

APPENDIX A
INITIAL STUDY/NOP RESPONSES

NOTICE OF PREPARATION

FILED ENDORSED
IN THE OFFICE OF THE
COUNTY CLERK RECORDER OF
SAN MATEO COUNTY, CALIF.

To: State Clearinghouse
Responsible Agencies
Trustee Agencies
San Mateo County Clerk
Interested parties
Federal Agencies

NOV 10 2006

WARREN SLOCUM, County Clerk
By MADELEINE BRULEY
DEPUTY CLERK
MADELEINE BRULEY

**Subject: Notice of Preparation (NOP) of the Roberts Road Subdivision
Environmental Impact Report (EIR)**

The City of Pacifica Planning and Economic Development Department, 170 Santa Maria Avenue, Pacifica, CA 94044, will be the Lead Agency for the Roberts Road Subdivision EIR. The purpose of this NOP is to invite comment on the scope and content of the environmental review which is germane to the proposed Project.

Pursuant to CEQA Guidelines §15082 (b), you have 30 days from the date of receipt of this NOP to respond. Please send your responses to Mr. Lee Diaz, Associate Planner, at the address shown above.

Project Title: Roberts Road Subdivision/Harmony @ 1

Project Applicant: Cowan - Newton
338 Horizon Way
Pacifica, CA 94044

Project Location: Roberts Road at Fassler Avenue, Pacifica, CA

APN: 022-150-310, 022-150-420, 022-150-030

Project Description:

The project property is located in the northwest section of the Linda Mar neighborhood in Pacifica. The site is bounded by Fassler Avenue on the north and by Roberts Road on the west. Access to the site would be constructed on Roberts Road and Fassler Avenue. The Project Applicant proposes a Planned Development on two parcels comprising 65 acres. The parcels will be subdivided into 13 single family residential lots ranging in size from 1.8 acres to 8.7 acres. Proposed lots would be sold for custom development by individual lot owners. Roughly 30 acres would be set aside as natural open space area. The project application also includes development of an adjoining 2-acre parcel with a single family residence. This smaller parcel will be developed as a permitted use in the Agricultural zoning district separate from the Planned Development subdivision on the 65 acres. See attached Initial Study for project location map and proposed site plan.

The project property comprises two ridge lines, one trending east-west along Fassler Avenue and one trending south toward Crespi Drive. The majority of the site is designated by the General Plan as Open Space Residential which allows an average density of more than 5 acres

for each residential unit. The southern portion of the site is designated by the General Plan as Very Low Density Residential which allows at an average density of one-half to 5 acres per dwelling unit.

The project is proposed as a sustainable subdivision. The project integrates green building strategies from the San Mateo County Sustainable Building Checklist. Additional features include use of solar power, central composting of yard waste, grey water recovery, rainwater collection, use of drought tolerant native plants, and earth-friendly construction materials.

Environmental Review:

The project proposal must meet the requirements of the California Environmental Quality Act (CEQA). An Initial Study prepared for the Project and is attached to this Notice of Preparation. The Initial Study indicates that the Project could result in significant adverse environmental effects and that an Environmental Impact Report (EIR) should be prepared. Potential adverse impacts relate to aesthetics, biology, geology, hydrology, and traffic. Project documents are available for review at the City Hall Planning Department at 170 Santa Maria Avenue in Pacifica.

Signature: Lee Diaz K.N.W. Date: 11/9/06
Title: Associate Planner, city of Pacifica

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Signature: Lee Diaz K.N.W. Date: 11/9/06
Title: Associate Planner, city of Pacifica

ENVIRONMENTAL CHECKLIST AND RESPONSES

1. **Project title:** Roberts Road Subdivision/Harmony @ 1
2. **Lead agency name and address:** City of Pacifica
170 Santa Maria Avenue
Pacifica, CA 94044
3. **Contact person and phone number:** Lee Diaz, Associate Planner
(650) 738-7341 Fax (650) 359-5807
4. **Project location:** Fassler Avenue and Roberts Road in the City of Pacifica, California
5. **Project sponsor's name and address:** Cowan - Newton
338 Horizon Way
Pacifica, CA 94044
6. **General Plan designation:** Open Space Residential, Very Low Density Residential
7. **Zoning:** Planned Development, Commercial, Agricultural
8. **Description of project:** The project property is located in the northwest section of the Linda Mar neighborhood in Pacifica. The site is bounded by Fassler Avenue on the north and by Roberts Road on the west (Figure 1). Access to the site would be constructed on Roberts Road and Fassler Avenue. The Project Applicant proposes a Planned Development on two parcels comprising 65 acres. The parcels will be subdivided into 13 single family residential lots ranging in size from 1.8 acres to 8.7 acres (Figure 2). Proposed lots would be sold for custom development by individual lot owners. Roughly 30 acres would be set aside as natural open space area. The project application also includes development of an adjoining 2-acre parcel with a single family residence. This smaller parcel will be developed as a permitted use in the Agricultural zoning district separate from the Planned Development subdivision on the 65 acres.

The project property comprises two ridge lines, one trending east-west along Fassler Avenue and one trending south toward Crespi Drive. The majority of the site is designated by the General Plan as Open Space Residential which allows an average density of more than 5 acres for each residential unit. The southern portion of the site is designated by the General Plan as Very Low Density Residential which allows at an average density of one-half to 5 acres per dwelling unit. The Zoning District for the two large parcels (65 acres) is Planned Development with the exception of one corner of the parcel fronting Fassler Avenue which is zoned Commercial. Both project parcels are within the Hillside Preservation District overlay zone. The Zoning District for the third smaller parcel (2 acres) is Agricultural which permits development of one single family unit.

The project is proposed as a sustainable subdivision. The project integrates green building strategies from the San Mateo County Sustainable Building Checklist. Additional

features include use of solar power, central composting of yard waste, grey water recovery, rainwater collection, use of drought tolerant native plants, and earth-friendly construction materials.

The project objective is to create a development of 14 lots for homeowners all with a desire to live in a sustainable development within a great community. Other project objectives identified by the Project Applicant include:

- Create a flagship, environmentally-friendly development that is in harmony with the earth and the community.
- Integrate passive and active solar, wind power and other environmental technologies that will catapult Pacifica as a leader in green solutions.
- Enhance the beauty of the hill by establishing habitats, bird and butterfly sanctuaries, while integrating native plants and wildflowers throughout the property.
- Promote a new concept called coastal green architecture that integrates the homes into the surrounding hillside and shows that we are a part of nature and not apart from nature.
- Work closely with many community groups, leaders and individuals to integrate their concerns, ideas and suggestions into the project.

9. Surrounding land uses and setting: Briefly describe the project's surroundings:

The project property is located in the north end of the Linda Mar area in Pacifica. The property is set in the coastal hills east of Highway 1 outside of the City's coastal zone. The property has views of the Pacific Ocean coastline. Residential housing occurs west of the site off Roberts Road. Residential use is proposed on undeveloped land north of the site off Fassler Avenue. Undeveloped hillside occurs east of the project site. Cabrillo School and commercial uses are to the south.

10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)

Required city approvals include Tentative Map, Development Plan, Rezoning, Growth Allocation, Final Map, and Use Permit. No permits or approvals are required from other regulatory agencies.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below could 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.

- | | | |
|--|--|--|
| <input checked="" type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture Resources | <input type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input checked="" type="checkbox"/> Geology /Soils |
| <input type="checkbox"/> Hazards & Hazardous Materials | <input checked="" type="checkbox"/> Hydrology / Water Quality | <input type="checkbox"/> Land Use / Planning |
| <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise | <input type="checkbox"/> Population / Housing |
| <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation | <input checked="" type="checkbox"/> Transportation/Traffic |
| <input type="checkbox"/> Utilities / Service Systems | <input checked="" type="checkbox"/> Mandatory Findings of Significance | |

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Lee Diaz
 Signature K.N.W.

11/9/06
 Date

Associate Planner, City of Pacifica

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 factors 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 off-site 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 (mitigation measures from Earlier Analyses, may be cross-referenced).
- 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 should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are 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) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) 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.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
1. AESTHETICS -- Would the project:				
a) Have a substantial adverse effect on a scenic vista?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>

ENVIRONMENTAL SETTING:

The project site consists of the lower slopes and a ridge with site elevations ranging from 36 feet at the south east corner near the intersection of Roberts Road and Crespi Drive to 397 feet on the ridgeline knoll above Fassler Avenue. The ridge is a prominent feature in the area and is visible from homes in the Pedro Point and Linda Mar areas, Pacifica State Beach, Pedro Point as well as drivers along sections of Highway 1. Some portions of the project development may also be visible from the Rockaway Beach area.

DISCUSSION:

Will the proposed project:

- a. **Have a substantial adverse effect on a scenic vista?** (Source #: 5, 6, 11, 16, 17, 18)
- b. **Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?** (Source #: 4, 5, 6, 11, 15, 16, 17)
- c. **Substantially degrade the existing visual character or quality of the site and its surroundings?** (Source #: 5, 6, 11, 16, 17, 18)

Potentially Significant Impact. Response to questions a, b, and c. The proposed project is located on a prominent ridge line that is visible from several residential areas, Pedro Point, Pacifica State Beach, and the Rockaway Beach area. Currently, the undeveloped site provides an aesthetically pleasing backdrop against urban development at sea level and on the

lower slopes of surrounding ridges. Up to 12 Heritage Trees and 58 other trees would be removed for the construction of the new roadway. Project development could potentially result in a significant change in the visual character of the parcel and degrade the quality of the scenic views. As proposed, the project incorporates many features that reduce or eliminate aesthetic impacts. The EIR will describe the scenic quality of the project site, features that have been incorporated into the project design to reduce or eliminate aesthetic impacts, thresholds of significance against which the aesthetic impact will be judged, the project's conformance with the City of Pacifica zoning and adopted design guidelines. Additional mitigation measures will be recommended in the EIR, as appropriate.

d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? (Source #: 11, 16, 17, 18)

Less than Significant. The project would have normal residential subdivision lighting and would not create significant light and glare impacts. The project would be a new source of night light on a ridgeline that currently does not have any lighting. The project's exterior lighting would be consistent with all local and state regulations for exterior light fixtures that are designed to be energy efficient and minimize light and glare.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
2. AGRICULTURE RESOURCES -- In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING:

The City of Pacifica is primarily a residential community. The land use surrounding the Harmony @ 1 project site is mixed. The land immediately west of the site is zoned for or developed with residential housing. The land east is zoned Planned Development, vacant, and has a General Plan designation of Open Space Residential. Immediately north, the land is undeveloped and further north is the Rockaway Beach neighborhood. To the south is the urban development of the Linda Mar neighborhood. The City of Pacifica does not have large scale agricultural operations within its limits. The Pacifica General Plan does not identify any farmlands of statewide importance near the project site.

DISCUSSION:

Will the proposed project:

- a. **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?** (Source #: 6, 7, 11, 17)
- b. **Conflict with existing zoning for agricultural use, or a Williamson Act contract?** (Source #: 6, 7, 11, 17)

c. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

(Source #: 6, 7, 11, 17)

No Impact. Response to questions a, b, and c. There is no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance on or adjacent to the project property. The proposed project would not directly or indirectly remove any acreage from agricultural production. The project would have no impact on other agricultural resources in the project vicinity. The project does not conflict with existing zoning for agricultural use or any Williamson Act Contracts.

The proposed project does include a 2-acre parcel that is zoned for agriculture yet designated by the Pacifica General Plan as Open Space Residential. The 2-acre parcel is a vacant lot and is not in use for agricultural purposes. The parcel is not subject to a Williamson Act Contract. The project proposes construction of one single family residence on this parcel consistent with the agricultural zoning district. The parcel would remain zoned for agricultural use and is not included in the Planned Development of the 65-acre subdivision project. The development of the lot with a residence would not displace an existing agricultural operation nor would it preclude future use of the remainder of the property for farm related purposes.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
3. AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING:

Regulatory Setting. The California Air Resources Board (CARB) is responsible for air pollution control and setting State ambient air quality standards and allowable emission levels for motor vehicles. The State is divided into air basins governed by districts. The project site is located in the Bay Area Air Quality Management District (BAAQMD). BAAQMD monitors and enforces District, State of California, and Federal air quality standards.

Meteorology and Topography. The Santa Cruz Mountains extend up the center of the Bay Area peninsula with elevations exceeding 2000 feet at the south end and gradually decreasing to 500 feet at the north end in South San Francisco where it terminates. Pacifica is a small coastal town on the western side of the mountains. Due to coastal ocean upwelling and northwest winds, Pacifica experiences a high incidence of cool foggy weather in the summer (BAAQMD, 2005).

Existing Ambient Air Quality. The San Francisco Bay Air Basin is in attainment for all national pollutant standards set forth in the federal Clean Air Act with exception of ozone. In June 2004, the Bay Area was designated as a marginal non-attainment area for the national 8-hour ozone standard. The region also exceeds State ambient air quality standards for ozone and

fine particulate matter (PM₁₀ and PM_{2.5}). The state standards for these pollutants are more stringent than the national standards. All other pollutants are designated as “attainment” or “unclassified” for federal standards and state standard.

There are no major stationary air pollutant sources or major sources of odors adjacent to this site in Pacifica. Automobile use is the primary source of air pollutant emissions in the community. There are no major sources of odor on the project site or in the project vicinity.

Sensitive Receptors. A sensitive receptor is generically defined as a location where human populations, especially children, seniors, and sick persons, are located where there is reasonable expectation of continuous human exposure to air pollutants according to the averaging period for the AAQS (e.g., 24-hour, 8-hour, 1-hour). These typically include residences, hospitals, and schools. The Roberts Road/Harmony @1 project site is located in the foothills east of Highway 1. The nearest sensitive air quality receptors are the residences located along Roberts Road to the west. There are no hospitals in the immediate project vicinity. Cabrillo School is located at the southeast property boundary of the project site on the opposite side of the ridgeline from the proposed building locations.

DISCUSSION:

Will the proposed project:

- a. Conflict with or obstruct implementation of the applicable air quality plan?**
(Source #: 1, 2, 6, 17, 18)

No Impact. The project would not result in violation of the Bay Area Air Quality Management Plan. The project would result in increased residential land use which contributes indirectly to air quality impacts from vehicle emissions. The project development is consistent with the growth allowed by local land use policies of the City of Pacifica.

- b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?** (Source #: 1, 2, 6, 17, 18)

Less than Significant. The project would result in short-term construction emissions and long-term vehicle emissions from project residents. Vehicle traffic from the proposed project would generate emissions of fine particulate matter (PM₁₀), nitrogen dioxide (NO_x), sulfur dioxide (SO_x), and reactive organic gases (ROG). The emission concentrations generated by new traffic from the 14 new homes is not considered significant.

Construction Impacts. The BAAQMD has published a document titled *BAAQMD CEQA Guidelines Assessing Air Quality Impacts of Projects and Plans, Revised December 1999* to serve as a guide in preparing air quality impact analyses. Although construction-related emissions are generally temporary in duration, they can be substantial and can represent a significant impact on air quality. Construction related emissions come from a variety of activities including grading, excavation and road building, travel by construction equipment, and exhaust from construction equipment.

Consistent with the BAAQMD CEQA Guidelines, construction emissions have not been calculated but standard mitigation measures for particulate control as listed below will be implemented during project construction. The implementation of all the applicable control measures listed by the BAAQMD for dust control ensure air quality impacts associated with construction activities will be less than significant. Dust control measures are required as a condition of grading and building permits issued by the City of Pacifica.

BAAQMD Construction Best Management Practices (BMPs) shall be employed to reduce dust emissions during the construction phase (BAAQMD CEQA Guidelines, Table 2). The project construction documents shall specify the following BMPs as dust control measures:

- Water all active construction sites at least twice daily.
- Cover all trucks hauling soil, sand and other loose materials or require all trucks to maintain at least 0.6 meters (2 feet) of freeboard.
- Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.
- Sweep daily with water sweepers all paved access roads, parking areas and staging areas at construction sites.
- Sweep streets daily with water sweepers if visible soil material is carried onto adjacent public streets.
- Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more).
- Enclose, cover, water twice daily or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.).
- Limit traffic speeds on unpaved roads to 15 mph.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways.
- Replant vegetation in disturbed areas as quickly as possible.
- Suspend excavation and grading activity when winds exceed 40 kilometers per hour (25 miles per hour).

Operational Impacts. The BAAQMD CEQA Guidelines use project screening to provide a simple indication of whether a project may exceed the threshold for total emissions from project operations might be exceeded. A development of 320 single family residences is likely to exceed the threshold of significance of 80 lbs/day for NO_x from vehicle emissions (BAAQMD CEQA Guidelines, Table 6). The Roberts Road/Harmony @1 project comprises 14 single family homes. This is substantially smaller than the significance threshold. The BAAQMD generally does not recommend a detailed air quality analysis for projects generating less than 2,000 vehicle trips per day (BAAQMD CEQA Guidelines, pg 24). The proposed Roberts Road project would generate 134 vehicle trips per day. Therefore, the project would not generate a significance source of air pollutants from vehicle emissions or result in significant air quality impacts.

- c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? (Source #: 1, 2, 6, 17, 18)**

Less than Significant. The San Francisco Bay Area is in non-attainment for ozone. The primary source of ozone precursors is motor vehicle emissions. The proposed residential project would indirectly contribute to ozone pollutants through the increase in vehicle emissions. The project would create 14 new housing units which would generate 134 vehicle trips per day. The project's contribution to vehicle emissions is negligible when compared to the total number of vehicle trips and emissions occurring throughout the San Francisco air basin. The project's contribution to cumulative impacts is *de minimus*. A *de minimus* contribution means that the environmental conditions would essentially be the same whether or not the proposed project is implemented (CEQA Guidelines Section 15064(i)(4)).

The BAAMD has determined that projects do not have a significant cumulative air quality impact if it does not have a significant operation air quality impact and 1) the project is consistent with the local general plan, and 2) the general plan is consistent with the most recently adopted Clean Air Plan (BAAQMD CEQA Guidelines).

The proposed subdivision project is consistent with the Pacifica General Plan; no general plan amendment is required for the project (See Land Use responses). The project proposes single family residential development at a density consistent with the General Plan land use designations for the site.

