 8/6/99

Analyst: JAC
Sample Matrix: Water
Date Extracted: N/A
Time Sampled: 1330

VOLATILE ORGANIC COMPOUNDS
EPA Method 8260 continued

Compound	Concentration ug/L	Dilution Factor	PQL ug/L
Ethylbenzene	BQL	1	1.0
Hexachlorobutadiene	BQL	1	0.5
Isopropylbenzene	BQL	1	0.5
p-Isopropyltoluene	BQL	1	0.5
Methylene Chloride	BQL	1	2.0
Napthalene	BQL	1	1.0
N-Propylbenzene	BQL	1	1.0
Styrene	BQL	1	0.5
1,1,1,2-Tetrachloroethane	BQL	1	1.0
1,1,2,2-Tetrachloroethane	BQL	1	0.5
Tetrachloroethene	BQL	1	1.0
Toluene	**0.51**	**1**	**0.5**
1,2,3-Trichlorobenzene	BQL	1	1.0
1,2,4-Trichlorobenzene	BQL	1	1.0
1,1,1-Trichloroethane	BQL	1	1.0
1,1,2-Trichloroethane	BQL	1	1.0
Trichloroethene	BQL	1	1.0
Trichloroflouromethane	BQL	1	1.0
1,2,3-Trichloropropane	**0.61**	**1**	**0.5**
1,2,4-Trimethylbenzene	BQL	1	1.0
1,3,5-Trimethylbenzene	BQL	1	1.0
Vinyl Chloride	BQL	1	1.0
Total Xylenes	BQL	1	2.0
MTBE	BQL	1	5.0

SURROGATE RECOVERY

Surrogate	% Recovery	Control Limits
Dibromofluoromethane	98	86-118%
Toluene-d8	106	88-110%
4-Bromofluorobenzene	88	86-115%

BQL: Below Practical Quantitation Limit
PQL: Practical Quantitation Limit

Principal Analyst

CAPCO Analytical Services, Inc.

Capco Analytical Services INC. (CAS)
1536 Eastman Avenue, Suite B
Ventura CA 93003
(805) 644-1095

Client: ENSR (1621-008-300)
Sample ID: Method Blank
CAS LAB NO: 991317-MB

Date Analyzed: 8/6/99
Analyst: JAC
Sample Matrix: MB for Liquid

VOLATILE ORGANIC COMPOUNDS
EPA Method 8260

Compound	Concentration ug/L	Dilution Factor	PQL ug/L
Benzene	BQL	1	0.5
Bromobenzene	BQL	1	0.5
Bromochloromethane	BQL	1	0.5
Bromodichloromethane	BQL	1	1.0
Bromoform	BQL	1	1.0
Bromomethane	BQL	1	0.5
N-Butylbenzene	BQL	1	0.5
sec-Butylbenzene	BQL	1	0.5
tert-Butylbenzene	BQL	1	0.5
Carbon tetrachloride	BQL	1	0.5
Chlorobenzene	BQL	1	1.0
Chloroethane	BQL	1	1.0
Chloroform	BQL	1	1.0
Chloromethane	BQL	1	0.5
2-Chlorotoluene	BQL	1	0.5
4-Chlorotoluene	BQL	1	0.5
1,2-Dibromo-3-chloropropane	BQL	1	5.0
1,2-Dibromoethane	BQL	1	0.5
Dibromochloromethane	BQL	1	1.0
Dibromomethane	BQL	1	0.5
1,2-Dichlorobenzene	BQL	1	0.5
1,3-Dichlorobenzene	BQL	1	0.5
1,4-Dichlorobenzene	BQL	1	1.0
Dichlorodifluoromethane	BQL	1	0.5
1,1-Dichloroethane	BQL	1	0.5
1,2-Dichloroethane	BQL	1	1.0
1,1-Dichloroethene	BQL	1	0.5
cis-1,2-Dichloroethene	BQL	1	0.5
trans-1,2-Dichloroethene	BQL	1	0.5
1,2-Dichloropropane	BQL	1	0.5
1,3-Dichloropropane	BQL	1	1.0
2,2-Dichloropropane	BQL	1	0.5
1,1-Dichloropropene	BQL	1	0.5

Principal Analyst

CAPCO Analytical Services, Inc.

Client: ENSR (1621-008-300)
Sample ID: Method Blank
CAS LAB NO: 991317-MB

Date Analyzed: 8/6/99
Analyst: JAC
Sample Matrix: MB for Liquid

VOLATILE ORGANIC COMPOUNDS
EPA Method 8260 continued

Compound	Concentration ug/L	Dilution Factor	PQL ug/L
Ethylbenzene	BQL	1	1.0
Hexachlorobutadiene	BQL	1	0.5
Isopropylbenzene	BQL	1	0.5
p-Isopropyltoluene	BQL	1	0.5
Methylene Chloride	BQL	1	2.0
Napthalene	BQL	1	1.0
N-Propylbenzene	BQL	1	1.0
Styrene	BQL	1	0.5
1,1,1,2-Tetrachloroethane	BQL	1	1.0
1,1,2,2-Tetrachloroethane	BQL	1	0.5
Tetrachloroethene	BQL	1	1.0
Toluene	BQL	1	0.5
1,2,3-Trichlorobenzene	BQL	1	1.0
1,2,4-Trichlorobenzene	BQL	1	1.0
1,1,1-Trichloroethane	BQL	1	1.0
1,1,2-Trichloroethane	BQL	1	1.0
Trichloroethene	BQL	1	1.0
Trichloroflouromethane	BQL	1	1.0
1,2,3-Trichloropropane	BQL	1	0.5
1,2,4-Trimethylbenzene	BQL	1	1.0
1,3,5-Trimethylbenzene	BQL	1	1.0
Vinyl Chloride	BQL	1	1.0
Total Xylenes	BQL	1	2.0
MTBE	BQL	1	5.0

SURROGATE RECOVERY

Surrogate	% Recovery	Control Limits
Dibromofluoromethane	98	86-118%
Toluene-d8	102	88-110%
4-Bromofluorobenzene	93	86-115%

BQL: Below Practical Quantitation Limit
PQL: Practical Quantitation Limit

Principal Analyst

CAPCO Analytical Services, Inc.

Capco Analytical Services INC. (CAS)
1536 Eastman Avenue, Suite B
Ventura CA 93003
(805) 644-1095

Client: ENSR (1621-008-300)
Sample ID: GP-1/A/3
Date Received: 8/6/99
Date Sampled: 8/6/99

Sample Matrix: Soil
CAS LAB NO: 99131701
Date Analyzed: 8/06/99 to 8/11/99

CAM 17 METALS ANALYSIS

METALS	TTLC (mg/Kg)	TTLC PQL (mg/Kg)	STLC (mg/L)	STLC PQL (mg/L)	CAM LIMITS TTLC (mg/Kg)	CAM LIMITS STLC (mg/L)	EPA METHOD
Antimony	BQL	8			500	15	6010
Arsenic	0.9	0.5			500	5	7060
Barium	32	10			10000	100	6010
Beryllium	BQL	0.8			75	0.75	6010
Cadmium	BQL	1			100	1	6010
Chromium	BQL	9			2500	560	6010
Cobalt	BQL	10			8000	80	6010
Copper	BQL	10			2500	25	6010
Lead	2.6	0.6			1000	5	7421
Mercury	BQL	0.1			20	0.2	7471
Molybdenum	BQL	20			3500	350	6010
Nickel	BQL	10			2000	20	6010
Selenium	BQL	0.5			100	1	7740
Silver	BQL	2			500	5	6010
Thallium	BQL	0.2			700	7	7841
Vanadium	12	7			2400	24	6010
Zinc	23	10			5000	250	6010

BQL: Below Practical Quantitation Limit
PQL: Practical Quantitation Limit

Principal Analyst

CAPCO Analytical Services, Inc.

Capco Analytical Services INC. (CAS)
1536 Eastman Avenue, Suite B
Ventura CA 93003
(805) 644-1095

Client: ENSR (1621-008-300)
Sample ID: GP-2/A/3
Date Received: 8/6/99
Date Sampled: 8/6/99

Sample Matrix: Soil
CAS LAB NO: 99131703
Date Analyzed: 8/06/99 to 8/11/99

CAM 17 METALS ANALYSIS

METALS	TTLC (mg/Kg)	TTLC PQL (mg/Kg)	STLC (mg/L)	STLC PQL (mg/L)	CAM LIMITS TTLC (mg/Kg)	CAM LIMITS STLC (mg/L)	EPA METHOD
Antimony	BQL	8			500	15	6010
Arsenic	0.80	0.5			500	5	7060
Barium	72	10			10000	100	6010
Beryllium	BQL	0.8			75	0.75	6010
Cadmium	BQL	1			100	1	6010
Chromium	BQL	9			2500	560	6010
Cobalt	BQL	10			8000	80	6010
Copper	15	10			2500	25	6010
Lead	2.9	0.6			1000	5	7421
Mercury	BQL	0.1			20	0.2	7471
Molybdenum	BQL	20			3500	350	6010
Nickel	BQL	10			2000	20	6010
Selenium	BQL	0.5			100	1	7740
Silver	BQL	2			500	5	6010
Thallium	BQL	0.2			700	7	7841
Vanadium	29	7			2400	24	6010
Zinc	68	10			5000	250	6010

BQL: Below Practical Quantitation Limit
PQL: Practical Quantitation Limit

Principal Analyst

CAPCO Analytical Services, Inc.

Capco Analytical Services INC. (CAS)
1536 Eastman Avenue, Suite B
Ventura CA 93003
(805) 644-1095

Client: ENSR (1621-008-300)
Sample ID: GP-3/A/3
Date Received: 8/6/99
Date Sampled: 8/6/99

Sample Matrix: Soil
CAS LAB NO: 99131705
Date Analyzed: 8/06/99 to 8/11/99

CAM 17 METALS ANALYSIS

METALS	TTLC (mg/Kg)	TTLC PQL (mg/Kg)	STLC (mg/L)	STLC PQL (mg/L)	CAM LIMITS TTLC (mg/Kg)	CAM LIMITS STLC (mg/L)	EPA METHOD
Antimony	BQL	8			500	15	6010
Arsenic	2.1	0.5			500	5	7060
Barium	37	10			10000	100	6010
Beryllium	BQL	0.8			75	0.75	6010
Cadmium	BQL	1			100	1	6010
Chromium	BQL	9			2500	560	6010
Cobalt	BQL	10			8000	80	6010
Copper	BQL	10			2500	25	6010
Lead	11	0.6			1000	5	7421
Mercury	BQL	0.1			20	0.2	7471
Molybdenum	BQL	20			3500	350	6010
Nickel	BQL	10			2000	20	6010
Selenium	BQL	0.5			100	1	7740
Silver	BQL	2			500	5	6010
Thallium	BQL	0.2			700	7	7841
Vanadium	12	7			2400	24	6010
Zinc	21	10			5000	250	6010

BQL: Below Practical Quantitation Limit
PQL: Practical Quantitation Limit

Principal Analyst

CAPCO Analytical Services, Inc.

Capco Analytical Services INC. (CAS)
1536 Eastman Avenue, Suite B
Ventura CA 93003
(805) 644-1095

Client: ENSR (1621-008-300)
Sample ID: GP-4/A/3
Date Received: 8/6/99
Date Sampled: 8/6/99

Sample Matrix: Soil
CAS LAB NO: 99131707
Date Analyzed: 8/06/99 to 8/11/99

CAM 17 METALS ANALYSIS

METALS	TTLC (mg/Kg)	TTLC PQL (mg/Kg)	STLC (mg/L)	STLC PQL (mg/L)	CAM LIMITS TTLC (mg/Kg)	CAM LIMITS STLC (mg/L)	EPA METHOD
Antimony	BQL	8			500	15	6010
Arsenic	0.8	0.5			500	5	7060
Barium	32	10			10000	100	6010
Beryllium	BQL	0.8			75	0.75	6010
Cadmium	BQL	1			100	1	6010
Chromium	BQL	9			2500	560	6010
Cobalt	BQL	10			8000	80	6010
Copper	BQL	10			2500	25	6010
Lead	1.6	0.6			1000	5	7421
Mercury	BQL	0.1			20	0.2	7471
Molybdenum	BQL	20			3500	350	6010
Nickel	BQL	10			2000	20	6010
Selenium	BQL	0.5			100	1	7740
Silver	BQL	2			500	5	6010
Thallium	BQL	0.2			700	7	7841
Vanadium	12	7			2400	24	6010
Zinc	13	10			5000	250	6010

BQL: Below Practical Quantitation Limit
PQL: Practical Quantitation Limit

Principal Analyst

CAPCO Analytical Services, Inc.

Capco Analytical Services INC. (CAS)
1536 Eastman Avenue, Suite B
Ventura CA 93003
(805) 644-1095

Client: ENSR (1621-008-300)
Sample ID: GP-5/A/3
Date Received: 8/6/99
Date Sampled: 8/6/99

Sample Matrix: Soil
CAS LAB NO: 99131709
Date Analyzed: 8/06/99 to 8/11/99

CAM 17 METALS ANALYSIS

METALS	TTLC (mg/Kg)	TTLC PQL (mg/Kg)	STLC (mg/L)	STLC PQL (mg/L)	CAM LIMITS TTLC (mg/Kg)	CAM LIMITS STLC (mg/L)	EPA METHOD
Antimony	BQL	8			500	15	6010
Arsenic	1.9	0.5			500	5	7060
Barium	70	10			10000	100	6010
Beryllium	BQL	0.8			75	0.75	6010
Cadmium	BQL	1			100	1	6010
Chromium	BQL	9			2500	560	6010
Cobalt	BQL	10			8000	80	6010
Copper	14	10			2500	25	6010
Lead	6.2	0.6			1000	5	7421
Mercury	BQL	0.1			20	0.2	7471
Molybdenum	BQL	20			3500	350	6010
Nickel	BQL	10			2000	20	6010
Selenium	BQL	0.5			100	1	7740
Silver	BQL	2			500	5	6010
Thallium	BQL	0.2			700	7	7841
Vanadium	24	7			2400	24	6010
Zinc	46	10			5000	250	6010

BQL: Below Practical Quantitation Limit
PQL: Practical Quantitation Limit

Principal Analyst

CAPCO Analytical Services, Inc.

Capco Analytical Services INC. (CAS)
1536 Eastman Avenue, Suite B
Ventura CA 93003
(805) 644-1095

Client: ENSR (1621-008-300)
Sample ID: Method Blank

Sample Matrix: MB for Solid
CAS LAB NO: 991317-MB

CAM 17 METALS ANALYSIS

METALS	TTLC (mg/Kg)	TTLC PQL (mg/Kg)	STLC (mg/L)	STLC PQL (mg/L)	CAM LIMITS TTLC (mg/Kg)	CAM LIMITS STLC (mg/L)	EPA METHOD
Antimony	BQL	8			500	15	6010
Arsenic	BQL	0.5			500	5	7060
Barium	BQL	10			10000	100	6010
Beryllium	BQL	0.8			75	0.75	6010
Cadmium	BQL	1			100	1	6010
Chromium	BQL	9			2500	560	6010
Cobalt	BQL	10			8000	80	6010
Copper	BQL	10			2500	25	6010
Lead	BQL	0.6			1000	5	7421
Mercury	BQL	0.1			20	0.2	7471
Molybdenum	BQL	20			3500	350	6010
Nickel	BQL	10			2000	20	6010
Selenium	BQL	0.5			100	1	7740
Silver	BQL	2			500	5	6010
Thallium	BQL	0.2			700	7	7841
Vanadium	BQL	7			2400	24	6010
Zinc	BQL	10			5000	250	6010

BQL: Below Practical Quantitation Limit
PQL: Practical Quantitation Limit

Principal Analyst

CAPCO Analytical Services, Inc.

Capco Analytical Services INC. (CAS)
1536 Eastman Avenue, Suite B
Ventura CA 93003
(805) 644-1095

Client: ENSR (1621-008/300)
Sample ID: GP-4/W
Date Received: 8/6/99
Date Sampled: 8/6/99

Sample Matrix: Water
CAS LAB NO: 99131713
Date Analyzed: 8/06/99 to 8/11/99

CAM 17 METALS ANALYSIS

METALS	TTLC (mg/L)	TTLC PQL (mg/L)	STLC (mg/L)	STLC PQL (mg/L)	CAM LIMITS TTLC (mg/L)	CAM LIMITS STLC (mg/L)	EPA METHOD
Antimony	BQL	0.1			500	15	200.7
Arsenic	BQL	0.03			500	5	206.2
Barium	BQL	0.06			10000	100	200.7
Beryllium	BQL	0.1			75	0.75	200.7
Cadmium	BQL	0.03			100	1	200.7
Chromium	BQL	0.04			2500	560	200.7
Cobalt	BQL	0.05			8000	80	200.7
Copper	BQL	0.03			2500	25	200.7
Lead	BQL	0.09			1000	5	200.7
Mercury	BQL	0.0005			20	0.2	245.1
Molybdenum	BQL	0.08			3500	350	200.7
Nickel	BQL	0.08			2000	20	200.7
Selenium	0.036	0.01			100	1	270.2
Silver	BQL	0.06			500	5	200.7
Thallium	BQL	0.2			700	7	200.7
Vanadium	0.16	0.07			2400	24	200.7
Zinc	BQL	0.06			5000	250	200.7

BQL: Below Practical Quantitation Limit
PQL: Practical Quantitation Limit

Principal Analyst

CAPCO Analytical Services, Inc.

Capco Analytical Services INC. (CAS)
1536 Eastman Avenue, Suite B
Ventura CA 93003
(805) 644-1095

Client: ENSR (1621-008/300)
Sample ID: GP-1/W
Date Received: 8/6/99
Date Sampled: 8/6/99

Sample Matrix: Water
CAS LAB NO: 99131716
Date Analyzed: 8/06/99 to 8/11/99

CAM 17 METALS ANALYSIS

METALS	TTLC (mg/L)	TTLC PQL (mg/L)	STLC (mg/L)	STLC PQL (mg/L)	CAM LIMITS TTLC (mg/L)	CAM LIMITS STLC (mg/L)	EPA METHOD
Antimony	BQL	0.1			500	15	200.7
Arsenic	BQL	0.03			500	5	206.2
Barium	BQL	0.06			10000	100	200.7
Beryllium	BQL	0.1			75	0.75	200.7
Cadmium	BQL	0.03			100	1	200.7
Chromium	BQL	0.04			2500	560	200.7
Cobalt	BQL	0.05			8000	80	200.7
Copper	0.06	0.03			2500	25	200.7
Lead	BQL	0.09			1000	5	200.7
Mercury	BQL	0.0005			20	0.2	245.1
Molybdenum	BQL	0.08			3500	350	200.7
Nickel	BQL	0.08			2000	20	200.7
Selenium	0.025	0.01			100	1	270.2
Silver	BQL	0.06			500	5	200.7
Thallium	BQL	0.2			700	7	200.7
Vanadium	0.13	0.07			2400	24	200.7
Zinc	0.26	0.06			5000	250	200.7

BQL: Below Practical Quantitation Limit
PQL: Practical Quantitation Limit

Principal Analyst

CAPCO Analytical Services, Inc.

Capco Analytical Services INC. (CAS)
1536 Eastman Avenue, Suite B
Ventura CA 93003
(805) 644-1095

Client: ENSR (1621-008/300)
Sample ID: Method Blank

Sample Matrix: MB for Liquid
CAS LAB NO: 991317-MB

CAM 17 METALS ANALYSIS

METALS	TTLC (mg/L)	TTLC PQL (mg/L)	STLC (mg/L)	STLC PQL (mg/L)	CAM LIMITS TTLC (mg/L)	CAM LIMITS STLC (mg/L)	EPA METHOD
Antimony	BQL	0.1			500	15	200.7
Arsenic	BQL	0.03			500	5	206.2
Barium	BQL	0.06			10000	100	200.7
Beryllium	BQL	0.1			75	0.75	200.7
Cadmium	BQL	0.03			100	1	200.7
Chromium	BQL	0.04			2500	560	200.7
Cobalt	BQL	0.05			8000	80	200.7
Copper	BQL	0.03			2500	25	200.7
Lead	BQL	0.09			1000	5	200.7
Mercury	BQL	0.0005			20	0.2	245.1
Molybdenum	BQL	0.08			3500	350	200.7
Nickel	BQL	0.08			2000	20	200.7
Selenium	BQL	0.01			100	1	270.2
Silver	BQL	0.06			500	5	200.7
Thallium	BQL	0.2			700	7	200.7
Vanadium	BQL	0.07			2400	24	200.7
Zinc	BQL	0.06			5000	250	200.7

BQL: Below Practical Quantitation Limit
PQL: Practical Quantitation Limit

Principal Analyst

Capco Analytical Services INC. (CAS)
1536 Eastman Avenue, Suite B
Ventura CA 93003
(805) 644-1095

Client: ENSR (1621-008-300)
Lab ID: 991317
Analyst: EN

Sample Matrix: Water
Date Received: 8/6/99
Date Sampled: 8/6/99

HEXAVALENT CHROMIUM

CAS Lab #	Sample ID	RESULTS (mg/L)	Dil Factor	PQL (mg/L)
99131713	GP-4/W	BQL	1	0.03
99131716	GP-1/W	BQL	1	0.03
991317-MB	Method Blank	BQL	1	0.03

PQL: Practical Quantitation Limit
BQL: Below Practical Quantitation Limit
EPA Method: SM 3500D

Principal Analyst

CAPCO Analytical Services, Inc.

Capco Analytical Services INC. (CAS)
1536 Eastman Avenue, Suite B
Ventura CA 93003
(805) 644-1095

Client: ENSR (1621-008-300)
Lab ID: 991317
Analyst: ENN

Sample Matrix: Soil
Date Received: 8/6/99
Date Sampled: 8/6/99

HEXAVALENT CHROMIUM

CAS Lab #	Sample ID	RESULTS (mg/Kg)	Dil Factor	PQL (mg/Kg)
99131701	GP-1/A/3	BQL	1	10
99131703	GP-2/A/3	BQL	1	10
99131705	GP-3/A/3	BQL	1	10
99131707	GP-4/A/3	BQL	1	10
99131709	GP-5/A/3	BQL	1	10
991317-MB	Method Blank	BQL	1	10

PQL: Practical Quantitation Limit
BQL: Below Practical Quantitation Limit
EPA Method: 7196

Principal Analyst

CAPCO Analytical Services, Inc.

CHAIN OF CUSTODY RECORD

Client/Project Name: City of Ventura

Project Location: Corner of Leland & Johnson Drive

Project No.: 1621-008-300

Field Logbook No.: —

Sampler: (Signature) John R. Cook

Chain of Custody Tape No.: None

991317

ANALYSES

Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	TPH-FF EPA 8015 mod	VOCs EPA 8260	CAM 17 metals 6000/7000				REMARKS
GP-1/A/3	8/6/99	~~10:01~~ 12:58		Soil	X		X				Normal TAT
GP-1/B/20'		~~10:21~~ 13:07			X	X					
GP-2/A/3		10:01			X		X				
GP-2/B/20'		10:29			X	X					
GP-3/A/3		11:12			X		X				
GP-3/B/20'		11:19			X	X					
GP-4/A/3		~~11:54~~ 12:01			X		X				
GP-4/B/20		12:20			X	X					

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
John R. Cook	8/6/99	1435	[illegible]	8-6-99	1435
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received for Laboratory: (Signature)	Date	Time
Sample Disposal Method:	Disposed of by: (Signature)			Date	Time

SAMPLE COLLECTOR

ENSR Consulting and Engineering
1220 Avenida Acaso
Camarillo, Ca. 93010
(805) 388-3775

ANALYTICAL LABORATORY

Use Ventura County Environmental Health Department required detection Limits on all analyses.

ENSR

Nº 5882

CHAIN OF CUSTODY RECORD

Client/Project Name: City of Ventura

Project Location: Corner of Leland & Johnson Drive

Project No.: 1621-008-300

Field Logbook No.: —

Sampler: (Signature) John R. Cook

Chain of Custody Tape No.: None

991317

ANALYSES

Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	VOCs EPA 8260	TPH-FF EPA 8015mod	CAM 17 metals 6010/7000				REMARKS
GP-5/A/3	8/6/99	10:42		Soil	X	X	X				Normal TAT
GP-5/B/20	"	10:59			X	X					
GP-4/W	"	12:30		Water/1 Liter Amber		X					
GP-4/W	"	12:30		2 VOA	X	X					
GP-4/W	"	12:30		1 Pint Plastic			X				* See Note Below
GP-1/W	"	13:30		2 VOA	X	X					
GP-1/W	"	13:30		1 Liter Amber		X					
GP-1/W	"	1330		1 Pint Plastic			X				* See Note Below

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
John R. Cook	8/6/99	1435	[illegible]	8-6-99	1435
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received for Laboratory: (Signature)	Date	Time

Sample Disposal Method:

Disposed of by: (Signature) — Date — Time

SAMPLE COLLECTOR

ENSR Consulting and Engineering
1220 Avenida Acaso
Camarillo, Ca. 93010
(805) 388-3775

ANALYTICAL LABORATORY

* Note: These samples tested for CAM 17 metals "Must" be Filtered (0.45 micron or Less) Before adding HNO_3 preservative

ENSR

№ 5883

APPENDIX B

LOGS OF SOIL BORINGS GP-1 THROUGH GP-5

LOCATION: Northwest corner of lot near Moon Ditch

SURFACE EL: Not Surveyed

ELEVATION, ft / DEPTH, ft	MATERIAL SYMBOL	SAMPLES	BLOWS/FT	SAMPLE NO.	MATERIAL DESCRIPTIONS	PID READING (PPMV)	TPH-Fuel Fingerprint (mg/kg)	Benzene, (mg/kg)	Toluene, (mg/kg)	Ethylbenzene, (mg/kg)	Total Xylenes, (mg/kg)	Total Lead, (mg/kg)
1					**ARTIFICIAL FILL**							
2					**Asphaltic Concrete Debris:** coarse gravelly SAND(SP), Dark brown to black, dense, dry, some wire and plastic debris, no odor or stains							
3				GP-1 @3'								
4					Fine SAND (SP): Brown to greenish brown, dry, poorly graded dense, some gravel, no odors							
5												
6					**Asphaltic Concrete Debris:** Coarse gravely SAND (SP), Dark brown to black with 2" thick gravel layer at 4.5 feet, dense, dry, some wire and plastic debris, no odor or stains	5.4	ND	ND	ND	ND	ND	2.6
7												
8					Fine silty SAND (SM): Yellowish brown to tan, moist, poorly graded, dense, some gravel, no odors or stains							
9												
10					1" thick layer of broken/crushed glass at 7.5'							
11					**Asphaltic Concrete Debris:** coarse gravelly SAND (SP), Dark brown to black, dense, dry, some wire and plastic debris,no odor or stains							
12												
13					**ALLUVIUM**							
14					Medium to coarse SAND (SP): Yellowish brown to tan, dense, very moist, poorly graded, no odors or stains							
15												
16					Coarse sandy GRAVEL (GP): Dark brown to yellowish brown to tan, very dense, very moist, poorly graded, no odors or stains							
17												
18					Coarse silty GRAVEL (GM): Dark brown to Yellowish brown to tan, very dense, very moist, moderately graded, no odors or stains							
19												
20				GP-1 @20'	Coarse SAND (SP): Dark brown to black, very dense, wet, poorly graded, some gravel, some decayed organic matter, slight sewer or organic decay odors with black staining	10.6	ND	ND	ND	ND	ND	ND
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
32												
33												

COMPLETION DEPTH: 20 feet
DEPTH TO WATER
First Encountered (▽): 19.5
At End of Drilling (▼): 19.5
BACKFILLED WITH: Bentonite
DRILLING DATE: August 6, 1999

DRILLING METHOD: Geoprobe
DRILLED BY: Vironex
LOGGED BY: J. Cook
CHECKED BY: M. Flack

The log and data presented are a simplification of actual condition encountered at the time of probing at the probed location. Subsurface conditions may differ at other locations and with the passage of time.

G:\DWG\1621\008\1621008GP-1.Dsf

LOG OF SOIL BORING GP-1
City of Ventura Leland/Johnson Drive Interchange Project
Ventura, California

LOCATION: Northern edge of lot near Moon Ditch

SURFACE EL: Not Surveyed

ELEVATION, ft / DEPTH, ft	MATERIAL SYMBOL	SAMPLES	BLOWS/FT	SAMPLE NO.	MATERIAL DESCRIPTIONS	PID READING (PPMV)	TPH-Fuel Fingerprint (mg/kg)	Benzene, (mg/kg)	Toluene, (mg/kg)	Ethylbenzene, (mg/kg)	Total Xylenes, (mg/kg)	Total Lead, (mg/kg)
1					**ARTIFICIAL FILL**							
2					**Asphaltic Concrete Debris:** coarse gravelly SAND(SP), Dark brown to black, dense, dry, some wire and plastic debris, no odor or stains							
3				GP-2 @3'								
4					Fine SAND (SP): Brown to greenish brown, dry, poorly graded dense, some gravel, no odors							
5												
6					**Asphaltic Concrete Debris:** Coarse gravely SAND (SP), Dark brown to black with 2" thick gravel layer at 4.5 feet, dense, dry, some wire and plastic debris, no odor or stains	2.3	ND	ND	ND	ND	ND	2.9
7												
8					Fine silty SAND (SM): Yellowish brown to brown, moist, poorly graded, dense, some gravel, some plastic debris, no odors or stains							
9					1" thick layer of broken/crushed glass at 7.5'							
10					**Asphaltic Concrete Debris:** coarse gravelly SAND (SP), Dark brown to black, dense, dry, some wire and plastic debris, no odor or stains							
11												
12					**ALLUVIUM**							
13												
14					Medium SAND (SP): Yellowish brown to tan, dense, very moist, poorly graded, no odors or stains							
15												
16					Medium sandy GRAVEL (GP): Dark brown to yellowish brown to tan, very dense, very moist, poorly graded, no odors or stains							
17												
18					Medium silty GRAVEL (GM): Dark brown to Yellowish brown to tan, very dense, very moist, moderately graded, no odors or stains							
19												
20				GP-2 @20'	Coarse SAND (SP): Dark brown to black, very dense, wet, poorly graded, some gravel, some decayed organic matter, slight sewer or organic decay odors with black staining	20.6	ND	ND	ND	ND	ND	ND
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
32												
33												

COMPLETION DEPTH: 20 feet
DEPTH TO WATER
First Encountered (▽): 19.5
At End of Drilling (▼): 19.5
BACKFILLED WITH: Bentonite
DRILLING DATE: August 6, 1999

DRILLING METHOD: Geoprobe
DRILLED BY: Vironex
LOGGED BY: J. Cook
CHECKED BY: M. Flack

The log and data presented are a simplification of actual condition encountered at the time of probing at the probed location. Subsurface conditions may differ at other locations and with the passage of time.

G:\DWG\1621\008\1621008GP-2.Dsf

LOG OF SOIL BORING GP-2
City of Ventura Leland/Johnson Drive Interchange Project
Ventura, California

LOCATION: Center of vacant lot

SURFACE EL: Not Surveyed

ELEVATION, ft / DEPTH, ft	MATERIAL SYMBOL	SAMPLES	BLOWS/FT	SAMPLE NO.	MATERIAL DESCRIPTIONS	PID READING (PPMV)	TPH-Fuel Fingerprint (mg/kg)	Benzene, (mg/kg)	Toluene, (mg/kg)	Ethylbenzene, (mg/kg)	Total Xylenes, (mg/kg)	Total Lead, (mg/kg)
					ARTIFICIAL FILL							
1–3					**Asphaltic Concrete Debris:** Coarse gravelly SAND(SP), Dark brown to black, dense, dry, some wire and plastic debris, no odor or stains							
3				GP-3 @3'								
4–5					Fine SAND (SP): Brown to dark brown, dry, poorly graded dense, some gravel, no odors or stains							
6–7					**Asphaltic Concrete Debris:** Coarse gravely SAND (SP), Dark brown to black with 2" thick gravel layer at 4.5 feet, dense, dry, some wire and plastic debris, no odor or stains	1.3	ND	ND	ND	ND	ND	11
8–9					Fine silty SAND (SM): Yellowish brown to brown, moist, poorly graded, dense, some gravel, some plastic and glass debris, no odors or stains							
10–12					**Asphaltic Concrete Debris:** Coarse gravelly SAND (SP), Dark brown to black, dense, dry, some wire and plastic debris, no odor or stains							
13					**ALLUVIUM**							
14–15					Medium SAND (SP): Yellowish brown to tan, dense, very moist, poorly graded, no odors or stains							
16–17					Medium sandy GRAVEL (GP): Dark brown to yellowish brown to tan, very dense, very moist, poorly graded, no odors or stains							
18–19					Medium silty GRAVEL (GM): Dark brown to Yellowish brown to tan, very dense, very moist, moderately graded, no odors or stains							
20			▽	GP-3 @20'	Coarse SAND (SP): Dark brown to black, very dense, wet, poorly graded, some gravel, some decayed organic matter, slight sewer or organic decay odors with black staining	15.6	ND	ND	ND	ND	ND	ND
21–33												

COMPLETION DEPTH: 20 feet
DEPTH TO WATER
First Encountered (▽): 19.5
At End of Drilling (▼): 19.5
BACKFILLED WITH: Bentonite
DRILLING DATE: August 6, 1999

DRILLING METHOD: Geoprobe
DRILLED BY: Vironex
LOGGED BY: J. Cook
CHECKED BY: M. Flack

The log and data presented are a simplification of actual condition encountered at the time of probing at the probed location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF SOIL BORING GP-3
City of Ventura Leland/Johnson Drive Interchange Project
Ventura, California

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LOCATION: Eastern edge of vacant lot near concrete pad

SURFACE EL: Not Surveyed

ELEVATION, ft / DEPTH, ft	MATERIAL SYMBOL	SAMPLES	BLOWS/FT	SAMPLE NO.	MATERIAL DESCRIPTIONS	PID READING (PPMV)	TPH-Fuel Fingerprint (mg/kg)	Benzene, (mg/kg)	Toluene, (mg/kg)	Ethylbenzene, (mg/kg)	Total Xylenes, (mg/kg)	Total Lead, (mg/kg)
1					**ARTIFICIAL FILL**							
2					**Asphaltic Concrete Debris:** coarse gravelly SAND(SP), Dark brown to black, dense, dry, some wire and concrete debris, no odor or stains							
3				GP-4 @3'	Fine SAND (SP): Brown to dark brown, dry, poorly graded dense, some gravel, no odors or stains							
4												
5												
6					**Asphaltic Concrete Debris:** Coarse gravely SAND (SP), Dark brown to black with 2" thick gravel layer at 4.5 feet, dense, dry, some wire and plastic debris, no odor or stains	4.3	ND	ND	ND	ND	ND	1.6
7												
8					Fine silty SAND (SM): Yellowish brown to brown, moist, poorly graded, dense, some gravel, some plastic and glass debris, no odors or stains							
9												
10					**Asphaltic Concrete Debris:** coarse gravelly SAND (SP), Dark brown to black, dense, dry, some wire and plastic debris, no odor or stains							
11												
12					**ALLUVIUM**							
13					Medium SAND (SP): Yellowish brown to tan, dense, very moist, poorly graded, no odors or stains							
14												
15					Medium sandy GRAVEL (GP): Dark brown to yellowish brown to tan, very dense, very moist, poorly graded, no odors or stains							
16												
17					Medium silty GRAVEL (GM): Dark brown to Yellowish brown to tan, very dense, very moist, moderately graded, no odors or stains							
18												
19												
20				GP-4 @20'	Coarse SAND (SP): Dark brown to black, very dense, wet, poorly graded, some gravel, some decayed organic matter, slight sewer or organic decay odors with black staining	12.6	ND	ND	ND	ND	ND	ND
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
32												
33												

COMPLETION DEPTH: 20 feet
DEPTH TO WATER
First Encountered (▽): 19.5
At End of Drilling (▼): 19.5
BACKFILLED WITH: Bentonite
DRILLING DATE: August 6, 1999

DRILLING METHOD: Geoprobe
DRILLED BY: Vironex
LOGGED BY: J. Cook
CHECKED BY: M. Flack

The log and data presented are a simplification of actual condition encountered at the time of probing at the probed location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF SOIL BORING GP-4
City of Ventura Leland/Johnson Drive Interchange Project
Ventura, California

G:\DWG\1621\008\1621008GP-4.Dsf

LOCATION: Center of vacant lot

SURFACE EL: Not Surveyed

ELEVATION, ft / DEPTH, ft	MATERIAL SYMBOL	SAMPLES	BLOWS/FT	SAMPLE NO.	MATERIAL DESCRIPTIONS	PID READING (PPMV)	TPH-Fuel Fingerprint (mg/kg)	Benzene, (mg/kg)	Toluene, (mg/kg)	Ethylbenzene, (mg/kg)	Total Xylenes, (mg/kg)	Total Lead, (mg/kg)
1					**ARTIFICIAL FILL**							
2					**Asphaltic Concrete Debris:** coarse gravelly SAND(SP), Dark brown to black, dense, dry, some wire and plastic debris, no odor or stains							
3				GP-5 @3'	Fine SAND (SP): Brown to dark brown, dry, poorly graded dense, some gravel, no odors or stains							
4												
5												
6					**Asphaltic Concrete Debris:** Coarse gravely SAND (SP), Dark brown to black with 2" thick gravel layer at 4.5 feet, dense, dry, some wire and plastic debris, no odor or stains	1.8	ND	ND	ND	ND	ND	6.2
7												
8					Fine silty SAND (SM): Yellowish brown to brown, moist, poorly graded, dense, some gravel, some plastic and glass debris, no odors or stains							
9												
10					**Asphaltic Concrete Debris:** coarse gravelly SAND (SP), Dark brown to black, dense, dry, some wire and plastic debris, no odor or stains							
11												
12												
13					**ALLUVIUM**							
14					Medium SAND (SP): Yellowish brown to tan, dense, very moist, poorly graded, no odors or stains							
15												
16					Medium sandy GRAVEL (GP): Dark brown to yellowish brown to tan, very dense, very moist, poorly graded, no odors or stains							
17												
18					Medium silty GRAVEL (GM): Dark brown to Yellowish brown to tan, very dense, very moist, moderately graded, no odors or stains							
19												
20				GP-5 @20'	Coarse SAND (SP): Dark brown to black, very dense, wet, poorly graded, some gravel, some decayed organic matter, slight sewer or organic decay odors with black staining	12.6	ND	ND	ND	ND	ND	ND
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
32												
33												

COMPLETION DEPTH: 20 feet
DEPTH TO WATER
First Encountered (▽): 19.5
At End of Drilling (▼): 19.5
BACKFILLED WITH: Bentonite
DRILLING DATE: August 6, 1999

DRILLING METHOD: Geoprobe
DRILLED BY: Vironex
LOGGED BY: J. Cook
CHECKED BY: M. Flack

The log and data presented are a simplification of actual condition encountered at the time of probing at the probed location. Subsurface conditions may differ at other locations and with the passage of time.

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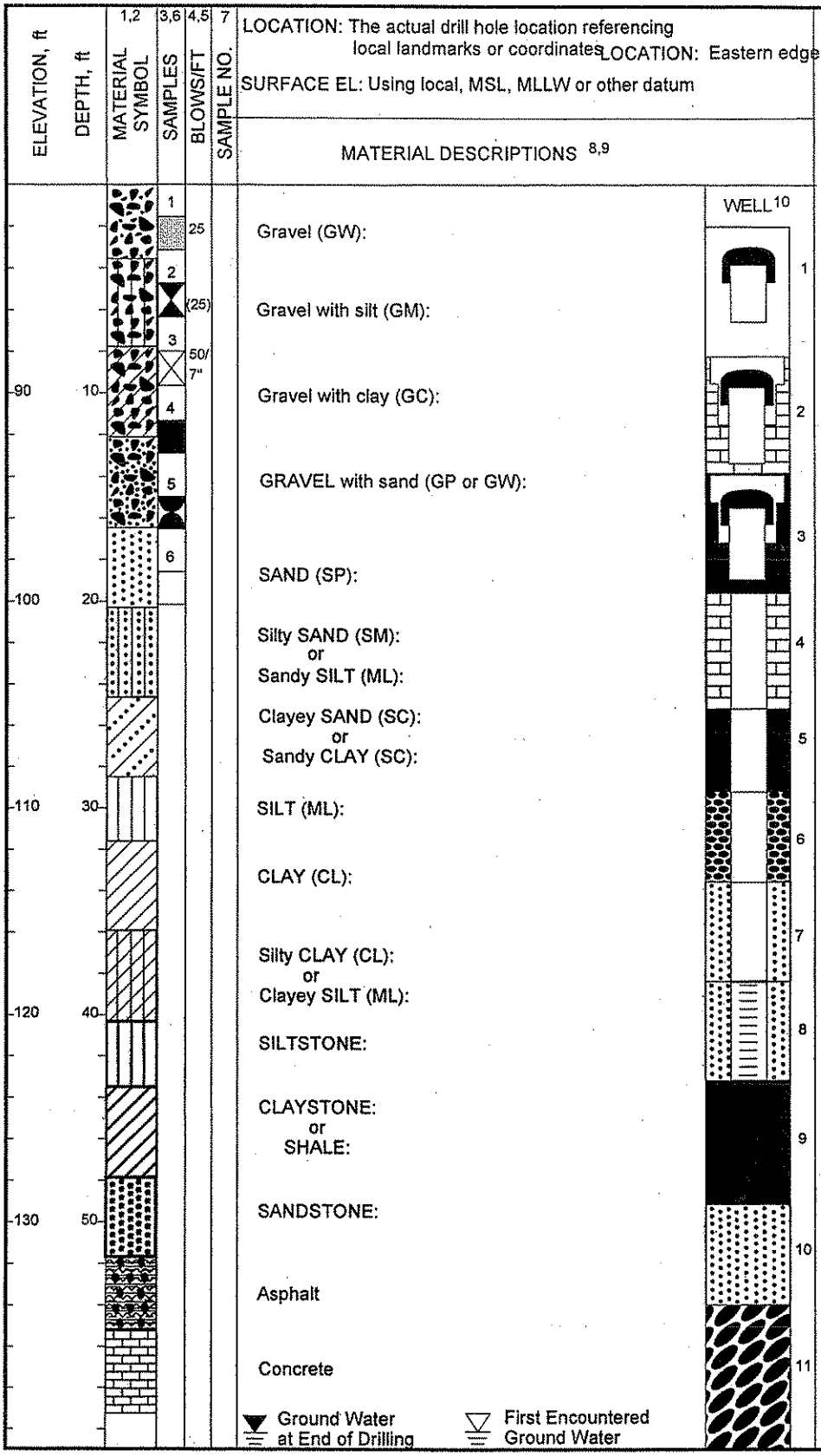
LOG OF SOIL BORING GP-5
City of Ventura Leland/Johnson Drive Interchange Project
Ventura, California



General Notes

1. Soil Texture Symbol
2. Slopped Line in symbol column indicates transitional boundary
3. Samplers and sampler dimensions (unless otherwise noted in report text) are as follows

Symbol for:

Sample No.	Sampler Type
1	SPT Sampler, driven 1 3/8" ID, 2" OD
2	CA Liner Sampler, drivin 2 3/8" ID, 3" OD
3	Thin-walled Tube, pushed 2 7/8" ID, 3" OD
4	Geoprobe Sampler, drivin 2 3/8" ID, 3" ID
5	Hand Auger Sampler, drivin 2 1/2" ID, 3" OD
6	No Sample Recovered

4. Sampler Driving Resistance

Number of blows with 140 lb. hammer, falling 30-in. to drive sampler 1-ft. after seating sampler 6 -in,; for example,

Blows/ft	Description
25	25 blows drove sampler 12" after initial 6" of seating
50/7"	50 blows drove sampler 7" after initial 6" of seating
Ref/3"	50 blows drove sampler 3" during initial 6" seating interval

5. Blow counts for Liner Sampler shown in ()
6. Length of sample symbol approximate recovery length
7. Sample Number refers to sample designations during time of sampling
8. Classification of soils per ASTM D2487 or D2488
9. Geologic Formation noted in bold font at the top of interrupted interval
10. Well Constructed Legend

Section	Description
1	Well Cap
2	Well Cap with concrete
3	Well Cap with grout
4	Solid pipe in concrete
5	Solid pipe in grout
6	Solid pipe in bentinite pellets
7	Solid pipe in sand
8	Slotted pipe in sand
9	Grout plug
10	Sand backfill
11	Native Backfill

11. Refer to report text for EPA Test Methods used
12. Commonly used acronyms:

MSL	Mean Sea Level
MLLW	Mean Lower Low Water
PPM	Parts Per Million
PPMV	Parts Per Million Per Volume
mg/kg	Milligrams per kilograms
PCF	Pound Per Cubic Foot
ND	Not Detected

KEY TO TERMS AND SYMBOLS USED ON LOGS

City of Ventura Leland/Johnson Drive Interchange Project

Ventura, California

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Appendix 2

Boring Logs

Rincon Consultants

LOG OF BORING HA1

Olivas Park Drive Extension
Ventura, California

Rincon Project 09-63950

Date Completed : September 14, 2009
Location : MP Enterprises- directly east of waste drum storage
Method : Hand Auger
Drilled By : Rincon- Joe Hardeman
Logged By : Joe Hardeman

Depth in Feet	Samples	USCS	GRAPHIC	DESCRIPTION	PID	Water Level	REMARKS
0	■	SP		SAND, brick fragments, traces of silt and clay, dark brown and red, slightly moist, fine to coarse grained, stiff, no odor	0		
1							Groundwater not encountered.
2							
3							
4							
5	■				0		
6							
7							
8							
9							
10							

02-08-2011

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LOG OF BORING HA2

Olivas Park Drive Extension
Ventura, California

Rincon Project 09-63950

Date Completed : September 14, 2009
Location : MP Enterprises- directly east of waste drum storage
Method : Hand Auger
Drilled By : Rincon- Joe Hardeman
Logged By : Joe Hardeman

Depth in Feet	Samples	USCS	GRAPHIC	DESCRIPTION	PID	Water Level	REMARKS
0		SP		SAND, brick fragments, brown and red, slightly moist, fine to coarse grained, stiff, no odor	0		Groundwater not encountered.
1							
2							
3							
4							
5					0		
6							
7							
8							
9							
10							

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LOG OF BORING HA3

Olivas Park Drive Extension
Ventura, California

Rincon Project 09-63950

Date Completed : September 14, 2009
Location : MP Enterprises- adjacent east of waste oil drum storage
Method : Hand Auger
Drilled By : Rincon- Joe Hardeman
Logged By : Joe Hardeman

Depth in Feet	Samples	USCS	GRAPHIC	DESCRIPTION	PID	Water Level	REMARKS
0	■	SP		SAND, brick fragments, 15% gravel, brown, slightly moist, fine to medium grained, firm, no odor	0		Groundwater not encountered.
4	■	SC		CLAYEY SAND, trace brick, gray, slightly moist, fine to medium grained, slightly plastic, soft, no odor	0		

0
1
2
3
4
5
6
7
8
9
10

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LOG OF BORING HA4

Olivas Park Drive Extension
Ventura, California

Rincon Project 09-63950

Date Completed : September 14, 2009
Location : MP Enterprises- north of maintenance shed
Method : Hand Auger
Drilled By : Rincon- Joe Hardeman
Logged By : Joe Hardeman

Depth in Feet	Samples	USCS	GRAPHIC	DESCRIPTION	PID	Water Level	REMARKS
0		GP		GRAVELLY SAND, brick fragments, light brown, dry, fine to coarse grained, stiff, no odor	0		Groundwater not encountered.
1							
2							
3							
4				Slightly moist, firm			
5					0		
6							
7							
8							
9							
10							

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LOG OF BORING HA5

Olivas Park Drive Extension
Ventura, California

Rincon Project 09-63950

Date Completed : September 14, 2009
Location : MP Enterprises- Inside maintenance shed near AST& parts wash
Method : Hand Auger
Drilled By : Rincon- Joe Hardeman
Logged By : Joe Hardeman

Depth in Feet	Samples	USCS	GRAPHIC	DESCRIPTION	PID	Water Level	REMARKS
0		GP		GRAVELLY SAND, dark brown, moist, fine to medium grained, firm, slight hydrocarbon odor	0		Groundwater not encountered.
1							
2							
3							
4							
5					0		
6							
7							
8							
9							
10							

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LOG OF BORING RB1

Olivas Park Drive Extension
Ventura, California

Rincon Project 09-63950

Date Completed	: September 14, 2009
Location	: Diesel AST on Wastewater Treatment Site
Method	: Geoprobe
Drilled By	: Hydrogeospectrum
Logged By	: Shawn Decker

Depth in Feet	Samples	USCS	GRAPHIC	DESCRIPTION	PID	Water Level	REMARKS
0				Asphalt	0		
		SM		SILTY SAND, tan brown, dry, medium grained, poorly graded, firm, no odor			Groundwater not encountered.
1							
2							
3					0		
4							
5		SP		SANDY trace silt, black discoloration, dry, medium grained, poorly graded, firm, diesel odor	0		
6							
7							
8							
9							
10				Light brown, slightly moist, no odor	0		

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LOG OF BORING RB2

Olivas Park Drive Extension
Ventura, California

Rincon Project 09-63950

Date Completed : September 14, 2009
Location : S of Maintenance Building at Wastewater Treatment Site
Method : Geoprobe
Drilled By : Hydrogeospectrum
Logged By : Shawn Decker

Depth in Feet	Samples	USCS	GRAPHIC	DESCRIPTION	PID	Water Level	REMARKS
0				Concrete	0		
1		SM		SANDY SILT, brown, dry, fine grained, well graded, soft, no odor			Groundwater not encountered.
2				SILTY SAND, 10% gravel, light brown, dry, medium grained, poorly graded, firm, no odor	0		
3		SP		SAND trace silt, 30% coarse grained sand, light brown, slightly moist, medium grained, poorly graded, hard, no odor			
4							
5					0		
6							
7							
8							
9							
10							

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LOG OF BORING RB3

Olivas Park Drive Extension
Ventura, California

Rincon Project 09-63950

Date Completed : September 14, 2009
Location : S of Maintenance Building at Wastewater Treatment Site
Method : Geoprobe
Drilled By : Hydrogeospectrum
Logged By : Shawn Decker

Depth in Feet	Samples	USCS	GRAPHIC	DESCRIPTION	PID	Water Level	REMARKS
0				Concrete	0		
1		SM		SANDY SILT, brown, dry, fine grained, well graded, soft, no odor			Groundwater not encountered.
2				SILTY SAND, 10% gravel, light brown, dry, medium grained, poorly graded, firm, no odor	0		
3		SP		SAND trace silt, 30% coarse grained sand, light brown, slightly moist, medium grained, poorly graded, hard, no odor			
4							
5					0		
6							
7							
8							
9							
10							

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LOG OF BORING RB4

Olivas Park Drive Extension
Ventura, California

Rincon Project 09-63950

Date Completed : September 14, 2009
Location : N side of Maintenance Building at Wastewater Treatment Site
Method : Geoprobe
Drilled By : Hydrogeospectrum
Logged By : Shawn Decker

Depth in Feet	Samples	USCS	GRAPHIC	DESCRIPTION	PID	Water Level	REMARKS
0				Concrete	0		
1		SM		SANDY SILT, brown, dry, very fine grained, poorly graded, hard, no odor			Groundwater not encountered.
2		SP		SAND, 20% medium grained sand, yellowish orange, dry, fine to medium grained, poorly graded, firm, no odor			
3					0		
4							
5					0		
6							
7							
8							
9							
10							

02-08-2011

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LOG OF BORING RB5

Olivas Park Drive Extension
Ventura, California

Rincon Project 09-63950

Date Completed	: September 14, 2009
Location	: Vacant Land East of Wastewater Treatment Site
Method	: Geoprobe
Drilled By	: Hydrogeospectrum
Logged By	: Shawn Decker

Depth in Feet	Samples	USCS	GRAPHIC	DESCRIPTION	PID	Water Level	REMARKS
0	■	ML		SILT, light brown, dry, very fine grained, poorly graded, firm, no odor	0		Groundwater not encountered.
1							
2							
3							
4							
5	■			SILT, trace clay, light brown, slightly moist, very fined grained, slightly plastic, poorly graded, hard, no odor	0		
6							
7		SP		SAND, tan brown, moist, medium grained, poorly graded, soft and loose, no odor			
8							
9	■				0		
10							

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LOG OF BORING RB6

Olivas Park Drive Extension
Ventura, California

Rincon Project 09-63950

Date Completed : September 14, 2009
Location : 320 feet east of boring RB5
Method : Geoprobe
Drilled By : Hydrogeospectrum
Logged By : Shawn Decker

Depth in Feet	Samples	USCS	GRAPHIC	DESCRIPTION	PID	Water Level	REMARKS
0	■	GM		SILT and GRAVEL, 50% gravel, light brown, dry, medium grained, poorly graded, firm, no odor	0		Groundwater not encountered.
1							
2							
3							
4							
4	■	SM		SILT and SAND, light brown, dry, fine grained, poorly graded, hard, no odor	0		
5							
6							
7							
8		SP		SAND, tan brown, slightly moist, medium grained, poorly graded, loose, no odor			
9							
10	■				0		

02-08-2011

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LOG OF BORING RB7

Olivas Park Drive Extension
Ventura, California

Rincon Project 09-63950

Date Completed : September 14, 2009
Location : 400 feet northeast of boring RB6
Method : Geoprobe
Drilled By : Hydrogeospectrum
Logged By : Shawn Decker

Depth in Feet	Samples	USCS	GRAPHIC	DESCRIPTION	PID	Water Level	REMARKS
0	■	SM		SANDY SILT, 10% gravel, light brown, dry, fine grained, well graded, firm, no odor	0		
1				SANDY SILT, no gravel			Groundwater not encountered.
2							
3							
4		SP/SM		SANDY SILT, trace medium grained gravel, yellowish orange, dry, fine to medium grained, poorly graded, hard, no odor			
5	■				0		
6							
7		SP		SAND, yellowish orange, slightly moist, medium grained, poorly graded, soft, no odor			
8							
9							
10	■				0		

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LOG OF BORING RB8

Olivas Park Drive Extension
Ventura, California

Rincon Project 09-63950

Date Completed : September 14, 2009
Location : 200 feet northeast of boring RB7
Method : Geoprobe
Drilled By : Hydrogeospectrum
Logged By : Shawn Decker

Depth in Feet	Samples	USCS	GRAPHIC	DESCRIPTION	PID	Water Level	REMARKS
0	■	SM		SANDY SILT, greater than 10% gravel, yellowish orange, dry, very fine grained, poorly graded, hard, no odor	0		Groundwater not encountered.
1							
2							
3							
4	■	SM/SP		SILTY SAND and gravel, yellowish orange, slightly moist, fine to medium grained, poorly graded, very hard, no odor	0		Refusal at 5 feet below grade
5							
6							
7							
8							
9							
10							

02-08-2011

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LOG OF BORING RB9

Olivas Park Drive Extension
Ventura, California

Rincon Project 09-63950

Date Completed : September 14, 2009
Location : 320 feet northeast of boring RB8
Method : Geoprobe
Drilled By : Hydrogeospectrum
Logged By : Shawn Decker

Depth in Feet	Samples	USCS	GRAPHIC	DESCRIPTION	PID	Water Level	REMARKS
0		SM		SANDY SILT, greater than 10% gravel, light brown, dry, fine to medium grained, poorly graded, hard, no odor	0		Groundwater not encountered.
1							
2							
3							
				No Recovery			Refusal at 4 feet below grade
4							
5							
6							
7							
8							
9							
10							

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LOG OF BORING RB10

Olivas Park Drive Extension
Ventura, California

Rincon Project 09-63950

Date Completed : September 14, 2009
Location : At Ventura Road
Method : Geoprobe
Drilled By : Hydrogeospectrum
Logged By : Shawn Decker

Depth in Feet	Samples	USCS	GRAPHIC	DESCRIPTION	PID	Water Level	REMARKS
0		SM		SILT and GRAVEL, 50% gravel, light brown, dry, very fine grained, poorly graded, hard, no odor	0		Groundwater not encountered.
1							
2							
				SILT and GRAVEL, 50% gravel, light brown, dry, very fine to fine grained, poorly graded, very hard, no odor	0		Refusal at 3 feet below grade
3							
4							
5							
6							
7							
8							
9							
10							

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LOG OF BORING RB11

Olivas Park Drive Extension
Ventura, California

Rincon Project 09-63950

Date Completed : September 14, 2009
Location : Storage Area to East of MP Enterprises
Method : Geoprobe
Drilled By : Hydrogeospectrum
Logged By : Shawn Decker

Depth in Feet	Samples	USCS	GRAPHIC	DESCRIPTION	PID	Water Level	REMARKS
0		SM		SANDY SILT, greater than 10% gravel, brick fragments, light brown, dry, fine to medium grained, poorly graded, firm, no odor	0		Groundwater not encountered.
1							
2							
3							
4					0		
5							
6							
7							
8							
9							
10							

02-08-2011

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LOG OF BORING RB12

Olivas Park Drive Extension
Ventura, California

Rincon Project 09-63950

Date Completed : September 14, 2009
Location : Storage Area to east of MP Enterprises
Method : Geoprobe
Drilled By : Hydrogeospectrum
Logged By : Shawn Decker

Depth in Feet	Samples	USCS	GRAPHIC	DESCRIPTION	PID	Water Level	REMARKS
0	■	SM/GM		SANDY SILT, greater than 10% gravel, light brown, dry, fine grained, poorly graded, firm, no odor	0		Groundwater not encountered.
1							
2							
3							
4							
4	■			SILTY SAND and GRAVEL, white, dry, very fine grained, poorly graded, hard, no odor	0		
5							
6							
7							
8							
9							
10							

02-08-2011

Rincon Consultants

LOG OF BORING RB13

Olivas Park Drive Extension
Ventura, California

Rincon Project 09-63950

Date Completed : September 14, 2009
Location : Storage Area east of MP Enterprises
Method : Geoprobe
Drilled By : Hydrogeospectrum
Logged By : Shawn Decker

Depth in Feet	Samples	USCS	GRAPHIC	DESCRIPTION	PID	Water Level	REMARKS
0	■	SM/GM		SILTY SAND and GRAVEL, greater than 10% coarse gravel, light brown, dry, fine to medium grained, poorly graded, hard, no odor	0		Groundwater not encountered.
4	■	SP/GM		SAND and GRAVEL, white, dry, fine to coarse grained, poorly graded, very hard, no odor	0		

0 1 2 3 4 5 6 7 8 9 10

02-08-2011

Rincon Consultants

LOG OF BORING RB14

Olivas Park Drive Extension
Ventura, California

Rincon Project 09-63950

Date Completed : September 14, 2009
Location : Storage Area to east of EP Enterprises
Method : Geoprobe
Drilled By : Hydrogeospectrum
Logged By : Shawn Decker

Depth in Feet	Samples	USCS	GRAPHIC	DESCRIPTION	PID	Water Level	REMARKS
0		SM/GM		SILTY SAND and GRAVEL, greater than 20% gravel, light brown, dry, fine to medium grained, poorly graded, hard, no odor	0		
1							Groundwater not encountered.
2				No sample recovery at 2.5 feet below grade			Refusal at 2.5 feet below grade
3							
4							
5							
6							
7							
8							
9							
10							

02-08-2011

Rincon Consultants

LOG OF BORING RB15

Olivas Park Drive Extension
Ventura, California

Rincon Project 09-63950

Date Completed : September 14, 2009
Location : Storage Area east of MP Enterprises
Method : Geoprobe
Drilled By : Hydrogeospectrum
Logged By : Shawn Decker

Depth in Feet	Samples	USCS	GRAPHIC	DESCRIPTION	PID	Water Level	REMARKS
0	■	SM/GM		SILTY SAND and GRAVEL, brick fragments, light brown, dry, fine to medium grained, poorly graded, stiff, no odor	0		Groundwater not encountered.
1							
2							
3							
4		SP/GM		SAND and GRAVEL, light brown, dry, fine to medium grained, poorly graded, hard, no odor			
5	■				0		
6							
7							
8							
9							
10							

02-08-2011

Rincon Consultants

LOG OF BORING RB16

Olivas Park Drive Extension
Ventura, California

Rincon Project 09-63950

Date Completed : September 14, 2009
Location : MP Enterprises- southeast area, appears to be cleaning area
Method : Geoprobe
Drilled By : Hydrogeospectrum
Logged By : Shawn Decker

Depth in Feet	Samples	USCS	GRAPHIC	DESCRIPTION	PID	Water Level	REMARKS
0		SM/GM		SILTY SAND and GRAVEL, light brown, dry, fine to medium grained, poorly graded, hard, strong hydrocarbon odor	0		
1							Groundwater not encountered.
2				Refusal in very hard rocks at 2 feet below grade. Strong hydrocarbon odors.			Refusal at 2 feet below grade
3							
4							
5							
6							
7							
8							
9							
10							

02-08-2011

Rincon Consultants

LOG OF BORING RB17

Olivas Park Drive Extension
Ventura, California

Rincon Project 09-63950

Date Completed : September 14, 2009
Location : MP Enterprises- south of maintenance shed
Method : Geoprobe
Drilled By : Hydrogeospectrum
Logged By : Shawn Decker

Depth in Feet	Samples	USCS	GRAPHIC	DESCRIPTION	PID	Water Level	REMARKS
0				Asphalt	0		
		SM		SANDY SILT, brown, dry, fine grained, poorly graded, hard, no odor			Groundwater not encountered.
1							
2				Brick fragments			
3							
4		SM/GM		SILTY SAND and gravel, light brown, slightly moist, medium grained, poorly graded, hard, no odor	0		
5							
6							
7							
8							
9							
10							

02-08-2011

Rincon Consultants

LOG OF BORING RB18

Olivas Park Drive Extension
Ventura, California

Rincon Project 09-63950

Date Completed : September 14, 2009
Location : MP Enterprises
Method : Geoprobe
Drilled By : Hydrogeospectrum
Logged By : Shawn Decker

Depth in Feet	Samples	USCS	GRAPHIC	DESCRIPTION	PID	Water Level	REMARKS
0	■	SM		SANDY SILT, brown, dry, fine grained, poorly graded, hard, no odor	0		Groundwater not encountered.
1							
2							
3							
4		ML		SANDY SILT and CLAY, light brown, slightly moist, fine grained, poorly graded, slightly plastic, no odor			
5	■				0		
6							
7							
8							
9							
10							

02-08-2011

Rincon Consultants

LOG OF BORING RB19

Olivas Park Drive Extension
Ventura, California

Rincon Project 09-63950

Date Completed : September 14, 2009
Location : MP Enterprises- south of loading dock
Method : Geoprobe
Drilled By : Hydrogeospectrum
Logged By : Shawn Decker

Depth in Feet	Samples	USCS	GRAPHIC	DESCRIPTION	PID	Water Level	REMARKS
0	■	SM		SANDY SILT, brown, dry, fine grained, poorly graded, hard, no odor	0		Groundwater not encountered.
1							
2							
3							
4		SP/GP		SAND with lots of gravel, yellowish orange to light brown, moist, medium grained, poorly graded, hard, no odor			
	■				0		
5							
6							
7							
8							
9							
10							

02-08-2011

Rincon Consultants

LOG OF BORING RB20

Olivas Park Drive Extension
Ventura, California

Rincon Project 09-63950

Date Completed : September 14, 2009
Location : MP Enterprises- West of concrete pad at maintenance sheds
Method : Geoprobe
Drilled By : Hydrogeospectrum
Logged By : Shawn Decker

Depth in Feet	Samples	USCS	GRAPHIC	DESCRIPTION	PID	Water Level	REMARKS
0				Asphalt	0		
		SP		SAND, trace silt, 10% gravel, brown, dry, fine grained, poorly graded, hard, no odor			Groundwater not encountered.
4		SM		SILTY SAND, brown, dry, medium grained, poorly graded, hard, no odor	0		

02-08-2011

Rincon Consultants

LOG OF BORING RB21

Olivas Park Drive Extension
Ventura, California

Rincon Project 09-63950

Date Completed : September 14, 2009
Location : MP Enterprises- west of boring RB20
Method : Geoprobe
Drilled By : Hydrogeospectrum
Logged By : Shawn Decker

Depth in Feet	Samples	USCS	GRAPHIC	DESCRIPTION	PID	Water Level	REMARKS
0	■		■	Asphalt	0		
		SM		SILTY SAND, black staining, slightly moist, fine grained, poorly graded, hard, no odor			Groundwater not encountered.
1							
2							
3							
4		SP		SAND, brown, very slightly moist, medium grained, poorly graded, hard, no odor			
	■				0		
5							
6							
7							
8							
9							
10							

02-08-2011

Rincon Consultants

LOG OF BORING RB22

Olivas Park Drive Extension
Ventura, California

Rincon Project 09-63950

Date Completed	: September 14, 2009
Location	: MP Enterprises- north of loading dock
Method	: Geoprobe
Drilled By	: Hydrogeospectrum
Logged By	: Shawn Decker

Depth in Feet	Samples	USCS	GRAPHIC	DESCRIPTION	PID	Water Level	REMARKS
0	■		■	Asphalt	0		
		SM		SAND, trace silt, 10% gravel, light brown, dry, fine grained, poorly graded, hard, no odor			Groundwater not encountered.
1							
2							
3							
4							
	■	SP		SAND, tan brown, dry, medium grained, poorly graded, soft and loose, no odor	0		
5							
6							
7							
8							
9							
10							

02-08-2011

Rincon Consultants

LOG OF BORING RB23

Olivas Park Drive Extension
Ventura, California

Rincon Project 09-63950

Date Completed : September 14, 2009
Location : MP Enterprises- access area to north of loading docks
Method : Geoprobe
Drilled By : Hydrogeospectrum
Logged By : Shawn Decker

Depth in Feet	Samples	USCS	GRAPHIC	DESCRIPTION	PID	Water Level	REMARKS
0				Asphalt	0		
1		SM		SAND, trace silt, 10% gravel, light brown, dry, fine grained, poorly graded, hard, no odor			Groundwater not encountered.
2							
3							
4							
5		SP		SAND, tan brown, dry, medium grained, poorly graded, soft and loose, no odor	0		
6							
7							
8							
9							
10							

02-08-2011

Rincon Consultants

LOG OF BORING RB24

Olivas Park Drive Extension
Ventura, California

Rincon Project 09-63950

Date Completed : September 14, 2009
Location : MP Enterprises- Access area to north of loading docks
Method : Geoprobe
Drilled By : Hydrogeospectrum
Logged By : Shawn Decker

Depth in Feet	Samples	USCS	GRAPHIC	DESCRIPTION	PID	Water Level	REMARKS
0				Asphalt	0		
		SM		SILT SAND, light brown, dry, fine grained, poorly graded, hard, no odor			Groundwater not encountered.
1							
2							
3							
4							
		SP		SAND, tan brown, dry, medium grained, poorly graded, soft and loose, no odor	0		
5							
6							
7							
8							
9							
10							

02-08-2011

Rincon Consultants

LOG OF BORING RB25

Olivas Park Drive Extension
Ventura, California

Rincon Project 09-63950

Date Completed : September 14, 2009
Location : Agricultural Land- western end near Olivas Park Drive
Method : Geoprobe
Drilled By : Hydrogeospectrum
Logged By : Shawn Decker

Depth in Feet	Samples	USCS	GRAPHIC	DESCRIPTION	PID	Water Level	REMARKS
0		SM		SANDY SILT, light brown, dry, fine grained, poorly graded, soft, no odor	0		Groundwater not encountered.
1							
2		SP		SAND, yellowish orange to light brown, slightly moist, fine to medium grained, poorly graded, soft, no odor			
3					0		
4							
5					0		
6							
7							
8							
9							
10							

02-08-2011

Rincon Consultants

LOG OF BORING RB26

Olivas Park Drive Extension
Ventura, California

Rincon Project 09-63950

Date Completed : September 14, 2009
Location : Agricultural Land- east of boring RB25
Method : Geoprobe
Drilled By : Hydrogeospectrum
Logged By : Shawn Decker

Depth in Feet	Samples	USCS	GRAPHIC	DESCRIPTION	PID	Water Level	REMARKS
0	■	SM		SANDY SILT, light brown, dry, fine grained, poorly graded, soft, no odor	0		Groundwater not encountered.
1							
2	■				0		
3		SP		SAND, yellowish orange to light brown, slightly moist, fine to medium grained, poorly graded, soft, no odor			
4	■				0		
5							
6							
7							
8							
9							
10							

02-08-2011

Rincon Consultants

LOG OF BORING RB27

Olivas Park Drive Extension
Ventura, California

Rincon Project 09-63950

Date Completed : September 14, 2009
Location : Agricultural Land- east of boring RB26
Method : Geoprobe
Drilled By : Hydrogeospectrum
Logged By : Shawn Decker

Depth in Feet	Samples	USCS	GRAPHIC	DESCRIPTION	PID	Water Level	REMARKS
0	■	SM		SANDY SILT, light brown, dry, fine grained, poorly graded, soft, no odor	0		Groundwater not encountered.
1							
2	■				0		
3		SP		SAND, yellowish orange to light brown, slightly moist, fine to medium grained, poorly graded, soft, no odor			
4	■				0		
5							
6							
7							
8							
9							
10							

02-08-2011

Rincon Consultants

LOG OF BORING RB28

Olivas Park Drive Extension
Ventura, California

Rincon Project 09-63950

Date Completed : September 14, 2009
Location : Agricultural Land- west of wastewater treatment site
Method : Geoprobe
Drilled By : Hydrogeospectrum
Logged By : Shawn Decker

Depth in Feet	Samples	USCS	GRAPHIC	DESCRIPTION	PID	Water Level	REMARKS
0		SM		SANDY SILT, light brown, dry, fine grained, poorly graded, soft, no odor	0		Groundwater not encountered.
2		SP		SAND, yellowish orange to light brown, slightly moist, fine to medium grained, poorly graded, soft, no odor	0		
5					0		
10							

02-08-2011

Appendix 3

Analytical Laboratory Reports

AMERICAN SCIENTIFIC LABORATORIES, LLC

Environmental Testing Services

2520 N. San Fernando Rd., Los Angeles, CA 90065 Tel: (323) 223-9700 Fax: (323) 223-9500

Ordered By

Rincon Consultants, Inc.
790 East Santa Clara Street
Ventura, CA 93001

Telephone (805) 641-1000
Attn Shawn Decker

Number of Pages 55
Date Received 09/15/2009
Date Reported 09/28/2009

Job Number	Ordered	Client
43104	09/15/2009	RINCON

Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension
Site: Ventura Road
Ventura, CA

Enclosed are the results of analyses on 62 samples analyzed as specified on attached chain of custody.

Amolk MOLKY Brar
Laboratory Manager

Rojert G. Araghi
Laboratory Director

American Scientific Laboratories, LLC (ASL) accepts sample materials from clients for analysis with the assumption that all of the information provided to ASL verbally or in writing by our clients (and/or their agents), regarding samples being submitted to ASL, is complete and accurate. ASL accepts all samples subject to the following conditions:

1) ASL is not responsible for verifying any client-provided information regarding any samples submitted to the laboratory.
2) ASL is not responsible for any consequences resulting from any inaccuracies, omissions, or misrepresentations contained in client-provided information regarding samples submitted to the laboratory.