The Pacifica General Plan is consistent with population growth projections in the Clean Air Plan (CAP) which rely on population growth projections from the Association of Bay Area Governments (ABAG). The Pacifica General Plan incorporates the ABAG growth projections into its Housing Element and its current population of 38,739 (Department of Finance, 2006) is consistent with ABAG's projection of 38,600 in 2005 (ABAG Projections 2005). The General Plan Circulation Element has adopted policies and action programs which encourage alternate means of transportation and promote orderly growth in land uses and circulation which are consistent with CAP Transportation Control Measures (TCMs).

d. Expose sensitive receptors to substantial pollutant concentrations? (Source #: 1, 2, 5, 6, 11, 17, 18)

No Impact. The project property features a prominent ridgeline trending north to south. Project development would primarily occur on the west and north end of the property. The nearest sensitive receptor is Cabrillo Elementary School located at the south eastern end of the project site at the base of the project slopes. The school is roughly ½ mile from the proposed construction area. The primary pollutants generated by the project are dust during construction and vehicle emissions from project traffic. These pollutants would be dispersed and would not cause adverse impacts to the school site.

e. Create objectionable odors affecting a substantial number of people? (Source #: 5, 17, 18)

No Impact. There are no odor sources created by the proposed housing project. There may be minor odors associated with use of asphalt oil during project road construction.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
4. BIOLOGICAL RESOURCES -- Would the project:				
a) 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?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■
d) 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?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■

ENVIRONMENTAL SETTING:

Biological reconnaissance of the project site was performed and documented in technical memos. WRA Environmental Consultants prepared two separate biological reports for the project site. The first, dated February 14, 2006, surveyed the 55-acre main parcel of the project

site; *Technical Memorandum for Roberts Road Parcel APN 022-150-240 Biological Reconnaissance*, dated February 14th, 2006 and the second is *Addendum to Technical Memorandum for the new Roberts Road Parcel Biological Reconnaissance*, dated April 21, 2006. In addition, a report titled *Heritage Tree Survey & Tree Protection Plan*, by Howard Linacre dated April 23, 2006 has been prepared for the project site. The biological impact analysis of the proposed project will be based on these reports.

The project site is dominated by Northern Coastal Scrub with patches of Northern Coastal Bluff Scrub on the upper south facing slopes and Central Coast Riparian Scrub on the lower south facing slopes. Patches of ruderal vegetation occur adjacent to Fassler Road.

On December 23, 2005, February 10, 2006, and April 19th, 2006, the project site was traversed on foot to determine (1) if sensitive habitats were present, and (2) if existing conditions provided suitable habitat for any special status plant or wildlife species.

The surveys determined that the parcel does not contain any sensitive plant species, including known host plants for four endangered butterflies that occur in the region. Two large erosion features and several smaller, new features on the lower southeast -facing slope may be considered potentially jurisdictional wetlands according to CDFG. Based on recorded presence in the vicinity of the project and the habitat types found on the project site, there are several sensitive bird species identified as having a moderate to high potential for occurrence. Although the project site does not contain suitable habitat to support the California red-legged frog (*Rana aurora draytonii*), a Federal Threatened species, the eastern portion of the site may be a dispersal corridor for known frog populations north and south of the site.

DISCUSSION:

Will the proposed project:

- a. **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?** (Source #s: 11, 16, 17, 18, 21, 22)

Potentially Significant Impact. Biological survey reports have been prepared for the project by WRA. These reports conclude that the site does not contain any sensitive plant species but may contain habitat for sensitive bird species including white-tailed kite, loggerhead shrike, California thrasher, Bell's sage sparrow, Costa's hummingbird, Rufous hummingbird and Allen's hummingbird. The eastern portion of the project site may act as a dispersal corridor for the California red-legged frog from known populations both north and south of the site. The potential impacts to these sensitive species, along with appropriate mitigation measures designed to reduce or eliminate potential impacts will be described in the EIR. It is anticipated that any potentially significant impact can be mitigated to a less than significant level.

- b. **Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife**

Service? (Source #s: 11, 16, 17, 18, 21, 22)

No Impact. Based on the site reconnaissance, the site does not contain sensitive plant communities. Two erosion features and several smaller, new features on the lower southeast-facing slope may be considered potential jurisdictional wetlands according to CDFG. These features are outside the area of development and will not be disturbed by the project. These features will be described in the EIR.

- c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?** (Source #s: 11, 16, 21, 22)

No Impact: See response to question b, above.

- d. 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?** (Source #s: 11, 16, 21, 22)

Potentially Significant Impact. See response to question a, above.

- e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?** (Source #s: 6, 7, 11, 14, 16, 17, 21, 22)

Less Than Significant. A Heritage Tree Survey has been prepared for the project site by a certified arborist. The report determined that 12 Heritage trees and 58 other trees would need to be removed for the construction of the new roadway. All of the 11 Monterey Pine (*Pinus radiata*) Heritage Trees are diseased with pitch canker and dying. There is one Monterey Cypress (*Cupressus macrocarpa*) that is considered a Heritage Tree, however this tree is also diseased. The EIR will provide a discussion of all the Heritage Trees, identify those that will be removed, and describe the requirements of City of Pacifica Heritage Tree ordinance. Given the poor health of the heritage trees impacted by project construction, the biological impact of the tree removal is not expected to be significant

- f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?** (Source #: 5, 6, 11, 17, 18)

No impact. There are no habitat conservation plans that govern the project site. The project would not conflict with adopted habitat conservation plans governing other areas in the region.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
5. CULTURAL RESOURCES -- Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING:

There are no known cultural or historical resources located on the project site or in the project vicinity according to the Pacifica General Plan. A site survey and literature review was conducted by Holman Associates. In a report dated August 30, 2006, the survey found that there are no known historic or archaeological resources on the project site. Given the topography of the site and its location, the site has low potential to contain unknown cultural resources.

DISCUSSION:

Will the proposed project:

- a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? (Source #: 6, 11, 12, 17)**
- b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? (Source #: 6, 11, 12, 17)**
- c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? (Source #: 6, 11, 12, 17)**
- d. Disturb any human remains, including those interred outside of formal cemeteries? (Source #: 6, 11, 12, 17)**

No Impact. Responses to questions a-d. There are no known archaeological or historical sites on the project site. No impacts to known archaeological or historical resources in the

project vicinity would occur as a result of the residential project. There are no significant paleontological resources, geological or physical features on or near the project site. The project property does not contain human remains nor is it located in a sensitive area for cultural resources. In the unlikely event that cultural resources are discovered during project ground disturbance activities, the City of Pacifica requires immediate work stoppage and consultation with a qualified archaeologist as a standard project condition.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
6. GEOLOGY AND SOILS – Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING:

An Engineering Geologic Feasibility Study (December 2005) and a Preliminary Geotechnical Investigation (June 2006) were prepared by Earth Investigations Consultants.

These reports address the existing geologic conditions of the site and its suitability for residential construction. The project site is located on the northwesterly end of a ridgeline. Elevations range from 50 feet at its southern end to 388 feet above sea level on the ridge crest. The site is underlain by bedrock materials of the Franciscan complex. Two erosional gorges occur on the southern part of the site.

The project site is relatively close to two active faults: the San Andreas Fault, about 3 miles northeast, and the offshore segment of Seal Cove Fault, about 4 miles to the southwest. There are no active faults known to cross the project site.

DISCUSSION:

Will the proposed project:

a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Sources #: 6, 9, 10, 11, 16, 17, 18)

Less than Significant Impact. The project site is roughly three miles southwest of the Earthquake Fault Zone for the Peninsula segment of the San Andreas Fault. Given the distance from the active fault, the potential for fault rupture to occur on the project site during a major earthquake is considered remote. Rupture along a known earthquake fault line could result in strong seismic ground shaking on the project site. See response ii below.

ii. Strong seismic ground shaking? (Sources #: 6, 9, 10, 11, 16, 17, 18)

Less than Significant. The project site is located in San Mateo County within a seismically active area. The San Andreas Fault is located roughly three miles northeast of the project site, resulting in the high probability that the project site will be subject to very strong seismic shaking during the next major earthquake on the San Andreas Fault. The effects of amplified seismic ground motions are not anticipated on the site because of the rounded ridgelines and the relatively thin mantle of unconsolidated deposits overlying consolidated bedrock. Standard construction practices such as meeting Uniform Building Codes would be adequate to reduce seismic safety risks associated with residential construction in a seismically active area.

iii. Seismic-related ground failure, including liquefaction? (Sources #: 6, 9, 10, 11, 16, 17, 18)

Potentially Significant Impact. The incised gorge terrain on the southern part of the project site has potential for lateral spreading during a seismic event. However, there has been no reported or observed evidence of this occurring on the site from historic earthquakes. The project site does not have the soil conditions which are subject to liquefaction. Undocumented fills in the northeast corner of the site and along unimproved trails are susceptible to earthquake-

induced settlement. These areas require mitigation to be described in the EIR.

Earthquake induced landslides are not known to have occurred on the site. It is possible that some soil was shaken from the steep cut slopes bordering the site and from the incised slopes of the erosional gorges on the southern slopes during the 1989 Loma Prieta earthquake. While earthquake-induced activation of potentially large segments of currently intact slope is highly unlikely, there is slight potential for reactivation of existing onsite landslide deposits and failure of the locally oversteepened colluvium in the erosional gorges during a major earthquake event centered nearby on the San Andreas Fault. The erosional gorges and landslide deposits are not located near proposed building envelopes. This will be further discussed in the EIR.

Landslides? (*Sources #: 6, 9, 10, 11, 16, 17, 18*)

Less than Significant. The proposed building envelopes are located on a stable geologic unit. No landslides have occurred in the area proposed for residential development. Two erosional gorges and landslide deposits occur on the south eastern slopes of the property which are not located near the building areas. The potential for landslides will be described in the EIR. The impact is not expected to be significant.

b. Result in substantial soil erosion or the loss of topsoil? (*Sources #: 6, 9, 10, 11, 16, 17, 18*)

Potentially Significant Impact. Project construction will result in the disturbance of site soils. These soils can be subject to erosion from storm water. Two erosional gullies occur on the project site. Increased stormwater flows through these gullies could result in increased soil erosion. The EIR will identify the drainage controls proposed for the project and recommend additional control measures as needed to minimize potential erosion. See also Hydrology Response 8.c.

c. 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? (*Sources #: 6, 9, 10, 11, 16, 17, 18*)

No impact. The bedrock materials of the site are of the Franciscan complex which is stable. Surficial deposits of undocumented fill and landslide deposits could be subject to seismically induced ground failure as described in Response a)iii and a)iv above.

d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? (*Sources #: 6, 9, 10, 11, 16, 17, 18*)

No Impact. No expansive soils have been identified on the project site.

e. 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? (*Sources #: 8, 17, 18*)

No impact. The project does not propose the installation of new septic tanks.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
7. HAZARDS AND HAZARDOUS MATERIALS — Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL SETTING:

Hazardous substances have certain chemical and physical properties that may pose a substantial present or future hazard to human health or the environment when improperly handled, stored, disposed or otherwise managed. These substances are commonly used in commercial, agricultural, and industrial applications, and to a limited extent in residential areas. There are no known hazardous material sites identified in the project area based on a review of the Cortese List (pursuant to Government Code Section 65962.5). There has been no developed use of the project property. The site has always been vacant land and is used informally by local residents for hiking and recreation.

DISCUSSION:

Will the proposed project:

- a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?** *(Source #: 11, 16, 17, 18)*

Less than Significant. The proposed project would not transport hazardous materials. No significant hazardous materials impacts are expected from the Harmony @ 1 project. Hazardous materials related to project construction activities, such as fuel for diesel equipment, may be transported to project site. However, this would be a temporary use and the risk of public exposure to hazardous volumes is low. As with all development projects, basic fueling and storage of fuel for vehicles used in the project construction would be subject to standard Best Management Practices (BMPs) under the National Pollutant Discharge Elimination System (NPDES) Program implemented by the California Regional Water Quality Control Board (RWQCB). The Applicant must develop and implement a Storm Water Pollution Prevention Plan (SWPPP) that prevents all construction pollutants from contacting storm water. The SWPPP must be filed with the RWQCB prior to construction.

- b. 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?** *(Source #: 11, 16, 17, 18)*

Less than Significant. The residential development will not transport, use, or dispose of hazardous materials and does not pose a hazard to the public from upset conditions. No hazardous materials will be stored on the project site with the possible exception of fuel for construction vehicles as described above in response a. The impact is not significant.

- c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or hazardous waste within one-quarter mile of an existing or proposed school?** *(Source #: 11, 16, 17, 18)*

No Impact. The proposed project does not involve the emission or handling of hazardous materials. The fuel for construction equipment may be temporarily stored on the project site. By using the BMPs discussed in response a, the impact of basic fueling and storage of fuel for vehicles used in the project construction would be less than significant. The nearest

school is Cabrillo located at the southeast boundary of the project site on the opposite side of the property ridgeline. There is no hazardous materials risk to the school from the project site.

- d. 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? (Source #: 3)**

No impact. No hazardous material site is known to occur on or in the vicinity of the project site. The project site is not on the Department of Toxic Substance Control's Hazardous Waste and Substance Site List (Cortese List). The property has historically been vacant and is not known to contain contaminated soils.

- e. 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? (Source #: 5, 6, 11, 17, 18)**

No Impact. The nearest public airport to the project site is San Francisco International Airport located approximately 6 miles east of the project site. The project site is not located within the land use plan area of the airport. The proposed development of the property with residential uses would not result in an airport safety hazard for the project residents.

- f. 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? (Source #: 5, 6, 11, 17, 18)**

No Impact. There are no private airstrips near the project vicinity.

- g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? (Source #: 6, 11, 16, 17)**

No Impact. The City's Emergency Plan focuses on preparedness for natural disasters, including earthquakes, fires, floods, tsunamis, and landslides, plus airplane crashes. The proposed project would bring a small number of additional people to the area compared to the number of people accounted for in the City's Emergency Plan. Project development would not affect implementation of the Emergency Plan.

- h. Expose people or structures to a significant risk of loss, injury or death involving wild land fires, including where wild lands are adjacent to urbanized areas or where residences are intermixed with wild lands? (Source #: 6, 11, 16, 17, 18)**

Less than Significant. The project site includes open space area covered by grassland, shrubs and some trees. Project development would expose a small number of people to the potential for wildland fires. The proposed access street meets minimum emergency vehicle and access requirements. Fire response personnel would be able to adequately access the project and adjacent open space. The project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
8. HYDROLOGY AND WATER QUALITY -- Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) 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 (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) 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 flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

i) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING:

The project property is located on the northwesterly end of a ridgeline. The northern part of the site drains to Fassler Avenue which carries runoff westerly to the mouth of Calera Creek. The western margin drains to Roberts Road. Most of the property drains by way of ephemeral swales tributary to San Pedro Creek to the south. There are no surface impoundments, perennial creeks, or drainage channels on the site. There are no known springs on the project site.

DISCUSSION:

Will the proposed project:

a. Violate any water quality standards or waste discharge requirements?

(Source #: 11, 16, 17, 18)

No Impact. Stormwater from the project site will be collected via a system of 12, 18, and 24-inch pipes located throughout the site and then discharged to a detention basin that is proposed on the project site along Roberts Road. The basin is designed to hold 3 feet of stormwater during peak events. From the detention basin, the stormwater will be discharged into the city's collection system located within Roberts Road. The project is not subject to waste discharge requirements.

b. 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 (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? *(Source #: 11, 15, 16, 17, 18)*

Less than Significant. The project would not extract groundwater and, therefore, would not affect the quantity of subsurface water supplies. The project would not change the direction or rate of groundwater flow. The project does not involve the use of groundwater supplies and, therefore, does not impact the groundwater table or nearby wells. Construction of project roads and houses will introduce impervious surfaces to the project site increasing stormwater runoff volumes and decreasing the amount of water that would be available for percolation into project soils and the underlying groundwater table. The project development site consists of 14 houses on 67 acres. Based on lot coverage allowed for the project by the Hillside Preservation District, the project could result in 5.4 acres of impermeable surface -- 3.5 acres for road pavement and 1.9 acres for houses (see Figure 2). The addition of impermeable would reduce the potential for groundwater recharge on 8% of the project site. This impact is not significant.

- c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?** (Source #: 11, 15, 16, 17, 18)

Potentially Significant Impact. The development of the project site with housing will require grading for the access road and grading for individual lots. Uncontrolled drainage in graded areas during construction activity could result in erosion of project soils. Construction storm water control is regulated by the California Regional Water Quality Control Board (RWQCB). All projects exceeding 10,000 square feet in size require a Storm Water Pollution Prevention Plan (SWPPP) under NPDES requirements for construction sites. Best Management Practices (BMPs) are required by RWQCB to protect the water quality of surface runoff and prevent siltation of downstream waterways. The EIR will discuss the potential for erosion and siltation impacts during project construction and identify necessary mitigation.

- d. 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 flooding on- or off-site?** (Source #: 11, 15, 16, 17, 18)

Less than Significant Impact. The project will create new areas of impervious surface that generate an increased rate or amount of surface runoff. Grading and development of the property would alter the topography and existing drainage patterns. The project proposes retaining all storm drainage on site. The EIR will discuss the proposed drainage controls to be installed as part of the project and evaluate the need for further mitigation.

- e. Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?** (Source #: 8, 11, 15, 16, 17, 18)

Less than Significant. Surface runoff from the new project access road will be discharge into the existing city storm drain lines along Fassler Avenue. The city sewer system has adequate capacity to accommodate additional flows from the proposed project (Brian Martinez, City of Pacifica. Assistant Superintendent).

- f. Otherwise substantially degrade water quality?** (Source #: 11, 15, 16, 17, 18)

No Impact. There are no other impacts to water quality.

- g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?** (Source #: 6, 11, 15, 16, 17, 18)

No Impact. The project site is located the coastal hills east of Highway 1. There are no 100-year flood zones located on the project property.

h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows? (Source #: 6, 11, 15, 16, 17, 18)

No Impact. The project site is located the coastal hills east of Highway 1. There are no 100-year flood zones located on the project property.

i. 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? (Source #: 6, 11, 15, 16, 17, 18)

No Impact. The project property is a hillside location. The property is not subject to flooding from local creeks or drainages. The project site is not within an inundation zone of a levee or dam.

j. Inundation by seiche, tsunami, or mudflow? (Source #: 6, 11, 15, 16, 17, 18)

No Impact. The project site is located outside of areas subject to inundation by seiche, tsunami, or mudflow.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
9. LAND USE AND PLANNING -- Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) 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, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING:

The project site comprises three parcels located south of Fassler Avenue and east of Roberts Road. The majority of the site is designated Open Space Residential by the Pacifica General Plan. The southern portion of the site is designated Very Low Residential. The Zoning District for the two large project parcels (65 acres) is Planned Development with the exception of one corner of the parcel fronting Fassler Avenue which is zoned Commercial. Both project parcels are within the Hillside Preservation District overlay zone. The Zoning District for the third smaller parcel (2 acres) is Agricultural which permits development of one single family unit.