AMERICAN SCIENTIFIC LABORATORIES, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA, CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

COC# № 49627 GLOBAL ID _____ E REPORT: ☒ PDF ☐ EDF ☐ EDD ASL JOB# 43104

Company: Rincon Consultants, Inc.		Report To: Rincon	ANALYSIS REQUESTED
Address: 790 E. Santa Clara	Project Name: Olivas Park Drive Extension	Address:	
Ventura, CA 93001	Site Address: Ventura Road	Invoice To: Rincon	
Telephone: 805 641 1000 Fax: 1072	Ventura, CA	Address:	
Special Instruction:	Project ID:		
E-mail: sloeller@rincon-consultants.com	Project Manager:	P.O.#:	

ITEM	LAB USE ONLY Lab ID	SAMPLE DESCRIPTION Sample ID	Date	Time	Container(s) #	Type	Matrix	Preservation	TEPH 8015M	Remarks
1	241784	RB1-0.5	9-14-09	8:30	1	Acetate Sleeve 5035	Soil	NA 5035	X	MDL
2	241785	RB1-3		8:35					X	
3	241786	RB1-5		8:40					X	
4	241787	RB1-10		8:45					X	
5	241788	RB2-0.5		9:15					X	
6	241789	RB2-3		9:20					X	
7	241790	RB2-5		9:15					X	
8	241791	RB3-0.5		9:40					X	
9	241792	RB3-3		9:45					X	
10	241793	RB3-5		9:50					X	

Collected By: [signature]	Date 9-14-09 Time	Relinquished By:	Date Time
Relinquished By: [signature]	Date 9-15-09 Time	Received For Laboratory [signature]	Date 9/15/09 Time 11:30
Received By:	Date Time	Condition of Sample:	

TAT
☒ Normal
☐ Rush

AMERICAN SCIENTIFIC LABORATORIES, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA, CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

COC# № 49628 GLOBAL ID _____ E REPORT: ☒ PDF ☐ EDF ☐ EDD ASL JOB# 43104

Company: Rincon Consultants, Inc.		Report To: Rincon	ANALYSIS REQUESTED
Address: 790 East Santa Clara	Project Name: Olivas Park Drive Extension	Address:	
Ventura, CA 93001	Site Address: Ventura Road	Invoice To: Rincon	
Telephone: 805 641 1000 Fax: 805 641 1072	Ventura, CA	Address:	
Special Instruction:	Project ID: 09-63950		
E-mail: sdecker@rinconconsultants.com	Project Manager: Shawn Decker	P.O.#: 09-63950	

ITEM	LAB USE ONLY Lab ID	SAMPLE DESCRIPTION Sample ID	Date	Time	Container(s) #	Type	Matrix	Preservation	8015M TEPH	8260B VOCs	8081 Chlorinated Pesticides	7471A/6010B Metals	Remarks
11	241794	RB4-0.5	9-14-09	10:00	1 3	Acetate/Glass 5035	Soil	NA 5035	X				MDL
12	241795	RB4-3		10:05					X				
13	241796	RB4-5		10:10					X				
14	241797	RB5-0.5		10:30					X	X	X	X	
15	241798	RB5-5		10:35					X		X	X	
16	241799	RB5-10		10:40					X				
17	241800	RB6-0.5		10:55					X	X	X	X	
18	241801	RB6-5		11:00					X		X	X	
19	241802	RB6-10		11:05					X				
20	241803	RB7-0.5		11:15					X	X	X	X	

Collected By: [signature]	Date 9-14-09	Time	Relinquished By:	Date / Time
Relinquished By: [signature]	Date 9-15-09	Time	Received For Laboratory [signature]	Date 9/15/09 Time 1130
Received By:	Date	Time	Condition of Sample:	

TAT: ☒ Normal ☐ Rush

AMERICAN SCIENTIFIC LABORATORIES, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA, CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

COC# № 49629 GLOBAL ID _____ E REPORT: ☒ PDF ☐ EDF ☐ EDD ASL JOB# 43104

Company: Rincon Consultants, Inc.		Report To: Rincon	ANALYSIS REQUESTED
Address: 790 E. Santa Clara	Project Name: Olivas Park Drive Extension	Address:	
Ventura, CA 93001	Site Address: Ventura Road	Invoice To: Rincon	
Telephone: 805 641 1000 Fax: 1072	Ventura, CA	Address:	
Special Instruction:	Project ID: 09-63950		
E-mail: sdecker@rinconconsultants.com	Project Manager: Shawn Decker	P.O.#: 09-63950	

ITEM	LAB USE ONLY Lab ID	SAMPLE DESCRIPTION Sample ID	Date	Time	Container(s) #	Type	Matrix	Preservation	8015M TEPH	8260B VOCs	8081 Chlorinated Pesticides	7471/6010B Metals	Remarks
21	241804	RB7-5	9-14-09	11:20	1 3	Acetate/Core 5035	Soil	NA 5035	X		X	X	MDL
22	241805	RB7-10		11:25					X				
23	241806	RB8-0.5		11:40					X	X	X	X	
24	241807	RB8-5		11:45					X		X	X	
25	241808	~~RB8-10~~ RB9-0.5		11:55					X	X	X	X	
		RB10-0.5		12:10									
		RB10-5		12:15									
		RB11-0.5		12:20									
		RB11-5		12:25									
26	241809	RB12-0.5		12:35								X	

Collected By: [signature]	Date 9-14-09 Time	Relinquished By:	Date Time
Relinquished By: [signature]	Date 9-14-09 Time	Received For Laboratory [signature]	Date 9/15/09 Time 11:35
Received By:	Date Time	Condition of Sample:	

TAT: ☒ Normal ☐ Rush

AMERICAN SCIENTIFIC LABORATORIES, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA, CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

COC# № 49629 GLOBAL ID _____ E REPORT: ☒ PDF ☐ EDF ☐ EDD ASL JOB# 48104

Company: Rincon Consultants, Inc.		Report To: Rincon	ANALYSIS REQUESTED
Address: 790 East Santa Clara	Project Name: Olivas Park Drive Extension	Address:	
Ventura, CA 93001	Site Address: Ventura Road	Invoice To: Rincon	
Telephone: 805 641 1000 Fax: 1072	Ventura, CA	Address:	
Special Instruction:	Project ID: 09-63950		
E-mail: schecker@rinconconsultants.com	Project Manager: Shawn Decker	P.O.#: 09-63950	

ITEM	LAB USE ONLY Lab ID	SAMPLE DESCRIPTION Sample ID	Date	Time	Container(s) #	Container(s) Type	Matrix	Preservation	8015M TEPH	8260B VOC	8270/Metals Metals								Remarks
		RB12-5	9-14-09	12:40	1 3	Acetate Sleeve 5035	Soil	NA 5035											MDL
27	241810	RB13-0.5		12:50					X	X	X								
		RB13-5		12:55															
		RB14-0.5		13:05															
28	241811	~~RB15~~ RB15-0.5		13:20							X								
		RB15-5		13:25															
29	241812	RB16-0.5		15:10					X	X	X								
30	241813	RB16-2		15:15					X	X	X								
31	241814	RB17-0.5		14:15					X	X	X								
		RB17-5		14:20															

Collected By: [signature]	Date 9-14-09 Time	Relinquished By:	Date Time
Relinquished By: [signature]	Date 9-15-09 Time	Received For Laboratory [signature]	Date 9/15/09 Time 11:40
Received By:	Date Time	Condition of Sample:	

TAT: ☒ Normal ☐ Rush

AMERICAN SCIENTIFIC LABORATORIES, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA, CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

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Company: Rincon Consultants, Inc.		Report To: Rincon	ANALYSIS REQUESTED
Address: 790 East Santa Clara	Project Name: Olivas Park Drive Extension	Address:	
Ventura, CA	Site Address: Ventura Road	Invoice To: Rincon	
Telephone: 805 641 1000 Fax: 1072	Ventura, CA	Address:	
Special Instruction:	Project ID: 09-63950		
E-mail: sdecks@rinconconsultants.com	Project Manager: Shawn Decks	P.O.#: 09-63950	

ITEM	LAB USE ONLY Lab ID	SAMPLE DESCRIPTION Sample ID	Date	Time	Container(s) #	Type	Matrix	Preservation	8015M TEPH	8260B VOCs	6010/7470/8082 Metals									Remarks
32	241815	RB18-0.5	9-14-09	14:30	1 3	Acetate Sleeve 5035	Soil	NA 5035	X	X	X									MDL
33	241816	RB18-5		14:35					X	X										
34	241817	RB19-0.5		14:40					X	X	X									
		RB19-5		14:45																
35	241818	RB20-0.5		14:55					X	X	X									
36	241819	RB20-5		15:00					X	X										
37	241820	RB21-0.5		15:10					X	X	X									
38	241821	RB21-5		15:15					X	X	X									
39	241822	RB22-0.5		15:25					X	X	X									
		RB22-5		15:30																

Collected By: [signature]	Date 9-14-09 Time	Relinquished By:	Date Time
Relinquished By: [signature]	Date 9-15-09 Time	Received For Laboratory [signature]	Date 9/15/09 Time 11:30
Received By:	Date Time	Condition of Sample:	

TAT ☒ Normal ☐ Rush

AMERICAN SCIENTIFIC LABORATORIES, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA, CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

COC# № 49629 GLOBAL ID _____ E REPORT: ☒ PDF ☐ EDF ☐ EDD ASL JOB# 43104

Company: Rincon Consultants, Inc.	Project Name: Olivas Park Drive Extension	Report To: Rincon
Address: 790 East Santa Clara	Site Address: Ventura Road	Address:
Ventura, CA 93001	Ventura, CA	Invoice To: Rincon
Telephone: 805 641 1000 Fax: 1072	Project ID: 09-63950	Address:
Special Instruction:	Project Manager: Shawn Decker	P.O.#: 09-63950
E-mail: sdecker@rinconconsultants.com		

ANALYSIS REQUESTED

ITEM	LAB USE ONLY Lab ID	SAMPLE DESCRIPTION Sample ID	Date	Time	Container(s) #	Type	Matrix	Preservation	TEPH	VOCs	Metals	Chlorinated Pesticides	Remarks
40	241823	RB23-0.5	9-14-09	15:45	1 3	Acetate Liner 5035	Soil	NA 5035	X	X	X		MDL
		RB23-5		15:50									
41	241824	RB24-0.5		16:00									
		RB24-5		16:05									
42	241825	RB25-0.5		16:15	1	Acetate Liner		NA				X	
43	241826	RB25-3		16:20								X	
44	241827	RB25-5		16:30								X	
45	241828	RB26-0.5		16:35								X	
46	241829	RB26-3		16:45								X	
47	241830	RB26-5		16:50								X	

Collected By: [signature]	Date 9-14-09 Time	Relinquished By:	Date Time
Relinquished By: [signature]	Date 9-15-09 Time	Received For Laboratory [signature]	Date 9/15/09 Time 11:30
Received By:	Date Time	Condition of Sample:	

TAT: ☒ Normal ☐ Rush

AMERICAN SCIENTIFIC LABORATORIES, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA, CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

COC# № 49629 GLOBAL ID _____ E REPORT: ☒ PDF ☐ EDF ☐ EDD ASL JOB# 43104

Company: Rincon Consultants, Inc.		Report To: Rincon	ANALYSIS REQUESTED
Address: 790 E. Santa Clara	Project Name: Olivas Park Drive Extension	Address:	
Ventura, CA	Site Address: Ventura Road	Invoice To: Rincon	
Telephone: 805 641 1000 Fax: 1072	Ventura, CA	Address:	
Special Instruction:	Project ID: 09-63950		
E-mail: sdecker@rinconconsultants.com	Project Manager: Shawn Decker	P.O.#: 09-63950	

ITEM	LAB USE ONLY Lab ID	SAMPLE DESCRIPTION Sample ID	Date	Time	Container(s) #	Type	Matrix	Preservation	8015M TEPH	8260B VOCs	7471/6010B Metals	8081 Chlorinated Pesticides							Remarks
48	241831	RB27-0.5	9-14-09	17:00	1	Acetate Sleeve	Soil	NA				X							MPL
49	241832	RB27-3		17:05								X							
50	241833	RB27-5		17:10								X							
51	241834	RB28-0.5		17:20								X							
52	241835	RB28-3		17:25								X							
53	241836	RB28-5		17:30								X							
54	241837	HA1-0.5		11:10	1	Brass Ring					X								4 VOA
55	241838	HA1-5		12:10	1	Brass Ring			X	X									4 VOA
56	241839	HA2-0.5		12:30	1 3	5035		NA 5035			X								4 VOA
57	241840	HA2-5		13:00					X	X									4 VOA & Jar

Collected By:	Date 9-14-09	Time	Relinquished By:	Date	Time
Relinquished By:	Date 9-15-09	Time	Received For Laboratory	Date 9/15/09	Time 11:30
Received By:	Date	Time	Condition of Sample:		

TAT: ☒ Normal ☐ Rush

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COC# № 49629 GLOBAL ID _____ E REPORT: ☒ PDF ☐ EDF ☐ EDD ASL JOB# 43104

Company: Rincon Consultants, Inc.		Report To: Rincon	ANALYSIS REQUESTED
Address: 790 East Santa Clara	Project Name: Olivas Park Drive Extension	Address:	
Ventura, CA	Site Address: Ventura Road	Invoice To: Rincon	
Telephone: 805 641 1000 Fax: 1072	Ventura, CA	Address:	
Special Instruction:	Project ID: 09-63950		
E-mail: sdeckler@rinconconsultants.com	Project Manager: Shawn Deckler	P.O.#: 09-63950	

ITEM	LAB USE ONLY Lab ID	SAMPLE DESCRIPTION Sample ID	Date	Time	Container(s) #	Type	Matrix	Preservation	8015M TEPH	8260B VOCs	7471/6010B Metals									Remarks
58	241841	HA3-0.5	9-14-09	13:30	1	Brass Ring 4oz	Soil	NA 5035			X									MDL
59	241842	HA3-5	↓	14:15	↓	↓	↓	↓	X	X										↓
60	241843	HA4-0.5		14:40					X	X	X									
		HA4-5		15:30																
61	241844	HA5-0.5		15:50					X	X	X									
62	241845	HA5-2.5	↓	16:20	↓	↓	↓	↓	X	X	X									

Collected By: S. Deckler	Date 9-14-09	Time	Relinquished By:	Date	Time
Relinquished By: S. Deckler	Date 9-15-09	Time	Received For Laboratory: Paul	Date 9/15/09	Time 11:30
Received By:	Date	Time	Condition of Sample:		

TAT: ☒ Normal ☐ Rush

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ANALYTICAL RESULTS

Ordered By

Rincon Consultants, Inc.
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Ventura, CA 93001

Telephone: (805)641-1000
Attn: Shawn Decker

Site

Ventura Road
Ventura, CA

Page: 2

Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 6010B/7471A, CCR Title 22 Metals (TTLC)

QC Batch No: 092109-2

Our Lab I.D.			241797	241798	241800	241801	241803
Client Sample I.D.			RB5-0.5	RB5-5	RB6-0.5	RB6-5	RB7-0.5
Date Sampled			09/14/2009	09/14/2009	09/14/2009	09/14/2009	09/14/2009
Date Prepared			09/21/2009	09/21/2009	09/21/2009	09/21/2009	09/21/2009
Preparation Method							
Date Analyzed			09/25/2009	09/25/2009	09/25/2009	09/25/2009	09/25/2009
Matrix			Soil	Soil	Soil	Soil	Soil
Units			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Dilution Factor			1	1	1	1	1
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	**Results**
AA Metals							
Mercury	0.0100	0.0500	0.0359J	0.0786	0.0265J	0.0148J	0.0196J
ICP Metals							
Antimony	0.200	0.500	0.499J	ND	0.226J	ND	0.715
Arsenic	0.150	0.250	2.90	0.804	4.16	2.54	4.10
Barium	0.0500	0.500	86.1	47.5	82.9	47.8	107
Beryllium	0.0400	0.500	0.250J	0.101J	0.238J	0.149J	0.240J
Cadmium	0.0400	0.500	1.16	0.473J	1.10	0.630	0.993
Chromium	0.0500	0.500	10.8	4.04	8.96	5.82	14.8
Cobalt	0.0500	0.500	3.86	1.63	3.69	2.32	3.11
Copper	0.0500	0.500	15.5	4.07	9.62	5.90	9.48
Lead	0.100	0.250	20.7	2.16	8.68	5.41	14.2
Molybdenum	0.0500	0.500	0.753	0.380J	0.840	0.450J	0.186J
Nickel	0.100	0.500	13.2	4.65	11.2	6.95	9.39
Selenium	0.200	0.500	ND	ND	ND	ND	ND
Silver	0.0500	0.500	ND	ND	ND	ND	ND
Thallium	0.150	0.500	ND	ND	ND	ND	ND
Vanadium	0.0500	0.500	17.3	8.50	16.9	10.8	17.0
Zinc	0.350	0.500	138	14.6	40.0	25.6	40.6

QUALITY CONTROL REPORT

QC Batch No: 092109-2

Analytes	LCS % REC	LCS/LCSD % Limit								
AA Metals										
Mercury	108	80-120								
ICP Metals										
Antimony	94	80-120								
Arsenic	92	80-120								

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ANALYTICAL RESULTS

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Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 6010B/7471A, CCR Title 22 Metals (TTLC)
QUALITY CONTROL REPORT

QC Batch No: 092109-2

Analytes	LCS % REC	LCS/LCSD % Limit								
ICP Metals										
Barium	103	80-120								
Beryllium	96	80-120								
Cadmium	92	80-120								
Chromium	93	80-120								
Cobalt	94	80-120								
Copper	95	80-120								
Lead	95	80-120								
Molybdenum	92	80-120								
Nickel	94	80-120								
Selenium	93	80-120								
Silver	94	80-120								
Thallium	95	80-120								
Vanadium	93	80-120								
Zinc	99	80-120								

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ANALYTICAL RESULTS

Ordered By

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790 East Santa Clara Street
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Telephone: (805)641-1000
Attn: Shawn Decker

Site

Ventura Road
Ventura, CA

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Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 6010B/7471A, CCR Title 22 Metals (TTLC)

QC Batch No: 092109-2

Our Lab I.D.			241804	241806	241807	241808	241809
Client Sample I.D.			RB7-5	RB8-0.5	RB8-5	RB9-0.5	RB12-0.5
Date Sampled			09/14/2009	09/14/2009	09/14/2009	09/14/2009	09/14/2009
Date Prepared			09/21/2009	09/21/2009	09/21/2009	09/21/2009	09/21/2009
Preparation Method							
Date Analyzed			09/25/2009	09/25/2009	09/25/2009	09/25/2009	09/25/2009
Matrix			Soil	Soil	Soil	Soil	Soil
Units			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Dilution Factor			1	1	1	1	1
Analytes	MDL	PQL	Results	Results	Results	Results	Results
AA Metals							
Mercury	0.0100	0.0500	0.0145J	0.0235J	0.0300J	0.0106J	0.0182J
ICP Metals							
Antimony	0.200	0.500	0.754	0.362J	ND	ND	ND
Arsenic	0.150	0.250	2.70	2.95	1.18	1.23	1.48
Barium	0.0500	0.500	85.8	115	48.7	52.2	97.9
Beryllium	0.0400	0.500	0.290J	0.335J	0.144J	0.109J	0.180J
Cadmium	0.0400	0.500	1.08	1.25	0.607	0.697	0.868
Chromium	0.0500	0.500	8.98	12.7	5.15	3.89	8.02
Cobalt	0.0500	0.500	4.73	4.98	1.89	1.63	3.12
Copper	0.0500	0.500	10.1	12.9	4.63	5.28	9.10
Lead	0.100	0.250	5.57	5.77	1.94	2.52	10.5
Molybdenum	0.0500	0.500	0.174J	0.614	0.528	0.403J	0.749
Nickel	0.100	0.500	10.9	16.7	5.73	4.58	11.3
Selenium	0.200	0.500	ND	ND	ND	ND	ND
Silver	0.0500	0.500	ND	ND	ND	ND	ND
Thallium	0.150	0.500	ND	ND	ND	ND	ND
Vanadium	0.0500	0.500	18.0	21.5	11.7	8.64	22.0
Zinc	0.350	0.500	35.0	49.2	17.2	16.0	37.8

QUALITY CONTROL REPORT

QC Batch No: 092109-2

Analytes	LCS % REC	LCS/LCSD % Limit								
AA Metals										
Mercury	108	80-120								
ICP Metals										
Antimony	94	80-120								
Arsenic	92	80-120								

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ANALYTICAL RESULTS

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Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 6010B/7471A, CCR Title 22 Metals (TTLC)
QUALITY CONTROL REPORT

QC Batch No: 092109-2

Analytes	LCS % REC	LCS/LCSD % Limit								
ICP Metals										
Barium	103	80-120								
Beryllium	96	80-120								
Cadmium	92	80-120								
Chromium	93	80-120								
Cobalt	94	80-120								
Copper	95	80-120								
Lead	95	80-120								
Molybdenum	92	80-120								
Nickel	94	80-120								
Selenium	93	80-120								
Silver	94	80-120								
Thallium	95	80-120								
Vanadium	93	80-120								
Zinc	99	80-120								

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ANALYTICAL RESULTS

Ordered By

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Attn: Shawn Decker

Site

Ventura Road
Ventura, CA

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Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 6010B/7471A, CCR Title 22 Metals (TTLC)

QC Batch No: 092109-2

Our Lab I.D.			241810	241811	241812	241813	241814
Client Sample I.D.			RB13-0.5	RB15-0.5	RB16-0.5	RB16-2	RB17-0.5
Date Sampled			09/14/2009	09/14/2009	09/14/2009	09/14/2009	09/14/2009
Date Prepared			09/21/2009	09/21/2009	09/21/2009	09/21/2009	09/21/2009
Preparation Method							
Date Analyzed			09/25/2009	09/25/2009	09/25/2009	09/25/2009	09/25/2009
Matrix			Soil	Soil	Soil	Soil	Soil
Units			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Dilution Factor			1	1	1	1	1
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	**Results**
AA Metals							
Mercury	0.0100	0.0500	0.0216J	0.0215J	0.0291J	0.0215J	0.0209J
ICP Metals							
Antimony	0.200	0.500	ND	ND	ND	ND	ND
Arsenic	0.150	0.250	2.12	2.30	2.06	2.94	1.04
Barium	0.0500	0.500	89.2	73.2	64.5	199	76.4
Beryllium	0.0400	0.500	0.238J	0.189J	0.197J	0.206J	0.0938J
Cadmium	0.0400	0.500	1.00	0.837	0.872	0.783	0.599
Chromium	0.0500	0.500	9.12	7.98	8.40	10.3	7.20
Cobalt	0.0500	0.500	3.58	2.97	2.73	3.07	4.04
Copper	0.0500	0.500	10.7	9.19	13.2	11.1	8.28
Lead	0.100	0.250	44.1	25.7	11.9	52.9	11.3
Molybdenum	0.0500	0.500	0.573	0.505	0.0600J	0.874	2.55
Nickel	0.100	0.500	11.5	9.48	9.37	7.95	10.9
Selenium	0.200	0.500	ND	ND	ND	ND	ND
Silver	0.0500	0.500	ND	ND	ND	ND	ND
Thallium	0.150	0.500	ND	ND	ND	ND	ND
Vanadium	0.0500	0.500	16.5	13.6	18.8	17.7	25.4
Zinc	0.350	0.500	47.5	44.5	34.7	82.1	30.9

QUALITY CONTROL REPORT

QC Batch No: 092109-2

Analytes	LCS % REC	LCS/LCSD % Limit								
AA Metals										
Mercury	108	80-120								
ICP Metals										
Antimony	94	80-120								
Arsenic	92	80-120								

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ANALYTICAL RESULTS

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Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 6010B/7471A, CCR Title 22 Metals (TTLC)
QUALITY CONTROL REPORT

QC Batch No: 092109-2

Analytes	LCS % REC	LCS/LCSD % Limit								
ICP Metals										
Barium	103	80-120								
Beryllium	96	80-120								
Cadmium	92	80-120								
Chromium	93	80-120								
Cobalt	94	80-120								
Copper	95	80-120								
Lead	95	80-120								
Molybdenum	92	80-120								
Nickel	94	80-120								
Selenium	93	80-120								
Silver	94	80-120								
Thallium	95	80-120								
Vanadium	93	80-120								
Zinc	99	80-120								

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ANALYTICAL RESULTS

Ordered By

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Site

Ventura Road
Ventura, CA

Page: 8

Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 6010B/7471A, CCR Title 22 Metals (TTLC)

QC Batch No: 092109-3.

Our Lab I.D.			241815	241817	241818	241820	241821
Client Sample I.D.			RB18-0.5	RB19-0.5	RB20-0.5	RB21-0.5	RB21-5
Date Sampled			09/14/2009	09/14/2009	09/14/2009	09/14/2009	09/14/2009
Date Prepared			09/21/2009	09/21/2009	09/21/2009	09/21/2009	09/21/2009
Preparation Method							
Date Analyzed			09/25/2009	09/25/2009	09/25/2009	09/25/2009	09/25/2009
Matrix			Soil	Soil	Soil	Soil	Soil
Units			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Dilution Factor			1	1	1	1	1
Analytes	MDL	PQL	Results	Results	Results	Results	Results
AA Metals							
Mercury	0.0100	0.0500	0.0134J	0.0160J	0.0214J	ND	ND
ICP Metals							
Antimony	0.200	0.500	ND	ND	ND	0.248J	ND
Arsenic	0.150	0.250	0.886	0.936	1.29	0.350	0.851
Barium	0.0500	0.500	65.4	75.3	93.9	343	25.2
Beryllium	0.0400	0.500	0.0907J	0.0957J	0.148J	ND	0.0896J
Cadmium	0.0400	0.500	0.578	0.628	0.712	1.05	0.457J
Chromium	0.0500	0.500	7.18	7.12	12.5	4.69	2.88
Cobalt	0.0500	0.500	3.89	3.76	4.09	8.38	1.25
Copper	0.0500	0.500	12.5	16.0	18.4	13.0	2.71
Lead	0.100	0.250	7.30	12.8	13.3	3.51	1.27
Molybdenum	0.0500	0.500	0.638	3.55	1.29	0.211J	0.251J
Nickel	0.100	0.500	10.1	10.3	12.7	8.74	4.10
Selenium	0.200	0.500	ND	ND	ND	ND	ND
Silver	0.0500	0.500	0.374J	0.521	ND	ND	ND
Thallium	0.150	0.500	ND	ND	ND	ND	ND
Vanadium	0.0500	0.500	20.4	24.4	27.5	22.8	6.96
Zinc	0.350	0.500	28.2	39.1	42.0	39.4	12.4

QUALITY CONTROL REPORT

QC Batch No: 092109-3.

Analytes	LCS % REC	LCS/LCSD % Limit								
AA Metals										
Mercury	106	80-120								
ICP Metals										
Antimony	91	80-120								
Arsenic	92	80-120								

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ANALYTICAL RESULTS

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Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 6010B/7471A, CCR Title 22 Metals (TTLC)
QUALITY CONTROL REPORT

QC Batch No: 092109-3.

Analytes	LCS % REC	LCS/LCSD % Limit								
ICP Metals										
Barium	104	80-120								
Beryllium	98	80-120								
Cadmium	96	80-120								
Chromium	93	80-120								
Cobalt	95	80-120								
Copper	94	80-120								
Lead	97	80-120								
Molybdenum	91	80-120								
Nickel	97	80-120								
Selenium	94	80-120								
Silver	98	80-120								
Thallium	101	80-120								
Vanadium	93	80-120								
Zinc	103	80-120								

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ANALYTICAL RESULTS

Ordered By

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Ventura Road
Ventura, CA

Page: 10

Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 6010B/7471A, CCR Title 22 Metals (TTLC)

QC Batch No: 092109-3.

Our Lab I.D.			241822	241823	241824	241837	241839
Client Sample I.D.			RB22-0.5	RB23-0.5	RB24-0.5	HA1-0.5	HA2-0.5
Date Sampled			09/14/2009	09/14/2009	09/14/2009	09/14/2009	09/14/2009
Date Prepared			09/21/2009	09/21/2009	09/21/2009	09/21/2009	09/21/2009
Preparation Method							
Date Analyzed			09/25/2009	09/25/2009	09/25/2009	09/25/2009	09/25/2009
Matrix			Soil	Soil	Soil	Soil	Soil
Units			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Dilution Factor			1	1	1	1	1
Analytes	MDL	PQL	Results	Results	Results	Results	Results
AA Metals							
Mercury	0.0100	0.0500	0.0206J	0.0721	0.0251J	0.0222J	0.0390J
ICP Metals							
Antimony	0.200	0.500	0.593	ND	0.592	ND	0.374J
Arsenic	0.150	0.250	1.62	1.21	1.75	2.10	2.18
Barium	0.0500	0.500	52.8	87.4	65.9	124	140
Beryllium	0.0400	0.500	0.110J	0.205J	0.170J	0.188J	0.205J
Cadmium	0.0400	0.500	1.24	0.913	0.919	0.798	1.12
Chromium	0.0500	0.500	31.4	7.10	29.1	7.87	9.53
Cobalt	0.0500	0.500	2.18	2.52	2.83	2.54	2.65
Copper	0.0500	0.500	9.63	6.51	7.19	14.2	12.0
Lead	0.100	0.250	143	5.07	6.23	24.2	38.8
Molybdenum	0.0500	0.500	0.811	0.510	1.04	0.482J	0.696
Nickel	0.100	0.500	6.57	7.27	16.6	8.10	9.22
Selenium	0.200	0.500	ND	ND	ND	ND	ND
Silver	0.0500	0.500	ND	ND	ND	ND	ND
Thallium	0.150	0.500	ND	ND	ND	ND	ND
Vanadium	0.0500	0.500	11.6	16.2	17.0	15.3	22.0
Zinc	0.350	0.500	58.1	24.6	30.8	81.0	229

QUALITY CONTROL REPORT

QC Batch No: 092109-3.

Analytes	LCS % REC	LCS/LCSD % Limit								
AA Metals										
Mercury	106	80-120								
ICP Metals										
Antimony	91	80-120								
Arsenic	92	80-120								

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ANALYTICAL RESULTS

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Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 6010B/7471A, CCR Title 22 Metals (TTLC)
QUALITY CONTROL REPORT

QC Batch No: 092109-3.

Analytes	LCS % REC	LCS/LCSD % Limit								
ICP Metals										
Barium	104	80-120								
Beryllium	98	80-120								
Cadmium	96	80-120								
Chromium	93	80-120								
Cobalt	95	80-120								
Copper	94	80-120								
Lead	97	80-120								
Molybdenum	91	80-120								
Nickel	97	80-120								
Selenium	94	80-120								
Silver	98	80-120								
Thallium	101	80-120								
Vanadium	93	80-120								
Zinc	103	80-120								

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Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 6010B/7471A, CCR Title 22 Metals (TTLC)

QC Batch No: 092109-3.

Our Lab I.D.			241841	241843	241844	241845	
Client Sample I.D.			HA3-0.5	HA4-0.5	HA5-0.5	HA5-2.5	
Date Sampled			09/14/2009	09/14/2009	09/14/2009	09/14/2009	
Date Prepared			09/21/2009	09/21/2009	09/21/2009	09/21/2009	
Preparation Method							
Date Analyzed			09/25/2009	09/25/2009	09/25/2009	09/25/2009	
Matrix			Soil	Soil	Soil	Soil	
Units			mg/Kg	mg/Kg	mg/Kg	mg/Kg	
Dilution Factor			1	1	1	1	
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	
AA Metals							
Mercury	0.0100	0.0500	0.0218J	0.0195J	0.0297J	0.0178J	
ICP Metals							
Antimony	0.200	0.500	0.516	0.232J	0.447J	ND	
Arsenic	0.150	0.250	1.88	2.01	1.80	2.10	
Barium	0.0500	0.500	105	75.7	155	84.6	
Beryllium	0.0400	0.500	0.200J	0.221J	0.140J	0.172J	
Cadmium	0.0400	0.500	1.62	1.05	0.774	0.822	
Chromium	0.0500	0.500	33.3	8.45	6.30	7.89	
Cobalt	0.0500	0.500	3.68	3.53	2.16	2.73	
Copper	0.0500	0.500	22.5	12.9	8.91	23.8	
Lead	0.100	0.250	86.4	14.2	195	17.4	
Molybdenum	0.0500	0.500	3.91	0.493J	0.315J	0.462J	
Nickel	0.100	0.500	15.9	9.68	6.52	9.60	
Selenium	0.200	0.500	ND	ND	ND	ND	
Silver	0.0500	0.500	ND	ND	ND	ND	
Thallium	0.150	0.500	ND	ND	ND	ND	
Vanadium	0.0500	0.500	17.6	16.8	11.2	16.9	
Zinc	0.350	0.500	82.5	130	112	54.0	

QUALITY CONTROL REPORT

QC Batch No: 092109-3.

Analytes	LCS % REC	LCS/LCSD % Limit								
AA Metals										
Mercury	106	80-120								
ICP Metals										
Antimony	91	80-120								
Arsenic	92	80-120								

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Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 6010B/7471A, CCR Title 22 Metals (TTLC)
QUALITY CONTROL REPORT

QC Batch No: 092109-3.

Analytes	LCS % REC	LCS/LCSD % Limit								
ICP Metals										
Barium	104	80-120								
Beryllium	98	80-120								
Cadmium	96	80-120								
Chromium	93	80-120								
Cobalt	95	80-120								
Copper	94	80-120								
Lead	97	80-120								
Molybdenum	91	80-120								
Nickel	97	80-120								
Selenium	94	80-120								
Silver	98	80-120								
Thallium	101	80-120								
Vanadium	93	80-120								
Zinc	103	80-120								

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Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8015B, TPH DROs and OROs (Diesel and Oil Range Organics)

QC Batch No: 091709-1D

Our Lab I.D.			**241803**				
Client Sample I.D.			RB7-0.5				
Date Sampled			09/14/2009				
Date Prepared			09/17/2009				
Preparation Method							
Date Analyzed			09/17/2009				
Matrix			Soil				
Units			mg/Kg				
Dilution Factor			1				
Analytes	**MDL**	**PQL**	**Results**				
TPH DROs (C10 to C28)	1.00	10.0	ND				
TPH OROs (C28+)	17.0	50.0	556				

Our Lab I.D.			**241803**				
Surrogates	**% Rec.Limit**		**% Rec.**				
Surrogate Percent Recovery							
Chlorobenzene	70-120		107				

QUALITY CONTROL REPORT

QC Batch No: 091709-1D

Analytes	MS % REC	MS DUP % REC	RPD .%	MS/MSD % Limit	MS RPD % Limit					
Diesel	101	97	4.0	75-120	<20					

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Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8015B, TPH DROs and OROs (Diesel and Oil Range Organics)

QC Batch No: 091709-2D

Our Lab I.D.			241787	241788	241789		
Client Sample I.D.			RB1-10	RB2-0.5	RB2-3		
Date Sampled			09/14/2009	09/14/2009	09/14/2009		
Date Prepared			09/17/2009	09/17/2009	09/17/2009		
Preparation Method							
Date Analyzed			09/18/2009	09/18/2009	09/18/2009		
Matrix			Soil	Soil	Soil		
Units			mg/Kg	mg/Kg	mg/Kg		
Dilution Factor			1	1	1		
Analytes	MDL	PQL	Results	Results	Results		
TPH DROs (C10 to C28)	1.00	10.0	ND	ND	ND		
TPH OROs (C28+)	17.0	50.0	ND	ND	18.6J		

Our Lab I.D.			241787	241788	241789		
Surrogates	% Rec.Limit		% Rec.	% Rec.	% Rec.		
Surrogate Percent Recovery							
Chlorobenzene	70-120		116	118	106		

QUALITY CONTROL REPORT

QC Batch No: 091709-2D

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit					
Diesel	96	95	1.0	75-120	<20					

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Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8015B, TPH DROs and OROs (Diesel and Oil Range Organics)

QC Batch No: 091709-2P

Our Lab I.D.			241784	241785	241786		
Client Sample I.D.			RB1-0.5	RB1-3	RB1-5		
Date Sampled			09/14/2009	09/14/2009	09/14/2009		
Date Prepared			09/17/2009	09/17/2009	09/17/2009		
Preparation Method							
Date Analyzed			09/18/2009	09/18/2009	09/18/2009		
Matrix			Soil	Soil	Soil		
Units			mg/Kg	mg/Kg	mg/Kg		
Dilution Factor			1	1	1		
Analytes	MDL	PQL	Results	Results	Results		
TPH DROs (C10 to C28)	1.00	10.0	ND	ND	105		
TPH OROs (C28+)	17.0	50.0	ND	ND	120		

Our Lab I.D.			241784	241785	241786		
Surrogates	% Rec.Limit		% Rec.	% Rec.	% Rec.		
Surrogate Percent Recovery							
Chlorobenzene	70-120		85	81	102		

QUALITY CONTROL REPORT

QC Batch No: 091709-2P

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit					
Diesel	99	101	2.0	75-120	<20					

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Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8015B, TPH DROs and OROs (Diesel and Oil Range Organics)

QC Batch No: 091809-1D

Our Lab I.D.			241798	241799	241802	241804	241805
Client Sample I.D.			RB5-5	RB5-10	RB6-10	RB7-5	RB7-10
Date Sampled			09/14/2009	09/14/2009	09/14/2009	09/14/2009	09/14/2009
Date Prepared			09/17/2009	09/17/2009	09/17/2009	09/17/2009	09/17/2009
Preparation Method							
Date Analyzed			09/18/2009	09/18/2009	09/18/2009	09/18/2009	09/18/2009
Matrix			Soil	Soil	Soil	Soil	Soil
Units			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Dilution Factor			1	1	1	1	1
Analytes	MDL	PQL	Results	Results	Results	Results	Results
TPH DROs (C10 to C28)	1.00	10.0	ND	ND	ND	ND	ND
TPH OROs (C28+)	17.0	50.0	17.6J	ND	ND	ND	ND

Our Lab I.D.			241798	241799	241802	241804	241805
Surrogates	% Rec.Limit		% Rec.	% Rec.	% Rec.	% Rec.	% Rec.
Surrogate Percent Recovery							
Chlorobenzene	70-120		93	108	99	85	86

QUALITY CONTROL REPORT

QC Batch No: 091809-1D

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit					
Diesel	97	97	<1	75-120	<20					

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Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8015B, TPH DROs and OROs (Diesel and Oil Range Organics)

QC Batch No: 091809-1D

Our Lab I.D.			241806	241807	241808		
Client Sample I.D.			RB8-0.5	RB8-5	RB9-0.5		
Date Sampled			09/14/2009	09/14/2009	09/14/2009		
Date Prepared			09/17/2009	09/17/2009	09/17/2009		
Preparation Method							
Date Analyzed			09/18/2009	09/18/2009	09/18/2009		
Matrix			Soil	Soil	Soil		
Units			mg/Kg	mg/Kg	mg/Kg		
Dilution Factor			1	1	1		
Analytes	MDL	PQL	Results	Results	Results		
TPH DROs (C10 to C28)	1.00	10.0	ND	ND	ND		
TPH OROs (C28+)	17.0	50.0	ND	ND	ND		

Our Lab I.D.			241806	241807	241808		
Surrogates	% Rec.Limit		% Rec.	% Rec.	% Rec.		
Surrogate Percent Recovery							
Chlorobenzene	70-120		93	79	86		

QUALITY CONTROL REPORT

QC Batch No: 091809-1D

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit					
Diesel	97	97	<1	75-120	<20					

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Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8015B, TPH DROs and OROs (Diesel and Oil Range Organics)

QC Batch No: 091809-1P

Our Lab I.D.			241790	241791	241792	241793	241794
Client Sample I.D.			RB2-5	RB3-0.5	RB3-3	RB3-5	RB4-0.5
Date Sampled			09/14/2009	09/14/2009	09/14/2009	09/14/2009	09/14/2009
Date Prepared			09/17/2009	09/17/2009	09/17/2009	09/17/2009	09/17/2009
Preparation Method							
Date Analyzed			09/18/2009	09/18/2009	09/18/2009	09/18/2009	09/18/2009
Matrix			Soil	Soil	Soil	Soil	Soil
Units			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Dilution Factor			1	1	1	1	1
Analytes	MDL	PQL	Results	Results	Results	Results	Results
TPH DROs (C10 to C28)	1.00	10.0	ND	ND	ND	ND	ND
TPH OROs (C28+)	17.0	50.0	ND	ND	ND	ND	ND

Our Lab I.D.			241790	241791	241792	241793	241794
Surrogates	% Rec.Limit		% Rec.	% Rec.	% Rec.	% Rec.	% Rec.
Surrogate Percent Recovery							
Chlorobenzene	70-120		84	90	77	80	73

QUALITY CONTROL REPORT

QC Batch No: 091809-1P

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit					
Diesel	86	86	<1	75-120	<20					

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Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8015B, TPH DROs and OROs (Diesel and Oil Range Organics)

QC Batch No: 091809-1P

Our Lab I.D.			241795	241796	241797		
Client Sample I.D.			RB4-3	RB4-5	RB5-0.5		
Date Sampled			09/14/2009	09/14/2009	09/14/2009		
Date Prepared			09/17/2009	09/17/2009	09/17/2009		
Preparation Method							
Date Analyzed			09/18/2009	09/18/2009	09/18/2009		
Matrix			Soil	Soil	Soil		
Units			mg/Kg	mg/Kg	mg/Kg		
Dilution Factor			1	1	1		
Analytes	MDL	PQL	Results	Results	Results		
TPH DROs (C10 to C28)	1.00	10.0	ND	ND	ND		
TPH OROs (C28+)	17.0	50.0	ND	ND	ND		

Our Lab I.D.			241795	241796	241797		
Surrogates	% Rec.Limit		% Rec.	% Rec.	% Rec.		
Surrogate Percent Recovery							
Chlorobenzene	70-120		76	78	81		

QUALITY CONTROL REPORT

QC Batch No: 091809-1P

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit					
Diesel	86	86	<1	75-120	<20					

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Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8015B, TPH DROs and OROs (Diesel and Oil Range Organics)

QC Batch No: 091809-2D

Our Lab I.D.			241812	241815	241818	241820	241822
Client Sample I.D.			RB16-0.5	RB18-0.5	RB20-0.5	RB21-0.5	RB22-0.5
Date Sampled			09/14/2009	09/14/2009	09/14/2009	09/14/2009	09/14/2009
Date Prepared			09/17/2009	09/17/2009	09/17/2009	09/17/2009	09/17/2009
Preparation Method							
Date Analyzed			09/19/2009	09/19/2009	09/19/2009	09/18/2009	09/18/2009
Matrix			Soil	Soil	Soil	Soil	Soil
Units			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Dilution Factor			1	1	1	1	1
Analytes	MDL	PQL	Results	Results	Results	Results	Results
TPH DROs (C10 to C28)	1.00	10.0	974	ND	ND	ND	ND
TPH OROs (C28+)	17.0	50.0	2130	1040	1100	1240	498

Our Lab I.D.			241812	241815	241818	241820	241822
Surrogates	% Rec.Limit		% Rec.	% Rec.	% Rec.	% Rec.	% Rec.
Surrogate Percent Recovery							
Chlorobenzene	70-120		102	116	102	104	99

QUALITY CONTROL REPORT

QC Batch No: 091809-2D

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit					
Diesel	100	99	1.0	75-120	<20					

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Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8015B, TPH DROs and OROs (Diesel and Oil Range Organics)

QC Batch No: 091809-2D

Our Lab I.D.			241844				
Client Sample I.D.			HA5-0.5				
Date Sampled			09/14/2009				
Date Prepared			09/17/2009				
Preparation Method							
Date Analyzed			09/19/2009				
Matrix			Soil				
Units			mg/Kg				
Dilution Factor			1				
Analytes	MDL	PQL	Results				
TPH DROs (C10 to C28)	1.00	10.0	ND				
TPH OROs (C28+)	17.0	50.0	554				

Our Lab I.D.			241844				
Surrogates	% Rec.Limit		% Rec.				
Surrogate Percent Recovery							
Chlorobenzene	70-120		101				

QUALITY CONTROL REPORT

QC Batch No: 091809-2D

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit					
Diesel	100	99	1.0	75-120	<20					

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Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8015B, TPH DROs and OROs (Diesel and Oil Range Organics).

QC Batch No: 091809-2P

Our Lab I.D.			241800	241801	241810	241813	241816
Client Sample I.D.			RB6-0.5	RB6-5	RB13-0.5	RB16-2	RB18-5
Date Sampled			09/14/2009	09/14/2009	09/14/2009	09/14/2009	09/14/2009
Date Prepared			09/17/2009	09/17/2009	09/17/2009	09/17/2009	09/17/2009
Preparation Method							
Date Analyzed			09/19/2009	09/19/2009	09/19/2009	09/19/2009	09/19/2009
Matrix			Soil	Soil	Soil	Soil	Soil
Units			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Dilution Factor			1	1	1	1	1
Analytes	MDL	PQL	Results	Results	Results	Results	Results
TPH DROs (C10 to C28)	1.00	10.0	ND	ND	ND	ND	ND
TPH OROs (C28+)	17.0	50.0	26.4J	17.2J	ND	52.8	ND

Our Lab I.D.			241800	241801	241810	241813	241816
Surrogates	% Rec.Limit		% Rec.	% Rec.	% Rec.	% Rec.	% Rec.
Surrogate Percent Recovery							
Chlorobenzene	70-120		81	82	77	89	80

QUALITY CONTROL REPORT

QC Batch No: 091809-2P

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit					
Diesel	105	105	<1	75-120	<20					

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Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8015B, TPH DROs and OROs (Diesel and Oil Range Organics)

QC Batch No: 091809-2P

Our Lab I.D.			241819	241821	241823	241824	241840
Client Sample I.D.			RB20-5	RB21-5	RB23-0.5	RB24-0.5	HA2-5
Date Sampled			09/14/2009	09/14/2009	09/14/2009	09/14/2009	09/14/2009
Date Prepared			09/17/2009	09/17/2009	09/17/2009	09/17/2009	09/17/2009
Preparation Method							
Date Analyzed			09/19/2009	09/19/2009	09/19/2009	09/19/2009	09/19/2009
Matrix			Soil	Soil	Soil	Soil	Soil
Units			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Dilution Factor			1	1	1	1	1
Analytes	MDL	PQL	Results	Results	Results	Results	Results
TPH DROs (C10 to C28)	1.00	10.0	ND	ND	ND	ND	ND
TPH OROs (C28+)	17.0	50.0	ND	ND	ND	150	279

Our Lab I.D.			241819	241821	241823	241824	241840
Surrogates	% Rec.Limit		% Rec.	% Rec.	% Rec.	% Rec.	% Rec.
Surrogate Percent Recovery							
Chlorobenzene	70-120		87	75	88	106	99

QUALITY CONTROL REPORT

QC Batch No: 091809-2P

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit					
Diesel	105	105	<1	75-120	<20					

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ANALYTICAL RESULTS

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Ventura Road
Ventura, CA

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Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8015B, TPH DROs and OROs (Diesel and Oil Range Organics)

QC Batch No: 091809-2P

Our Lab I.D.			241842	241843			
Client Sample I.D.			HA3-5	HA4-0.5			
Date Sampled			09/14/2009	09/14/2009			
Date Prepared			09/17/2009	09/17/2009			
Preparation Method							
Date Analyzed			09/19/2009	09/19/2009			
Matrix			Soil	Soil			
Units			mg/Kg	mg/Kg			
Dilution Factor			1	1			
Analytes	MDL	PQL	Results	Results			
TPH DROs (C10 to C28)	1.00	10.0	ND	ND			
TPH OROs (C28+)	17.0	50.0	ND	32.4J			

Our Lab I.D.			241842	241843			
Surrogates	% Rec.Limit		% Rec.	% Rec.			
Surrogate Percent Recovery							
Chlorobenzene	70-120		86	81			

QUALITY CONTROL REPORT

QC Batch No: 091809-2P

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit					
Diesel	105	105	<1	75-120	<20					

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Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8015B, TPH DROs and OROs (Diesel and Oil Range Organics)

QC Batch No: 092109-1D

Our Lab I.D.			241838	241845			
Client Sample I.D.			HA1-5	HA5-2.5			
Date Sampled			09/14/2009	09/14/2009			
Date Prepared			09/17/2009	09/17/2009			
Preparation Method							
Date Analyzed			09/21/2009	09/21/2009			
Matrix			Soil	Soil			
Units			mg/Kg	mg/Kg			
Dilution Factor			1	1			
Analytes	MDL	PQL	Results	Results			
TPH DROs (C10 to C28)	1.00	10.0	ND	ND			
TPH OROs (C28+)	17.0	50.0	ND	534			

Our Lab I.D.			241838	241845			
Surrogates	% Rec.Limit		% Rec.	% Rec.			
Surrogate Percent Recovery							
Chlorobenzene	70-120		102	109			

QUALITY CONTROL REPORT

QC Batch No: 092109-1D

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit					
Diesel	98	95	3.1	75-120	<20					

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Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8015B, TPH DROs and OROs (Diesel and Oil Range Organics)

QC Batch No: 092109-2D

Our Lab I.D.			241814	241817			
Client Sample I.D.			RB17-0.5	RB19-0.5			
Date Sampled			09/14/2009	09/14/2009			
Date Prepared			09/17/2009	09/17/2009			
Preparation Method							
Date Analyzed			09/22/2009	09/22/2009			
Matrix			Soil	Soil			
Units			mg/Kg	mg/Kg			
Dilution Factor			1	1			
Analytes	MDL	PQL	Results	Results			
TPH DROs (C10 to C28)	1.00	10.0	ND	ND			
TPH OROs (C28+)	17.0	50.0	1750	1180			

Our Lab I.D.			241814	241817			
Surrogates	% Rec.Limit		% Rec.	% Rec.			
Surrogate Percent Recovery							
Chlorobenzene	70-120		98	103			

QUALITY CONTROL REPORT

QC Batch No: 092109-2D

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit					
Diesel	99	103	4.0	75-120	<20					

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Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8081A, Organochlorine Pesticides

QC Batch No: 091709-1

Our Lab I.D.			241797	241798	241800	241801	241803
Client Sample I.D.			RB5-0.5	RB5-5	RB6-0.5	RB6-5	RB7-0.5
Date Sampled			09/14/2009	09/14/2009	09/14/2009	09/14/2009	09/14/2009
Date Prepared			09/17/2009	09/17/2009	09/17/2009	09/17/2009	09/17/2009
Preparation Method							
Date Analyzed			09/17/2009	09/17/2009	09/17/2009	09/17/2009	09/17/2009
Matrix			Soil	Soil	Soil	Soil	Soil
Units			ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Dilution Factor			1	1	1	1	1
Analytes	MDL	PQL	Results	Results	Results	Results	Results
Aldrin	0.230	2.00	ND	ND	ND	ND	ND
alpha-Hexachlorocyclohexane (Alpha-BHC)	0.270	2.00	ND	ND	ND	ND	ND
Beta-Hexachlorocyclohexane (Beta-BHC)	0.370	2.00	ND	ND	ND	ND	ND
Gamma-Chlordane	0.190	2.00	ND	ND	2.10	1.29J	ND
alpha-Chlordane	0.200	2.00	ND	ND	2.23	ND	ND
4,4'-DDD (DDD)	0.270	4.00	26.1	ND	ND	ND	ND
4,4'-DDE (DDE)	0.220	4.00	ND	ND	ND	9.62	3.94J
4,4'-DDT (DDT)	0.220	4.00	12.8	ND	1.54J	ND	ND
delta-Hexachlorocyclohexane (Delta-BHC)	0.150	2.00	ND	ND	ND	ND	ND
Dieldrin	0.200	4.00	ND	ND	6.63	3.62J	ND
Endosulfan 1	0.200	2.00	ND	ND	ND	ND	ND
Endosulfan 11	0.240	4.00	ND	ND	ND	ND	ND
Endosulfan sulfate	0.270	4.00	ND	ND	ND	ND	ND
Endrin	0.250	4.00	ND	ND	ND	ND	ND
Endrin aldehyde	0.440	4.00	ND	ND	ND	ND	ND
Endrin ketone	0.300	4.00	ND	ND	ND	ND	ND
gamma-Hexachlorocyclohexane (Gamma-BHC, Lindane)	0.210	2.00	ND	ND	ND	ND	ND
Heptachlor	0.230	2.00	ND	ND	ND	ND	ND
Heptachlor epoxide	0.230	2.00	ND	ND	ND	ND	ND
Methoxychlor	0.390	17.0	ND	ND	ND	ND	ND
Toxaphene	17.0	170	ND	ND	ND	ND	ND

Our Lab I.D.			241797	241798	241800	241801	241803
Surrogates	% Rec.Limit		% Rec.	% Rec.	% Rec.	% Rec.	% Rec.
Surrogate Percent Recovery							
Decachlorobiphenyl	43-169		92	88	94	86	99

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ANALYTICAL RESULTS

Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8081A, Organochlorine Pesticides
QUALITY CONTROL REPORT

QC Batch No: 091709-1 Sample Spiked: 241836

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit	LCS % REC	LCS DUP % REC	LCS RPD % REC	LCS/LCSD % Limit	LCS RPD % Limit
Aldrin	82	88	7.1	42-122	<30	110	100	9.5	42-122	<30
4,4'-DDT (DDT)	91	91	<1	25-160	<30	116	108	7.1	25-160	<30
Dieldrin	82	85	3.6	36-146	<30	110	101	8.5	36-146	<30
Endrin	108	113	4.5	30-147	<30	132	120	9.5	30-147	<30
gamma-Hexachlorocyclohexane (Gamma-BHC, Lindane)	82	81	1.2	32-127	<30	115	111	3.5	32-127	<30
Heptachlor	42	47	11.2	34-111	<30	113	117	3.5	34-111	<30

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Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8081A, Organochlorine Pesticides

QC Batch No: 091709-1

Our Lab I.D.			241804	241806	241807	241825	241826
Client Sample I.D.			RB7-5	RB8-0.5	RB8-5	RB25-0.5	RB25-3
Date Sampled			09/14/2009	09/14/2009	09/14/2009	09/14/2009	09/14/2009
Date Prepared			09/17/2009	09/17/2009	09/17/2009	09/17/2009	09/17/2009
Preparation Method							
Date Analyzed			09/17/2009	09/17/2009	09/17/2009	09/17/2009	09/17/2009
Matrix			Soil	Soil	Soil	Soil	Soil
Units			ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Dilution Factor			1	1	1	1	1
Analytes	MDL	PQL	Results	Results	Results	Results	Results
Aldrin	0.230	2.00	ND	ND	ND	ND	ND
alpha-Hexachlorocyclohexane (Alpha-BHC)	0.270	2.00	ND	ND	ND	ND	ND
Beta-Hexachlorocyclohexane (Beta-BHC)	0.370	2.00	ND	ND	ND	ND	ND
Gamma-Chlordane	0.190	2.00	ND	ND	ND	ND	ND
alpha-Chlordane	0.200	2.00	ND	ND	ND	ND	ND
4,4'-DDD (DDD)	0.270	4.00	ND	ND	ND	ND	ND
4,4'-DDE (DDE)	0.220	4.00	ND	30.1	ND	ND	ND
4,4'-DDT (DDT)	0.220	4.00	ND	ND	ND	ND	ND
delta-Hexachlorocyclohexane (Delta-BHC)	0.150	2.00	ND	ND	ND	ND	ND
Dieldrin	0.200	4.00	ND	ND	ND	ND	ND
Endosulfan 1	0.200	2.00	ND	ND	ND	ND	ND
Endosulfan 11	0.240	4.00	ND	ND	ND	ND	ND
Endosulfan sulfate	0.270	4.00	ND	ND	ND	ND	ND
Endrin	0.250	4.00	ND	ND	ND	ND	ND
Endrin aldehyde	0.440	4.00	ND	ND	ND	ND	ND
Endrin ketone	0.300	4.00	ND	ND	ND	ND	ND
gamma-Hexachlorocyclohexane (Gamma-BHC, Lindane)	0.210	2.00	ND	ND	ND	ND	ND
Heptachlor	0.230	2.00	ND	ND	ND	ND	ND
Heptachlor epoxide	0.230	2.00	ND	ND	ND	ND	ND
Methoxychlor	0.390	17.0	ND	ND	ND	ND	ND
Toxaphene	17.0	170	ND	ND	ND	ND	ND

Our Lab I.D.			241804	241806	241807	241825	241826
Surrogates	% Rec.Limit		% Rec.	% Rec.	% Rec.	% Rec.	% Rec.
Surrogate Percent Recovery							
Decachlorobiphenyl	43-169		91	84	95	94	113

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ANALYTICAL RESULTS

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Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8081A, Organochlorine Pesticides
QUALITY CONTROL REPORT

QC Batch No: 091709-1 Sample Spiked: 241836

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit	LCS % REC	LCS DUP % REC	LCS RPD % REC	LCS/LCSD % Limit	LCS RPD % Limit
Aldrin	82	88	7.1	42-122	<30	110	100	9.5	42-122	<30
4,4'-DDT (DDT)	91	91	<1	25-160	<30	116	108	7.1	25-160	<30
Dieldrin	82	85	3.6	36-146	<30	110	101	8.5	36-146	<30
Endrin	108	113	4.5	30-147	<30	132.	120	9.5	30-147	<30
gamma-Hexachlorocyclohexane (Gamma-BHC, Lindane)	82	81	1.2	32-127	<30	115	111	3.5	32-127	<30
Heptachlor	42	47	11.2	34-111	<30	113	117	3.5	34-111	<30

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Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8081A, Organochlorine Pesticides

QC Batch No: 091709-1

Our Lab I.D.			241827	241829	241830	241832	241833
Client Sample I.D.			RB25-5	RB26-3	RB26-5	RB27-3	RB27-5
Date Sampled			09/14/2009	09/14/2009	09/14/2009	09/14/2009	09/14/2009
Date Prepared			09/17/2009	09/17/2009	09/17/2009	09/17/2009	09/17/2009
Preparation Method							
Date Analyzed			09/17/2009	09/17/2009	09/17/2009	09/17/2009	09/17/2009
Matrix			Soil	Soil	Soil	Soil	Soil
Units			ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Dilution Factor			1	1	1	1	1
Analytes	MDL	PQL	Results	Results	Results	Results	Results
Aldrin	0.230	2.00	ND	ND	ND	ND	ND
alpha-Hexachlorocyclohexane (Alpha-BHC)	0.270	2.00	ND	ND	ND	ND	ND
Beta-Hexachlorocyclohexane (Beta-BHC)	0.370	2.00	ND	ND	ND	ND	ND
Gamma-Chlordane	0.190	2.00	ND	ND	ND	ND	ND
alpha-Chlordane	0.200	2.00	ND	ND	ND	ND	ND
4,4'-DDD (DDD)	0.270	4.00	ND	ND	ND	ND	ND
4,4'-DDE (DDE)	0.220	4.00	ND	ND	ND	ND	14.0
4,4'-DDT (DDT)	0.220	4.00	ND	ND	ND	ND	ND
delta-Hexachlorocyclohexane (Delta-BHC)	0.150	2.00	ND	ND	ND	ND	ND
Dieldrin	0.200	4.00	ND	ND	ND	ND	ND
Endosulfan 1	0.200	2.00	ND	ND	ND	ND	ND
Endosulfan 11	0.240	4.00	ND	ND	ND	ND	ND
Endosulfan sulfate	0.270	4.00	ND	ND	ND	ND	ND
Endrin	0.250	4.00	ND	ND	ND	ND	ND
Endrin aldehyde	0.440	4.00	ND	ND	ND	ND	ND
Endrin ketone	0.300	4.00	ND	ND	ND	ND	ND
gamma-Hexachlorocyclohexane (Gamma-BHC, Lindane)	0.210	2.00	ND	ND	ND	ND	ND
Heptachlor	0.230	2.00	ND	ND	ND	ND	ND
Heptachlor epoxide	0.230	2.00	ND	ND	ND	ND	ND
Methoxychlor	0.390	17.0	ND	ND	ND	ND	ND
Toxaphene	17.0	170	ND	ND	ND	ND	ND

Our Lab I.D.			241827	241829	241830	241832	241833
Surrogates	% Rec.Limit		% Rec.	% Rec.	% Rec.	% Rec.	% Rec.
Surrogate Percent Recovery							
Decachlorobiphenyl	43-169		107	106	103	99	85

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ANALYTICAL RESULTS

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Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8081A, Organochlorine Pesticides
QUALITY CONTROL REPORT

QC Batch No: 091709-1 Sample Spiked: 241836

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit	LCS % REC	LCS DUP % REC	LCS RPD % REC	LCS/LCSD % Limit	LCS RPD % Limit
Aldrin	82	88	7.1	42-122	<30	110	100	9.5	42-122	<30
4,4'-DDT (DDT)	91	91	<1	25-160	<30	116	108	7.1	25-160	<30
Dieldrin	82	85	3.6	36-146	<30	110	101	8.5	36-146	<30
Endrin	108	113	4.5	30-147	<30	132	120	9.5	30-147	<30
gamma-Hexachlorocyclohexane (Gamma-BHC, Lindane)	82	81	1.2	32-127	<30	115	111	3.5	32-127	<30
Heptachlor	42	47	11.2	34-111	<30	113	117	3.5	34-111	<30

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Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8081A, Organochlorine Pesticides

QC Batch No: 091709-1

Our Lab I.D.			241835	241836			
Client Sample I.D.			RB28-3	RB28-5			
Date Sampled			09/14/2009	09/14/2009			
Date Prepared			09/17/2009	09/17/2009			
Preparation Method							
Date Analyzed			09/17/2009	09/17/2009			
Matrix			Soil	Soil			
Units			ug/kg	ug/kg			
Dilution Factor			1	1			
Analytes	MDL	PQL	Results	Results			
Aldrin	0.230	2.00	ND	ND			
alpha-Hexachlorocyclohexane (Alpha-BHC)	0.270	2.00	ND	ND			
Beta-Hexachlorocyclohexane (Beta-BHC)	0.370	2.00	ND	ND			
Gamma-Chlordane	0.190	2.00	ND	ND			
alpha-Chlordane	0.200	2.00	ND	ND			
4,4'-DDD (DDD)	0.270	4.00	ND	ND			
4,4'-DDE (DDE)	0.220	4.00	ND	ND			
4,4'-DDT (DDT)	0.220	4.00	ND	ND			
delta-Hexachlorocyclohexane (Delta-BHC)	0.150	2.00	ND	ND			
Dieldrin	0.200	4.00	ND	ND			
Endosulfan 1	0.200	2.00	ND	ND			
Endosulfan 11	0.240	4.00	ND	ND			
Endosulfan sulfate	0.270	4.00	ND	ND			
Endrin	0.250	4.00	ND	ND			
Endrin aldehyde	0.440	4.00	ND	ND			
Endrin ketone	0.300	4.00	ND	ND			
gamma-Hexachlorocyclohexane (Gamma-BHC, Lindane)	0.210	2.00	ND	ND			
Heptachlor	0.230	2.00	ND	ND			
Heptachlor epoxide	0.230	2.00	ND	ND			
Methoxychlor	0.390	17.0	ND	ND			
Toxaphene	17.0	170	ND	ND			

Our Lab I.D.			241835	241836			
Surrogates	% Rec.Limit		% Rec.	% Rec.			
Surrogate Percent Recovery							
Decachlorobiphenyl	43-169		83	80			

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Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8081A, Organochlorine Pesticides
QUALITY CONTROL REPORT

QC Batch No: 091709-1 Sample Spiked: 241836

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit	LCS % REC	LCS DUP % REC	LCS RPD % REC	LCS/LCSD % Limit	LCS RPD % Limit
Aldrin	82	88	7.1	42-122	<30	110	100	9.5	42-122	<30
4,4'-DDT (DDT)	91	91	<1	25-160	<30	116	108	7.1	25-160	<30
Dieldrin	82	85	3.6	36-146	<30	110	101	8.5	36-146	<30
Endrin	108	113	4.5	30-147	<30	132	120	9.5	30-147	<30
gamma-Hexachlorocyclohexane (Gamma-BHC, Lindane)	82	81	1.2	32-127	<30	115	111	3.5	32-127	<30
Heptachlor	42	47	11.2	34-111	<30	113	117	3.5	34-111	<30

AMERICAN SCIENTIFIC LABORATORIES, LLC
Environmental Testing Services
2520 N. San Fernando Rd., Los Angeles, CA 90065 Tel: (323) 223-9700 Fax: (323) 223-9500

ANALYTICAL RESULTS

Ordered By

Rincon Consultants, Inc.
790 East Santa Clara Street
Ventura, CA 93001

Telephone: (805)641-1000
Attn: Shawn Decker

Site

Ventura Road
Ventura, CA

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Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8081A, Organochlorine Pesticides

QC Batch No: 091709-1A

Our Lab I.D.			241808	241828	241831	241834
Client Sample I.D.			RB9-0.5	RB26-0.5	RB27-0.5	RB28-0.5
Date Sampled			09/14/2009	09/14/2009	09/14/2009	09/14/2009
Date Prepared			09/17/2009	09/17/2009	09/17/2009	09/17/2009
Preparation Method						
Date Analyzed			09/17/2009	09/17/2009	09/17/2009	09/17/2009
Matrix			Soil	Soil	Soil	Soil
Units			ug/kg	ug/kg	ug/kg	ug/kg
Dilution Factor			1	1	1	1
Analytes	MDL	PQL	Results	Results	Results	Results
Aldrin	0.230	2.00	ND	ND	ND	ND
alpha-Hexachlorocyclohexane (Alpha-BHC)	0.270	2.00	ND	ND	ND	ND
Beta-Hexachlorocyclohexane (Beta-BHC)	0.370	2.00	ND	ND	ND	ND
Gamma-Chlordane	0.190	2.00	13.9	17.2	18.5	17.1
alpha-Chlordane	0.200	2.00	12.4	13.7	15.9	14.4
4,4'-DDD (DDD)	0.270	4.00	ND	ND	ND	124
4,4'-DDE (DDE)	2.20	40.0	639	846	579	572
4,4'-DDT (DDT)	2.20	40.0	539	705	551	540
delta-Hexachlorocyclohexane (Delta-BHC)	0.150	2.00	ND	ND	ND	ND
Dieldrin	0.200	4.00	9.33	ND	ND	ND
Endosulfan 1	0.200	2.00	ND	ND	ND	ND
Endosulfan 11	0.240	4.00	ND	ND	ND	ND
Endosulfan sulfate	0.270	4.00	ND	ND	ND	ND
Endrin	0.250	4.00	ND	ND	ND	ND
Endrin aldehyde	0.440	4.00	ND	ND	ND	ND
Endrin ketone	0.300	4.00	ND	ND	ND	ND
gamma-Hexachlorocyclohexane (Gamma-BHC, Lindane)	0.210	2.00	ND	ND	ND	ND
Heptachlor	0.230	2.00	ND	ND	ND	ND
Heptachlor epoxide	0.230	2.00	ND	ND	ND	ND
Methoxychlor	0.390	17.0	ND	ND	ND	ND
Toxaphene	17.0	170	1110	1230	986	1280

Our Lab I.D.			241808	241828	241831	241834
Surrogates	% Rec.Limit		% Rec.	% Rec.	% Rec.	% Rec.
Surrogate Percent Recovery						
Decachlorobiphenyl	43-169		93	103	94	97

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ANALYTICAL RESULTS

Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8081A, Organochlorine Pesticides
QUALITY CONTROL REPORT

QC Batch No: 091709-1A Sample Spiked: 241836

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit	LCS % REC	LCS DUP % REC	LCS RPD % REC	LCS/LCSD % Limit	LCS RPD % Limit
Aldrin	82	88	7.1	42-122	<30	110	100	9.5	42-122	<30
4,4'-DDT (DDT)	91	91	<1	25-160	<30	116	108	7.1	25-160	<30
Dieldrin	82	85	3.6	36-146	<30	110	101	8.5	36-146	<30
Endrin	108	113	4.5	30-147	<30	132	120	9.5	30-147	<30
gamma-Hexachlorocyclohexane (Gamma-BHC, Lindane)	82	81	1.2	32-127	<30	115	111	3.5	32-127	<30
Heptachlor	42	47	11.2	34-111	<30	113	117	3.5	34-111	<30

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ANALYTICAL RESULTS

Ordered By

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Ventura Road
Ventura, CA

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Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8260B, Volatile Organic Compounds

QC Batch No: 091609-1B

Our Lab I.D.			241797	241800	241803	241806	241808
Client Sample I.D.			RB5-0.5	RB6-0.5	RB7-0.5	RB8-0.5	RB9-0.5
Date Sampled			09/14/2009	09/14/2009	09/14/2009	09/14/2009	09/14/2009
Date Prepared			09/16/2009	09/16/2009	09/16/2009	09/16/2009	09/16/2009
Preparation Method							
Date Analyzed			09/16/2009	09/16/2009	09/16/2009	09/16/2009	09/16/2009
Matrix			Soil	Soil	Soil	Soil	Soil
Units			ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Dilution Factor			1	1	1	1	1
Analytes	MDL	PQL	Results	Results	Results	Results	Results
Acetone	12.7	50.0	ND	ND	ND	ND	ND
Benzene	0.930	2.00	ND	ND	ND	ND	ND
Bromobenzene (Phenyl bromide)	3.39	10.0	ND	ND	ND	ND	ND
Bromochloromethane (Chlorobromomethane)	0.380	10.0	ND	ND	ND	ND	ND
Bromodichloromethane (Dichlorobromomethane)	0.630	10.0	ND	ND	ND	ND	ND
Bromoform (Tribromomethane)	3.39	50.0	ND	ND	ND	ND	ND
Bromomethane (Methyl bromide)	2.75	30.0	ND	ND	ND	ND	ND
2-Butanone (MEK, Methyl ethyl ketone)	5.83	50.0	ND	ND	ND	ND	ND
n-Butylbenzene	2.05	10.0	ND	ND	ND	ND	ND
sec-Butylbenzene	3.04	10.0	ND	ND	ND	ND	ND
tert-Butylbenzene	1.34	10.0	ND	ND	ND	ND	ND
Carbon disulfide	5.53	10.0	ND	ND	ND	ND	ND
Carbon tetrachloride (Tetrachloromethane)	2.48	10.0	ND	ND	ND	ND	ND
Chlorobenzene	0.890	10.0	ND	ND	ND	ND	ND
Chloroethane	2.15	30.0	ND	ND	ND	ND	ND
2-Chloroethyl vinyl ether	5.53	50.0	ND	ND	ND	ND	ND
Chloroform (Trichloromethane)	1.24	10.0	ND	ND	ND	ND	ND
Chloromethane (Methyl chloride)	1.74	30.0	ND	ND	ND	ND	ND
4-Chlorotoluene (p-Chlorotoluene)	1.34	10.0	ND	ND	ND	ND	ND
2-Chlorotoluene (o-Chlorotoluene)	2.35	10.0	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane (DBCP)	2.69	50.0	ND	ND	ND	ND	ND
Dibromochloromethane	0.650	10.0	ND	ND	ND	ND	ND
1,2-Dibromoethane (EDB, Ethylene dibromide)	2.75	10.0	ND	ND	ND	ND	ND
Dibromomethane	2.30	10.0	ND	ND	ND	ND	ND
1,2-Dichlorobenzene (o-Dichlorobenzene)	1.03	10.0	ND	ND	ND	ND	ND
1,3-Dichlorobenzene (m-Dichlorobenzene)	1.65	10.0	ND	ND	ND	ND	ND

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ANALYTICAL RESULTS

Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8260B, Volatile Organic Compounds

QC Batch No: 091609-1B

Our Lab I.D.			241797	241800	241803	241806	241808
Client Sample I.D.			RB5-0.5	RB6-0.5	RB7-0.5	RB8-0.5	RB9-0.5
Date Sampled			09/14/2009	09/14/2009	09/14/2009	09/14/2009	09/14/2009
Date Prepared			09/16/2009	09/16/2009	09/16/2009	09/16/2009	09/16/2009
Preparation Method							
Date Analyzed			09/16/2009	09/16/2009	09/16/2009	09/16/2009	09/16/2009
Matrix			Soil	Soil	Soil	Soil	Soil
Units			ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Dilution Factor			1	1	1	1	1
Analytes	MDL	PQL	Results	Results	Results	Results	Results
1,4-Dichlorobenzene (p-Dichlorobenzene)	2.23	10.0	ND	ND	ND	ND	ND
Dichlorodifluoromethane	2.07	30.0	ND	ND	ND	ND	ND
1,1-Dichloroethane	1.30	10.0	ND	ND	ND	ND	ND
1,2-Dichloroethane	1.57	10.0	ND	ND	ND	ND	ND
1,1-Dichloroethene (1,1-Dichloroethylene)	2.60	10.0	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	1.60	10.0	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	2.16	10.0	ND	ND	ND	ND	ND
1,2-Dichloropropane	0.660	10.0	ND	ND	ND	ND	ND
1,3-Dichloropropane	0.920	10.0	ND	ND	ND	ND	ND
2,2-Dichloropropane	1.36	10.0	ND	ND	ND	ND	ND
1,1-Dichloropropene	1.12	10.0	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	0.980	10.0	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	0.960	10.0	ND	ND	ND	ND	ND
Ethylbenzene	1.00	2.00	ND	ND	ND	ND	ND
Hexachlorobutadiene (1,3-Hexachlorobutadiene)	2.77	30.0	ND	ND	ND	ND	ND
2-Hexanone	3.18	50.0	ND	ND	ND	ND	ND
Isopropylbenzene	1.42	10.0	ND	ND	ND	ND	ND
p-Isopropyltoluene (4-Isopropyltoluene)	3.86	10.0	ND	ND	ND	ND	ND
MTBE	2.90	5.00	ND	ND	ND	ND	ND
4-Methyl-2-pentanone (MIBK, Methyl isobutyl ketone)	3.14	50.0	ND	ND	ND	ND	ND
Methylene chloride (Dichloromethane, DCM)	3.31	50.0	ND	ND	ND	ND	ND
Naphthalene	1.14	10.0	ND	ND	ND	ND	ND
n-Propylbenzene	1.14	10.0	ND	ND	ND	ND	ND
Styrene	0.800	10.0	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	1.28	10.0	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	3.25	10.0	ND	ND	ND	ND	ND
Tetrachloroethene (Tetrachloroethylene)	0.930	10.0	ND	ND	ND	ND	ND
Toluene (Methyl benzene)	1.00	2.00	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	1.23	10.0	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	2.82	10.0	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	2.03	10.0	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	1.74	10.0	ND	ND	ND	ND	ND

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ANALYTICAL RESULTS

Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8260B, Volatile Organic Compounds

QC Batch No: 091609-1B

Our Lab I.D.			241797	241800	241803	241806	241808
Client Sample I.D.			RB5-0.5	RB6-0.5	RB7-0.5	RB8-0.5	RB9-0.5
Date Sampled			09/14/2009	09/14/2009	09/14/2009	09/14/2009	09/14/2009
Date Prepared			09/16/2009	09/16/2009	09/16/2009	09/16/2009	09/16/2009
Preparation Method							
Date Analyzed			09/16/2009	09/16/2009	09/16/2009	09/16/2009	09/16/2009
Matrix			Soil	Soil	Soil	Soil	Soil
Units			ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Dilution Factor			1	1	1	1	1
Analytes	MDL	PQL	Results	Results	Results	Results	Results
Trichloroethene (TCE)	1.15	10.0	ND	ND	ND	ND	ND
Trichlorofluoromethane	3.15	10.0	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	1.74	10.0	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	3.19	10.0	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	1.23	10.0	ND	ND	ND	ND	ND
Vinyl acetate	10.8	50.0	ND	ND	ND	ND	ND
Vinyl chloride (Chloroethene)	2.79	30.0	ND	ND	ND	ND	ND
o-Xylene	1.00	2.00	ND	ND	ND	ND	ND
m- & p-Xylenes	1.80	4.00	ND	ND	ND	ND	ND

Our Lab I.D.			241797	241800	241803	241806	241808
Surrogates	% Rec.Limit		% Rec.	% Rec.	% Rec.	% Rec.	% Rec.
Surrogate Percent Recovery							
Bromofluorobenzene	70-120		116	113	107	112	103
Dibromofluoromethane	70-120		101	112	105	108	101
Toluene-d8	70-120		114	112	114	114	115

QUALITY CONTROL REPORT

QC Batch No: 091609-1B

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit					
Benzene	111	112	<1	75-120	15					
Chlorobenzene	112	116	3.5	75-120	15					
1,1-Dichloroethene (1,1-Dichloroethylene)	116	117	<1	75-120	15					
MTBE	81	77	5.1	75-120	15					
Toluene (Methyl benzene)	110	107	2.8	75-120	15					
Trichloroethene (TCE)	85	87	2.3	75-120	15					

AMERICAN SCIENTIFIC LABORATORIES, LLC
Environmental Testing Services
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ANALYTICAL RESULTS

Ordered By

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Site

Ventura Road
Ventura, CA

Page: **41**

Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8260B, Volatile Organic Compounds

QC Batch No: 091609-1B

Our Lab I.D.			241810	241812			
Client Sample I.D.			RB13-0.5	RB16-0.5			
Date Sampled			09/14/2009	09/14/2009			
Date Prepared			09/16/2009	09/16/2009			
Preparation Method							
Date Analyzed			09/16/2009	09/16/2009			
Matrix			Soil	Soil			
Units			ug/kg	ug/kg			
Dilution Factor			1	1			
Analytes	MDL	PQL	Results	Results			
Acetone	12.7	50.0	ND	ND			
Benzene	0.930	2.00	ND	ND			
Bromobenzene (Phenyl bromide)	3.39	10.0	ND	ND			
Bromochloromethane (Chlorobromomethane)	0.380	10.0	ND	ND			
Bromodichloromethane (Dichlorobromomethane)	0.630	10.0	ND	ND			
Bromoform (Tribromomethane)	3.39	50.0	ND	ND			
Bromomethane (Methyl bromide)	2.75	30.0	ND	ND			
2-Butanone (MEK, Methyl ethyl ketone)	5.83	50.0	ND	ND			
n-Butylbenzene	2.05	10.0	ND	ND			
sec-Butylbenzene	3.04	10.0	ND	ND			
tert-Butylbenzene	1.34	10.0	ND	ND			
Carbon disulfide	5.53	10.0	ND	ND			
Carbon tetrachloride (Tetrachloromethane)	2.48	10.0	ND	ND			
Chlorobenzene	0.890	10.0	ND	ND			
Chloroethane	2.15	30.0	ND	ND			
2-Chloroethyl vinyl ether	5.53	50.0	ND	ND			
Chloroform (Trichloromethane)	1.24	10.0	ND	ND			
Chloromethane (Methyl chloride)	1.74	30.0	ND	ND			
4-Chlorotoluene (p-Chlorotoluene)	1.34	10.0	ND	ND			
2-Chlorotoluene (o-Chlorotoluene)	2.35	10.0	ND	ND			
1,2-Dibromo-3-chloropropane (DBCP)	2.69	50.0	ND	ND			
Dibromochloromethane	0.650	10.0	ND	ND			
1,2-Dibromoethane (EDB, Ethylene dibromide)	2.75	10.0	ND	ND			
Dibromomethane	2.30	10.0	ND	ND			
1,2-Dichlorobenzene (o-Dichlorobenzene)	1.03	10.0	ND	ND			
1,3-Dichlorobenzene (m-Dichlorobenzene)	1.65	10.0	ND	ND			

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ANALYTICAL RESULTS

Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8260B, Volatile Organic Compounds

QC Batch No: 091609-1B

Our Lab I.D.			241810	241812			
Client Sample I.D.			RB13-0.5	RB16-0.5			
Date Sampled			09/14/2009	09/14/2009			
Date Prepared			09/16/2009	09/16/2009			
Preparation Method							
Date Analyzed			09/16/2009	09/16/2009			
Matrix			Soil	Soil			
Units			ug/kg	ug/kg			
Dilution Factor			1	1			
Analytes	MDL	PQL	Results	Results			
1,4-Dichlorobenzene (p-Dichlorobenzene)	2.23	10.0	ND	ND			
Dichlorodifluoromethane	2.07	30.0	ND	ND			
1,1-Dichloroethane	1.30	10.0	ND	ND			
1,2-Dichloroethane	1.57	10.0	ND	ND			
1,1-Dichloroethene (1,1-Dichloroethylene)	2.60	10.0	ND	ND			
cis-1,2-Dichloroethene	1.60	10.0	ND	ND			
trans-1,2-Dichloroethene	2.16	10.0	ND	ND			
1,2-Dichloropropane	0.660	10.0	ND	ND			
1,3-Dichloropropane	0.920	10.0	ND	ND			
2,2-Dichloropropane	1.36	10.0	ND	ND			
1,1-Dichloropropene	1.12	10.0	ND	ND			
cis-1,3-Dichloropropene	0.980	10.0	ND	ND			
trans-1,3-Dichloropropene	0.960	10.0	ND	ND			
Ethylbenzene	1.00	2.00	ND	ND			
Hexachlorobutadiene (1,3-Hexachlorobutadiene)	2.77	30.0	ND	ND			
2-Hexanone	3.18	50.0	ND	ND			
Isopropylbenzene	1.42	10.0	ND	ND			
p-Isopropyltoluene (4-Isopropyltoluene)	3.86	10.0	ND	ND			
MTBE	2.90	5.00	ND	ND			
4-Methyl-2-pentanone (MIBK, Methyl isobutyl ketone)	3.14	50.0	ND	ND			
Methylene chloride (Dichloromethane, DCM)	3.31	50.0	ND	ND			
Naphthalene	1.14	10.0	ND	ND			
n-Propylbenzene	1.14	10.0	ND	ND			
Styrene	0.800	10.0	ND	ND			
1,1,1,2-Tetrachloroethane	1.28	10.0	ND	ND			
1,1,2,2-Tetrachloroethane	3.25	10.0	ND	ND			
Tetrachloroethene (Tetrachloroethylene)	0.930	10.0	ND	ND			
Toluene (Methyl benzene)	1.00	2.00	ND	ND			
1,2,3-Trichlorobenzene	1.23	10.0	ND	ND			
1,2,4-Trichlorobenzene	2.82	10.0	ND	ND			
1,1,1-Trichloroethane	2.03	10.0	ND	ND			
1,1,2-Trichloroethane	1.74	10.0	ND	ND			

AMERICAN SCIENTIFIC LABORATORIES, LLC
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ANALYTICAL RESULTS

Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8260B, Volatile Organic Compounds

QC Batch No: 091609-1B

Our Lab I.D.			241810	241812			
Client Sample I.D.			RB13-0.5	RB16-0.5			
Date Sampled			09/14/2009	09/14/2009			
Date Prepared			09/16/2009	09/16/2009			
Preparation Method							
Date Analyzed			09/16/2009	09/16/2009			
Matrix			Soil	Soil			
Units			ug/kg	ug/kg			
Dilution Factor			1	1			
Analytes	MDL	PQL	Results	Results			
Trichloroethene (TCE)	1.15	10.0	ND	ND			
Trichlorofluoromethane	3.15	10.0	ND	ND			
1,2,3-Trichloropropane	1.74	10.0	ND	ND			
1,2,4-Trimethylbenzene	3.19	10.0	ND	ND			
1,3,5-Trimethylbenzene	1.23	10.0	ND	ND			
Vinyl acetate	10.8	50.0	ND	ND			
Vinyl chloride (Chloroethene)	2.79	30.0	ND	ND			
o-Xylene	1.00	2.00	ND	ND			
m- & p-Xylenes	1.80	4.00	ND	ND			

Our Lab I.D.			241810	241812			
Surrogates	% Rec.Limit		% Rec.	% Rec.			
Surrogate Percent Recovery							
Bromofluorobenzene	70-120		101	117			
Dibromofluoromethane	70-120		108	119			
Toluene-d8	70-120		114	105			

QUALITY CONTROL REPORT

QC Batch No: 091609-1B

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit					
Benzene	111	112	<1	75-120	15					
Chlorobenzene	112	116	3.5	75-120	15					
1,1-Dichloroethene (1,1-Dichloroethylene)	116	117	<1	75-120	15					
MTBE	81	77	5.1	75-120	15					
Toluene (Methyl benzene)	110	107	2.8	75-120	15					
Trichloroethene (TCE)	85	87	2.3	75-120	15					

AMERICAN SCIENTIFIC LABORATORIES, LLC
Environmental Testing Services
2520 N. San Fernando Rd., Los Angeles, CA 90065 Tel: (323) 223-9700 Fax: (323) 223-9500

ANALYTICAL RESULTS

Ordered By

Rincon Consultants, Inc.
790 East Santa Clara Street
Ventura, CA 93001

Telephone: (805)641-1000
Attn: Shawn Decker

Site

Ventura Road
Ventura, CA

Page: **44**

Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8260B, Volatile Organic Compounds

QC Batch No: 091609-1C

Our Lab I.D.			241813	241814	241815	241816	241820
Client Sample I.D.			RB16-2	RB17-0.5	RB18-0.5	RB18-5	RB21-0.5
Date Sampled			09/14/2009	09/14/2009	09/14/2009	09/14/2009	09/14/2009
Date Prepared			09/16/2009	09/16/2009	09/16/2009	09/16/2009	09/16/2009
Preparation Method							
Date Analyzed			09/16/2009	09/16/2009	09/16/2009	09/16/2009	09/16/2009
Matrix			Soil	Soil	Soil	Soil	Soil
Units			ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Dilution Factor			1	1	1	1	1
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	**Results**
Acetone	12.7	50.0	48.6J	ND	91.2	ND	ND
Benzene	0.930	2.00	ND	ND	ND	ND	5.24
Bromobenzene (Phenyl bromide)	3.39	10.0	ND	ND	ND	ND	ND
Bromochloromethane (Chlorobromomethane)	0.380	10.0	ND	ND	ND	ND	ND
Bromodichloromethane (Dichlorobromomethane)	0.630	10.0	ND	ND	ND	ND	ND
Bromoform (Tribromomethane)	3.39	50.0	ND	ND	ND	ND	ND
Bromomethane (Methyl bromide)	2.75	30.0	ND	ND	ND	ND	ND
2-Butanone (MEK, Methyl ethyl ketone)	5.83	50.0	ND	ND	ND	ND	ND
n-Butylbenzene	2.05	10.0	ND	ND	ND	ND	ND
sec-Butylbenzene	3.04	10.0	ND	ND	ND	ND	ND
tert-Butylbenzene	1.34	10.0	ND	ND	ND	ND	ND
Carbon disulfide	5.53	10.0	ND	ND	ND	ND	ND
Carbon tetrachloride (Tetrachloromethane)	2.48	10.0	ND	ND	ND	ND	ND
Chlorobenzene	0.890	10.0	ND	ND	ND	ND	ND
Chloroethane	2.15	30.0	ND	ND	ND	ND	ND
2-Chloroethyl vinyl ether	5.53	50.0	ND	ND	ND	ND	ND
Chloroform (Trichloromethane)	1.24	10.0	ND	ND	ND	ND	ND
Chloromethane (Methyl chloride)	1.74	30.0	ND	ND	ND	ND	ND
4-Chlorotoluene (p-Chlorotoluene)	1.34	10.0	ND	ND	ND	ND	ND
2-Chlorotoluene (o-Chlorotoluene)	2.35	10.0	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane (DBCP)	2.69	50.0	ND	ND	ND	ND	ND
Dibromochloromethane	0.650	10.0	ND	ND	ND	ND	ND
1,2-Dibromoethane (EDB, Ethylene dibromide)	2.75	10.0	ND	ND	ND	ND	ND
Dibromomethane	2.30	10.0	ND	ND	ND	ND	ND
1,2-Dichlorobenzene (o-Dichlorobenzene)	1.03	10.0	ND	ND	ND	ND	ND
1,3-Dichlorobenzene (m-Dichlorobenzene)	1.65	10.0	ND	ND	ND	ND	ND

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ANALYTICAL RESULTS

Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8260B, Volatile Organic Compounds

QC Batch No: 091609-1C

Our Lab I.D.			241813	241814	241815	241816	241820
Client Sample I.D.			RB16-2	RB17-0.5	RB18-0.5	RB18-5	RB21-0.5
Date Sampled			09/14/2009	09/14/2009	09/14/2009	09/14/2009	09/14/2009
Date Prepared			09/16/2009	09/16/2009	09/16/2009	09/16/2009	09/16/2009
Preparation Method							
Date Analyzed			09/16/2009	09/16/2009	09/16/2009	09/16/2009	09/16/2009
Matrix			Soil	Soil	Soil	Soil	Soil
Units			ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Dilution Factor			1	1	1	1	1
Analytes	MDL	PQL	Results	Results	Results	Results	Results
1,4-Dichlorobenzene (p-Dichlorobenzene)	2.23	10.0	ND	ND	ND	ND	ND
Dichlorodifluoromethane	2.07	30.0	ND	ND	ND	ND	ND
1,1-Dichloroethane	1.30	10.0	ND	ND	ND	ND	ND
1,2-Dichloroethane	1.57	10.0	ND	ND	ND	ND	ND
1,1-Dichloroethene (1,1-Dichloroethylene)	2.60	10.0	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	1.60	10.0	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	2.16	10.0	ND	ND	ND	ND	ND
1,2-Dichloropropane	0.660	10.0	ND	ND	ND	ND	ND
1,3-Dichloropropane	0.920	10.0	ND	ND	ND	ND	ND
2,2-Dichloropropane	1.36	10.0	ND	ND	ND	ND	ND
1,1-Dichloropropene	1.12	10.0	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	0.980	10.0	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	0.960	10.0	ND	ND	ND	ND	ND
Ethylbenzene	1.00	2.00	ND	ND	ND	ND	ND
Hexachlorobutadiene (1,3-Hexachlorobutadiene)	2.77	30.0	ND	ND	ND	ND	ND
2-Hexanone	3.18	50.0	ND	ND	ND	ND	ND
Isopropylbenzene	1.42	10.0	ND	ND	ND	ND	ND
p-Isopropyltoluene (4-Isopropyltoluene)	3.86	10.0	ND	ND	ND	ND	ND
MTBE	2.90	5.00	ND	ND	ND	ND	ND
4-Methyl-2-pentanone (MIBK, Methyl isobutyl ketone)	3.14	50.0	ND	ND	ND	ND	ND
Methylene chloride (Dichloromethane, DCM)	3.31	50.0	ND	ND	ND	ND	ND
Naphthalene	1.14	10.0	ND	ND	ND	ND	ND
n-Propylbenzene	1.14	10.0	ND	ND	ND	ND	ND
Styrene	0.800	10.0	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	1.28	10.0	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	3.25	10.0	ND	ND	ND	ND	ND
Tetrachloroethene (Tetrachloroethylene)	0.930	10.0	ND	ND	ND	ND	ND
Toluene (Methyl benzene)	1.00	2.00	ND	ND	ND	ND	3.98
1,2,3-Trichlorobenzene	1.23	10.0	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	2.82	10.0	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	2.03	10.0	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	1.74	10.0	ND	ND	ND	ND	ND

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ANALYTICAL RESULTS

Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8260B, Volatile Organic Compounds

QC Batch No: 091609-1C

Our Lab I.D.			241813	241814	241815	241816	241820
Client Sample I.D.			RB16-2	RB17-0.5	RB18-0.5	RB18-5	RB21-0.5
Date Sampled			09/14/2009	09/14/2009	09/14/2009	09/14/2009	09/14/2009
Date Prepared			09/16/2009	09/16/2009	09/16/2009	09/16/2009	09/16/2009
Preparation Method							
Date Analyzed			09/16/2009	09/16/2009	09/16/2009	09/16/2009	09/16/2009
Matrix			Soil	Soil	Soil	Soil	Soil
Units			ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Dilution Factor			1	1	1	1	1
Analytes	MDL	PQL	Results	Results	Results	Results	Results
Trichloroethene (TCE)	1.15	10.0	ND	ND	ND	ND	ND
Trichlorofluoromethane	3.15	10.0	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	1.74	10.0	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	3.19	10.0	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	1.23	10.0	ND	ND	ND	ND	ND
Vinyl acetate	10.8	50.0	ND	ND	ND	ND	ND
Vinyl chloride (Chloroethene)	2.79	30.0	ND	ND	ND	ND	ND
o-Xylene	1.00	2.00	ND	ND	ND	ND	ND
m- & p-Xylenes	1.80	4.00	ND	ND	ND	ND	ND

Our Lab I.D.			241813	241814	241815	241816	241820
Surrogates	% Rec.Limit		% Rec.	% Rec.	% Rec.	% Rec.	% Rec.
Surrogate Percent Recovery							
Bromofluorobenzene	70-120		106	95	100	108	100
Dibromofluoromethane	70-120		104	94	100	102	99
Toluene-d8	70-120		83	94	89	92	95

QUALITY CONTROL REPORT

QC Batch No: 091609-1C

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit					
Benzene	92	92	<1	75-120	15					
Chlorobenzene	90	91	1.1	75-120	15					
1,1-Dichloroethene (1,1-Dichloroethylene)	99	93	6.3	75-120	15					
MTBE	99	97	2.0	75-120	15					
Toluene (Methyl benzene)	90	86	4.5	75-120	15					
Trichloroethene (TCE)	91	88	3.4	75-120	15					

AMERICAN SCIENTIFIC LABORATORIES, LLC
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ANALYTICAL RESULTS

Ordered By

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Ventura Road
Ventura, CA

Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8260B, Volatile Organic Compounds

QC Batch No: 091609-2C

Our Lab I.D.			241818	241821	241823	241824	241838
Client Sample I.D.			RB20-0.5	RB21-5	RB23-0.5	RB24-0.5	HA1-5
Date Sampled			09/14/2009	09/14/2009	09/14/2009	09/14/2009	09/14/2009
Date Prepared			09/17/2009	09/17/2009	09/17/2009	09/17/2009	09/17/2009
Preparation Method							
Date Analyzed			09/17/2009	09/17/2009	09/17/2009	09/17/2009	09/17/2009
Matrix			Soil	Soil	Soil	Soil	Soil
Units			ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Dilution Factor			1	1	1	1	1
Analytes	MDL	PQL	Results	Results	Results	Results	Results
Acetone	12.7	50.0	ND	ND	38.6J	78.0	ND
Benzene	0.930	2.00	ND	ND	ND	ND	ND
Bromobenzene (Phenyl bromide)	3.39	10.0	ND	ND	ND	ND	ND
Bromochloromethane (Chlorobromomethane)	0.380	10.0	ND	ND	ND	ND	ND
Bromodichloromethane (Dichlorobromomethane)	0.630	10.0	ND	ND	ND	ND	ND
Bromoform (Tribromomethane)	3.39	50.0	ND	ND	ND	ND	ND
Bromomethane (Methyl bromide)	2.75	30.0	ND	ND	ND	ND	ND
2-Butanone (MEK, Methyl ethyl ketone)	5.83	50.0	ND	ND	ND	ND	ND
n-Butylbenzene	2.05	10.0	ND	ND	ND	ND	ND
sec-Butylbenzene	3.04	10.0	ND	ND	ND	ND	ND
tert-Butylbenzene	1.34	10.0	ND	ND	ND	ND	ND
Carbon disulfide	5.53	10.0	ND	ND	ND	ND	ND
Carbon tetrachloride (Tetrachloromethane)	2.48	10.0	ND	ND	ND	ND	ND
Chlorobenzene	0.890	10.0	ND	ND	ND	ND	ND
Chloroethane	2.15	30.0	ND	ND	ND	ND	ND
2-Chloroethyl vinyl ether	5.53	50.0	ND	ND	ND	ND	ND
Chloroform (Trichloromethane)	1.24	10.0	ND	ND	ND	ND	ND
Chloromethane (Methyl chloride)	1.74	30.0	ND	ND	ND	ND	ND
4-Chlorotoluene (p-Chlorotoluene)	1.34	10.0	ND	ND	ND	ND	ND
2-Chlorotoluene (o-Chlorotoluene)	2.35	10.0	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane (DBCP)	2.69	50.0	ND	ND	ND	ND	ND
Dibromochloromethane	0.650	10.0	ND	ND	ND	ND	ND
1,2-Dibromoethane (EDB, Ethylene dibromide)	2.75	10.0	ND	ND	ND	ND	ND
Dibromomethane	2.30	10.0	ND	ND	ND	ND	ND
1,2-Dichlorobenzene (o-Dichlorobenzene)	1.03	10.0	ND	ND	ND	ND	ND
1,3-Dichlorobenzene (m-Dichlorobenzene)	1.65	10.0	ND	ND	ND	ND	ND

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ANALYTICAL RESULTS

Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8260B, Volatile Organic Compounds

QC Batch No: 091609-2C

Our Lab I.D.			241818	241821	241823	241824	241838
Client Sample I.D.			RB20-0.5	RB21-5	RB23-0.5	RB24-0.5	HA1-5
Date Sampled			09/14/2009	09/14/2009	09/14/2009	09/14/2009	09/14/2009
Date Prepared			09/17/2009	09/17/2009	09/17/2009	09/17/2009	09/17/2009
Preparation Method							
Date Analyzed			09/17/2009	09/17/2009	09/17/2009	09/17/2009	09/17/2009
Matrix			Soil	Soil	Soil	Soil	Soil
Units			ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Dilution Factor			1	1	1	1	1
Analytes	MDL	PQL	Results	Results	Results	Results	Results
1,4-Dichlorobenzene (p-Dichlorobenzene)	2.23	10.0	ND	ND	ND	ND	ND
Dichlorodifluoromethane	2.07	30.0	ND	ND	ND	ND	ND
1,1-Dichloroethane	1.30	10.0	ND	ND	ND	ND	ND
1,2-Dichloroethane	1.57	10.0	ND	ND	ND	ND	ND
1,1-Dichloroethene (1,1-Dichloroethylene)	2.60	10.0	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	1.60	10.0	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	2.16	10.0	ND	ND	ND	ND	ND
1,2-Dichloropropane	0.660	10.0	ND	ND	ND	ND	ND
1,3-Dichloropropane	0.920	10.0	ND	ND	ND	ND	ND
2,2-Dichloropropane	1.36	10.0	ND	ND	ND	ND	ND
1,1-Dichloropropene	1.12	10.0	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	0.980	10.0	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	0.960	10.0	ND	ND	ND	ND	ND
Ethylbenzene	1.00	2.00	ND	ND	ND	ND	ND
Hexachlorobutadiene (1,3-Hexachlorobutadiene)	2.77	30.0	ND	ND	ND	ND	ND
2-Hexanone	3.18	50.0	ND	ND	ND	ND	ND
Isopropylbenzene	1.42	10.0	ND	ND	ND	ND	ND
p-Isopropyltoluene (4-Isopropyltoluene)	3.86	10.0	ND	ND	ND	ND	ND
MTBE	2.90	5.00	ND	ND	ND	ND	ND
4-Methyl-2-pentanone (MIBK, Methyl isobutyl ketone)	3.14	50.0	ND	ND	ND	ND	ND
Methylene chloride (Dichloromethane, DCM)	3.31	50.0	ND	ND	ND	ND	ND
Naphthalene	1.14	10.0	ND	ND	ND	ND	ND
n-Propylbenzene	1.14	10.0	ND	ND	ND	ND	ND
Styrene	0.800	10.0	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	1.28	10.0	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	3.25	10.0	ND	ND	ND	ND	ND
Tetrachloroethene (Tetrachloroethylene)	0.930	10.0	ND	ND	ND	ND	ND
Toluene (Methyl benzene)	1.00	2.00	ND	2.34	ND	ND	1.14J
1,2,3-Trichlorobenzene	1.23	10.0	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	2.82	10.0	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	2.03	10.0	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	1.74	10.0	ND	ND	ND	ND	ND

AMERICAN SCIENTIFIC LABORATORIES, LLC
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ANALYTICAL RESULTS

Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8260B, Volatile Organic Compounds

QC Batch No: 091609-2C

Our Lab I.D.			241818	241821	241823	241824	241838
Client Sample I.D.			RB20-0.5	RB21-5	RB23-0.5	RB24-0.5	HA1-5
Date Sampled			09/14/2009	09/14/2009	09/14/2009	09/14/2009	09/14/2009
Date Prepared			09/17/2009	09/17/2009	09/17/2009	09/17/2009	09/17/2009
Preparation Method							
Date Analyzed			09/17/2009	09/17/2009	09/17/2009	09/17/2009	09/17/2009
Matrix			Soil	Soil	Soil	Soil	Soil
Units			ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Dilution Factor			1	1	1	1	1
Analytes	MDL	PQL	Results	Results	Results	Results	Results
Trichloroethene (TCE)	1.15	10.0	ND	ND	ND	ND	ND
Trichlorofluoromethane	3.15	10.0	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	1.74	10.0	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	3.19	10.0	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	1.23	10.0	ND	ND	ND	ND	ND
Vinyl acetate	10.8	50.0	ND	ND	ND	ND	ND
Vinyl chloride (Chloroethene)	2.79	30.0	ND	ND	ND	ND	ND
o-Xylene	1.00	2.00	ND	ND	ND	ND	ND
m- & p-Xylenes	1.80	4.00	ND	ND	ND	ND	ND

Our Lab I.D.			241818	241821	241823	241824	241838
Surrogates	% Rec.Limit		% Rec.	% Rec.	% Rec.	% Rec.	% Rec.
Surrogate Percent Recovery							
Bromofluorobenzene	70-120		116	111	112	102	106
Dibromofluoromethane	70-120		100	99	97	100	90
Toluene-d8	70-120		101	92	90	91	92

QUALITY CONTROL REPORT

QC Batch No: 091609-2C

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit					
Benzene	93	96	3.2	75-120	15					
Chlorobenzene	90	89	1.1	75-120	15					
1,1-Dichloroethene (1,1-Dichloroethylene)	93	104	11.2	75-120	15					
MTBE	101	104	2.9	75-120	15					
Toluene (Methyl benzene)	90	92	2.2	75-120	15					
Trichloroethene (TCE)	91	92	1.1	75-120	15					

AMERICAN SCIENTIFIC LABORATORIES, LLC
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ANALYTICAL RESULTS

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Ventura, CA

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Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8260B, Volatile Organic Compounds

QC Batch No: 091609-2C

Our Lab I.D.			241840	241842	241843	241844	241845
Client Sample I.D.			HA2-5	HA3-5	HA4-0.5	HA5-0.5	HA5-2.5
Date Sampled			09/14/2009	09/14/2009	09/14/2009	09/14/2009	09/14/2009
Date Prepared			09/17/2009	09/17/2009	09/17/2009	09/17/2009	09/17/2009
Preparation Method							
Date Analyzed			09/17/2009	09/17/2009	09/17/2009	09/17/2009	09/17/2009
Matrix			Soil	Soil	Soil	Soil	Soil
Units			ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Dilution Factor			1	1	1	1	1
Analytes	MDL	PQL	Results	Results	Results	Results	Results
Acetone	12.7	50.0	119	ND	14.6J	ND	129
Benzene	0.930	2.00	ND	ND	ND	ND	2.26
Bromobenzene (Phenyl bromide)	3.39	10.0	ND	ND	ND	ND	ND
Bromochloromethane (Chlorobromomethane)	0.380	10.0	ND	ND	ND	ND	ND
Bromodichloromethane (Dichlorobromomethane)	0.630	10.0	ND	ND	ND	ND	ND
Bromoform (Tribromomethane)	3.39	50.0	ND	ND	ND	ND	ND
Bromomethane (Methyl bromide)	2.75	30.0	ND	ND	ND	ND	ND
2-Butanone (MEK, Methyl ethyl ketone)	5.83	50.0	ND	ND	ND	ND	ND
n-Butylbenzene	2.05	10.0	ND	ND	ND	ND	ND
sec-Butylbenzene	3.04	10.0	ND	ND	ND	ND	ND
tert-Butylbenzene	1.34	10.0	ND	ND	ND	ND	ND
Carbon disulfide	5.53	10.0	ND	ND	ND	ND	ND
Carbon tetrachloride (Tetrachloromethane)	2.48	10.0	ND	ND	ND	ND	ND
Chlorobenzene	0.890	10.0	ND	ND	ND	ND	ND
Chloroethane	2.15	30.0	ND	ND	ND	ND	ND
2-Chloroethyl vinyl ether	5.53	50.0	ND	ND	ND	ND	ND
Chloroform (Trichloromethane)	1.24	10.0	ND	ND	ND	ND	ND
Chloromethane (Methyl chloride)	1.74	30.0	ND	ND	ND	ND	ND
4-Chlorotoluene (p-Chlorotoluene)	1.34	10.0	ND	ND	ND	ND	ND
2-Chlorotoluene (o-Chlorotoluene)	2.35	10.0	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane (DBCP)	2.69	50.0	ND	ND	ND	ND	ND
Dibromochloromethane	0.650	10.0	ND	ND	ND	ND	ND
1,2-Dibromoethane (EDB, Ethylene dibromide)	2.75	10.0	ND	ND	ND	ND	ND
Dibromomethane	2.30	10.0	ND	ND	ND	ND	ND
1,2-Dichlorobenzene (o-Dichlorobenzene)	1.03	10.0	ND	ND	ND	ND	ND
1,3-Dichlorobenzene (m-Dichlorobenzene)	1.65	10.0	ND	ND	ND	ND	ND

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ANALYTICAL RESULTS

Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8260B, Volatile Organic Compounds

QC Batch No: 091609-2C

Our Lab I.D.			241840	241842	241843	241844	241845
Client Sample I.D.			HA2-5	HA3-5	HA4-0.5	HA5-0.5	HA5-2.5
Date Sampled			09/14/2009	09/14/2009	09/14/2009	09/14/2009	09/14/2009
Date Prepared			09/17/2009	09/17/2009	09/17/2009	09/17/2009	09/17/2009
Preparation Method							
Date Analyzed			09/17/2009	09/17/2009	09/17/2009	09/17/2009	09/17/2009
Matrix			Soil	Soil	Soil	Soil	Soil
Units			ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Dilution Factor			1	1	1	1	1
Analytes	MDL	PQL	Results	Results	Results	Results	Results
1,4-Dichlorobenzene (p-Dichlorobenzene)	2.23	10.0	ND	ND	ND	ND	ND
Dichlorodifluoromethane	2.07	30.0	ND	ND	ND	ND	ND
1,1-Dichloroethane	1.30	10.0	ND	ND	ND	ND	ND
1,2-Dichloroethane	1.57	10.0	ND	ND	ND	ND	ND
1,1-Dichloroethene (1,1-Dichloroethylene)	2.60	10.0	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	1.60	10.0	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	2.16	10.0	ND	ND	ND	ND	ND
1,2-Dichloropropane	0.660	10.0	ND	ND	ND	ND	ND
1,3-Dichloropropane	0.920	10.0	ND	ND	ND	ND	ND
2,2-Dichloropropane	1.36	10.0	ND	ND	ND	ND	ND
1,1-Dichloropropene	1.12	10.0	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	0.980	10.0	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	0.960	10.0	ND	ND	ND	ND	ND
Ethylbenzene	1.00	2.00	ND	ND	ND	ND	ND
Hexachlorobutadiene (1,3-Hexachlorobutadiene)	2.77	30.0	ND	ND	ND	ND	ND
2-Hexanone	3.18	50.0	ND	ND	ND	ND	ND
Isopropylbenzene	1.42	10.0	ND	ND	ND	ND	ND
p-Isopropyltoluene (4-Isopropyltoluene)	3.86	10.0	ND	ND	ND	ND	ND
MTBE	2.90	5.00	ND	ND	ND	ND	ND
4-Methyl-2-pentanone (MIBK, Methyl isobutyl ketone)	3.14	50.0	ND	ND	ND	ND	ND
Methylene chloride (Dichloromethane, DCM)	3.31	50.0	ND	ND	ND	ND	ND
Naphthalene	1.14	10.0	ND	ND	ND	ND	ND
n-Propylbenzene	1.14	10.0	ND	ND	ND	ND	ND
Styrene	0.800	10.0	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	1.28	10.0	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	3.25	10.0	ND	ND	ND	ND	ND
Tetrachloroethene (Tetrachloroethylene)	0.930	10.0	ND	ND	ND	ND	ND
Toluene (Methyl benzene)	1.00	2.00	ND	ND	ND	ND	2.12
1,2,3-Trichlorobenzene	1.23	10.0	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	2.82	10.0	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	2.03	10.0	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	1.74	10.0	ND	ND	ND	ND	ND

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ANALYTICAL RESULTS

Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8260B, Volatile Organic Compounds

QC Batch No: 091609-2C

Our Lab I.D.			241840	241842	241843	241844	241845
Client Sample I.D.			HA2-5	HA3-5	HA4-0.5	HA5-0.5	HA5-2.5
Date Sampled			09/14/2009	09/14/2009	09/14/2009	09/14/2009	09/14/2009
Date Prepared			09/17/2009	09/17/2009	09/17/2009	09/17/2009	09/17/2009
Preparation Method							
Date Analyzed			09/17/2009	09/17/2009	09/17/2009	09/17/2009	09/17/2009
Matrix			Soil	Soil	Soil	Soil	Soil
Units			ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Dilution Factor			1	1	1	1	1
Analytes	MDL	PQL	Results	Results	Results	Results	Results
Trichloroethene (TCE)	1.15	10.0	ND	ND	ND	ND	ND
Trichlorofluoromethane	3.15	10.0	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	1.74	10.0	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	3.19	10.0	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	1.23	10.0	ND	ND	ND	ND	ND
Vinyl acetate	10.8	50.0	ND	ND	ND	ND	ND
Vinyl chloride (Chloroethene)	2.79	30.0	ND	ND	ND	ND	ND
o-Xylene	1.00	2.00	ND	ND	ND	ND	ND
m- & p-Xylenes	1.80	4.00	ND	ND	ND	ND	ND

Our Lab I.D.			241840	241842	241843	241844	241845
Surrogates	% Rec.Limit		% Rec.	% Rec.	% Rec.	% Rec.	% Rec.
Surrogate Percent Recovery							
Bromofluorobenzene	70-120		103	104	102	112	100
Dibromofluoromethane	70-120		97	96	96	97	101
Toluene-d8	70-120		90	95	93	92	85

QUALITY CONTROL REPORT

QC Batch No: 091609-2C

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit					
Benzene	93	96	3.2	75-120	15					
Chlorobenzene	90	89	1.1	75-120	15					
1,1-Dichloroethene (1,1-Dichloroethylene)	93	104	11.2	75-120	15					
MTBE	101	104	2.9	75-120	15					
Toluene (Methyl benzene)	90	92	2.2	75-120	15					
Trichloroethene (TCE)	91	92	1.1	75-120	15					

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ANALYTICAL RESULTS

Ordered By

Rincon Consultants, Inc.
790 East Santa Clara Street
Ventura, CA 93001

Site

Ventura Road
Ventura, CA

Telephone: (805)641-1000
Attn: Shawn Decker

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Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8260B, Volatile Organic Compounds

QC Batch No: 091709-1C

Our Lab I.D.			241817	241819	241822		
Client Sample I.D.			RB19-0.5	RB20-5	RB22-0.5		
Date Sampled			09/14/2009	09/14/2009	09/14/2009		
Date Prepared			09/17/2009	09/17/2009	09/17/2009		
Preparation Method							
Date Analyzed			09/17/2009	09/17/2009	09/17/2009		
Matrix			Soil	Soil	Soil		
Units			ug/kg	ug/kg	ug/kg		
Dilution Factor			1	1	1		
Analytes	MDL	PQL	Results	Results	Results		
Acetone	12.7	50.0	67.1	360	ND		
Benzene	0.930	2.00	ND	1.16J	ND		
Bromobenzene (Phenyl bromide)	3.39	10.0	ND	ND	ND		
Bromochloromethane (Chlorobromomethane)	0.380	10.0	ND	ND	ND		
Bromodichloromethane (Dichlorobromomethane)	0.630	10.0	ND	ND	ND		
Bromoform (Tribromomethane)	3.39	50.0	ND	ND	ND		
Bromomethane (Methyl bromide)	2.75	30.0	ND	ND	ND		
2-Butanone (MEK, Methyl ethyl ketone)	5.83	50.0	ND	ND	ND		
n-Butylbenzene	2.05	10.0	ND	ND	ND		
sec-Butylbenzene	3.04	10.0	ND	ND	ND		
tert-Butylbenzene	1.34	10.0	ND	ND	ND		
Carbon disulfide	5.53	10.0	ND	ND	ND		
Carbon tetrachloride (Tetrachloromethane)	2.48	10.0	ND	ND	ND		
Chlorobenzene	0.890	10.0	ND	ND	ND		
Chloroethane	2.15	30.0	ND	ND	ND		
2-Chloroethyl vinyl ether	5.53	50.0	ND	ND	ND		
Chloroform (Trichloromethane)	1.24	10.0	ND	ND	ND		
Chloromethane (Methyl chloride)	1.74	30.0	ND	ND	ND		
4-Chlorotoluene (p-Chlorotoluene)	1.34	10.0	ND	ND	ND		
2-Chlorotoluene (o-Chlorotoluene)	2.35	10.0	ND	ND	ND		
1,2-Dibromo-3-chloropropane (DBCP)	2.69	50.0	ND	ND	ND		
Dibromochloromethane	0.650	10.0	ND	ND	ND		
1,2-Dibromoethane (EDB, Ethylene dibromide)	2.75	10.0	ND	ND	ND		
Dibromomethane	2.30	10.0	ND	ND	ND		
1,2-Dichlorobenzene (o-Dichlorobenzene)	1.03	10.0	ND	ND	ND		
1,3-Dichlorobenzene (m-Dichlorobenzene)	1.65	10.0	ND	ND	ND		

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ANALYTICAL RESULTS

Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8260B, Volatile Organic Compounds

QC Batch No: 091709-1C

Our Lab I.D.			241817	241819	241822		
Client Sample I.D.			RB19-0.5	RB20-5	RB22-0.5		
Date Sampled			09/14/2009	09/14/2009	09/14/2009		
Date Prepared			09/17/2009	09/17/2009	09/17/2009		
Preparation Method							
Date Analyzed			09/17/2009	09/17/2009	09/17/2009		
Matrix			Soil	Soil	Soil		
Units			ug/kg	ug/kg	ug/kg		
Dilution Factor			1	1	1		
Analytes	MDL	PQL	Results	Results	Results		
1,4-Dichlorobenzene (p-Dichlorobenzene)	2.23	10.0	ND	ND	ND		
Dichlorodifluoromethane	2.07	30.0	ND	ND	ND		
1,1-Dichloroethane	1.30	10.0	ND	ND	ND		
1,2-Dichloroethane	1.57	10.0	ND	ND	ND		
1,1-Dichloroethene (1,1-Dichloroethylene)	2.60	10.0	ND	ND	ND		
cis-1,2-Dichloroethene	1.60	10.0	ND	ND	ND		
trans-1,2-Dichloroethene	2.16	10.0	ND	ND	ND		
1,2-Dichloropropane	0.660	10.0	ND	ND	ND		
1,3-Dichloropropane	0.920	10.0	ND	ND	ND		
2,2-Dichloropropane	1.36	10.0	ND	ND	ND		
1,1-Dichloropropene	1.12	10.0	ND	ND	ND		
cis-1,3-Dichloropropene	0.980	10.0	ND	ND	ND		
trans-1,3-Dichloropropene	0.960	10.0	ND	ND	ND		
Ethylbenzene	1.00	2.00	ND	ND	ND		
Hexachlorobutadiene (1,3-Hexachlorobutadiene)	2.77	30.0	ND	ND	ND		
2-Hexanone	3.18	50.0	ND	ND	ND		
Isopropylbenzene	1.42	10.0	ND	ND	ND		
p-Isopropyltoluene (4-Isopropyltoluene)	3.86	10.0	ND	ND	ND		
MTBE	2.90	5.00	ND	ND	ND		
4-Methyl-2-pentanone (MIBK, Methyl isobutyl ketone)	3.14	50.0	ND	ND	ND		
Methylene chloride (Dichloromethane, DCM)	3.31	50.0	ND	ND	ND		
Naphthalene	1.14	10.0	ND	ND	ND		
n-Propylbenzene	1.14	10.0	ND	ND	ND		
Styrene	0.800	10.0	ND	ND	ND		
1,1,1,2-Tetrachloroethane	1.28	10.0	ND	ND	ND		
1,1,2,2-Tetrachloroethane	3.25	10.0	ND	ND	ND		
Tetrachloroethene (Tetrachloroethylene)	0.930	10.0	ND	ND	ND		
Toluene (Methyl benzene)	1.00	2.00	ND	5.36	ND		
1,2,3-Trichlorobenzene	1.23	10.0	ND	ND	ND		
1,2,4-Trichlorobenzene	2.82	10.0	ND	ND	ND		
1,1,1-Trichloroethane	2.03	10.0	ND	ND	ND		
1,1,2-Trichloroethane	1.74	10.0	ND	ND	ND		

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ANALYTICAL RESULTS

Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43104	09/15/2009	RINCON

Method: 8260B, Volatile Organic Compounds

QC Batch No: 091709-1C

Our Lab I.D.			241817	241819	241822		
Client Sample I.D.			RB19-0.5	RB20-5	RB22-0.5		
Date Sampled			09/14/2009	09/14/2009	09/14/2009		
Date Prepared			09/17/2009	09/17/2009	09/17/2009		
Preparation Method							
Date Analyzed			09/17/2009	09/17/2009	09/17/2009		
Matrix			Soil	Soil	Soil		
Units			ug/kg	ug/kg	ug/kg		
Dilution Factor			1	1	1		
Analytes	MDL	PQL	Results	Results	Results		
Trichloroethene (TCE)	1.15	10.0	ND	ND	ND		
Trichlorofluoromethane	3.15	10.0	ND	ND	ND		
1,2,3-Trichloropropane	1.74	10.0	ND	ND	ND		
1,2,4-Trimethylbenzene	3.19	10.0	ND	ND	ND		
1,3,5-Trimethylbenzene	1.23	10.0	ND	ND	ND		
Vinyl acetate	10.8	50.0	ND	ND	ND		
Vinyl chloride (Chloroethene)	2.79	30.0	ND	ND	ND		
o-Xylene	1.00	2.00	ND	ND	ND		
m- & p-Xylenes	1.80	4.00	ND	ND	ND		

Our Lab I.D.			241817	241819	241822		
Surrogates	% Rec.Limit		% Rec.	% Rec.	% Rec.		
Surrogate Percent Recovery							
Bromofluorobenzene	70-120		115	112	102		
Dibromofluoromethane	70-120		101	92	90		
Toluene-d8	70-120		77	91	93		

QUALITY CONTROL REPORT

QC Batch No: 091709-1C

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit					
Benzene	99	100	1.0	75-120	15					
Chlorobenzene	92	94	2.2	75-120	15					
1,1-Dichloroethene (1,1-Dichloroethylene)	99	99	<1	75-120	15					
MTBE	93	96	3.2	75-120	15					
Toluene (Methyl benzene)	93	94	1.1	75-120	15					
Trichloroethene (TCE)	91	92	1.1	75-120	15					

AMERICAN SCIENTIFIC LABORATORIES, LLC

Environmental Testing Services

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Ordered By

Rincon Consultants, Inc.
790 East Santa Clara Street
Ventura, CA 93001

Telephone (805) 641-1000
Attn Shawn Decker

Number of Pages 6
Date Received 09/15/2009
Date Reported 10/02/2009

Job Number	Ordered	Client
43208	09/25/2009	RINCON

Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension
Site: Ventura Road
Ventura

Enclosed are the results of analyses on 10 samples analyzed as specified on attached chain of custody.

Wendy Lu
Organics Supervisor

Rojert G. Araghi
Laboratory Director

American Scientific Laboratories, LLC (ASL) accepts sample materials from clients for analysis with the assumption that all of the information provided to ASL verbally or in writing by our clients (and/or their agents), regarding samples being submitted to ASL, is complete and accurate. ASL accepts all samples subject to the following conditions:

1) ASL is not responsible for verifying any client-provided information regarding any samples submitted to the laboratory.
2) ASL is not responsible for any consequences resulting from any inaccuracies, omissions, or misrepresentations contained in client-provided information regarding samples submitted to the laboratory.

Additional Request

Molky Brar NEW JOB # 43208

From: "Shawn Decker" <sdecker@rinconconsultants.com>
To: "Molky Brar" <molky@asllab.com>
Sent: Friday, September 25, 2009 9:49 AM
Subject: Additional Analyses

Molky,

Please analyze the following samples for TPH gasoline by EPA Method 8015M from ASL job number 43104:

		Date	Matrix	New I.D.
1	RB1-0.5	9-14-09	soil	242319
2	RB1-3	↓	↓	242320
3	RB1-5			242321
4	RB17-0.5			242322
5	RB18-0.5			242323
6	RB19-0.5			242324
7	RB20-0.5			242325
8	RB21-0.5			242326

Please analyze the following samples for TEPH by EPA Method 8015M:

9	RB17-5	9-14-09	Soil	242432
10	RB19-5	"	"	242433

Requested Date: 9-25-09

Due Date: 10-2-09

Thank you,

Shawn Decker
Project Manager, Environmental Services
RINCON CONSULTANTS, INC.
790 E. Santa Clara Street
Ventura, CA 93001
ph. (805) 641-1000 x23
fax (805) 641-1072

www.rinconconsultants.com

Environmental Scientists Planners Engineers

Please consider the environment prior to printing this email.

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Environmental Testing Services
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ANALYTICAL RESULTS

Ordered By

Rincon Consultants, Inc.
790 East Santa Clara Street
Ventura, CA 93001

Telephone: (805)641-1000
Attn: Shawn Decker

Site

Ventura Road
Ventura

Page: 2

Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43208	09/15/2009	RINCON

Method: 8015B, TPH DROs and OROs (Diesel and Oil Range Organics)

QC Batch No: 093009-1P

Our Lab I.D.		242432	242433			
Client Sample I.D.		RB17-5	RB19-5			
Date Sampled		09/14/2009	09/14/2009			
Date Prepared		09/28/2009	09/28/2009			
Preparation Method						
Date Analyzed		09/30/2009	09/30/2009			
Matrix		Soil	Soil			
Units		mg/Kg	mg/Kg			
Dilution Factor		1	1			
Analytes	**PQL**	**Results**	**Results**			
TPH DROs (C10 to C28)	10.0	ND	ND			
TPH OROs (C28+)	50.0	ND	33.4J			

Our Lab I.D.		242432	242433			
Surrogates	**% Rec.Limit**	**% Rec.**	**% Rec.**			
Surrogate Percent Recovery						
Chlorobenzene	70-120	81	79			

QUALITY CONTROL REPORT

QC Batch No: 093009-1P

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit					
Diesel	95	100	5.1	75-120	<20					

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Environmental Testing Services
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ANALYTICAL RESULTS

Ordered By

Rincon Consultants, Inc.
790 East Santa Clara Street
Ventura, CA 93001

Telephone: (805)641-1000
Attn: Shawn Decker

Site

Ventura Road
Ventura

Page: 3

Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43208	09/15/2009	RINCON

Method: 8015B, TPH GROs (Gasoline Range Organics)

QC Batch No: 092509-1

Our Lab I.D.		242319	242320	242321		
Client Sample I.D.		RB1-0.5	RB1-3	RB1-5		
Date Sampled		09/14/2009	09/14/2009	09/14/2009		
Date Prepared		09/25/2009	09/25/2009	09/25/2009		
Preparation Method						
Date Analyzed		09/25/2009	09/25/2009	09/25/2009		
Matrix		Soil	Soil	Soil		
Units		mg/Kg	mg/Kg	mg/Kg		
Dilution Factor		1	1	1		
Analytes	PQL	Results	Results	Results		
TPH GROs (C6 to C10)	0.500	ND	ND	ND		

Our Lab I.D.		242319	242320	242321		
Surrogates	% Rec.Limit	% Rec.	% Rec.	% Rec.		
Surrogate Percent Recovery						
Bromofluorobenzene	70-120	99	111	98		

QUALITY CONTROL REPORT

QC Batch No: 092509-1

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit					
Benzene	92	92	<1	75-120	<20					
Toluene	89	89	<1	75-120	<20					

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ANALYTICAL RESULTS

Ordered By

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790 East Santa Clara Street
Ventura, CA 93001

Telephone: (805)641-1000
Attn: Shawn Decker

Site

Ventura Road
Ventura

Page: 4

Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43208	09/15/2009	RINCON

Method: 8260B, TPH GROs(Gasoline Range Organics)

QC Batch No: 091609-1C

Our Lab I.D.		242322	242326			
Client Sample I.D.		RB17-0.5	RB21-0.5			
Date Sampled		09/14/2009	09/14/2009			
Date Prepared		09/16/2009	09/16/2009			
Preparation Method						
Date Analyzed		09/16/2009	09/16/2009			
Matrix		Soil	Soil			
Units		ug/kg	ug/kg			
Dilution Factor		1	1			
Analytes	PQL	Results	Results			
TPH GROs (C6 to C10)	500	ND	ND			

Our Lab I.D.		242322	242326			
Surrogates	% Rec.Limit	% Rec.	% Rec.			
Surrogate Percent Recovery						
Bromofluorobenzene	70-120	94	100			
Dibromofluoromethane	70-120	95	99			
Toluene-d8	70-120	95	95			

QUALITY CONTROL REPORT

QC Batch No: 091609-1C

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit					
Benzene	92	92	<1	75-120	15					
Chlorobenzene	90	91	1.1	75-120	15					
1,1-Dichloroethene (1,1-Dichloroethylene)	99	93	6.3	75-120	15					
MTBE	99	97	2.0	75-120	15					
Toluene (Methyl benzene)	90	86	4.5	75-120	15					
Trichloroethene (TCE)	91	88	3.4	75-120	15					

AMERICAN SCIENTIFIC LABORATORIES, LLC
Environmental Testing Services
2520 N. San Fernando Rd., Los Angeles, CA 90065 Tel: (323) 223-9700 Fax: (323) 223-9500

ANALYTICAL RESULTS

Ordered By

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Site

Ventura Road
Ventura

Page: 5

Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43208	09/15/2009	RINCON

Method: 8260B, TPH GROs(Gasoline Range Organics)

QC Batch No: 091609-2C

Our Lab I.D.		242325				
Client Sample I.D.		RB20-0.5				
Date Sampled		09/14/2009				
Date Prepared		09/17/2009				
Preparation Method						
Date Analyzed		09/17/2009				
Matrix		Soil				
Units		ug/kg				
Dilution Factor		1				
Analytes	PQL	Results				
TPH GROs (C6 to C10)	500	ND				

Our Lab I.D.		242325				
Surrogates	% Rec.Limit	% Rec.				
Surrogate Percent Recovery						
Bromofluorobenzene	70-120	116				
Dibromofluoromethane	70-120	100				
Toluene-d8	70-120	101				

QUALITY CONTROL REPORT

QC Batch No: 091609-2C

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit					
Benzene	93	96	3.2	75-120	15					
Chlorobenzene	90	89	1.1	75-120	15					
1,1-Dichloroethene (1,1-Dichloroethylene)	93	104	11.2	75-120	15					
MTBE	101	104	2.9	75-120	15					
Toluene (Methyl benzene)	90	92	2.2	75-120	15					
Trichloroethene (TCE)	91	92	1.1	75-120	15					

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Site

Ventura Road
Ventura

Page: 6

Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43208	09/15/2009	RINCON

Method: 8260B, TPH GROs(Gasoline Range Organics)

QC Batch No: 091709-1C

Our Lab I.D.		242323	242324			
Client Sample I.D.		RB18-0.5	RB19-0.5			
Date Sampled		09/14/2009	09/14/2009			
Date Prepared		09/17/2009	09/17/2009			
Preparation Method						
Date Analyzed		09/17/2009	09/17/2009			
Matrix		Soil	Soil			
Units		ug/kg	ug/kg			
Dilution Factor		1	1			
Analytes	PQL	Results	Results			
TPH GROs (C6 to C10)	500	ND	ND			

Our Lab I.D.		242323	242324			
Surrogates	% Rec.Limit	% Rec.	% Rec.			
Surrogate Percent Recovery						
Bromofluorobenzene	70-120	108	115			
Dibromofluoromethane	70-120	96	101			
Toluene-d8	70-120	88	77			

QUALITY CONTROL REPORT

QC Batch No: 091709-1C

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit					
Benzene	99	100	1.0	75-120	15					
Chlorobenzene	92	94	2.2	75-120	15					
1,1-Dichloroethene (1,1-Dichloroethylene)	99	99	<1	75-120	15					
MTBE	93	96	3.2	75-120	15					
Toluene (Methyl benzene)	93	94	1.1	75-120	15					
Trichloroethene (TCE)	91	92	1.1	75-120	15					

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Ordered By

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Telephone (805) 641-1000
Attn Shawn Decker

Number of Pages 3
Date Received 09/15/2009
Date Reported 09/30/2009

Job Number	Ordered	Client
43194	09/23/2009	RINCON

Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension
Site: Ventura Road
Ventura, CA

Enclosed are the results of analyses on 2 samples analyzed as specified on attached chain of custody.

Wendy Lu
Organics Supervisor

Rojert G. Araghi
Laboratory Director

American Scientific Laboratories, LLC (ASL) accepts sample materials from clients for analysis with the assumption that all of the information provided to ASL verbally or in writing by our clients (and/or their agents), regarding samples being submitted to ASL, is complete and accurate. ASL accepts all samples subject to the following conditions:

1) ASL is not responsible for verifying any client-provided information regarding any samples submitted to the laboratory.
2) ASL is not responsible for any consequences resulting from any inaccuracies, omissions, or misrepresentations contained in client-provided information regarding samples submitted to the laboratory.

Additional Request

Molky Brar

NEW JOB # 43194

From: "Shawn Decker" <sdecker@rinconconsultants.com>
To: "Molky Brar" <molky@asllab.com>
Sent: Wednesday, September 23, 2009 3:32 PM
Subject: additional analyses

Molky,

New I.D: 242257 242258 Sample Date: 9-14-09

Please analyze soil samples RB16-0.5 and RB16-2 for TPH gasoline by EPA Method 8015M from ASL Job Number 43104. There will likely be more analyses coming.

Thank you,

Shawn Decker
Project Manager, Environmental Services
RINCON CONSULTANTS, INC.
790 E. Santa Clara Street
Ventura, CA 93001
ph. (805) 641-1000 x23
fax (805) 641-1072

www.rinconconsultants.com

Requested Date: 9-23-09
Due Date: 9-30-09

Environmental Scientists Planners Engineers

Please consider the environment prior to printing this email.

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ANALYTICAL RESULTS

Ordered By

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Telephone: (805)641-1000
Attn: Shawn Decker

Site

Ventura Road
Ventura, CA

Page: 2

Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43194	09/15/2009	RINCON

Method: 8260B, TPH GROs(Gasoline Range Organics)

QC Batch No: 091609-1B

Our Lab I.D.		242257				
Client Sample I.D.		RB16-0.5				
Date Sampled		09/14/2009				
Date Prepared		09/16/2009				
Preparation Method						
Date Analyzed		09/16/2009				
Matrix		Soil				
Units		ug/kg				
Dilution Factor		1				
Analytes	**PQL**	**Results**				
TPH GROs (C6 to C10)	500	ND				

Our Lab I.D.		242257				
Surrogates	**% Rec.Limit**	**% Rec.**				
Surrogate Percent Recovery						
Bromofluorobenzene	70-120	119				
Dibromofluoromethane	70-120	103				
Toluene-d8	70-120	105				

QUALITY CONTROL REPORT

QC Batch No: 091609-1B

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit					
Benzene	111	112	<1	75-120	15					
Chlorobenzene	112	116	3.5	75-120	15					
1,1-Dichloroethene (1,1-Dichloroethylene)	116	117	<1	75-120	15					
MTBE	81	77	5.1	75-120	15					
Toluene (Methyl benzene)	110	107	2.8	75-120	15					
Trichloroethene (TCE)	85	87	2.3	75-120	15					

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ANALYTICAL RESULTS

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Site

Ventura Road
Ventura, CA

Page: 3
Project ID: OLIVAS PARK DR EXT.
Project Name: Olivas Park Drive Extension

ASL Job Number	Submitted	Client
43194	09/15/2009	RINCON

Method: 8260B, TPH GROs(Gasoline Range Organics)

QC Batch No: 091709-1C

Our Lab I.D.		242258				
Client Sample I.D.		RB16-2				
Date Sampled		09/14/2009				
Date Prepared		09/17/2009				
Preparation Method						
Date Analyzed		09/17/2009				
Matrix		Soil				
Units		ug/kg				
Dilution Factor		1				
Analytes	**PQL**	**Results**				
TPH GROs (C6 to C10)	500	ND				

Our Lab I.D.		242258				
Surrogates	**% Rec.Limit**	**% Rec.**				
Surrogate Percent Recovery						
Bromofluorobenzene	70-120	113				
Dibromofluoromethane	70-120	91				
Toluene-d8	70-120	89				

QUALITY CONTROL REPORT

QC Batch No: 091709-1C

Analytes	MS % REC	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit					
Benzene	99	100	1.0	75-120	15					
Chlorobenzene	92	94	2.2	75-120	15					
1,1-Dichloroethene (1,1-Dichloroethylene)	99	99	<1	75-120	15					
MTBE	93	96	3.2	75-120	15					
Toluene (Methyl benzene)	93	94	1.1	75-120	15					
Trichloroethene (TCE)	91	92	1.1	75-120	15					

Appendix E

Hydrology, Drainage, and Water Supply

Appendix E-1

Draft Hydrology and Hydraulic Appendix

Prepared by Hawks & Associates

DRAFT HYDROLOGY AND HYDRAULICS APPENDIX

OLIVAS PARK DRIVE EXTENSION EIR

November 19, 2010

Prepared for:

The City of San Buenaventura

P. O. Box 99, Ventura, CA 93002-0099

Prepared by:

Hawks and Associates

2259 Portola Rd. Suite B, Ventura, CA 93003

Project # 405-10

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HEC-RAS Hydraulic Model Floodplain & Floodway Tables

List of Abbreviations

cfs	Cubic Feet per Second
CIRGIS	Channel Islands Regional Geographic Information System
CLOMR	Conditional Letter of Map Revision
EIR	Environmental Impact Report
FEMA	Federal Emergency Management Agency
FIS	Flood Insurance Study
ft/s	Feet per Second
HEC-RAS	U.S. Army Corps of Engineers Hydrologic Engineering Center River Analysis System
LiDAR	Light Detection and Ranging
NAD	North American Datum
NAVD	North American Vertical Datum
OPDE	Olivas Park Drive Extension
VCWPD	Ventura County Watershed Protection District

1.0 INTRODUCTION

This Hydrology and Hydraulics Technical Appendix contains background information that supports the impact analysis documented in the Environmental Impact Report (EIR) developed for the proposed Olivas Park Drive Extension (OPDE) and adjacent earthen levee project. As shown in Figure 1, the project is located southwest of Highway 101 and north of the Santa Clara River within the City of San Buenaventura (City). The OPDE would connect the existing Olivas Park Drive to Johnson Drive as part of the city's traffic circulation plan and the set-back levee would protect ODPE and properties to the north (Exhibit A). This appendix documents the projects impacts on the existing Santa Clara River floodplain, floodway, and other factors. The impacts are estimated for the OPDE proposed levee conditions with and without a south bank levee planned by the Ventura County Watershed Protection District (VCWPD) and the City of Oxnard.

Figure 1. Location Map

1.1 Description of Study Reach

The Santa Clara River is one of the largest river systems in Southern California. The river flows approximately 100 miles from its headwater in the San Gabriel Mountains toward the Oxnard Plain before discharging into the Pacific Ocean near the Ventura Marina. Approximately 40 percent of the 1,634 square mile watershed area is located in Los Angeles County and 60 percent in Ventura County.

The limits of the hydraulic study reach are from 200 feet upstream of the Highway 101 Bridge to 450 feet downstream of the Victoria Avenue Bridge to take advantage of the bridges as hydraulic control structures (Figure 2). Other local existing hydraulic factors include:

- VCWPD three rock groins on the south bank of the river (Figure 2).
- VCWPD uncertified SCR-1 and SCR-3 levee systems on the south bank of the river designed to protect City of Oxnard on the south from flooding (Figure 3).

Figure 2. Study Reach.

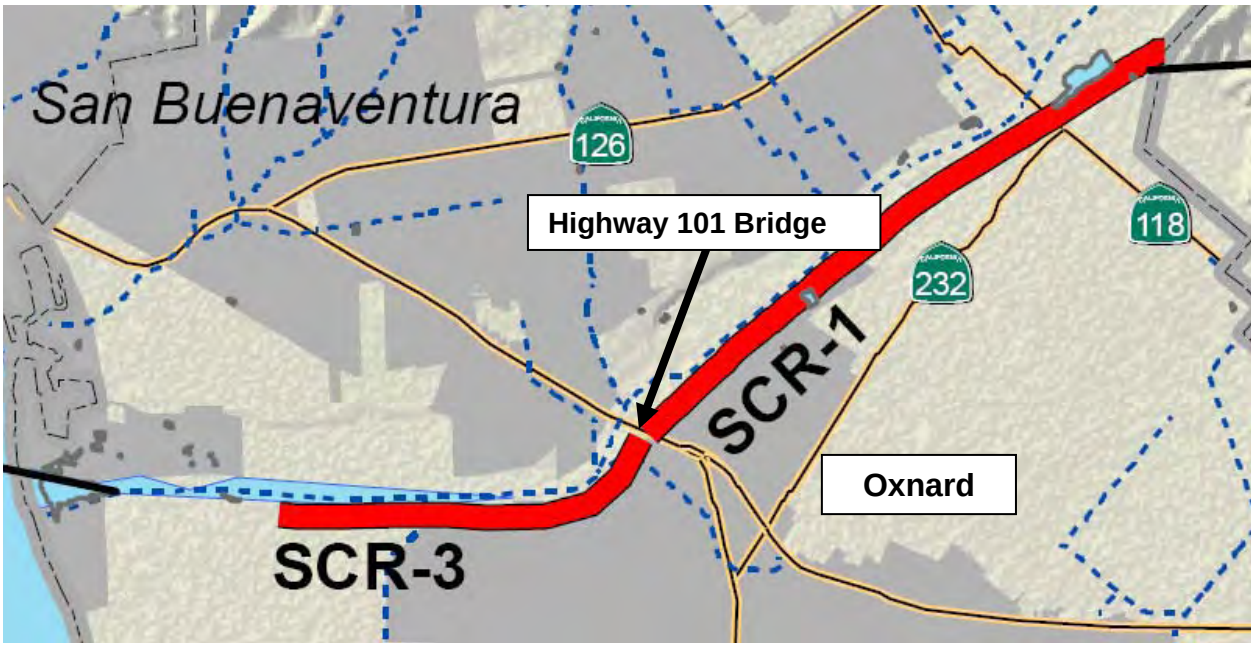


Figure 3. VCWPD Levee System.

1.2 Project Description

The OPDE project is shown on Exhibit A and consists of:

(1) an approximately 4,500 linear foot extension of Olivas Park Drive roadway between Perkin Avenue and Johnson Drive

(2) an approximately 5,800 linear foot setback levee and floodwall along the north side of the Santa Clara River

(3) a General Plan amendment for an approximately 25.4-acre area between the proposed Johnson Drive extension and levee.

The OPDE project would create an 82.5 feet wide road consisting of four 12-foot wide travel lanes, a 12-foot wide raised median, two six-foot wide bike lanes, and one ten-foot wide sidewalk on the north side of the road. Additionally, roadway widening would take place along the existing portions of Olivas Park Drive between Golf Course Drive and Perkin Avenue and along Johnson Drive between Auto Center Drive and U.S. 101 southbound off-ramp.

The OPDE project would result in the abandonment or demolition of wastewater treatment components at the Montalvo Municipal Improvement District. Wastewater currently treated at this facility would be diverted to the City's main reclamation facility.

The proposed levee system is designed to be setback from the Santa Clara River as much as possible to reduce encroachment effects, but also to protect the redevelopment of properties adjacent to the river. The levee will be primarily composed of earth except at the eastern and western ends where the levee would become a flood wall to tie into the natural high ground.

The floodwall section includes a removable section that crosses Olivas Park Drive. The height of the levee varies up to a maximum of 10 feet above the existing ground. The levee bank and toe protection adjacent to the Santa Clara River would primarily consist of rock riprap but will vary in size and depth depending on the calculated design flow velocities and shear stress. The top width of the levee would be 17 feet to accommodate a maintenance road. The levee would provide flood protection from a 100-year flood for properties north of the levee.

The City of Oxnard is also planning the construction of a levee on the opposite (south) side of the Santa Clara River in the vicinity of the OPDE project. Impacts of the project on the floodplain, floodway, and velocities of the Santa Clara River due to the flowing conditions were analyzed:

- North levee only
- South levee only
- North and South levee

Flows up to the 25-year storm event (150,000 cfs) per the VCWPD *Santa Clara River 2006 Hydrology Update* would not be affected by the OPDE levee. The impacts of the 100-year storm event were evaluated as the likely maximum probable impacts.

2.0 HYDROLOGY

The hydrologic boundary conditions used in the modeling effort to estimate impacts were taken from the Wood Rodgers *SCR-3 Levee Design Flow and Water Surface Technical Memorandum* (April 2010). The same hydrology that is being used in the design of the south SCR-3 levee was used for consistency between the two levee designs. Table 1 presents historical and the most recent 100-year storm event flow estimates in cubic feet per second (cfs) based on the Montalvo stream gage (USGS Station 1110850), which has a drainage area of 1,594 square miles.

Table 1. Recent 100-Year Storm Event Flow Estimates Near the Montalvo Stream Gage	
Reference	**100-Year Storm Event Flow (cfs)**
Floodplain and Floodway	
1990 U.S. Army Corps of Engineers (FEMA Effective 100-year Storm Event Based on Data Before 1983)	161,000
1994 Ventura County Flood Control District (Now the VCWPD)	200,000
2006 VCWPD (Flood for New FEMA FIS Study)	226,000
2010 Wood Rodgers Technical Memo (at Hwy 101) (1400 feet Downstream of Highway 101)	226,000 229,337
Levee Design	
2010 VCWPD	248,000
2010 Wood Rodgers Technical Memo	250,000

Note that the Federal Emergency Management Agency (FEMA) is currently conducting a Flood Insurance Study (FIS) in collaboration with VCWPD for the Santa Clara River and 100-year event flows are being re-evaluated.

3.0 HYDRAULICS

Four detailed Army Corps of Engineers Hydrologic Engineering Centers River Analysis System (HEC-RAS) version 4.0 models were developed using a RiverCAD 8.4.2 platform to analyze the effects of the proposed north river bank levee in conjunction with a proposed upgrade of the south river bank levee due to the 100-year storm event flow:

- Existing conditions with flooding over the existing south river bank for 226,000 cfs – 229,337 cfs
- Proposed condition with only the north river bank levee for same floods
- Proposed conditions with only the south river bank levee for same floods
- Proposed conditions with the north and south river bank levees for same floods.

Starting water surface elevations downstream of the Ventura Avenue were based on the Wood Rodgers 2010 model (48.92 feet for 229.337 cfs and 49.5 for 250,000 cfs). Additional cross-sections were added in the study reach to define the project effects in more detail.

The levees height, erosion protection, and toe were designed for 250,000 cfs based on the 2010 Wood Rodgers Technical Memorandum.

3.1 Topography and Aerial Imagery

The HEC-RAS hydraulic models were developed based on VCWPD 2005 Light Detection and Ranging (LiDAR) topography at a 1-foot contour interval for the existing conditions model. The LiDAR topography was flown and processed by Airborn1 and is considered compliant with FEMA specifications. The horizontal datum is the North American Datum of 1983 (NAD83) Zone V and the vertical datum is the North American Vertical Datum of 1988 (NAVD88).

The placement of left and right overbanks was based on features observed on 2007 areail photography (Figure 2) from the Channel Islands Regional Geographic Information System (CIRGIS http://www.cirgis.org/).

3.2 Existing Conditions Model

Manning's roughness coefficient (n) values were developed based on aerial photography (Figure 2) and site visits. The values are consistent with the current FEMA flood insurance study.

Details of the existing conditions model include:

- Total reach length of model = 10,182 feet.
- Total cross sections = 30
- Cross-sections with ineffective flow areas = 6
- Cross-sections with levees = 26
- Average reach length per cross section = 340 feet
- Number of bridges = 3
- n value for main channel (Figure 2) = 0.035
- n values for left and right overbanks (Figure 2) = 0.04 to 0.05
- Contraction coefficient = 0.1
- Expansion coefficient = 0.3
- Contraction coefficient at bridges = 0.6
- Expansion coefficient at bridges = 0.8
- Flow regime = Subcritical

3.3 Proposed Conditions Hydraulic Models

The existing conditions model was changed to reflect proposed conditions for north and south levee combinations. Levees were designated at each cross-section according to the levee alignments. The alignment for the south levee was based on 10 percent plans of Alternative 1 from the *Santa Clara River Levee System (SCR-3) Reach 4 between N Ventura Road and Ventura Freeway (US 101) Conceptual Design Alternatives* report by Wood Rodgers (March 23, 2010). Alternative 1 was chosen as the most conservative alignment alternative presented in the report because the alignment encroaches the farthest into the Santa Clara River.

4.0 IMPACTS OF PROPOSED CONDITIONS

The proposed condition effects on the floodplain, floodway, and velocity profile along the Santa Clara River are presented below. The estimated area that the north levee removes from the floodplain is 107 acres and consists of buildings, parking lots, and wastewater treatment plant ponds (Figure 4).

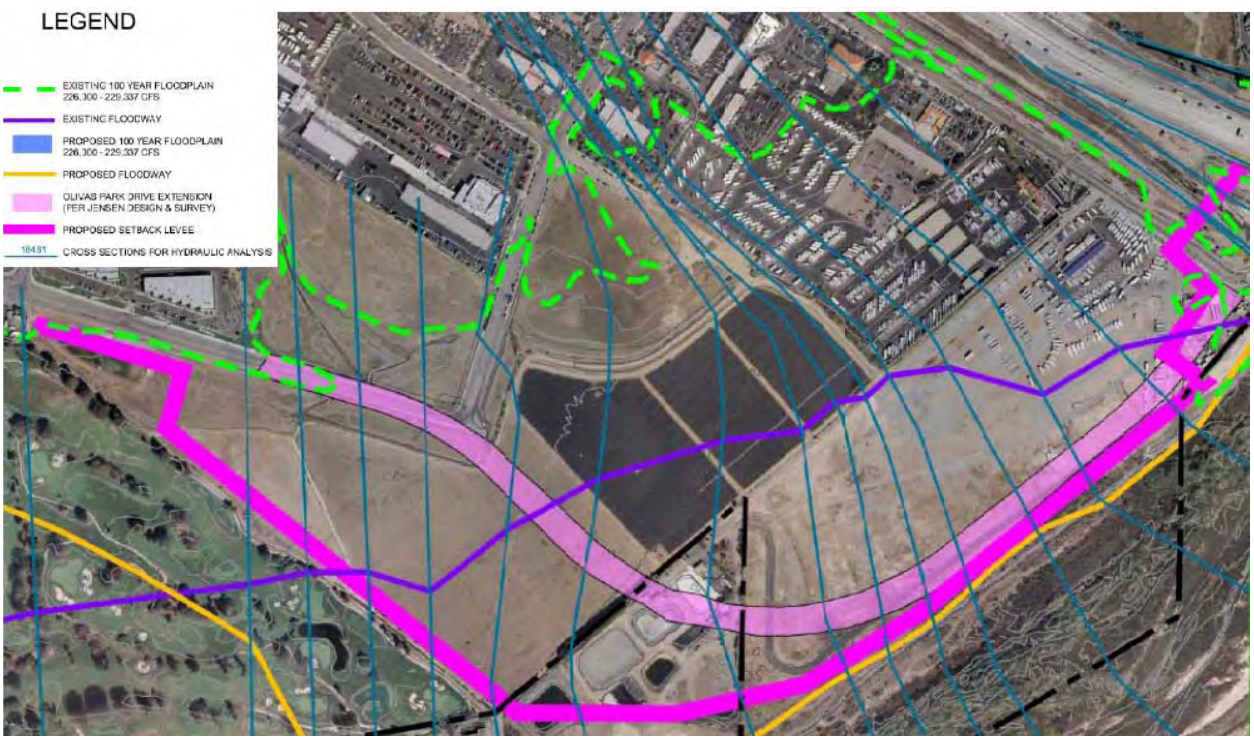


Figure 4. Area Removed from Floodplain

4.1 Floodplain Water Surface Elevation Comparison

Table 2 shows the difference in the 100-year storm event floodplain water surface elevations for the scenarios described in Section 3.0. Floodplain maps for the three scenarios are attached as Exhibits B, C, and D. The table shows that increases in water surface for the 100-year storm event due to the south levee are less than 1 foot, changes due to the north levee are greater than 2 feet at one location, and changes due to the combination of both levees are the same as changes due to the north levee only. Note that the changes are limited to the river reach directly adjacent to the levee system and there are no changes upstream or downstream of the proposed developments.