Land use in the project site vicinity is open space to the north and east, multi-family residences and open space to the west and residences and the Cabrillo School to the south. The nearest commercial use is Linda Mar Shopping Center to the south and the Sea Bowl bowling alley at the intersection of Highway 1 and Fassler Avenue.

DISCUSSION:

Will the proposed project:

- a. Physically divide an established community?** (Source #: 6, 7, 11, 16, 17, 18)

No Impact. The project would develop 14 residential lots on the property. Approximately 30 acres would remain in private open space. The project will not divide an established community.

- b. 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, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?** (Source #: 1, 2, 6, 7, 16, 17, 18, 21, 22)

Less than Significant. The project site has non-conforming zoning. The commercial zoning designation on a portion of one project parcel does not conform to the General Plan designation of Open Space Residential. Because the project parcels are located in the Hillside Preservation District, subdividing the property requires a rezoning from PD and commercial districts to PD with a Development Plan. This rezoning action will remove the non-conforming commercial district and bring the zoning for the property into compliance with the General Plan designation. The 2-acre parcel included in the project application is zoned Agricultural. This parcel will be developed with a single family residence as permitted under the Agricultural zoning district. It is not included in the Planned Development portion of the project application and no rezoning is required or proposed for this agricultural parcel.

One project parcel has a split General Plan designation of Very Low Residential and Open Space Residential. The two designations allow different development densities. Both designations occur on proposed Lot 11 at the southern end of the property. The development density of the proposed project may conflict with the development density allowed on the parcel with the split General Plan designation. The remedy would be adjusting the lot line or building envelope location for Lot 11 to ensure conformity with the general plan densities. This would be discussed further in the EIR.

- c. Conflict with any applicable habitat conservation plan or natural community conservation plan?** (Source #: 6, 11, 16, 17, 18, 21, 22)

No impact. The project site is not located in a habitat conservation plan or natural community conservation plan area.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
10. MINERAL RESOURCES -- Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING:

The Pacifica General Plan does not identify any significant mineral resource area in the project vicinity.

DISCUSSION:

Will the proposed project:

- a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? (Source #: 6, 16, 17, 18)**

No Impact. Construction of the project will not result in the loss of availability of known mineral resources of regional or local importance. No locally important mineral resources are designated in the vicinity of the project property to the Pacifica General Plan. The development of the property would not result in the loss of mineral resources which are of regional or state-wide importance.

- b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? (Source #: 6, 16, 17, 18)**

No Impact. No locally important mineral resources are designated at this site in the Pacifica General Plan. The development of the property would not result in the loss of locally important mineral resources.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
11. NOISE -- Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING:

Noise is generally defined as unwanted sound. Sound levels are usually measured and reported in decibels (dB), a unit which describes the amplitude, or extent, of the air pressure changes which produce sound. The A-weighted sound level or dBA is an adjusted or weighted measure of sound that corresponds to human hearing since the human ear cannot perceive all pitches or frequencies equally well. The equivalent sound level (L_{eq}) is used to describe noise levels over extended periods of time, unlike the dBA, which describes a noise level at just one moment. The L_{dn} accounts for human sensitivity to nighttime noise levels as most people sleep at night and are more sensitive to noise intrusion during this time (nighttime ambient noise levels within a house usually decreases making exterior noise become more noticeable).

A noise assessment for the Harmony @ 1 subdivision was prepared in July 2006 by Illingworth & Rodkin, Inc. The results of the assessment are presented here in the following

section.

The existing noise environment is characterized by distant traffic (adjacent streets and Highway 1), aircraft overflights, and the sounds of the ocean. Land use in the project site vicinity is open space to the north and east, multi-family residences and open space to the west and residences and the Cabrillo School to the south. The nearest commercial use is Linda Mar Shopping Center to the south and the Sea Bowl bowling alley at the intersection of Highway 1 and Fassler Avenue.

The City of Pacifica's General Plan Noise Element identifies standards of community noise levels for the various land uses within the city for use in evaluating a project's compatibility with the noise environment where it is proposed. Exterior and interior noise level guidelines established by the State office of Noise Control have been adopted by many communities for this purpose. Noise levels in outdoor activity areas of new residential developments are considered "normally acceptable" by the City in noise environments of 60 dBA L_{dn} or less. The City Noise Element incorporates California Administrative Code which specifies that the interior noise levels in specified dwellings shall be maintained at or below 45 dBA L_{dn} . The 45 dBA L_{dn} interior noise criterion is used in this analysis to assess interior noise levels in the proposed single-family residences.

One long term (approximately 24 hours) and one short term (approximately 10 minutes) noise measurement, was made from June 29th to June 30th, 2006 to document the existing noise conditions at the proposed development site. Hourly noise levels from the long-term noise measurement ranged from 48 to 49 dBA L_{eq} during the daytime and dropped to 42 dBA during the early morning (around 3:00 am). It is estimated that ocean sounds generated noise levels of about 40 dBA L_{eq} at this location. The L_{dn} noise level at this location is calculated to be 53 dBA, generated by a combination of distant traffic noise, occasional aircraft overflights, and ocean sounds.

The short-term noise measurement was taken from 9:15 to 9:25am. The L_{eq} was 51 dBA. Based on observation of the sound level meter during the noise measurement, traffic generated noise levels of 50 to 55 dBA during (relatively) heavy traffic, the ocean generated noise levels of about 45 to 50 dBA, and airplane overflights generated instantaneous maximum noise levels of 53 to 58 dBA L_{max} .

DISCUSSION:

Will the proposed project:

- a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? (Source #: 6, 7, 11, 13, 16, 17, 18)**

Less than Significant. Preliminary traffic noise modeling predicted that noise levels at the site would range from below 50 dBA L_{dn} up to 56 dBA L_{dn} at the locations of the proposed residences and are not expected to increase measurably under post project traffic conditions. Exterior noise levels at all residential locations would be below 60 dBA L_{dn} and is considered

normally acceptable. Where exterior noise levels are below 60 dBA Ldn, interior noise levels can typically be maintained below 45 dBA Ldn with standard California construction methods.

b. Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels? (Source #: 5, 6, 7, 11, 13, 16, 17, 18)

No Impact. There are no sources of ground vibration, such as may occur from railroad lines or blasting activity on or near the project site. No project construction activities which cause ground vibrations, such as blasting or pile driving, are proposed.

c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? (Source #: 6, 7, 11, 13, 16, 17, 18)

Less than Significant. Traffic noise increases were calculated based on the Draft Traffic Impact Analysis prepared for the project by RKH Civil and Transportation Engineering, February 24, 2006). Based on this report, project traffic would enter and exit the site from Fassler Avenue or Roberts Road. Project trips would then distribute along the roadway network, the majority of which (more than 80%) would travel north on Highway 1. The addition of project traffic is calculated to increase noise levels on area roadways by less than 1 dBA Ldn. Increases of less than 1 dBA Ldn would not typically be measurable and are not considered substantial.

d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? (Source #: 6, 7, 11, 13, 16, 17, 18)

Less than Significant. Project construction activities would take place in a period of less than one construction season (one-year) and would include grading of the site, paving of roadways, construction of project infrastructure, and construction of individual buildings. The highest noise levels would be generated during the grading of the site, with lower noise levels occurring during building construction. Large pieces of earth-moving equipment, such as graders, scrapers, and bulldozers, generate maximum noise levels of 80 to 85 dBA at a distance of 100 feet. Typical hourly average construction-generated noise levels are about 75 to 80 dBA L_{eq} measured at a distance of 100 feet from the site during busy construction periods. These noise levels drop off at a rate of about 6 dBA per doubling of distance between the noise source and receptor.

The majority of project construction would take place in the northeastern portion of the site, where the 14 residences are proposed. Although existing noise sensitive uses border the site to the west and south, the majority of project construction would not be located adjacent to these land uses. Most construction activities would take place 500 feet or more from sensitive land uses to the west and more than 1000 feet from sensitive land uses to the north, south, and east. During a period of heavy construction in areas with direct line-of-sight to the construction area, noise levels would be anticipated to be 60 to 65 dBA L_{eq} at a distance of 500 feet from construction activities and 55 to 60 dBA L_{eq} at a distance of 1000 feet from construction activities. The project site is located in complex terrain and noise levels would be considerably lower in areas that are shielded from the construction site by hills.

Construction noise levels at adjacent residences are not anticipated to exceed 65 dBA L_{eq} when construction occurs at the site. However, noise levels produced by heavy equipment would, at times, be audible at these residences and may occasionally interfere with normal residential activities during busy construction periods when construction activities occur in areas adjacent to residences. Noise generated by construction would create a temporary noise impact on adjacent noise sensitive receptors. The City of Pacifica regulates construction noise through the building permit process which limits the hours of construction to weekdays (Monday through Friday) from 7:00 am to 7:00 pm and on weekends (Saturday and Sunday) from 9:00 am to 5:00 pm. Restriction of construction noise to these hours of operation would result in a noise impact that is less than significant.

- e. 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?** (Source #: 5, 6, 7, 11, 13, 16, 17, 18)

No Impact. The project site is not located within an airport land use plan area. The project property is located roughly 6.5 miles west of the San Francisco International Airport and 6 miles north of Half Moon Bay Airport. The project is not significantly affected by aircraft flyover.

- f. 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?** (Source #: 5, 6, 7, 11, 13, 16, 17, 18)

No Impact. The proposed project is not within the vicinity of a private airstrip and would not expose people to excessive noise levels from private airstrips.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
12. POPULATION AND HOUSING -- Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DISCUSSION:

Will the proposed project:

- a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?** (Source #: 5, 6, 7, 11, 16, 17, 18)

Less than Significant. The project would result in the direct development of 14 lots with single family residences. The project subdivision would generate a population of 38 persons based on the City's standard occupancy rate of 2.74 residents per unit. This would not result in a significant increase in city population. The project would not expand infrastructure or induce substantial population growth in the community.

- b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?** (Source #: 5, 6, 11, 16, 17, 18)

No Impact. The project involves subdividing undeveloped property for residential use. Development of the project would not displace existing housing.

- c. Displace substantial numbers of existing people, necessitating the construction of replacement housing elsewhere?** (Source #: 5, 6, 11, 16, 17, 18)

No Impact. The project involves subdividing undeveloped property for residential use. There is no housing affected by the project. No people would be displaced by the project.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
13. PUBLIC SERVICES --				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DISCUSSION:

Will the proposed project:

- a. **Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:**

1. Fire protection? (Source # 6, 16, 17, 18, 20)

Less than Significant. Pacifica is served by two North County Fire Authority stations. The closest is located less than two miles south at 1100 Linda Mar Boulevard and the other is located less than four miles north at 616 Edgemar Avenue. The addition of 14 new homes off Roberts Road would not result in the need for additional fire stations in the area. Response times and specific concerns of the fire department will be identified in the EIR. Project impacts upon

fire protection services will be addressed in the EIR. The impact is not expected to be significant.

2. Police protection? (Source # 16, 17, 18, 20)

Less than Significant. Pacifica is served by the Pacifica Police Department. The addition of 14 new homes would not likely result in the need for additional law enforcement. Project impacts upon police protection services and any specific concerns of the city police department will be addressed in the EIR. The impact is not expected to be significant.

3. Schools? (Source # 6, 16, 17, 18, 20)

Less than Significant. Elementary and Middle School services are provided by the Pacifica School District. Cabrillo School and Vallemar School are both less than 1 mile away from the project site. High school grade levels are provided by the Jefferson Union High School District. The nearest high school is Terra Nova High School, less than 2 miles east of the project site. The addition of 14 new homes would not result in the need for additional schools. The potential impact upon school capacities will be addressed in the EIR. The impact is not expected to be significant.

4. Parks? (Source # 16, 17, 18, 20)

Less than Significant. The addition of 14 homes would not result in the need for additional parks or recreation facilities. The increased demand on park space generated by the project residents will be addressed in the EIR. The impact is not expected to be significant.

5. Other public facilities? (Source # 16, 17, 18, 20)

No Impact. No other public facilities would be adversely affected by the proposed project.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
14. RECREATION --				
a) Would the project 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DISCUSSION:

Will the proposed project:

- a. Would the project 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? (Source #: 16, 17, 18, 20)**

Less than Significant. The estimated 38 new residents would not increase the use of regional parks or other recreational facilities such that substantial physical deterioration of existing recreational facilities in the area would occur or be accelerated. Increased demand for and use of developed park facilities by project residents would be minor. The project proponents would preserve 30 acres of the project site as conservation open space to be managed by the Homeowners Association.

- b. 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? (Source #: 16, 17, 18, 20)**

No Impact. The project would not adversely affect recreational opportunities. The project would not increase the use of existing recreational facilities or expand a recreational facility.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
15. TRANSPORTATION/TRAFFIC -- Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Result in inadequate emergency access?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING:

Project access would be constructed off Roberts Road and Fassler Avenue. A traffic study was prepared for the project by RKH Civil and Transportation Engineering (September 6, 2006). Most intersections in the project vicinity operate at acceptable levels (LOS D or above) during the morning and afternoon peak hours. Two intersections, Route 1 at Reina Del Mar Drive and Route 1 at Fassler/Rockaway Beach, operate at unacceptable levels during the morning commute period.

DISCUSSION:

Will the proposed project:

- a. Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?** (Source #: 11, 16, 17, 18, 19)

Less than Significant Impact. The project subdivision is expected to generate an estimated 9 vehicle trips during the morning peak hour and 13 vehicle trips during the afternoon peak traffic hour. While the project in itself will not create a significant impact at any one intersection, it will contribute to the excessive delay conditions at two intersections on Route 1 during the morning peak traffic period. The cumulative impact is significant as described in Response b. below.

- b. Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?** (Source #: 11, 16, 17, 18, 19)

Potentially Significant Impact. The addition of 9 vehicle trips to the AM peak hour traffic would contribute to the excessive delay conditions at two intersections. Route 1/Reina Del Mar Avenue intersection operates at LOS E and would experience an increased delay of 3 seconds per vehicle. Route 1/Fassler Ave/Rockaway Beach Avenue intersection operates at LOS F and would experience an increased delay of 6 seconds per vehicle. Traffic standards employed by the City of Pacifica state that any increase of vehicle trips to an intersection that is operating below acceptable levels (LOS E or below) is a significant impact that requires mitigation. The EIR will address what mitigation measures are available to offset project impacts. If mitigation is not available, the increased traffic delay would be a significant unavoidable impact.

- c. 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?** (Source #: 5, 6, 11, 16, 17, 18)

No Impact. The project will not affect air traffic patterns.

- d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?** (Source #: 11, 16, 17, 18, 19)

Potentially Significant Impact. A sight distance assessment was included in the project traffic report (RKH, February 2005). The proposed project road would intersect Roberts Road at the inside of a curve creating limited sight distances. The hillside along Roberts Road near the intersection of the new project road needs to be trimmed back in order to create adequate sight lines for drivers on the new road to see Roberts Road traffic. The required sight line distances and the necessary mitigation will be described in the EIR.

e. Result in inadequate emergency access? (Source #: 11, 16, 17, 18, 19)

Potentially Significant Impact. Two intersections at Highway 1 – Reina Del Mar and Fassler Avenue – are highly congested during the morning peak hours. The proposed project will contribute traffic to these intersections causing a minor increase in delay times. By contributing to intersection congestion, the project could indirectly impact emergency vehicle access to nearby areas. This potential impact will be addressed in the EIR.

f. Result in inadequate parking capacity? (Source #: 11, 16, 17, 18, 19)

No Impact. The proposed residential project would not affect parking capacity. All subdivision lots would provide private parking for its residents and guests.

g. Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)? (Source #: 6, 11, 16, 17, 18)

No Impact. The proposed residential project would not affect alternative transportation policies or programs.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
16. UTILITIES AND SERVICE SYSTEMS -- Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DISCUSSION:

Will the proposed project:

- a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?** (Source #: 11, 16, 17, 18, 20)

Less than Significant Impact. Wastewater treatment for the proposed project site would be provided by the City of Pacifica's Calera Creek Water Recycling Plant (CCWRP). Currently the annual average daily wastewater flow in Pacifica is 3.05 million gallons per day

(gpd). The CCWRP has been designed to handle an annual average daily flow of 3.30 million gpd. For peak flows, the plant can accommodate 7 million gpd for dry weather flows and 20 million gpd for peak wet weather conditions. The plant design is sufficient to handle flows from complete build-out of the City's General Plan (Thomas Reid Associates, 2002).

The proposed project, at 14 residential units and 2.74 residents per unit, would generate approximately 38 new residents. Using a generation rate of 100 gpd per person, the proposed project would produce approximately 3,800 gpd of wastewater. This growth is consistent with the general plan and therefore wastewater from the project is included in the design capacity of the Calera Creek Water Recycling Plant. The addition of the proposed project will not exceed the City's wastewater treatment capacity.

b. 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? (Source #: 8, 11, 15, 16, 17, 18, 20)

Less than Significant Impact. As discussed in response a) above, the Calera Creek Water Recycling Plant has adequate capacity to serve the Harmony @1 project. Therefore, project development would not result in the construction of new wastewater treatment facilities or expansion of existing facilities.

Water service to the proposed project site would be provided by the North Coast County Water District (NCCWD). Water provided by the NCCWD is purchased from the San Francisco Public Utility Commission's Hetch Hetchy water system. This water has already been treated and is thus potable when it reaches the NCCWD's storage tanks. (Thomas Reid Associates, 2002). The proposed project would not necessitate the construction or expansion of water treatment facilities. NCCWD has confirmed it has the water availability and adequate pressure to provide water to the project site (NCCWD, 2006).

c. 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? (Source #: 11, 16, 17, 18)

No Impact. The project proposes the recycling of grey water for irrigation use and capture of rain water. All storm water would be detained on the project site to pre-development levels as required by the City. No new storm drainage lines would be required as a result of the project.

d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? (Source #: 15, 20)

Less than Significant Impact. The proposed project would generate a demand for approximately 5,025 gallons of water per day (calculated at 2.74 persons per household, 14 households, and 131 gallons per person per day).