Table 2. 100-year Event Floodplain Water Surface (W.S.) Comparison

		Existing Conditions	North Levee Only		South Levee Only		North and South Levees	
River Station	**Q Total (cfs)**	**W.S. Elevation (ft)**	**W.S. Elevation (ft)**	**Difference (ft)**	**W.S. Elevation (ft)**	**Difference (ft)**	**W.S. Elevation (ft)**	**Difference (ft)**
14430	229337	48.92	48.92	0	48.92	0	48.92	0
14838	229337	49.51	49.51	0	49.51	0	49.51	0
15148	229337	53.18	53.18	0	53.18	0	53.18	0
15864	229337	55.15	55.15	0	55.15	0	55.15	0
16320	229337	55.88	55.88	0	55.88	0	55.88	0
17022	229337	58.06	58.06	0	58.06	0	58.06	0
17835	229337	59.41	59.41	0	59.41	0	59.41	0
18523	229337	60.25	60.05	-0.20	60.25	0	60.05	-0.20
18768	229337	60.86	60.59	-0.27	60.86	0	60.59	-0.27
18982	229337	61.65	61.53	-0.12	61.65	0	61.53	-0.12
19172	229337	61.29	61.2	-0.09	61.29	0	61.20	-0.09
19491	229337	62.64	61.83	-0.81	62.64	0	61.83	-0.81
19956	229337	64.82	66.29	1.47	64.82	0	66.29	1.47
20577	229337	66.03	67.75	1.72	66.03	0	67.75	1.72
21023	229337	67.19	68.90	1.71	67.19	0	68.90	1.71
21277	229337	67.32	69.06	1.74	67.32	0	69.06	1.74
21547	229337	67.98	69.83	1.85	67.98	0	69.83	1.85
21776	229337	68.25	70.11	1.86	68.25	0	70.12	1.87
22190	226000	69.03	70.71	1.68	68.45	-0.58	70.63	1.60
22788	226000	69.18	71.34	2.16	69.65	0.47	71.34	2.16
23138	226000	70.71	71.93	1.22	71.05	0.34	71.93	1.22
23640	226000	71.64	72.98	1.34	71.86	0.22	72.98	1.34
23653	226000	76.10	76.10	0	76.10	0	76.10	0
23892	226000	76.31	76.31	0	76.31	0	76.31	0
24213	226000	76.41	76.41	0	76.41	0	76.41	0
24428	226000	76.82	76.82	0	76.82	0	76.82	0
24612	226000	76.84	76.84	0	76.84	0	76.84	0
Maximum				**2.16**		**0.47**		**2.16**
Minimum				**-0.81**		**-0.58**		**-0.81**

4.2 Floodplain Velocity Comparison

Figure 5 looking downstream shows how the north and south levees were modeled and how the velocity is distributed in a typical section. The distribution of velocities shown by the colors in the legend indicates that the velocity along the south levee is higher than along the north levee because of the relative distances to the main channel. The levee slope and toe protection on the north overbank will be designed for lower velocities and scour than on the south bank according to the distance of the north levee set-back.

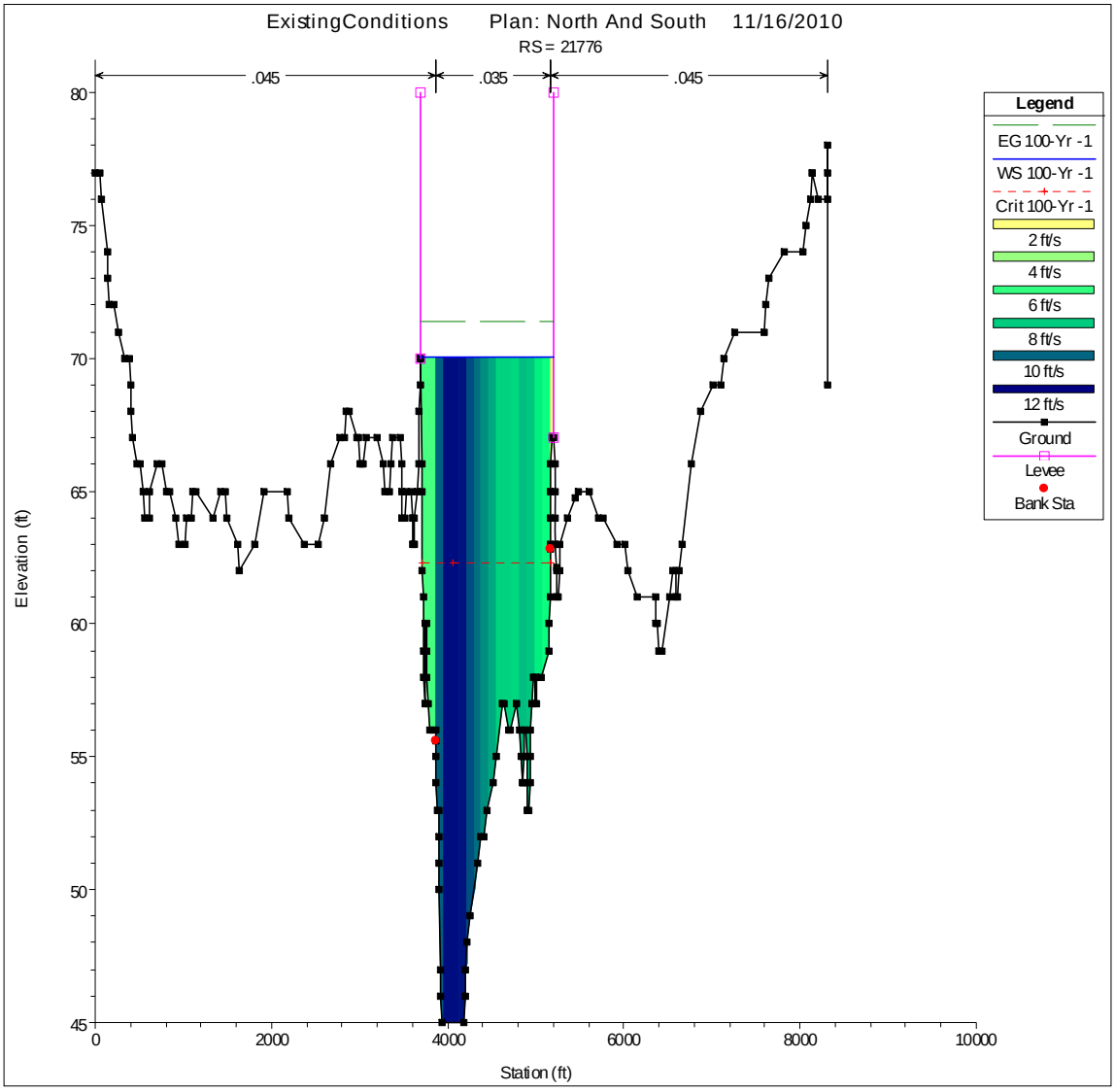


Figure 5. Sample River Cross-section with Velocity Distribution.

Table 3 provides 100-year storm event floodplain velocity differences for the scenarios stated in Section 3.0. Floodplain maps for the three scenarios are attached as Exhibits B, C, and D. The table shows that increases in velocity for the 100-year storm event due to the south levee are less than 3 feet per second (ft/s), changes due to the north levee are almost 4 ft/s at one location, and changes due to the combination of both levees are the same as changes due to the north levee only. Note that the changes are limited to the river reach directly adjacent to the levee system and there are no changes upstream or downstream of the proposed developments.

Table 3. 100-year Event Floodplain Velocity Comparison

		Existing Conditions	North Levee Only		South Levee Only		North and South Levees	
River Station	**Q Total (cfs)**	**Channel Velocity (ft/s)**	**Channel Velocity (ft/s)**	**Difference (ft/s)**	**Channel Velocity (ft/s)**	**Difference (ft/s)**	**Channel Velocity (ft/s)**	**Difference (ft/s)**
14430	229337	12.14	12.14	0	12.14	0	12.14	0
14838	229337	14.74	14.74	0	14.74	0	14.74	0
15148	229337	12.14	12.14	0	12.14	0	12.14	0
15864	229337	11.39	11.39	0	11.39	0	11.39	0
16320	229337	12.58	12.58	0	12.58	0	12.58	0
17022	229337	10.78	10.78	0	10.78	0	10.78	0
17835	229337	10.23	10.23	0	10.23	0	10.23	0
18523	229337	12.53	13.46	0.93	12.53	0	13.46	0.93
18768	229337	12.33	13.83	1.50	12.33	0	13.83	1.50
18982	229337	11.55	13.08	1.53	11.55	0	13.08	1.53
19172	229337	15.16	16.57	1.41	15.16	0	16.57	1.41
19491	229337	14.33	18.03	3.70	14.33	0	18.03	3.70
19956	229337	11.15	12.02	0.87	11.15	0	12.02	0.87
20577	229337	10.85	11.28	0.43	10.85	0	11.28	0.43
21023	229337	9.16	9.84	0.68	9.16	0	9.84	0.68
21277	229337	10.03	10.49	0.46	10.03	0	10.49	0.46
21547	229337	8.93	9.22	0.29	8.93	0	9.22	0.29
21776	229337	9.01	9.20	0.19	9.01	0	9.20	0.19
22190	226000	8.01	8.86	0.85	10.56	2.55	9.08	1.07
22788	226000	10.94	9.28	-1.66	10.53	-0.41	9.28	-1.66
23138	226000	9.39	9.42	0.03	9.03	-0.36	9.41	0.02
23640	226000	9.45	8.61	-0.84	9.30	-0.15	8.61	-0.84
23653	226000	7.13	7.13	0	7.13	0	7.13	0
23892	226000	7.24	7.24	0	7.24	0	7.24	0
24213	226000	7.64	7.64	0	7.65	0.01	7.64	0
24428	226000	8.16	8.16	0	8.16	0	8.16	0
24612	226000	9.58	9.58	0	9.58	0	9.58	0
Maximum				**3.70**		**2.55**		**3.70**
Minimum				**-1.66**		**-0.41**		**-1.66**

4.3 Floodplain Area and Top Width Comparison

Table 4 provides 100-year storm event floodplain top width differences for the scenarios stated in Section 3.0. Floodplain maps for the three scenarios are attached as Exhibits B, C, and D. The table shows that the maximum decrease in top width for the 100-year storm event due to the north levee is 1,894 feet and the maximum decrease in top width for either the south only levee or the combination north and south levee is approximately 4,700 feet at section 22190.

In the north levee only scenario, 107 acres are removed from the floodplain of the north bank, but there is an additional 19 acres of inundation on the south overbank area. If only the south levee is built, it removes 110 acres from the Oxnard floodplain and there is no change to the floodplain of the north overbank. The combination of the north and south levees removes 107 acres from the north overbank and 110 acres from the south overbank

Table 4. 100-year Event Floodplain Top Width Comparison

		Existing Conditions	North Levee Only		South Levee Only		North and South Levees	
River Station	**Q Total (cfs)**	**Top Width (ft)**	**Top Width (ft)**	**Difference (ft)**	**Top Width (ft)**	**Difference (ft)**	**Top Width (ft)**	**Difference (ft)**
14430	229337	3549	3549	0	3549	0	3549	0
14838	229337	3294	3294	0	3294	0	3294	0
15148	229337	3315	3315	0	3315	0	3315	0
15864	229337	3510	3510	0	3510	0	3510	0
16320	229337	3401	3401	0	3401	0	3401	0
17022	229337	3113	3113	0	3113	0	3113	0
17835	229337	2854	2854	0	2854	0	2854	0
18523	229337	2689	2258	-431	2689	0	2258	-431
18768	229337	2932	2041	-891	2932	0	2041	-891
18982	229337	2867	1889	-978	2867	0	1889	-978
19172	229337	2562	1631	-931	2562	0	1631	-931
19491	229337	2863	969	-1894	2863	0	969	-1894
19956	229337	2892	1250	-1642	2892	0	1250	-1642
20577	229337	2905	1199	-1706	2905	0	1199	-1706
21023	229337	3192	1332	-1861	3192	0	1332	-1861
21277	229337	3256	1390	-1866	3256	0	1390	-1866
21547	229337	3154	4879	1725	3154	0	1414	-1739
21776	229337	3207	4880	1674	3207	0	1518	-1688
22190	226000	6293	4871	-1422	1623	-4670	1646	-4647
22788	226000	1709	1844	134	1742	33	1844	134
23138	226000	3241	1701	-1540	3253	12	1701	-1540
23640	226000	1751	1759	8	1752	1	1759	8
23653	226000	1761	1761	0	1761	0	1761	0
23892	226000	2916	2916	0	2916	0	2916	0
24213	226000	1986	1986	0	1986	0	1986	0
24428	226000	1974	1974	0	1974	0	1974	0
24612	226000	1756	1756	0	1756	0	1756	0
Maximum				**1725**		**33**		**134**
Minimum				**-1894**		**-4670**		**-4647**

4.4 Floodway Water Surface Comparison

Table 5 shows the difference in the 100-year storm event floodway water surface for the scenarios stated in Section 3.0. Floodway maps for the three scenarios are attached as Exhibits B, C, and D. The table shows that increases in water surface for the 100-year storm event due to the south levee are negligible, increases due to the north levee are greater than 1 foot, and changes due to the combination of both levees are similar to changes due to the north levee only. Note that the north levee causes floodway changes upstream and downstream of the proposed developments.

Table 5. 100-year Event Floodway Water Surface Comparison

		Existing Conditions	North Levee Only		South Levee Only		North and South Levees	
River Station	**Q Total (cfs)**	**W.S. Elevation (ft)**	**W.S. Elevation (ft)**	**Difference (ft)**	**W.S. Elevation (ft)**	**Difference (ft)**	**W.S. Elevation (ft)**	**Difference (ft)**
14430	229337	49.5	49.5	0	49.5	0	49.5	0
14838	229337	50.15	50.15	0	50.15	0	50.15	0
15148	229337	53.34	53.28	-0.06	53.34	0	53.28	-0.06
15864	229337	55.19	55.16	-0.03	55.19	0	55.16	-0.03
16320	229337	55.93	55.9	-0.03	55.93	0	55.9	-0.03
17022	229337	58.08	58.19	0.11	58.08	0	58.19	0.11
17835	229337	60.08	59.49	-0.59	60.08	0	59.49	-0.59
18523	229337	61.03	60.13	-0.9	61.03	0	60.13	-0.9
18768	229337	61.49	60.74	-0.75	61.49	0	60.74	-0.75
18982	229337	62.43	61.89	-0.54	62.43	0	61.89	-0.54
19172	229337	62.25	61.45	-0.8	62.25	0	61.45	-0.8
19491	229337	63.29	62.82	-0.47	63.29	0	62.82	-0.47
19956	229337	65.62	66.41	0.79	65.62	0	66.41	0.79
20577	229337	66.67	67.86	1.19	66.67	0	67.86	1.19
21023	229337	67.77	68.98	1.21	67.81	0.04	68.98	1.21
21277	229337	67.92	69.12	1.2	67.92	0	69.12	1.2
21547	229337	68.56	69.9	1.34	68.58	0.02	69.91	1.35
21776	229337	68.84	70.19	1.35	68.86	0.02	70.19	1.35
22190	226000	69.35	70.7	1.35	69.36	0.01	70.7	1.35
22788	226000	70.17	71.38	1.21	70.16	-0.01	71.38	1.21
23138	226000	70.96	71.94	0.98	71.05	0.09	71.94	0.98
23640	226000	72.01	72.99	0.98	71.99	-0.02	72.99	0.98
23653	226000	76.96	76.5	-0.46	76.95	-0.01	76.5	-0.46
23892	226000	77.1	76.57	-0.53	77.09	-0.01	76.57	-0.53
24213	226000	77.37	76.88	-0.49	77.36	-0.01	76.88	-0.49
24428	226000	77.75	77.28	-0.47	77.74	-0.01	77.28	-0.47
24612	226000	77.76	77.31	-0.45	77.75	-0.01	77.31	-0.45
Maximum				**1.35**		**0.09**		**1.35**
Minimum				**-0.90**		**-0.02**		**-0.90**

4.5 Floodway Velocity Comparison

Table 6 provides 100-year storm event floodway velocity differences for the scenarios stated in Section 3.0. Floodway maps for the three scenarios are attached as Exhibits B, C, and D. The table shows that increases in velocity for the 100-year storm event due to the south levee are negligible, increases due to the north levee are greater than 2 ft/s, and changes due to the combination of both levees are similar to changes due to the north levee only. Note that the north levee causes floodway changes upstream and downstream of the proposed developments.

Table 6. 100-year Event Floodway Velocity Comparison

		Existing Conditions	North Levee Only		South Levee Only		North and South Levees	
River Station	**Q Total (cfs)**	**Channel Velocity (ft/s)**	**Channel Velocity (ft/s)**	**Difference (ft/s)**	**Channel Velocity (ft/s)**	**Difference (ft/s)**	**Channel Velocity (ft/s)**	**Difference (ft/s)**
14430	229337	11.96	11.96	0	11.96	0	11.96	0
14838	229337	14.02	14.01	-0.01	14.02	0	14.01	-0.01
15148	229337	12.35	12.16	-0.19	12.35	0	12.16	-0.19
15864	229337	11.94	11.61	-0.33	11.94	0	11.61	-0.33
16320	229337	13.3	12.87	-0.43	13.3	0	12.87	-0.43
17022	229337	12.45	10.99	-1.46	12.45	0	10.99	-1.46
17835	229337	10.93	10.83	-0.1	10.93	0	10.83	-0.1
18523	229337	12.74	14.29	1.55	12.74	0	14.29	1.55
18768	229337	12.99	14.57	1.58	12.99	0	14.57	1.58
18982	229337	11.97	13.53	1.56	11.97	0	13.53	1.56
19172	229337	14.84	17.21	2.37	14.84	0	17.21	2.37
19491	229337	14.53	16.9	2.37	14.53	0	16.9	2.37
19956	229337	11.02	12.06	1.04	11.02	0	12.06	1.04
20577	229337	10.96	11.21	0.25	10.96	0	11.21	0.25
21023	229337	9.49	9.79	0.3	9.37	-0.12	9.79	0.3
21277	229337	10.29	10.52	0.23	10.29	0	10.52	0.23
21547	229337	9.33	9.25	-0.08	9.27	-0.06	9.2	-0.13
21776	229337	9.43	9.16	-0.27	9.37	-0.06	9.16	-0.27
22190	226000	9.59	9.05	-0.54	9.53	-0.06	9.05	-0.54
22788	226000	10.12	9.41	-0.71	10.13	0.01	9.41	-0.71
23138	226000	10.17	9.73	-0.44	9.92	-0.25	9.73	-0.44
23640	226000	10.25	9.1	-1.15	10.26	0.01	9.1	-1.15
23653	226000	7.73	7.42	-0.31	7.74	0.01	7.42	-0.31
23892	226000	7.87	8.02	0.15	7.87	0	8.02	0.15
24213	226000	7.62	7.71	0.09	7.63	0.01	7.71	0.09
24428	226000	8.11	8.19	0.08	8.11	0	8.19	0.08
24612	226000	9.47	9.52	0.05	9.47	0	9.52	0.05
Maximum				**2.37**		**0.01**		**2.37**
Minimum				**-1.46**		**-0.25**		**-1.46**

4.6 Floodway Top Width Comparison

Table 7 provides 100-year storm event floodway top width differences for the scenarios stated in Section 3.0. Floodway maps for the three scenarios are attached as Exhibits B, C, and D. The table shows that decreases in top width for the 100-year storm event due to the south levee are negligible, decreases due to the north levee are greater than 1,000 ft, and changes due to the combination of both levees are similar to changes due to the north levee only. Note that the north levee causes floodway changes upstream and downstream of the proposed developments.

Table 7. 100-year Event Floodway Top Width Comparison

		Existing Conditions	North Levee Only		South Levee Only		North and South Levees	
River Station	**Q Total (cfs)**	**Top Width (ft)**	**Top Width (ft)**	**Difference (ft)**	**Top Width (ft)**	**Difference (ft)**	**Top Width (ft)**	**Difference (ft)**
14430	229337	1432	1436	4	1432	0	1436	4
14838	229337	1263	1267	4	1263	0	1267	4
15148	229337	1209	1237	28	1209	0	1237	28
15864	229337	1542	1705	163	1542	0	1705	163
16320	229337	1577	2034	457	1577	0	2034	457
17022	229337	1770	2463	693	1770	0	2463	693
17835	229337	1895	2270	375	1895	0	2270	375
18523	229337	1940	1747	-193	1940	0	1747	-193
18768	229337	1965	1299	-666	1965	0	1299	-666
18982	229337	1955	1256	-699	1955	0	1256	-699
19172	229337	1818	1043	-775	1818	0	1043	-775
19491	229337	2053	992	-1060	2053	0	992	-1060
19956	229337	2255	1174	-1081	2255	0	1174	-1081
20577	229337	2250	1196	-1054	2250	0	1196	-1054
21023	229337	2180	1332	-848	2255	75	1332	-848
21277	229337	2275	1360	-915	2275	0	1360	-915
21547	229337	2215	1378	-837	2265	50	1393	-822
21776	229337	2260	1482	-778	2310	50	1482	-778
22190	226000	2270	1629	-641	2320	50	1629	-641
22788	226000	1745	1655	-90	1745	0	1655	-90
23138	226000	1931	1546	-385	2231	300	1546	-385
23640	226000	1470	1616	146	1470	0	1616	146
23653	226000	1470	1615	145	1470	0	1615	145
23892	226000	1592	1632	40	1592	0	1632	40
24213	226000	1633	1722	89	1633	0	1722	89
24428	226000	1610	1697	87	1610	0	1697	87
24612	226000	1546	1628	82	1546	0	1628	82
Maximum				**693**		**300**		**693**
Minimum				**-1081**		**0**		**-1081**

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Only North levee

The following conclusions were determined based on the hydraulic analysis of adding the north levee only:

- Will not cause changes in water surface elevations upstream or downstream of the levee, but will cause an increase in floodplain water surface elevations adjacent to the levee with a maximum increase of 2.16 feet for the 100-year storm event. Water surface elevations of the floodway will increase by more than one foot in the vicinity of the levee and decrease by more than a half of a foot up-steam and downstream of the levee. Increase in waters surface elevations within the project reach will be mitigated by levee design height needed to comply with FEMA and U.S. Army Corps of Engineers (USACE) regulations.

- Will not cause changes in river velocity upstream or downstream of the levee, but will cause an increase in velocity adjacent to the levee with a maximum increase of 3.7 ft/s for the 100-year storm event. Velocities of the floodway will increase by more than 2 ft/s in the vicinity of the levee and decrease by more than 1 ft/s up-steam and downstream of the levee. Increase in river velocities within the project limits will be mitigated by levee design modification to bank and toe protection as needed to comply with FEMA and USACE regulations.

- Will not cause changes in river top width upstream or downstream of the levee, but will cause a decrease in top width adjacent to the levee with a maximum decrease of 1,894 for the 100-year storm event. Top width of the floodway will decrease in the vicinity of the levee by more than 1,000 feet and increase by more than 600 feet up-stream and downstream of the levee. Approximately 107 acres consisting of parking lots, buildings, wastewater treatment plant ponds will be removed from the floodplain during the 100-year storm event.

- The north levee will cause the water surface to decrease by approximately 0.5 feet and the velocity to increase by approximately 2.5 ft/s near an existing building and radio tower that are outside the levee alignment. The increased velocity may cause erosion of the fill underlying the building and may need additional erosion protection.

5.2 Only South levee

The following conclusions were determined based on the hydraulic analysis of only building the south levee:

- Will not cause changes in water surface elevations upstream or downstream of the levee, but will cause an increase in floodplain water surface elevations adjacent to the levee with a maximum increase of 0.47 feet for the 100-year storm event. Water surface elevations of the floodway will increase by 0.1 foot at section 23138. Increase in waters surface elevations within the project reach will be mitigated by levee design height needed to comply with FEMA and U.S. Army Corps of Engineers (USACE) regulations.
-

- Will not cause changes in river velocity upstream or downstream of the levee, but will cause an increase in velocity adjacent to the levee with a maximum increase of 2.6 ft/s for the 100-year storm event. Velocities of the floodway will decrease in the project area and upstream by 0.1 to 0.3 ft/s. Increase in river velocities within the project limits will be mitigated by levee design modification to bank and toe protection as needed to comply with FEMA and USACE regulations.

- Will not cause changes in river top width upstream or downstream of the levee, but will cause a decrease in top width adjacent to the levee with a maximum decrease of 4,670 feet for the 100-year storm event. Top width of the floodway will increase in the vicinity of the levee by 50 to 300 feet. Approximately 110 acres consisting of parking lots and buildings will be removed from the Oxnard floodplain during the 100-year storm event.

5.3 Both North and South Levee

The following conclusions were determined based on the hydraulic analysis of adding the north and south levees:

- The combined levees will remove 107 acres from the floodplain of the north overbank and 110 acres of floodplain in the Oxnard south overbank.

- Most of the floodplain impacts due to the north and south levee are equal to the north levee except for top width. Top width changes for the scenario with the north and south levees are dominated by the south overflow boundary.

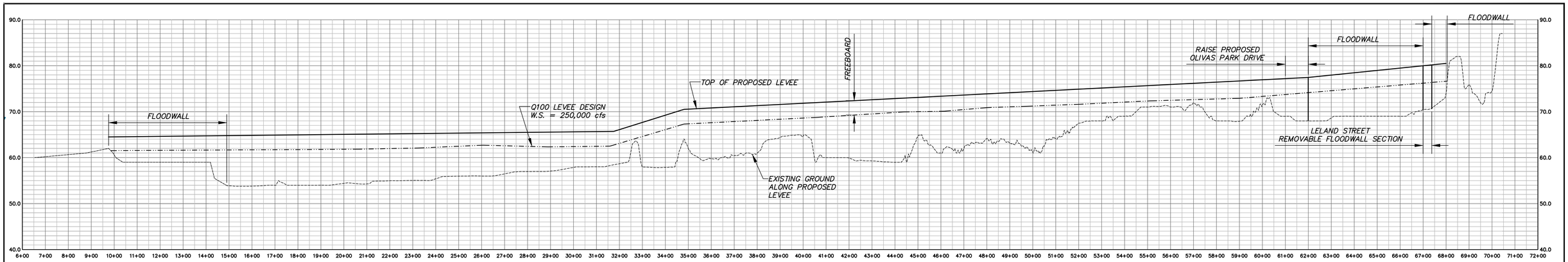
- All of the floodway impacts due to the north and south levees are the same as the north only floodway.

5.4 Recommendations

As shown on Exhibit B, the project is to be constructed within the existing floodway and floodplain. The construction can not cause an increase in flood elevations upstream or downstream of the project under VCWPD and FEMA regulations and must demonstrate the “no net rise” through hydrologic and hydraulic analysis. The encroachment will require the following:

- Conditional Letter of Map Revision (CLOMR). A CLOMR documents the changes to the floodway and floodplain due to the project encroachments.

- Letter of Map Revision (LOMR). A LOMR must be submitted based on as-built plans to finalize the FEMA process to approve the revised floodplain and floodway.



PROFILE

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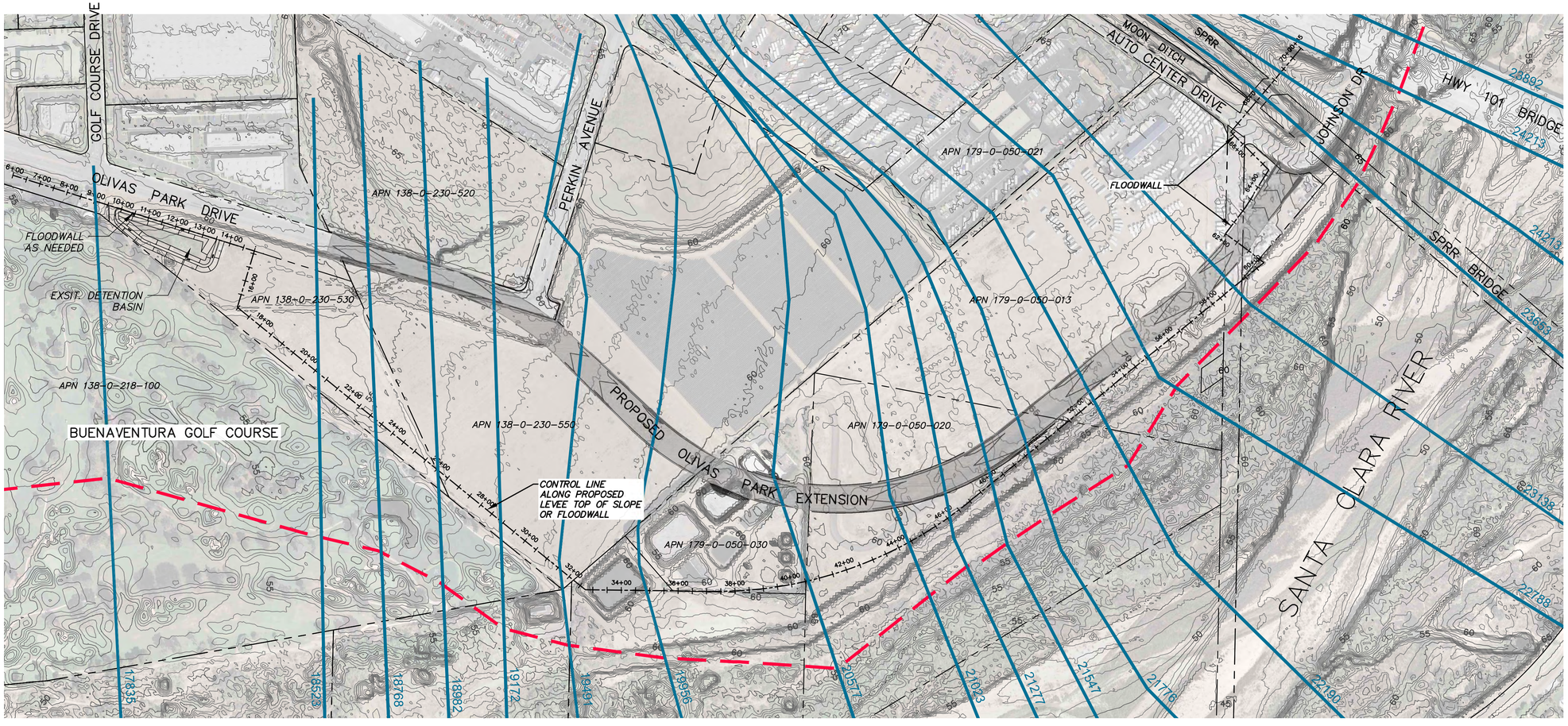

PLAN

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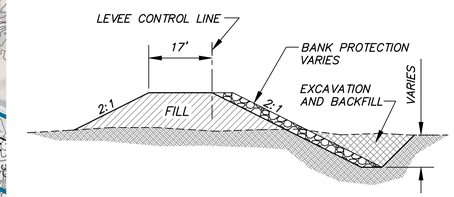


TYPICAL LEVEE SECTION

NOT TO SCALE

LEGEND

- PROPOSED FLOODWAY WITH LEVEE
- 22788 RIVER CROSS SECTION
- PROPERTY LINE
- PROPOSED OLIVAS PARK DRIVE EXTENSION

DATUM: HORZ= NAD83, CALIFORNIA ZONE 5, US FOOT
VERT=NAVD88

TOPOGRAPHY: VENTURA COUNTY, LIDAR, AIRBORNE MARCH 2006

PHOTOGRAPHY: CIRGIS 2007

EXHIBIT A NOVEMBER 18, 2010

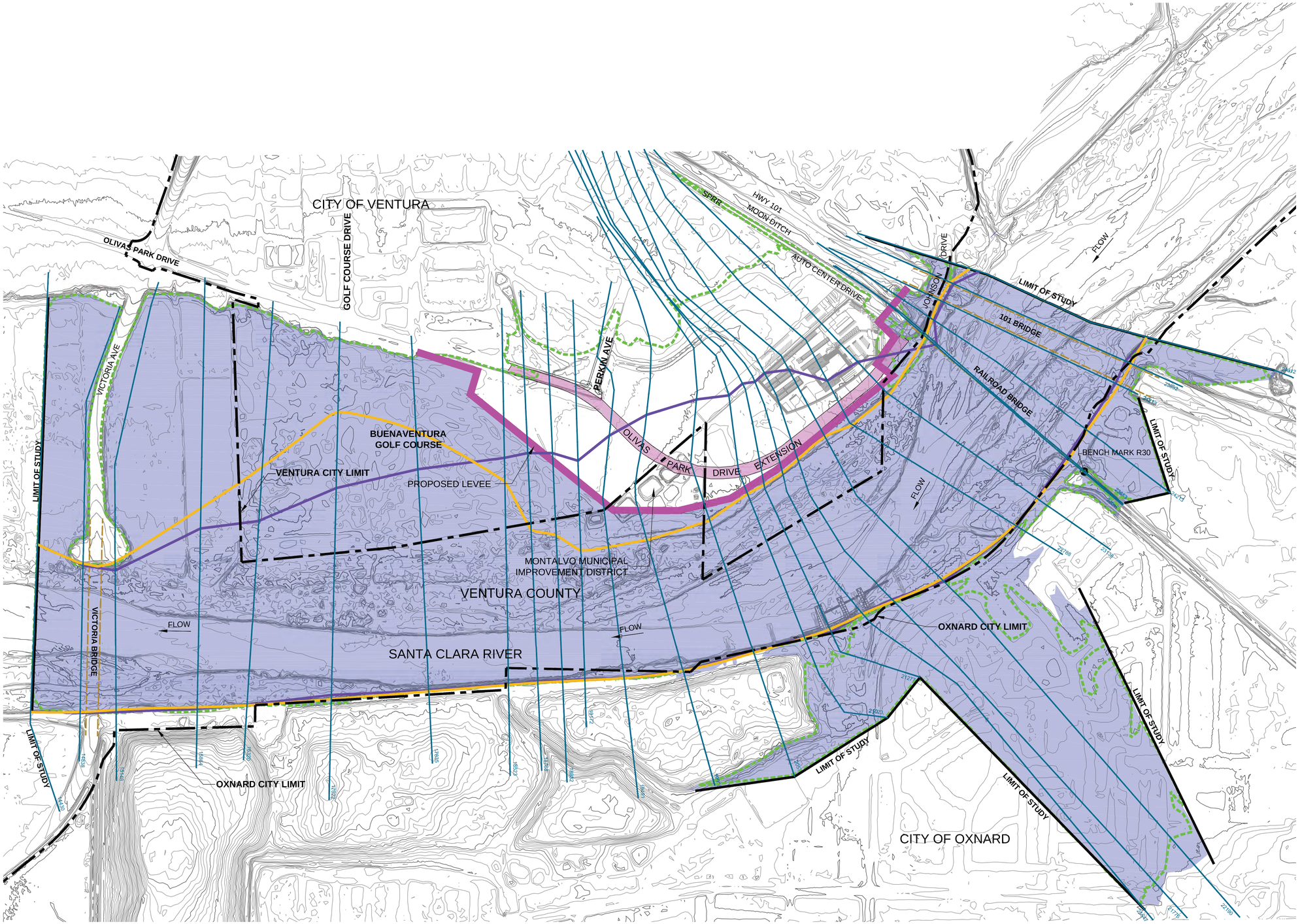
D			
C			
B			
A			
Δ	REVISION DESCRIPTION	APP	DATE

PREPARED BY:
HAWKS & ASSOCIATES
2259 PORTOLA ROAD SUITE B
VENTURA, CA. 93003 (805) 658-6611

DESIGNED BY: B. FRANK
DRAWN BY: T. FRASER
CHECKED BY: –
PROJ. NO. –

OLIVAS PARK DRIVE EXTENSION
PROPOSED SETBACK LEVEE
PRELIMINARY PLAN AND PROFILE

SHEET 1 OF 1
DRAWING NO.



LEGEND

- EXISTING 100 YEAR FLOODPLAIN 226,000 - 229,337 CFS
- EXISTING FLOODWAY
- PROPOSED 100 YEAR FLOODPLAIN 226,000 - 229,337 CFS
- PROPOSED FLOODWAY
- OLIVAS PARK DRIVE EXTENSION (PER JENSEN DESIGN & SURVEY)
- PROPOSED SETBACK LEVEE
- 18461 CROSS SECTIONS FOR HYDRAULIC ANALYSIS

BASIS OF ELEVATION

COUNTY OF VENTURA
BENCH MARK No. R 30

BRASS DISK IN THE TOP OF THE SOUTHWEST END OF THE SOUTHEAST ABUTMENT OF THE SOUTHERN PACIFIC RAIL ROAD COMPANY TRESSEL CROSSING THE SANTA CLARA RIVER NEAR HWY 101 BRIDGE No. 52-0449 APPROXIMATELY 5 FT SOUTHWEST OF THE SOUTHWEST RAIL
NAVD88 ELEVATION = 80.686 FT
2005 LIDAR TOPOGRAPHY BASED ON NAVD 88 DATUM

N

400 0 400 800
SCALE OF FEET

DATUM: HORZ= NAD83 VERT=NAVD88

EXHIBIT B **NOVEMBER 18, 2010**

D			
C			
B			
A			
△	REVISION DESCRIPTION	APP	DATE

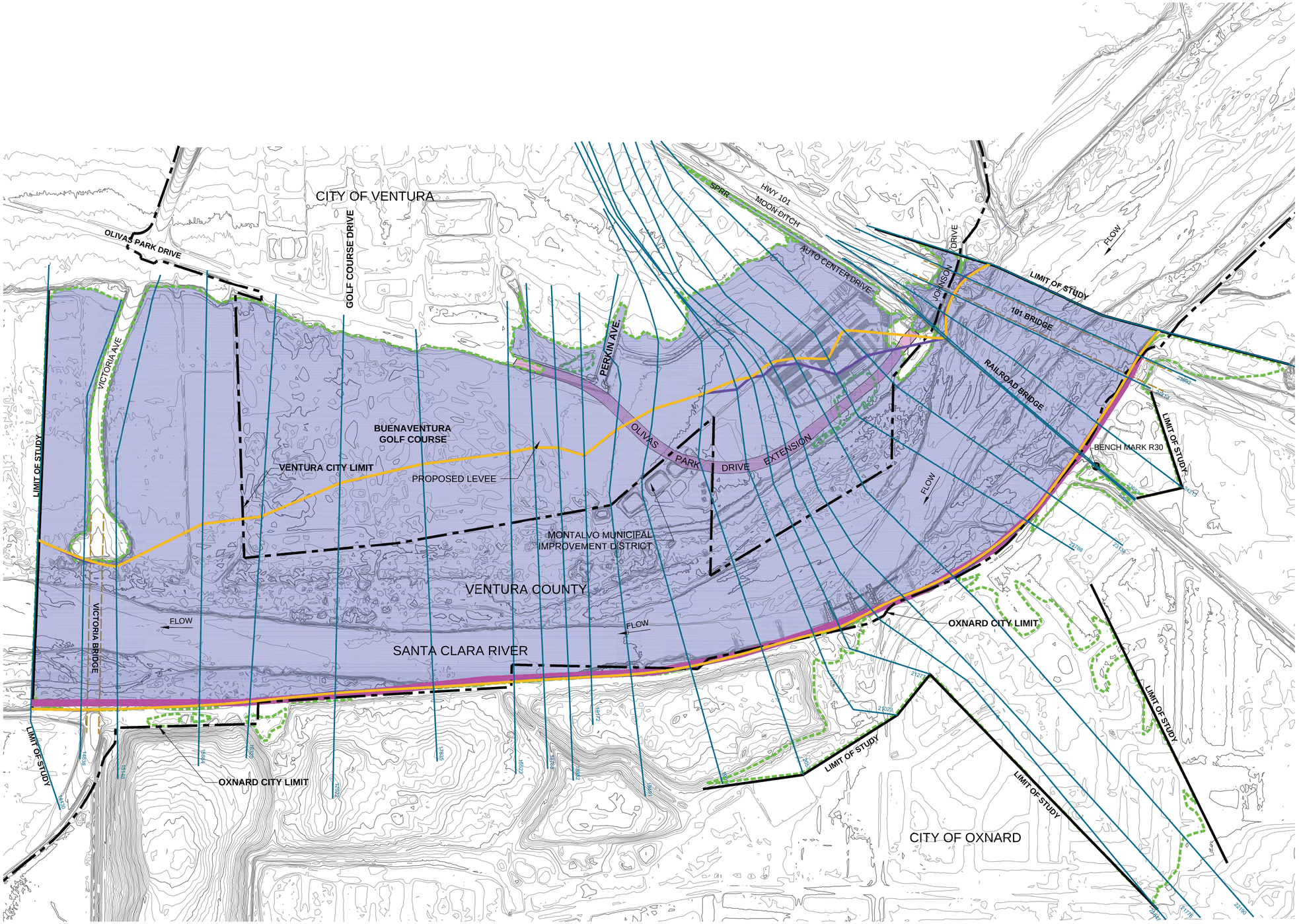
PREPARED BY:
HAWKS & ASSOCIATES
2259 PORTOLA ROAD SUITE B
VENTURA, CA 93003 (805) 658-6511

DESIGNED BY: B. FRANK
DRAWN BY: G. CAMUS
CHECKED BY: B. O'BRIEN
PROJ. NO. 405-10

OLIVAS PARK DRIVE EXTENSION EIR
EXISTING & PROPOSED NORTH SETBACK LEVEE FLOODPLAIN & FLOODWAY

SHEET 1 OF 3
DRAWING NO.

Plot Date: C:\Users\GCamus\Desktop\Floodplain-EIR_01.dwg Nov 19, 2010, 8:59am GCamus



LEGEND

- EXISTING 100 YEAR FLOODPLAIN 226,000 - 229,337 CFS
- EXISTING FLOODWAY
- PROPOSED 100 YEAR FLOODPLAIN 226,000 - 229,337 CFS
- PROPOSED FLOODWAY
- OLIVAS PARK DRIVE EXTENSION (PER JENSEN DESIGN & SURVEY)
- PROPOSED SETBACK LEVEE
- 18461 CROSS SECTIONS FOR HYDRAULIC ANALYSIS

BASIS OF ELEVATION

COUNTY OF VENTURA
BENCH MARK No. R 30

BRASS DISK IN THE TOP OF THE SOUTHWEST END OF THE SOUTHEAST ABUTMENT OF THE SOUTHERN PACIFIC RAIL ROAD COMPANY TRESSEL CROSSING THE SANTA CLARA RIVER NEAR HWY 101 BRIDGE No. 52-0449 APPROXIMATELY 5 FT SOUTHWEST OF THE SOUTHWEST RAIL
NAVD88 ELEVATION = 80.686 FT
2005 LIDAR TOPOGRAPHY BASED ON NAVD 88 DATUM

N

400 0 400 800
SCALE OF FEET

DATUM: HORZ= NAD83
VERT=NAVD88

EXHIBIT C **NOVEMBER 18, 2010**

D			
C			
B			
A			
△	REVISION DESCRIPTION	APP	DATE

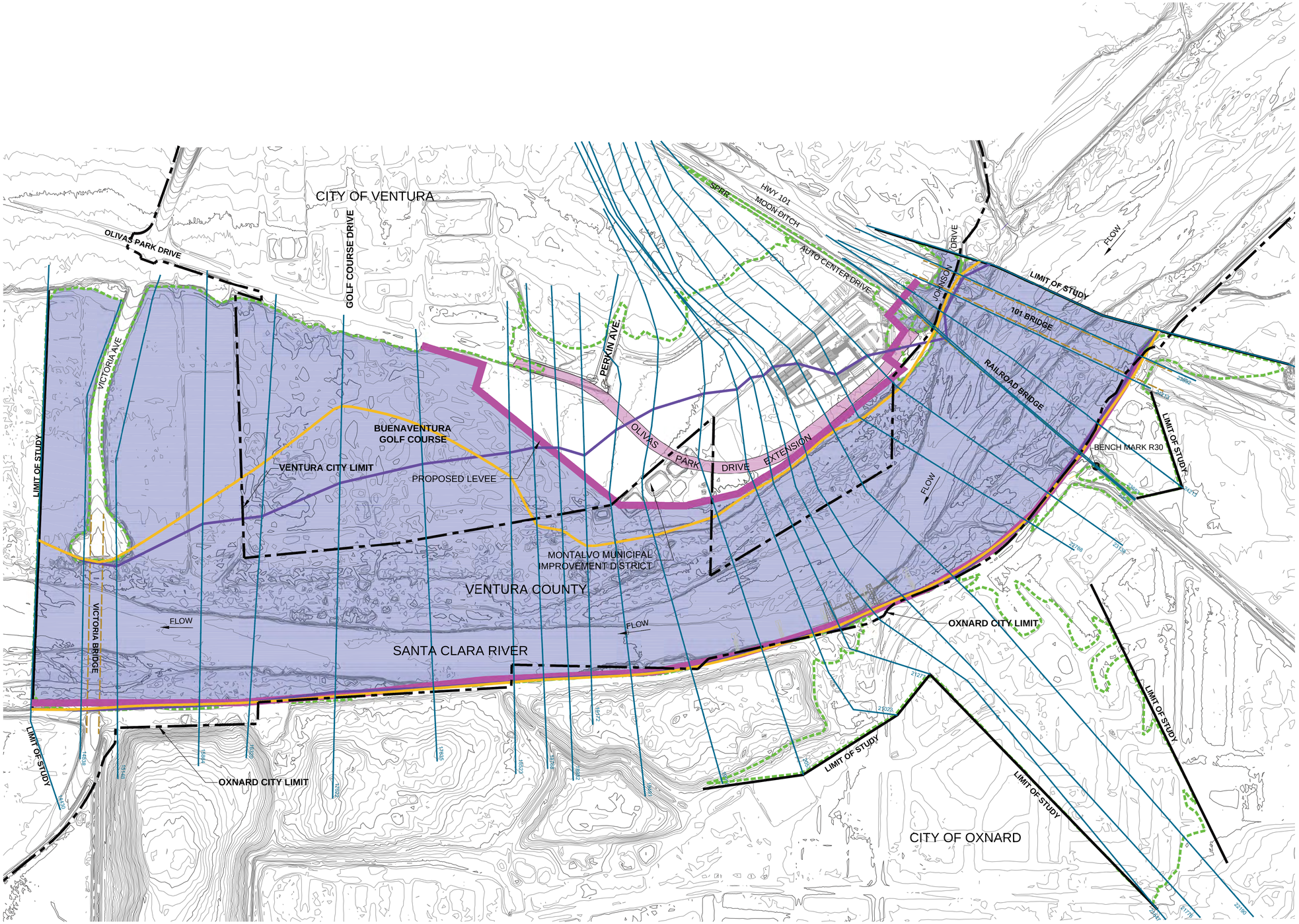
PREPARED BY:
HAWKS & ASSOCIATES
2259 PORTOLA ROAD SUITE B
VENTURA, CA. 93003 (805) 658-6611

DESIGNED BY: B. FRANK
DRAWN BY: G. CAMUS
CHECKED BY: B. O'BRIEN
PROJ. NO. 405-10

OLIVAS PARK DRIVE EXTENSION EIR
EXISTING & PROPOSED SOUTH LEVEE FLOODPLAIN & FLOODWAY

SHEET 2 OF 3
DRAWING NO.

Plot Date: T:\PROJECTS\405-10 Olivas Park Extention EIR\Floodplain-EIR_01.dwg Nov 18, 2010, 1:11pm GC



LEGEND

- EXISTING 100 YEAR FLOODPLAIN 226,000 - 229,337 CFS
- EXISTING FLOODWAY
- PROPOSED 100 YEAR FLOODPLAIN 226,000 - 229,337 CFS
- PROPOSED FLOODWAY
- OLIVAS PARK DRIVE EXTENSION (PER JENSEN DESIGN & SURVEY)
- PROPOSED SETBACK LEVEE
- 18461 CROSS SECTIONS FOR HYDRAULIC ANALYSIS

BASIS OF ELEVATION

COUNTY OF VENTURA
BENCH MARK No. R 30

BRASS DISK IN THE TOP OF THE SOUTHWEST END OF THE SOUTHEAST ABUTMENT OF THE SOUTHERN PACIFIC RAIL ROAD COMPANY TRESSEL CROSSING THE SANTA CLARA RIVER NEAR HWY 101 BRIDGE No. 52-0449 APPROXIMATELY 5 FT SOUTHWEST OF THE SOUTHWEST RAIL
NAVD88 ELEVATION = 80.686 FT
2005 LIDAR TOPOGRAPHY BASED ON NAVD 88 DATUM

N

400 0 400 800
SCALE OF FEET

DATUM: HORZ= NAD83
VERT=NAVD88

EXHIBIT D **NOVEMBER 18, 2010**

D			
C			
B			
A			
△	REVISION DESCRIPTION	APP	DATE

PREPARED BY:
HAWKS & ASSOCIATES
2259 PORTOLA ROAD SUITE B
VENTURA, CA. 93003 (805) 658-6611

DESIGNED BY: B. FRANK
DRAWN BY: G. CAMUS
CHECKED BY: B. O'BRIEN
PROJ. NO. 405-10

OLIVAS PARK DRIVE EXTENSION EIR
EXISTING & PROPOSED NORTH SETBACK LEVEE & SOUTH LEVEE FLOODPLAIN & FLOODWAY

SHEET 3 OF 3
DRAWING NO.

Plot Date: T:\PROJECTS\405-10 Olivas Park Extention EIR\Floodplain-EIR_01.dwg Nov 18, 2010, 1:14pm GC

APPENDIX

HEC-RAS Hydraulic Model Floodplain & Floodway Tables

- ***Existing Conditions***
- ***North Levee Only***
- ***South Levee Only***
- ***North & South Levees***
- ***Levee Design (Floodplain 250,000 cfs)***

River Sta	Profile	Q Total	W.S. Elev	Prof Delta WS	E.G. Elev	Vel Chnl	Top Width	Enc Sta L	Enc Sta R	Froude # XS
		(cfs)	(ft)	(ft)	(ft)	(ft/s)	(ft)	(ft)	(ft)	
24612.00	100-Yr - FP	226000.00	76.84		78.15	9.58	1756.35			0.41
24612.00	100-Yr - FW	226000.00	77.31	0.48	78.63	9.52	1627.91	1087.29	2933.3	0.4
24428.00	100-Yr - FP	226000.00	76.82		77.83	8.16	1973.67			0.36
24428.00	100-Yr - FW	226000.00	77.28	0.46	78.32	8.19	1696.50	485.53	2182.03	0.35
24320.5 BR U	100-Yr - FP	226000.00	76.61		77.75	8.67	1876.99			0.39
24320.5 BR U	100-Yr - FW	226000.00	77.08	0.47	78.24	8.69	1615.87	485.53	2182.03	0.38
24320.5 BR D	100-Yr - FP	226000.00	76.40		77.35	7.98	1890.64			0.34
24320.5 BR D	100-Yr - FW	226000.00	76.87	0.47	77.87	8.06	1640.91	170.36	1891.9	0.33
24213.00	100-Yr - FP	226000.00	76.41		77.29	7.64	1985.97			0.32
24213.00	100-Yr - FW	226000.00	76.88	0.47	77.80	7.71	1721.54	170.36	1891.9	0.32
23892.00	100-Yr - FP	226000.00	76.31		77.04	7.24	2915.75			0.3
23892.00	100-Yr - FW	226000.00	76.57	0.27	77.56	8.02	1632.29	894.71	2527	0.33
23653.00	100-Yr - FP	226000.00	76.10		76.89	7.13	1760.93			0.3
23653.00	100-Yr - FW	226000.00	76.50	0.41	77.36	7.42	1614.70	601.64	2230.53	0.3
23646.5 BR U	100-Yr - FP	226000.00	73.70		76.89	11.13	1297.66			0.5
23646.5 BR U	100-Yr - FW	226000.00	73.70	0.00	77.36	11.82	1188.43	601.64	2230.53	0.52
23646.5 BR D	100-Yr - FP	226000.00	72.98		74.13	11.65	1303.86			0.53
23646.5 BR D	100-Yr - FW	226000.00	72.99	0.01	74.28	12.33	1192.83	602.12	2300	0.55
23640.00	100-Yr - FP	226000.00	72.98		74.13	8.61	1758.86			0.39
23640.00	100-Yr - FW	226000.00	72.99	0.01	74.28	9.10	1616.33	602.12	2300	0.41
23138.00	100-Yr - FP	226000.00	71.93		73.30	9.42	1700.89			0.44
23138.00	100-Yr - FW	226000.00	71.94	0.01	73.41	9.73	1546.22	763.78	2310	0.44
22788.00	100-Yr - FP	226000.00	71.34		72.68	9.28	1843.67			0.44
22788.00	100-Yr - FW	226000.00	71.38	0.04	72.76	9.41	1655.00	475	2130	0.43

River Sta	Profile	Q Total	W.S. Elev	Prof Delta WS	E.G. Elev	Vel Chnl	Top Width	Enc Sta L	Enc Sta R	Froude # XS
		(cfs)	(ft)	(ft)	(ft)	(ft/s)	(ft)	(ft)	(ft)	
22190.00	100-Yr - FP	226000.00	70.71		71.90	8.86	4870.59			0.44
22190.00	100-Yr - FW	226000.00	70.70	0.00	71.97	9.05	1629.10	3834.11	5470	0.4
21776.00	100-Yr - FP	229337.00	70.11		71.43	9.20	4880.40			0.4
21776.00	100-Yr - FW	229337.00	70.19	0.08	71.50	9.16	1481.87	3698.13	5180	0.39
21547.00	100-Yr - FP	229337.00	69.83		71.15	9.22	4878.53			0.39
21547.00	100-Yr - FW	229337.00	69.90	0.06	71.22	9.25	1377.96	3637.04	5015	0.38
21277.00	100-Yr - FP	229337.00	69.06		70.77	10.49	1389.94			0.47
21277.00	100-Yr - FW	229337.00	69.12	0.07	70.84	10.52	1359.77	921.59	2320	0.46
21023.00	100-Yr - FP	229337.00	68.90		70.40	9.84	1331.74			0.41
21023.00	100-Yr - FW	229337.00	68.98	0.09	70.47	9.79	1332.02	1082.18	2417.08	0.41
20577.00	100-Yr - FP	229337.00	67.75		69.72	11.28	1198.92			0.48
20577.00	100-Yr - FW	229337.00	67.86	0.11	69.81	11.21	1195.52	1115.86	2311.38	0.48
19956.00	100-Yr - FP	229337.00	66.29		68.54	12.02	1250.13			0.54
19956.00	100-Yr - FW	229337.00	66.41	0.12	68.67	12.06	1173.60	1006.4	2180	0.53
19491.00	100-Yr - FP	229337.00	61.83		66.82	18.03	968.94			0.83
19491.00	100-Yr - FW	229337.00	62.82	0.99	67.19	16.90	992.32	1012.57	2167	0.76
19172.00	100-Yr - FP	229337.00	61.20		65.13	16.57	1630.50			0.8
19172.00	100-Yr - FW	229337.00	61.45	0.24	65.90	17.21	1043.27	395.33	1507.74	0.79
18982.00	100-Yr - FP	229337.00	61.53		64.04	13.08	1889.28			0.65
18982.00	100-Yr - FW	229337.00	61.89	0.36	64.72	13.53	1256.46	851.61	2118.23	0.64
18768.00	100-Yr - FP	229337.00	60.59		63.34	13.83	2040.82			0.7
18768.00	100-Yr - FW	229337.00	60.74	0.15	63.96	14.57	1299.45	756.25	2055.7	0.7
18523.00	100-Yr - FP	229337.00	60.05		62.46	13.46	2257.69			0.62

River Sta	Profile	Q Total	W.S. Elev	Prof Delta WS	E.G. Elev	Vel Chnl	Top Width	Enc Sta L	Enc Sta R	Froude # XS
		(cfs)	(ft)	(ft)	(ft)	(ft/s)	(ft)	(ft)	(ft)	
18523.00	100-Yr - FW	229337.00	60.13	0.08	62.99	14.29	1746.88	774.23	2522.73	0.67
17835.00	100-Yr - FP	229337.00	59.41		60.71	10.23	2853.96			0.43
17835.00	100-Yr - FW	229337.00	59.49	0.07	61.01	10.83	2269.68	610.93	2886.94	0.46
17022.00	100-Yr - FP	229337.00	58.06		59.45	10.78	3112.61			0.44
17022.00	100-Yr - FW	229337.00	58.19	0.13	59.67	10.99	2463.49	863.58	3327.07	0.45
16320.00	100-Yr - FP	229337.00	55.88		58.05	12.58	3401.42			0.58
16320.00	100-Yr - FW	229337.00	55.90	0.02	58.21	12.87	2033.72	465.68	2500	0.59
15864.00	100-Yr - FP	229337.00	55.15		57.00	11.39	3510.15			0.51
15864.00	100-Yr - FW	229337.00	55.16	0.01	57.11	11.61	1705.00	520	2225	0.52
15148.00	100-Yr - FP	229337.00	53.18		55.47	12.14	3315.44			0.55
15148.00	100-Yr - FW	229337.00	53.28	0.10	55.57	12.16	1237.31	620	1950	0.55
14993 BR U	100-Yr - FP	229337.00	51.18		54.69	15.03	1174.06			0.73
14993 BR U	100-Yr - FW	229337.00	51.43	0.25	54.85	14.85	1148.31	620	1950	0.71
14993 BR D	100-Yr - FP	229337.00	50.71		53.94	14.42	1185.26			0.69
14993 BR D	100-Yr - FW	229337.00	51.00	0.29	54.09	14.12	1186.50	400	1712.21	0.67
14838.00	100-Yr - FP	229337.00	49.51		52.88	14.74	3294.04			0.74
14838.00	100-Yr - FW	229337.00	50.15	0.64	53.20	14.01	1266.83	400	1712.21	0.69
14430.00	100-Yr - FP	229337.00	48.92		51.16	12.14	3548.56			0.6
14430.00	100-Yr - FW	229337.00	49.50	0.58	51.72	11.96	1436.16	878.55	2327.48	0.58

River Sta	Profile	Q Total	W.S. Elev	Prof Delta WS	E.G. Elev	Vel Chnl	Top Width	Enc Sta L	Enc Sta R	Froude # XS
		(cfs)	(ft)	(ft)	(ft)	(ft/s)	(ft)	(ft)	(ft)	
24612.00	100-Yr - FP	226000.00	76.84		78.15	9.58	1756.33			0.41
24612.00	100-Yr - FW	226000.00	77.75	0.92	79.07	9.47	1545.95	1300	2850	0.39
24428.00	100-Yr - FP	226000.00	76.82		77.82	8.16	1973.66			0.36
24428.00	100-Yr - FW	226000.00	77.74	0.92	78.76	8.11	1610.00	540	2150	0.34
24320.5 BR U	100-Yr - FP	226000.00	76.61		77.74	8.67	1876.98			0.39
24320.5 BR U	100-Yr - FW	226000.00	77.54	0.93	78.69	8.59	1536.70	540	2150	0.37
24320.5 BR D	100-Yr - FP	226000.00	76.40		77.35	7.98	1890.64			0.34
24320.5 BR D	100-Yr - FW	226000.00	77.35	0.95	78.33	7.97	1559.70	217	1850	0.32
24213.00	100-Yr - FP	226000.00	76.41		77.29	7.65	1985.97			0.32
24213.00	100-Yr - FW	226000.00	77.36	0.95	78.26	7.63	1633.00	217	1850	0.31
23892.00	100-Yr - FP	226000.00	76.31		77.03	7.24	2915.73			0.3
23892.00	100-Yr - FW	226000.00	77.09	0.79	78.04	7.87	1592.00	908	2500	0.32
23653.00	100-Yr - FP	226000.00	76.10		76.88	7.13	1760.93			0.3
23653.00	100-Yr - FW	226000.00	76.95	0.85	77.88	7.74	1470.00	630	2100	0.31
23646.5 BR U	100-Yr - FP	226000.00	73.70		76.88	11.13	1297.66			0.5
23646.5 BR U	100-Yr - FW	226000.00	73.70	0.00	77.88	12.50	1088.14	630	2100	0.54
23646.5 BR D	100-Yr - FP	226000.00	71.86		73.21	12.59	1297.33			0.6
23646.5 BR D	100-Yr - FW	226000.00	71.99	0.13	73.63	13.85	1089.62	630	2100	0.63
23640.00	100-Yr - FP	226000.00	71.86		73.21	9.30	1752.33			0.44
23640.00	100-Yr - FW	226000.00	71.99	0.13	73.63	10.26	1470.00	630	2100	0.47
23138.00	100-Yr - FP	226000.00	71.05		72.21	9.03	3252.71			0.48
23138.00	100-Yr - FW	226000.00	71.05	0.00	72.53	9.92	2231.00	769	3000	0.5
22788.00	100-Yr - FP	226000.00	69.65		71.38	10.53	1742.29			0.53
22788.00	100-Yr - FW	226000.00	70.16	0.51	71.75	10.13	1744.82	480	2700	0.5

River Sta	Profile	Q Total	W.S. Elev	Prof Delta WS	E.G. Elev	Vel Chnl	Top Width	Enc Sta L	Enc Sta R	Froude # XS
		(cfs)	(ft)	(ft)	(ft)	(ft/s)	(ft)	(ft)	(ft)	
22190.00	100-Yr - FP	226000.00	68.45		70.18	10.56	1623.00			0.51
22190.00	100-Yr - FW	226000.00	69.36	0.92	70.73	9.53	2320.00	3830	6150	0.48
21776.00	100-Yr - FP	229337.00	68.25		69.37	9.01	3206.80			0.42
21776.00	100-Yr - FW	229337.00	68.86	0.61	70.15	9.37	2310.00	3715	6025	0.44
21547.00	100-Yr - FP	229337.00	67.98		69.07	8.93	3153.54			0.41
21547.00	100-Yr - FW	229337.00	68.58	0.61	69.84	9.27	2265.00	3635	5900	0.42
21277.00	100-Yr - FP	229337.00	67.32		68.69	10.03	3256.42			0.48
21277.00	100-Yr - FW	229337.00	67.92	0.60	69.44	10.29	2275.00	900	3175	0.48
21023.00	100-Yr - FP	229337.00	67.19		68.32	9.16	3192.37			0.42
21023.00	100-Yr - FW	229337.00	67.81	0.62	69.06	9.37	2255.00	1095	3350	0.42
20577.00	100-Yr - FP	229337.00	66.03		67.64	10.85	2904.82			0.51
20577.00	100-Yr - FW	229337.00	66.67	0.65	68.39	10.96	2250.00	1125	3375	0.51
19956.00	100-Yr - FP	229337.00	64.82		66.49	11.15	2892.43			0.53
19956.00	100-Yr - FW	229337.00	65.62	0.80	67.31	11.02	2255.00	1020	3275	0.5
19491.00	100-Yr - FP	229337.00	62.64		65.33	14.33	2863.34			0.66
19491.00	100-Yr - FW	229337.00	63.29	0.65	66.19	14.53	2052.62	1035	3125	0.65
19172.00	100-Yr - FP	229337.00	61.29		64.35	15.16	2561.86			0.73
19172.00	100-Yr - FW	229337.00	62.25	0.96	65.29	14.84	1818.28	405	2280	0.67
18982.00	100-Yr - FP	229337.00	61.65		63.43	11.55	2866.91			0.55
18982.00	100-Yr - FW	229337.00	62.43	0.78	64.50	11.97	1955.00	865	2820	0.56
18768.00	100-Yr - FP	229337.00	60.86		62.88	12.33	2932.29			0.61
18768.00	100-Yr - FW	229337.00	61.49	0.64	63.92	12.99	1965.00	755	2720	0.63
18523.00	100-Yr - FP	229337.00	60.25		62.24	12.53	2688.57			0.57

River Sta	Profile	Q Total	W.S. Elev	Prof Delta WS	E.G. Elev	Vel Chnl	Top Width	Enc Sta L	Enc Sta R	Froude # XS
		(cfs)	(ft)	(ft)	(ft)	(ft/s)	(ft)	(ft)	(ft)	
18523.00	100-Yr - FW	229337.00	61.03	0.78	63.22	12.74	1940.00	780	2720	0.56
17835.00	100-Yr - FP	229337.00	59.41		60.71	10.23	2853.96			0.43
17835.00	100-Yr - FW	229337.00	60.08	0.66	61.69	10.93	1895.00	625	2520	0.46
17022.00	100-Yr - FP	229337.00	58.06		59.45	10.78	3112.61			0.44
17022.00	100-Yr - FW	229337.00	58.08	0.03	60.16	12.45	1770.00	900	2670	0.52
16320.00	100-Yr - FP	229337.00	55.88		58.05	12.58	3401.42			0.58
16320.00	100-Yr - FW	229337.00	55.93	0.05	58.48	13.30	1577.00	473	2050	0.6
15864.00	100-Yr - FP	229337.00	55.15		57.00	11.39	3510.15			0.51
15864.00	100-Yr - FW	229337.00	55.19	0.04	57.29	11.94	1542.00	508	2050	0.53
15148.00	100-Yr - FP	229337.00	53.18		55.47	12.14	3315.44			0.55
15148.00	100-Yr - FW	229337.00	53.34	0.16	55.71	12.35	1209.00	591	1800	0.56
14993 BR U	100-Yr - FP	229337.00	51.18		54.69	15.03	1174.06			0.73
14993 BR U	100-Yr - FW	229337.00	51.40	0.22	54.95	15.12	1128.82	591	1800	0.73
14993 BR D	100-Yr - FP	229337.00	50.71		53.94	14.42	1185.26			0.69
14993 BR D	100-Yr - FW	229337.00	50.99	0.28	54.09	14.13	1179.00	422	1685	0.67
14838.00	100-Yr - FP	229337.00	49.51		52.88	14.74	3294.04			0.74
14838.00	100-Yr - FW	229337.00	50.15	0.64	53.20	14.02	1263.00	422	1685	0.69
14430.00	100-Yr - FP	229337.00	48.92		51.16	12.14	3548.56			0.6
14430.00	100-Yr - FW	229337.00	49.50	0.58	51.72	11.96	1432.48	895	2327.48	0.58

River Sta	Profile	Q Total	W.S. Elev	Prof Delta WS	E.G. Elev	Vel Chnl	Top Width	Enc Sta L	Enc Sta R	Froude # XS
		(cfs)	(ft)	(ft)	(ft)	(ft/s)	(ft)	(ft)	(ft)	
24612.00	100-Yr - FP	226000.00	76.84		78.15	9.58	1756.35			0.41
24612.00	100-Yr - FW	226000.00	77.31	0.48	78.63	9.52	1627.91	1087.29	2933.3	0.4
24428.00	100-Yr - FP	226000.00	76.82		77.83	8.16	1973.67			0.36
24428.00	100-Yr - FW	226000.00	77.28	0.46	78.32	8.19	1696.5	485.53	2182.03	0.35
24320.5 BR U	100-Yr - FP	226000.00	76.61		77.75	8.67	1876.99			0.39
24320.5 BR U	100-Yr - FW	226000.00	77.08	0.47	78.24	8.69	1615.87	485.53	2182.03	0.38
24320.5 BR D	100-Yr - FP	226000.00	76.40		77.35	7.98	1890.64			0.34
24320.5 BR D	100-Yr - FW	226000.00	76.87	0.47	77.87	8.06	1640.91	170.36	1891.9	0.33
24213.00	100-Yr - FP	226000.00	76.41		77.29	7.64	1985.97			0.32
24213.00	100-Yr - FW	226000.00	76.88	0.47	77.80	7.71	1721.54	170.36	1891.9	0.32
23892.00	100-Yr - FP	226000.00	76.31		77.04	7.24	2915.75			0.3
23892.00	100-Yr - FW	226000.00	76.57	0.27	77.56	8.02	1632.29	894.71	2527	0.33
23653.00	100-Yr - FP	226000.00	76.10		76.89	7.13	1760.93			0.3
23653.00	100-Yr - FW	226000.00	76.50	0.41	77.36	7.42	1614.7	601.64	2230.53	0.3
23646.5 BR U	100-Yr - FP	226000.00	73.70		76.89	11.13	1297.66			0.5
23646.5 BR U	100-Yr - FW	226000.00	73.70	0.00	77.36	11.82	1188.43	601.64	2230.53	0.52
23646.5 BR D	100-Yr - FP	226000.00	72.98		74.13	11.65	1303.88			0.53
23646.5 BR D	100-Yr - FW	226000.00	72.99	0.01	74.28	12.33	1192.83	602.12	2300	0.55
23640.00	100-Yr - FP	226000.00	72.98		74.13	8.61	1758.88			0.39
23640.00	100-Yr - FW	226000.00	72.99	0.01	74.28	9.10	1616.33	602.12	2300	0.41
23138.00	100-Yr - FP	226000.00	71.93		73.31	9.41	1700.9			0.44
23138.00	100-Yr - FW	226000.00	71.94	0.01	73.41	9.73	1546.22	763.78	2310	0.44
22788.00	100-Yr - FP	226000.00	71.34		72.68	9.28	1843.69			0.44
22788.00	100-Yr - FW	226000.00	71.38	0.04	72.76	9.41	1655	475	2130	0.43

River Sta	Profile	Q Total	W.S. Elev	Prof Delta WS	E.G. Elev	Vel Chnl	Top Width	Enc Sta L	Enc Sta R	Froude # XS
		(cfs)	(ft)	(ft)	(ft)	(ft/s)	(ft)	(ft)	(ft)	
22190.00	100-Yr - FP	226000.00	70.63		71.91	9.08	1645.87			0.41
22190.00	100-Yr - FW	226000.00	70.70	0.07	71.97	9.05	1629.1	3834.11	5470	0.4
21776.00	100-Yr - FP	229337.00	70.12		71.43	9.20	1518.42			0.4
21776.00	100-Yr - FW	229337.00	70.19	0.08	71.50	9.16	1481.87	3698.13	5180	0.39
21547.00	100-Yr - FP	229337.00	69.83		71.15	9.22	1414.26			0.39
21547.00	100-Yr - FW	229337.00	69.91	0.08	71.22	9.20	1392.96	3637.04	5030	0.38
21277.00	100-Yr - FP	229337.00	69.06		70.77	10.49	1389.94			0.47
21277.00	100-Yr - FW	229337.00	69.12	0.07	70.84	10.52	1359.77	921.59	2320	0.46
21023.00	100-Yr - FP	229337.00	68.90		70.40	9.84	1331.74			0.41
21023.00	100-Yr - FW	229337.00	68.98	0.09	70.47	9.79	1332.02	1082.18	2417.08	0.41
20577.00	100-Yr - FP	229337.00	67.75		69.72	11.28	1198.92			0.48
20577.00	100-Yr - FW	229337.00	67.86	0.11	69.81	11.21	1195.52	1115.86	2311.38	0.48
19956.00	100-Yr - FP	229337.00	66.29		68.54	12.02	1250.13			0.54
19956.00	100-Yr - FW	229337.00	66.41	0.12	68.67	12.06	1173.6	1006.4	2180	0.53
19491.00	100-Yr - FP	229337.00	61.83		66.82	18.03	968.94			0.83
19491.00	100-Yr - FW	229337.00	62.82	0.99	67.19	16.90	992.32	1012.57	2167	0.76
19172.00	100-Yr - FP	229337.00	61.20		65.13	16.57	1630.5			0.8
19172.00	100-Yr - FW	229337.00	61.45	0.24	65.90	17.21	1043.27	395.33	1507.74	0.79
18982.00	100-Yr - FP	229337.00	61.53		64.04	13.08	1889.28			0.65
18982.00	100-Yr - FW	229337.00	61.89	0.36	64.72	13.53	1256.46	851.61	2118.23	0.64
18768.00	100-Yr - FP	229337.00	60.59		63.34	13.83	2040.82			0.7
18768.00	100-Yr - FW	229337.00	60.74	0.15	63.96	14.57	1299.45	756.25	2055.7	0.7
18523.00	100-Yr - FP	229337.00	60.05		62.46	13.46	2257.69			0.62

River Sta	Profile	Q Total	W.S. Elev	Prof Delta WS	E.G. Elev	Vel Chnl	Top Width	Enc Sta L	Enc Sta R	Froude # XS
		(cfs)	(ft)	(ft)	(ft)	(ft/s)	(ft)	(ft)	(ft)	
18523.00	100-Yr - FW	229337.00	60.13	0.08	62.99	14.29	1746.88	774.23	2522.73	0.67
17835.00	100-Yr - FP	229337.00	59.41		60.71	10.23	2853.96			0.43
17835.00	100-Yr - FW	229337.00	59.49	0.07	61.01	10.83	2269.68	610.93	2886.94	0.46
17022.00	100-Yr - FP	229337.00	58.06		59.45	10.78	3112.61			0.44
17022.00	100-Yr - FW	229337.00	58.19	0.13	59.67	10.99	2463.49	863.58	3327.07	0.45
16320.00	100-Yr - FP	229337.00	55.88		58.05	12.58	3401.42			0.58
16320.00	100-Yr - FW	229337.00	55.90	0.02	58.21	12.87	2033.72	465.68	2500	0.59
15864.00	100-Yr - FP	229337.00	55.15		57.00	11.39	3510.15			0.51
15864.00	100-Yr - FW	229337.00	55.16	0.01	57.11	11.61	1705	520	2225	0.52
15148.00	100-Yr - FP	229337.00	53.18		55.47	12.14	3315.44			0.55
15148.00	100-Yr - FW	229337.00	53.28	0.10	55.57	12.16	1237.31	620	1950	0.55
14993 BR U	100-Yr - FP	229337.00	51.18		54.69	15.03	1174.06			0.73
14993 BR U	100-Yr - FW	229337.00	51.43	0.25	54.85	14.85	1148.31	620	1950	0.71
14993 BR D	100-Yr - FP	229337.00	50.71		53.94	14.42	1185.26			0.69
14993 BR D	100-Yr - FW	229337.00	51.00	0.29	54.09	14.12	1186.5	400	1712.21	0.67
14838.00	100-Yr - FP	229337.00	49.51		52.88	14.74	3294.04			0.74
14838.00	100-Yr - FW	229337.00	50.15	0.64	53.20	14.01	1266.83	400	1712.21	0.69
14430.00	100-Yr - FP	229337.00	48.92		51.16	12.14	3548.56			0.6
14430.00	100-Yr - FW	229337.00	49.50	0.58	51.72	11.96	1436.16	878.55	2327.48	0.58

River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
	(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
24612.00	250000.00	54.00	77.55	70.58	79.01	0.00	10.10	26816.76	1761.82	0.41
24428.00	250000.00	53.00	77.54	69.55	78.66	0.00	8.61	30357.35	1978.31	0.37
24320.50	Bridge									
24213.00	250000.00	53.00	77.09	67.67	78.08	0.00	8.12	32605.08	1988.39	0.33
23892.00	250000.00	49.00	77.00	67.64	77.80	0.00	7.62	38844.93	2925.26	0.31
23653.00	250000.00	49.00	76.73	66.41	77.63	0.00	7.62	32830.87	1763.11	0.31
23646.50	Bridge									
23640.00	250000.00	49.00	73.96	66.41	75.20	0.00	8.94	27984.53	1764.61	0.39
23138.00	250000.00	48.00	72.91	66.29	74.38	0.00	9.74	25696.50	1703.45	0.44
22788.00	250000.00	47.00	72.35	65.65	73.76	0.00	9.58	26414.70	1846.74	0.43
22190.00	250000.00	46.00	71.63	64.06	73.01	0.00	9.43	26653.28	1645.87	0.41
21776.00	250000.00	45.00	71.16	62.76	72.54	0.00	9.43	26606.80	1518.42	0.39
21547.00	250000.00	44.00	70.88	61.97	72.27	0.00	9.49	26376.49	1414.26	0.39
21277.00	250000.00	44.50	70.11	63.18	71.90	0.00	10.71	23343.26	1420.04	0.46
21023.00	250000.00	44.00	69.95	61.33	71.54	0.00	10.11	24721.85	1363.81	0.42
20577.00	250000.00	43.00	68.76	61.33	70.84	0.00	11.58	21587.15	1258.33	0.49
19956.00	250000.00	41.00	67.31	61.32	69.65	0.00	12.28	20353.77	1258.15	0.54
19491.00	250000.00	40.00	62.50	60.74	67.92	0.00	18.82	13795.47	986.01	0.82
19172.00	250000.00	39.00	62.34	60.49	66.11	0.00	16.38	17987.82	1642.82	0.72
18982.00	250000.00	39.00	62.71	59.51	65.12	0.00	12.87	21644.74	1892.16	0.59
18768.00	250000.00	39.00	62.09	59.21	64.55	0.00	13.20	22022.21	2083.67	0.61
18523.00	250000.00	38.00	61.84	58.59	63.81	0.00	12.36	25185.45	2263.73	0.55
17835.00	250000.00	36.00	61.50	55.92	62.52	0.00	9.25	35288.72	2910.32	0.39
17022.00	250000.00	34.00	60.68	54.83	61.71	0.00	9.41	35044.43	3139.26	0.38
16320.00	250000.00	33.00	59.65	53.39	60.95	0.00	10.03	31036.03	3552.01	0.4
15864.00	250000.00	32.00	59.26	51.36	60.46	0.00	9.33	30601.48	3672.9	0.37
15148.00	250000.00	31.00	58.43	48.76	59.78	0.00	9.45	27717.41	4069.52	0.37
14993.00	Bridge									
14838.00	250000.00	30.00	50.03	47.85	53.72	0.00	15.41	16219.82	3297.76	0.76
14430.00	250000.00	30.00	49.50	46.00	51.92	0.00	12.63	20538.26	3551.31	0.61

FLOODPLAIN TABLE
(250,000 cfs)

Appendix E-2

Preliminary Drainage Concept

Prepared by Jensen Design & Survey, Inc.

JENSEN DESIGN & SURVEY, INC
Delivering excellence through experience

1672 Donlon Street
Ventura, CA 93003
Local 805 654-6977
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COV01.4097
Wednesday, January 11, 2013

City of San Buenaventura
Lucho Rodriguez
501 Poli Street
Ventura, CA 93001

Subject: Drainage Concept for Olivas Park Drive Extension

Dear Mr. Rodriquez,

The City of Ventura is proposing to extend the Olivas Park Drive roadway, located south of Highway 101 and north of the Santa Clara River in the City of Ventura, to connect the existing Olivas Park Drive to Johnson Drive. In addition, a levee/floodwall will be installed adjacent to the Olivas Park Drive Extension (OPDE) to protect the roadway and future developments within the vicinity of the OPDE. Currently, approximately 175 acres south of Highway 101 and east of Golf Course Drive drain southerly to the Santa Clara River. The installation of the levee/floodwall system along the north bank of the Santa Clara River, from Auto Center Dr. to Golf Course Dr., will impede discharges to the Santa Clara River from the 175 acre watershed. This letter addresses the overall drainage concept for the site after construction of the OPDE and levee/floodwall improvements.

Proposed runoff quantities for the 175 acre watershed were found using the Ventura County Tc Calculator. The analysis assumes the entire watershed to be fully developed (95% impervious) to ensure conservative results. Proposed flows are displayed in the table below. See attached Drainage Concept Exhibit for more detail.

Proposed Flow Rates

Q10 (cfs)	Q50 (cfs)	Q100 (cfs)
280	404	455

Runoff from the 175 acre watershed will need to be collected and diverted through or around the levee/floodplain once the roadway and levee improvements are installed. The 14' median within the OPDE will be utilized as a detention/treatment swale for the entire 175 acre area. The roadway will be sloped towards the median so that runoff from the road will drain into median. See attached Drainage Concept Exhibit for proposed roadway sections. Runoff from developments surrounding the OPDE will be routed towards the roadway, and perhaps connected to the median by a storm drain system.

Review of the hydraulic calculations of the Santa Clara River pertaining to the levee design, prepared by Hawks & Associates (received 11-1-2012), has determined that all runoff up to a Q10 storm event associated the 175 acre site (280 CFS) can outlet through the levee and floodwalls. Flapgates will be installed on each outlet through the levee/floodwall. Above a Q10

storm, the flapgates will be closed until the water level drops in the river. Sizing and location of these outlets will be determined once the OPDE roadway alignment has been finalized.

All runoff associated with storm events larger than a 10-year event will be detained within the roadway median or within future developments (as deemed necessary during final analysis) until water surface elevations within the river drop below the pipe outlets in the levee/floodwall, enabling the flapgates to open and runoff to discharge into the river. There is an opportunity to reduce detention volumes by releasing runoff can be released around the west end of the levee. The following two scenarios will be analyzed to assess the feasibility of diverting additional flows through the golf course for storm events larger than a 10-year event:

(1) The existing Olivas Park Drive roadway, to the west of Golf Course Drive, ultimately drains through the Buenaventura Golf Course entrance, towards the golf course, and into the river. Capacity will be analyzed within the existing roadway (Section A-A in the attached Drainage Concept Exhibit) to determine how much (if any) additional runoff can be diverted from the 175 acre watershed to the street. Capacity of the existing roadway will be set by dry lane requirements put forth by the City of Ventura.

(2) There is an existing 54" storm drain to the west of the Olivas Park Drive and Golf Course Drive intersection (as shown in the attached Drainage Concept Exhibit) that drains out to the golf course through an existing headwall structure. The pipe will be analyzed to determine the quantity of runoff (if any) that can be diverted from the 175 acre watershed, out through the 54" pipe and to the golf course.

Runoff that above a Q10 event cannot be rerouted around the levee by the two methods described above will be detained onsite.

Routing runoff from the 175 acre watershed to the OPDE median will also provide the City with an opportunity to encourage "green" and low-impact development strategies. Inlets within the median will be raised to allow for a couple of inches of ponding, therefore promoting stormwater infiltration and evapotranspiration. In addition, the vegetated median will function as a biofiltration swale for the entire 175 acre watershed.

The drainage concept for the OPDE ensures that runoff from the 175 acre watershed will be adequately captured and conveyed to the Santa Clara River in all 100-year storm events or less. The roadway will be designed so that the City's dry lane requirements are met for all storm events. The finished floors of future buildings in the vicinity of the OPDE will be set based off final analysis of the OPDE drainage concept, ensuring all future developments will be protected in a 100-year storm event. Final analysis of the OPDE concept will fulfill City of Ventura requirements.

Sincerely,

Jensen Design & Survey, Inc.

Susanne M. Cooper

Susanne Cooper, P.E.
Senior Civil Engineer

PROPOSED ONSITE FLOWS

		Q10 Storm Event*		Q50 Storm Event		Q100 Storm Event	
Area	Area (Ac)	Tc (min)	Q (cfs)	Tc (min)	Q (cfs)	Tc (min)	Q100 (cfs)
A	38	16	70	12	103	11	120
B	107	24	161	20	230	19	256
C	30	20	49	16	71	16	78
TOTAL	175		280		404		455

*Q10 Storm Event will outlet through levee/floodwall. Storm events exceeding the 10-year event will be detained onsite or within future developments or be routed around levee, west of Golf Course Drive.

LEGEND

X / X.XX — MAIN AREAS; AREA (AC)

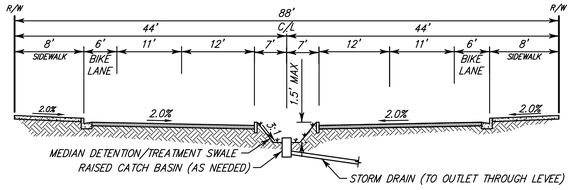
MAIN SUBAREA BOUNDARY

NOTES

1. THE ALIGNMENT DISPLAYED IN THIS EXHIBIT HAS NOT BEEN FINALIZED AND IS SHOWN FOR REFERENCE PURPOSES ONLY.

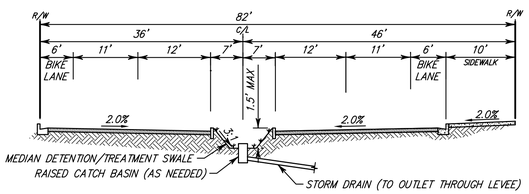
200' 100' 0' 200' 400'

GRAPHIC SCALE: 1"=200'



OLIVAS PARK DRIVE: GOLF COURSE DR TO PERKIN AVE.

NOT TO SCALE



OLIVAS PARK DRIVE: PERKIN AVE TO AUTO CENTER DR.

NOT TO SCALE

JENSEN DESIGN & SURVEY, INC
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SCALE: 1" = 200'
J.N.: COV01.4097
DATE: 8/27/2012
DWG. NAME: 4097_Drainage Concept Exhibit.dwg

OLIVAS PARK DRIVE EXTENSION DRAINAGE CONCEPT

FOR CITY OF VENTURA

COUNTY OF VENTURA STATE OF CALIFORNIA

SHEET 1 OF 1

Appendix E-3

Water Supply Assessment

Prepared by Rincon Consultants, Inc.

OLIVAS PARK DRIVE EXTENSION PROJECT
CITY OF SAN BUENAVENTURA

SB 610 Water Supply Assessment

Prepared by:

City of San Buenaventura
Public Works Department
501 Poli Street
Ventura, CA 93002

Prepared with the assistance of:

Rincon Consultants, Inc.
180 North Ashwood Avenue
Ventura, California 93003

January 2013

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WATER SUPPLY ASSESSMENT INFORMATION

This water supply assessment is provided for the proposed Olivas Park Drive Extension Project in the City of Ventura, pursuant to the requirements of Section 10910 of the State Water Code, as amended by Senate Bill No. 610, Chapter 643 (2001).

BACKGROUND

Senate Bill No. 610 (Costa) became effective January 1, 2002. The bill requires a city or county which determines that a "project" (as defined in Water Code § 10912) is subject to the California Environmental Quality Act (CEQA) to identify any public water system that may supply water for the project and to request those public water systems to prepare a specified water supply assessment. The assessment is required to include an identification of existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project and water received in prior years pursuant to those entitlements, rights, and contracts. The assessment must be approved by the governing body of the public water system supplying water to the project. If the projected water demand associated with the project was included as part of the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in the water supply assessment. The bill requires the city or county, if it is not able to identify any public water system that may supply water for the project, to prepare the water supply assessment after a prescribed consultation. If the public water system concludes that water supplies are, or will be, insufficient, plans for acquiring additional water supplies are required to be submitted to the city or county. The city or county must include the water supply assessment in any environmental document prepared for the project pursuant to the act. It also requires the city or county to determine whether project water supplies will be sufficient to satisfy the demands of the project, in addition to existing and planned future uses.

PROJECT SUMMARY

The proposed Olivas Park Drive Extension project would involve: (1) an approximately 4,500 linear-foot extension of Olivas Park Drive between Golf Course Drive and Johnson Drive; (2) an approximately 5,400 linear-foot levee/floodwall along the north side of the Santa Clara River; and (3) General Plan amendments; and Zoning changes. The proposed project would involve General Plan Amendments to accommodate a total of 1,258,000 square feet of commercial use and 75,000 square feet of industrial use within the project area along with a four-lane arterial connection. The project site is located between Golf Course Drive and Johnson Drive, primarily in the City of Ventura. Portions of the road alignment and levee are in unincorporated Ventura County. The proposed Olivas Park Drive extension would connect Johnson Drive near U.S. Highway 101 to the existing terminus of Olivas Park Drive at Perkin Avenue. The road extension would encroach onto properties owned by the Hofer family, Olivas Company LLC, and the Montalvo Municipal Improvement District (MMID). The proposed levee/floodwall would generally parallel the proposed road extension, and would be located primarily between the roadway extension and the Santa Clara River. The project area for which General Plan amendments and zone changes are proposed is located north of the proposed levee.

The proposed project meets the definition of "project" within Water Code section 10912 and is subject to the California Environmental Quality Act (CEQA). Pursuant to CEQA, the City of Ventura, acting as lead agency, is preparing a Draft Environmental Impact Report (EIR) for the project. The City of Ventura is the public water system that would supply water to the project if it is approved by the City of Ventura.

WATER SUPPLY ASSESSMENT

The following is a discussion of local water supply planning as it relates to the applicable requirements of Section 10910 of the State Water Code.

SB 610 APPLICABILITY

Water Code Section 10910(a) states that projects, as defined in Section 10912, are subject to the requirement to prepare a water supply assessment. A "project" under Section 10912 includes a development that would meet one of the following criteria:

> *(1) A proposed residential development of more than 500 dwelling units.*
> *(2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.*
> *(3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.*
> *(4) A proposed hotel or motel, or both, having more than 500 rooms.*
> *(5) A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.*
> *(6) A mixed-use project that includes one or more of the projects specified in this subdivision.*
> *(7) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.*

The potential development that would result from the proposed project includes 1,258,000 square feet of commercial use and 75,000 square feet of industrial use. Therefore, the requirements of Section 10910 of the California Water Code apply to the proposed project.

WATER SUPPLIER

Water Code Section 10910(b) requires the identification of the public water system that would serve the project. The project site is located within the City of Ventura service area and would be served by the City of Ventura if approved. The City of Ventura obtains its water from several sources, including the Ventura River, Casitas Water District, United Water District, the Mound Groundwater Basin, the Oxnard Plain Groundwater Basin, and the Santa Paula Groundwater Basin.[1]

[1] The City's 2010 Urban Water Management Plan (UWMP) and 2008 Biennial Water Supply Report included the Saticoy County Yard Well as a potential planned water supply source of up to 2,400 AFY. However, pursuant to the 2010 Urban Water Management Plan, the anticipated future water supply from the Saticoy County Yard Well is unknown at this time and, therefore, is not considered in this Water Supply Assessment.

UWMP APPLICABILITY

Water Code Section 10910(c)(l) requires a determination of whether or not the proposed project was included in the most recently adopted urban water management plan (UWMP). The most recently adopted UWMP (2010) for the City of Ventura projects future demand based on General Plan buildout to the year 2035, with an estimated population projection of 140,472 in 2035.

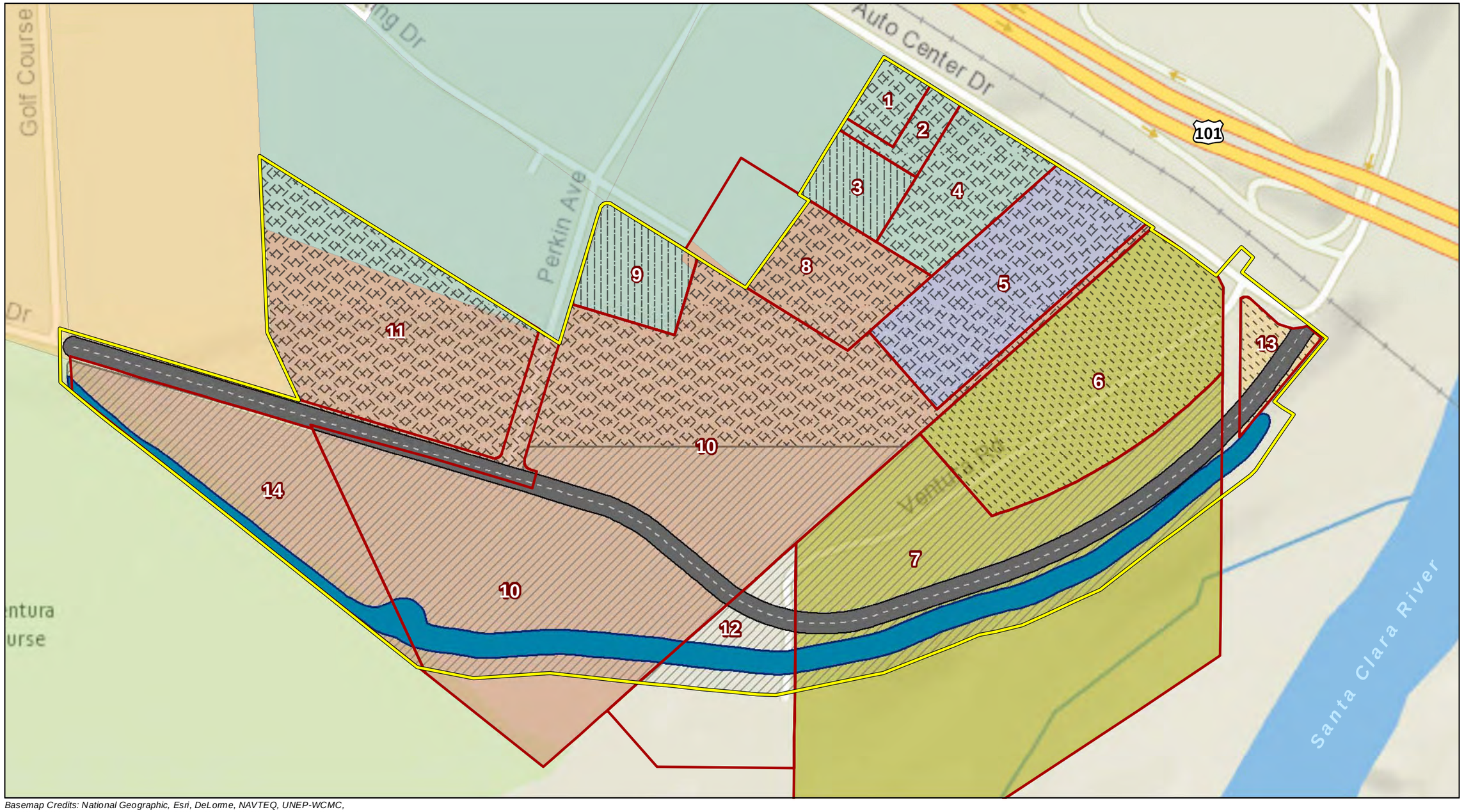
The City's 2005 General Plan forecasts buildout through the year 2025, with an estimated population increase of 21,208 persons, the addition of 8,258 residences, and the addition of 2,655,000 square feet of commercial development. The General Plan did not identify the extent of development potential that could occur as a result of the proposed project during the General Plan Update process; hence, the proposed project was not included in the 2010 UWMP. Figure 1 shows the existing land use designations in the project area.

The proposed project would involve: (1) an approximately 4,500 linear-foot extension of Olivas Park Drive between Golf Course Drive and Johnson Drive; (2) an approximately 5,400 linear-foot levee/floodwall along the north side of the Santa Clara River; and (3) General Plan amendments; and Zoning changes. The proposed project would involve General Plan Amendments to accommodate a total of 1,258,000 square feet of commercial use and 75,000 square feet of industrial use within the project area along with a four-lane arterial connection. The following would be accommodated onsite:

- 1,258,000 square feet of Commercial
- 75,000 square feet of Industrial

The proposed General Plan amendments would involve re-designation of eight parcels within the 111.8-acre project area. The land use designations for three parcels would be changed from Agriculture to Commerce , two parcels' land use designations would be changed from Specific Plan to Commerce , two parcels' land use designations would be changed from Industry to Commerce, and one parcel would involve a change in land use designation from Agriculture to Industry. Table 1 provides a breakdown of the proposed re-designations for the proposed General Plan Amendments and Zone changes. The proposed General Plan land use designations would allow development of the site with a range of commercial and industrial uses.

Two General Plan amendments are also proposed for the Accessible Community Element that would change the designation of the of the Olivas Park Drive extension from Future Collector (two travel lanes) to Future Secondary Arterial (four travel lanes). This change would allow for the proposed roadway extension to align with the existing Olivas Park Drive to the west which is currently a four-lane roadway. Additionally, the designation of a future bike path consistent with the alignment of the Olivas Park Drive extension would be changed from Future Class I (bike path separated from roadway) to Future Class II (bikeway on roadway). This change would allow for the proposed bike path extension to be consistent with the existing Class II bike path along Olivas Park Drive to the west and the Future Class II designation along Johnson Drive to the east.



Basemap Credits: National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC, Other data from County of Ventura, 2010

Legend
- Project Boundary
- Parcel Boundary
- Roadway Alignment
- Levee Alignment

Land Use
- Agriculture
- Commerce
- Industry
- Specific Plan

Zoning Designation
- Commercial Planned Development (CPD)
- Limited Industrial (M-1)
- General Inudstrial (M-2)
- Manufacturing Planned Development (M-P-D)
- Single Family Residential (R-1-1AC)

0 200 400 Feet

N

Current Land Use and Zoning Designations

Figure 1

Table 1
Proposed General Plan Amendments/Zone Changes

Parcel Number	APN[1]	Acreage	General Plan Change	Zoning
1	138-0-230-150	1.3	Remain Commerce	Remain CPD
2	138-0-230-740	0.77	Remain Commerce	Remain CPD
3	138-0-230-730	1.84	Specific Plan to Commerce	Remain CPD
4	138-0-230-130	3.87	Remain Commerce	Remain CPD
5	138-0-230-210	7.31	Remain Commerce	M1 to CPD
6	179-0-050-150	11.99	Industry to Commerce	M2 to CPD
7	179-0-050-160	16.67[2]	Agriculture to Commerce	M2 to CPD
8	138-0-230-760	3.64[3]	Remain Commerce	R-1-1AC to CPD
9	139-0-230-480	2.75	Specific Plan to Commerce	Remain CPD
10	138-0-230-750	37.32[4]	Agriculture to Commerce	R-1-1AC to CPD
11	138-0-230-650	12.51	Remain Commerce	R-1-1AC to CPD
12	179-0-050-030	3.18[5]	Agriculture to Commerce	Agriculture to CPD
13	139-0-010-575	1.49	Industry to Commerce	MPD to CPD
14	138-0-230-820	7.16	Agriculture to Industry	R-1-1AC to MPD

1 APN – Assessor's Parcel Number
2 Total parcel is 37.28 acres, 20.61 acres are located south of the proposed levee.
3 Total parcel is 5.92 acres, 2.28 acres are located outside of the project boundary.
4 Total parcel is 40.38 acres, 3.06 acres are located south of the proposed levee.
5 Total parcel is 6.65 acres, but 3.47 acres are located south of the proposed levee.

As a measure of conservatism, the water demand created by this project is considered on its own and as not accounted for under the 2010 UWMP. Thus, pursuant to SB 610, this WSA is required to evaluate the overall projected supply during normal, single dry and multiple dry years over a period of 20 years.

Figure 2 shows the proposed General Plan Amendment and Zone change parcels.

WATER SUPPLIES AND DEMAND

According to the 2010 UWMP, the City of Ventura obtains water from the following sources:

1. Ventura River Foster Park Area (Foster Park)
    a. Surface Water Intake
    b. Upper Ventura River Groundwater Basin/Subsurface Intake and Wells
2. Casitas Municipal Water District (Casitas)
3. Mound Groundwater Basin
4. Oxnard Plain Groundwater Basin (Fox Canyon Aquifer)
5. Santa Paula Ground Water Basin

The City also provides reclaimed water from the Ventura Water Reclamation Facility. In addition, the City has a 10,000 AFY contract amount from the California State Water Project, which is not utilized within the City service area because there are no facilities to deliver the water to the City.

Basemap Credits: National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC, Other data from County of Ventura, 2010

Legend

- Project Boundary
- Parcel Boundary
- Roadway Alignment
- Levee Alignment
- Proposed Zone Change
- Proposed Land Use Change

0 200 400 Feet

N

Proposed Land Use and Zoning Changes

Figure 2

Groundwater

The City obtains water from three groundwater basins, which provide roughly 10,000 AFY, or half of the City's total supply. These groundwater basins are described below.

Mound Groundwater Basin. The Mound Groundwater Basin is identified in DWR Bulletin 118, 2003 Update as the Mound Subbasin of the Santa Clara River Valley Groundwater Basin (Basin No. 4-4.03). The basin underlies the northern part of the Ventura coastal plain and is bounded on the north by the Santa Ynez and Topa Topa Mountains, on the south by the Oak Ridge and Saticoy faults, the northeast by the Santa Paula Subbasin, and the west by the Pacific Ocean. Historical agricultural and private well uses have typically extracted about 2,000 AFY[2] while the City's average annual extraction for the last ten years has been approximately 3,800 AFY.

Historical use has been documented to temporarily exceed the yield of the basin and result in water levels that have fallen below sea level and created the threat of seawater intrusion. To abate this threat, the City abandoned its historical coastal well facilities and located groundwater extraction near the center of the Mound Basin. A report compiled as part of a 1996 study of the basin indicated that historical data supports a basin yield of at least 8,000 AFY during drought conditions as long as pumpage is reduced during wet years to allow water levels to recover[3]. The basin is not in overdraft. Currently, two wells supply water from the Mound Groundwater Basin; Victoria Well No. 2, which was installed in 1995 and Mound Well No. 1, which began production in April 2003. Victoria Well No. 1, which was installed in 1982, is considered an inactive well at this time due to maintenance and water quality issues and is scheduled for destruction. Water quality is highly mineralized in the Mound Basin and blending with lower TDS water is required by the California Department of Public Health (CDPH). The production capacity of the existing Mound Basin wells is 5,500 AFY[4].

Oxnard Plain Groundwater Basin. The Oxnard Plain Groundwater Basin is identified in DWR Bulletin 118, 2003 Update as the Oxnard Subbasin of the Santa Clara River Valley Basin (Basin No. 4-4.02), located in southern Ventura County. The basin is bounded on the north by the Oak Ridge fault, the south by the Santa Monica Mountains, the east by the Pleasant Valley and Las Posas Valley Basins, and the west by the Pacific Ocean. Average annual yield from the Golf Course wells over the past 10 years has been about 3,750 AFY. However, due to present water system supply and operational constraints, the last five-year annual yield has been 5,500 AFY. This level will continue until additional facilities are developed, at which time it is anticipated that the City will go back to the reduced historical allocation.

Wells near the Buenaventura Golf Course have drawn from the Oxnard Plain Groundwater Basin since 1961. Currently, two wells, Golf Course Wells No. 5 and 6, produce potable water for the City's system. These wells pump from the Fox Canyon aquifer of the Oxnard Plain Groundwater Basin. A third well (Golf Course Well No. 3) is out of service for major rehabilitation. This third well could be used as an emergency source and will only return to service during a drought, following the replacement of wellhead, pump, electrical and raw water connection. Raw water quality data indicates that wells from this basin have better raw

[2] City of San Buenaventura Water Master Plan, 2011. Page V-7.
[3] Fugro West, Inc. June 1997. "Mound Groundwater Basin Annual Report".
[4] City of San Buenaventura Water Master Plan, 2011. Table V-14.

water quality then wells located within the Mound Basin. The City's historical allocation has been steadily reduced through the years. Current production capacity of the Oxnard Plain Basin is 4,100 AF based on the allocation[5].

Conjunctive use strategies and operational practices have allowed the City to accrue 30,249 AF of FCGMA groundwater credits as of the beginning of calendar year 2010. These practices currently make it possible for the City to use its groundwater credits to supplement its supply in the event of a drought or operational/production/treatment constraints on other supply sources. However, this is considered a reliability supply only and is not a firm supply available for new development. In addition, delivery of these credits is limited by operational restrictions.

Santa Paula Groundwater Basin. The Santa Paula Groundwater Basin is identified in DWR Bulletin 118, 2003 Update as the Santa Paula Subbasin (Basin No.4-4.04). The basin is bound on the north by the Topa Topa Mountains, the south by the Oak Ridge and South Mountain, the Oak Ridge fault, and the Saticoy fault, the east by a bedrock constriction, and the west by the Oxnard Plain and Mound subbasins. Since 1996, water production has averaged 1,400 AFY[6]. The current supply capacity of the Santa Paula Basin is 1,600[7] AF, but the City is allocated 21,000 AF over any seven year period.

Water from the Santa Paula Basin is extracted through a single well at Saticoy Well No. 2, with a peak capacity of 1,200 gpm. This water is treated by an iron-manganese conditioning facility. Water quality is about the same as the Oxnard Plain Basin. The City is moving forward with designing and constructing Saticoy Well No. 3 (CIP 97899), which will improve the water supply delivered to the Saticoy Treatment Plant. It is expected that Saticoy Well No. 3 will have an operational capacity of 2,000 gpm and a peaking capacity of 3,000 gpm[8].

<u>Surface Water</u>

Casitas Municipal Water District (Casitas). Casitas Municipal Water District supplies potable water to agricultural and urban users in western Ventura County. The Casitas service area includes the Ojai Valley, the western part of the City, and the coastal area between the City and Santa Barbara County. Use of Casitas water is restricted to areas within its boundaries. The western portion of the City is within Casitas' service area. Approximately 30 percent of the City's water accounts are located within the Casitas service area. Storm water runoff from local watersheds is stored in Lake Casitas, located approximately 10 miles northwest of the City, then treated and delivered to customers by Casitas. The City has annually purchased an average of 6,200 AFY of water from Casitas over the past ten years.

The "'safe yield" of Lake Casitas is defined to be the amount of water that can be removed from the lake each year without excessive risk that the lake will become dry. The safe yield of Lake Casitas has been re-evaluated in Casitas' 2004 Water Supply and Use Status Report. Under the current application of the Robles Biological Opinion operating criteria and considering the eventual removal or complete siltation of Matilija Dam, the safe yield of Lake Casitas has been

[5] City of San Buenaventura Water Master Plan, 2011. Table V-14.
[6] City of San Buenaventura Water Master Plan, 2011. Page V-12.
[7] City of San Buenaventura Water Master Plan, 2011. Table V-14.
[8] City of San Buenaventura Water Master Plan, 2011. Page V-8.

calculated to be 20,840 AFY. Studies by the Casitas engineering department have shown that this period represents the most critical dry spell for the Lake's watershed of all the years which historical data is available[9].

To maintain the future operation of Lake Casitas at safe yield, in 1992 Casitas established an allocation program for its customers. The City's allocation can be as high as the in-District demand for Stage I (wet or average year or 8,000 AFY), or reduced to 7,090 AFY for Stage 2 (dry conditions). This amount is incrementally reduced during Stages 3 and 4 dry weather conditions and results in 4,960 AFY for Stage 5 (extremely dry conditions). Stage 2 is initiated when Lake Casitas storage drops below 127,000 AF and Stage 5 is initiated when levels drop below 65,000 AF. The lower allocation remains in effect until storage is recovered to 90,000 AF. A possible future impact to the multistage allocation system may be the operation of the fish ladder at the Robles Diversion. In July 1995, the City signed the current operating agreement with Casitas, establishing the City's minimum annual purchase at 6,000 AFY, which is subject to the allocation program during drought periods. While additional supply (up to 8,000 AFY) may be available to the City in future years, the present annual supply used within the Casitas district boundary of the City service system is approximately 6,200 AFY (annual average for the last 10 years). The estimated demand based on population growth to the year 2035 within the Casitas district boundary served by the City of Ventura water service area is 6,000 to 7,000 AFY. These numbers have been provided to Casitas and have been incorporated into Casitas' own planning estimates.

Ventura River. Surface water from the Ventura River is collected via surface stream diversion, as well as through subsurface collectors and shallow wells for delivery to the Avenue Treatment Plant through the City's Foster Park facilities. Production from this source is a function of several factors including diversion capacity, local hydrology, environmental impacts, and the storage capacity of the Ventura River alluvium and upstream diversions. Due to extreme damage to the City's Foster Park water production facilities in 2005, production from the Ventura River decreased dramatically. However, most of these facilities were repaired by 2009. Between 2005 and 2009, annual production averaged 2,300 AFY. Between 1995 and 2004, annual production averaged 7,000 AFY.

The Ventura River water source is dependent upon local hydrology. Currently, the surface intake structure at Foster Park is unused due to the natural channeling of the active river system bypassing the structure. Each year the flows can change the position of the active river channel in relation to the intake structure. According to a model of the Ventura River developed in 1984 and modified in 1992, the Upper Ventura River Basin fills after one or more years of above average rainfall. Once full, it takes three successive years of drought (below-average rainfall) to deplete the river basin subsurface storage and cause river water production to drop until the drought ends. The Foster Park facilities produce water throughout the year. However, due to storm flows, the wells are subject to inundation and erosion. In 2008, the City began conducting studies of the Ventura River flow conditions in order to operate the Foster Park facilities in a more sustainable manner. The City is working towards developing a pumping regime that will balance production demands with environmental concerns. Presently the City has voluntarily adopted a well production schedule that limits its pumping based on annual rainfall conditions. It is anticipated that construction of additional Foster Park Well Facilities and expansion of the

[9] City of San Buenaventura Water Master Plan, 2011. Page V-2.

Avenue Treatment Plant to its maximum capacity will increase the supply from this source in the future. These improvements are anticipated to restore historical production capabilities to produce up to 6,700 AFY. This is comparable to the 50-year average historical City production records between 1960 and 2009. However, operational constraints will likely limit supply to 70 percent of that amount (4,200 AFY) to be obtained under the City's operations schedule. This is roughly equal to the annual average for the last 10 years[10].

Planned Water Supply Projects and Programs

Desalination. Because the City is located along the coast, desalinization could be a potential new source of supply. Potential exists for the City to develop financing for desalinated water opportunities. The City has been following the existing and proposed seawater desalination projects along California's coast.

Recycled Water. The City has access to recycled water supply through the Ventura Water Reclamation Facility (VWRF). The City has sole ownership in the wastewater treatment and water recycling facilities in its own service area. Currently, the VWRF discharges most of its tertiary treated effluent to the Santa Clara River Estuary with approximately 700 acre-feet per year (AFY) portion diverted as recycled water for landscape irrigation by several users.

The City's current and past recycled water planning efforts have centered on issues related to the beneficial uses of the Santa Clara River Estuary. These issues have required the City to consider whether or not discharge from the VWRF provides enhancements to the beneficial uses of the estuary, and consequently affects the amount of recycled water that can supplement domestic water supply.

The City manages its water resources conjunctively. Conjunctive use is the practice of first utilizing surface supplies (which are lost to the ocean if not used when they are available) before groundwater supplies (which can be stored for use when the surface supplies are not plentiful). Groundwater is used to provide for seasonal demands and as a source during drought periods. Therefore, the City will generally utilize its water supplies in the following order: Ventura River, Lake Casitas, and groundwater basins. In addition, the City provides reclaimed water from the Ventura Water Reclamation Facility to two municipal golf courses, the Ventura Marina area and private customers for landscape irrigation. The City's Historic Water Source Supply between 1980 and 2005 is shown in Table 2.

Currently the City has approximately 31,650 service connections serving 113,500 people. All service connections are metered. Water consumption within the City has decreased in recent years as shown by the per capita use figures in Table 3. The annual per capita usage from 1940 to 1970 averaged about 277 gallons per capita per day (gpcd). In the period 1985 through 1989, the annual per capita use averaged about 196 gpcd. In the period 1994 through 2004, the per capita figure dropped to an average of 161 gpcd. This decrease in per capita consumption is the result of plumbing improvements such as low flow fixtures and low water consuming appliances in some existing and all new housing; and an active water conservation program adopted by the City in 1975 and further strengthened with regulations in 1990. Between 2005

[10] City of San Buenaventura Water Master Plan, 2011. Page V-5.

and 2009, the annual per capita use averaged 156 gpcd including recycled water and total water sales ranged from 18,200 to 20,850 AFY, with an average of 19,300 AFY.

Table 2
Historic Water Source Supply Availability (Acre Feet) [1]

Year	Surface Water		Ground Water			Total Water Supply
	Lake Casitas [2]	Ventura River [3]	Mound Basin [4]	Oxnard Plain Basin [5]	Santa Paula Basin [6]	
1980	7,544	7,276	0	5,198	2,129	22,147
1985	9,099	5,493	2,360	6,172	46	23,170
1990	6,175	2,859	4,365	5,749	0	19,148
1995	1,622	9,042	2,169	2,603	2,594	18,030
2000	5,836	6,779	4,579	2,674	1,698	21,566
2001	6,292	5,727	4,030	905	2,006	18,960
2002	7,127	5,951	3,721	1,978	1,157	19,934
2003	4,912	6,722	5,546	2,898	316	20,394
2004	6,833	6,118	4,773	2,391	2,183	22,298
2005	8,000	2,400	5,700	4,600	2,600	23,300

Source: City of San Buenaventura, 2010 UWMP, Table 3-6
[1] Includes treated and raw water; excludes reclaimed water supply
[2] Lake Casitas is the City's total past supply including raw water and oil users.
[6] Santa Paula Basin 2005 water supply reflects estimated year-end actuals.

The City water service area is essentially an established community comprised primarily of residential areas with opportunities for infill development. Historical water demand has varied slightly year to year, but has otherwise remained fairly steady since 1995 despite increases in population. As documented in the 2010 UWMP, in 1990, the City used 196 gpcd. Per capita water use has steadily decreased over time through the implementation of long-term conservation programs. In 2000, per capita water use was 190 gpcd. In 2005, per capita water use was 170 gpcd. For the 2010 UWMP, a factor of 168 gpcd, based on the average per capita use between 2000 and 2009 was used to project base demands. Water demand for oilfield injection has steadily declined. Average water usage between 1995 and 2000 was 1,500 AFY. Between 2001 and 2005 it was approximately 900 AFY, and between 2006 and 2010 it was approximately 500 AFY. For purposes of the 2010 UWMP, future water demand of 400 AFY was used.

Table 3
Base Daily Per Capita Water Use

Sequence Year	Calendar Year	Distribution System Population	Daily System Gross Water Use (mgd)	Annual Daily per Capita Water Use (gcpd)	10 Year Average[1]	5 Year Average[1]
Year 1	1995	101,022	16.3	161.6		
Year 2	1996	101,793	17.0	166.7		
Year 3	1997	102,409	17.1	166.6		
Year 4	1998	102,994	17.1	166.5		
Year 5	1999	103,608	17.8	171.4		
Year 6	2000	104,522	19.1	183.1		
Year 7	2001	105,254	18.8	178.3		
Year 8	2002	106,280	17.2	161.5		
Year 9	2003	107,906	17.3	160.4		
Year 10	2004	108,559	19.6	180.9	169.7	
Year 11	2005	109,153	18.0	165.2	170.1	
Year 12	2006	110,049	16.3	148.5	168.3	
Year 13	2007	110,594	16.9	152.9	166.9	161.6
Year 14	2008	111,439	16.6	149.1	165.1	159.3
Year 15	2009	112,496	15.7	139.3	161.9	151.0
Period Selected					**161.9**	**161.6**

Source: City of Ventura, 2010 Urban Water Management Plan.
[1]Average of previous 10 or 5 year period.

Past, current, and projected baseline water deliveries are shown in Table 4. Baseline water demand projections were calculated by multiplying the average per capita use between 2000 and 2009 with the projected population for 2015 and beyond. The values shown for 2005 and 2010 are actual recorded demands. A projection of demands using the 2015 and 2020 Target Per Capita Water Use is also shown. The projection shows demands after 2020 using the 2020 Target Per Capita Water Use. In order to reduce the baseline water demands to meet the Per Capita Water Use Targets, a combination of recycled water supplies and conservation savings will have to be developed. Table 5 shows the expected supply of recycled water and the amount of conservation that must be achieved in order to meet the Per Capita Water Use Targets in 2015 and 2020.

Table 4
Past, Current, and Projected Water Demands (AFY)

Year	Single Family	Multi-Family	Commercial	Industrial	Institutional/ Governmental	Landscape	Petroleum Recovery Operations	Other	Total
2005	7,483	3,887	4,279	163	541	1,079	930	2,447	20,808
2010	7,006	3,678	3,384	64	495	1,044	368	1,312	17,351
2015	9,197	4,562	4,551	163	690	1,416	400	1,306	22,286
2020	9,615	4,761	4,749	170	720	1,478	400	1,363	23,256
2025	10,052	4,969	4,956	178	751	1,542	400	1,423	24,270
2030	10,508	5,185	5,173	185	784	1,610	400	1,485	25,330
2035	10,984	5,412	5,399	193	818	1,680	400	1,550	26,436

Source: Table 2-5, 2010 UWMP.
Note: 2005 and 2010 are actual demands. 2015 and beyond are projected.

Table 5
Target Water Demand Projections (AFY)

Year	Baseline Water Demands	Recycled Water Use	Conservation Needed to Meet SBX7-7 Targets	Target Water Demand
2015	22,286	700	1,422	20,163
2020	23,256	700	2,899	19,657
2025	24,270	700	3,056	20,514
2030	25,330	700	3,220	21,410
2035	26,436	700	3,391	22,345

Source: Table 2-7, 2010 UWMP.

Table 6 summarizes available water supply sources.

In drought conditions, water supplies may be reduced as a result of reduced precipitation. The 2010 UWMP evaluated a three-year drought scenario to determine the City's ability to supply water under drought conditions. The City assumed that severe drought conditions (no rain and above average temperatures) would begin immediately and continue for three consecutive years. Planned water sources for fiscal year 2010, reflecting capacity of current facilities were used as an average normal water year base for estimating purposes. It was also assumed that demand would not be reduced in response to the drought conditions. Available water supplies during the three year period were projected considering: 1) the current status of each existing source; and 2) the past response of each existing source to similar drought conditions.

Table 6
Summary of Water Supply Sources (AFY)

Supply	**2010**	**2015**	**2020**	**2025**	**2030**	**2035**
Existing Supplies:						
Casitas Municipal Water District[1]	6,000	6,000	6,100	6,200	6,500	7,000
Mound Basin[2]	4,000	4,000	4,000	4,000	4,000	4,000
Oxnard Plain Basin[2]	4,100	4,100	4,100	4,100	4,100	4,100
Santa Paula Basin[2]	1,600	1,600	1,600	1,600	1,600	1,600
Ventura River (Foster Park)[2]	4,200	4,200	4,200	4,200	4,200	4,200
Recycled Water[3]	700	700	700	700	700	700
Total Existing Supplies	**20,600**	**20,600**	**20,700**	**20,800**	**21,100**	**21,600**
Planned Supplies:						
Santa Paula Basin (Saticoy Well No. 3[4]	0	1,400	1,400	1,400	1,400	1,400
Supplier Produced Surface Water						
Ventura River (Foster Park Wells Improvements)	0	0	2,500	2,500	2,500	2,500
Total Existing and Planned Supplies	**20,600**	**22,000**	**24,600**	**24,700**	**25,000**	**25,500**
FCGMA Groundwater Credit[5]	**30,000**	**22,000**	**22,000**	**22,000**	**22,000**	**22,000**

Source: City of Ventura, 2010 UWMP.

[1] *Estimated demand based on population growth within the Casitas service area served by Ventura Water.*

[2] *Average annual supply based on 2011 City of Ventura Water Master Plan, Table V-14*

[3] *Based on current and expected usage.*

[4] *Well will allow full use of 1996 stipulated Judgment allocation.*

[5] *FCGMA Groundwater Credit is drought/reliability supply source; not a firm supply available for new development. 30,249 AF available for 2010 per Water Master Plan (See Oxnard Plain supply description in Section 3.3.1.2 of the 2010 UWMP) reduced to 22,000 AF by 2015 in the event of a drought or operational/production/treatment constraints from other supply sources.*

Any FCGMA historic allocations that are associated with the parcels/wells within the development area shall be transferred to the City prior to development occurring.

The single dry and multiple dry year supply and demand comparisons are shown in Table 7. The projected multiple dry three year water demand and supply through 2035 is shown in Table 8.

Table 7
Current Supply Reliability (AFY)

Source	Average/Normal Water Year [1]	Single Dry Water Year [2]	Multiple Dry Years		
			Year 1	Year 2	Year 3
Ventura River[1]	4,200	4,200	4,200	3,500	2,000
Casitas [2]	6,000	6,000	6,000	7,090	4,960
Oxnard Plain GW [3]	4,100	4,100	4,100	4,100	4,100
Mound Basin GW [4]	4,000	4,000	4,000	5,500	5,500
Santa Paula GW [5]	3,000	3,000	3,000	3,000	3,000
Recycled Water	700	700	700	700	700
Total Available Supply	22,000	22,000	22,000	23,890	20,260
Total Demand[6]	20,513	20,513	20,513	20,430	20,344
Supply/Demand Difference (Supply-Demand)	1,487	1,487	1,487	3,460	-84
FCGMA Groundwater Credit Used[7]	0	0	0	0	84

Source: City of Ventura, 2010 UWMP.

[1] Supply reduced from 4,200 to 2,000 AFY during an extended drought based on historical records (Water Master Plan, Table V-2)

[2] Second dry year supply based on Stage 2 allocations, third year of multiple dry years basin can supply additional water to compensate for loss in other supplies.

[3] Average annual groundwater supply assumed reliable during dry years.

[4] Average annual groundwater supply assumed reliable during dry years. In multiple dry years basin can supply additional water to compensate for loss in other supplies.

[5] Assumes Saticoy Well No. 3 is operational. Timing of potential reductions per 1996 Stipulated Judgment is not known at this time.

[6] 2011 demands. Multiple dry year demands are for 2011-2013.

[7] 30,249 AF available as of end of 2009.

Table 8
Summary of Projected Multiple-Dry Three Year Water Demand and Supply (AFY)

Source	2015			2020			2025			2030			2035		
	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3
Casitas [1]	6,000	7,090	4,960	6,000	7,090	4,960	6,000	7,090	4,960	6,000	7,090	4,960	6,000	7,090	4,960
Oxnard Plain GW [2]	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100
Mound Basin GW [3]	4,000	5,500	5,500	4,000	5,500	5,500	4,000	5,500	5,500	4,000	5,500	5,500	4,000	5,500	5,500
Santa Paula GW [4]	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Recycled Water	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700
Ventura River[1]	4,200	3,500	2,000	6,700	3,500	2,000	6,700	3,500	2,000	6,700	3,500	2,000	6,700	3,500	2,000
Total Available Supply	22,000	23,890	20,260	24,500	23,890	20,260	24,500	23,890	20,260	24,500	23,890	20,260	24,500	23,890	20,260
Total Demand[5]	20,163	20,068	19,970	19,657	19,826	19,996	20,514	20,690	20,868	21,410	21,593	21,779	22,345	22,345	22,345
Supply/Demand Difference (Supply-Demand)	1,837	3,822	290	4,843	4,064	264	3,986	3,200	-608	3,090	2,297	-1,519	2,155	1,545	-2,085
Difference as a Percent of Supply	8	16	1	20	17	1	16	13	-3	13	10	-7	9	6	-10
Difference as a Percent of Demand	9	19	1	25	21	1	19	5	-3	14	11	-7	10	7	-9
FCGMA Groundwater Credit Used[6]	0	0	0	0	0	0	0	0	608	0	0	1,519	0	0	2,085

Source: 2010 UWMP

[1] Second dry year supply based on Stage 2 allocations, third year of multiple-dry year period based on Stage 5 allocations per agreement with Casitas.

[2] Average annual groundwater supply assumed reliable during dry years.

[3] Average annual groundwater supply assumed reliable during dry years. In multiple dry years basin can supply additional water to compensate for loss in other supplies.

[4] Average annual groundwater supply assumed reliable during dry years.

[5] Based on SBX7-7 demands in 2010 UWMP Table 2-7.

[6] 30,249 AF Available as of end of 2009.

CONTINGENCY PLANS/WATER CONSERVATION

The City has developed a five-stage water shortage plan that would include voluntary and mandatory stages. The stages are intended to be fair to all water customers with the minimum impact on business, employment and quality of life. The water shortage stages and the reduction goals for each stage are outlined in Table 9.

Table 9
Water Shortage Stages and Reduction Goals

Shortage	Stage	Demand Reduction Goal	Program Type
Up to 10%	Stage 1	10% reduction	Voluntary
10-15%	Stage 2	15% reduction	Mandatory
15-20%	Stage 3	20% reduction	Mandatory
20-30%	Stage 4	30% reduction	Mandatory
30-50%+	Stage 5	50%+ reduction	Mandatory

Source: City of Ventura, 2010 UWMP, Table 8-1.

The City currently has a monitoring program to provide roughly five year's advance warning of the need for a supplemental water supply, whether the need be for drought proofing or for long term base-loaded supply. This will give the City sufficient time to fully implement a supplemental water supply project, from the feasibility study phase to completion of construction and start-up of the facility. The water supply conditions that will be reviewed include the production from the Ventura River, the storage level in Lake Casitas, the City's Fox Canyon GMA credits, the status of the City's other groundwater basins, and water demand within the City.

In addition to the short term water supply triggers, the City's long term water supply will be evaluated using the following triggers:

- Ventura River - the previous year's water production from the Ventura River was less than 2,500 AF.
- Lake Casitas - the storage in the lake reaches the 127,000 AF Stage 2 level.
- Fox Canyon GMA Credits - the City's balance of Fox Canyon GMA groundwater credits falls below 10,000 AF.
- Other Groundwater Basins - conditions in the Mound and Santa Paula groundwater basins begin to deteriorate significantly.
- Water Demand - the water demand within the City reaches 27,500 AFY.

The triggers for a drought-proofing supplemental water supply, based on the condition of the Ventura River, Lake Casitas, the Fox Canyon GMA credits, and the groundwater basins, should be considered together. It is suggested in the 2010 UWMP that if any two of the first four

triggers identified above are reached, then the decision making process for implementation of a supplemental water supply project should begin.

The water demand trigger for a long-term base-loaded supplemental water supply, the fifth trigger, should be considered independently of the drought-proofing triggers. Reaching the water demand trigger would also begin the decision making process for implementation of a supplemental water supply project regardless of the condition of the City's existing water supplies. The City Council's decision-making process to select either seawater desalination, importing SWP water or another alternative will focus on the actual circumstances at that future time.

The primary factor in limiting the City's existing water supplies is drought. In evaluating a three year worst-case water supply scenario, the City assumed that severe drought conditions (limited rain and above-average temperatures) would begin immediately and continue for three consecutive years (Table 10). Planned water sources for fiscal year 2011 reflecting capacity of current facilities will be used as an average/normal water year base for estimating purposes.

Table 10
Estimate of Minimum Supply for the Years 2012 - 2014 (AFY)

Source	Supply (AF)		
	2012	**2013**	**2014**
Casitas[1]	6,000	6,000	6,000
Mound Basin[2]	5,500	5,500	5,500
Oxnard Plain Basin[2]	4,100	4,100	4,100
Santa Paula Basin[3]	1,141	1,141	1,141
Ventura River (Foster Park)[4]	4,200	3,500	2,000
Recycled Water	700	700	700
Total Supply	**21,641**	**20,941**	**19,441**

Source: 2010 UWMP.
[1]Estimated demand based on population growth within the Casitas service area served by City of Ventura water service area.
[2] Average annual groundwater supply assumed reliable during dry years
[3] In multiple dry years, supply would be reduced to 1,141 AFY during Stage 2 reductions per 1996 Stipulated Judgment.
[4] Supply reduced from 4,200 to 2,000 AFY during an extended drought.

It was assumed that demand would not be reduced in response to the drought conditions. Available water supplies during the three year period were projected considering: 1) the current status of each existing source and 2) the past response of each existing source to similar drought conditions. Also, because of the complexities of the City's water sources, the specific numbers are only approximations.

Water Department and City water customers each have certain actions they must undertake. Public agency actions involve increasing public awareness and education, adopting ordinances prohibiting water waste and establishing mandatory water conservation regulations, and periodically reviewing triggering levels. Water customer actions involve implementing water conservation measures and complying with water conservation ordinances. Significant measures of the five-stage water shortage plan include:

Stage 1: 0-10 Percent Reduction Goal (Voluntary)

Public Agency Actions

- Monitor conservation levels and increase public awareness.
- Notify customers of shortage conditions and disseminate literature.
- Publish customer use goals.
- Identify Water Shortage Contingency Plan stages and the possible actions per stage.
- Distribute water conservation brochures, information, and conservation kits.
- Conduct exterior and interior water audits upon customer requests.
- Request voluntary water consumption reduction.
- Maintain tiered rate structure to promote water conservation.
- Establish/enforce water waste ordinance.
- Establish/enforce ordinance prohibiting watering from 9 A.M. to 6 P.M.

Water Customer Actions

- Monitor own meter for usage.
- Implement conservation measures to reduce usage.
- Comply with water waste ordinance.
- Comply with prohibited watering during 9 A.M. to 6 P.M.

Stage 2: 10-15 Percent Reduction Goal (Mandatory)

Public Agency Actions (In addition to actions established in previous Stage)

- Initiate Mandatory Water Conservation Regulations of Ordinance No. 92-07.
- Enforce mandatory water consumption goals and allocations for all customers.
- Enact water rate surcharge for water consumption over customer allocation.
- Water in excess of allocation is billed at four times the City's highest water rate.
- For the third consecutive excessive bill, surcharge rate is ten times the City's highest water rate. Beyond a third billing period, restrictors placed on meters, at the customer's expense.
- Enactment of allocation adjustment and penalty review programs. Customers can apply for an allocation adjustment for the reasons specified in ordinance.
- Customers may appeal in writing for a waiver of penalties incurred due to a leak or break, incorrect allocation or hardship.

Water Customer Actions (In addition to actions established in previous Stage)

- Comply with mandatory water conservation regulations.
- All water customers requesting an increase in their water allocation must undergo a water audit and install water efficient plumbing fixtures for all fixtures at their business or residence.

Stage 3: 15-20 Percent Reduction Goal (Mandatory)

Public Agency Actions (In addition to actions established in previous Stage)

- Initiate Mandatory Water Conservation Regulations as an Ordinance.
- Establish and enforce mandatory water consumption goals and allocations for all customers.

Water Customer Actions (In addition to actions established in previous Stage)

- Comply with mandatory water conservation guidelines.

Stage 4: 20-30 Percent Reduction Goal (Mandatory)

Public Agency Actions (In addition to actions established in previous Stage)

- Initiate Mandatory Water Conservation Regulations as an Ordinance.
- Establish and enforce mandatory water consumption goals and allocations for all customers.

Water Customer Actions (In addition to actions established in previous Stage)

- Comply with mandatory water conservation guidelines.

Stage 5: 30-50+ Percent Reduction Goal (Mandatory)

Public Agency Actions (In addition to actions established in previous Stage)

- Initiate Mandatory Water Conservation Regulations as an Ordinance.
- Establish and enforce mandatory water consumption goals and allocations for all customers.
- All water use not required for health and safety is prohibited.

Water Customer Actions (In addition to actions established in previous Stage)

- Comply with mandatory water conservation regulations.
- Prohibition of all outside water use unless necessary for the preservation of health and safety and the public welfare.
- Watering with hand-held five gallon maximum bucket, filled at exterior hose bib or interior faucet (not by hose) shall be allowed at any time. This will assist in preserving vegetable gardens or fruit trees. Outdoor use of bath water, dishwater, and laundry water for irrigation purposes is encouraged to the extent this practice is allowed under local health and safety regulations.

- The filling, refilling or adding of water to swimming and/or wading pools is prohibited.
- The operation of any ornamental fountain or similar structure is prohibited.

The City has established the following customer classifications and the allocation method for each classification during a water shortage:

- Single Family -Hybrid of Per-capita Allocation and Percentage Reduction.
- Multi-Family -Hybrid of Per-capita Allocation and Percentage Reduction.
- Commercial -Percentage Reduction.
- Industrial -Percentage Reduction.
- Fire lines -No Reduction.
- Temporary -No Reduction.
- Municipal -Percentage Reduction.
- Schools -Percentage Reduction.
- Churches -Percentage Reduction.
- Unaccounted -No Reduction.
- New Demand -Per-capita Allocation.

The following priorities for use of available water, based on California Water Code Chapter 3 and community input were used in establishing consumption limits. In order of preference pursuant to the 2010 City's UWMP they are:

- Health and Safety - interior residential and fire fighting.
- Commercial, Industrial and Governmental Uses - maintain jobs and economic base.
- Permanent Crops - takes five to ten years to replace.
- Annual Crops - protect jobs.
- Existing Landscaping - especially trees and shrubs.
- New Demand - projects without permits when shortage declared.

Each customer will be notified of their classification and allotment by mail before the effective date of the Water Shortage Emergency. New customers and connections will be notified at the time service commences. In a disaster, prior notice of allotment may not be possible; notice will be provided by other means. The City also has a water waste ordinance. In April 1989, the City adopted Ordinance 89-6 prohibiting water waste (see Appendix F). The ordinance defined prohibited activities and the penalties to be imposed for violations.

ENTITLEMENTS/REGULATORY APPROVALS

Water Code Section 10910(d)(2) requires the identification of existing water supply entitlements, water rights, or water service contracts, federal, state, and local permits for construction of necessary infrastructure, and any regulatory approvals required in order to be able to deliver the water supply. The provision of water for the proposed project would require approval from the City of Ventura.

The City of Ventura would review the project plans to ensure that there is adequate infrastructure and water supply to serve the project. In order to identify improvements required to serve the proposed development area, a preliminary water system design report

will be prepared by a licensed Civil Engineer who is approved by the City of Ventura. The report will include an analysis of both the water and reclaimed water systems. The report will include a hydraulic analysis of the proposed systems and identify existing facilities and pipelines that will need to be upgraded to meet the additional demands. A utility plan will be prepared showing the layout and sizes of the waterlines ad reclaimed waterlines required to serve the proposed development area. It is anticipated that an assessment district will be set up to establish an equitable means of paying for the required infrastructure. This design report and utility plan will serve as a basis of design only and shall be re-evaluated as each parcel develops. Each development within the project site will be reviewed at the time of submittal for analysis of effects to the City's systems. Each development will be conditioned and the conditions would only be valid for a set period. Once that period ends, the development will be treated as a new project and new conditions will be required.

Building/grading permits would be required from the City of Ventura to install or conduct improvements to water distribution facilities to serve the proposed development. No other federal, state, or local permits for construction of necessary infrastructure associated with delivering the water supply would be required. No regulatory approvals are required in order to convey the water supply to the project area. If approved, development accommodated by the proposed project would be served by the City of Ventura, which obtains water from various sources including the Ventura River, Casitas Municipal Water District, the Mound Groundwater Basin, the Santa Paula Groundwater Basin, and the Oxnard Plain Groundwater Basin. Existing allotments allow for continued production to meet demand over the 20 year planning horizon. In addition, a State Water Project entitlement of 10,000 AFY also exists, but has not been incorporated into the delivery system.

PROJECT IMPACTS

The proposed General Plan Amendments would allow for the development of up to 1,258,000 square feet of commercial uses, and 75,000 square feet of industrial uses. Table 11 shows the estimated water demand generated by the proposed project. Water demand for development accommodated in the project area would be 379 AFY. The 379 AFY increase in demand resulting from the proposed project represents approximately 1.9% of the projected 2015 annual citywide target demand (20,163 AF).

Table 11
Estimated Water Demand of the Proposed Project
Based on a Maximum Development Scenario

Use	Unit(s)	Water Duty Factor	Water Demand GPD	Water Demand AFY
		Quantity[1]		
Commercial	1,258,000 sf	250 gpd/1,000 sf	314,500	352
Industrial	75,000 sf	315 gpd/1,000 sf	23,625	27
Total Demand with Proposed General Plan Amendments			**338,125**	**379**

1. Duty factors are consistent with the City of Ventura 2005 General Plan EIR.
sf = square feet
AFY=Acre-feet per year
gpd = gallons per day

CONCLUSION

The proposed General Plan Amendments would accommodate up to 1,258,000 square feet of commercial development and 75,000 square feet of industrial development. Water demand associated with this development is estimated at 379 AFY. This amount represents approximately 1.9% of the projected 2015 annual citywide target demand (20,163 AF).

An increased water demand of 379 AFY generated by the proposed project could be accommodated by the normal year surplus indicated in Table 7 (1,487 AF in 2015). In addition, the additional 379 AFY of demand could be accommodated by the surplus in a single-dry year scenario through the year 2035. However, as shown in Table 8, projected water demand would exceed the projected supply in Year 3 of a multiple dry year scenario from 2015 through 2035, requiring the use of banked groundwater. With the additional 379 AFY required by the proposed project, 89 AFY of banked groundwater would be required in a multiple dry year scenario in the year 2015; 115 AFY of banked groundwater would be required in a multiple dry year scenario in the year 2020; 987 AFY of banked groundwater would be required in a multiple dry year scenario in the year 2025; 1,898 AFY of banked groundwater would be required to meet demand in a multiple dry year scenario in 2030; and 2,464 AFY of banked groundwater would be required to meet demand in a multiple dry year scenario in 2035. As shown in Table 6, banked groundwater totals 22,000 AFY through 2035. Therefore, banked groundwater would be sufficient to accommodate the additional demand generated by the proposed project in all multiple dry year scenarios through 2035.

Based on the 2010 UWMP, there is adequate water to supply the project under the normal, single dry year, and multiple dry year scenarios over the next 20 years. However, recent developments related to supply constraints along with the list of approved projects have triggered the need for a reevaluation of water needs. A technical study assessing the City's water needs is currently being undertaken by RBF. The supply study will need to be completed before the conclusions of this water supply assessment can be validated.

REFERENCES

City of San Buenaventura, Department of Public Works. December 2010. Urban Water Management Plan

City of San Buenaventura, 2011. Water Master Plan.

City of San Buenaventura. 2005. General Plan Final Environmental Impact Report.

City of San Buenaventura. September 2008. 2008 Biennial Water Supply Assessment Report.

Senate Bill No. 610, Approved by the Governor and filed with the Secretary of State October 9, 2001.

Appendix F

Traffic Study

Prepared by Associated Transportation Engineers

OLIVAS PARK DRIVE EXTENSION PROJECT EIR
VENTURA, CALIFORNIA

TRAFFIC AND CIRCULATION STUDY

ATE Project #10067 **December 4, 2012**

Prepared for:
Rincon Consultants, Inc.
180 Ashwood Avenue
Ventura, CA 93003

ASSOCIATED TRANSPORTATION ENGINEERS

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December 4, 2012 10067R01.RPT

Mr. Paul Calderwood
Rincon Consultants, Inc.
180 North Ashwood Avenue
Ventura, CA 93003

TRAFFIC AND CIRCULATION STUDY FOR THE OLIVAS PARK DRIVE EXTENSION PROJECT EIR - CITY OF VENTURA

Associated Transportation Engineers (ATE) is pleased to submit the following traffic and circulation study for the Olivas Park Drive Extension Project. The study examines existing and future traffic volumes in the study-area and determines the need for improvements based on City of Ventura thresholds. A discussion of impacts to the regional CMP system and the Ventura County roadway network is also provided. It our understanding that the results of the study will be incorporated into the EIR being prepared by Rincon Consultants Inc., for the project.

We appreciate the opportunity to assist you with this project. Please contact our office if you have any questions or comments regarding the contents of the study.

Associated Transportation Engineers

Scott A. Schell, AICP, PTP
Vice President

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INTRODUCTION

This study contains an analysis of traffic and circulation issues associated with the Olivas Park Drive Extension Project, proposed by the City of Ventura. The study provides information relative to existing and future traffic conditions within the project study-area. Future traffic conditions are evaluated for two General Plan Buildout scenarios. The scope of work analyzed in this study was developed based on input received from staff at the City's Public Works and Community Development Departments. It is our understanding that the information presented in the study will be incorporated into the Environmental Impact Report (EIR) being prepared for the project by Rincon Consultants.

PROJECT DESCRIPTION

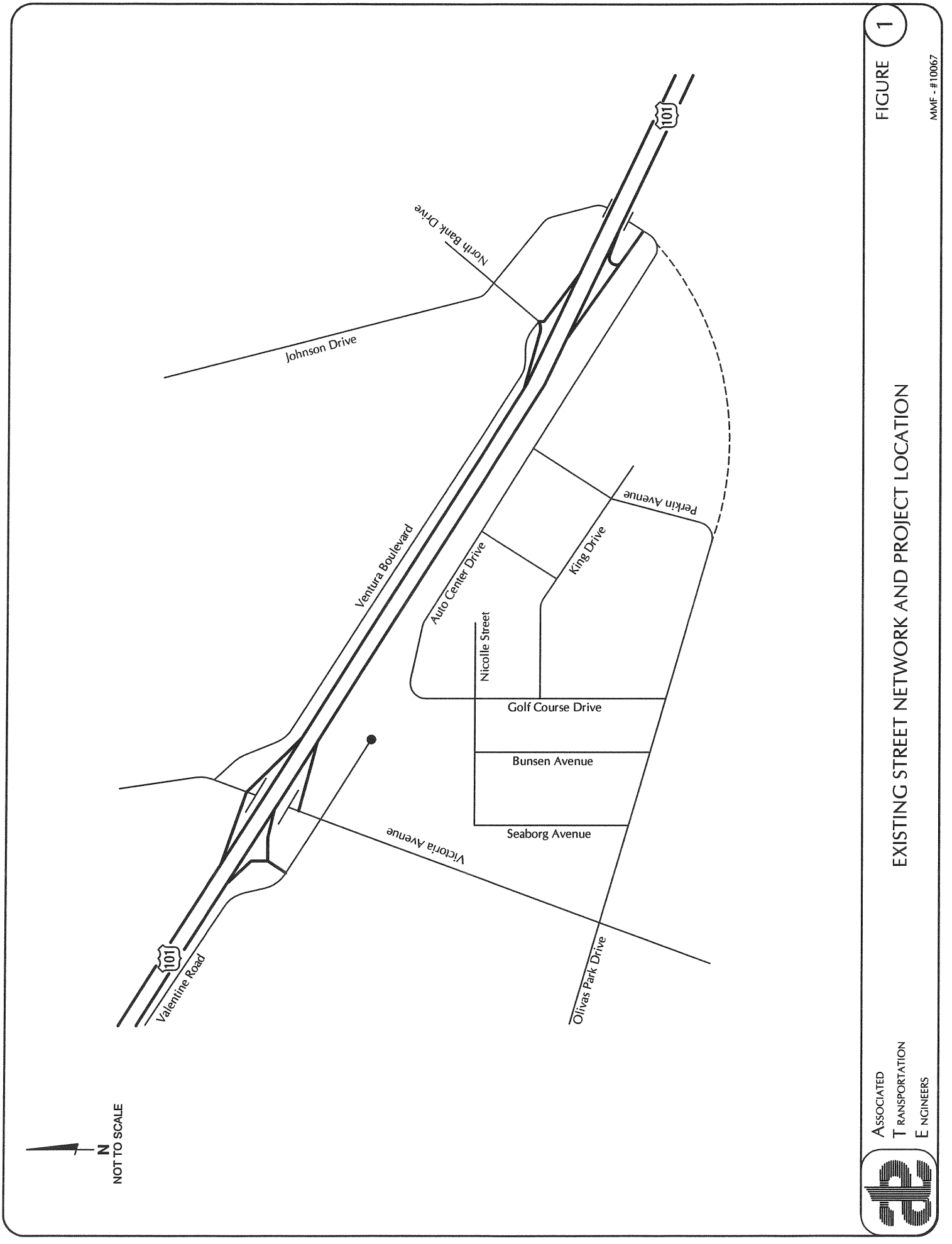
The City of Ventura is proposing to extend Olivas Park Drive as a 4-lane Secondary Arterial from Golf Course Drive to the intersection of Auto Center Drive - Johnson Drive at the southbound U.S. Highway 101 on/off ramps. The proposed extension will transition to join the existing improvements at the U.S. Highway 101 southbound ramps/Johnson Drive interchange. No improvements other than the transition are proposed as part of the project at the U.S. Highway 101 southbound ramps/Johnson Drive interchange. There are no additional improvements planned or proposed by the City at the interchange.

The project will provide a direct connection from Victoria Avenue to the Johnson Drive undercrossing of U.S. Highway 101. The Olivas Park Drive extension would provide a greater degree of access and circulation for the businesses in the Auto Center area of Ventura. Figure 1 illustrates the general location of the proposed roadway extension.

- The Olivas Park Drive extension will have a cross-section that varies between 82 feet and 88 feet, be a 4-lane section (11- and 12-foot travel lanes) with a raised median (14-foot) and 2 bike lanes (6-foot).

- Between Golf Course Drive and Perkin Avenue, Olivas Park Drive will have 8-foot sidewalks on both sides, East of Perkin Avenue, Olivas Park Drive will have 10-foot sidewalks on the north side and no sidewalk on the south side. The new sidewalk will tie in with the existing sidewalk on Auto Center Drive.

- Maintain the connection of the existing segment of Auto Center Drive with the future Olivas Park Drive extension. City staff have indicated that under the ultimate plan, the Auto Center Drive intersection at Olivas Park Drive will remain unsignalized.


101
North Bank Drive
Johnson Drive
Ventura Boulevard
Perkin Avenue
King Drive
Auto Center Drive
Nicolle Street
Golf Course Drive
Bunsen Avenue
Seaborg Avenue
Victoria Avenue
Olivas Park Drive
101
Valentine Road
N
NOT TO SCALE
FIGURE 1
EXISTING STREET NETWORK AND PROJECT LOCATION
MMF - #10067
Associated
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The proposed extension of Olivas Park Drive crosses unimproved and developed lands which are predominately within the current 100-year flood boundary. The transportation facilities are part of a larger scope of capital improvements which include the construction of a levee/flood wall along the southern and eastern boundaries of the project site. The proposed levee would be approximately 5,400 feet in length and would extend from the intersection of Golf Course Drive and Olivas Park Drive along the northeastern boundary of the Buenaventura Golf Course and the northwestern bank of the Santa Clara River. At the northern location where the levee transitions to floodwall, the proposed roadway extension would be elevated and cross over the top of the levee and descend to connect with Johnson Drive. At this location, the roadway would effectively serve as the levee for approximately 100 linear feet. Figure 2 illustrates the preliminary road and levee alignment.

The project would also include General Plan amendments would involve land use re-designations involving eight parcels within the 110.83 acre project area. The land use designations for three parcels would change from Agricultural to Commercial, two parcels would change from Specific Plan to Commercial, two parcels would change from Industrial to Commercial, and one parcel would change from Agricultural to Industrial. The proposed land use designations would allow development of the site with approximately 1,258,000 square feet of commercial space and 75,000 square feet of industrial space.

PROJECT STUDY AREA

The study-area is generally bounded by U.S. Highway 101 on the north, Victoria Avenue on the west and the Santa Clara River on the east and the south. The boundaries of the study-area are shown in Figure 1, along with the general alignment of the Olivas Park Drive extension. The impacts of the project are assessed by analyzing existing and future traffic volumes assuming completion of the proposed improvements. The transportation facilities analyzed in this study, which were determined through consultation with City staff, are listed in Table 1.

Table 1
Study Transportation Facilities

Roadways	Intersections
U.S. Highway 101	U.S. Highway 101 Northbound Ramps/Victoria Avenue
Victoria Avenue	U.S. Highway 101 Southbound Ramps/Valentine Road
Johnson Drive	Victoria Avenue/Valentine Road
Olivas Park Drive	Victoria Avenue/Olivas Park Drive
Perkin Avenue	Olivas Park Drive/Golf Course Drive
Auto Center Drive	Perkin Avenue/King Drive
	Perkin Avenue/Auto Center Drive
	U.S. Highway 101 Southbound Ramps/Johnson Drive
	North Bank Drive/Ventura Boulevard
	Johnson Drive/North Bank Drive

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PRELIMINARY ROAD AND LEVEE ALIGNMENT

FIGURE 2

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EXISTING CONDITIONS

Roadway Network

The project study area is includes a circulation system comprised of U.S. Highway 101, arterial streets, and collector streets. The study-area intersections and lane geometries are illustrated on Figure 3. The major components of the existing street network are discussed in the following text.

U.S. Highway 101, located along the northern boundary of the study-area, is a multi-lane freeway which serves as a major arterial for the City and is the principal inter-city route along this portion of the Pacific Coast. The segment of U.S. Highway 101 adjacent to the study-area is a 6- to 12-lane freeway including auxiliary lanes. Access to the freeway from the study-area is currently provided via the interchanges located at Victoria Avenue on the west and Johnson Drive on the east.

Victoria Avenue, located along the western boundary of the study-area, is a north-south arterial street which extends northerly from its terminus near the Channel Islands Harbor through the eastern portion of the City to Foothill Road. North of U.S. Highway 101, Victoria Avenue is 6- to 8-lanes wide and south of U.S. Highway 101 it is 4- to 6-lanes wide. Traffic signals and left-turn channelization are present at most intersections along the Victoria Avenue corridor.

Olivas Park Drive is 2- to 4-lane east-west roadway extending east of Harbor Boulevard past Victoria Avenue to Perkin Avenue, where it currently terminates.

Johnson Drive is a 2- to 4-lane north-south roadway located east and north of the study-area. Johnson Drive currently extends north from U.S. Highway 101 southbound ramps and terminates just south of State Route 126. Johnson Drive serves as a major access route from U.S. Highway 101 to the eastern portion of the City.

Golf Course Drive is a 2-lane roadway running north of Olivas Park Drive to Auto Center Drive. Golf Course Drive provides direct access to commercial and light industrial land uses east of Victoria Avenue.