The NCCWD was contacted regarding this project and other projects that are foreseen to be approved in the near future. In a letter to the City of Pacifica, NCCWD has confirmed it has

the water availability and pressure needed to provide water to the project site (NCCWD, 2006). No new or expanded entitlements are required.

- e. 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?** (Source #: 8, 20)

Less than Significant Impact. See response a. above.

- f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?** (Source #: 16, 17, 18, 20)

Less than Significant Impact. The City of Pacifica is served by the Ox Mountain Landfill, operated by Browning Ferris Industries. According to the company, Ox Mountain Landfill has the capacity to adequately accommodate solid waste generation within its San Mateo County service area through the year 2023. Therefore, the landfill would have sufficient capacity to accommodate solid waste generated by the proposed project (Thomas Reid Associates, 2002).

- g. Comply with federal, state, and local statutes and regulations related to solid waste?** (Source #: 16, 17, 18, 20)

No Impact. The proposed project will comply with all federal, state and local statutes and regulations related to solid waste.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
17. MANDATORY FINDINGS OF SIGNIFICANCE --				
a) 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?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) 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)?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

DISCUSSION:

- a. 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?**

Potentially Significant Impact. The project site provides a visual backdrop to coastal views. Homes built on the site are low density but could be highly visual potentially creating adverse impacts from local viewpoints. The EIR will address the adequacy of project measures to reduce visual impacts. The drainages on the project site have the potential to be used by California red-legged frog (CRLF) as a travel corridor. Project construction activities could potentially impact frogs moving through the project site. The EIR will assess the potential for impact and address measures to reduce potential impacts on CRLF. The project would not reduce the number or restrict the range of rare or endangered plant or animal species. The project does not have the potential to eliminate important examples of the major periods of California history or prehistory.

- b. 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)?**

Potentially Significant Impact. The proposed project would add traffic to the Route 1/Fassler Ave/Rockaway Beach intersection which operates at LOS F in the AM peak hour and to the Route 1/Reina Del Mar intersection which operates at LOS E in the AM peak hour. The project traffic contribution is small but due to the existing poor operating levels of these intersections, and other development projects pending approval or construction in the project vicinity, the project addition of traffic impact is cumulatively considerable and will result in additional delay. The EIR will address the traffic impact of the project and evaluate potential mitigation measures to reduce project impacts. The project contributes to cumulative air pollutants in the air basin by generating new vehicle emissions. Because the project size of 14 residential units is small, the contribution of the project’s vehicle emissions to air quality impacts in the air basin is de minimus and therefore not cumulatively significant.

- c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?**

Potentially Significant Impact. The project site is located in a seismically active region. Project structures would be subject to strong ground shaking in the event of an earthquake. With standard building practices the impact is expected to be less than significant. The EIR will address the potential for seismic safety impacts to cause substantial adverse effects on humans, either directly or indirectly.

Figure 1 – Regional Location and Project Vicinity

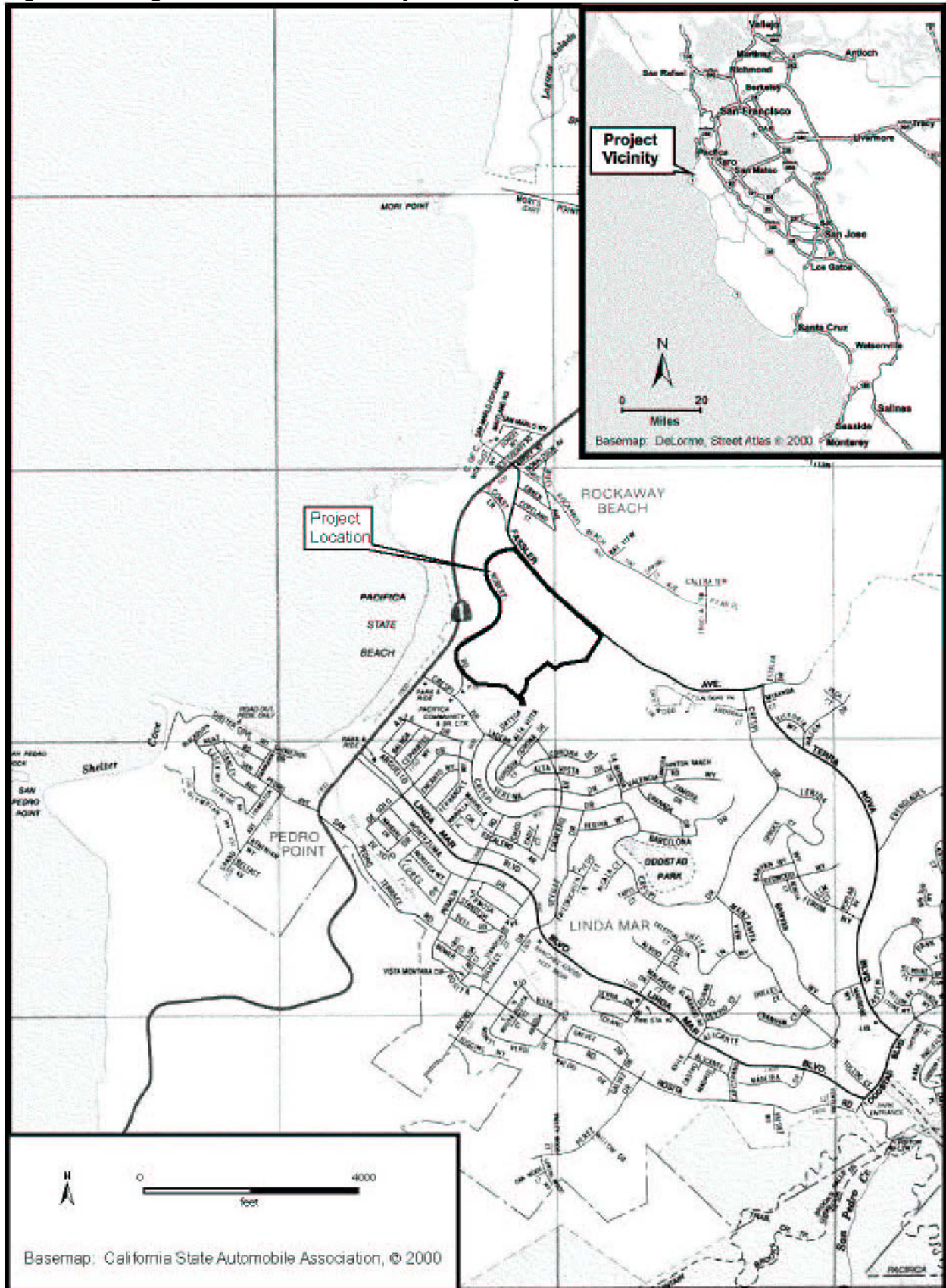
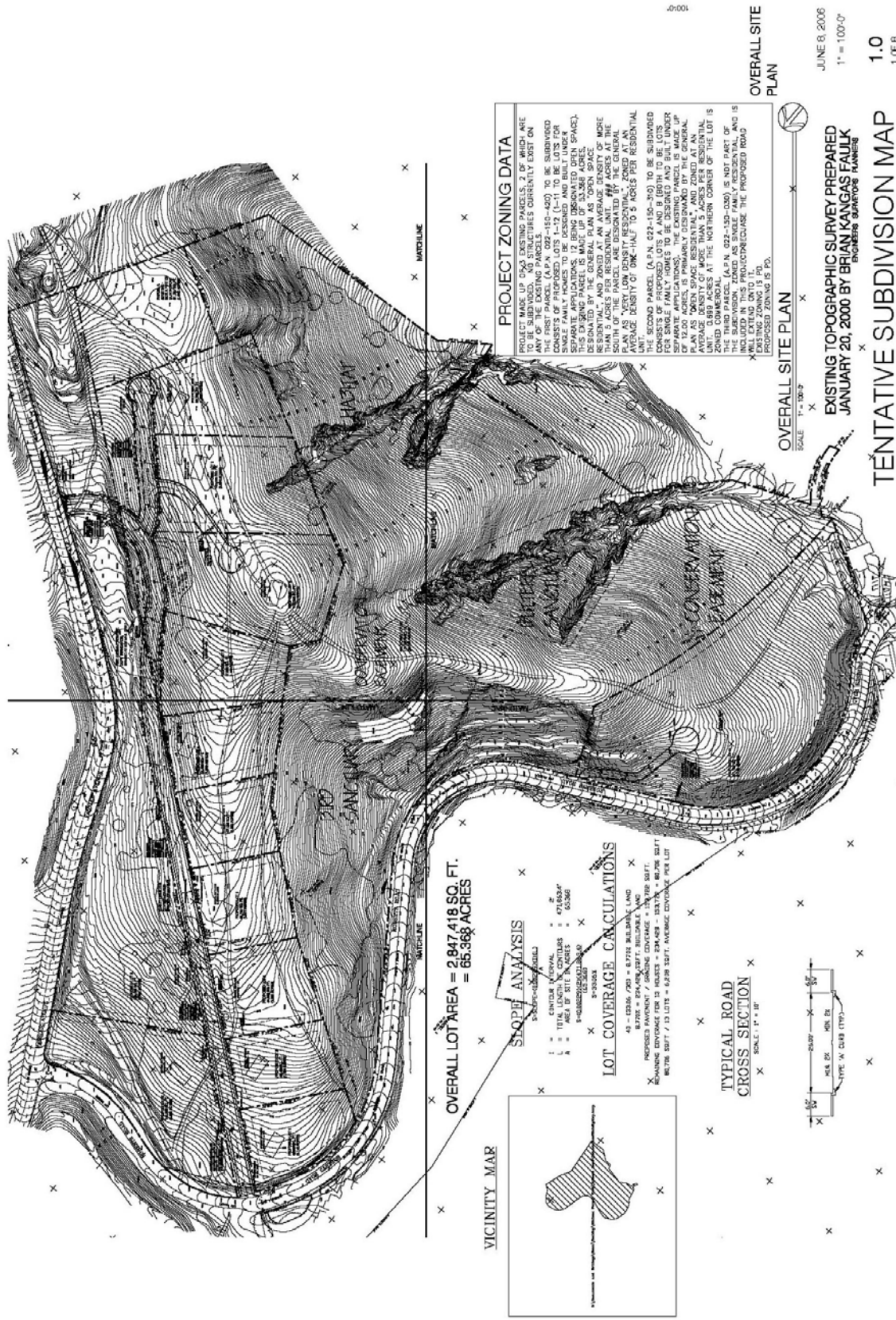


Figure 2 – Project Site Plan



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**APPENDIX A
CULTURAL RESOURCES ASSESSMENT
Holman and Associates Archaeological Consultants**



holman & ASSOCIATES
Archaeological Consultants

"SINCE THE BEGINNING"

3615 FOLSOM ST. SAN FRANCISCO,
CALIFORNIA 94110 415/550-7286

Kate Werner
Thomas Reid Associates
545 Middlefield Road Suite 200
Menlo Park, CA 94025

August 30, 2006

Dear Ms. Werner:

RE: CULTURAL RESOURCES STUDY OF THE ROBERTS ROAD PACIFICA
DEVELOPMENT AREA, PACIFICA, SAN MATEO COUNTY, CALIFORNIA

At your request I have completed an archaeological literature review and field inspection of the above referenced 65 acre Roberts Road development area. No evidence of historic and/or prehistoric archaeological resources were seen inside the project borders. This report contains a summary of my findings to date.

PROJECT DESCRIPTION

The proposed project area consists of an approximately 65 acre parcel of land located on the south side of Fassler Avenue in Pacifica. Located on the Montara Mountain U.S.G.S. map, the borders of the property are Fassler Avenue on the north, Roberts Road along the west, and open hillside along the east and southern borders.

The property consists of the open hillsides south of Cattle Hill in Pacifica, which rise from near sea level at the southern edge of the property east of Pacifica State Beach to an elevation of around 400 feet above sea level at the easternmost tip of the property. Construction is proposed along the east-west spine of the hillside which parallels Fassler Avenue. Access to the property will begin at its western edge along Roberts Road south of its intersection with Fassler and will exit the property at its eastern end, cutting north to intersect Fassler Avenue.

At the time of the field inspection on June 1, 2006, the property was covered by dense grasses, coyote brush, poison oak, sage and a profusion of native flowers. Historic alteration to the property can be seen in the form of two dirt roads which parallel Fassler along the spine of the ridge to access tanks east of the property borders: where the road has cut through vegetation, a sandy yellow clay material is found on top of a brown to yellow sandstone substrate. Other than the relatively level east-west spine, the remainder of the property drops steeply off to the north (towards Fassler) and the south and east, where two steep drainages reach the lower elevations of

the property east of Roberts Road. At the eastern upper end of the ridge line is an area of exposed sandstone conglomerate containing veins of chert. Deeply weathered and pocketed, these large boulders are found stacked together by historic clearing and/or are in their original locations north of the dirt road which runs through them.

ARCHAEOLOGICAL LITERATURE REVIEW

An archaeological literature was conducted by this author in person at the Northwest Information Center (NWIC) located at Sonoma State University on May 19, 2006 (file no. 05-1127) to obtain information about recorded archaeological sites in and around the project borders and information about formal archaeological surveys of the project area and surrounding lands.

There are no archaeological sites recorded inside the project borders and none within a thousand feet of it. There have been no previous field inspections of the project area; one small 8 acre parcel was done to the north of it on Cattle Hill by David Chavez in 1979 for the Rockaway Beach Condo project with negative findings. The current project area was the subject of an archaeological literature review done by this author for the Pacifica General Plan Amendment in 1987. This report concluded that there were no recorded archaeological sites inside the general plan amendment area, but its proximity to the coast and other known archaeological sites located to the west of Highway 1 suggested that the properties inside the GPA should be inspected for cultural resources.

DESCRIPTION OF FIELD INSPECTION

A visual inspection of the project area was conducted by this author on June 1, 2006. The inspection itself was limited to those portions of the property which were level enough to have supported habitation sites, trails and/or which could have been used for resource exploitation, such as the area of rock outcrops found at the upper eastern edge of the ridge line. The remainder of the property, found east of Roberts Road and/or just south of Fassler Avenue is too steep to have been utilized for camp or village sites.

Vegetation along the east-west ridgeline and the smaller spine which runs south was dense at the time of the field inspection. Where visible the soils consist of a light brown to black clay loam. Wherever erosion has occurred from pedestrian traffic or vehicles and/or motorcycles, the thin topsoil has been eroded away exposing a thin layer of brown clay on top of light brown to blond sandstone.

FINDINGS/RECOMMENDATIONS

No evidence of Native American use and/or occupation of the project area was seen anywhere inside the project borders. Evidence of habitation would have included concentrations of shellfish remains, darker than surrounding soils of a friable nature exhibiting concentrations of stone and bone, artifacts of these materials and evidence of fires (ash, charcoal, fire affected rock

or earth). The grouping of conglomerate rocks found stacked together and/or in their original locations at the eastern end of the property were also inspected for any evidence of casual quarrying activity or other forms of alteration (rock art, grinding stations). Despite the presence of small veins of chert, there was no evidence that these had been exploited by native peoples.

It is the opinion of this writer that future development of the project parcel will have no effect on prehistoric and/or historic archaeological resources. In spite of the imperfect survey conditions (dense grasses and brush covering much of the ground surface) this report makes no further recommendations for mechanical subsurface presence/absence testing for archaeological deposits in areas currently obscured by vegetation. Archaeological monitoring of construction related earthmoving activities is also not recommended.

Sincerely,



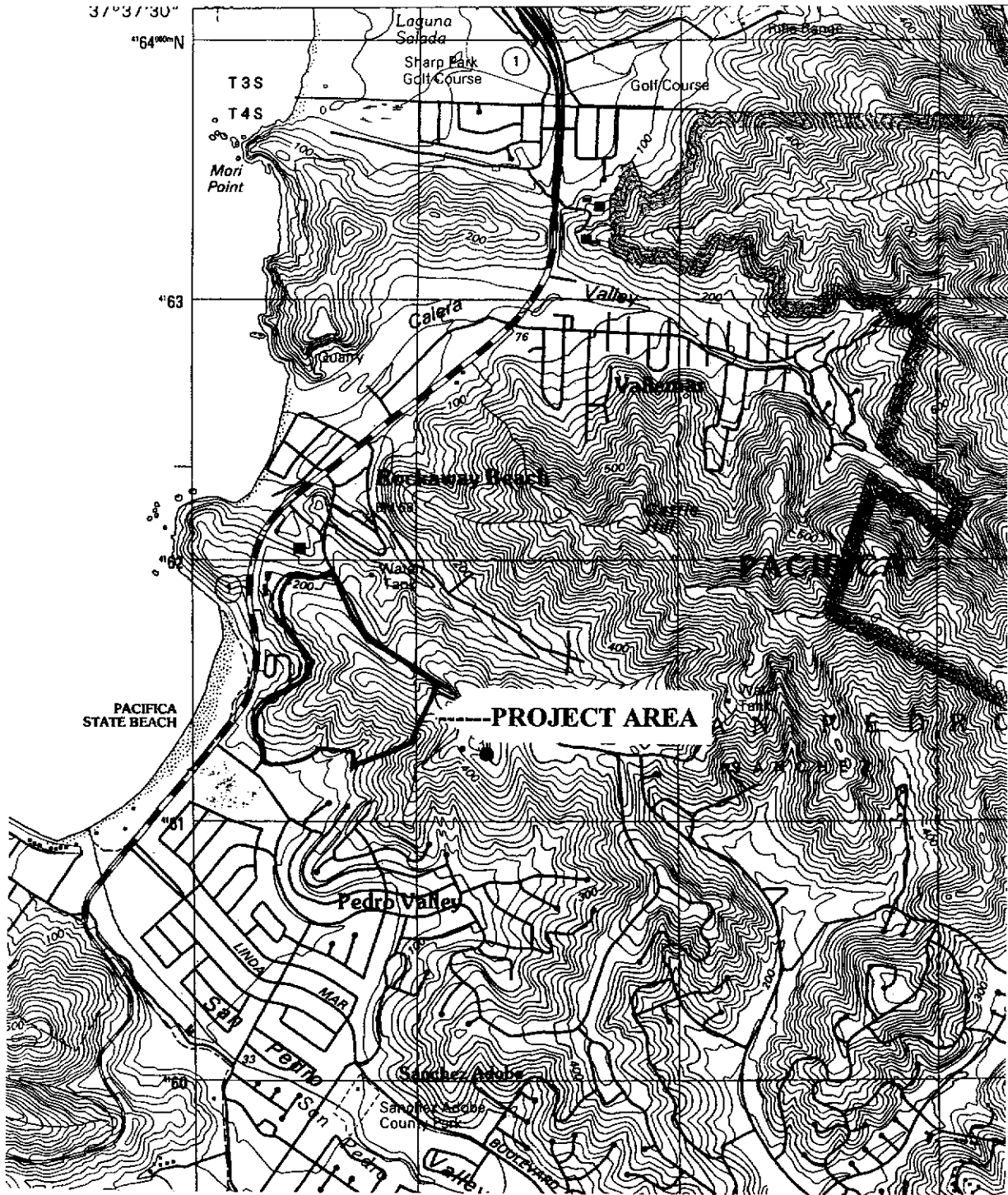
Miley Paul Holman
Holman & Associates

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ROBERTS ROAD PROJECT AREA

PACIFICA, SAN MATEO COUNTY, CALIFORNIA
MONTARA MOUNTAIN U.S.G.S. MAP 1997



**APPENDIX B
ENVIRONMENTAL NOISE ASSESSMENT
Illingworth & Rodkin, Inc.**

HARMONY @ 1
ENVIRONMENTAL NOISE ASSESSMENT
PACIFICA, CALIFORNIA

July 17, 2006



Prepared for:

Stuart Newton
Open Door Properties, Inc
338 Horizon Way, Suite 200
Pacifica, CA 94044

Prepared by:

Dana M. Lodico

ILLINGWORTH & RODKIN, INC.
Acoustics · Air Quality
505 Petaluma Boulevard South
Petaluma, CA 94952
(707) 766-7700

Introduction

This report presents the results of a noise assessment conducted for Harmony @ 1 in Pacifica, California. The project proposes to develop 13 residential units on an approximate 66-acre site. This assessment presents the fundamentals of environmental noise, provides a discussion of policies and standards applicable to the project, presents the results of measurements conducted at the site, and evaluates the potential significance of impacts resulting from the project.