Auto Center Drive is a 2-lane east-west roadway terminating at Johnson Drive, with additional intersections at Lake Drive and Perkin Avenue. Auto Center Drive provides direct access to the auto dealerships, commercial and light industrial land uses located in the study-area.

Perkin Avenue is a 2-lane roadway running south of Auto Center Drive which terminates at its intersection with Olivas Park Drive. Perkin Avenue provides direct access to commercial and light industrial land uses east of Victoria Avenue.

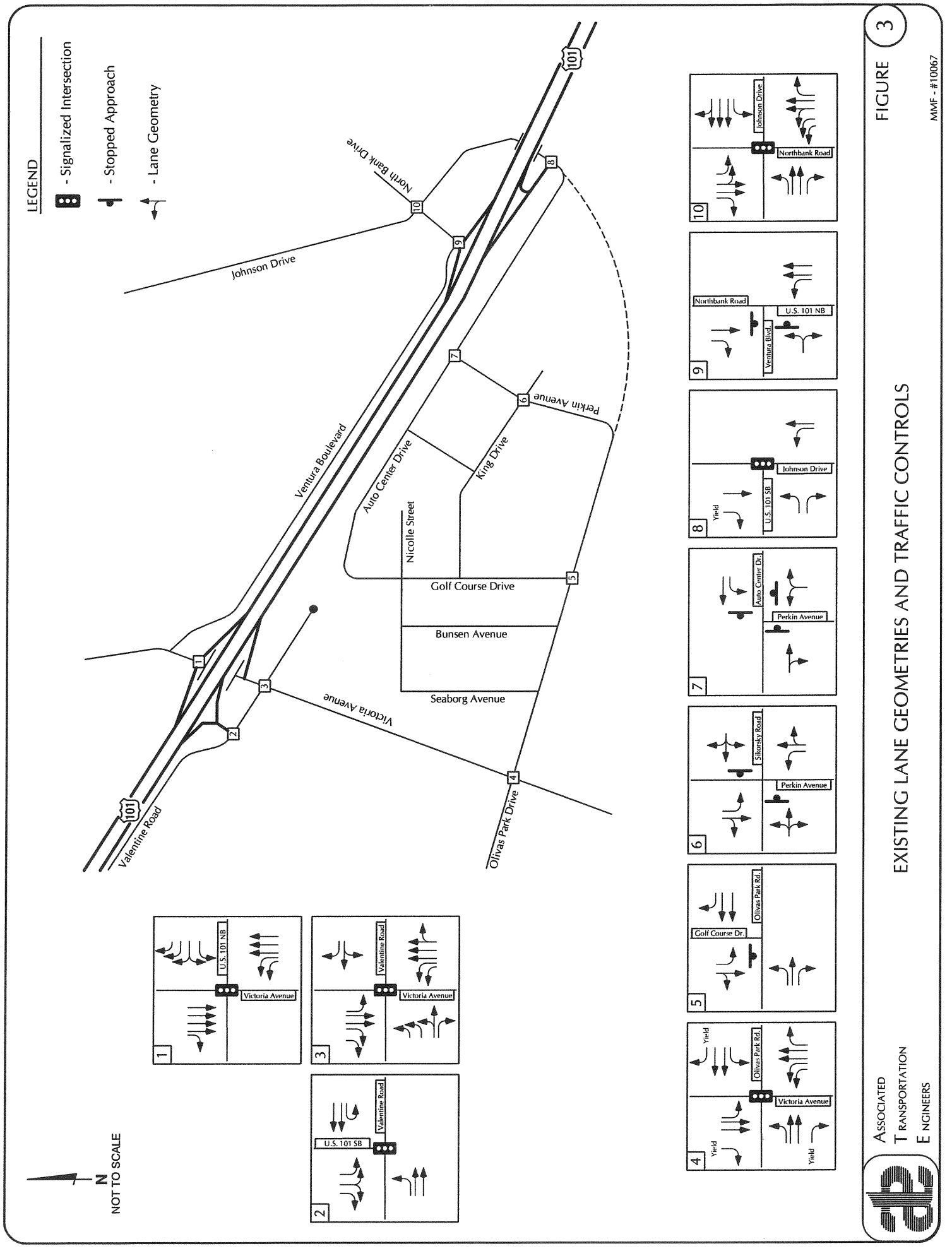

FIGURE 3

EXISTING LANE GEOMETRIES AND TRAFFIC CONTROLS

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King Drive is a 2-lane east-west roadway with intersections at Golf Course Drive, Lake Drive and Perkin Avenue. King Drive provides direct access to commercial and light industrial uses east of Victoria Avenue.

North Bank Drive is a 4-lane north-south roadway which provides a connection between the U.S. Highway 101 northbound ramps and Johnson Drive.

Existing Roadway Volumes

Existing average daily traffic (ADT) volumes for the study-area roadways are illustrated in Figure 4. The ADT volumes for the street segments included in the study-area were obtained from 24-hour machine counts conducted by ATE in October of 2010 for this study. The study-area roadway segments are generally operating acceptably within their respective design capacities as shown in Table 2.

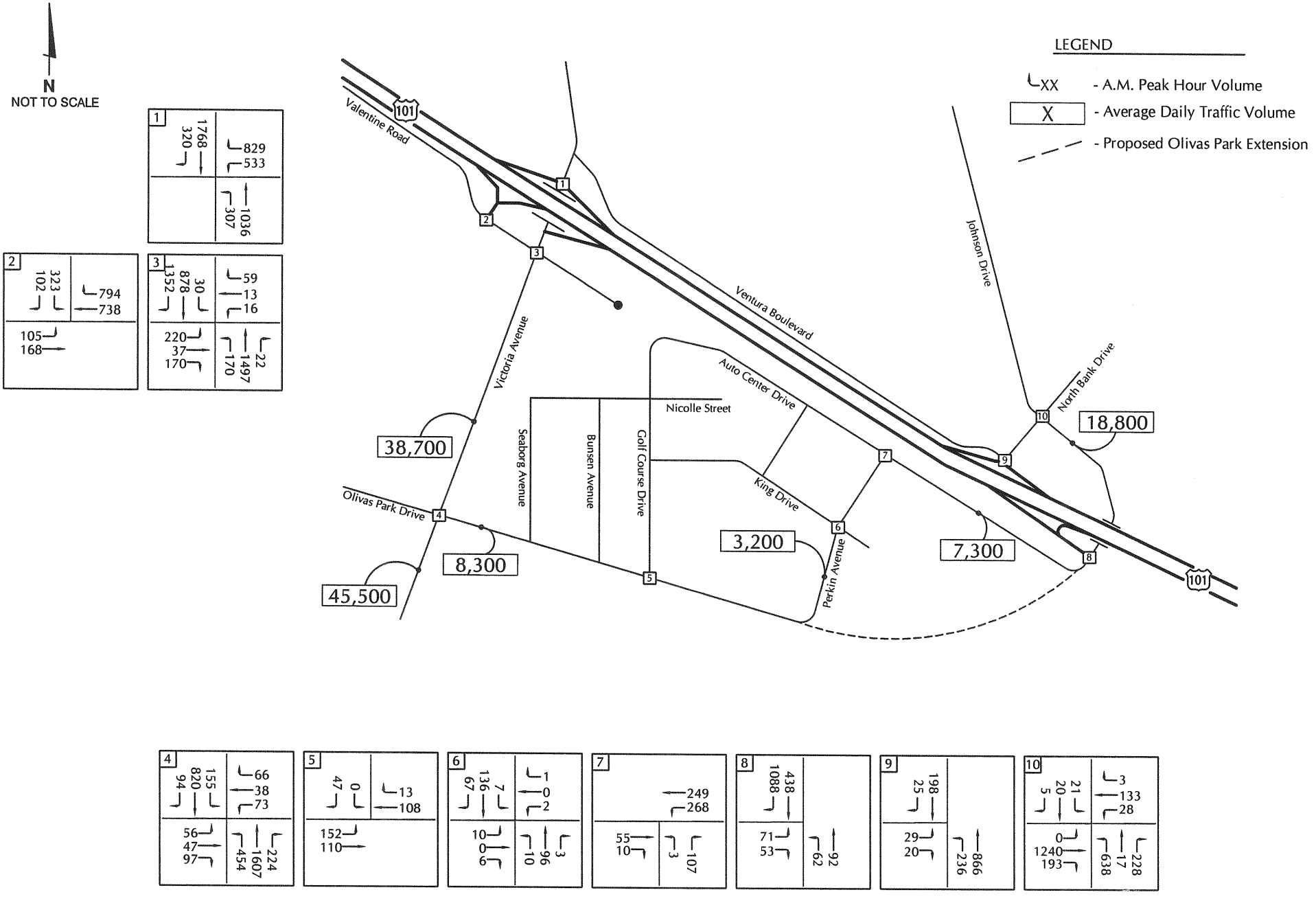
Table 2
Existing Roadway Volumes

Roadway Segment	Geometry	ADT
Victoria Avenue n/o Olivas Park Drive	4-Lanes	38,700
Victoria Avenue s/o Olivas Park Drive	4-Lanes	45,500
Olivas Park Drive e/o Victoria Avenue	4-Lanes	8,300
Perkin Avenue n/o Olivas Park Drive	2-Lanes	3,200
Auto Center Drive e/o Perkin Avenue	2-Lanes	7,300
Johnson Drive s/o North Bank Drive	4-Lanes	18,800

Existing Intersection Volumes and Levels of Service

Because traffic flow on urban arterials is most constrained at intersections, a detailed analysis of traffic flow must examine the operating conditions of critical intersections during peak travel periods. The rating of existing or future intersection operations is based on the concept of level of service. In determining the operational characteristics of the study-area intersections with existing or future traffic volumes, "Levels of Service" (LOS) A through F are applied, with LOS A indicating very good operation and LOS F indicating poor operation (more complete definitions of levels of service are contained in the Technical Appendix). The City considers LOS E acceptable at freeway interchange intersections. At all other principal intersections within the City, LOS D has been adopted as the peak hour design objective.

Figures 4 and 5 illustrate the existing A.M. and P.M. peak hour turning volumes for the study-area intersections. The peak hour turning volumes for the study intersections were obtained from counts conducted by ATE in October of 2010. Levels of service for the signalized intersections were calculated using the Intersection Capacity Utilization (ICU) methodology. A brief discussion of the ICU methodology used in estimating intersection levels of service is included in the Technical Appendix to this document. Levels of service for the unsignalized intersections were determined assuming the locations to be signalized.



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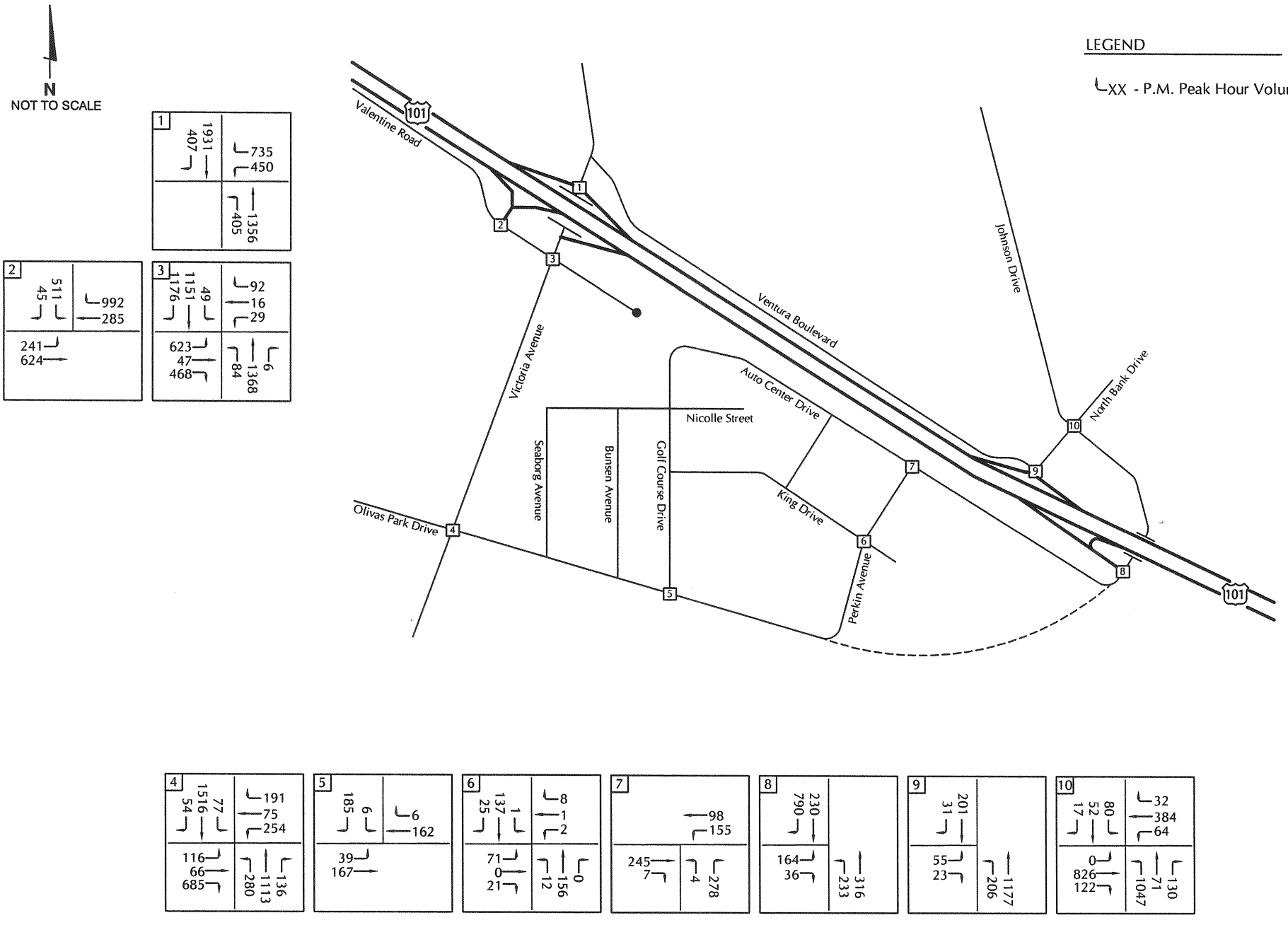
EXISTING AVERAGE DAILY AND A.M. PEAK HOUR TRAFFIC VOLUMES

FIGURE 4

MMF - #10067



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EXISTING P.M. PEAK HOUR TRAFFIC VOLUMES

FIGURE 5

MMF - #10067

Table 3 lists the control type and the A.M. and P.M. peak hour levels of service for each of the intersections. Level of service calculation worksheets are contained in the Technical Appendix.

Table 3
Existing Intersection Levels of Service

No.	Intersection	Control Type	ICU or Delay / LOS	
			A.M. Peak Hour	P.M. Peak Hour
1.	U.S. Highway 101 NB Ramps/Victoria Ave.	Signal	0.58/LOS A	0.61/LOS B
2.	U.S. Highway 101 SB Ramps/Valentine Rd.	Signal	0.38/LOS A	0.35/LOS A
3.	Victoria Ave./Valentine Rd.	Signal	0.57/LOS A	0.65/LOS B
4.	Victoria Ave./Olivas Park Dr.	Signal	0.66/LOS B	0.74/LOS C
5.	Olivas Park Dr./Golf Course Dr.[a]	Signal	0.16/LOS A	0.22/LOS A
6.	Perkin Ave./King Dr.[a]	Signal	0.15/LOS A	0.17/LOS A
7.	Perkin Ave./Auto Center Dr.[a]	Signal	0.28/LOS A	0.43/LOS A
8.	U.S. 101 Highway SB Ramps/Johnson Dr.	Signal	0.59/LOS A	0.39/LOS A
9.	North Bank Dr./Ventura Blvd.[a]	Signal	0.68/LOS B	0.74/LOS C
10.	Johnson Dr./North Bank Dr.	Signal	0.52/LOS A	0.50/LOS A

(a) Analyzed as signalized intersections.

The data presented in Table 3 indicate that the study-area intersections currently operate at the LOS C or better, which is considered acceptable based on the City of Ventura performance standard.

IMPACT THRESHOLDS

City of Ventura

The City's traffic performance standard and impact thresholds were used to assess the significance of the traffic impacts resulting from the proposed project and associated General Plan land use change. The standards and thresholds are discussed in the following text.

Performance Standard: Level of Service E (peak hour ICU less than or equal to 1.00) for freeway ramp intersections and non-Principal signalized intersections that are located on the CMP network. Level of Service D (peak hour ICU less than or equal to 0.90) for all other Principal intersections.

Thresholds of Significance (for impact analyses): For an intersection that is forecast to operate worse than its performance standard, the impact of a given project is considered to be significant if the project increase the ICU by more than 0.01. An ICU increase of more than 0.01 does not cause the threshold of significance to be exceeded if the with project ICU does not exceed the maximum ICU value.

PROJECT IMPACT METHODOLOGY

Traffic Analysis Scenarios

The following traffic analysis scenarios have been developed for this study. These scenarios were developed in conjunction with City staff in order to quantify project-specific impacts to the study-area roadways and intersection. The scenarios were developed in order to quantify specific land uses to be used to generate traffic volumes for two General Plan Buildout scenarios, as well as to establish the roadway network assumptions for use in determining levels of service for the two General Plan Buildout scenarios.

> Current General Plan Buildout (Year 2025) Analysis: 2-lane Olivas Park Drive; North Bank Drive/Ventura Boulevard intersection (Signalized); Auto Center Drive connection (Unsignalized); King Drive extension with proposed land use change. Buildout traffic model forecast assume the adopted land uses and zoning in the current General Plan.
>
> Proposed General Plan Buildout (Year 2025) Analysis: 4-lane Olivas Park Drive; North Bank Drive/Ventura Boulevard intersection (Signalized); Auto Center Drive connection (Unsignalized); King Drive extension with proposed land use change. Buildout traffic model forecast assume the changes noted to the adopted land uses and zoning.

Land-Use Trip Generation Comparison

The construction of the Olivas Park Drive extension will provide greater access and circulation for the existing businesses in the Auto Center area of Ventura. The extension will also have a growth inducing effect. The current City of Ventura General Plan allows for the development of approximately 300,000 square feet of retail commercial space, 300,000 square feet of light industrial space, 50,000 square feet of office space and 50 apartment units in the project area. Proposed amendments and zone changes would allow for the development of approximately 1,258,000 square feet of retail commercial space and 75,000 square feet of light industrial space in the project area.

The following project area General Plan Buildout trip generation comparison is provided. Average daily, A.M. and P.M. peak hour trip generation estimates for the current and proposed General Plan land uses are presented in Table 4. Rates published in the Institute of Transportation Engineers (ITE), Trip Generation, 8th Edition for Low Rise Apartment (Land Use Code #221), General Office Building (Land Use Code #710), "Shopping Center" (Land Use Code #820) and General Light Industrial (Land Use Code #110) were used to develop the trip generation estimates for the two General Plan Buildout land use scenarios.

Table 4
Project Area General Plan Buildout Land Use Trip Generation Comparison

Project Area Land Uses	Size	ADT	A.M. Peak Hour			P.M. Peak Hour		
			Entering	Exiting	Total	Entering	Exiting	Total
Current General Plan:								
Retail Commercial	300,000 SF	10,302	150	96	246	429	462	891
Office	50,000 SF	550	68	10	78	12	62	74
Light Industrial	300,000 SF	2,091	243	33	276	36	255	291
Residential	50 units	330	5	18	23	19	10	29
	Subtotal:	13,273	466	157	623	496	789	1,285
Proposed General Plan:								
Retail Commercial	1,258,000 SF	43,199	629	402	1,031	1,799	1,937	3,736
Light Industrial	75,000 SF	523	61	8	69	9	64	73
	Subtotal:	43,722	690	410	1,100	1,808	2,001	3,809
	Net Change:	+30,449	+224	+253	+477	+1,312	+1,212	+2,524

The current General Plan Buildout land uses are estimated to generate a total of 13,273 average daily trips, 623 A.M. and 1,285 P.M. peak hour trips. The proposed General Plan Buildout land uses are estimated to generate a total of 43,722 average daily trips, 1,100 A.M. and 3,809 P.M. peak hour trips. The net change in trip generation results in an increase of 30,449 average daily trips, 1,312 A.M. and 2,524 P.M. peak hour trips.

Current General Plan Buildout (Year 2025) Traffic Volume Forecasts - Existing Zoning

The City of Ventura Traffic Model was used to develop Year 2025 traffic volume forecasts based on the land uses and circulation system planned in the current General Plan. The estimated project area General Plan Buildout trip generation presented in Table 4 is accounted for by the traffic model.

Olivas Park Drive Extension

- Olivas Park Drive extended as a 2-lane facility.
- Unsignalized intersection at Auto Center Drive and Olivas Park Drive with median configuration prohibiting eastbound left turns.
- Signalization of the North Bank Drive and Ventura Boulevard intersection.

Current General Plan Buildout (Year 2025) Roadway Volumes

The current General Plan Buildout average daily traffic volume forecasts for the study-area roadway segments area illustrated in Figure 6 and presented in Table 5.

Table 5
Current General Plan Buildout (Year 2025) Roadway Volumes

Location	Geometry	ADT
Victoria Avenue n/o Olivas Park Drive	6-Lanes	54,000
Victoria Avenue s/o Olivas Park Drive	6-Lanes	60,000
Olivas Park Drive e/o Victoria Avenue	4-Lanes	18,000
Olivas Park Drive w/o Perkin Avenue	2-Lanes	10,000
Perkin Avenue n/o Olivas Park Drive	2-Lanes	4,000
Auto Center Drive e/o Perkin Avenue	2-Lanes	6,000
Johnson Drive s/o North Bank Drive	4-Lanes	27,000

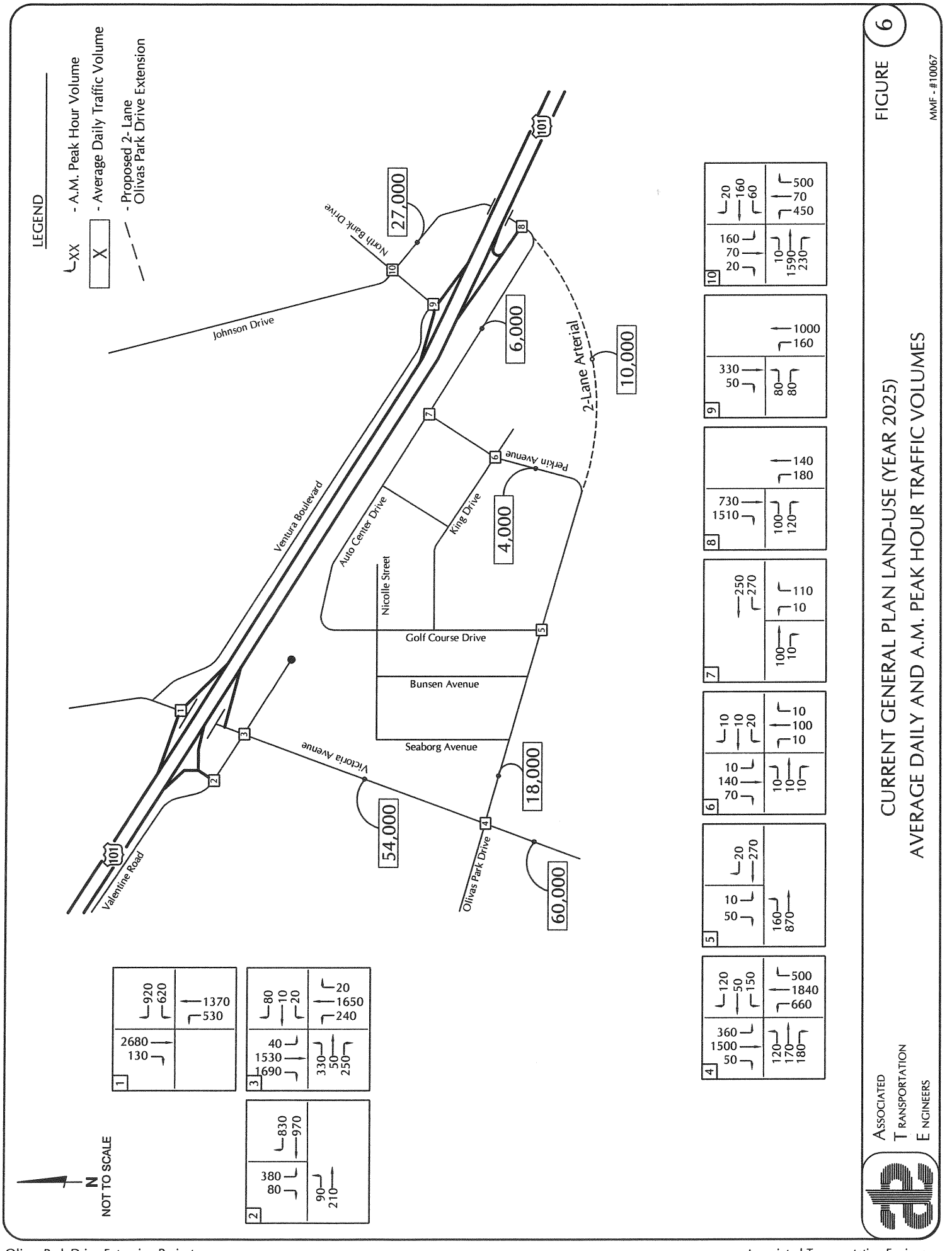
The study-area roadway segments are generally operating acceptably within their respective design capacities as shown in Table 5.

Current General Plan Buildout (Year 2025) Intersection Volumes and Levels of Service

Current General Plan Buildout A.M. and P.M. peak hour traffic volumes are illustrated in Figures 6 and 7 respectively. Intersection levels of service were calculated assuming future geometrics at the study-area intersections. Table 6 lists the results of the current General Plan Buildout intersection level of service calculations. Level of Service calculation worksheets are contained in the Technical Appendix.

Table 6
Current General Plan Buildout (Year 2025) Intersection Levels of Service

No.	Intersection	A.M. Peak Hour ICU or Delay / LOS	P.M. Peak Hour ICU or Delay / LOS
1.	Victoria Ave./U.S. Highway 101 NB Ramps	0.78/LOS C	0.65/LOS B
2.	Valentine Rd./U.S. Highway 101 SB Ramps	0.48/LOS A	0.52/LOS A
3.	Victoria Ave./Valentine Rd.	0.66/LOS B	0.77/LOS C
4.	Victoria Ave./Olivas Park Dr.	0.66/LOS B	0.83/LOS D
5.	Olivas Park Dr./Golf Course Rd.[(a)]	0.58/LOS A	0.74/LOS C
6.	Perkin Rd./King Dr.[(a)]	0.18/LOS A	0.22/LOS A
7.	Perkin Rd./Auto Center Dr.[(a)]	0.32/LOS A	0.44/LOS A
8.	Johnson Dr./U.S. Highway 101 SB Ramps	0.63/LOS B	0.96/LOS E
9.	North Bank Dr./Ventura Blvd.	0.41/LOS A	0.87/LOS D
10.	Johnson Dr./North Bank Dr.	0.75/LOS C	0.82/LOS D


LEGEND
XX - A.M. Peak Hour Volume
X - Average Daily Traffic Volume
- Proposed 2- Lane Olivas Park Drive Extension
Johnson Drive
North Bank Drive
27,000
6,000
10,000
2-Lane Arterial
Perkin Avenue
4,000
Ventura Boulevard
Auto Center Drive
King Drive
Nicolle Street
Golf Course Drive
Bunsen Avenue
Seaborg Avenue
Victoria Avenue
54,000
18,000
60,000
Olivas Park Drive
Valentine Road
101
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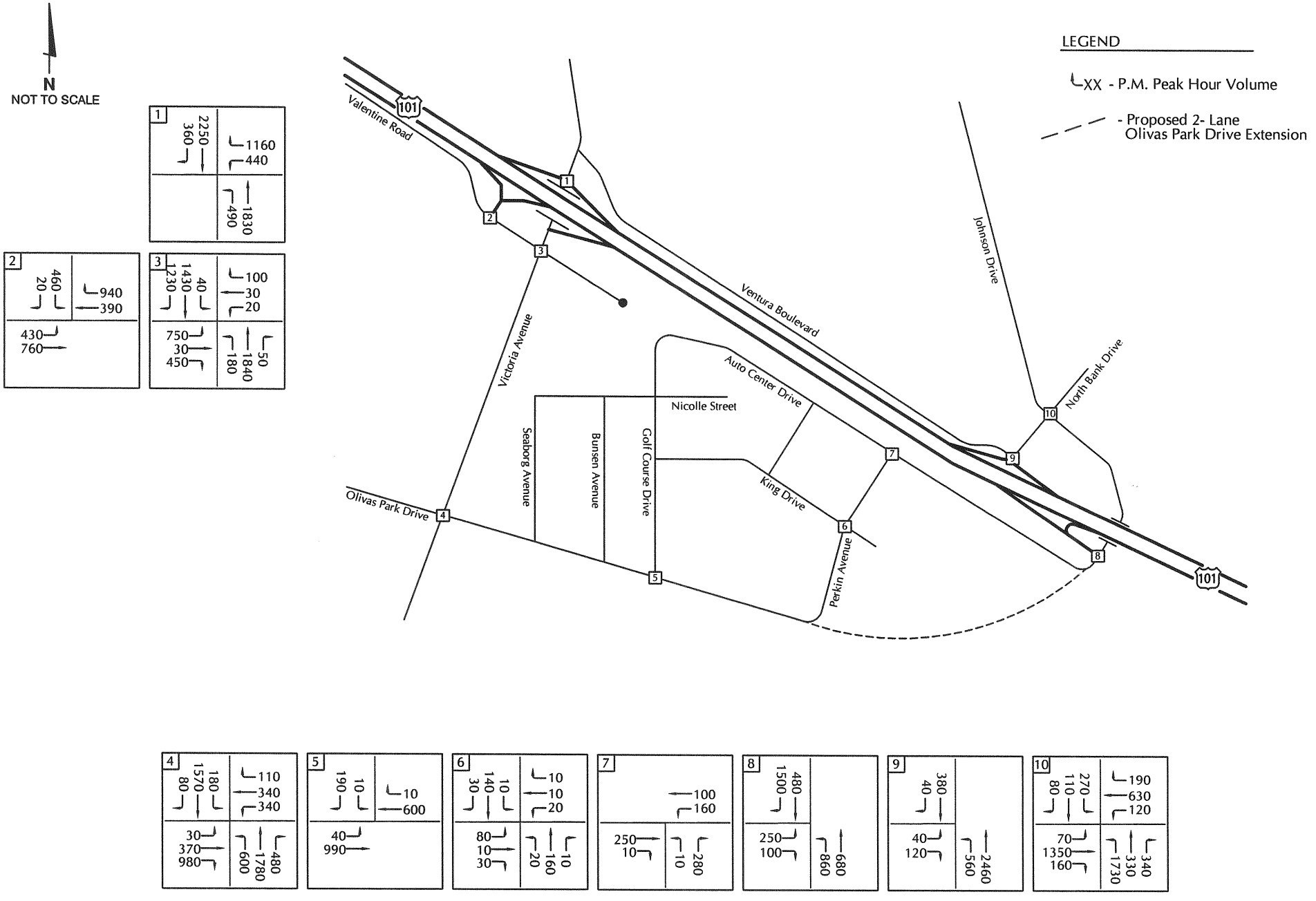
N
FIGURE 6
CURRENT GENERAL PLAN LAND-USE (YEAR 2025)
AVERAGE DAILY AND A.M. PEAK HOUR TRAFFIC VOLUMES
MMF - #10067
Associated Transportation Engineers



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CURRENT GENERAL PLAN LAND-USE (YEAR 2025) P.M. PEAK HOUR TRAFFIC VOLUMES

FIGURE 7

MMF - #10067

As shown in Table 6 all of the study-area intersections would operate at LOS E/D or better which is considered acceptable based on the City of Ventura performance standard.

Proposed General Plan Buildout (Year 2025) Traffic Volume Forecasts - Proposed Zoning

The City of Ventura Traffic Model was used to develop Year 2025 traffic volume forecasts based on the land use and circulation system proposed by the General Plan Amendment and zone change. The estimated General Plan Buildout trip generation presented in Table 4 is accounted for by the traffic model.

Olivas Park Drive Extension

- Olivas Park Drive extended as a 4-lane facility.
- Unsignalized intersection at Auto Center Drive and Olivas Park Drive with median configuration prohibiting eastbound left-turns.
- Signalization of the North Bank Drive and Ventura Boulevard intersection.

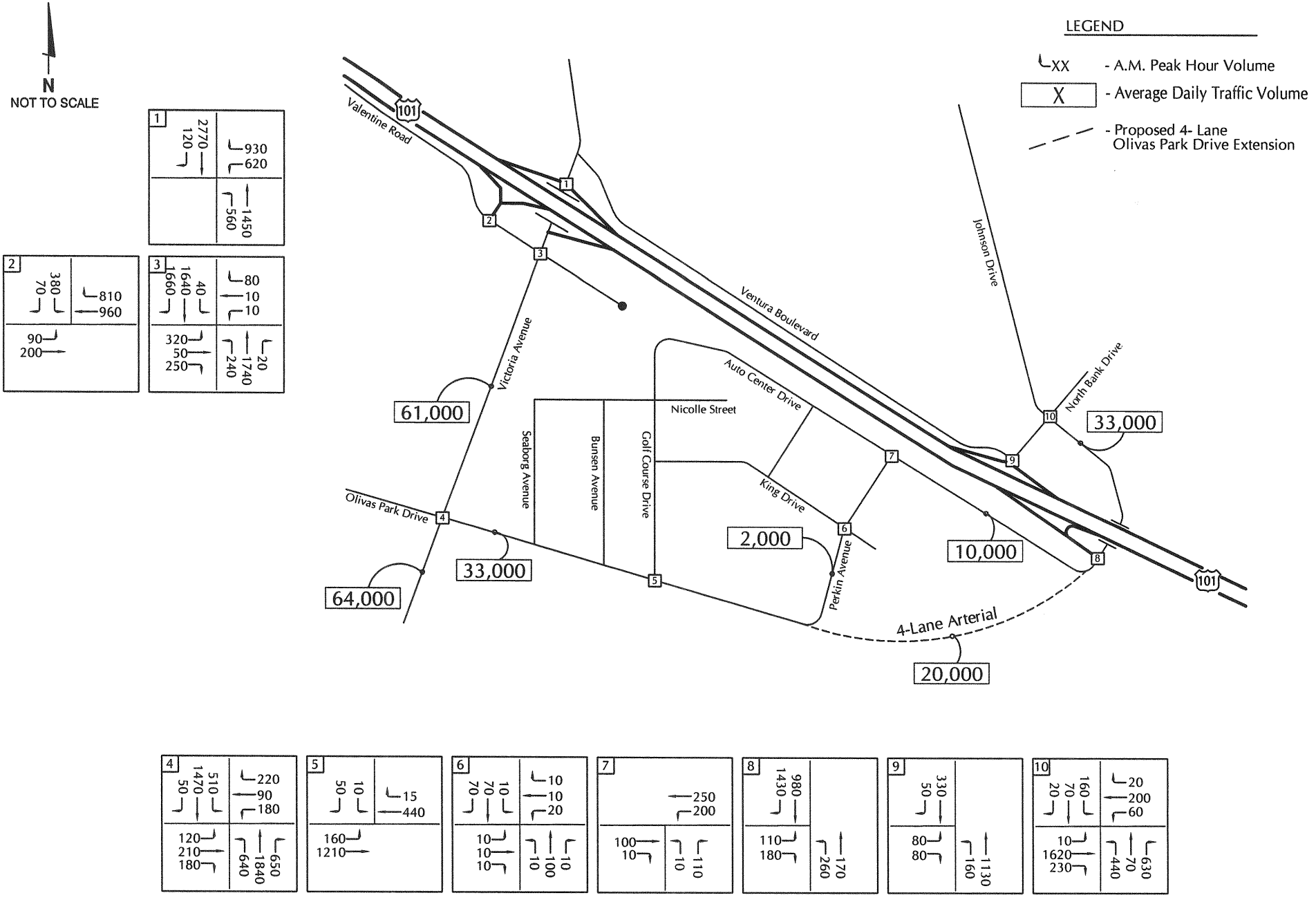
Proposed General Plan Buildout (Year 2025) Roadway Volumes

The proposed General Plan Buildout average daily traffic volume forecasts for the study-area roadway segments area illustrated in Figure 8 and presented in Table 7.

Table 7
Proposed General Plan Buildout (Year 2025) Roadway Volumes

Location	Geometry	ADT
Victoria Avenue n/o Olivas Park Drive	6-Lanes	61,000
Victoria Avenue s/o Olivas Park Drive	6-Lanes	64,000
Olivas Park Drive e/o Victoria Avenue	4-Lanes	33,000
Olivas Park Drive w/o Perkin Avenue	4-Lanes	20,000
Perkin Avenue n/o Olivas Park Drive	2-Lanes	2,000
Auto Center Drive e/o Perkin Avenue	2-Lanes	10,000
Johnson Drive s/o North Bank Drive	4-Lanes	33,000

The study-area roadway segments are generally operating acceptably within their respective design capacities as shown in Table 7.



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PROPOSED GENERAL PLAN LAND-USE (YEAR 2025)
AVERAGE DAILY AND A.M. PEAK HOUR TRAFFIC VOLUMES

FIGURE 8

MMF - #10067

Proposed General Plan Buildout (Year 2025) Intersection Volumes and Levels of Service

Proposed General Plan Buildout A.M. and P.M. peak hour traffic volumes are illustrated in Figures 8 and 9 respectively. Intersection levels of service were calculated assuming future geometrics at the study-area intersections. Table 8 lists the results of the proposed General Plan Buildout (Year 2025) intersection level of service calculations. Level of Service calculation worksheets are contained in the Technical Appendix.

Table 8
Proposed General Plan Buildout (Year 2025) Intersection Levels of Service

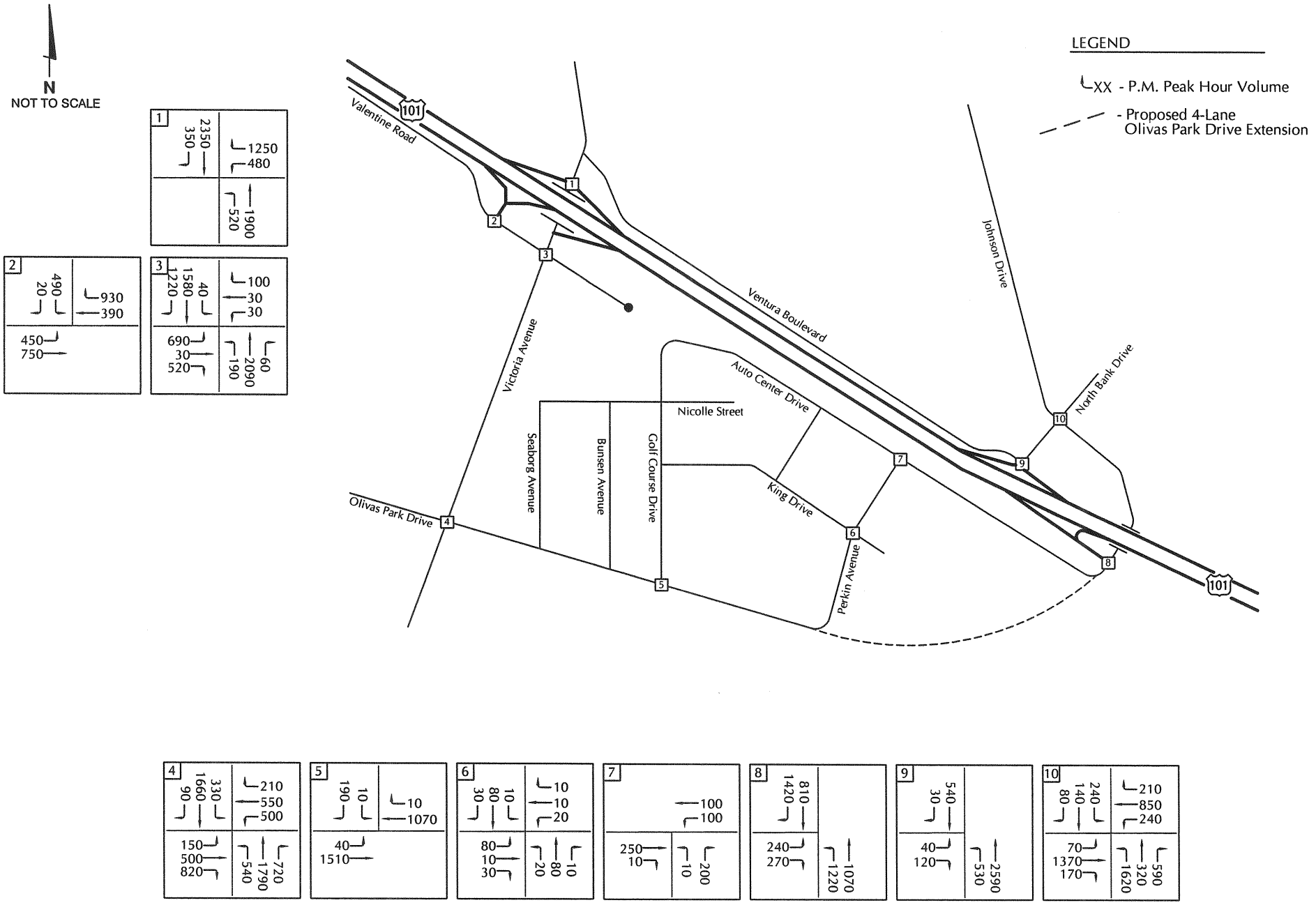
No.	Intersection	A.M. Peak Hour ICU or Delay / LOS	P.M. Peak Hour ICU or Delay / LOS
1.	Victoria Ave./U.S. Highway 101 NB Ramps	0.80/LOS C	0.69/LOS B
2.	Victoria Ave./U.S. Highway 101 NB Ramps	0.48/LOS A	0.55/LOS A
3.	Victoria Ave./Valentine Rd.	0.68/LOS B	0.86/LOS D
4.	Victoria Ave./Olivas Park Dr.	0.72/LOS C	**0.99/LOS E**
5.	Olivas Park Dr./Golf Course Rd[(a)]	0.41/LOS A	0.59/LOS A
6.	Perkin Rd./King Dr.[(a)]	0.14/LOS A	0.18/LOS A
7.	Perkin Rd./Auto Center Dr.[(a)]	0.27/LOS A	0.36/LOS A
8.	Johnson Dr./U.S. Highway 101 SB Ramps	0.84/LOS D	**1.42/LOS F**
9.	North Bank Dr./Ventura Blvd.	0.45/LOS A	0.91/LOS E
10.	Johnson Dr./North Bank Dr.	0.84/LOS D	0.89/LOS D

(a) Analyzed as signalized intersection.

As shown in Table 8, the intersection of Victoria Avenue/Olivas Park Drive is forecast to operate at LOS E (ICU = 0.99) during the P.M. peak hour and the intersection of U.S. Highway 101 southbound ramps/Johnson Drive is forecast to operate at LOS F (ICU = 1.42) during the P.M. peak hour, exceeding the City's performance threshold.

PROJECT-SPECIFIC IMPACTS

Project-Specific Impacts were evaluated based on the City of Ventura Performance Standard and Impact Thresholds.



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PROPOSED GENERAL PLAN LAND-USE (YEAR 2025) P.M. PEAK HOUR TRAFFIC VOLUMES

FIGURE 9

MMF - #10067

General Plan Buildout (Year 2025) Intersection and Levels of Service

Project-Specific intersection impacts are identified in Tables 9 and 10.

Table 9
General Plan Buildout (Year 2025) A.M. Peak Hour Intersection LOS Comparison

No.	Intersection	ICU / LOS		Change V/C	Impact?
		Current G.P.	Proposed G.P.		
1.	Victoria Ave./U.S. Highway 101 NB Ramps	0.78/LOS C	0.80/LOS C	0.02	NO
2.	Valentine Rd./U.S. Highway 101 SB Ramps	0.48/LOS A	0.48/LOS A	0.00	NO
3.	Victoria Ave./Valentine Rd.	0.66/LOS B	0.68/LOS B	0.02	NO
4.	Victoria Ave./Olivas Park Dr.	0.66/LOS C	0.72/LOS C	0.06	NO
5.	Olivas Park Dr./Golf Course Rd	0.58/LOS A	0.41/LOS A	-0.17	NO
6.	Perkins Rd./King Dr.	0.18/LOS A	0.14/LOS A	-0.04	NO
7.	Perkins Rd./Auto Center Dr.	0.32/LOS A	0.27/LOS A	-0.05	NO
8.	Johnson Dr./U.S. Highway 101 SB Ramps	0.63/LOS C	0.84/LOS D	0.21	NO
9.	North Bank Dr./Ventura Blvd.	0.41/LOS A	0.45/LOS A	0.04	NO
10.	Johnson Dr./North Bank Dr.	0.75/LOS C	0.84/LOS D	0.09	NO

(a) Analyzed as signalized intersections.

Table 10
General Plan Buildout (Year 2025) P.M. Peak Hour Intersection LOS Comparison

No.	Intersection	ICU / LOS		Change V/C	Impact?
		Current G.P.	Proposed G.P.		
1.	Victoria Ave./U.S. Highway 101 NB Ramps	0.65/LOS B	0.69/LOS B	0.04	NO
2.	Valentine Rd./U.S. Highway 101 SB Ramps	0.52/LOS A	0.55/LOS A	0.03	NO
3.	Victoria Ave./Valentine Rd.	0.77/LOS C	0.86/LOS D	0.09	NO
4.	Victoria Ave./Olivas Park Dr.	0.83/LOS D	**0.99/LOS E**	**0.16**	**YES**
5.	Olivas Park Dr./Golf Course Rd.	0.74/LOS C	0.59/LOS A	-0.15	NO
6.	Perkins Rd./King Dr.	0.22/LOS A	0.18/LOS A	-0.04	NO
7.	Perkins Rd./Auto Center Dr.	0.44/LOS A	0.36/LOS A	-0.08	NO
8.	Johnson Dr./U.S. Highway 101 SB Ramps	0.96/LOS E	**1.42/LOS F**	**0.46**	**YES**
9.	North Bank Dr./Ventura Blvd.	0.87/LOS D	0.91/LOS E	0.04	NO
10.	Johnson Dr./North Bank Dr.	0.82/LOS D	0.89/LOS D	0.07	NO

(a) Analyzed as signalized intersections.

The data presented in Table 10 indicate that the 4-lane extension and General Plan amendments would result in a project-specific impact at the Victoria Avenue/Olivas Park Drive intersection and U.S. Highway 101 southbound ramps/Johnson Drive intersection during the P.M. peak hour period. The diversion of traffic due to the Olivas Park Drive extension is illustrated in comparison of the intersection levels of service.

MITIGATION MEASURES

Victoria Avenue/Olivas Park Drive : Forecast traffic volumes indicate that significant congestion could occur at the intersection of Victoria Avenue/Olivas Park Drive with the proposed General Plan, with an estimate of LOS E (ICU = 0.99) during the P.M. peak hour. This can be mitigated to LOS B and D during the A.M. and P.M peak hour periods respectively, by installing dual left-turn lanes on the westbound approach of the intersection as shown in Tables 11 and 12. The timing of this improvement would be dependent on traffic volume growth at the intersection, as determined through monitoring by the City.

Table 11
Victoria Avenue/Olivas Park Drive
Mitigated A.M. Peak Hour Level of Service

Intersection	Proposed General Plan Buildout	
	General Plan Geometry	Improved General Plan Geometry
Victoria Avenue/Olivas Park Drive	V/C = 0.72/LOS C	V/C = 0.66/LOS B

Table 12
Victoria Avenue/Olivas Park Drive
Mitigated P.M. Peak Hour Level of Service

Intersection	Proposed General Plan Buildout	
	General Plan Geometry	Improved General Plan Geometry
Victoria Avenue/Olivas Park Drive	V/C = 0.99/LOS E	V/C = 0.83/LOS D

U.S. Highway 101 Southbound Ramps/Johnson Drive: Forecast traffic volumes indicate that significant congestion could occur at the intersection of U.S. Highway 101 Southbound Ramps/Johnson Drive with the proposed General Plan, with an estimate of LOS F (ICU = 1.42) during the P.M. peak hour. Currently two travel lanes and a right-turn lane to the southbound on-ramp are provided under U.S. Highway 101. Support columns and the Santa Clara River embankment preclude the construction of additional travel lanes within the existing pavement. This location can not be mitigated by new construction without significant modifications to the southbound U.S. Highway 101 hook ramps, the Union Pacific bridge underpass and the Johnson Drive underpass.

ATE and City of Ventura staff discussed the following alternative measures to address the operation of the U.S. Highway 101 Southbound Ramps/Johnson Drive intersection.

Limit Future Development: Monitor the operation of the intersection annually and implement trip generation restrictions (when the threshold of ICU = 0.95 is reached) such that the City's LOS E threshold is not exceeded. The trip generation restrictions will have to be established as a mitigation measure and linked to the issuance of building permits.

Eliminate Left-turns: Eliminate left-turns to the southbound ramp at the intersection and provide a second northbound through travel lane from Auto Center Drive to North Bank Drive. This would cause vehicles to divert to the U.S. Highway 101 southbound ramps at Victoria Avenue or make U-turns at the Johnson Drive/Motel 6 Driveway intersection to access southbound U.S. Highway 101. An exclusive right-turn lane on the northbound approach of the Victoria Avenue/Valentine Road intersection would be required as part of this alternative. Johnson Drive is re-striped to provide two northbound through lanes under the U.S. Highway 101. Caltrans approval would be required. The resulting intersection levels of service are provided in Tables 13 and 14.

Table 13
No Left-Turns to the U.S. Highway 101 Southbound Ramp from Johnson Drive Mitigated A.M. Peak Hour Level of Service

Intersection	Proposed General Plan Buildout	
	With Left-Turns	Without Left-Turns
Victoria Avenue/Valentine Road[a]	0.68/LOS B	0.68/LOS B
Victoria Avenue/Olivas Park Drive	0.66/LOS B	0.66/LOS B
Olivas Park Drive/Golf Course Drive	0.41/LOS A	0.59/LOS A
U.S. Highway 101 SB Ramps/Johnson Drive[b]	0.84/LOS D	0.38/LOS A
Johnson Drive/Motel 6 Driveway	0.53/LOS A	0.62/LOS B

(a) Assumes exclusive northbound right-turn lane. (b) Assumes two through lanes under U.S. Highway 101

Table 14
No Left-Turns to the U.S. Highway 101 Southbound Ramp from Johnson Drive
Mitigated P.M. Peak Hour Level of Service

Intersection	Proposed General Plan Buildout	
	With Left-Turns	Without Left-Turns
Victoria Avenue/Valentine Road[(a)]	0.86/LOS D	0.90/LOS D
Victoria Avenue/Olivas Park Drive	0.83/LOS D	0.83/LOS D
Olivas Park Drive/Golf Course Drive	0.59/LOS A	0.67/LOS B
U.S. Highway 101 SB Ramps/Johnson Drive[(b)]	**1.42/LOS F**	0.68/LOS B
Johnson Drive/Motel 6 Driveway	0.50/LOS A	0.88/LOS D

(a) Assumes exclusive northbound right-turn lane. (b) Assumes two through lanes under U.S. Highway 101

P.M. Peak Hour Only Restriction of Left-turns: Restrict left-turns to the southbound ramp at the intersection during the P.M. peak hour period only. Left-turns would be allowed during the remainder of the day. This would cause vehicles to divert to the U.S. Highway 101 southbound ramps at Victoria Avenue or make U-turns at the Johnson Drive/Motel 6 Driveway intersection to access southbound U.S. Highway 101 only during the P.M. peak hour between 4:00 P.M. and 6:00 P.M. An exclusive right-turn lane on the northbound approach of the Victoria Avenue/Valentine Road intersection would be required as part of this alternative. Johnson Drive is re-striped to provide two northbound through lanes under the U.S. Highway 101. Caltrans approval would be required. The resulting P.M. peak hour intersection levels of service are provided in Table 14.

Statement of Overriding Consideration: If the City determines that improvements at the existing interchange are not feasible and accepts the LOS F operation during the P.M. peak hour and make a statement of overriding consideration.

VENTURA COUNTY GENERAL PLAN CONSISTENCY

The Olivas Park Drive project, in and of itself, will not affect the County road system. The project will have the effect of diverting existing traffic onto Olivas Park Drive currently using Victoria Avenue and U.S. Highway 101. Traffic volumes on the County road system would not be affected whether or not the Olivas Park Drive project is built or not. For example, future traffic to and from the south on Victoria Avenue will continue to travel south on Victoria Avenue whether or not access to Johnson Drive and the U.S. Highway 101 southbound ramps is provided by the Olivas Park Drive extension.

The study-area land uses, which were used to generate future traffic projections, would impact the County road system. However, these land uses are not part of the project. Discretionary land uses within the study-area will be tested against the County policies when their development application is submitted to the City of Ventura.

VENTURA COUNTY CONGESTION MANAGEMENT PROGRAM

According to the County's Congestion Management Program (CMP), the minimum acceptable standard for traffic operations is LOS E.[1] However, so that local jurisdictions are not unfairly penalized for existing congestion, CMP locations currently operating in the LOS F range are considered acceptable.

Roadway Operations: Only two study-area roadway segments are in the County's CMP network. As reviewed in this study, Victoria Avenue was analyzed and mitigated based on the City's LOS E/D standard, which is more stringent than the CMP LOS E standard. Consequently, the project would be consistent with the County's CMP.

Intersection Operations: Victoria Avenue/U.S. Highway 101 northbound ramps, Victoria Avenue/Valentine Road and Victoria Avenue/Olivas Park Drive are in the County's CMP network. As was the case for the roadway operations discussed above, the intersections were also analyzed and mitigated based on the City's LOS E/D standard, which is more stringent than the CMP LOS E standard. Consequently, the project would be consistent with the County's CMP.

Traffic Level of Service Monitoring for the Ventura County Congestion Management Program, Ventura County Transportation Commission, 2004.

STUDY PARTICIPANTS AND REFERENCES

Associated Transportation Engineers

Scott A. Shell, AICP, PTP, Principal Transportation Planner
Darryl F. Nelson, PTP Senior Transportation Planner
Matthew Farrington, Transportation Planner

Persons Contacted

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Lucho Rodriguez, City of Ventura Public Works Department
Paul Calderwood, Rincon Consultants, Inc.
Joe Power, Rincon Consultants, Inc.

References

General Plan Circulation Element Update Traffic Study, City of San Buenaventura Community Services Department, Engineering Division, August, 2005.

2010 Highway Capacity Manual, National Research Council, 2010.

Traffic Level of Service Monitoring for the Ventura County Congestion Management Program, Ventura County Transportation Commission, 2004.

Trip Generation, Institute of Transportation Engineers, 8th Edition, 2008.

TECHNICAL APPENDIX

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Ref. 1 - U.S. Highway 101 Northbound Ramps/Victoria Avenue
Ref. 2 - U.S. Highway 101 Southbound Ramps/Valentine Road
Ref. 3 - Victoria Avenue/Valentine Road
Ref. 4 - Victoria Avenue/Olivas Park Drive
Ref. 5 - Olivas Park Drive/Golf Course Road
Ref. 6 - Perkin Avenue/King Drive
Ref. 7 - Perkin Avenue/Auto Center Drive
Ref. 8 - U.S. Highway 101 Southbound Ramps/Johnson Drive
Ref. 9 - North Bank Drive/Ventura Boulevard
Ref. 10- Johnson Drive/North Bank Drive

LEVEL OF SERVICE DEFINITIONS

LEVEL OF SERVICE DEFINITIONS

In rating roadway and intersection operating conditions with existing or future traffic volumes, "Levels of Service" (LOS) A through F are used, with LOS A indicating very good operation and LOS F indicating poor operation. More complete level of service definitions are:

LOS	V/C Range	Definition
A	0.00-0.60	Conditions of free unobstructed flow, no delays and all signal phases sufficient in duration to clear all approaching vehicles.
B	0.61-0.70	Conditions of stable flow, very little delay, a few phases are unable to handle all approaching vehicles.
C	0.71-0.80	Conditions of stable flow, delays are low to moderate, full use of peak direction signal phases is experienced.
D	0.81-0.90	Conditions approaching unstable flow, delays are moderate to heavy, significant signal time deficiencies are experienced for short durations during the peak traffic period.
E	0.91-1.00	Conditions of unstable flow, delays are significant, signal phase timing is generally insufficient, congestion exists for extended duration throughout the peak period.
F	> 1.00	Conditions of forced flow, travel speeds are low and volumes are well above capacity. This condition is often caused when vehicles released by an upstream signal are unable to proceed because of back-ups from a downstream signal.

ROADWAY ENGINEERING DESIGN CAPACITIES

FIGURE 4.2.2

AVERAGE DAILY TRAFFIC (ADT) LEVEL OF SERVICE (LOS) THRESHOLDS COUNTY ROADS AND CONVENTIONAL STATE HIGHWAYS					
	CLASS I			CLASS II	CLASS III
LOS	2 LANES	4 LANES	6 LANES	2 LANES	2 LANES
A	2,400	19,000	29,000	1,500	350
B	5,600	28,000	42,000	3,900	2,000
C	10,000	38,000	57,000	7,000	3,300
D	16,000	47,000	70,000	11,000	5,900
E	27,000	58,000	87,000	21,000	16,000

ADT/LOS THRESHOLDS FREEWAYS				
LOS	4 LANES	6 LANES	8 LANES	10 LANES
A	31,000	46,000	62,000	77,000
B	48,000	71,000	95,000	119,000
C	68,000	102,000	136,000	169,000
D	82,000	123,000	164,000	205,000
E	88,000	132,000	176,000	220,000

SOURCE: VENTURA COUNTY PUBLIC WORKS AGENCY 9/94

R. 12/20/94

Roadway Engineering Design Capacities

Type of Roadway	# of Lanes	LOS A		LOS B		LOS C		LOS D		LOS E	
		Low	High	Low	High	Low	High	Low	High	Low	High
Arterial	2 Lanes	8,100	12,000	9,400	14,000	10,800	16,000	12,100	18,000	13,500	20,000
Arterial	4 Lanes	16,100	23,900	18,900	27,900	21,600	31,900	24,300	35,900	27,000	39,900
Major	2 Lanes	6,500	9,600	7,500	11,200	8,600	12,800	9,700	14,400	10,800	16,000
Major	4 Lanes	12,900	19,200	15,100	22,300	17,200	25,500	19,400	28,700	21,600	31,900
Collector	- -	4,600	7,100	5,400	8,200	6,200	9,400	6,900	10,600	7,700	11,800

The roadway capacities listed above are "rule of thumb" figures only. Some factors which affect these capacities are intersections (numbers and configuration), degrees of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, level of truck and bus traffic and level of pedestrian and bicycle traffic.

DISCUSSION OF INTERSECTION CAPACITY UTILIZATION (ICU)

DISCUSSION OF INTERSECTION CAPACITY UTILIZATION (ICU)

The ability of a roadway to carry traffic is referred to as capacity. The capacity is usually less at intersections because traffic flows continuously between them and only during the green phase at them. Capacity at intersections is best defined in terms of vehicles per lane per hour of green. The technique used to compare the volumes and capacity of an intersection is known as Intersection Capacity Utilization (ICU). ICU or volume-to-capacity ratio, usually expressed as a percentage, is the proportion of an hour required to provide sufficient capacity to accommodate all intersection traffic if all approaches operate at capacity. If an intersection is operating at 80 percent of capacity, then 20 percent of the signal cycle is not used.

The ICU calculation assumes that an intersection is signalized and that the signal is ideally timed. Although calculating ICU for an unsignalized intersection is invalid, the presumption is that a signal can be installed and the calculation shows whether the geometrics are capable of accommodating the expected volumes. It is possible to have an ICU well below 100 percent, yet have severe traffic congestion. This would occur if one or more movements is not getting sufficient time to satisfy its demand, and excess time exists on other movements. This is an operational problem which should be addressed.

Capacity is often defined in terms of roadway width. However, standard lanes have approximately the same capacity whether they are 11 or 14 feet wide. Data collected by Kunzman Associates indicates a typical lane, whether a through-lane or a left-turn lane, has a capacity of approximately 1,700 vehicles per hour, with nearly all locations showing a capacity greater than 1,600 vehicles per hour per lane. This finding is published in the August, 1978 issue of ITE Journal in the article entitled, "Another Look at Signalized Intersection Capacity" by William Kunzman. For this study, a capacity of 1,600 vehicles per hour per lane will be assumed for left-turn, through, and right-turn lanes as per City policy.

The yellow time can either be assumed to be completely used and no penalty applied, or it can be assumed to be only partially usable. Total yellow time accounts for less than 10 percent of a cycle, and a penalty of up to five percent is reasonable. On the other hand, during peak hour traffic operation, the yellow times are nearly completely used. In this study, no penalty will be applied for the yellow because the capacities have been assumed to be only 1,600 vehicles per hour per lane when in general they are 1,700-1,800 vehicles per hour per lane.

The ICU technique is an ideal tool to quantify existing as well as future intersection operation. The impact of adding a lane can be quickly determined by examining the effect the lane has on the intersection capacity utilization.

Source: Oxnard Airport Business Park Traffic Study, Kunzman Assoc., City of Oxnard, 1985.

EXISTING TRAFFIC COUNT DATA

Prepared by NDS/ATD

Volumes for: Thursday, October 21, 2010	City: Ventura	NB	SB	EB	WB	Total
Location: Victoria Ave N/o Olivas Park Dr	Project: 10-5421-003	19,644	19,055	0	0	38,699

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	27		48					12:00	355		275				
00:15	15		42					12:15	324		320				
00:30	25		52					12:30	357		302				
00:45	10	77	33	175			252	12:45	354	1390	236	1133			2523
01:00	10		27					13:00	302		245				
01:15	16		28					13:15	296		289				
01:30	11		17					13:30	299		288				
01:45	20	57	28	100			157	13:45	327	1224	300	1122			2346
02:00	16		35					14:00	286		277				
02:15	13		28					14:15	317		299				
02:30	23		23					14:30	282		349				
02:45	22	74	19	105			179	14:45	323	1208	332	1257			2465
03:00	11		20					15:00	309		330				
03:15	16		24					15:15	289		315				
03:30	27		18					15:30	347		387				
03:45	40	94	27	89			183	15:45	372	1317	397	1429			2746
04:00	22		19					16:00	315		358				
04:15	45		14					16:15	338		373				
04:30	64		30					16:30	366		392				
04:45	68	199	49	112			311	16:45	349	1368	400	1523			2891
05:00	68		37					17:00	393		396				
05:15	117		52					17:15	350		423				
05:30	160		89					17:30	378		396				
05:45	190	535	114	292			827	17:45	343	1464	382	1597			3061
06:00	185		153					18:00	309		357				
06:15	243		178					18:15	273		301				
06:30	265		217					18:30	323		306				
06:45	324	1017	220	768			1785	18:45	249	1154	284	1248			2402
07:00	292		198					19:00	204		281				
07:15	391		250					19:15	201		219				
07:30	447		256					19:30	147		229				
07:45	418	1548	278	982			2530	19:45	134	686	244	973			1659
08:00	426		259					20:00	144		228				
08:15	350		247					20:15	137		215				
08:30	396		227					20:30	108		205				
08:45	377	1549	247	980			2529	20:45	97	486	220	868			1354
09:00	303		239					21:00	112		193				
09:15	307		219					21:15	83		175				
09:30	260		234					21:30	95		154				
09:45	273	1143	235	927			2070	21:45	68	358	170	692			1050
10:00	277		182					22:00	88		161				
10:15	295		227					22:15	69		88				
10:30	251		247					22:30	59		94				
10:45	246	1069	270	926			1995	22:45	56	272	65	408			680
11:00	281		265					23:00	48		79				
11:15	286		261					23:15	46		87				
11:30	316		256					23:30	48		61				
11:45	294	1177	294	1076			2253	23:45	36	178	46	273			451
Total Vol.	8539		6532				15071		11105		12523				23628

	NB	SB	EB	WB	Total
Daily Totals :	19,644	19,055	0	0	38,699

	AM				PM		
Split %	56.7%	43.3%	38.9%		47.0%	53.0%	61.1%
AM				PM			
Peak Hr.	07:15	11:45	07:15	Peak Hr.	16:45	16:45	16:45
Volume	1682	1191	2725	Volume	1470	1615	3085
P.H.F.	0.941	0.930	0.969	P.H.F.	0.935	0.954	0.978
7 - 9 Vol.	3097	1962	5059	4 - 6 Vol.	2832	3120	5952
Peak Hr.	07:15	07:15	07:15	Peak Hr.	16:45	16:45	16:45
Volume	1682	1043	2725	Volume	1470	1615	3085
P.H.F.	0.941	0.938	0.969	P.H.F.	0.935	0.954	0.978

Prepared by NDS/ATD

Volumes for: Thursday, October 21, 2010	City: Ventura	NB	SB	EB	WB	Total
Location: Victoria Ave S/o Olivas Park Dr	Project: 10-5421-007	22,716	22,766	0	0	45,482

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	27		72					12:00	360		313				
00:15	17		51					12:15	369		339				
00:30	23		50					12:30	390		321				
00:45	13	80	28	201			281	12:45	369	1488	296	1269			2757
01:00	9		31					13:00	356		312				
01:15	12		27					13:15	275		317				
01:30	11		20					13:30	356		330				
01:45	17	49	39	117			166	13:45	356	1343	331	1290			2633
02:00	13		53					14:00	316		350				
02:15	15		24					14:15	356		390				
02:30	22		16					14:30	305		447				
02:45	19	69	19	112			181	14:45	350	1327	386	1573			2900
03:00	18		17					15:00	325		450				
03:15	19		20					15:15	358		374				
03:30	23		10					15:30	392		535				
03:45	39	99	21	68			167	15:45	457	1532	509	1868			3400
04:00	23		17					16:00	311		488				
04:15	37		13					16:15	419		482				
04:30	45		23					16:30	331		609				
04:45	62	167	35	88			255	16:45	409	1470	540	2119			3589
05:00	82		44					17:00	406		662				
05:15	139		48					17:15	366		595				
05:30	235		64					17:30	416		587				
05:45	275	731	93	249			980	17:45	350	1538	569	2413			3951
06:00	261		115					18:00	344		476				
06:15	351		143					18:15	297		430				
06:30	404		157					18:30	347		375				
06:45	475	1491	200	615			2106	18:45	307	1295	341	1622			2917
07:00	395		222					19:00	230		360				
07:15	509		253					19:15	219		307				
07:30	581		245					19:30	161		313				
07:45	547	2032	250	970			3002	19:45	159	769	272	1252			2021
08:00	544		241					20:00	145		257				
08:15	487		241					20:15	138		239				
08:30	486		256					20:30	112		271				
08:45	421	1938	259	997			2935	20:45	100	495	272	1039			1534
09:00	377		243					21:00	107		250				
09:15	346		221					21:15	92		234				
09:30	305		279					21:30	101		214				
09:45	342	1370	245	988			2358	21:45	90	390	185	883			1273
10:00	321		209					22:00	102		179				
10:15	352		260					22:15	68		109				
10:30	267		287					22:30	71		120				
10:45	301	1241	286	1042			2283	22:45	59	300	75	483			783
11:00	280		283					23:00	51		88				
11:15	321		282					23:15	54		91				
11:30	375		308					23:30	45		69				
11:45	329	1305	340	1213			2518	23:45	47	197	47	295			492
Total Vol.		10572		6660			17232			12144		16106			28250

	NB	SB	EB	WB	Total
Daily Totals :	22,716	22,766	0	0	45,482

	AM			PM		
Split %	61.4%	38.6%	37.9%	43.0%	57.0%	62.1%
AM				**PM**		
Peak Hr.	07:15	11:45	07:15	Peak Hr.	16:45	17:00	16:45
Volume	2181	1313	3170	Volume	1597	2413	3981
P.H.F.	0.938	0.965	0.959	P.H.F.	0.960	0.911	0.932
7 - 9 Vol.	3970	1967	5937	4 - 6 Vol.	3008	4532	7540
Peak Hr.	07:15	08:00	07:15	Peak Hr.	16:45	17:00	16:45
Volume	2181	997	3170	Volume	1597	2413	3981
P.H.F.	0.938	0.962	0.959	P.H.F.	0.960	0.911	0.932

Prepared by NDS/ATD

Volumes for: Thursday, October 21, 2010	City: Ventura	NB	SB	EB	WB	Total
Location: Olivas Park Dr E/o Victoria Ave	Project: 10-5421-001	0	0	4,127	4,162	8,289

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			3		4			12:00			82		90		
00:15			4		9			12:15			91		77		
00:30			6		2			12:30			78		100		
00:45			0	13	0	15	28	12:45			88	339	75	342	681
01:00			3		1			13:00			93		85		
01:15			3		2			13:15			66		80		
01:30			3		3			13:30			93		74		
01:45			10	19	20	26	45	13:45			71	323	70	309	632
02:00			10		22			14:00			65		67		
02:15			7		1			14:15			80		78		
02:30			11		5			14:30			58		88		
02:45			2	30	4	32	62	14:45			60	263	69	302	565
03:00			11		0			15:00			52		110		
03:15			5		4			15:15			59		57		
03:30			10		5			15:30			72		91		
03:45			8	34	8	17	51	15:45			82	265	83	341	606
04:00			5		9			16:00			57		110		
04:15			3		12			16:15			66		80		
04:30			11		14			16:30			79		166		
04:45			20	39	8	43	82	16:45			74	276	107	463	739
05:00			10		13			17:00			73		148		
05:15			12		9			17:15			66		121		
05:30			23		5			17:30			57		145		
05:45			40	85	14	41	126	17:45			53	249	79	493	742
06:00			35		13			18:00			53		57		
06:15			64		12			18:15			37		46		
06:30			65		25			18:30			29		64		
06:45			116	280	25	75	355	18:45			22	141	37	204	345
07:00			75		27			19:00			24		51		
07:15			74		35			19:15			28		36		
07:30			102		46			19:30			22		36		
07:45			134	385	53	161	546	19:45			20	94	22	145	239
08:00			110		54			20:00			21		28		
08:15			87		51			20:15			18		29		
08:30			68		44			20:30			11		18		
08:45			88	353	44	193	546	20:45			11	61	23	98	159
09:00			70		48			21:00			8		25		
09:15			57		43			21:15			14		12		
09:30			61		62			21:30			10		14		
09:45			60	248	49	202	450	21:45			11	43	16	67	110
10:00			60		58			22:00			6		17		
10:15			64		48			22:15			3		15		
10:30			51		62			22:30			9		8		
10:45			58	233	47	215	448	22:45			14	32	6	46	78
11:00			48		79			23:00			8		11		
11:15			79		58			23:15			14		8		
11:30			78		91			23:30			9		5		
11:45			84	289	80	308	597	23:45			2	33	0	24	57
Total Vol.				2008		1328	3336					2119		2834	4953

	NB	SB	EB	WB	Total
Daily Totals :	0	0	4,127	4,162	8,289

	AM				PM	
Split %	60.2%	39.8%	40.2%	42.8%	57.2%	59.8%
AM				PM		
Peak Hr.	07:30	11:45	11:45	Peak Hr.	12:15	16:30	16:30
Volume	433	347	682	Volume	350	542	834
P.H.F.	0.808	0.868	0.958	P.H.F.	0.941	0.816	0.851
7 - 9 Vol.	738	354	1092	4 - 6 Vol.	525	956	1481
Peak Hr.	07:30	07:30	07:30	Peak Hr.	16:15	16:30	16:30
Volume	433	204	637	Volume	292	542	834
P.H.F.	0.808	0.944	0.852	P.H.F.	0.924	0.816	0.851

Prepared by NDS/ATD

Volumes for: Thursday, October 21, 2010	City: Ventura	NB	SB	EB	WB	Total
Location: Perkins Ave N/o Olivas Park Dr	Project: 10-5421-004	1,656	1,530	0	0	3,186

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	2		4					12:00	27		23				
00:15	3		6					12:15	27		22				
00:30	2		0					12:30	31		18				
00:45	0	7	1	11			18	12:45	33	118	25	88			206
01:00	0		0					13:00	29		32				
01:15	0		2					13:15	20		28				
01:30	1		0					13:30	31		27				
01:45	2	3	15	17			20	13:45	26	106	22	109			215
02:00	0		18					14:00	31		21				
02:15	0		1					14:15	38		19				
02:30	0		1					14:30	32		16				
02:45	1	1	2	22			23	14:45	32	133	33	89			222
03:00	0		0					15:00	29		25				
03:15	0		1					15:15	37		25				
03:30	0		0					15:30	27		28				
03:45	1	1	1	2			3	15:45	43	136	31	109			245
04:00	0		0					16:00	36		28				
04:15	0		0					16:15	36		25				
04:30	0		2					16:30	38		44				
04:45	1	1	0	2			3	16:45	47	157	29	126			283
05:00	1		1					17:00	52		52				
05:15	3		4					17:15	36		35				
05:30	4		3					17:30	48		40				
05:45	2	10	9	17			27	17:45	37	173	31	158			331
06:00	5		9					18:00	31		25				
06:15	7		6					18:15	26		10				
06:30	9		12					18:30	18		29				
06:45	13	34	23	50			84	18:45	18	93	14	78			171
07:00	16		17					19:00	17		9				
07:15	12		23					19:15	16		17				
07:30	31		26					19:30	12		23				
07:45	27	86	45	111			197	19:45	21	66	13	62			128
08:00	33		34					20:00	17		6				
08:15	17		27					20:15	14		7				
08:30	22		26					20:30	7		9				
08:45	26	98	28	115			213	20:45	7	45	13	35			80
09:00	27		16					21:00	6		9				
09:15	23		21					21:15	9		3				
09:30	20		23					21:30	8		6				
09:45	23	93	31	91			184	21:45	9	32	8	26			58
10:00	20		18					22:00	7		13				
10:15	22		18					22:15	3		6				
10:30	24		27					22:30	5		5				
10:45	36	102	19	82			184	22:45	11	26	4	28			54
11:00	27		25					23:00	8		3				
11:15	22		24					23:15	12		3				
11:30	33		27					23:30	7		1				
11:45	23	105	19	95			200	23:45	3	30	0	7			37
Total Vol.		541		615			1156			1115		915			2030