Fundamentals of Environmental Noise

Noise is defined as unwanted sound. Airborne sound is a rapid fluctuation of air pressure above and below atmospheric pressure. Sound levels are usually measured and expressed in decibels (dB) with 0 dB corresponding roughly to the threshold of hearing. Decibels and other technical terms are defined in Table 1.

Most of the sounds which we hear in the environment do not consist of a single frequency, but rather a broad band of frequencies, with each frequency differing in sound level. The intensities of each frequency add together to generate a sound. The method commonly used to quantify environmental sounds consists of evaluating all of the frequencies of a sound in accordance with a weighting that reflects the facts that human hearing is less sensitive at low frequencies and extreme high frequencies than in the frequency mid-range. This is called "A" weighting, and the decibel level so measured is called the A-weighted sound level (dBA). In practice, the level of a sound source is conveniently measured using a sound level meter that includes an electrical filter corresponding to the A-weighting curve. Typical A-weighted levels measured in the environment and in industry are shown in Table 2 for different types of noise.

Although the A-weighted noise level may adequately indicate the level of environmental noise at any instant in time, community noise levels vary continuously. Most environmental noise includes a conglomeration of noise from distant sources which create a relatively steady background noise in which no particular source is identifiable. To describe the time-varying character of environmental noise, the statistical noise descriptors, L_{01} , L_{10} , L_{50} , and L_{90} , are commonly used. They are the A-weighted noise levels equaled or exceeded during 1%, 10%, 50%, and 90% of a stated time period. A single number descriptor called the L_{eq} is also widely used. The L_{eq} is the average A-weighted noise level during a stated period of time.

In determining the daily level of environmental noise, it is important to account for the difference in response of people to daytime and nighttime noises. During the nighttime, exterior background noises are generally lower than the daytime levels. However, most household noise also decreases at night and exterior noise becomes very noticeable. Further, most people sleep at night and are very sensitive to noise intrusion. To account for human sensitivity to nighttime noise levels, a descriptor, L_{dn} (day/night average sound level), was developed. The L_{dn} divides the 24-hour day into the daytime of 7:00 AM to 10:00 PM and the nighttime of 10:00 PM to 7:00 AM. The nighttime noise level is weighted 10 dB higher than the daytime noise level. The Community Noise Equivalent Level (CNEL) is another 24-hour average which includes both an evening and nighttime weighting.

Table 1: Definitions of Acoustical Terms Used in this Report

Term	Definitions
Decibel, dB	A unit describing, the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micro Pascals (or 20 micro Newtons per square meter), where 1 Pascal is the pressure resulting from a force of 1 Newton exerted over an area of 1 square meter. The sound pressure level is expressed in decibels as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g., 20 micro Pascals). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sound are below 20 Hz and Ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level, Leq	The average A-weighted noise level during the measurement period.
L_{max} , L_{min}	The maximum and minimum A-weighted noise level during the measurement period.
L_{01} , L_{10} , L_{50} , L_{90}	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Day/Night Noise Level, L_{dn} or DNL	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10:00 pm and 7:00 am.
Community Noise Equivalent Level, CNEL	The average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels in the evening from 7:00 pm to 10:00 pm and after addition of 10 decibels to sound levels measured in the night between 10:00 pm and 7:00 am.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

Table 2: Typical Noise Levels in the Environment

Common Outdoor Noise Source	Noise Level (dBA)	Common Indoor Noise Source
	120 dBA	
Jet fly-over at 300 meters		Rock concert
	110 dBA	
Pile driver at 20 meters		Night club with live music
	100 dBA	
Large truck pass by at 15 meters		
	90 dBA	
	80 dBA	Noisy restaurant
Gas lawn mower at 30 meters		Garbage disposal at 1 meter
Commercial/Urban area daytime		Vacuum cleaner at 3 meters
Suburban expressway at 90 meters		Normal speech at 1 meter
Suburban daytime		Active office environment
	50 dBA	
Urban area nighttime		Quiet office environment
	40 dBA	
Suburban nighttime		
Quiet rural areas		Library
	30 dBA	Quiet bedroom at night
Wilderness area		
Most quiet remote areas		Quiet recording studio
	20 dBA	
Most quiet remote areas		
	10 dBA	
Threshold of human hearing		Threshold of human hearing
	0 dBA	

Regulatory Background

State CEQA Guidelines

There are no state laws directly applicable in the assessment of noise associated with new projects. The California Environmental Quality Act (CEQA) includes qualitative guidelines for determining significance of adverse environmental noise impacts. A project will typically have a significant impact if it would;

- a. Expose people to or generate noise levels in excess of standards established in the local general plan, noise ordinance, or applicable standards of other agencies.
- b. Expose people to or generate excessive groundborne vibration or groundborne noise levels.
- c. Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
- d. Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.
- e. For projects within an area covered by an airport land use plan or within two miles of a public airport or public use airport when such an airport land use plan has not been adopted, or within the vicinity of a private airstrip, expose people residing or working in the project area to excessive aircraft noise levels.
- f. For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels.

CEQA does not define the noise level increase that is considered substantial. Typically, an increase in the day-night average noise level of 3 dBA L_{dn} or greater at noise-sensitive receptors would be considered significant when projected noise levels would exceed those considered satisfactory for the affected land use. An increase of 5 dBA L_{dn} or greater at noise-sensitive receptors would be considered significant when the resulting projected noise levels would remain below those considered satisfactory for the affected land use.

Checklist items (a), (c), and (d) are relevant to the proposed project. Ground-borne noise and vibration is not anticipated to occur as a result of the project. The project is not located in the vicinity of a private airstrip or public airport. Checklist items (b), (e), and (f) are not carried forward for further analysis.

City of Pacifica General Plan

The City of Pacifica's General Plan does not contain quantifiable noise level limits that could be used in the evaluation of a project's compatibility with the noise environment where it is proposed. Exterior and interior noise level guidelines established by the State Office of Noise Control have been adopted by many communities for this purpose. Noise levels in outdoor activity areas of new residential developments are considered normally acceptable in noise environments of 60 dBA L_{dn} or less. The State Building Code regulates interior noise levels to be maintained at or below 45 dBA L_{dn} inside multifamily residences. The 45 dBA L_{dn} interior noise criterion is used in this analysis to assess interior noise levels in the proposed single-family residences.

Existing Noise Environment

The project site is located along Roberts Road, south of Fassler Avenue in Pacifica, California. The project site is bordered by open space to the north and east, by multifamily residences and open space to the west and by residences and the Cabrillo School to the south. The existing noise environment results primarily from distant traffic, aircraft overflights, and the sounds of the ocean. Much of the site is shielded from roadway and ocean noise by the surrounding hills.

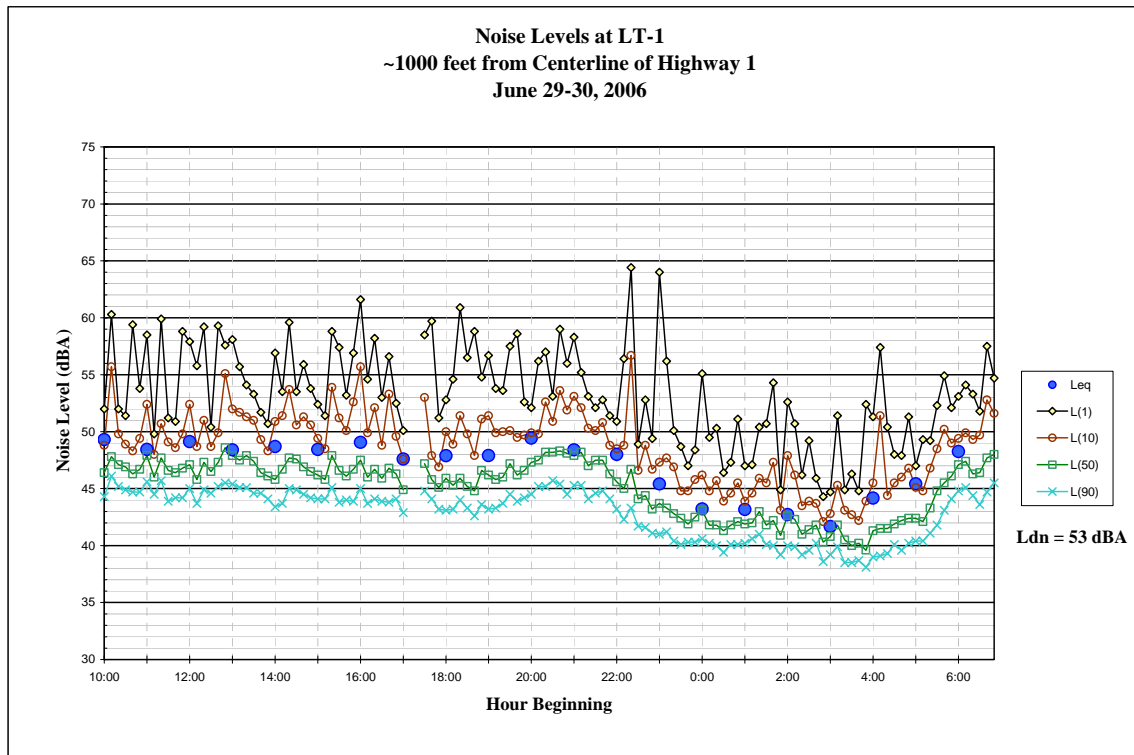
A noise monitoring survey, which included one long-term measurement (approximately 24-hours) and one short-term measurement (10-minutes), was made from June 29th to 30th, 2006 to document existing noise conditions. Noise measurement locations are shown on Figure 1.

Figure 1: Noise Measurement Locations



The long-term measurement (LT-1) was located along the proposed project access roadway (which is currently a dirt path) at a distance of about 1000 feet from the centerline of the closest visible portion of Highway 1, about 530 feet from the centerline of Fassler Avenue, and about 450 feet from the centerline of Roberts Avenue. At this location, Highway 1 and Roberts Road were visible to the northwest and Fassler Avenue was visible to the east. Hourly noise levels ranged from 48 to 49 dBA L_{eq} during daytime hours and dropped to a low of 42 dBA L_{eq} during the early morning (3:00 am). It is estimated that ocean sounds generated noise levels of about 40 dBA L_{eq} at this location. The L_{dn} noise level at this location is calculated to be 53 dBA, generated by a combination of distant traffic noise, occasional aircraft overflights, and ocean sounds. The trend in noise levels at LT-1 is shown in Figure 2.

Figure 2 – Daily Trend in Noise Levels at LT-1



The short-term noise measurement (ST-1) was located about 1200 feet from the centerline of the closest visible portion of Highway 1 and about 420 feet from the centerline of Fassler Avenue. This measurement is representative of the noise level at the closest lot to Highway 1 along the access road which is in line-of-sight with the roadway. The L_{eq} measured from 9:15 to 9:25 am at this location was 51 dBA. Based on observation of the sound level meter during the noise measurement, traffic generated noise levels of 50 to 55 dBA during periods with (relatively) heavy traffic, and the ocean generated noise levels of about 45 to 50 dBA, and airplane overflights generated instantaneous maximum noise levels of 53 to 58 dBA L_{max} . The estimated L_{dn} at this location is 53 dBA.

Noise Impacts and Mitigation Measures

Impact 1: Noise and Land Use Compatibility. Noise levels throughout the site would meet the exterior (60 dBA L_{dn}) and interior (45 dBA L_{dn}) noise level guidelines used for this analysis. **This is a *less-than-significant* impact.**

Preliminary traffic noise modeling was conducted using FHWA's Traffic Noise Model (TNM v 2.5). Project geometry¹ including roadway and receiver locations and elevations was input into TNM 2.5 to develop a three-dimensional model of the project site. Roadway traffic information was based on the traffic impact analysis prepared for the project². The model output was compared with the results of the noise monitoring survey for calibration purposes.

¹ Harmony @ 1, Overall Site Grading Plan, PKM, Inc., June 8, 2006.

² Draft Traffic Impact Analysis, Roberts Road Residential, RKH Civil and Transportation Engineering, February 24, 2006.

Existing noise levels at the site were calculated to range from below 50 dBA L_{dn} up to 56 dBA L_{dn} at the locations of proposed residences and are not anticipated to increase measurably under future traffic conditions. Exterior noise levels at all residential locations would be below 60 dBA L_{dn} and would meet the criteria used in this assessment. Where exterior noise levels are below 60 dBA L_{dn} , interior noise levels can typically be maintained below 45 dBA L_{dn} with standard California construction methods only. This is a *less-than-significant* impact.

Mitigation 1: None Recommended

Impact 2: Project Operations. Project generated traffic would not measurably change the existing noise environment at nearby noise sensitive uses. **This impact is *less-than-significant*.**

Traffic noise increases were calculated based on the traffic impact analysis prepared for the project². Based on the traffic report, project traffic would enter and exit the site from Fassler Avenue or Roberts Road. Project trips would then distribute themselves along the roadway network, the majority of which (more than 80%) would travel north along Highway 1. The addition of project traffic is calculated to increase noise levels on area roadway by less than 1 dBA L_{dn} . Increases of less than 1 dBA L_{dn} would not typically be measurable and are not considered substantial. This is a less-than-significant impact.

Mitigation 2: None Recommended

Impact 3: Construction. The construction of the project would temporarily increase noise levels in the immediate vicinity of the project site. Due to the distance between the project site and nearby noise sensitive areas and the duration of construction; with appropriate construction time limits and noise suppression techniques, the noise generated by the construction activity would not generate significant adverse impacts. **This impact is *less-than-significant*.**

Project construction activities would take place in a period of less than one construction season (one-year) and would include grading of the site, paving of roadways, construction of project infrastructure, and construction of individual buildings. The highest noise levels would be generated during the grading of the site, with lower noise levels occurring during building construction. Large pieces of earth-moving equipment, such as graders, scrapers, and bulldozers, generate maximum noise levels of 80 to 85 dBA at a distance of 100 feet. Typical hourly average construction-generated noise levels are about 75 to 80 dBA L_{eq} measured at a distance of 100 feet from the site during busy construction periods. These noise levels drop off at a rate of about 6 dBA per doubling of distance between the noise source and receptor.

The majority of project construction would take place in the northeastern portion of the site, where the 13 residences are proposed. Although existing noise sensitive uses border the site to the west and south, the majority of project construction would not be located adjacent to these land uses. Most construction activities would take place 500 feet or more from sensitive land uses to the west and more than 1000 feet from sensitive land uses to the north, south, and east. During a period of heavy construction in areas with direct line-of-sight to the construction area, noise levels would be anticipated to be 60 to 65 dBA L_{eq} at a distance of 500 feet from construction activities and 55 to 60 dBA L_{eq} at a distance of 1000 feet from construction activities. The project site is located in complex terrain and noise levels would be considerably lower in areas that are shielded from the construction site by hills. Construction noise levels at adjacent residences are not anticipated to exceed 65 dBA L_{eq} when construction occurs at the site. However, noise levels produced by heavy equipment would, at times, be audible at these residences and may occasionally interfere with normal residential activities during busy construction periods when

construction activities occur in areas adjacent to residences. Noise generated by construction would create a temporary noise impact on adjacent noise sensitive receptors, but because the construction is estimated to take place over one construction season and is not anticipated to generate excessive noise levels, this would be considered a *less-than-significant* impact provided that standard construction noise control measures are implemented as follows:

- Limit construction to daytime hours (7:00 am to 7:00 pm) with no construction activities on Sundays or holidays.
- Construction traffic shall avoid residential areas. The primary construction access to the site shall be from Highway 1 via Sea Bowl Lane.
- Use available noise suppression devices and properly maintain and muffle loud construction equipment.
- Avoid unnecessary idling of equipment and stage construction equipment within 500 feet of noise-sensitive land uses.
- Designate a "noise disturbance coordinator" who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and institute reasonable measures warranted to correct the problem. Conspicuously post a telephone number for the disturbance coordinator at the construction site.

Mitigation 3: No Additional Measures are Recommended.

APPENDIX B
STORMWATER CONTROL PLAN

Stormwater Control Plan

C.3 Report

PACIFICA 13 Lot Subdivision Roberts Road & Fassler Avenue

APN 022-150-420, 022-150-310, 022-150-030

Pacifica, California

Date: May 14, 2007

Prepared for:
City of Pacifica

Owner/Developer:
Cowan Newton, LLC
338 Horizon Way, Suite 200
Pacifica, California 94044
650-355-3838



Terra Firma
Civil Engineering Land Planning
Surveying Golf Course Design

3815 Hummingbird Dr. Antioch CA 94509
(925) 777-9222

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I. Project Setting

a. Project Location and Description

Pacifica's Harmony @ 1 will have 13 single family residential homes on 65 acres and the development of one single family home, with a guest house on an adjoining two-acre lot. The project is located on vacant hillside property in Linda Mar south of Fassler Avenue at Roberts Road.. The project site is bounded by Fassler Avenue on the north and by Roberts Road on the west. Access to the site would be constructed on Roberts Road and Fassler Avenue. The site is located in the City of Pacifica, San Mateo County, California. It is in the Linda Mar/Rockaway Beach area of Pacifica.



b. Existing Site Features and Conditions

The property is set in the coastal hills east of Highway 1 outside of the City's coastal zone. The property has views of the Pacific Ocean coastline, and is comprised of two ridge lines, one trending east-west along Fassler Avenue and the other trending south toward Crespi Drive. Elevations range from 36 feet at the southeast corner near the intersection of Roberts Road and Crespi Drive to 397 feet (MSL). There is minor grading shown for all the proposed home sites. Most will be cut since the objective is to hide the proposed homes as much as possible. The maximum cut heights for the lots is 12' and maximum fill heights is 7' feet in height next to the roads. The cut and fill slopes have gradients of 2:1 (Horiz:Vert).

The site is currently undeveloped. Several native and non-native trees, and native scrubs are scattered throughout the site.

The majority of the site is zoned/designated Open Space Residential by the Pacifica General Plan. The southern portion of the site is designated Very Low Residential. The Zoning District for the two large Parcels (65 acres) is Planned Development with the exception of one corner of the parcel fronting Fassler Avenue which is zoned Commercial. Both project parcels are within the Hillside Preservation District overlay zone.

An engineering geotechnical study was performed by Earth Investigations Consultants dated March 30, 2006, Job # 2104.01.00. The majority of the site is made up of silty clays and clayey silts underlain with bedrock throughout the site. Groundwater was not encountered at any of the borings on the site during drilling. Bedrock (sandstone) was encountered in the borings. The soils across the site have low permeability (NRCS Hydrologic Soil Group “D”, the United Soil Classification System as “CH”).

No existing surface drainage enters the site from any direction. The overall area drainage is directed toward the east, north, south and to the west.

c. Opportunities and Constraints for Stormwater Control

Because of the topography of the site there does not seem to be any major or even minor constraints for developing a practical workable BMP schedule for the site.

The site will be moderately graded to create good access, several building pads and site drainage while negating any import or export material and impacts to adjacent properties. The project design attempts to capitalize on the topography to the fullest extent without jeopardizing structural integrity and long term maintenance capability.

The elevation differential provides sufficient hydraulic head to direct the stormwater over to the two bio-filtration/detention basins and each Planter of each of the 13 lots. The present condition of the natural drainage patterns throughout the site shows no type of erosion at present time.

II. Measures to Limit Imperviousness

a. Measures to Cluster Development and Protect Natural Resources

The proposed 13 home sites are separated sufficiently to allow vegetated areas and pervious areas between the impervious areas. Because of the constraints of construction on this sensitive site, the areas that will be disturbed are minimal, allowing the overall effect of stormwater to be minimal in relation to erosion and sediment.

b. Measures Used to Limit Directly Connected Impervious Area

The impervious areas (roofs, driveways, and patios) are disconnected from the drainage system. The roof leaders will be conveyed over to the gutters where the stormwater will be conveyed over to Planters within each of the 13 lots. Additionally, the impervious areas are separated consistent with single-family detached homes in order that pervious areas separate the impervious areas. The proposed on-site Road, because of the design, will be having two separate bio retention basins to use on site. Also being incorporated into most all the homes will be a certain percentage of green roofs, thus lowering the total amount of imperviousness. Permeable pavement is a viable alternative for this Project and will likely be incorporated into patio areas and possibly even many private driveways.

c. Summary of Pervious and Self-Retaining Areas

The perimeter of each lot will be naturally landscaped and remain pervious. However, due to the structural considerations outlined in the geotechnical report and site topography, it is not

practical to make most of these areas self-retaining. It may be possible for rear yards to be self-retaining – however, this solution may potentially pose maintenance and management issues. For the purpose of this report, we anticipate that local drainage systems (bio-retention basins or roof leaders that deposit into the planters) are created for each lot resulting in non-self-retaining pervious areas.

The planters receiving runoff have been sized to take into account the impervious area of the roofs, driveways, and patios of each of the 13 lots. The planters will receive runoff via storm drains and overland flow. They will then convey the stormwater over to a proposed onsite storm drain system that will then enter the City's existing storm system. The bio retention basins have also been sized to take into account the impervious areas of the proposed onsite roadway, and will receive runoff via storm drains. At the end of each of the bio-retention basins there will be a collector catch basin to eventually convey the stormwater to the City's storm Drain system.

To reduce the amount and velocity of runoff, and to protect down-slope areas and bio-retention basins from filtration, exposed slopes will be limited in height and steepness wherever possible. Exposed slopes will be stabilized.

III. Selection and Preliminary Design of Stormwater Treatment BMPs

Requirements to manage increases in runoff peak flows and durations (hydrograph modification management), will apply, as those requirements have been placed in effect by the City. Treatment facilities are designed to accommodate runoff from the specified design storm intensity of 0.2 inches per hour.

The Stormwater Control Plan Exhibit shows the BMPs and the corresponding areas of the site that drain to each bio-retention basin and planter. The site has been divided into several drainage areas that have impervious surfaces. The sizes of the areas are shown on Exhibit A. The locations of the areas are shown on the Exhibit and the corresponding BMPs are shown on Exhibit A.

Runoff from the areas is managed by routing to bio-retention basins and planters sized to treat runoff for these project areas. Drainage from driveways, homes, and patios will flow overland into the planters and eventually will be conveyed over to the storm drain system. Drainage from the new roadways will be directed over to the two bio-retention basins designed to accommodate the flows. Runoff from all impervious areas will be treated as mentioned above.

a. General Treatment BMP Characteristics

Runoff from roofs, walkways, patios, and driveways will be harvested by each homeowner from the 13 lots and utilize the planters. The main access roadways will be collected and conveyed to the two bio-retention basins, one at the intersection of Roberts Road & Fassler Ave and the other being on next to Fassler Ave on the east side.

The BMPs are located to accommodate individual drainage areas, site topography, while allowing maintenance access from public right of way. Each size of the BMP's have adequate hydraulic head to allow drainage into, through, and away from the BMP's without the need for pumps.

The industry standard has been to provide a sandy loam as backfill material within the bio-retention basins and planters. Imported material sized and specified for the bio-retention

basins and planters will be implemented during construction and will have an infiltration rate greater than 5-inches per hour.

b. Specific Characteristics

i) Area Characteristics

Area DMA1: Totaling 7,038 square feet of impervious area includes proposed roofs, patios, and driveway areas for Lot 1.

Area DMA2: Totaling 7,563 square feet of impervious area includes proposed roofs, patios, and driveway areas for Lot 2.

Area DMA3: Totaling 7,281 square feet of impervious area includes proposed roofs, patios, and driveway areas for Lot 3.

Area DMA4: Totaling 7,258 square feet of impervious area includes proposed roofs, patios, and driveway areas for Lot 4.

Area DMA5: Totaling 7,078 square feet of impervious area includes proposed roofs, patios, and driveway areas for Lot 5.

Area DMA6: Totaling 7,545 square feet of impervious area includes proposed roofs, patios, and driveway areas for Lot 6.

Area DMA7: Totaling 6,788 square feet of impervious area includes proposed roofs, patios, and driveway areas for Lot 7.

Area DMA8: Totaling 7,974 square feet of impervious area includes proposed roofs, patios, and driveway areas for Lot 8.

Area DMA9: Totaling 7,650 square feet of impervious area includes proposed roofs, patios, and driveway areas for Lot 9.

Area DMA10: Totaling 6,952 square feet of impervious area includes proposed roofs, patios, and driveway areas for Lot 10.

Area DMA11: Totaling 5,439 square feet of impervious area includes proposed roofs, patios, and driveway areas for Lot 11.

Area DMA12: Totaling 6,765 square feet of impervious area includes proposed roofs, patios, and driveway areas for Parcel 1.

Area DMA13: Totaling 8,261 square feet of impervious area includes proposed roofs, patios, and driveway areas for Parcel 2.

Area DMA14: Totaling 52,242 square feet of impervious area includes proposed street pavement areas for the proposed onsite road.

Area DMA15: Totaling 42,073 square feet of impervious area includes proposed street pavement areas for the proposed onsite road.

Area DMA16: Totaling 10,691 square feet of impervious area includes proposed roadway area for Lots 11.

Area DMA17: Totaling 1,237,746 square feet of pervious area includes the open space of Lot A.

Area DMA18: Totaling 324,573 square feet of pervious area includes open space of Parcel A.

Area DMA19: Totaling 158,491 square feet of pervious area includes open space of Lot B.

Area DMA20: Totaling 268,816 square feet of pervious area includes open space of Lot 11.

Area DMA21: Totaling 314,698 square feet of pervious area includes the areas around the impervious envelopes of Lots 1-7.

Area DMA22: Totaling 188,710 square feet of pervious area includes the areas around the impervious envelopes of Parcel 1 and Parcel 2.

Area DMA23: Totaling 216,865 square feet of pervious area includes the areas around the impervious envelopes of Lots 8-10.

Area IMP1: Totaling 325 sq. ft. of pervious soil for the Planter.

Area IMP2: Totaling 349 sq. ft. of pervious soil for the Planter.

Area IMP3: Totaling 336 sq. ft. of pervious soil for the Planter.

Area IMP4: Totaling 335 sq. ft. of pervious soil for the Planter.

Area IMP5: Totaling 326 sq. ft. of pervious soil for the Planter.

Area IMP6: Totaling 348 sq. ft. of pervious soil for the Planter.

Area IMP7: Totaling 313 sq. ft. of pervious soil for the Planter.

Area IMP8: Totaling 368 sq. ft. of pervious soil for the Planter.

Area IMP9: Totaling 353 sq. ft. of pervious soil for the Planter.

Area IMP10: Totaling 321 sq. ft. of pervious soil for the Planter.

Area IMP11: Totaling 251 sq. ft. of pervious soil for the Planter.

Area IMP12: Totaling 312 sq. ft. of pervious soil for the Planter.

Area IMP13: Totaling 381 sq. ft. of pervious soil for the Planter.

Area IMP14: Totaling 2,887 sq. ft. of pervious soil for the Planter.

Area IMP15: Totaling 2,325 sq. ft. of pervious soil for the Planter.

Area IMP16: Totaling 493 sq. ft. of pervious soil for the Planter.

ii) Bio Retention Basins

The bio-retention basins have been designed and will be constructed according to the criteria included in the County Clean Water Program Stormwater C.3 Guidebook, the bio-retention basin have the following characteristics:

- Setback from structures is at least 10' or as req. by engineer.
- Depth to groundwater is at least 10', Depth to bedrock 3' min.
- All upstream drainage areas are stabilized prior to construction of the infiltration trench.
- The infiltration basin is designed equipped with an underlain system, with cleanouts, for dewatering and in situations when the system becomes clogged.
- The infiltration basin is designed with an emergency spillway or overflow riser to prevent uncontrolled overflows.
- The side slopes and bottom are vegetated with a dense turf of water-tolerant grass immediately following construction.
- Native soils protected against compaction during construction.
- The basin floor is graded uniformly as possible for uniform ponding and infiltration.

iii) Planters

The planters have been designed and will be constructed according to the criteria included in the County Clean Water Program Stormwater C.3 Guidebook, the planters have the following characteristics:

- Setback from structures is at least 10' or as req. by engineer.
- Depth to groundwater is at least 10', Depth to bedrock 3' min.
- Planter is installed level.
- Overflow adequate to meet municipal drainage requirements.
- Minimum 12" deep reservoir at top of planter

- 18” deep “sandy loam” soil mix w/ infiltration rate more than 5”/hr.
- 18” Pea gravel or crushed rock layer beneath soil layer
- Splash blocks or cobbles at inlets and inlet pipes
- Native soils protected against compaction during construction
- Perforated pipe underdrain with connection to storm drain or discharge point, with adequate head to reach storm drain or discharge point.
- Plants selected for viability and to minimize need for fertilizers and pesticides.

The basin floor is graded uniformly as possible for uniform ponding and

c. Sizing Calculations

The native soils are not permeable. Therefore, the design proposes to have these two basins handle all the runoff for the new on-site road, and have individual planters for each lot. Because of the natural topography of the site the most efficient placement of the bio-retention basins are on the far north corner next to Roberts Road and Fassler Ave.

See Exhibit B for sizing calculations of pervious and impervious areas and the corresponding BMP treatment measure.

IV. Source Control Measures

The single-family residential project will create few potential sources of Stormwater pollutants.

Sources to be controlled included:

- Potential dumping of wash-water or other liquids into storm drain inlets.
- Need for future indoor or structural pest control.
- Fertilizers and pesticides used in garden, and yard maintenance.
- Vehicle washing.

Table 3: Sources and Source Control BMPs

Potential Source	Permanent Controls (BMPs)	Operations Controls (BMPs)
On-site dumping into storm drain	All accessible on-site inlets will be marked with the words “No Dumping! Flows to Bay”	Marking will be periodically repainted or replaced. Inlets and pipes conveying Stormwater to BMPs will be inspected and maintained as part of BMP Operation and Maintenance Plan.
Need for future indoor or structural pest control		Integrated Pest Management (IPM) information will be provided to new homeowners.
Landscape/outdoor pesticide use	Final landscape plans will: Be designed to minimize irrigation and runoff and to minimize use of fertilizers and pesticides that can contribute to stormwater pollution. Specify plantings within bio-retention areas and swales that are	Landscape will be maintained using minimum or no pesticides. IPM information will be provided to new owners.

	<p>tolerant of sandy and sandy loam soil and periodic inundation.</p> <p>Include pest-resistant plants.</p> <p>Include plantings appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency and plant interactions.</p>	
Vehicle washing	<p>Driveways and parking areas drain to bio-retention area or swales. Homeowners will be required to use biodegradable soaps & cleansers.</p>	<p>Distribute Stormwater pollution prevention information to homeowners.</p>

V. Summary of Permitting and Code Compliance Issues

There are no known conflicts between the proposed Stormwater Control Plan and the City of Pacifica or the San Mateo County ordinance or policies. Any conflicts that are found will be resolved through the design review process or during subsequent permitting.

VI. BMP Operations and Maintenance

a. Means to Finance and Implement BMP Maintenance

All Stormwater treatment facilities in this plan will be owned and maintained by the homeowner’s association and will have an Access Easement for the City of Pacifica or San Mateo County inspection.

The applicant will submit, with the application of building permits, a draft Stormwater Facilities Operation and Maintenance Plan including detailed maintenance requirements and a maintenance schedule. The Applicant will also agree to annex into a Benefit Assessment District that may be established to help fund the ongoing inspection and/or maintenance costs if the County were to take over these responsibilities in the future.

b. Summary of Maintenance Requirements

Bio filtration basins remove pollutants primarily by filtering runoff slowly through an active layer of soil. Routine maintenance is needed to insure that flow is unobstructed, that erosion is prevented, and that soils are held together by plant roots and are biologically active. The applicant/owner will be required to develop and enter into a maintenance agreement to ensure long-term maintenance of the on-site water quality features associated with the project and record a deed notification to inform any future owners of their maintenance responsibilities:

- Inspect inlets for channels, exposure of soils, or other evidence of erosion. Clear any obstructions and remove any accumulation of sediment. Examine rock or other material used as a splash pad and replenish if necessary.
- Inspect outlets for erosion or plugging.
- Inspect side slopes for evidence of instability or erosion and correct as necessary.

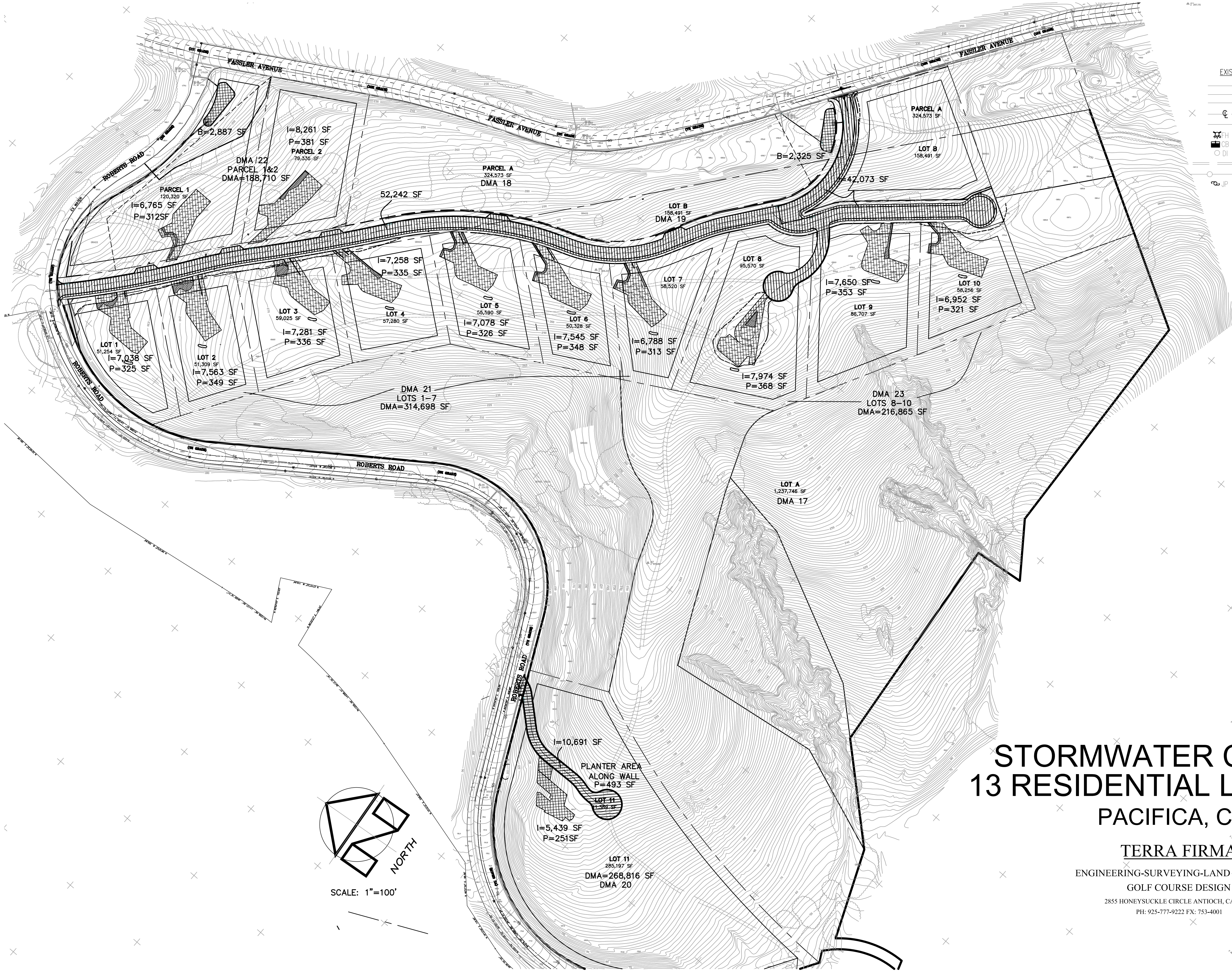
- Observe soil at the bottom of the basins of filter for uniform percolation throughout. If portions of the swale or filter do not drain within 48 hours after the end of a storm, the soil should be tilled and replanted. Remove any debris or accumulation of sediment.
- Examine the vegetation to ensure that it is healthy and dense enough to provide filtering and to protect soils from erosion that it is healthy and dense enough to provide filtering and to protect soils from erosion. Replenish mulch as necessary, remove fallen leaves and debris, prune large shrubs or trees, and mow turf area. Confirm that irrigation is adequate and not excessive. Replace dead plants and remove invasive vegetation.
- Abate any potential vectors by filling holes in the ground, in and around the basins and by ensuring that there are no areas where water stands longer than 48 hours following a storm. If mosquito larvae are present and persistent, contact the City or County Vector Control District for information and advice. Mosquito larvicides should be applied only when absolutely necessary and then only by a licensed individual or contractor.