	NB	SB	EB	WB	Total
Daily Totals :	1,656	1,530	0	0	3,186

	AM			PM		
Split %	46.8%	53.2%	36.3%	54.9%	45.1%	63.7%
AM				**PM**		
Peak Hr.	10:45	07:30	07:30	Peak Hr.	16:45	16:30	16:45
Volume	118	132	240	Volume	183	160	339
P.H.F.	0.819	0.733	0.833	P.H.F.	0.880	0.769	0.815
7 - 9 Vol.	184	226	410	4 - 6 Vol.	330	284	614
Peak Hr.	07:30	07:30	07:30	Peak Hr.	16:45	16:30	16:45
Volume	108	132	240	Volume	183	160	339
P.H.F.	0.818	0.733	0.833	P.H.F.	0.880	0.769	0.815

Prepared by NDS/ATD

Volumes for: Thursday, October 21, 2010	City: Ventura	NB	SB	EB	WB	Total
Location: Auto Center Dr E/o Perkins Ave	Project: 10-5421-006	0	0	3,554	3,722	7,276

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			3		3			12:00			101		70		
00:15			5		10			12:15			66		88		
00:30			2		2			12:30			63		56		
00:45			1	11	3	18	29	12:45			68	298	80	294	592
01:00			0		0			13:00			83		102		
01:15			1		3			13:15			47		94		
01:30			1		2			13:30			68		66		
01:45			1	3	6	11	14	13:45			58	256	79	341	597
02:00			4		27			14:00			77		58		
02:15			1		2			14:15			60		51		
02:30			0		3			14:30			64		56		
02:45			1	6	8	40	46	14:45			75	276	61	226	502
03:00			2		2			15:00			79		66		
03:15			2		2			15:15			80		58		
03:30			1		4			15:30			75		51		
03:45			0	5	2	10	15	15:45			83	317	63	238	555
04:00			1		2			16:00			93		71		
04:15			2		1			16:15			91		37		
04:30			3		2			16:30			159		64		
04:45			2	8	10	15	23	16:45			105	448	61	233	681
05:00			2		7			17:00			147		70		
05:15			6		10			17:15			119		66		
05:30			6		12			17:30			104		47		
05:45			5	19	32	61	80	17:45			69	439	56	239	678
06:00			8		33			18:00			78		34		
06:15			6		38			18:15			60		27		
06:30			10		37			18:30			34		33		
06:45			22	46	49	157	203	18:45			41	213	30	124	337
07:00			19		76			19:00			30		25		
07:15			11		68			19:15			28		21		
07:30			41		115			19:30			18		23		
07:45			34	105	135	394	499	19:45			22	98	11	80	178
08:00			42		167			20:00			35		13		
08:15			39		109			20:15			21		7		
08:30			27		93			20:30			17		12		
08:45			45	153	76	445	598	20:45			12	85	14	46	131
09:00			58		88			21:00			23		8		
09:15			43		48			21:15			12		12		
09:30			39		48			21:30			15		13		
09:45			29	169	39	223	392	21:45			10	60	11	44	104
10:00			40		52			22:00			11		9		
10:15			46		58			22:15			9		10		
10:30			47		51			22:30			9		2		
10:45			55	188	42	203	391	22:45			12	41	4	25	66
11:00			55		64			23:00			32		10		
11:15			46		42			23:15			17		4		
11:30			76		55			23:30			12		3		
11:45			66	243	65	226	469	23:45			6	67	12	29	96
Total Vol.			956		1803		**2759**				2598		1919		**4517**

	NB	SB	EB	WB	Total
Daily Totals :	0	0	3,554	3,722	7,276

	AM				PM		
Split %	34.7%	65.3%	**37.9%**		57.5%	42.5%	**62.1%**
AM				**PM**			
Peak Hr.	11:30	07:30	**07:30**	**Peak Hr.**	16:30	12:45	**16:30**
Volume	309	526	**682**	**Volume**	530	342	**791**
P.H.F.	0.765	0.787	**0.816**	**P.H.F.**	0.833	0.838	**0.887**
7 - 9 Vol.	258	839	**1097**	**4 - 6 Vol.**	887	472	**1359**
Peak Hr.	07:30	07:30	**07:30**	**Peak Hr.**	16:30	16:30	**16:30**
Volume	156	526	**682**	**Volume**	530	261	**791**
P.H.F.	0.929	0.787	**0.816**	**P.H.F.**	0.833	0.932	**0.887**

Prepared by NDS/ATD

Volumes for: Thursday, October 21, 2010	City: Ventura	NB	SB	EB	WB	Total
Location: Johnson Dr S/o North Bank Dr	Project: 10-5421-002	0	0	14,512	4,300	18,812

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			44		6			12:00			254		98		
00:15			24		12			12:15			197		82		
00:30			15		6			12:30			223		81		
00:45			10	93	5	29	122	12:45			228	902	90	351	1253
01:00			15		2			13:00			238		83		
01:15			10		3			13:15			219		71		
01:30			8		2			13:30			221		69		
01:45			17	50	4	11	61	13:45			197	875	67	290	1165
02:00			21		3			14:00			188		65		
02:15			18		6			14:15			211		72		
02:30			16		0			14:30			209		62		
02:45			10	65	1	10	75	14:45			262	870	80	279	1149
03:00			10		3			15:00			238		87		
03:15			8		2			15:15			204		84		
03:30			10		1			15:30			248		86		
03:45			29	57	3	9	66	15:45			241	931	85	342	1273
04:00			16		2			16:00			231		109		
04:15			18		5			16:15			225		89		
04:30			30		3			16:30			227		124		
04:45			46	110	5	15	125	16:45			229	912	110	432	1344
05:00			53		7			17:00			281		131		
05:15			76		5			17:15			282		132		
05:30			93		15			17:30			267		121		
05:45			159	381	7	34	415	17:45			235	1065	97	481	1546
06:00			163		16			18:00			197		94		
06:15			196		8			18:15			188		82		
06:30			239		18			18:30			185		66		
06:45			279	877	29	71	948	18:45			156	726	56	298	1024
07:00			311		23			19:00			150		53		
07:15			358		17			19:15			146		47		
07:30			359		38			19:30			127		33		
07:45			461	1489	44	122	1611	19:45			97	520	46	179	699
08:00			378		51			20:00			115		43		
08:15			345		43			20:15			87		43		
08:30			249		38			20:30			81		23		
08:45			260	1232	53	185	1417	20:45			92	375	33	142	517
09:00			220		63			21:00			78		42		
09:15			202		47			21:15			82		20		
09:30			194		38			21:30			70		25		
09:45			200	816	28	176	992	21:45			72	302	27	114	416
10:00			151		42			22:00			75		26		
10:15			176		56			22:15			43		24		
10:30			183		57			22:30			46		21		
10:45			163	673	53	208	881	22:45			44	208	25	96	304
11:00			185		59			23:00			51		36		
11:15			212		64			23:15			42		37		
11:30			201		86			23:30			35		29		
11:45			225	823	88	297	1120	23:45			32	160	27	129	289
Total Vol.				6666		1167	7833					7846		3133	10979

	NB	SB	EB	WB	Total
Daily Totals :	0	0	14,512	4,300	18,812

	AM				PM		
Split %	85.1%	14.9%	41.6%		71.5%	28.5%	58.4%
AM Peak Hr.	07:15	11:30	07:30	PM Peak Hr.	17:00	16:30	16:45
Volume	1556	354	1719	Volume	1065	497	1553
P.H.F.	0.844	0.903	0.851	P.H.F.	0.944	0.941	0.938
7 - 9 Vol.	2721	307	3028	4 - 6 Vol.	1977	913	2890
Peak Hr.	07:15	08:00	07:30	Peak Hr.	17:00	16:30	16:45
Volume	1556	185	1719	Volume	1065	497	1553
P.H.F.	0.844	0.873	0.851	P.H.F.	0.944	0.941	0.938

Intersection Turning Movement

Prepared by:

NDS

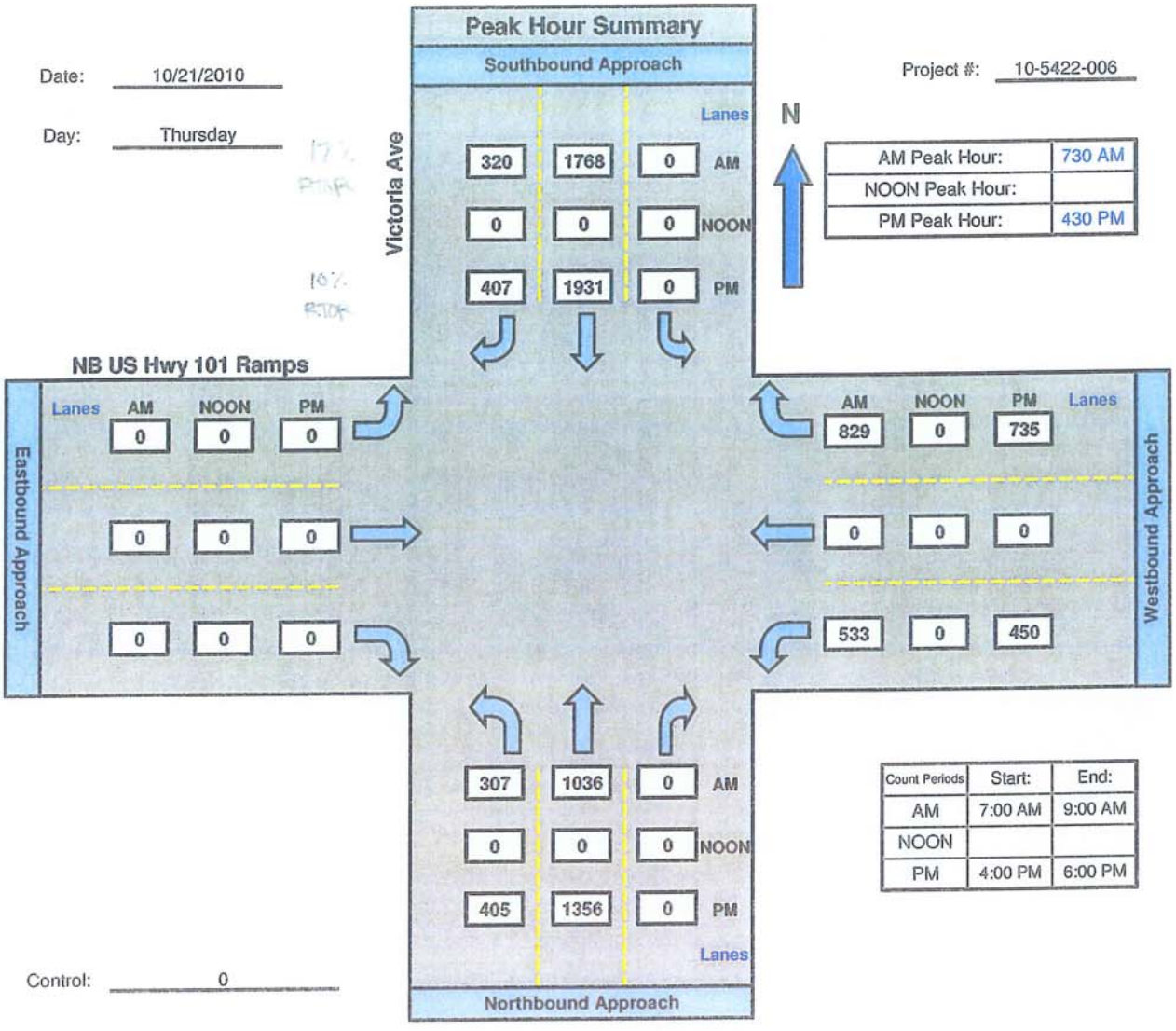
National Data & Surveying Services

Victoria Ave and NB US Hwy 101 Ramps , City of Ventura

Date: 10/21/2010

Day: Thursday

Project #: 10-5422-006



AM Peak Hour:	730 AM
NOON Peak Hour:	
PM Peak Hour:	430 PM

Count Periods	Start:	End:
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Control: 0

#2

Intersection Turning Movement

Prepared by:

NDS

National Data & Surveying Services

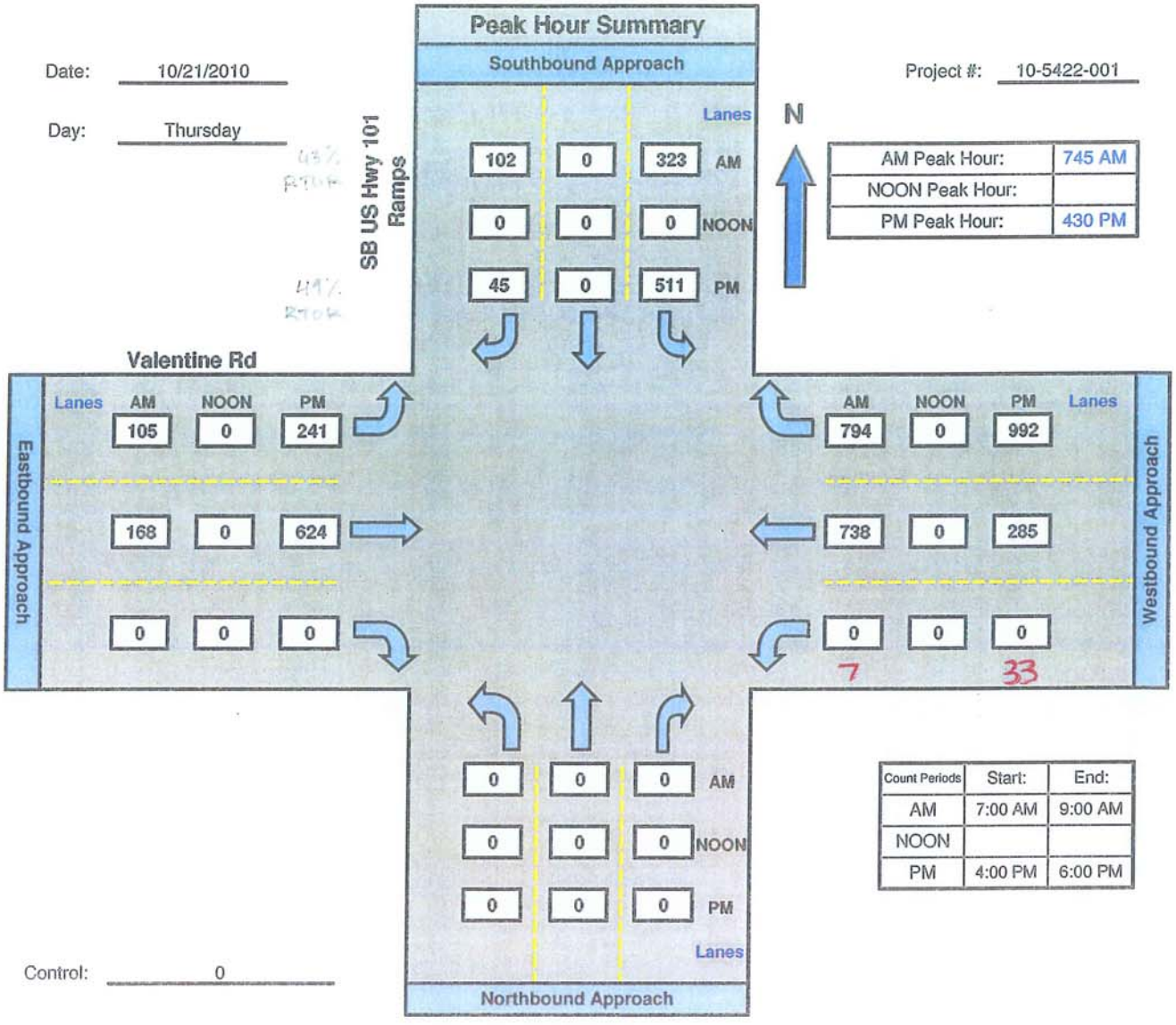
SB US Hwy 101 Ramps and Valentine Rd , City of Ventura

Date: 10/21/2010

Day: Thursday

Project #: 10-5422-001

AM Peak Hour:	745 AM
NOON Peak Hour:	
PM Peak Hour:	430 PM



Count Periods	Start:	End:
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Control: 0

#3

Intersection Turning Movement

Prepared by:

NDS

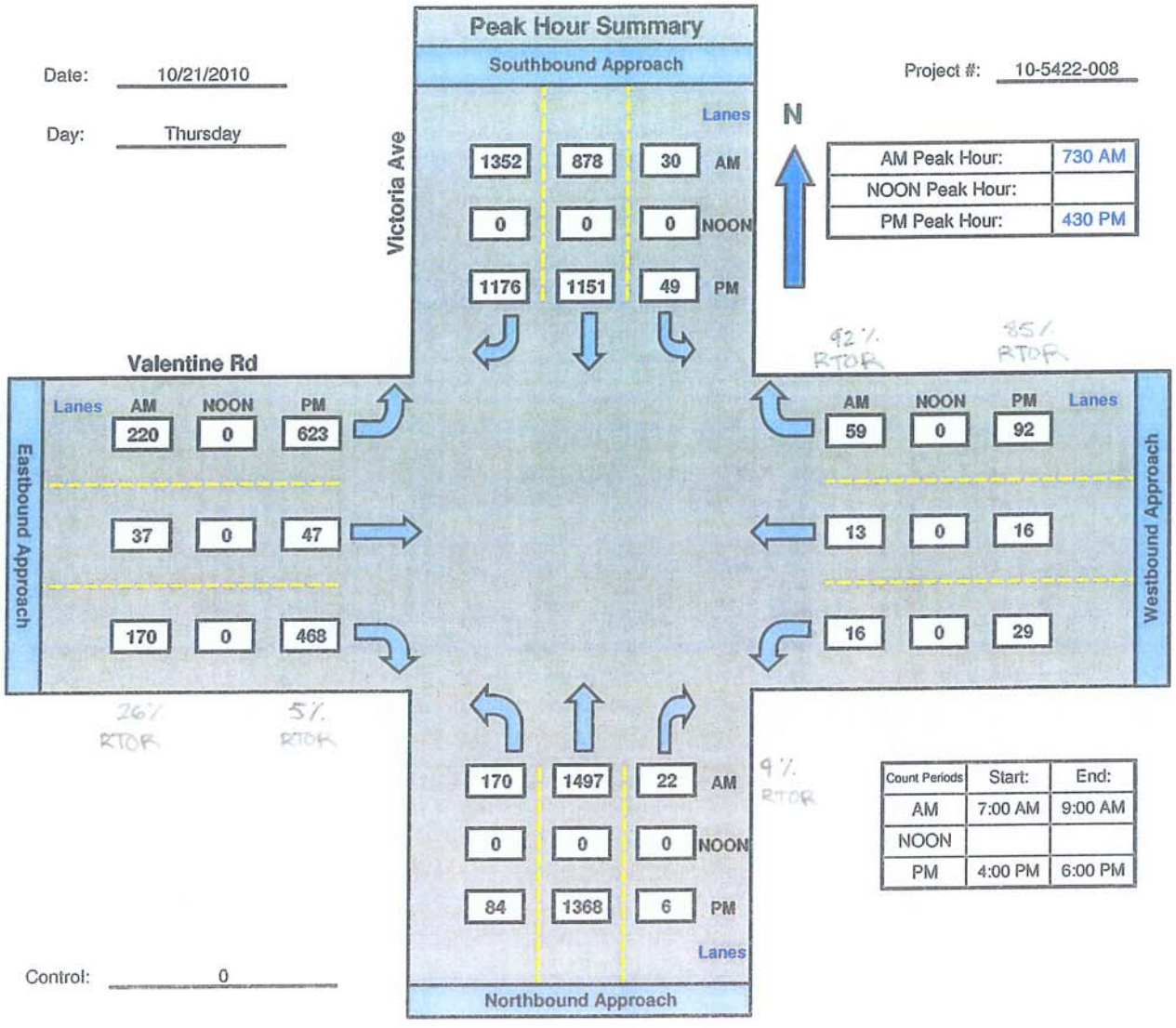
National Data & Surveying Services

Victoria Ave and Valentine Rd , City of Ventura

Date: 10/21/2010

Day: Thursday

Project #: 10-5422-008



AM Peak Hour:	730 AM
NOON Peak Hour:	
PM Peak Hour:	430 PM

Count Periods	Start:	End:
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Control: 0

Intersection Turning Movement

Prepared by:

NDS

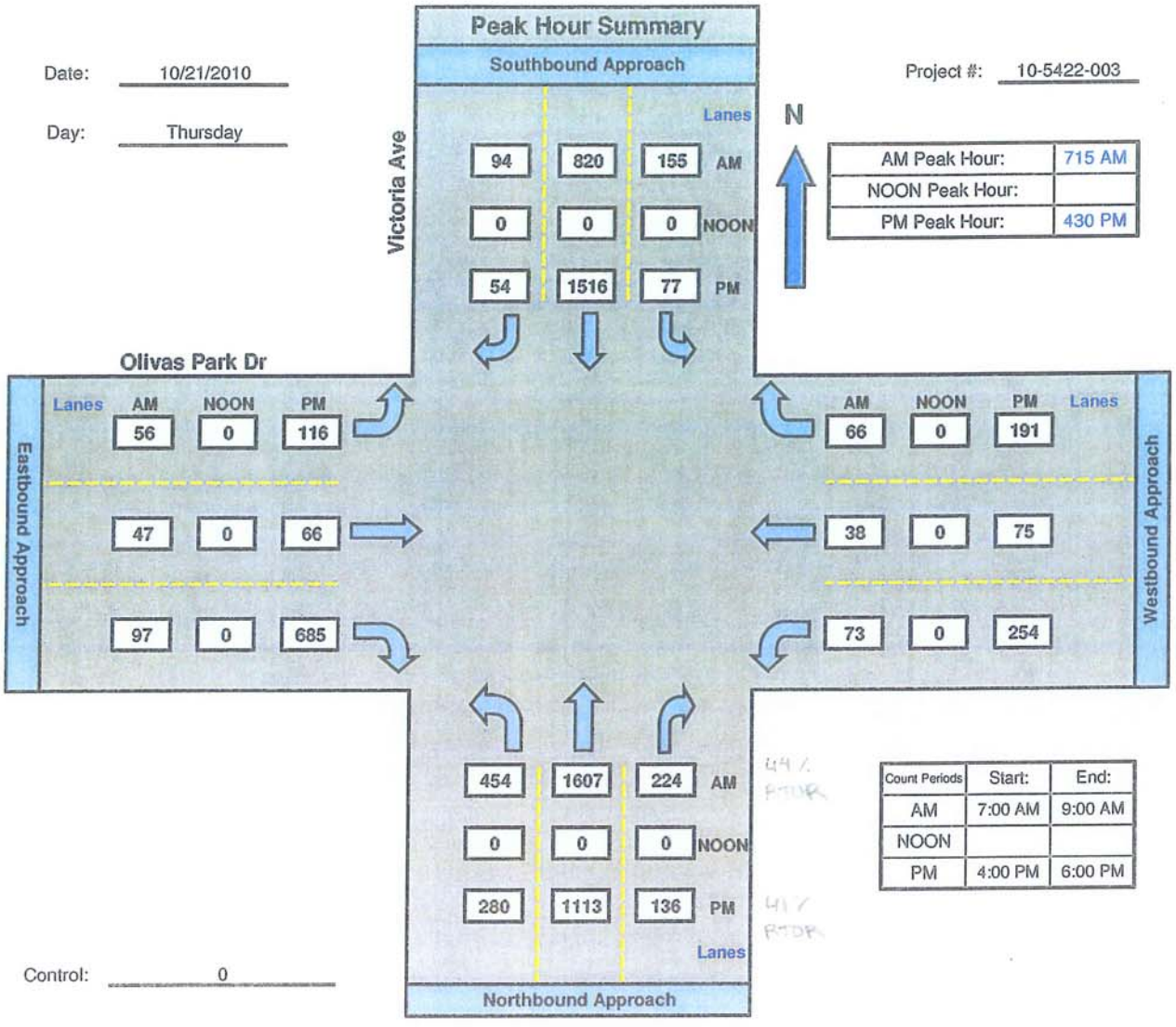
National Data & Surveying Services

Victoria Ave and Olivas Park Dr , City of Ventura

Date: 10/21/2010

Day: Thursday

Project #: 10-5422-003



AM Peak Hour:	715 AM
NOON Peak Hour:	
PM Peak Hour:	430 PM

Count Periods	Start:	End:
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Control: 0

Intersection Turning Movement

Prepared by:

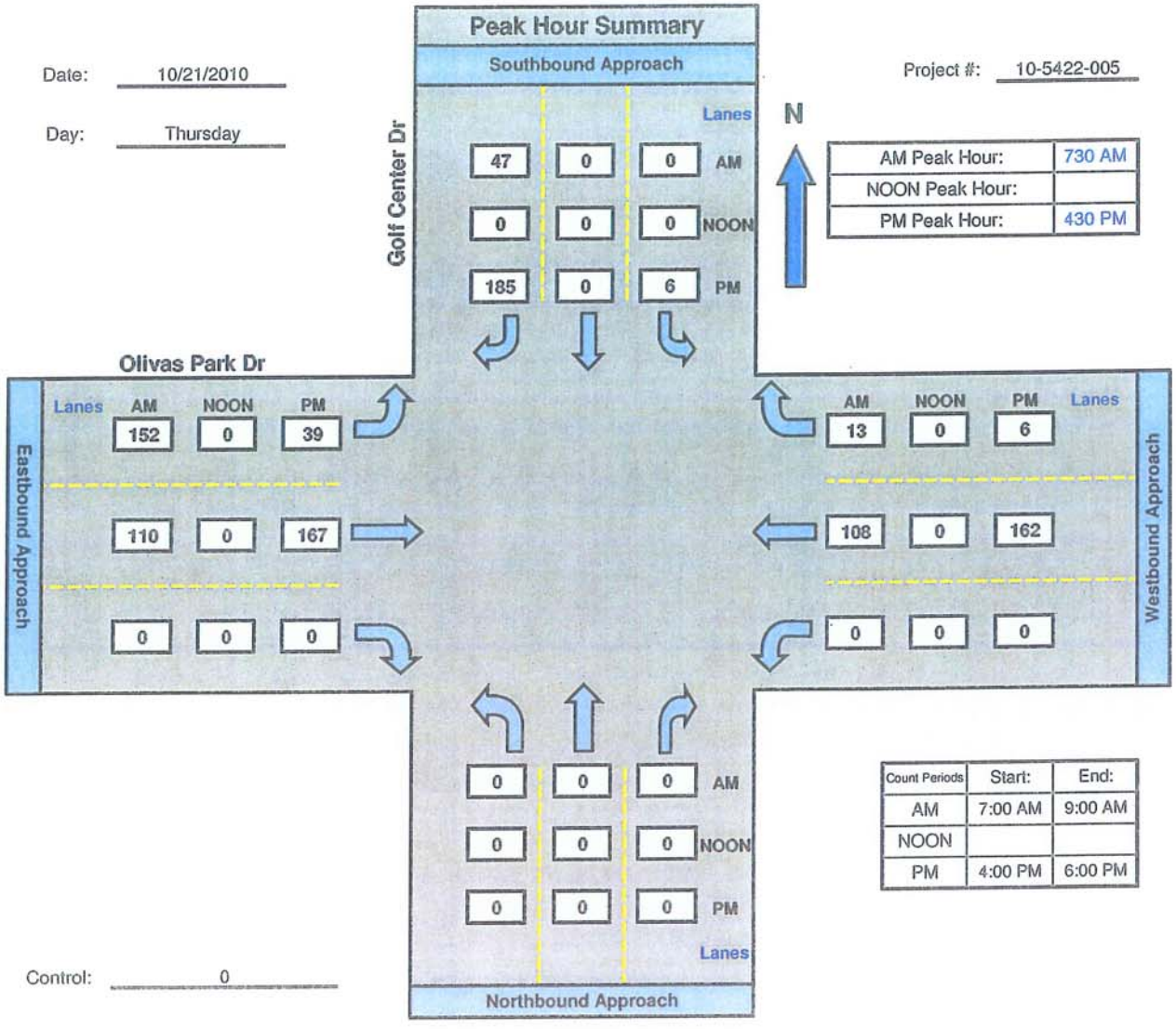
National Data & Surveying Services

Golf Center Dr and Olivas Park Dr , City of Ventura

Date: 10/21/2010

Day: Thursday

Project #: 10-5422-005



AM Peak Hour:	730 AM
NOON Peak Hour:	
PM Peak Hour:	430 PM

Count Periods	Start:	End:
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Control: 0

#6

Intersection Turning Movement

Prepared by:

NDS

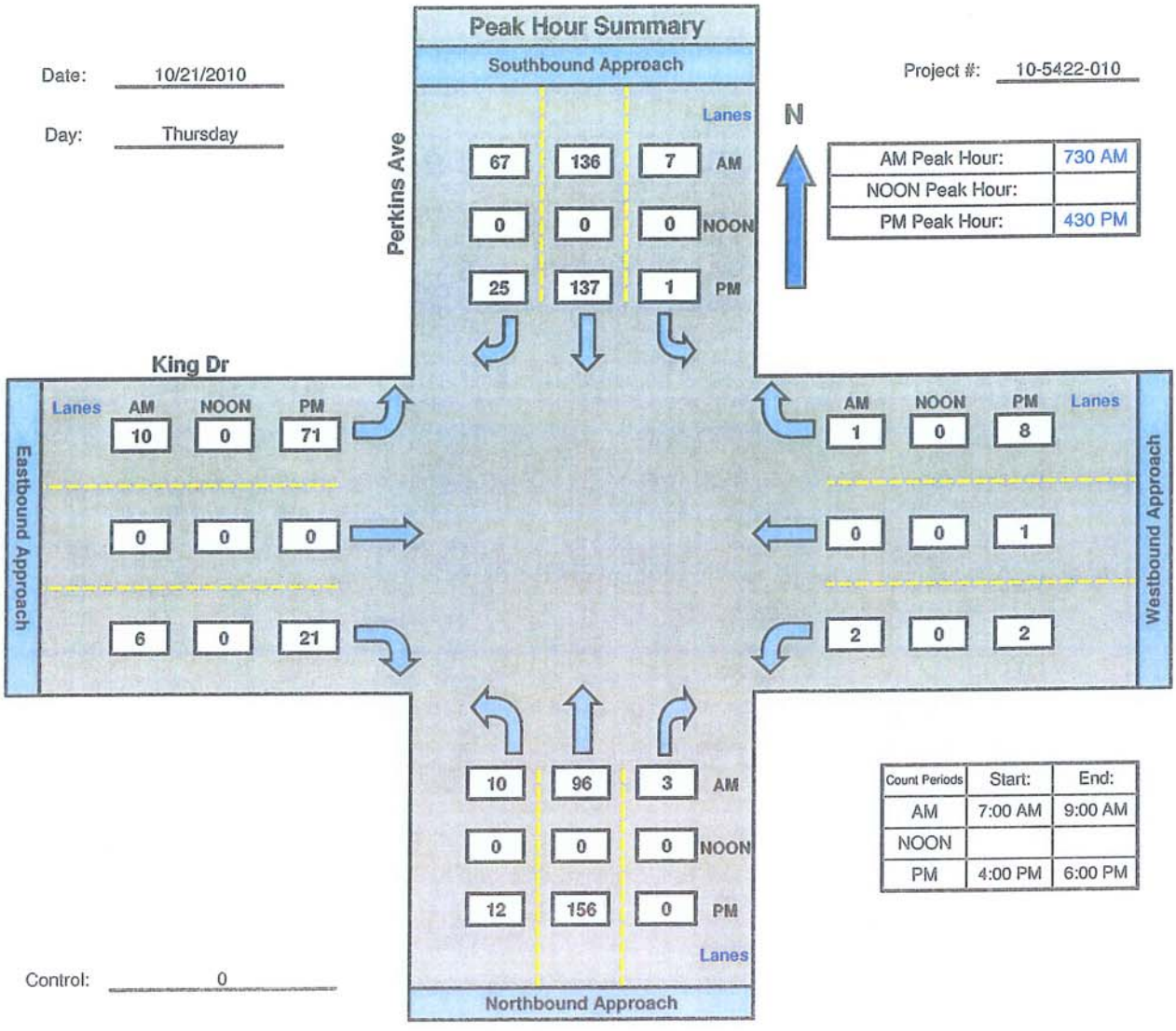
National Data & Surveying Services

Perkins Ave and King Dr , City of Ventura

Date: 10/21/2010

Day: Thursday

Project #: 10-5422-010



AM Peak Hour:	730 AM
NOON Peak Hour:	
PM Peak Hour:	430 PM

Count Periods	Start:	End:
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Control: 0

Intersection Turning Movement

Prepared by:

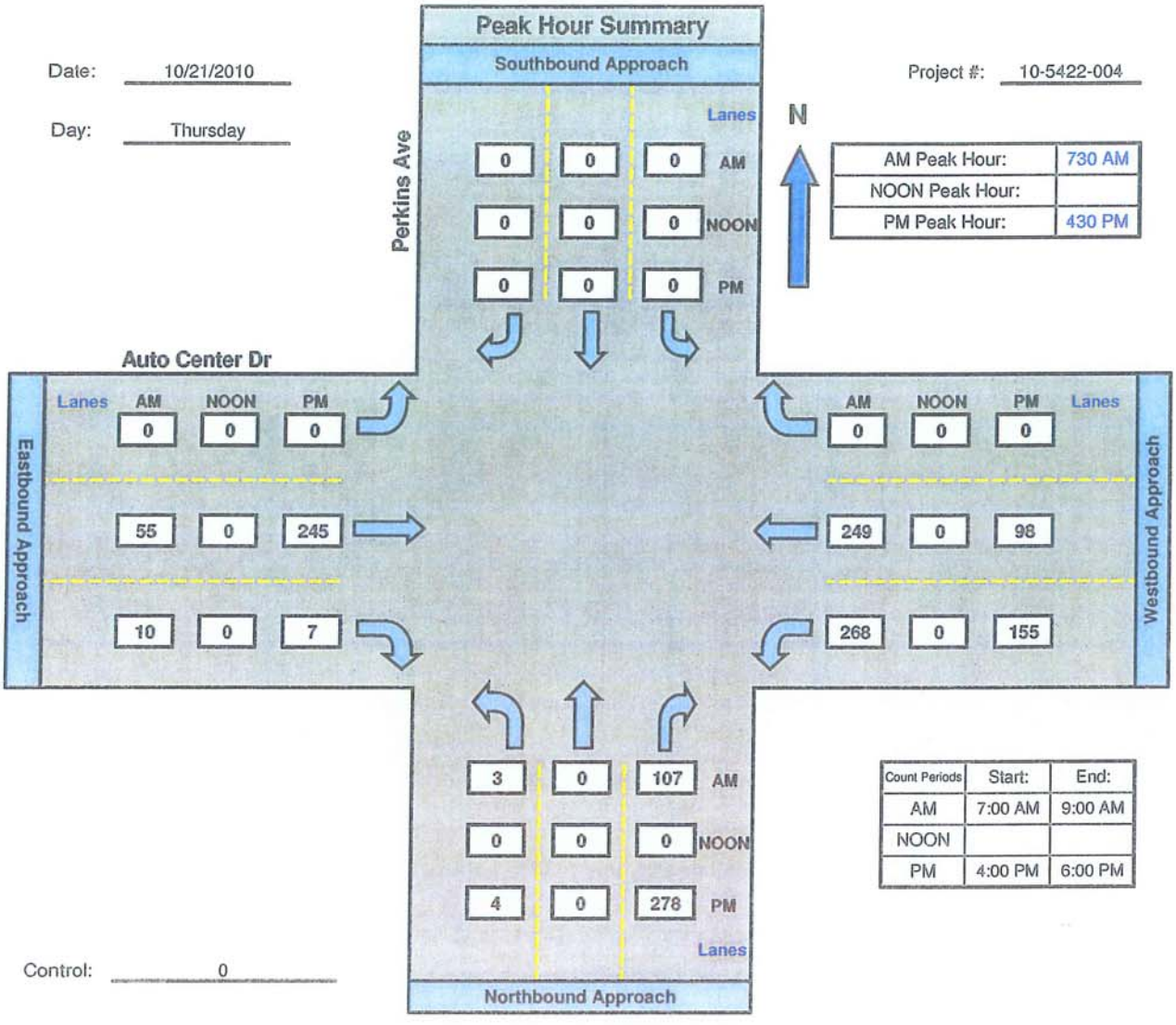
National Data & Surveying Services

Perkins Ave and Auto Center Dr , City of Ventura

Date: 10/21/2010

Day: Thursday

Project #: 10-5422-004



AM Peak Hour:	730 AM
NOON Peak Hour:	
PM Peak Hour:	430 PM

Count Periods	Start:	End:
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Control: 0

Intersection Turning Movement

Prepared by:

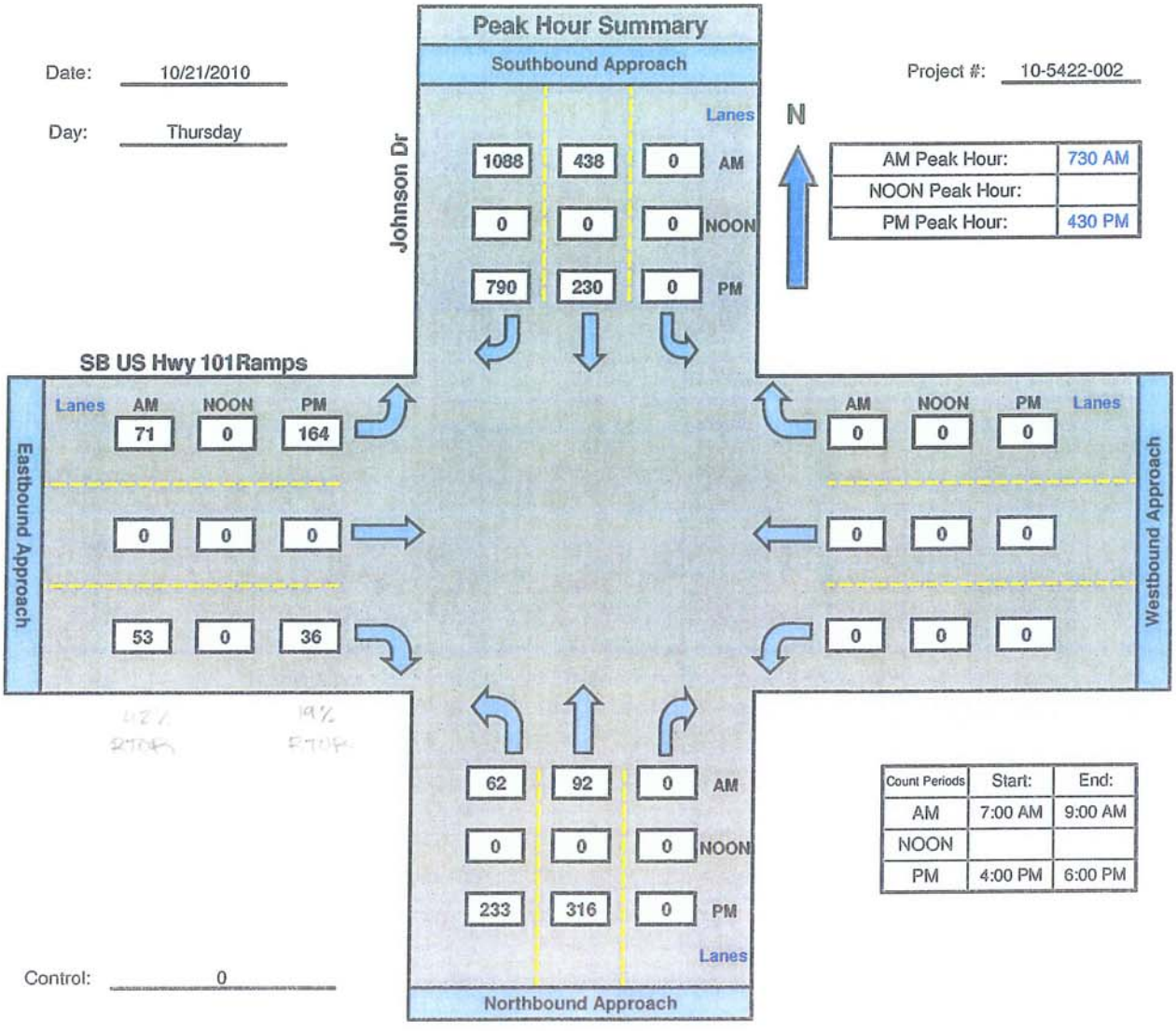
National Data & Surveying Services

Johnson Dr and SB US Hwy 101Ramps , City of Ventura

Date: 10/21/2010

Day: Thursday

Project #: 10-5422-002



AM Peak Hour:	730 AM
NOON Peak Hour:	
PM Peak Hour:	430 PM

Count Periods	Start:	End:
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Control: 0

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

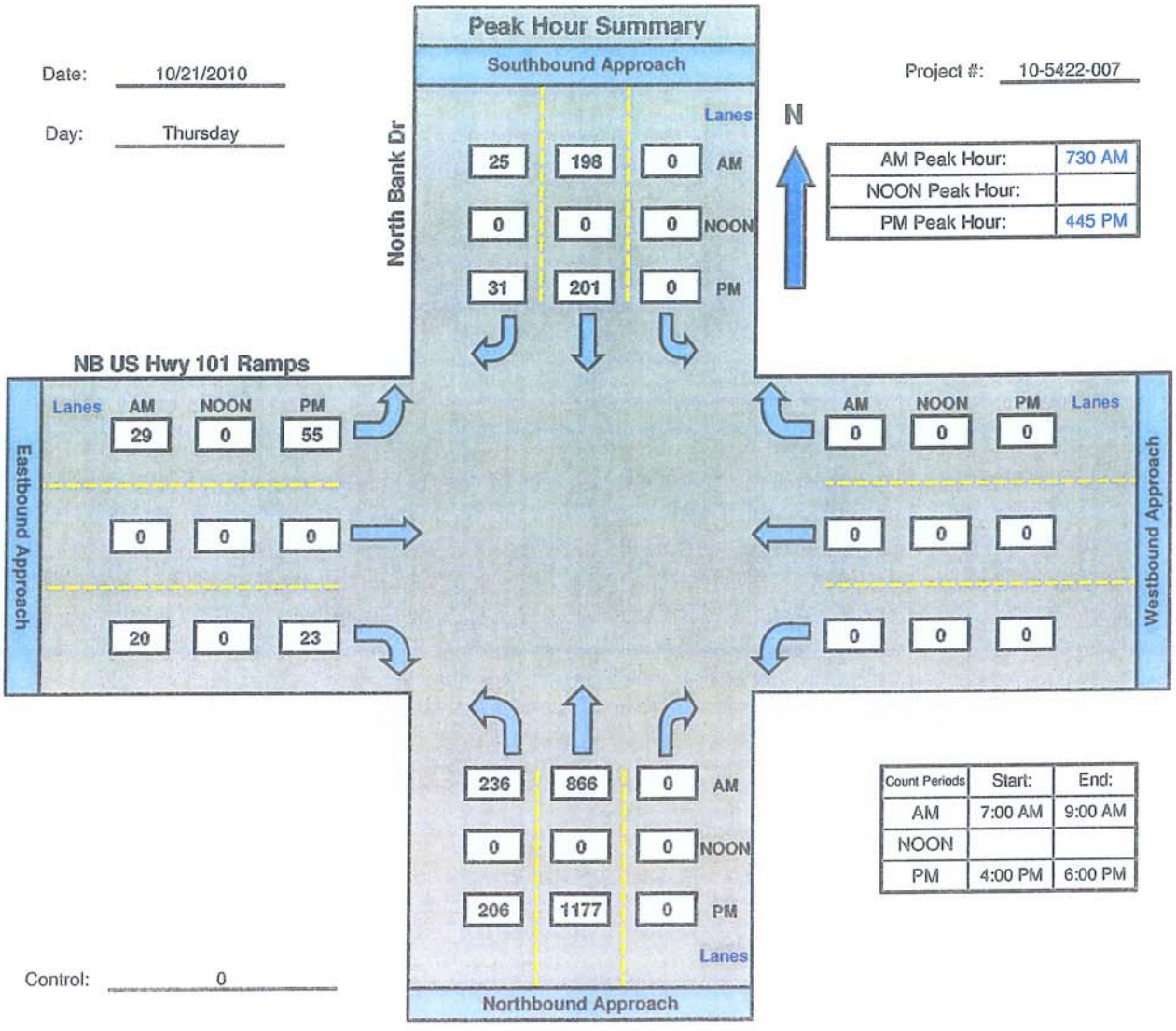
North Bank Dr and NB US Hwy 101 Ramps , City of Ventura

Date: 10/21/2010

Day: Thursday

Project #: 10-5422-007

AM Peak Hour:	730 AM
NOON Peak Hour:	
PM Peak Hour:	445 PM



Count Periods	Start:	End:
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Control: 0

#10

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Johnson Dr and North Bank Dr , City of Ventura

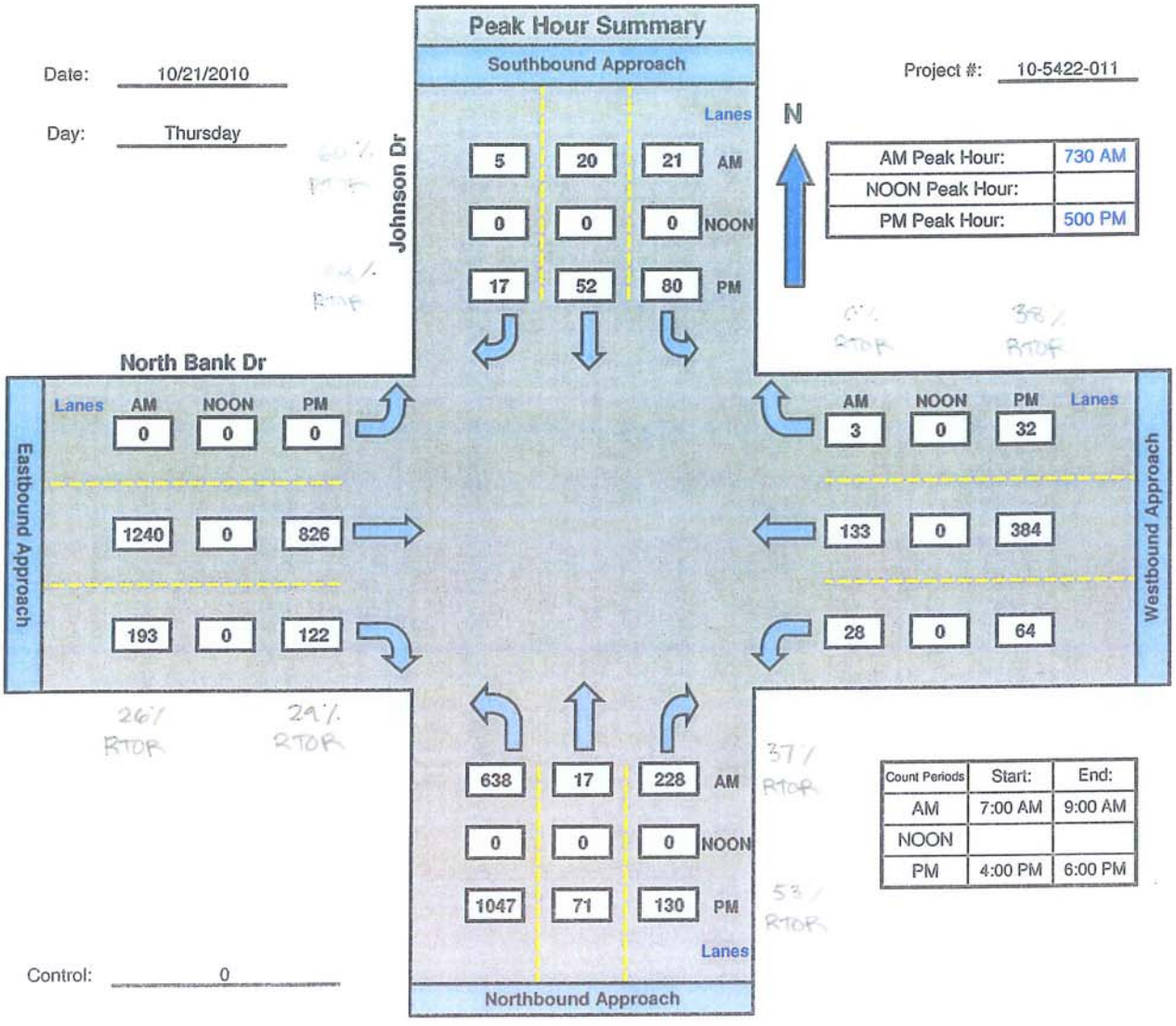
Date: 10/21/2010

Day: Thursday

Project #: 10-5422-011

N

AM Peak Hour:	730 AM
NOON Peak Hour:	
PM Peak Hour:	500 PM



Count Periods	Start:	End:
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Control: 0

INTERSECTION LOS CALCULATION WORKSHEETS

Ref. 1 - U.S. Highway 101 Northbound Ramps/Victoria Avenue
Ref. 2 - U.S. Highway 101 Southbound Ramps/Valentine Road
Ref. 3 - Victoria Avenue/Valentine Road
Ref. 4 - Victoria Avenue/Olivas Park Drive
Ref. 5 - Olivas Park Drive/Golf Course Road
Ref. 6 - Perkin Avenue/King Drive
Ref. 7 - Perkin Avenue/Auto Center Drive
Ref. 8 - U.S. Highway 101 Southbound Ramps/Johnson Drive
Ref. 9 - North Bank Drive/Ventura Boulevard
Ref. 10 - Johnson Drive/North Bank Drive

#10067 - OLIVAS PARK DRIVE EXTENSION **REF:** 01 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***VICTORIA AVENUE***

E/W STREET: ***U.S. 101 NB RAMPS***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	**307**	**1036**	**0**	**0**	**1768**	**320**	**0**	**0**	**0**	**533**	**0**	**829**

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	LL TTT	TTTT R		L LR RR

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	2	3200	307				0.096 *					
NBT	3	4800	1036				0.216					
NBR	0	0	0				-					
SBL	0	0	0				-					
SBT	4	6400	1768				0.276 *					
SBR *(a)*	1	1600	266				0.166					
EBL	0	0	0				-					
EBT	0	0	0				-					
EBR	0	0	0				-					
WBL	0	0	533				-					
WBT	4	6400	0				0.213 *					
WBR	0	0	829				-					
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.58**					
						SCENARIO LEVEL OF SERVICE:	**A**					

NOTES:

RTOR: (a) 17%

Printed: 02/11/13

#10067 - OLIVAS PARK DRIVE EXTENSION **REF:** 01 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***VICTORIA AVENUE***

E/W STREET: ***U.S. 101 NB RAMPS***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	405	1356	0	0	1931	407	0	0	0	450	0	735

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	LL TTT	TTTT R		L LR RR

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	2	3200	405				0.127 *					
NBT	3	4800	1356				0.283					
NBR	0	0	0				-					
SBL	0	0	0				-					
SBT	4	6400	1931				0.302 *					
SBR *(a)*	1	1600	366				0.229					
EBL	0	0	0				-					
EBT	0	0	0				-					
EBR	0	0	0				-					
WBL	0	0	450				-					
WBT	4	6400	0				0.185 *					
WBR	0	0	735				-					
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.61**					
						SCENARIO LEVEL OF SERVICE:	**B**					

NOTES:

RTOR: (a) 10%

Printed: 02/11/13

#10067 - OLIVAS PARK DRIVE EXTENSION WITH 2-LANE OLIVAS PARK DRIVE **REF:** 01 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***VICTORIA AVENUE***

E/W STREET: ***U.S. 101 NB RAMPS***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	**530**	**1370**	**0**	**0**	**2680**	**130**	**0**	**0**	**0**	**620**	**0**	**920**

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	LL TTT	TTTT R		L L RRR

TRAFFIC SCENARIOS

SCENARIO 1 = GENERAL PLAN VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	2	3200	530				0.166 *					
NBT	3	4800	1370				0.285					
NBR	0	0	0				-					
SBL	0	0	0				-					
SBT	4	6400	2680				0.419 *					
SBR *(a)*	1	1600	108				0.068					
EBL	0	0	0				-					
EBT	0	0	0				-					
EBR	0	0	0				-					
WBL	2	3200	620				0.194 *					
WBT	0	0	0				-					
WBR	3	4800	920				0.192					
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.78**					
						SCENARIO LEVEL OF SERVICE:	**C**					

NOTES:

RTOR: (a) 17%

Printed: 02/11/13

#10067 - OLIVAS PARK DRIVE EXTENSION WITH 2-LANE OLIVAS PARK DRIVE **REF:** 01 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***VICTORIA AVENUE***

E/W STREET: ***U.S. 101 NB RAMPS***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	**510**	**1820**	**0**	**0**	**2230**	**360**	**0**	**0**	**0**	**440**	**0**	**1140**

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	LL TTT	TTTT R		L L RRR

TRAFFIC SCENARIOS

SCENARIO 1 = GENERAL PLAN VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	2	3200	510				0.159 *					
NBT	3	4800	1820				0.379					
NBR	0	0	0				-					
SBL	0	0	0				-					
SBT	4	6400	2230				0.348 *					
SBR *(a)*	1	1600	299				0.187					
EBL	0	0	0				-					
EBT	0	0	0				-					
EBR	0	0	0				-					
WBL	2	3200	440				0.138 *					
WBT	0	0	0				-					
WBR	3	4800	1140				0.238					
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.65**					
						SCENARIO LEVEL OF SERVICE:	**B**					

NOTES:

RTOR: (a) 17%

Printed: 02/11/13

#10067 - OLIVAS PARK DRIVE EXTENSION WITH 4-LANE OLIVAS PARK DRIVE **REF:** 01 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***VICTORIA AVENUE***

E/W STREET: ***U.S. 101 NB RAMPS***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	**560**	**1450**	**0**	**0**	**2770**	**120**	**0**	**0**	**0**	**620**	**0**	**930**

GEOMETRICS

	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
LANE GEOMETRICS	LL TTT	TTTT R		L L RRR

TRAFFIC SCENARIOS

SCENARIO 1 = GENERAL PLAN VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	2	3200	560				0.175 *					
NBT	3	4800	1450				0.302					
NBR	0	0	0				-					
SBL	0	0	0				-					
SBT	4	6400	2770				0.433 *					
SBR	1	1600	120				0.075					
EBL	0	0	0				-					
EBT	0	0	0				-					
EBR	0	0	0				-					
WBL	2	3200	620				0.194 *					
WBT	0	0	0				-					
WBR	3	4800	930				0.194					
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.80**					
						SCENARIO LEVEL OF SERVICE:	**C**					

NOTES:

Printed: 02/11/13

#10067 - OLIVAS PARK DRIVE EXTENSION WITH 4-LANE OLIVAS PARK DRIVE **REF:** 01 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***VICTORIA AVENUE***

E/W STREET: ***U.S. 101 NB RAMPS***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	**520**	**1900**	**0**	**0**	**2350**	**350**	**0**	**0**	**0**	**480**	**0**	**1250**

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	LL TTT	TTTT R		L L RRR

TRAFFIC SCENARIOS

SCENARIO 1 = GENERAL PLAN VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	2	3200	520				0.163 *					
NBT	3	4800	1900				0.396					
NBR	0	0	0				-					
SBL	0	0	0				-					
SBT	4	6400	2350				0.367 *					
SBR	1	1600	350				0.219					
EBL	0	0	0				-					
EBT	0	0	0				-					
EBR	0	0	0				-					
WBL	2	3200	480				0.150 *					
WBT	0	0	0				-					
WBR	3	4800	1250				0.260					
						RIGHT TURN ADJUSTMENT WBR:	**0.01** *					
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.69**					
						SCENARIO LEVEL OF SERVICE:	**B**					

NOTES:

Printed: 02/11/13

#10067 - OLIVAS PARK DRIVE EXTENSION **REF:** 02 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***U.S. 101 SB RAMPS***

E/W STREET: ***VALENTINE ROAD***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	0	0	0	323	0	102	105	168	0	7	738	0

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
		L TR R	L TT	U TT

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	0	0	0				-			
NBT	0	0	0				-			
NBR	0	0	0				-			
SBL	0	0	323				-			
SBT	3	4800	0				0.079 *			
SBR (a)	0	0	58				-			
EBL	1	1600	105				0.066 *			
EBT	2	3200	168				0.053			
EBR	0	0	0				-			
WBL	1	1600	7				0.004			
WBT	2	3200	738				0.231 *			
WBR	0	0	0				-			
						LOST TIME:				
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.38**			
						SCENARIO LEVEL OF SERVICE:	A			

NOTES:

RTOR: (a) 43%

Printed: 02/11/13

#10067 - OLIVAS PARK DRIVE EXTENSION **REF:** 02 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***U.S. 101 SB RAMPS***

E/W STREET: ***VALENTINE ROAD***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	0	0	0	511	0	45	241	624	0	33	285	0

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
		L TR R	L TT	U TT

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	0	0	0				-					
NBT	0	0	0				-					
NBR	0	0	0				-					
SBL	0	0	511				-					
SBT	3	4800	0				0.111 *					
SBR *(a)*	0	0	23				-					
EBL	1	1600	241				0.151 *					
EBT	2	3200	624				0.195					
EBR	0	0	0				-					
WBL	1	1600	33				0.021					
WBT	2	3200	285				0.089 *					
WBR	0	0	0				-					
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.35**					
						SCENARIO LEVEL OF SERVICE:	A					

NOTES:

RTOR: (a) 49%

Printed: 02/11/13

#10067 - OLIVAS PARK DRIVE EXTENSION WITH 2-LANE OLIVAS PARK DRIVE **REF:** 02 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***U.S. 101 SB RAMPS***

E/W STREET: ***VALENTINE ROAD***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	0	0	0	380	0	80	90	200	0	0	970	840

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
		L TR R	L TT	U TT

TRAFFIC SCENARIOS

SCENARIO 1 = GENERAL PLAN VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	0	0	0				-					
NBT	0	0	0				-					
NBR	0	0	0				-					
SBL	2	3200	380				0.119 *					
SBT	0	0	0				-					
SBR	1	1600	80				0.050					
EBL	1	1600	90				0.056 *					
EBT	2	3200	200				0.063					
EBR	0	0	0				-					
WBL	1	1600	0				0.000					
WBT	2	3200	970				0.303 *					
WBR	1	1600	840				0.525					
						LOST TIME:						
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.48**					
						SCENARIO LEVEL OF SERVICE:	A					

NOTES:

RTOR: (a) 43%

Printed: 02/11/13

#10067 - OLIVAS PARK DRIVE EXTENSION WITH 2-LANE OLIVAS PARK DRIVE REF: 02 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***U.S. 101 SB RAMPS***

E/W STREET: ***VALENTINE ROAD***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	0	0	0	460	0	20	420	760	0	0	390	920

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
		L TR R	L TT	U TT

TRAFFIC SCENARIOS

SCENARIO 1 = GENERAL PLAN VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	0	0	0				-					
NBT	0	0	0				-					
NBR	0	0	0				-					
SBL	2	3200	460				0.144 *					
SBT	0	0	0				-					
SBR	1	1600	20				0.013					
EBL	1	1600	420				0.263 *					
EBT	2	3200	760				0.238					
EBR	0	0	0				-					
WBL	1	1600	0				0.000					
WBT	2	3200	390				0.122 *					
WBR	1	1600	920				0.575					
						LOST TIME:						
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.52**					
						SCENARIO LEVEL OF SERVICE:	A					

NOTES:

Printed: 02/11/13

#10067 - OLIVAS PARK DRIVE EXTENSION WITH 4-LANE OLIVAS PARK DRIVE **REF:** 02 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***U.S. 101 SB RAMPS***

E/W STREET: ***VALENTINE ROAD***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	0	0	0	380	0	70	90	200	0	0	960	810

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
		L TR R	L TT	U TT

TRAFFIC SCENARIOS

SCENARIO 1 = GENERAL PLAN VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	0	0	0				-					
NBT	0	0	0				-					
NBR	0	0	0				-					
SBL	2	3200	380				0.119 *					
SBT	0	0	0				-					
SBR	1	1600	70				0.044					
EBL	1	1600	90				0.056 *					
EBT	2	3200	200				0.063					
EBR	0	0	0				-					
WBL	1	1600	0				0.000					
WBT	2	3200	960				0.300 *					
WBR	1	1600	810				0.506					
						LOST TIME:						
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.48**					
						SCENARIO LEVEL OF SERVICE:	A					

NOTES:

RTOR: (a) 43%

Printed: 02/11/13

#10067 - OLIVAS PARK DRIVE EXTENSION WITH 4-LANE OLIVAS PARK DRIVE **REF:** 02 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***U.S. 101 SB RAMPS***

E/W STREET: ***VALENTINE ROAD***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	0	0	0	490	0	20	450	750	0	0	390	930

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
		L TR R	L TT	U TT

TRAFFIC SCENARIOS

SCENARIO 1 = GENERAL PLAN VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	0	0	0				-					
NBT	0	0	0				-					
NBR	0	0	0				-					
SBL	2	3200	490				0.153 *					
SBT	0	0	0				-					
SBR	1	1600	20				0.013					
EBL	1	1600	450				0.281 *					
EBT	2	3200	750				0.234					
EBR	0	0	0				-					
WBL	1	1600	0				0.000					
WBT	2	3200	390				0.122 *					
WBR	1	1600	930				0.581					
						LOST TIME:						
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.55**					
						SCENARIO LEVEL OF SERVICE:	A					

NOTES:

Printed: 02/11/13

#10067 - OLIVAS PARK DRIVE EXTENSION **REF:** 03 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***VICTORIA AVENUE***

E/W STREET: ***VALENTINE ROAD (SPLIT PHASED)***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	170	1497	22	30	878	1352	220	37	170	16	13	59

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	LL TT TR	L TT RR	LL LT R	LT R

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	2	3200	170				0.053 *					
NBT	3	4800	1497				0.316					
NBR *(a)*	0	0	20				-					
SBL	1	1600	30				0.019					
SBT	2	3200	878				0.274					
SBR	2	3200	1352				0.423 *					
EBL	0	0	220				-					
EBT	3	4800	37				0.054					
EBR *(b)*	1	1600	126				0.079 *					
WBL	0	0	16				-					
WBT	1	1600	13				0.018 *					
WBR *(c)*	1	1600	5				0.003					
						TOTAL INTERSECTION CAPACITY UTILIZATION:	0.57					
						SCENARIO LEVEL OF SERVICE:	A					

NOTES:

RTOR: *(a) 9%*
(b) 26%
(c) 92%

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#10067 - OLIVAS PARK DRIVE EXTENSION **REF:** 03 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***VICTORIA AVENUE***

E/W STREET: ***VALENTINE ROAD (SPLIT PHASED)***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	84	1368	6	49	1151	1176	623	47	468	29	16	92

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	LL TT TR	L TT RR	LL LT R	LT R

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	2	3200	84				0.026 *			
NBT	3	4800	1368				0.286			
NBR	0	0	6				-			
SBL	1	1600	49				0.031			
SBT	2	3200	1151				0.360 *			
SBR	2	3200	1176				0.368			
EBL	0	0	623				-			
EBT	3	4800	47				0.140			
EBR *(a)*	1	1600	384				0.240 *			
WBL	0	0	29				-			
WBT	1	1600	16				0.028 *			
WBR *(b)*	1	1600	92				0.058			

TOTAL INTERSECTION CAPACITY UTILIZATION: **0.65**

SCENARIO LEVEL OF SERVICE: **B**

NOTES:

RTOR: (a) 5%

(b) 85%

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#10067 - OLIVAS PARK DRIVE EXTENSION WITH 2-LANE OLIVAS PARK DRIVE **REF:** 03 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***VICTORIA AVENUE***

E/W STREET: ***VALENTINE ROAD (SPLIT PHASED)***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	240	1650	20	40	1530	1690	330	50	260	20	10	80

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	LL TT TR	L TT RR	LL LT R	LT R

TRAFFIC SCENARIOS

SCENARIO 1 = GENERAL PLAN VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	2	3200	240				0.075 *			
NBT	3	4800	1650				0.348			
NBR	0	0	20				-			
SBL	1	1600	40				0.025			
SBT	2	3200	1530				0.478 *			
SBR	2	3200	1690				0.528			
EBL	0	0	330				-			
EBT	3	4800	50				0.079 *			
EBR	1	1600	260				0.163			
WBL	0	0	20				-			
WBT	1	1600	10				0.019 *			
WBR	1	1600	80				0.050			
						TOTAL INTERSECTION CAPACITY UTILIZATION:	0.66			
						SCENARIO LEVEL OF SERVICE:	B			

NOTES:

Printed: 02/11/13

#10067 - OLIVAS PARK DRIVE EXTENSION WITH 2-LANE OLIVAS PARK DRIVE **REF:** 03 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***VICTORIA AVENUE***

E/W STREET: ***VALENTINE ROAD (SPLIT PHASED)***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	**180**	**1890**	**50**	**40**	**1430**	**1210**	**750**	**30**	**450**	**30**	**30**	**100**

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	LL TT TR	L TT RR	LL LT R	LT R

TRAFFIC SCENARIOS

SCENARIO 1 = GENERAL PLAN VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	2	3200	180				0.056 *					
NBT	3	4800	1890				0.404					
NBR	0	0	50				-					
SBL	1	1600	40				0.025					
SBT	2	3200	1430				0.447 *					
SBR	2	3200	1210				0.378					
EBL	0	0	750				-					
EBT	3	4800	30				0.163					
EBR	1	1600	360				0.225 *					
WBL	0	0	30				-					
WBT	1	1600	30				0.038 *					
WBR	1	1600	100				0.063					
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.77**					
						SCENARIO LEVEL OF SERVICE:	**C**					

NOTES:

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#10067 - OLIVAS PARK DRIVE EXTENSION WITH 4-LANE OLIVAS PARK DRIVE **REF:** 03 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***VICTORIA AVENUE***

E/W STREET: ***VALENTINE ROAD (SPLIT PHASED)***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	**240**	**1740**	**20**	**40**	**1640**	**1660**	**320**	**50**	**250**	**10**	**10**	**80**

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	LL TT TR	L TT RR	LL LT R	LT R

TRAFFIC SCENARIOS

SCENARIO 1 = GENERAL PLAN VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	2	3200	240				0.075 *					
NBT	3	4800	1740				0.367					
NBR	0	0	20				-					
SBL	1	1600	40				0.025					
SBT	2	3200	1640				0.513 *					
SBR	2	3200	1660				0.519					
EBL	0	0	320				-					
EBT	3	4800	50				0.077 *					
EBR	1	1600	250				0.156					
WBL	0	0	10				-					
WBT	1	1600	10				0.013 *					
WBR	1	1600	80				0.050					
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.68**					
						SCENARIO LEVEL OF SERVICE:	**B**					

NOTES:

Printed: 02/11/13

#10067 - OLIVAS PARK DRIVE EXTENSION WITH 4-LANE OLIVAS PARK DRIVE **REF:** 03 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***VICTORIA AVENUE***

E/W STREET: ***VALENTINE ROAD (SPLIT PHASED)***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	**190**	**2090**	**60**	**40**	**1580**	**1220**	**690**	**30**	**520**	**30**	**30**	**100**

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	LL TT TR	L TT RR	LL LT R	LT R

TRAFFIC SCENARIOS

SCENARIO 1 = GENERAL PLAN VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	2	3200	190				0.059 *					
NBT	3	4800	2090				0.448					
NBR	0	0	60				-					
SBL	1	1600	40				0.025					
SBT	2	3200	1580				0.494 *					
SBR	2	3200	1220				0.381					
EBL	0	0	690				-					
EBT	3	4800	30				0.150					
EBR	1	1600	425				0.266 *					
WBL	0	0	30				-					
WBT	1	1600	30				0.038 *					
WBR	1	1600	100				0.063					
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.86**					
						SCENARIO LEVEL OF SERVICE:	**D**					

NOTES:

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#10067 - OLIVAS PARK DRIVE EXTENSION **REF:** 04 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***VICTORIA AVENUE***

E/W STREET: ***OLIVAS PARK DRIVE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	454	1607	224	155	820	94	56	47	97	73	38	66

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	LL TT R	L TT FR	L TT FR	L TT FR

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	2	3200	454				0.142					
NBT	2	3200	1607				0.502 *					
NBR *(a)*	1	1600	125				0.078					
SBL	1	1600	155				0.097 *					
SBT	2	3200	820				0.256					
SBR	1	1600	94				0.059					
EBL	1	1600	56				0.035					
EBT	2	3200	47				0.015 *					
EBR	1	1600	97				0.061					
WBL	1	1600	73				0.046 *					
WBT	2	3200	38				0.012					
WBR	1	1600	66				0.041					
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.66**					
						SCENARIO LEVEL OF SERVICE:	**B**					

NOTES:

RTOR: (a) 44%

Printed: 02/11/13

#10067 - OLIVAS PARK DRIVE EXTENSION REF: 04 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***VICTORIA AVENUE***

E/W STREET: ***OLIVAS PARK DRIVE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	280	1113	136	77	1516	54	116	66	685	254	75	191

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	LL TT R	L TT FR	L TT FR	L TT FR

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	2	3200	280				0.088 *			
NBT	2	3200	1113				0.348			
NBR *(a)*	1	1600	80				0.050			
SBL	1	1600	77				0.048			
SBT	2	3200	1516				0.474 *			
SBR	1	1600	54				0.034			
EBL	1	1600	116				0.073			
EBT	2	3200	66				0.021 *			
EBR	1	1600	685				0.428			
WBL	1	1600	254				0.159 *			
WBT	2	3200	75				0.023			
WBR	1	1600	191				0.119			
			TOTAL INTERSECTION CAPACITY UTILIZATION:				0.74			
			SCENARIO LEVEL OF SERVICE:				C			

NOTES:

RTOR: (a) 41%

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#10067 - OLIVAS PARK DRIVE EXTENSION WITH 2-LANE OLIVAS PARK DRIVE **REF:** 04 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***VICTORIA AVENUE***

E/W STREET: ***OLIVAS PARK DRIVE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	**660**	**1840**	**500**	**370**	**1500**	**50**	**120**	**170**	**180**	**150**	**50**	**120**

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	LL TTT R	LL TTT FR	L TT FR	L T FR

TRAFFIC SCENARIOS

SCENARIO 1 = GENERAL PLAN VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	2	3200	660				0.206 *					
NBT	3	4800	1840				0.383					
NBR	1	1600	500				0.313					
SBL	2	3200	370				0.116					
SBT	3	4800	1500				0.313 *					
SBR	1	1600	50				0.031					
EBL	1	1600	120				0.075					
EBT	2	3200	170				0.053 *					
EBR	1	1600	180				0.113					
WBL	1	1600	150				0.094 *					
WBT	1	1600	50				0.031					
WBR	1	1600	120				0.075					
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.66**					
						SCENARIO LEVEL OF SERVICE:	**B**					

NOTES:

Printed: 02/11/13

#10067 - OLIVAS PARK DRIVE EXTENSION WITH 2-LANE OLIVAS PARK DRIVE **REF:** 04 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***VICTORIA AVENUE***

E/W STREET: ***OLIVAS PARK DRIVE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	590	1780	470	180	1570	80	70	330	980	350	350	110

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	LL TTT R	LL TTT FR	L TT FR	L T FR

TRAFFIC SCENARIOS

SCENARIO 1 = GENERAL PLAN VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	2	3200	590				0.184 *					
NBT	3	4800	1780				0.371					
NBR	1	1600	470				0.294					
SBL	2	3200	180				0.056					
SBT	3	4800	1570				0.327 *					
SBR	1	1600	80				0.050					
EBL	1	1600	70				0.044					
EBT	2	3200	330				0.103 *					
EBR	1	1600	980				0.613					
WBL	1	1600	350				0.219 *					
WBT	1	1600	350				0.219					
WBR	1	1600	110				0.069					
						TOTAL INTERSECTION CAPACITY UTILIZATION:	0.83					
						SCENARIO LEVEL OF SERVICE:	D					

NOTES:

Printed: 02/11/13

#10067 - OLIVAS PARK DRIVE EXTENSION WITH 4-LANE OLIVAS PARK DRIVE **REF:** 04 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***VICTORIA AVENUE***

E/W STREET: ***OLIVAS PARK DRIVE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	640	1840	650	510	1470	50	120	210	180	180	90	220

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	LL TTT R	LL TTT FR	LL TT FR	L TT FR

TRAFFIC SCENARIOS

SCENARIO 1 = GENERAL PLAN VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	2	3200	640				0.200					
NBT	3	4800	1840				0.383 *					
NBR	1	1600	650				0.406					
SBL	2	3200	510				0.159 *					
SBT	3	4800	1470				0.306					
SBR	1	1600	50				0.031					
EBL	2	3200	120				0.038					
EBT	2	3200	210				0.066 *					
EBR	1	1600	180				0.113					
WBL	1	1600	180				0.113 *					
WBT	2	3200	90				0.028					
WBR	1	1600	220				0.138					
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.72**					
						SCENARIO LEVEL OF SERVICE:	**C**					

NOTES:

Printed: 02/11/13

#10067 - OLIVAS PARK DRIVE EXTENSION WITH 4-LANE OLIVAS PARK DRIVE **REF:** 04 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***VICTORIA AVENUE***