VII. Construction Plan C.3 Checklist

Stormwater Control Plan Reference	BMP Description	Plan Sheet Number
Section II.b and Exhibit A	Bio Retention Basin BRB1 & BRB2 sized as specified and designed to capture, clean and route drainage from the areas delineated on Exhibit A	10
Section 3.b.i, Exhibit A	Drainage from Lots 1-11 and Parcels 1 & 2 proposed homes roof downspouts, patios, and driveways as shown will be graded and paved to direct drainage to P1-P11 & P12-P13 respectively. P1-P13 sized and designed as stated in Section 3.b.i, 3.b.ii, & includes erosion protection.	10
Section 3.b.i, Exhibit A	Drainage from the proposed Road as shown will be graded and paved to direct drainage to BRB1 & BRB2. BRB1 & BRB2 sized and designed as stated in Section 3.b.i, 3.b.ii, and includes erosion protection.	10

VIII. Certification

The selection, size, and preliminary design of treatment BMPs and other control measures in this plan meet the requirements of Regional Water Quality Control Board Order R2-2003-0022.

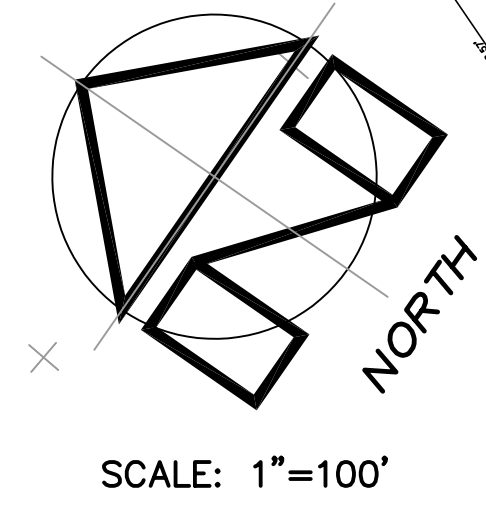


LEGEND:

SYMBOLS	EXISTING	PROPOSED	DESCRIPTION
---	---	---	BOUNDARY LINE
---	---	---	RIGHT OF WAY
---	---	---	NEW LOT LINE
---	---	---	CENTERLINE
---	---	---	BUILDING LINE
⊕	⊕	⊕	FIRE HYDRANT
⊕	⊕	⊕	CATCH BASIN
⊕	⊕	⊕	DRAIN INLET
---	---	---	STORM DRAIN LINE
---	---	---	FENCE (FNC)
---	---	---	JOINT POLE
CB	CB	CB	CATCH BASIN
EX	EX	EX	EXISTING
FF	FF	FF	FINISH FLOOR
FL	FL	FL	FLOW LINE
G	G	G	GRATE ELEVATION

	IMPERVIOUS ROADWAY AREA
	DEVELOPABLE AREAS
	DETENTION BASIN
	DETENTION BASIN

I = IMPERVIOUS AREA
P = INGROUND PLANTER
DMA = DRAINAGE MANAGEMENT AREA

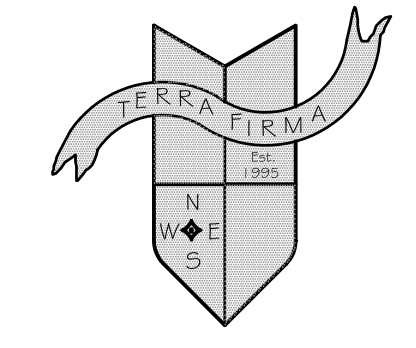


STORMWATER CONTROL PLAN

13 RESIDENTIAL LOT SUBDIVISION

PACIFICA, CALIFORNIA

TERRA FIRMA
ENGINEERING-SURVEYING-LAND-PLANNING
GOLF COURSE DESIGN
2855 HONEYSUCKLE CIRCLE ANTIPOCH, CA 94531
PH: 925-777-9222 FX: 753-4001



DATE: 05/14/07	SHEET 1 OF 1 SHEETS
DRAWN BY: RAM	PROJECT NO.
CHECKED BY: RAC	FILE No.

Project Name: PACIFICA - Harmony @ 1
Project Type: Flow Control and Water Quality
Location: Roberts Road & Fassler Ave, San Mateo County, California
APN: 022-150-030,310,420
Drainage Area: 2,918,520 (sf)
Mean Annual Precipitation: 22 (in)

Drainage Management Areas Draining to IMPs

IMP										Tributary DMAs					
Name	Type	Soil Group	Rain Adj. Factor	Sizing Factor	Dim. 1 (ft)	Dim. 2 (ft)	Min. Size	Planned Size	Max Underdrain Flow (cfs)	Name	Surface Type	Area	Runoff Factor	Min IMP Size	Contribution to Max Underdrain Flow (cfs)
IMP15	Bioretention Area	D	0.92	0.06	-	-	2325 sq ft	2325 sq ft	0.2181	DMA15	Conventional Concrete or Asphalt Paving	42073	1	2325	-
IMP8	In-Ground (Infiltration) Planter	D	0.92	0.05	-	-	368 sq ft	368 sq ft	0.0165	DMA8	Roofs	7974	1	368	-
IMP11	In-Ground (Infiltration) Planter	D	0.92	0.05	-	-	251 sq ft	251 sq ft	0.0113	DMA11	Roofs	5439	1	251	-
IMP14	Bioretention Area	D	0.92	0.06	-	-	2887 sq ft	2887 sq ft	0.2709	DMA14	Conventional Concrete or Asphalt Paving	52242	1	2887	-
IMP13	In-Ground (Infiltration) Planter	D	0.92	0.05	-	-	381 sq ft	381 sq ft	0.0171	DMA13	Roofs	8261	1	381	-
IMP3	In-Ground (Infiltration) Planter	D	0.92	0.05	-	-	336 sq ft	336 sq ft	0.0151	DMA3	Roofs	7281	1	336	-
IMP4	In-Ground (Infiltration) Planter	D	0.92	0.05	-	-	335 sq ft	335 sq ft	0.0151	DMA4	Roofs	7258	1	335	-

IMP9	In-Ground (Infiltration) Planter	D	0.92	0.05	-	-	353 sq ft	353 sq ft	0.0159	DMA9	Roofs	7650	1	353	-
IMP2	In-Ground (Infiltration) Planter	D	0.92	0.05	-	-	349 sq ft	349 sq ft	0.0157	DMA2	Roofs	7563	1	349	-
IMP12	In-Ground (Infiltration) Planter	D	0.92	0.05	-	-	312 sq ft	312 sq ft	0.014	DMA12	Roofs	6765	1	312	-
IMP16	In-Ground (Infiltration) Planter	D	0.92	0.05	-	-	493 sq ft	493 sq ft	0.0222	DMA16	Conventional Concrete or Asphalt Paving	10691	1	493	-
IMP7	In-Ground (Infiltration) Planter	D	0.92	0.05	-	-	313 sq ft	313 sq ft	0.0141	DMA7	Roofs	6788	1	313	-
IMP10	In-Ground (Infiltration) Planter	D	0.92	0.05	-	-	321 sq ft	321 sq ft	0.0144	DMA10	Roofs	6952	1	321	-
IMP6	In-Ground (Infiltration) Planter	D	0.92	0.05	-	-	348 sq ft	348 sq ft	0.0156	DMA6	Roofs	7545	1	348	-
IMP5	In-Ground (Infiltration) Planter	D	0.92	0.05	-	-	326 sq ft	326 sq ft	0.0147	DMA5	Roofs	7078	1	326	-
IMP1	In-Ground (Infiltration) Planter	D	0.92	0.05	-	-	325 sq ft	325 sq ft	0.0146	DMA1	Roofs	7038	1	325	-

Self-Treating DMAs

DMA Name	Area (sq ft)
DMA23	216865
DMA22	188710
DMA19	158491
DMA21	314698
DMA20	268816
DMA17	1237746
DMA18	324573

Software Tool Warnings

Warning Type	Source	Description	Suggestion
DMA	DMAs/IMPs	Total area of DMAs and IMPs is within 100% of the total project area.	If this is not within an acceptable tolerance, modify the correct area so that they are equal.


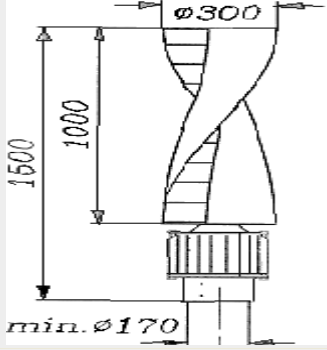
APPENDIX C
WIND TURBINES

Appendix C Windside Turbines Product Specifications

The proposed model is expected to produce 50% more electricity in a year than traditional propeller models.

Windside Wind Turbines are constructed of high quality durable materials to ensure free production of electricity for many years. The design ensures a minimum requirement for maintenance.

They are soundless (0 db) and do not kill birds or people. For these reasons they are safe to use in population centers, public spaces, parks, wildlife parks and on buildings. They are also beautiful and in many cases have been used to combine art and functionality.

Characteristics: 	WS-0,30C 
Rated power	9A/12V
Mast recommendation	wood/metal
Cut-in wind speed	2,8 m/s
Rated wind speed	15 m/s
Cut-out wind speed	none
Swept area	0,30 m ²
Vane weight	2 kg
Total weight of turbine	36 kg
Rotor speed control	not required, electronic
Overspeed control	none required
Generator model	Windside
Generator construction	permanent magnet
Generator types	1-400 V/12,24,48 V
Gear box	without gear
Main brake system	electronic
Charging controller	Windside WGU-22
Measured sound emission	0 dB

APPENDIX D
DRAFT CC&RS

When Recorded Return To:

**Hanna & Van Atta
525 University Avenue, Suite 705
Palo Alto, California 94301**

WORKING DRAFT #4

**DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS
HARMONY @ 1**

THIS DECLARATION CONTAINS A BINDING ARBITRATION PROVISION IN ACCORDANCE WITH THE FEDERAL ARBITRATION ACT. YOU MUST READ THE ARBITRATION PROVISION CAREFULLY AND SHOULD CONSULT LEGAL COUNSEL WITH ANY QUESTIONS.

IF THIS DOCUMENT CONTAINS ANY RESTRICTION BASED ON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, FAMILIAL STATUS, MARITAL STATUS, DISABILITY, NATIONAL ORIGIN, SOURCE OF INCOME AS DEFINED IN SUBDIVISION (P) OF SECTION 12955 OF THE GOVERNMENT CODE, OR ANCESTRY, THAT RESTRICTION VIOLATES STATE AND FEDERAL FAIR HOUSING LAWS AND IS VOID, AND MAY BE REMOVED PURSUANT TO SECTION 12956.2 OF THE GOVERNMENT CODE. LAWFUL RESTRICTIONS UNDER STATE AND FEDERAL LAW ON THE AGE OF OCCUPANTS IN SENIOR HOUSING OR HOUSING FOR OLDER PERSONS SHALL NOT BE CONSTRUED AS RESTRICTIONS BASED ON FAMILIAL STATUS.

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**DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS
HARMONY @ 1**

THIS DECLARATION, made on the date hereinafter set forth, by Crown-Newton LLC, a California limited liability company, hereinafter referred to as "Declarant," is made with reference to the following facts:

A. Location of Property. Declarant is the owner of certain property located in the City of Pacifica ("City"), County of San Mateo ("County"), State of California, more particularly described on the Map entitled "_____", filed for record in the Office of the Recorder of the County of San Mateo, State of California, on _____, 20____, in Book _____ of Maps, page(s) _____ ("Map").

B. Owner's Interest. The development shall be referred to as the "Project" as defined in Section 1.36. Each Lot shall have appurtenant to it a membership in the In Harmony Homeowners Association, a nonprofit mutual benefit corporation.

C. General Plan of Improvement. Declarant intends by this Declaration to impose upon the Project, as defined and described in this Declaration, mutually beneficial restrictions under a general plan of improvement for the benefit of all Owners of Lots. Declarant intends to improve the Project with the construction of a private road, installation of private storm sewers, and installation of main utility lines and infrastructure within the private road to provide utility services to the Lots and Common Area. Declarant will provide basic grading on the Lot, but will not be constructing the Residences or the Residential Improvements on the Lots.

NOW, THEREFORE, Declarant hereby declares that all of the Project described above shall be held, sold, leased, mortgaged, encumbered, rented, used, occupied, improved and conveyed subject to the following declarations, limitations, easements, restrictions, covenants, and conditions, which are imposed as equitable servitudes pursuant to a general plan for the development of the Project for the purpose of enhancing and protecting the value and desirability of the Project and every part thereof, and which shall run with the Project and be binding on Declarant and its successors and assigns, and on all parties having or acquiring any right, title or interest in or to the described Project or any part of it, their heirs, successors and assigns, and shall inure to the benefit of each Owner thereof.

ARTICLE I DEFINITIONS

1.1. "Architectural Control Committee or Committee": Architectural Control Committee created pursuant to Article VI.

1.2. "Articles": The Articles of Incorporation of the Association, as amended from time to time.

1.3. "Assessment": That portion of the cost of maintaining, improving, repairing, operating and managing the Project which is to be paid by each Owner as determined by the Association, and shall include Regular Assessments, Special Assessments, and Reimbursement Charges.

1.4. "Assessment Lien": A lien imposed by the Association on a Lot to collect delinquent Assessments pursuant to California Civil Code Section 1367.1

1.5. **"Association"**: The In Harmony Homeowners Association, a California nonprofit mutual benefit corporation, the Members of which shall be the Owners of Lots in the Project.

1.6. **"Board" or "Board of Directors"**: The governing body of the Association.

1.7. **"Bylaws"**: The bylaws of the Association, as amended from time to time.

1.8. **"City"**: The City of Pacifica, a municipal corporation.

1.9. **"Common Area"**: The portions of the Property (and all improvements thereon) owned by the Association for the common use and enjoyment of the Owners consisting upon recordation of the Map and conveyance by deed to the Association of [Lot] [Parcel] ____, described on said Map

1.10. **"Common Expenses"**: The actual and estimated expenses the Association incurred for maintaining, repairing, operating and replacing the Common Area and any reasonable reserve for such purposes as found and determined by the Board and all sums designated Common Expenses by or pursuant to the Declaration, Articles, or Bylaws.

1.11. **"County"**: The County of San Mateo.

1.12. **"Davis-Stirling Act"**: California Civil Code sections 1350-1378.

1.13. **"Declarant"**: Crown-Newton LLC, a California limited liability company, and any successor or assign that expressly assumes the rights and duties of the Declarant under this Declaration in a recorded written document.

1.14. **"Declaration"**: This Declaration, as amended or supplemented from time to time.

1.15. **"Design Guidelines"**: The rules or guidelines setting forth procedures and standards for submission of plans for Architectural Control Committee approval.

1.16. **"DRE"**: The California Department of Real Estate and any department or agency of the California state government that succeeds to the DRE's functions.

1.17. **"Eligible Mortgages"**: Mortgages held by "Eligible Mortgage Holders."

1.18. **"Eligible Mortgage Holder"**: A First Lender.

1.19. **"Eligible Insurer or Guarantor"**: An insurer or governmental guarantor of a First Mortgage.

1.20. **"First Lender"**: Any person, entity, bank, savings and loan association, insurance company, or other financial institution holding a recorded First Mortgage on any Lot.

1.21. **"First Mortgage"**: Any Mortgage recorded in the County made in good faith and for value on a Lot with first priority over other Mortgages encumbering the Lot.

1.22. "Foreclosure": The legal process by which a Lot owned by an Owner who is in default under a Mortgage is sold, pursuant to California Civil Code § 2924a et seq. or sale by the Court pursuant to California Code of Civil Procedure § 725a et seq. and any other applicable laws.

1.23. "Governing Documents": This Declaration, as amended from time to time, the exhibits, if any, that are attached to the Declaration, together with the other basic documents used to create and govern the Project, including the Map, the Articles, the Bylaws, and Rules adopted by the Board or the Association.

1.24. "Lot": Each Lot or parcel shown on the Map, with the exception of the Common Area.

1.25. "Maintenance Guidelines": Recommendations and suggestions for maintenance of Project improvements.

1.26. "Maintenance Manual": The document containing the maintenance procedures and requirements applicable to the Common Area improvements.

1.27. "Major Components": Those elements of the Project, including, without limitation, structural elements, machinery and equipment, that the Association is obligated to maintain as provided in Civil Code §§ 1365 and 1365.5.

1.28. "Map": That Map, described above in Clause A.

1.29. "Member": A person entitled to membership in the Association as provided herein.