E/W STREET: ***OLIVAS PARK DRIVE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	540	1790	720	330	1660	90	150	500	820	500	550	210

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	LL TTT R	LL TTT FR	LL TT FR	L TT FR

TRAFFIC SCENARIOS

SCENARIO 1 = GENERAL PLAN VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	2	3200	540				0.169 *					
NBT	3	4800	1790				0.373					
NBR	1	1600	720				0.450					
SBL	2	3200	330				0.103					
SBT	3	4800	1660				0.346 *					
SBR	1	1600	90				0.056					
EBL	2	3200	150				0.047					
EBT	2	3200	500				0.156 *					
EBR	1	1600	820				0.513					
WBL	1	1600	500				0.313 *					
WBT	2	3200	550				0.172					
WBR	1	1600	210				0.131					
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.99**					
						SCENARIO LEVEL OF SERVICE:	**E**					

NOTES:

Printed: 02/11/13

#10067 - OLIVAS PARK DRIVE EXTENSION WITH 4-LANE OLIVAS PARK DRIVE

REF: 04 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

MITIGATED

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***VICTORIA AVENUE***

E/W STREET: ***OLIVAS PARK DRIVE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	640	1840	650	510	1470	50	120	210	180	180	90	220

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	LL TTT R	LL TTT FR	LL TT FR	LL TT FR

TRAFFIC SCENARIOS

SCENARIO 1 = GENERAL PLAN VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	2	3200	640				0.200			
NBT	3	4800	1840				0.383 *			
NBR	1	1600	650				0.406			
SBL	2	3200	510				0.159 *			
SBT	3	4800	1470				0.306			
SBR	1	1600	50				0.031			
EBL	2	3200	120				0.038			
EBT	2	3200	210				0.066 *			
EBR	1	1600	180				0.113			
WBL	2	3200	180				0.056 *			
WBT	2	3200	90				0.028			
WBR	1	1600	220				0.138			
						TOTAL INTERSECTION CAPACITY UTILIZATION:	0.66			
						SCENARIO LEVEL OF SERVICE:	B			

NOTES:

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#10067 - OLIVAS PARK DRIVE EXTENSION WITH 4-LANE OLIVAS PARK DRIVE **REF:** 04 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

MITIGATED

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***VICTORIA AVENUE***

E/W STREET: ***OLIVAS PARK DRIVE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	**540**	**1790**	**720**	**330**	**1660**	**90**	**150**	**500**	**820**	**500**	**550**	**210**

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	LL TTT R	LL TTT FR	LL TT FR	LL TT FR

TRAFFIC SCENARIOS

SCENARIO 1 = GENERAL PLAN VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	2	3200	540				0.169 *					
NBT	3	4800	1790				0.373					
NBR	1	1600	720				0.450					
SBL	2	3200	330				0.103					
SBT	3	4800	1660				0.346 *					
SBR	1	1600	90				0.056					
EBL	2	3200	150				0.047					
EBT	2	3200	500				0.156 *					
EBR	1	1600	820				0.513					
WBL	2	3200	500				0.156 *					
WBT	2	3200	550				0.172					
WBR	1	1600	210				0.131					
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.83**					
						SCENARIO LEVEL OF SERVICE:	**D**					

NOTES:

Printed: 02/11/13

#10067 - OLIVAS PARK DRIVE EXTENSION **REF:** 05 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***GOLF COURSE DRIVE***

E/W STREET: ***OLIVAS PARK DRIVE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	0	0	0	0	0	47	152	110	0	0	108	13

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
		L TR	L T R	TT R

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	0	0	0				-			
NBT	0	0	0				-			
NBR	0	0	0				-			
SBL	1	1600	0				0.000			
SBT	1	1600	0				0.029 *			
SBR	0	0	47				-			
EBL	1	1600	152				0.095 *			
EBT	1	1600	110				0.069			
EBR	1	1600	0				0.000			
WBL	0	0	0				-			
WBT	2	3200	108				0.034 *			
WBR	1	1600	13				0.008			
						LOST TIME:				
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.16**			
						SCENARIO LEVEL OF SERVICE:	**A**			

NOTES:

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#10067 - OLIVAS PARK DRIVE EXTENSION **REF:** 05 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***GOLF COURSE DRIVE***

E/W STREET: ***OLIVAS PARK DRIVE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	0	0	0	6	0	185	39	167	0	0	162	6

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
		L TR	L T R	TT R

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	0	0	0				-					
NBT	0	0	0				-					
NBR	0	0	0				-					
SBL	1	1600	6				0.004					
SBT	1	1600	0				0.116 *					
SBR	0	0	185				-					
EBL	1	1600	39				0.024					
EBT	1	1600	167				0.104 *					
EBR	1	1600	0				0.000					
WBL	0	0	0				-					
WBT	2	3200	162				0.051					
WBR	1	1600	6				0.004					
						LOST TIME:						
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.22**					
						SCENARIO LEVEL OF SERVICE:	A					

NOTES:

Printed: 02/11/13

#10067 - OLIVAS PARK DRIVE EXTENSION WITH 2-LANE OLIVAS PARK DRIVE **REF:** 05 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***GOLF COURSE DRIVE***

E/W STREET: ***OLIVAS PARK DRIVE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	0	0	0	10	0	50	160	870	0	0	270	20

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
		L TR	L T R	TT R

TRAFFIC SCENARIOS

SCENARIO 1 = GENERAL PLAN VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	0	0	0				-					
NBT	0	0	0				-					
NBR	0	0	0				-					
SBL	1	1600	10				0.006					
SBT	1	1600	0				0.031 *					
SBR	0	0	50				-					
EBL	1	1600	160				0.100					
EBT	1	1600	870				0.544 *					
EBR	1	1600	0				0.000					
WBL	0	0	0				-					
WBT	2	3200	270				0.084					
WBR	1	1600	20				0.013					
						LOST TIME:						
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.58**					
						SCENARIO LEVEL OF SERVICE:	A					

NOTES:

Printed: 02/11/13

#10067 - OLIVAS PARK DRIVE EXTENSION WITH 2-LANE OLIVAS PARK DRIVE **REF:** 05 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***GOLF COURSE DRIVE***

E/W STREET: ***OLIVAS PARK DRIVE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	0	0	0	10	0	190	40	990	0	0	600	10

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
		L TR	L T R	TT R

TRAFFIC SCENARIOS

SCENARIO 1 = GENERAL PLAN VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	0	0	0				-					
NBT	0	0	0				-					
NBR	0	0	0				-					
SBL	1	1600	10				0.006					
SBT	1	1600	0				0.119 *					
SBR	0	0	190				-					
EBL	1	1600	40				0.025					
EBT	1	1600	990				0.619 *					
EBR	1	1600	0				0.000					
WBL	0	0	0				-					
WBT	2	3200	600				0.188					
WBR	1	1600	10				0.006					
						LOST TIME:						
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.74**					
						SCENARIO LEVEL OF SERVICE:	**C**					

NOTES:

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#10067 - OLIVAS PARK DRIVE EXTENSION WITH 4-LANE OLIVAS PARK DRIVE **REF:** 05 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***GOLF COURSE DRIVE***

E/W STREET: ***OLIVAS PARK DRIVE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	0	0	0	10	0	50	160	1210	0	0	440	15

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
		L TR	L TT R	TT R

TRAFFIC SCENARIOS

SCENARIO 1 = GENERAL PLAN VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	0	0	0				-					
NBT	0	0	0				-					
NBR	0	0	0				-					
SBL	1	1600	10				0.006					
SBT	1	1600	0				0.031 *					
SBR	0	0	50				-					
EBL	1	1600	160				0.100					
EBT	2	3200	1210				0.378 *					
EBR	1	1600	0				0.000					
WBL	0	0	0				-					
WBT	2	3200	440				0.138					
WBR	1	1600	15				0.009					
						LOST TIME:						
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.41**					
						SCENARIO LEVEL OF SERVICE:	A					

NOTES:

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#10067 - OLIVAS PARK DRIVE EXTENSION WITH 4-LANE OLIVAS PARK DRIVE **REF:** 05 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***GOLF COURSE DRIVE***

E/W STREET: ***OLIVAS PARK DRIVE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	0	0	0	10	0	190	40	1510	0	0	1070	10

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
		L TR	L TT R	TT R

TRAFFIC SCENARIOS

SCENARIO 1 = GENERAL PLAN VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	0	0	0				-					
NBT	0	0	0				-					
NBR	0	0	0				-					
SBL	1	1600	10				0.006					
SBT	1	1600	0				0.119 *					
SBR	0	0	190				-					
EBL	1	1600	40				0.025					
EBT	2	3200	1510				0.472 *					
EBR	1	1600	0				0.000					
WBL	0	0	0				-					
WBT	2	3200	1070				0.334					
WBR	1	1600	10				0.006					
						LOST TIME:						
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.59**					
						SCENARIO LEVEL OF SERVICE:	A					

NOTES:

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#10067 - OLIVAS PARK DRIVE EXTENSION **REF:** 06 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***PERKIN AVENUE***

E/W STREET: ***KING DRIVE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	10	96	3	7	136	67	10	0	6	2	0	1

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	L TR	L TR	LTR	LTR

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	1	1600	10				0.006 *			
NBT	1	1600	96				0.062			
NBR	0	0	3				-			
SBL	1	1600	7				0.004			
SBT	1	1600	136				0.127 *			
SBR	0	0	67				-			
EBL	0	0	10				-			
EBT	1	1600	0				0.010 *			
EBR	0	0	6				-			
WBL	0	0	2				-			
WBT	1	1600	0				0.002 *			
WBR	0	0	1				-			
						LOST TIME:				
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.15**			
						SCENARIO LEVEL OF SERVICE:	A			

NOTES:

Printed: 02/11/13

#10067 - OLIVAS PARK DRIVE EXTENSION **REF:** 06 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***PERKIN AVENUE***

E/W STREET: ***KING DRIVE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	12	156	0	1	137	25	71	0	21	2	1	8

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	L TR	L TR	LTR	LTR

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	1	1600	12				0.008 *			
NBT	1	1600	156				0.098			
NBR	0	0	0				-			
SBL	1	1600	1				0.001			
SBT	1	1600	137				0.101 *			
SBR	0	0	25				-			
EBL	0	0	71				-			
EBT	1	1600	0				0.058 *			
EBR	0	0	21				-			
WBL	0	0	2				-			
WBT	1	1600	1				0.007 *			
WBR	0	0	8				-			
						LOST TIME:				
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.17**			
						SCENARIO LEVEL OF SERVICE:	**A**			

NOTES:

Printed: 02/11/13

#10067 - OLIVAS PARK DRIVE EXTENSION WITH 2-LANE OLIVAS PARK DRIVE **REF:** 06 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***PERKIN AVENUE***

E/W STREET: ***KING DRIVE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	**10**	**100**	**10**	**10**	**140**	**70**	**10**	**10**	**10**	**20**	**10**	**10**

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	L TR	L TR	LTR	LTR

TRAFFIC SCENARIOS

SCENARIO 1 = GENERAL PLAN VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	1	1600	10				0.006 *					
NBT	1	1600	100				0.069					
NBR	0	0	10				-					
SBL	1	1600	10				0.006					
SBT	1	1600	140				0.131 *					
SBR	0	0	70				-					
EBL	0	0	10				-					
EBT	1	1600	10				0.019 *					
EBR	0	0	10				-					
WBL	0	0	20				-					
WBT	1	1600	10				0.025 *					
WBR	0	0	10				-					
						LOST TIME:						
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.18**					
						SCENARIO LEVEL OF SERVICE:	**A**					

NOTES:

Printed: 02/11/13

#10067 - OLIVAS PARK DRIVE EXTENSION WITH 2-LANE OLIVAS PARK DRIVE **REF:** 06 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***PERKIN AVENUE***

E/W STREET: ***KING DRIVE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	**20**	**160**	**10**	**10**	**140**	**30**	**80**	**10**	**30**	**20**	**10**	**10**

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	L TR	L TR	LTR	LTR

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	1	1600	20				0.013 *			
NBT	1	1600	160				0.106			
NBR	0	0	10				-			
SBL	1	1600	10				0.006			
SBT	1	1600	140				0.106 *			
SBR	0	0	30				-			
EBL	0	0	80				-			
EBT	1	1600	10				0.075 *			
EBR	0	0	30				-			
WBL	0	0	20				-			
WBT	1	1600	10				0.025 *			
WBR	0	0	10				-			
						LOST TIME:				
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.22**			
						SCENARIO LEVEL OF SERVICE:	A			

NOTES:

Printed: 02/11/13

#10067 - OLIVAS PARK DRIVE EXTENSION WITH 4-LANE OLIVAS PARK DRIVE **REF:** 06 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***PERKIN AVENUE***

E/W STREET: ***KING DRIVE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	**10**	**100**	**10**	**10**	**70**	**70**	**10**	**10**	**10**	**20**	**10**	**10**

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	L TR	L TR	LTR	LTR

TRAFFIC SCENARIOS

SCENARIO 1 = GENERAL PLAN VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	1	1600	10				0.006 *					
NBT	1	1600	100				0.069					
NBR	0	0	10				-					
SBL	1	1600	10				0.006					
SBT	1	1600	70				0.088 *					
SBR	0	0	70				-					
EBL	0	0	10				-					
EBT	1	1600	10				0.019 *					
EBR	0	0	10				-					
WBL	0	0	20				-					
WBT	1	1600	10				0.025 *					
WBR	0	0	10				-					
						LOST TIME:						
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.14**					
						SCENARIO LEVEL OF SERVICE:	**A**					

NOTES:

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#10067 - OLIVAS PARK DRIVE EXTENSION WITH 4-LANE OLIVAS PARK DRIVE **REF:** 06 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***PERKIN AVENUE***

E/W STREET: ***KING DRIVE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	20	80	10	10	80	30	80	10	30	20	10	10

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	L TR	L TR	LTR	LTR

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	1	1600	20				0.013 *					
NBT	1	1600	80				0.056					
NBR	0	0	10				-					
SBL	1	1600	10				0.006					
SBT	1	1600	80				0.069 *					
SBR	0	0	30				-					
EBL	0	0	80				-					
EBT	1	1600	10				0.075 *					
EBR	0	0	30				-					
WBL	0	0	20				-					
WBT	1	1600	10				0.025 *					
WBR	0	0	10				-					
						LOST TIME:						
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.18**					
						SCENARIO LEVEL OF SERVICE:	**A**					

NOTES:

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#10067 - OLIVAS PARK DRIVE EXTENSION **REF:** 07 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***PERKIN AVENUE***

E/W STREET: ***AUTO CENTER DRIVE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	3	0	107	0	0	0	0	55	10	268	249	0

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	LR		TR	L T

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	0	0	3				-					
NBT	1	1600	0				0.069 *					
NBR	0	0	107				-					
SBL	0	0	0				-					
SBT	0	0	0				-					
SBR	0	0	0				-					
EBL	0	0	0				-					
EBT	1	1600	55				0.041 *					
EBR	0	0	10				-					
WBL	1	1600	268				0.168 *					
WBT	1	1600	249				0.156					
WBR	0	0	0				-					
						LOST TIME:						
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.28**					
						SCENARIO LEVEL OF SERVICE:	A					

NOTES:

Printed: 02/11/13

#10067 - OLIVAS PARK DRIVE EXTENSION **REF:** 07 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***PERKIN AVENUE***

E/W STREET: ***AUTO CENTER DRIVE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	4	0	278	0	0	0	0	245	7	155	98	0

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	LR		TR	L T

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	0	0	4				-			
NBT	1	1600	0				0.176 *			
NBR	0	0	278				-			
SBL	0	0	0				-			
SBT	0	0	0				-			
SBR	0	0	0				-			
EBL	0	0	0				-			
EBT	1	1600	245				0.158 *			
EBR	0	0	7				-			
WBL	1	1600	155				0.097 *			
WBT	1	1600	98				0.061			
WBR	0	0	0				-			
						LOST TIME:				
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.43**			
						SCENARIO LEVEL OF SERVICE:	A			

NOTES:

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#10067 - OLIVAS PARK DRIVE EXTENSION WITH 2-LANE OLIVAS PARK DRIVE **REF:** 07 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***PERKIN AVENUE***

E/W STREET: ***AUTO CENTER DRIVE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	**10**	**0**	**110**	**0**	**0**	**0**	**0**	**110**	**10**	**270**	**250**	**0**

GEOMETRICS

	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
LANE GEOMETRICS	LR		TR	L T

TRAFFIC SCENARIOS

SCENARIO 1 = GENERAL PLAN VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	0	0	10				-					
NBT	1	1600	0				0.075 *					
NBR	0	0	110				-					
SBL	0	0	0				-					
SBT	0	0	0				-					
SBR	0	0	0				-					
EBL	0	0	0				-					
EBT	1	1600	110				0.075 *					
EBR	0	0	10				-					
WBL	1	1600	270				0.169 *					
WBT	1	1600	250				0.156					
WBR	0	0	0				-					
						LOST TIME:						
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.32**					
						SCENARIO LEVEL OF SERVICE:	A					

NOTES:

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#10067 - OLIVAS PARK DRIVE EXTENSION WITH 2-LANE OLIVAS PARK DRIVE **REF:** 07 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***PERKIN AVENUE***

E/W STREET: ***AUTO CENTER DRIVE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	**10**	**0**	**280**	**0**	**0**	**0**	**0**	**250**	**10**	**160**	**100**	**0**

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	LR		TR	L T

TRAFFIC SCENARIOS

SCENARIO 1 = GENERAL PLAN VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	0	0	10				-					
NBT	1	1600	0				0.181 *					
NBR	0	0	280				-					
SBL	0	0	0				-					
SBT	0	0	0				-					
SBR	0	0	0				-					
EBL	0	0	0				-					
EBT	1	1600	250				0.163 *					
EBR	0	0	10				-					
WBL	1	1600	160				0.100 *					
WBT	1	1600	100				0.063					
WBR	0	0	0				-					
						LOST TIME:						
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.44**					
						SCENARIO LEVEL OF SERVICE:	A					

NOTES:

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#10067 - OLIVAS PARK DRIVE EXTENSION WITH 4-LANE OLIVAS PARK DRIVE **REF:** 07 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***PERKIN AVENUE***

E/W STREET: ***AUTO CENTER DRIVE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	**10**	**0**	**110**	**0**	**0**	**0**	**0**	**100**	**10**	**200**	**250**	**0**

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	LR		TR	L T

TRAFFIC SCENARIOS

SCENARIO 1 = GENERAL PLAN VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	0	0	10				-			
NBT	1	1600	0				0.075 *			
NBR	0	0	110				-			
SBL	0	0	0				-			
SBT	0	0	0				-			
SBR	0	0	0				-			
EBL	0	0	0				-			
EBT	1	1600	100				0.069 *			
EBR	0	0	10				-			
WBL	1	1600	200				0.125 *			
WBT	1	1600	250				0.156			
WBR	0	0	0				-			
						LOST TIME:				
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.27**			
						SCENARIO LEVEL OF SERVICE:	A			

NOTES:

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#10067 - OLIVAS PARK DRIVE EXTENSION WITH 4-LANE OLIVAS PARK DRIVE **REF:** 07 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***PERKIN AVENUE***

E/W STREET: ***AUTO CENTER DRIVE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	**10**	**0**	**200**	**0**	**0**	**0**	**0**	**250**	**10**	**100**	**100**	**0**

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	LR		TR	L T

TRAFFIC SCENARIOS

SCENARIO 1 = GENERAL PLAN VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	0	0	10				-					
NBT	1	1600	0				0.131 *					
NBR	0	0	200				-					
SBL	0	0	0				-					
SBT	0	0	0				-					
SBR	0	0	0				-					
EBL	0	0	0				-					
EBT	1	1600	250				0.163 *					
EBR	0	0	10				-					
WBL	1	1600	100				0.063 *					
WBT	1	1600	100				0.063					
WBR	0	0	0				-					
						LOST TIME:						
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.36**					
						SCENARIO LEVEL OF SERVICE:	**A**					

NOTES:

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#10067 - OLIVAS PARK DRIVE EXTENSION **REF:** 08 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***JOHNSON DRIVE***

E/W STREET: ***U.S. 101 SB RAMPS***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	236	866	0	0	438	1088	71	0	53	0	0	0

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	L T	T FR	L R	

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	1	1600	236				0.148					
NBT	1	1600	866				0.541 *					
NBR	0	0	0				-					
SBL	0	0	0				-					
SBT	1	1600	438				0.274					
SBR	1	1600	1088				0.680					
EBL	1	1600	71				0.044 *					
EBT	0	0	0				-					
EBR *(a)*	1	1600	31				0.019					
WBL	0	0	0				-					
WBT	0	0	0				-					
WBR	0	0	0				-					
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.59**					
						SCENARIO LEVEL OF SERVICE:	**A**					

NOTES:

RTOR: (a) 42%

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#10067 - OLIVAS PARK DRIVE EXTENSION **REF:** 08 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***JOHNSON DRIVE***

E/W STREET: ***U.S. 101 SB RAMPS***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	233	316	0	0	230	790	164	0	36	0	0	0

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	L T	T FR	L R	

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	1	1600	233				0.146 *					
NBT	1	1600	316				0.198					
NBR	0	0	0				-					
SBL	0	0	0				-					
SBT	1	1600	230				0.144 *					
SBR	1	1600	790				0.494					
EBL	1	1600	164				0.103 *					
EBT	0	0	0				-					
EBR *(a)*	1	1600	29				0.018					
WBL	0	0	0				-					
WBT	0	0	0				-					
WBR	0	0	0				-					
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.39**					
						SCENARIO LEVEL OF SERVICE:	A					

NOTES:

RTOR: (a) 19%

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#10067 - OLIVAS PARK DRIVE EXTENSION WITH 2-LANE OLIVAS PARK DRIVE **REF:** 08 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***JOHNSON DRIVE***

E/W STREET: ***U.S. 101 SB RAMPS***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	**180**	**140**	**0**	**0**	**730**	**1510**	**100**	**0**	**120**	**0**	**0**	**0**

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	L T	T FR	L R	

TRAFFIC SCENARIOS

SCENARIO 1 = GENERAL PLAN VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	1	1600	180				0.113 *					
NBT	1	1600	140				0.088					
NBR	0	0	0				-					
SBL	0	0	0				-					
SBT	1	1600	730				0.456 *					
SBR	1	1600	1510				0.944					
EBL	1	1600	100				0.063 *					
EBT	0	0	0				-					
EBR	1	1600	120				0.075					
WBL	0	0	0				-					
WBT	0	0	0				-					
WBR	0	0	0				-					
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.63**					
						SCENARIO LEVEL OF SERVICE:	**B**					

NOTES:

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#10067 - OLIVAS PARK DRIVE EXTENSION WITH 2-LANE OLIVAS PARK DRIVE **REF:** 08 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***JOHNSON DRIVE***

E/W STREET: ***U.S. 101 SB RAMPS***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	**820**	**650**	**0**	**0**	**470**	**1530**	**260**	**0**	**90**	**0**	**0**	**0**

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	L T	T FR	L R	

TRAFFIC SCENARIOS

SCENARIO 1 = GENERAL PLAN VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	1	1600	820				0.513 *					
NBT	1	1600	650				0.406					
NBR	0	0	0				-					
SBL	0	0	0				-					
SBT	1	1600	470				0.294 *					
SBR	1	1600	1530				0.956					
EBL	1	1600	260				0.163 *					
EBT	0	0	0				-					
EBR	1	1600	90				0.056					
WBL	0	0	0				-					
WBT	0	0	0				-					
WBR	0	0	0				-					
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.96**					
						SCENARIO LEVEL OF SERVICE:	**E**					

NOTES:

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#10067 - OLIVAS PARK DRIVE EXTENSION WITH 4-LANE OLIVAS PARK DRIVE **REF:** 08 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***JOHNSON DRIVE***

E/W STREET: ***U.S. 101 SB RAMPS***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	**260**	**170**	**0**	**0**	**980**	**1430**	**110**	**0**	**180**	**0**	**0**	**0**

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	L T	T FR	L R	

TRAFFIC SCENARIOS

SCENARIO 1 = GENERAL PLAN VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	1	1600	260				0.163 *			
NBT	1	1600	170				0.106			
NBR	0	0	0				-			
SBL	0	0	0				-			
SBT	1	1600	980				0.613 *			
SBR	1	1600	1430				0.894			
EBL	1	1600	110				0.069 *			
EBT	0	0	0				-			
EBR	1	1600	180				0.113			
WBL	0	0	0				-			
WBT	0	0	0				-			
WBR	0	0	0				-			
			TOTAL INTERSECTION CAPACITY UTILIZATION:				**0.84**			
			SCENARIO LEVEL OF SERVICE:				**D**			

NOTES:

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#10067 - OLIVAS PARK DRIVE EXTENSION WITH 4-LANE OLIVAS PARK DRIVE **REF:** 08 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***JOHNSON DRIVE***

E/W STREET: ***U.S. 101 SB RAMPS***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	1220	1070	0	0	810	1420	240	0	270	0	0	0

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	L T	T FR	L R	

TRAFFIC SCENARIOS

SCENARIO 1 = GENERAL PLAN VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	1	1600	1220				0.763 *			
NBT	1	1600	1070				0.669			
NBR	0	0	0				-			
SBL	0	0	0				-			
SBT	1	1600	810				0.506 *			
SBR	1	1600	1420				0.888			
EBL	1	1600	240				0.150 *			
EBT	0	0	0				-			
EBR	1	1600	270				0.169			
WBL	0	0	0				-			
WBT	0	0	0				-			
WBR	0	0	0				-			
			TOTAL INTERSECTION CAPACITY UTILIZATION:				1.42			
			SCENARIO LEVEL OF SERVICE:				F			

NOTES:

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#10067 - OLIVAS PARK DRIVE EXTENSION **REF:** 09 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***JOHNSON DRIVE***

E/W STREET: ***U.S. 101 SB RAMPS***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	**236**	**866**	**0**	**0**	**198**	**25**	**29**	**0**	**20**	**0**	**0**	**0**

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	L T	T R	L R	

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	1	1600	236				0.148					
NBT	1	1600	866				0.541 *					
NBR	0	0	0				-					
SBL	0	0	0				-					
SBT	1	1600	198				0.124 *					
SBR	1	1600	25				0.016					
EBL	1	1600	29				0.018 *					
EBT	0	0	0				-					
EBR	1	1600	20				0.013					
WBL	0	0	0				-					
WBT	0	0	0				-					
WBR	0	0	0				-					
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.68**					
						SCENARIO LEVEL OF SERVICE:	**B**					

NOTES:

Printed: 02/11/13

#10067 - OLIVAS PARK DRIVE EXTENSION **REF:** 09 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***JOHNSON DRIVE***

E/W STREET: ***U.S. 101 SB RAMPS***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	233	316	0	0	230	790	164	0	36	0	0	0

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	L T	T R	L R	

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	1	1600	233				0.146 *					
NBT	1	1600	316				0.198					
NBR	0	0	0				-					
SBL	0	0	0				-					
SBT	1	1600	230				0.144					
SBR	1	1600	790				0.494 *					
EBL	1	1600	164				0.103 *					
EBT	0	0	0				-					
EBR	1	1600	36				0.023					
WBL	0	0	0				-					
WBT	0	0	0				-					
WBR	0	0	0				-					
						TOTAL INTERSECTION CAPACITY UTILIZATION:	0.74					
						SCENARIO LEVEL OF SERVICE:	C					

NOTES:

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#10067 - OLIVAS PARK DRIVE EXTENSION WITH 2-LANE OLIVAS PARK DRIVE **REF:** 09 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***NORTH BANK DRIVE***

E/W STREET: ***VENTURA BOULEVARD***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	**160**	**1000**	**0**	**0**	**330**	**50**	**80**	**0**	**80**	**0**	**0**	**0**

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	L TT	T R	LR	

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	1	1600	160				0.100					
NBT	2	3200	1000				0.313 *					
NBR	0	0	0				-					
SBL	0	0	0				-					
SBT	1	1600	330				0.206					
SBR	1	1600	50				0.031					
EBL	0	0	80				-					
EBT	1	1600	0				0.100 *					
EBR	0	0	80				-					
WBL	0	0	0				-					
WBT	0	0	0				-					
WBR	0	0	0				-					
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.41**					
						SCENARIO LEVEL OF SERVICE:	**A**					

NOTES:

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#10067 - OLIVAS PARK DRIVE EXTENSION WITH 2-LANE OLIVAS PARK DRIVE **REF:** 09 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***NORTH BANK DRIVE***

E/W STREET: ***VENTURA BOULEVARD***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	580	2460	0	0	370	30	40	0	120	0	0	0

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	L TT	T R	LR	

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	1	1600	580				0.363					
NBT	2	3200	2460				0.769 *					
NBR	0	0	0				-					
SBL	0	0	0				-					
SBT	1	1600	370				0.231					
SBR	1	1600	30				0.019					
EBL	0	0	40				-					
EBT	1	1600	0				0.100 *					
EBR	0	0	120				-					
WBL	0	0	0				-					
WBT	0	0	0				-					
WBR	0	0	0				-					
						TOTAL INTERSECTION CAPACITY UTILIZATION:	0.87					
						SCENARIO LEVEL OF SERVICE:	D					

NOTES:

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#10067 - OLIVAS PARK DRIVE EXTENSION WITH 4-LANE OLIVAS PARK DRIVE **REF:** 09 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***NORTH BANK DRIVE***

E/W STREET: ***VENTURA BOULEVARD***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	**160**	**1130**	**0**	**0**	**330**	**50**	**80**	**0**	**80**	**0**	**0**	**0**

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	L TT	T R	LR	

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	1	1600	160				0.100					
NBT	2	3200	1130				0.353 *					
NBR	0	0	0				-					
SBL	0	0	0				-					
SBT	1	1600	330				0.206					
SBR	1	1600	50				0.031					
EBL	0	0	80				-					
EBT	1	1600	0				0.100 *					
EBR	0	0	80				-					
WBL	0	0	0				-					
WBT	0	0	0				-					
WBR	0	0	0				-					

TOTAL INTERSECTION CAPACITY UTILIZATION: **0.45**

SCENARIO LEVEL OF SERVICE: **A**

NOTES:

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#10067 - OLIVAS PARK DRIVE EXTENSION WITH 4-LANE OLIVAS PARK DRIVE **REF:** 09 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***NORTH BANK DRIVE***

E/W STREET: ***VENTURA BOULEVARD***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	530	2590	0	0	540	30	40	0	120	0	0	0

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	L TT	T R	LR	

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	1	1600	530				0.331					
NBT	2	3200	2590				0.809 *					
NBR	0	0	0				-					
SBL	0	0	0				-					
SBT	1	1600	540				0.338					
SBR	1	1600	30				0.019					
EBL	0	0	40				-					
EBT	1	1600	0				0.100 *					
EBR	0	0	120				-					
WBL	0	0	0				-					
WBT	0	0	0				-					
WBR	0	0	0				-					
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.91**					
						SCENARIO LEVEL OF SERVICE:	**E**					

NOTES:

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#10067 - OLIVAS PARK DRIVE EXTENSION **REF:** 10 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***NORTHBANK ROAD (SPLIT PHASED)***

E/W STREET: ***JOHNSON DRIVE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	638	17	228	21	20	5	0	1240	193	28	133	3

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	LL LT T R	L LT T R	L TT R	L TT TR

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	0	0	638				-					
NBT	4	6400	17				0.102 *					
NBR *(a)*	1	1600	144				0.090					
SBL	0	0	21				-					
SBT	3	4800	20				0.009 *					
SBR *(b)*	1	1600	2				0.001					
EBL	1	1600	0				0.000					
EBT	2	3200	1240				0.388 *					
EBR *(c)*	1	1600	143				0.089					
WBL	1	1600	28				0.018 *					
WBT	3	4800	133				0.028					
WBR *(d)*	0	0	3				-					
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.52**					
						SCENARIO LEVEL OF SERVICE:	A					

NOTES:

RTOR: *(a) 37%*
(b) 60%
(c) 26%
(d) 0%

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#10067 - OLIVAS PARK DRIVE EXTENSION **REF:** 10 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***NORTHBANK ROAD (SPLIT PHASED)***

E/W STREET: ***JOHNSON DRIVE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	1047	71	130	80	52	17	0	826	122	64	384	32

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	LL LT T R	L LT T R	L TT R	L TT TR

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	0	0	1047				-					
NBT	4	6400	71				0.175 *					
NBR *(a)*	1	1600	61				0.038					
SBL	0	0	80				-					
SBT	3	4800	52				0.028 *					
SBR *(b)*	1	1600	2				0.001					
EBL	1	1600	0				0.000					
EBT	2	3200	826				0.258 *					
EBR *(c)*	1	1600	87				0.054					
WBL	1	1600	64				0.040 *					
WBT	3	4800	384				0.084					
WBR *(d)*	0	0	20				-					
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.50**					
						SCENARIO LEVEL OF SERVICE:	A					

NOTES:

RTOR: *(a) 53%*
(b) 88%
(c) 29%
(d) 38%

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#10067 - OLIVAS PARK DRIVE EXTENSION WITH 2-LANE OLIVAS PARK DRIVE **REF:** 10 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***NORTHBANK ROAD (SPLIT PHASED)***

E/W STREET: ***JOHNSON DRIVE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	450	70	500	160	70	20	10	1590	230	60	160	20

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	LL LT T R	L LT T R	L TTTR	L TTT R

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	0	0	450				-					
NBT	4	6400	70				0.081					
NBR	1	1600	440				0.275 *					
SBL	0	0	160				-					
SBT	3	4800	70				0.048 *					
SBR	1	1600	20				0.013					
EBL	1	1600	10				0.006					
EBT	3	4800	1590				0.379 *					
EBR	0	0	230				-					
WBL	1	1600	60				0.038 *					
WBT	3	4800	160				0.033					
WBR	1	1600	20				0.013					
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.75**					
						SCENARIO LEVEL OF SERVICE:	**C**					

NOTES:

RTOR: *(a) 37%*
(b) 60%
(c) 26%
(d) 0%

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#10067 - OLIVAS PARK DRIVE EXTENSION WITH 2-LANE OLIVAS PARK DRIVE **REF:** 10 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***NORTHBANK ROAD (SPLIT PHASED)***

E/W STREET: ***JOHNSON DRIVE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	1730	340	330	270	110	80	70	1370	160	110	620	180

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	LL LT T R	L LT T R	L TTTR	L TTT R

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	3	4800	1730				0.360 *					
NBT	2	3200	340				0.106					
NBR	1	1600	330				0.206					
SBL	2	3200	270				0.084					
SBT	1	1600	110				0.069 *					
SBR	1	1600	80				0.050					
EBL	1	1600	70				0.044					
EBT	3	4800	1370				0.319 *					
EBR	0	0	160				-					
WBL	1	1600	110				0.069 *					
WBT	3	4800	620				0.129					
WBR	1	1600	180				0.113					
						TOTAL INTERSECTION CAPACITY UTILIZATION:	0.82					
						SCENARIO LEVEL OF SERVICE:	D					

NOTES:

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#10067 - OLIVAS PARK DRIVE EXTENSION WITH 4-LANE OLIVAS PARK DRIVE **REF:** 10 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***A.M. PEAK HOUR***

N/S STREET: ***NORTH BANK ROAD (SPLIT PHASED)***

E/W STREET: ***JOHNSON DRIVE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	440	70	630	160	70	20	10	1620	230	60	200	20

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	LL LT T R	L LT T R	L TTTR	L TTT R

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	0	0	440				-					
NBT	4	6400	70				0.080					
NBR	1	1600	570				0.356 *					
SBL	0	0	160				-					
SBT	3	4800	70				0.048 *					
SBR	1	1600	20				0.013					
EBL	1	1600	10				0.006					
EBT	3	4800	1620				0.385 *					
EBR	0	0	230				-					
WBL	1	1600	60				0.038 *					
WBT	3	4800	200				0.042					
WBR	1	1600	20				0.013					
						TOTAL INTERSECTION CAPACITY UTILIZATION:	0.84					
						SCENARIO LEVEL OF SERVICE:	D					

NOTES:

~~RTOR: (a) 37%~~
~~(b) 60%~~
~~(c) 26%~~
~~(d) 0%~~

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#10067 - OLIVAS PARK DRIVE EXTENSION WITH 4-LANE OLIVAS PARK DRIVE **REF:** 10 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***OCTOBER 21, 2010***

TIME PERIOD: ***P.M. PEAK HOUR***

N/S STREET: ***NORTHBANK ROAD (SPLIT PHASED)***

E/W STREET: ***JOHNSON DRIVE***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A) EXISTING:	1620	320	590	240	140	80	70	1370	170	240	850	210

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND	SOUTH BOUND	EAST BOUND	WEST BOUND
	LL LT T R	L LT T R	L TTTR	L TTT R

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4		
NBL	3	4800	1620				0.338 *					
NBT	2	3200	320				0.100					
NBR	1	1600	590				0.369					
SBL	2	3200	240				0.075					
SBT	1	1600	140				0.088 *					
SBR	1	1600	80				0.050					
EBL	1	1600	70				0.044					
EBT	3	4800	1370				0.321 *					
EBR	0	0	170				-					
WBL	1	1600	240				0.150 *					
WBT	3	4800	850				0.177					
WBR	1	1600	210				0.131					

TOTAL INTERSECTION CAPACITY UTILIZATION: **0.89**

SCENARIO LEVEL OF SERVICE: **D**

NOTES:

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Ventura, California 93003

OLIVAS PARK DRIVE EXTENSION PROJECT, CITY OF VENTURA

Caltrans District 7 staff requested that the Southbound Ramps at the U.S. Highway 101/Johnson Drive interchange and the U.S. Highway 101/Victoria Avenue interchange be evaluated to determine whether the vehicle queues can be adequately accommodated within the off-ramp without backing into the U.S. Highway 101 mainline. A phone conversation with Nerses Armand Yerjanian with Caltrans District 7 determined that the U.S. Highway 101/Victoria Avenue interchange did not require further evaluation since the EIR did not determine that the project would significantly impact the ramps at this interchange.

ATE evaluated the A.M. and P.M. peak hour periods for the following three scenarios included in the Olivas Park Drive Extension Project EIR, "Existing Conditions", "Buildout of Current General Plan" and "Buildout of Proposed General Plan". ATE utilized the Synchro software and the Highway Capacity Manual (HCM) methodology to determine the vehicle queues on the southbound off-ramp at Johnson Drive. The results of the analysis are summarized in Table 1.

Table 1
Estimated Queue Lengths

Scenario	A.M. Peak Hour		P.M. Peak Hour	
	Left Queue	Right Queue	Left Queue	Right Queue
Existing Conditions	33 feet	16 feet	72 feet	15 feet
Current General Plan Buildout	76 feet	39 feet	290 feet	44 feet
Proposed General Plan Buildout	113 feet	77 feet	273 feet	114 feet

As shown in Table 1, the maximum vehicle queue is estimated to be 290 feet. The Synchro worksheets are attached for review. The southbound off-ramp provides approximately 900 feet of storage from the gore point to the crosswalk of the intersection. ATE has determined that no improvements are necessary due to vehicles backing into the freeway mainline.

Associated Transportation Engineers

Scott A. Schell, AICP, PTP
Principal Transportation Planner

SAS/DFN/wp

attachments: Synchro Worksheets

Appendix G

Mitigation Monitoring and Reporting Program

MITIGATION MONITORING AND REPORTING PROGRAM

CEQA requires adoption of mitigation monitoring and reporting program (MMRP) for the measures necessary to mitigate or avoid significant effects on the environment (Public Resources Code 21081.6). The mitigation monitoring and reporting program is designed to ensure compliance with adopted mitigation measures during project implementation. For each mitigation measure recommended in the Olivas Park Drive Extension Environmental Impact Report (EIR), specifications are made herein that identify the action required and the monitoring that must occur. In addition, a responsible agency is identified for verifying compliance with measures contained in the MMRP.

To implement this MMRP, the City of Ventura will designate a Project Mitigation Monitoring and Reporting Coordinator ("Coordinator"). The coordinator will be responsible for ensuring that the mitigation measures incorporated into the project are complied with during project implementation. The coordinator will also distribute copies of the MMRP to those responsible agencies identified in the MMRP as having partial or full responsibility for implementing certain measures. Failure of a responsible agency to implement a mitigation measure will not in any way prevent the lead agency from implementing the proposed project.

The following table will be used as the coordinator's checklist to determine compliance with required mitigation measures.

Mitigation Measure	Implementation Requirement	Timing	Monitoring Department	Funding	Standard for Success	Compliance Verification		
						Initial	Date	Comments
AGRICULTURAL RESOURCES								
AG-1 Agricultural Conservation Easement. Mitigation shall be provided for the loss of state-designated Prime Farmland and Farmland of Statewide Importance in existence at the time property in the project area containing such state-designated Farmland is developed. Applicants seeking to develop such state-designated Farmland shall cause to be set aside in perpetuity agricultural lands of equivalent acreage (a 1:1 ratio) and with soil and farming conditions equivalent or superior to the state-designated Farmland that the applicant seeks to convert to other uses. The applicant shall either purchase one or more permanent, irreversible agricultural easements for the benefit of the City or other qualifying entity acceptable to the City, or contribute funds to a local, regional, or statewide organization or agency whose purpose includes the acquisition and stewardship of agricultural easements, to be earmarked for the purchase of permanent, irreversible agricultural easements. The protected acreage equal to the total acreage of, and of equivalent soil and farming conditions to, the state-designated Farmland to be converted shall be set aside prior to the commencement of any development activity.	Verification that an agricultural easement has been purchased or that funds to a qualifying organization or agency have been made.	Prior to issuance of building permits for future private development projects	VCD	Property owners/ project applicants	Easements purchased or funds paid			

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Mitigation Measure	Implementation Requirement	Timing	Monitoring Department	Funding	Standard for Success	Compliance Verification		
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AIR QUALITY								
AQ-2 Energy and Transportation Related Emission Reduction. Future project site developers shall prepare project-specific air quality studies to determine if their proposed development would generate emissions exceeding the 25 lbs/day VCAPCD significance threshold. Project-specific air quality emissions reports may be completed as stand-alone studies or may be incorporated into required CEQA analysis of individual projects. Applicants of development projects determined to exceed the 25 lbs/days threshold shall implement one or more of the following in order to reduce emissions of ROG and NOx to 25 lbs/day or less. • **Energy Efficiency.** The commercial and industrial structures proposed for development within the project area shall be designed to increase energy efficiency 20 percent beyond Title 24 requirements to partially offset the operational emissions associated with daily operation of the proposed project following buildout. Proposed energy conservation measures shall be specified in individual building plans and shall be subject to review and approval by the Inspection Services Division.	Verification that project-specific studies are completed and appropriate project-specific mitigation is required.	Prior to issuance of building permits for future private development projects	VCD	Property owners/ project applicants	Project-specific studies completed and appropriate measures implemented			

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• **Transportation Demand Management Plan.** The applicant shall prepare and implement an on-site Transportation Demand Management (TDM) Plan. In the course of completing the environmental evaluation, the TDM Plan will be reviewed by, and must meet the requirements of, the City Planning Department. • **Air Quality Mitigation Fund.** For any remaining emissions above 25 lbs/day after other mitigation measures are implemented, the applicant shall contribute toward an Air Quality Mitigation Fund to be used to develop regional programs to offset air pollutant emissions associated with implementation of the project area. The total amount that would be contributed to this fund shall be calculated based upon the methodology described in Ordinance 93-37. The fund shall be used to finance City programs to reduce regional air pollutant emissions. Specific mitigation measures that could be undertaken using the fund include, but are not limited to, enhanced public transit service, vanpool programs/subsidies, rideshare assistance programs, clean fuel programs, improved pedestrian and bicycle facilities, and park-and-ride facilities.								

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BIOLOGICAL RESOURCES								
BIO-1(a) Preconstruction Special Status Wildlife Surveys and Construction Monitoring. Not more than one week prior to vegetation clearing and initial ground disturbance activities within the project site, focused preconstruction surveys for special status wildlife species shall be conducted by qualified biologists within the construction footprint and within a 200-foot survey buffer area. The surveys shall include mapping of current locations of special-status wildlife species for avoidance and relocation efforts and to assist construction monitoring efforts. CDFW species of special concern, which are not federally listed, shall be captured by qualified biologists, when possible, and relocated to adjacent appropriate habitat to the project area (at least 200 feet from the grading limits). In addition, during any construction activities involving vegetation clearing or initial ground disturbance activities, the applicant shall contract with a biologist or biological consulting firm to conduct biological monitoring to avoid and minimize impacts to special status wildlife and protected nesting birds in the path of construction. Wildlife observed during construction activities shall be captured by qualified biologists,	Verification that wildlife surveys have been conducted and appropriate measures have been identified; field monitoring during construction	Surveys to be completed prior to initiation of grading for the road and levee; field monitoring through grading and construction of the road and levee	VPW	City	Survey completed and appropriate avoidance strategies implemented			

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Mitigation Measure	Implementation Requirement	Timing	Monitoring Department	Funding	Standard for Success	Compliance Verification		
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when possible, and relocated to suitable habitat onsite at least 200 feet from the grading limits. If active woodrat nests are found during the peak nesting season (February 1 through May 31), a 50-foot radius buffer area shall be established around the nests and land clearing activities shall be postponed until the end of peak nesting season to protect the nest. Outside of the peak nesting season, nests shall be relocated under the direction of a qualified biologist. Nest material shall be carefully and slowly picked up to allow any woodrats to escape and placed in similar suitable habitat at least 100 feet from the project boundary. CDFW shall be notified and consulted regarding the presence of any special status wildlife species found onsite during the preconstruction surveys or during biological monitoring. If a federally listed species is found prior to or during grading of the site, the USFWS shall also be notified. Only a USFWS approved biologist shall be allowed to capture and relocate listed species. The methods and results of the preconstruction surveys and any relocation efforts during those surveys shall be documented in a brief letter report and submitted to								

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the City no later than three weeks following the completion of the last survey. The methods and results of the biological monitoring and any relocation efforts conducted during construction shall be documented in a brief letter report and submitted to the City upon completion of vegetation clearance and initial ground disturbance activities.								
BIO-1(b) Conduct Nesting Bird Surveys, Provide Establish Active Nest Avoidance Buffers, and Monitor Active Nests. Vegetation clearing, construction activities, grading activities, staging/mobilization activities (collectively, "development activities") shall avoid any nests of native birds. To the extent feasible, development activities shall be planned to avoid the breeding and nesting season (February 1 – August 31). If the City determines that breeding season avoidance is not feasible, a qualified biologist shall conduct a minimum of three nesting bird surveys, within two weeks, and no more than three days prior to the start of vegetation or nesting habitat disturbance. Weekly bird nesting surveys shall be reinitiated if land clearing and disturbance activities are delayed for more than one week. The nesting bird survey area shall include a buffer around the grading limits of 500 feet. If an	Verification that bird surveys have been conducted and, if necessary, appropriate avoidance measures have been identified	Prior to initiation of grading for the road and levee	VPW	City	Survey completed and appropriate avoidance strategies implemented			

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active bird nest is found, an appropriate buffer shall be established surrounding the nest(s) and shall be flagged for avoidance. The avoidance buffer shall be determined by the monitoring biologist based upon the species nesting and the activity being conducted. If an active nest of a special status bird species is found, a suitable buffer area will be determined in coordination with CDFW/USFWS. If active bird nests are found and avoidance buffers are established, construction work shall be delayed within these areas until after the nesting season or until the young are no longer dependent upon the nest site. Alternatively, construction within the buffer area may be conducted at the discretion of a qualified biological monitor. The biologist shall monitor the active nest(s) during initial disturbance activities and/or development activities to determine if the recommended avoidance buffers are adequate and that the nests are not being stressed or jeopardized. The methods and results of the nesting bird surveys, any nesting bird avoidance efforts as a result of those surveys, and the success of the avoidance buffers shall be documented in a brief letter report and shall be submitted to the City								

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no later than three weeks following the completion of active nest monitoring activities.								
BIO-1(c) Conduct Least Bell's Vireo and Southwestern Willow Flycatcher Surveys. Development activities within 500 feet of the Santa Clara River riparian corridor shall be avoided during the least Bell's vireo (April 10 to July 31) and southwestern willow flycatcher (May 15 to July 17) breeding season. If the City determines that breeding season avoidance is not feasible, a permitted biologist shall conduct focused presence/ absence surveys in accordance with the USFWS protocols for least Bell's vireo (2001) and southwestern willow flycatcher (2003). Any survey methodology that deviates from these protocols shall be approved by the USFWS prior to initiation of the first survey. Surveys shall focus on riparian habitat associated with the Santa Clara River within the project site and adjacent suitable habitat out to 500 feet. Protocol surveys shall be conducted within one year of start of construction (i.e. breeding season prior to), and will continue annually until completion of construction activities if presence is documented in the first year. Documentation of findings, including a negative finding must be submitted to the USFWS for review. If neither species is detected, no further actions are required.	If the breeding season is not avoided, verification that surveys have been conducted and, if necessary, appropriate avoidance measures have been identified	Prior to initiation of grading for the road and levee and annually thereafter until construction is completed	VPW	City	Survey completed and appropriate avoidance strategies implemented			

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If least Bell's vireo or southwestern willow flycatcher are found nesting within the survey area, all project activities shall be halted within 500 feet of the nest site and territory for the remainder of the breeding season. The USFWS and CDFW shall be notified immediately. Should development activities within this zone be required during the breeding season, than additional consultation with USFWS and CDFW shall be required to establish suitable monitoring procedures and buffers to ensure that "take" does not occur. If "take" of least Bell's vireo or southwestern willow flycatcher is necessary to complete development activities, the applicant is required to obtain the applicable regulatory take permit(s). Compensatory mitigation, if necessary, would be determined in coordination with the wildlife agencies.								
BIO-1(d) Conduct Burrowing Owl Surveys. A qualified biologist shall conduct preconstruction clearance surveys prior to ground disturbance activities within all suitable habitat to confirm the presence/absence of burrowing owls (maybe conducted concurrently with BIO-1(a)). The surveys shall be consistent with the recommended survey methodology provided by CDFW (2012). Clearance surveys shall be conducted within seven days prior	Verification that surveys have been conducted prior to all onsite development (road, levee, and future projects) and, if necessary, appropriate avoidance measures have been identified	Prior to initiation of grading for all onsite development	VPW for road and levee; VCD for future private developmen t projects	City of road and levee; property owners/ project applicants for private development projects	Surveys completed and appropriate avoidance strategies implemented			

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to construction and ground disturbance activities. If no burrowing owls are observed, no further actions are required. If burrowing owl are detected during the preconstruction clearance surveys, avoidance buffers will be implemented in accordance with the CDFW (2012) and Burrowing Owl Consortium (1993) minimization mitigation measures. Coordination with the CDFW by a qualified biologist shall occur to establish the appropriate avoidance buffer distances specific for the project's activities and level of expected disturbance. If avoidance of burrowing owls is not feasible, a Burrowing Owl Exclusion Plan and Mitigation and Monitoring Plan will be developed by a qualified biologist in accordance with the CDFW (2012) and Burrowing Owl Consortium (1993). The Plan shall be approved by the applicable local CDFW office prior to implementation. A qualified biologist shall coordinate with the CDFW to determine the appropriate exclusion methods (passive or active relocation) for the project to relocate burrowing owls to a suitable offsite location. Relocation of owls can only occur during the non-breeding season.								

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BIO-1(e) Provide Restoration/ Compensation for Impacts to Native Vegetation Communities. Development activities shall avoid the loss of native scrub habitat wherever feasible. Avoidance shall be achieved through fencing of areas to be protected with a minimum 50 foot buffer. No construction activities, equipment or materials staging, or any other construction related activities shall be allowed within the protected native scrub areas or the surrounding buffers. Where avoidance is not feasible, the project applicant shall coordinate with the appropriate regulatory agencies, as necessary, regarding appropriate compensation for replacement of lost habitat. Compensatory mitigation for impacts to native vegetation would be determined in coordination with the wildlife agencies (e.g. providing onsite habitat creation through a HMMP or offsite payment into an in-lieu fee program for loss of habitat).	Verification that road and levee design/alignment avoid scrub habitat and that, as necessary, coordination with regulatory agencies has occurred and, as necessary, compensatory mitigation identified	Prior to initiation of grading for the road and levee	VPW	City	Appropriate avoidance and/or compensation measures identified and implemented			

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BIO-1(f) Exclude Invasive Species. Final landscape design for developed areas shall be prepared by a qualified landscape architect such that project landscaping does not introduce invasive nonnative plant species into the vicinity of the project site. The plan shall be reviewed by a qualified botanist and approved by the City prior to installation of any plant materials.	Verification that landscape plans for the road/levee and future onsite private developments do not include invasive species	Prior to construction of the road/levee; prior to issuance of building permits for future onsite private development projects	VPW for the road/levee; VCD for future private developmen t projects	City for road/ levee; property owners/ project applicants for private development projects	Landscape plans that do not include invasive plant species			
BIO-1(g) Sensitive Resources Education. Prior to initiation of all development activities, a qualified biologist shall conduct a training session for all construction personnel. At a minimum, the training shall include a description of all listed and sensitive resource issues on site and within the project area, as well as the general measures that are being implemented to protect these resources. A fact sheet covering these issues, as well as construction BMPs, shall be prepared by the developer for distribution to all contractors, their employees, and other personnel involved with construction of the project.	Verification that educational requirements have been completed	Prior to construction of the road/levee; prior to issuance of grading permits for future onsite private development projects	VPW for the road/levee; VCD for future private developmen t projects	City for road/ levee; property owners/ project applicants for private development projects	Educational requirements completed			

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BIO-2(a) Riparian/Wetland Habitat Impact Avoidance. To the extent practicable, the project shall be designed to avoid impacts to the jurisdictional waters within the project area. The following avoidance/minimization measures are required: • Any material/spoils from project activities shall be located away from jurisdictional areas or sensitive habitat and protected from stormwater run-off using temporary perimeter sediment barriers such as berms, silt fences, fiber rolls, covers, sand/gravel bags, and straw bale barriers, as appropriate. • Only the minimal amount of material needed for the project shall be stored. Materials shall be stored on impervious surfaces or plastic ground covers to prevent any spills or leakage from contaminating the ground and generally at least 50 feet from the top of bank. • Any spillage of material will be stopped if it can be done safely. The contaminated area will be cleaned and any contaminated materials properly disposed of. For all spills the project foreman or designated environmental representative will be notified. • The extent of riparian/wetland vegetation/jurisdictional areas	Field monitoring during grading for and construction of the road and levee	Throughout grading for and construction of the road and levee	VPW	City	Avoidance of riparian/wetland habitat during grading and construction			

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shall be shown on all project plans. • Riparian/wetland habitat adjacent to construction areas that will not be disturbed by the project shall be demarcated with highly visible orange construction fencing installed by the construction contractor under the guidance of a qualified biologist. The fencing shall be maintained throughout the duration of the project and shall be inspected weekly to ensure it is in proper working condition.								
BIO-2(b) Secure Resource Regulatory Permits for Impacts to Jurisdictional Areas. If jurisdictional waters cannot be avoided, minimization measures shall be applied and all necessary resource agency permits shall be obtained. This includes a 401 Certification or WDR from the RWQCB and a SAA from CDFG.	As necessary, verification that necessary regulatory permits have been obtained	Prior to grading for the road and levee	VPW	City	Any required regulatory permits obtained and applicable permit conditions implemented			
BIO-2(c) Jurisdictional Habitat Mitigation. Prepare a Habitat Mitigation and Monitoring Plan (HMMP) that outlines a compensatory mitigation approach for the project in coordination with the RWQCB and CDFG. Impacts to jurisdictional waters shall be mitigated at a minimum 2:1 ratio. It is noted that the final mitigation ratio required by the RWQCB and CDFG for acquisition of regulatory permits may differ.	As necessary, verification that the required HMMP has been prepared	Prior to grading for the road and levee	VPW	City	HMMP that outlines an appropriate compensatory mitigation approach prepared and implemented			

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The HMMP shall identify portions of the site (potentially along the eastern edge of the levee adjacent to the Santa Clara River) that contain suitable characteristics (e.g. hydrology) for restoration and provide adequate acreage to compensate for the anticipated project impacts. It shall provide measurable performance criteria for determining success of the mitigation effort and recommend remedial measures to ensure the performance criteria are met, if necessary. If mitigation must be implemented offsite, suitable mitigation lands shall be identified and purchased in the local vicinity of the site or watershed. The Plan shall discuss preservation of the site through a conservation easement and identify an approach for funding assurance for the long-term management of the conserved land.								
BIO-3(a) Lighting and Sound Restrictions. New sources of lighting and glare shall comply with City standards. The project shall incorporate lighting design features to the extent possible that will reduce the amount and intensity of night lighting in open space areas adjacent to the development. This will involve using lighting only to the extent necessary, using low intensity lights, placing lighting close to the ground when possible, using shields to reduce glare and direct lighting downward, and pointing	Verification that lighting and, as necessary, sound control plans have been completed	Prior to construction of the road/levee; prior to issuance of building permits for future private development projects	VPW for the road/levee; VCD for private developmen t projects	City for the road/levee; property owners/ project applicants for private development projects	Design and implementation of lighting and sound control plans that minimize impacts to wildlife movement corridors			

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lights away from open space areas. Light from onsite sources shall not exceed 0.01 foot-candles as measured at three feet above the ground at the edge of the development. Sound amplification equipment shall be shielded from the Santa Clara River habitat to reduce effects on wildlife movement. Sound levels shall not exceed a Leq of 65 dBA as measured at the edge of the project boundary. Prior to approval of the lighting and sound plans, a qualified biologist shall review lighting and sound plans to ensure that the proposed levels minimize potential impacts on wildlife movement. Within one year after completion of construction when each new development is in operation, a report shall be submitted to the City that, through light and sound level monitoring, confirms that installed equipment do not exceed the specified criteria.								
BIO-3(b) Invasive Weed Prevention. Applicants shall develop and implement Invasive Weed Prevention and Management Programs to prevent invasion of undeveloped native habitat areas by nonnative plant species. A list of target species shall be included, along with measures for early detection and eradication before any species can gain a foothold and	Verification that an appropriate invasive weed prevention and management program has been developed	Prior to grading for the road/ levee; prior to issuance of grading permits for future private development projects	VPW for the road/levee; VCD for private developmen t projects	City for the road/levee; property owners/ project applicants for private development projects	Effective invasive weed prevention and management program developed and implemented			

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outcompete native plant species for resources. All temporarily disturbed areas shall be hydroseeded with a mix of locally native species upon completion of work in those areas. In areas where construction is ongoing, hydroseeding shall occur where no construction activities have occurred within six (6) weeks since ground disturbing activities ceased. If exotic species invade these areas prior to hydroseeding, weed removal shall occur in consultation with a qualified biologist and in accordance with the restoration plan.								
BIO-3(c) Fencing. Fencing shall be installed along the south and eastern project boundaries adjacent to the Santa Clara River (e.g. at the east toe of the levee slope) to prevent unnecessary and unrestricted pedestrian, vehicular, bicycle, equestrian, or urban wildlife access across the levee and into the river area.	Verfication that final plans for the road and levee include appropriate fencing	Prior to construction of the road and levee	VPW	City	Appropriate fencing installed along the southern and eastern boundaries of the levee			
BIO-3(d) Construction Best Management Practices (BMPs). The following BMPs shall be implemented: • Construction fencing shall be installed five (5) feet outside of the disturbance limits of active grading areas. The disturbance areas and fencing shall not encroach closer than 30 feet to sensitive habitats.	Field monitoring during grading for and construction of the road and levee	Throughout grading for and construction of the road and levee	VPW	City	Required BMPs fully implemented throughout grading and construction			

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• Establish appropriate BMPs along construction boundaries to provide erosion and sediment control and contain onsite. • A 15 mph speed limit shall be designated in all construction areas. • All equipment washout and fueling areas shall located within the limits of grading at a minimum of 200 feet from the ephemeral drainage. Washout areas shall be designed to fully contain polluted water and materials for subsequent removal from the site. • Mufflers shall be used on all construction equipment and light trucks shall be in good operating condition. • Spill kits shall be onsite at all times. • Drip pans shall be placed under all stationary vehicles and mechanical equipment. • All trash that may attract predators shall be properly contained, removed from the work site weekly, and disposed of regularly. • Sensitive vegetation removed by accident during construction shall be restored. • Comply with the NPDES State General Construction Permit, the project's Storm Water Pollution Prevention Plan (SWPPP) BMPs to control the discharge of pollutants,								

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including sediment, into local surface water drainages								
BIO-3(e) Storm Drain BMPs. To minimize the degradation of water quality which could impact sensitive fish and other aquatic resources, all future private and public storm drain facilities that would drain into the Santa Clara River shall incorporate protective BMPs for sediment and pollution control.	Verification that appropriate BMPs are incorporated into development plans for future onsite development projects	Prior to issuance of building permits for future private development projects	VCD	Property owners/ project applicants	Required BMPs fully implemented for all future private development projects			
BIO-4 City Tree Coordination. Prior to initiation of future development projects, applicants shall confirm that the City of Ventura has not approved a tree protection ordinance that is applicable to any trees within the project area. Furthermore, applicants will coordinate with the City's Parks Division for project activities involving the planting, pruning, or removal of any tree located in an existing parkway or easement. Per the City's recommended tree planting requirement for specific roadways with City limits, any trees installed within the Olivas Park Drive right-of-way shall be restricted to island live oak (Quercus tomentella).	Verification that landscape plans for Olivas Park Drive include island live oaks; verification that development plans for future onsite development projects conform to City tree protection requirements	Review of Olivas Park Drive landscape plans prior to construction of the road; review of development plans for private development projects prior to issuance of grading permits	VCD	City for Olivas Park Drive; property owners/ project applicants for future development projects	Inclusion of appropriate trees in landscape plans; verification of compliance with City tree protection requirements			

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GREENHOUSE GAS EMISSIONS								
GHG-1 GHG Emissions Calculations. Future project site developers shall perform project-specific GHG calculations to determine whether their proposed development would generate emissions exceeding the 4.1 metric tons of CO_2E/year per service population threshold, applicable VCAPCD threshold, or recommended City of Ventura threshold in place at the time of development. Project-specific GHG emissions calculations may be completed as stand-alone studies or may be incorporated into required CEQA analysis for individual projects. Applicants of development projects determined to exceed the appropriate threshold, as determined by the City of Ventura, shall implement one or more of the following in order to reduce GHG emissions to below the threshold of significance utilized by the City at the time of development. • **GHG Reduction Plan.** Prior to permit issuance, the applicant shall develop a GHG Reduction Plan that would reduce annual greenhouse gas emissions from the project. The plan will be implemented on site by the project applicant and may include, but is not be limited to, the following components:	Verification that project-specific studies are completed and appropriate project-specific mitigation is required.	Prior to issuance of building permits for future private development projects	VCD	Property owners/ project applicants	Project-specific studies completed and appropriate measures implemented			

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1. Alternative fuel vehicles 2. Energy conservation policies 3. Energy efficient equipment, appliances, heating and cooling 4. Energy efficient lighting 5. Green building and roofs 6. Water conservation and recycling 7. Renewable energy production 8. Off-site vehicle trip reduction 9. Carbon sequestration • **Purchase Carbon Offsets.** If greenhouse gas emissions cannot be reduced to below a level of significance through compliance with a project GHG Reduction Plan, the project applicant shall purchase carbon offsets to reduce GHG emissions below threshold levels. Purchased carbon offsets shall be approved by City staff prior to permit approval.								

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HAZARDS/HAZARDOUS MATERIALS								
HAZ-1 Soil Management Plan. In the area of the proposed Olivas Park Drive extension and levee alignment, a Soil Management Plan shall be prepared prior to grading to provide procedures for characterization, handling, storage, disposal, and documentation of all soils to be excavated during construction activities. This plan will describe the approach for managing soils consistent with all laws and regulations regarding the excavation, handling, and disposal of impacted soils, including Ventura County Air Pollution Control District (VCAPCD) Rule 55 (Fugitive Dust) and VCAPCD Rule 74.29 (Soil Decontamination Operations) (if applicable). The plan shall be approved by the Los Angeles Regional Water Quality Control Board prior to the issuance of a demolition permit. At the MP Enterprises site (Parcel 13), where lead has been detected in soil samples, the Soil Management Plan shall require additional sampling and analysis for this metal prior to the removal of soil. Any soils that contain lead at levels exceeding the Soluble Threshold Limit Concentration (STLC) shall be excavated and disposed as a hazardous waste. Soils in Parcel 13 that have been identified as containing TPH at	Verification that an appropriate soil management plan has been prepared and implemented.	Verification that a soil plan has been prepared and that appropriate remedial actions have been taken prior to grading for the Olivas Park Drive extension	VPW	City	Implementation of a soil management plan that effectively removes or treats contaminated soil			

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levels exceeding RWQCB action levels shall also be excavated and disposed as a hazardous waste. Upon removal of the concrete pad in Parcel 13, the underlying soil shall be tested for TPH and treated as a hazardous waste if contamination is detected. In the four locations where Toxaphene contamination has been detected, soils shall be excavated and disposed as a hazardous waste. Contaminated soil will either be stockpiled on-site or will be loaded directly onto trucks and covered and transported to an approved off-site disposal/recycling facility. If contaminated soil is stored on-site, it shall be stockpiled on polyethylene or placed in containers approved by the federal Department of Transportation (DOT) until it is transported to an approved off-site disposal/ recycling facility. Disposal of contaminated soils shall occur at an appropriate facility licensed to handle such contaminants and remedial excavation shall proceed under the supervision of an environmental consultant licensed to oversee such remediation. The remediation/disposal program shall be approved by VCEHD. The proponent shall submit all correspondence to VCEHD prior to issuance of grading permits. All proper waste handling and disposal procedures shall be followed. Upon								

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completion of the remediation/disposal, a qualified environmental consultant shall prepare a report summarizing the project, the remediation/disposal approach implemented, and the analytical results after completion of the remediation, including all waste disposal or treatment manifests.								
HAZ-2 Site-Specific Analysis and Remediation. Prior to construction of any commercial and/or industrial development within the project area, the developer shall undertake site-specific analysis of potential soil and groundwater contamination. If soil sampling indicates the presence of any contaminant in quantities not in compliance with applicable laws or regulations, the applicant shall coordinate with VCEHD or RWQCB, as appropriate, to develop and implement a program to remediate or manage the contaminated soil or groundwater. If groundwater is determined to have been affected by on-site contamination, or if soil contamination is detected at depths of 20 feet below grade or greater, then a groundwater sampling assessment shall be performed. If contaminants are detected in groundwater at levels that exceed maximum contaminant levels for those constituents in drinking water, then the results of the groundwater sampling shall be forwarded to the	Verification that site-specific soil and groundwater analyses have been conducted for future private development projects and that, as necessary, appropriate remediation or management techniques have been implemented	Prior to issuance of grading permits for future private development projects	VCD	Property owners/ project applicants	Completion of required studies and, as necessary, implementation of remediation that achieves compliance with applicable regulatory standards			

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appropriate regulatory agency (VCEHD, RWQCB, or the State of California Environmental Protection Agency Department of Toxic Substances Control). The agency shall review the data and sign off on the property or determine if any additional investigation or remedial activities are deemed necessary. If contaminated soil is present, disposal of contaminated soils shall occur at an appropriate facility licensed to handle such contaminants and remedial excavation shall proceed under the supervision of an environmental consultant licensed to oversee such remediation. The remediation/ disposal program shall be approved by VCEHD. The applicant shall submit all correspondence to VCEHD prior to issuance of grading permits. All proper waste handling and disposal procedures shall be followed. Upon completion of the remediation/disposal, a qualified environmental consultant shall prepare a report summarizing the project, the remediation/ disposal approach implemented, and the analytical results after completion of the remediation, including all waste disposal or treatment manifests.								

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HAZ-4 Storage Tank Removal. Prior to construction of the Olivas Park Drive extension, the diesel AST in Parcel 12 shall be removed and properly disposed at a licensed facility. The removal of the storage tank shall be conducted in accordance with VCEHD regulations. Once the tank is removed, the underlying soil shall be inspected by a qualified environmental consultant to determine if soil and/or groundwater sampling beneath the storage tank would be necessary. If contaminated soil is identified and contaminants in concentrations exceeding regulatory thresholds or action levels are detected, a remediation program shall be implemented to reduce contaminants to within acceptable levels as determined by the VCEHD. Remediation options may include, but are not limited to: excavation and removal with offsite disposal or in-situ soil treatment. If contaminated groundwater is identified and contaminants in concentrations exceeding regulatory action levels are detected, a remediation program shall be implemented to reduce contaminants to within acceptable levels as determined by the VCEHD. Remediation options may include, but are not limited to: pumping and treatment, biological remediation, or natural attenuation.	Verification that the referenced tank has been removed and, as necessary, remediation has been conducted in accordance with applicable regulatory standards	Prior to grading for Olivas Park Drive	VPW	City	Removal of the tank and, as necessary, remediation of any residual contamination to achieve applicable regulatory standards			

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HYDROLOGY AND WATER QUALITY								
HWQ-3(a) Erosion Evaluation and Reinforcement. Once the design of the levee has been finalized, stream flow velocity calculations shall be performed by a qualified hydrologist to determine the exact increase near the radio tower and building. If the increase is determined to result in erosion of the fill underlying the building and tower, the structures must be reinforced using rip-rap, soil cement, or similar technique to prevent erosion.	Verification that stream flow analysis has been conducted and, as necessary, appropriate erosion control measures have been incorporated	In conjunction with final levee design	VPW	City	Required calculations completed and, as necessary, erosion control measures incorporated			
HWQ-3(b) Project Timing. Adequate flood protection shall be provided for both the project area and potentially affected areas along the south side of the Santa Clara River in the City of Oxnard prior to project area construction other than the extension of Olivas Park Drive. Construction of the north and south levees shall be coordinated to the extent feasible to ensure that neither the project site nor any developed areas in Oxnard would experience an increase in surface water elevation of more than one foot during a 100-year flood event.	Verification that the levee would not increase flood hazards within the project area and along potentially affected areas in Oxnard	In conjunction with final levee design	VPW	City	No increase in flood hazards due to levee design			
HWQ-5(a) Conditional Letter of Map Revision (CLOMR). Prior to construction of the levee, a CLOMR from FEMA must be obtained to ensure that project design will accommodate flows during the 100-year storm event.	Verification that a CLOMR has been obtained	Prior to levee construction	VPW	City	CLOMR obtained			

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HWQ-5(b) Letter of Map Revision. Prior to issuance of building permits, a Letter of Map Revision (LOMR) from FEMA shall be obtained and the final development shall be sited to assure that no structures are placed within the redefined 100-year Flood Zone.	Verification that a LOMR has been obtained	Prior to levee construction	VPW	City	LOMR obtained			
TRAFFIC AND CIRCULATION								
T-1(a) Dual Left-turn Lanes at Victoria Avenue/Olivas Park Drive Intersection. On the westbound approach of this intersection, dual left-turn lanes shall be installed to improve traffic conditions to LOS B and D during the A.M. and P.M. peak hour periods respectively. The timing of this improvement will be dependent on traffic volume growth at the intersection, as determined through monitoring by the City.	Monitoring of intersection operation and implementation of intersection improvements at such time as they are needed	Monitoring annually; implementation of improvements prior to issuance of additional building permits once the City standard has been exceeded	VPW	City for monitoring; property owners/ project applicants for intersection improvements	Implementation of intersection improvements once City standards are exceeded			
T-1(b) Future Development Monitoring. Monitor traffic at the U.S. 101 Southbound Ramps/Johnson Drive intersection annually to determine whether the threshold of ICU – 0.95 has been reached such that the City's LOS E threshold is exceeded.	Monitoring of intersection operation	Annually	VPW	City	Annual monitoring completed			

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T-1(c) Eliminate Left-turns. Left-turns to the southbound ramp at the U.S. Highway 101 Southbound Ramps/Johnson Drive intersection shall be eliminated and a second northbound through travel lane shall be provided from Auto Center Drive to North Bank Drive. In addition, an exclusive right-turn lane on the northbound approach of the Victoria Avenue/Valentine Road intersection shall be required. Johnson Drive shall be re-striped to provide two northbound through lanes under U.S. Highway 101 and a traffic signal shall be installed at the Motel 6/Johnson Drive intersection. Caltrans approval of the improvements to the U.S. Highway 101 Southbound Ramps/Johnson Drive would be required. OR **T-1(d) P.M. Peak Hour Only Restriction of Left-turns.** Left-turns shall be restricted to the southbound ramp at the intersection during the P.M. peak hour period only. Left-turns shall be allowed during the remainder of the day. This would cause vehicles to divert to the U.S. Highway 101 southbound ramps at Victoria Avenue or make U-turns at the Johnson Drive/Motel 6 Driveway intersection to access southbound U.S. Highway 101 only during the P.M. peak hour between 4:00 P.M.	Verification that the improvements in Measure (c), (d), or (e) are implemented once City standards at the Highway 101 Southbound Ramps/ Johnson Drive intersection have been completed	Prior to issuance of additional building permits once the City standard has been exceeded	VPW	Property owners/ project applicants	Implementation of intersection improvements once City standards are exceeded			

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and 6:00 P.M. An exclusive right-turn lane on the northbound approach of the Victoria Avenue/Valentine Road intersection and installation of a traffic signal at the Motel 6/Johnson Drive intersection would be required as part of this measure. Johnson Drive shall be re-striped to provide two northbound through lanes under U.S. Highway 101. Caltrans approval of the improvements to the U.S. Highway 101 Southbound Ramps/Johnson Drive intersection would be required. OR **T-1(e) Limit Future Development.** Trip generation restrictions shall be required of future development in the project area, and shall be implemented as a condition of building permit issuance, to prevent an exceedance of the City's LOS E threshold at the Johnson Drive and Highway 101 Southbound Ramps intersection.								

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