1.30. "Mortgage": A mortgage, deed of trust, assignment of rents, issues and profits or other proper instrument (including, without limitation, those instruments and estates created by sublease or assignment) given as security for the repayment of a loan or other financing which encumbers a Lot, made in good faith and for value.

1.31. "Mortgagee": The holder of a Mortgage including the beneficiary of a deed of trust that constitutes a Mortgage.

1.32. "Mortgagor": A Person who encumbers his Lot with a Mortgage, including a trustor of a deed of trust that constitutes a Mortgage.

1.33. "Notice of Delinquent Assessment": A Notice of Delinquent Assessment filed by the Association for a delinquent Assessment pursuant to Section 4.9.C.

1.34. "Owner": The record Owner, whether one (1) or more persons or entities, of fee simple title to any Lot which is a part of the Project but expressly excluding those persons or entities having an interest merely as security for the performance of an obligation, until such person obtains fee title hereto, and those parties who have leasehold interests in a Lot. If a Lot is sold under a recorded contract of sale, the purchaser under the contract of sale, rather than the holder of the fee interest, be considered the "Owner" from and after the date the Association receives written notice of the recorded contract.

1.35. "Person": A natural person, a corporation, a partnership, a trust, or other legal entity.

1.36. "Project": All of the real property above described on the Map including all improvements and structures erected or to be erected on that real property, subject to this Declaration.

1.37. "Public Report": The official document and permit issued pursuant to the Subdivided Lands Act (Business & Professions Code §§ 11000 et seq.) by the State of California Department of Real Estate authorizing the offering of the Lots for sale to the public.

1.38. "Regular Assessments": A Regular Assessment levied by the Association pursuant to Section 4.3B.

1.39. "Reimbursement Charge": A charge levied by the Board against an Owner to reimburse the Association for costs and expenses incurred in bringing the Owner and/or his or her Lot into compliance with the provisions of this Declaration, determined and levied pursuant to sections 4.9 and 5.1A of this Declaration.

1.40. "Reserves or Reserve Funds": That portion of the Common Expenses collected as part of the Regular Assessments levied against the Lots in the Project allocated (i) for the future repair and replacement of, or additions to, the Major Components which the Association is obligated to maintain pursuant to this Declaration, including reserves for replacement of structural elements and mechanical equipment or other facilities maintained by the Association; and (ii) to cover the deductible amounts of any insurance policies maintained by the Association.

1.41. "Residence": The residence that is or will be built on each Lot by the Owner.

1.42. "Residential Improvements": The improvements on a Lot, including the Residence and the infrastructure and ancillary improvements serving the Residence that is or will be built on a Lot by an Owner, or on behalf of the Owner by others

1.43. "Rules": The rules adopted from time to time by the Board or the Association pursuant to Section 5.2C.

1.44. "Special Assessments": A Special Assessment levied by the Association pursuant to Section 4.3B.

1.45. "Utility Facilities": Defined in Section 2.6.

ARTICLE II. DESCRIPTION OF PROJECT, DIVISION OF PROPERTY, AND CREATION OF PROPERTY RIGHTS

2.1. Description of Project: The Project is a planned development, consisting of the Common Area, the fourteen (14) building Lots, and all improvements thereon.

2.2. Easements; Dedication of Common Area: Each of the Lots shown on the Map shall have appurtenant to it as the dominant tenement an easement over the Common Area(s) as the servient tenement for ingress and egress, and for use, occupancy and enjoyment, and for the construction, maintenance and operation of utilities; subject to the following provisions:

A. The right of the Association to discipline Members and to suspend the voting rights of a Member for any period during which any Assessment against the Member's Lot remains unpaid, and for any infraction of the Declaration, Bylaws, Articles or written Rules in accordance with the provisions of sections 4.9, 5.2E and 9.1 hereof.

B. The right of the Association to dedicate, transfer or mortgage all or any part of the Common Area to any public agency, authority, or utility for such purposes and subject to such conditions as may be agreed to by the Members, provided, that in the case of the borrowing of money and the mortgaging of its property as security therefor, the rights of such Mortgagee shall be subordinate to the rights of the Members of the Association. No such dedication, transfer or mortgage shall be effective unless an instrument signed or approved by two-thirds (2/3rds) of each class of Members agreeing to such dedication, transfer or mortgage has been recorded.

C. The right of the Association to grant easements under, in, upon, across, over, above or through any portion of the Common Area for purposes, including, without limitation, access, utilities, and parking, which are beneficial to the development of the Project in accordance with the general plan established by this Declaration.

D. The right of the Association or Declarant to install or have installed a cable or central television antenna system. The system, if and when installed, shall be maintained by the Association or cable television franchisee. To the extent required to effectuate the foregoing plan, there shall be an easement in favor of each Lot for the purpose of connecting the same with the master cable television terminal, central television antenna or line. Each Lot shall be subject to an easement in favor of all other Lots and in favor of the entity holding the CATV franchise, to provide for the passage through the Lot and any structure thereon of television connections from any other Lot to the cable system, and shall be subject to a further easement for the placement and maintenance of such connections.

E. Easements for work necessary to complete development and construction of the Project as more particularly described in Section 9.6.

The foregoing easements are granted and reserved subject to the condition that their use and enjoyment shall not unreasonably interfere with the use, occupancy or enjoyment of all or any part of the Lot servient to them or to which they are appurtenant.

2.3. Easements to Accompany Conveyance of Lot: Easements that benefit or burden any Lot shall be appurtenant to that Lot and shall automatically accompany the conveyance of the Lot, even though the description in the instrument of conveyance may refer only to the fee title to the Lot.

2.4. Delegation of Use: Any Owner may delegate, in accordance with the Bylaws, his right of enjoyment to the Common Area and facilities to the members of his family, guests, tenants, or contract purchasers, who reside in the Project.

2.5. Conveyance of Common Area to Association: On or before conveyance of title to the first Lot, Declarant shall deed the Common Area to the Association to be held for the benefit of the Members of the Association.

2.6. Owners' Rights and Easements for Utilities: The rights and duties of the Owners of Lots within the Project with respect to sanitary sewer, drainage, water, electric, gas, television receiving, telephone equipment, cables and lines and facilities (hereinafter referred to, collectively, as "Utility Facilities") shall be as follows:

A. Whenever Utility Facilities are installed within the Project, which Utility Facilities or any portion thereof lie in or upon a Lot or Lots owned by other than the Owner of a Lot served by said Utility Facilities, the Owners of any Lots served by said Utility Facilities, shall have the right of reasonable access for themselves or for utility companies or the City to repair, to replace and generally maintain said Utility Facilities as and when the same may be necessary, due to failure or inability of the Board to take timely action to make such repairs or perform such maintenance.

B. Whenever Utility Facilities are installed within the Project which serve more than one (1) Lot, the Owner of each Lot served by said Utility Facilities shall be entitled to the full use and enjoyment of such portions of said Utility Facilities as service his Lot.

C. In the event of a dispute between Owners with respect to the repair or rebuilding of said Utility Facilities, or with respect to the sharing of the cost thereof, then, upon written request of one (1) Owner addressed to the other Owner(s), the matter shall be submitted first to the Board for mediation, and thereafter, if the dispute remains unresolved, to binding arbitration within sixty (60) days pursuant to section 9.14E. The decision of the Arbitrator(s) shall be final and conclusive on the parties, and judgment may be entered thereon in any court having jurisdiction.

2.7. Maintenance Easement: An easement over each Lot is reserved by Declarant, and is hereby granted to the Association, for the purpose of entering upon the Project to perform such maintenance, if any, as the Association may do in accordance with the provisions of Sections 5.1A and 7.19 of this Declaration.

2.8. [ALT: Provision for Municipal Services: Domestic water supply services to each lot in the Common Area is provided by the _____ improvement district. The _____ improvement district also provides sanitary sewer service. To assure the City of _____ and the _____ improvement district, at their option in the event a service or a maintenance contract is entered into between the Association and either the _____ improvement district or the City of _____, access to maintain and repair its services and facilities for the provisions of police and fire protection, the Association shall keep all utilities, including but not limited to storm drains, sewers, accessways, roadways, lighting and appurtenances thereto on the subdivided Project, in a state of good condition and repair, consistent with the standard of quality of said roadways and appurtenances upon original installation. All such repairs shall be made at the expense of the Association. [REVIEW]

2.9. Drainage Easements: An easement over and under each Lot as the servient tenement is reserved in favor of each other Lot as the dominant tenement for the purpose of allowing the Association's agents to enter the Lot to maintain that portion of an in-tract storm drainage system located thereon. No Owner or occupant shall commit any act that would interfere with the operation of any drainage system (including drainage swales) installed on the Owner's Lot, each Owner shall maintain the system free of debris and other obstacles at all times. Reciprocal appurtenant easements between each Lot and the Common Area and between adjoining Lots are reserved for the flow of surface water.

2.10. Other Easements: The Common Area and each Lot are subject to all easements, dedications, and rights of way granted or reserved in, on, over and under the Project as shown on the Map.

2.11. Rights of Entry and Use: The Lots and Common Area shall be subject to the following rights of entry and use:

A. The right of the Association's agents to enter any Lot to cure any violation of this Declaration or the Bylaws, provided that the Owner has received notice and a hearing as required by the Bylaws (except in the case of an emergency) and the Owner has failed to cure the violation or take steps necessary to cure the violation within thirty (30) days after the finding of a violation by the Association;

B. The access rights of the Association to maintain, repair or replace improvements or property located in the Common Area as described in Section 5.2D;

C. The easements described in this [REDACTED] II;

D. The right of the Association's agents to enter any Lot to perform maintenance as described in section 7.19.

E. The rights of the Declarant during the construction period as described in Section 9.6.

2.12. Partition of Common Area: There shall be no subdivision or partition of the Common Area, nor shall any Owner seek any partition or subdivision thereof.

Notwithstanding any provisions to the contrary contained in this Declaration and in order to provide for a means of terminating the Project if this should become necessary or desirable, on occurrence of any of the conditions allowing an Owner of a Lot to maintain an action for partition (as such conditions are presently set forth in California Civil Code § 1359 or as such conditions in the future may be set forth in any amendment thereto or comparable provisions of law), two-thirds (2/3rds) of the Owners of Lots shall have the right to petition the Superior Court having jurisdiction to alter or vacate the Map under California Government Code § 66499.21, et seq., or any comparable provisions of law, and to vest title to the Project in Owners as tenants in common and order an equitable partition of the Project in accordance with the laws of the State of California.

Nothing herein shall be construed to prohibit partition of a joint tenancy or co-tenancy in any Lot.

2.13. All Easements Part of Common Plan: Whenever any easements are reserved or created or are to be reserved or created in this Declaration, such easements shall constitute equitable servitudes for the mutual benefit of all property in the Project, even if only certain Lots are specifically mentioned as subject to or benefiting from a particular easement. Easements referred to in this Declaration that are created by grant deeds subsequent to the date of this Declaration shall be part of the common plan created by this Declaration for the benefit of all property Owners within the Project.

ARTICLE III. ASSOCIATION, ADMINISTRATION, MEMBERSHIP AND VOTING RIGHTS

3.1. Association to Own and Manage Common Areas: The Association shall own and manage the Common Area in accordance with the provisions of this Declaration, and the Articles and Bylaws.

3.2. Membership: The Owner of a Lot shall automatically, upon becoming the Owner of same, be a Member of the Association, and shall remain a Member thereof until such time as his ownership ceases for any reason. Membership shall be appurtenant to and may not be separated from ownership of a Lot. Membership shall be held in accordance with the Articles and Bylaws.

3.3. Transferred Membership: Membership in the Association shall not be transferred, encumbered, pledged, or alienated in any way, except upon the sale or encumbrance of the Lot to which it is appurtenant, and then only to the purchaser, in the case of a sale, or Mortgagee, in the case of an encumbrance of such Lot. On any transfer of title to an Owner's Lot, including a transfer on the death of an Owner, membership passes automatically with title to the transferee.

A Mortgagee does not have membership rights until it obtains title to the Lot through Foreclosure or deed in lieu of Foreclosure. Any attempt to make a prohibited transfer is void. No Member may resign his membership. On notice of a transfer, the Association shall record the transfer on its books.

3.4. Membership and Voting Rights: Membership and voting rights shall be as set forth in the Bylaws.

ARTICLE IV. ASSESSMENTS AND LIENS

4.1. Creation of the Lien and Personal Obligation of Assessments: The Declarant, for each Lot owned within the Project, hereby covenants, and each Owner of any Lot by acceptance of a deed for that Lot, whether or not it shall be so expressed in such deed, covenants and agrees:

(1) to pay Regular Assessments or charges, Special Assessments, and Reimbursement Charges to the Association as established in this Declaration; and

(2) to allow the Association to enforce any Assessment Lien established under this Declaration by nonjudicial proceedings under a power of sale or by any other means authorized by law.

The Regular Assessments and Special Assessments, including Reimbursement Charges, together with interest, late charges, collection costs, and reasonable attorneys' fees, shall be a charge on the land and shall be a continuing Assessment Lien upon the property against which each such Assessment is made, the Assessment Lien to become effective upon recordation of a Notice of Delinquent Assessment. Each Assessment, together with interest, late charges, collection costs, and reasonable attorneys' fees, shall also be the personal, joint and several, obligation of each person who was the Owner of such property at the time when the Assessment fell due. The personal obligation for delinquent Assessments shall not pass to his successors in title unless expressly assumed by them. No Owner of a Lot may exempt himself from liability for his contribution towards the Common Expenses by waiver of the use or enjoyment of any of the Common Areas or by the abandonment of his Lot.

The interest of any Owner in the amounts paid pursuant to any Assessment upon the transfer of ownership shall pass to the new Owner. Upon the termination of these covenants for any reason, any amounts remaining from the collection of such Assessments after paying all amounts properly charged against such Assessments shall be distributed to the then Owners on the same pro rata basis on which the Assessments were collected.

4.2. Purpose of Assessments: The Assessments levied by the Association shall be used exclusively to promote the economic interests, recreation, health, safety, and welfare of all the Owners and other residents in the Project and to enable the Association to perform its obligations under this Declaration.

4.3. Assessments:

A. Regular Assessments: The Board shall establish and levy Regular Assessments in an amount that the Board estimates will be sufficient to raise the funds needed to perform the duties of the Association during each fiscal year. Regular Assessments shall be made for a one-year period and collected in monthly installments.

The Regular Assessment shall include a portion for reserves in such amounts as the Board in its discretion considers appropriate to meet the costs of the future repair, replacement or additions to the major improvements and fixtures that the Association is obligated to maintain and repair. Reserve funds shall be deposited in a separate account and the signatures of at least two (2) persons who shall either be members of the Board or one officer who is not a member of the Board and a member of the Board shall be required to withdraw monies from the reserve account.

B. Special Assessments: The Board, at any time, may levy a Special Assessment in order to raise funds for unexpected operating or other costs, insufficient operating or reserve funds, or such other purposes as the Board in its discretion considers appropriate. Special Assessments shall be allocated among the Lots in the same manner as Regular Assessments, except in the case of an Assessment levied by the Board against a Member to reimburse the Association for costs incurred in bringing the Member and his Lot into compliance with provisions of the Governing Documents.

4.4. Restrictions on Increases in Regular Assessments or Special Assessments:

A. Restrictions. Except as provided in Section 4.4B, without having first obtained the approval of such action by the vote or written assent of Members casting a majority of the votes at a meeting of the Association at which a quorum is present, the Board may not: (1) impose a Regular Assessment on any Lot which is more than twenty percent (20%) greater than the Regular Assessment for the immediately preceding fiscal year or (2) levy a Special Assessment to defray the cost of any action or undertaking on behalf of the Association which in the aggregate exceeds five percent (5%) of the budgeted gross expenses of the Association for that fiscal year. For purposes of this Section 4.4, a "quorum" means Members constituting more than fifty percent (50%) of the voting power of the Association. Any meeting of the Association for purposes of complying with this Section 4.4 shall be conducted in accordance with Chapter 5 (commencing with § 7510) of Part 3, Division 2 of Title 1 of the California Corporations Code and § 7613 of the California Corporations Code. The right of the Board to increase Regular Assessments by up to twenty percent (20%) over the Regular Assessment for the immediately preceding fiscal year is subject to the Board having complied with the provisions of California Civil Code § 1365(a), which

provisions are set forth in Section 12.1A of the Bylaws or having obtained the approval of such increase by the Members in the manner set forth above in this Section 4.4.

B. Assessments - Emergency Situations. Notwithstanding the foregoing, the Board, without membership approval, may increase Regular Assessments or levy Special Assessments necessary for an emergency situation in amounts that exceed the provisions of Section 4.4A, above. For purposes of this section, an emergency situation is one of the following:

- (1) an extraordinary expense required by an order of a court,
- (2) an extraordinary expense necessary to repair or maintain the Project or any part of it for which the Association is responsible where a threat to personal safety on the Project is discovered, or
- (3) an extraordinary expense necessary to repair or maintain the Project or any part of it for which the Association is responsible that could not have been reasonably foreseen by the Board in preparing and distributing the pro forma operating budget, provided, however, that prior to the imposition or collection of the Assessment, the Board shall pass a resolution containing written findings as to the necessity of the extraordinary expense involved and why the expense was not or could not have been reasonably foreseen in the budgeting process and the resolution shall be distributed to the Members with the notice of the Assessment.

The Association shall provide to the Owners by first-class mail notice of any increase in the Regular Assessments or Special Assessments of the Association, not less than thirty (30) nor more than sixty (60) days prior to the increased Assessment becoming due.

This Section 4.4 incorporates the statutory requirements of California Civil Code § 1366. If this section of the California Civil Code is amended in any manner, this Section 4.4 automatically shall be automatically amended in the same manner without the necessity of amending this Declaration.

C. Notice and Quorum for Any Action Authorized Under Section 4.4: Any action authorized under Section 4.4, which requires a vote of the membership, shall be taken at a meeting called for that purpose, written notice of which shall be personally delivered or mailed to all Members not less than ten (10) nor more than ninety (90) days in advance of the meeting specifying the place, day and hour of the meeting and, in the case of a special meeting, the nature of the business to be undertaken. The action may also be taken without a meeting pursuant to the provisions of California Corporations Code §7513.

4.5. Division of Assessments: Both Regular Assessments and Special Assessments shall be levied equally among the Lots. Regular Assessments shall be collected on a monthly basis unless the Board directs otherwise. Special Assessments may be collected in one (1) payment or periodically as the Board shall direct.

4.6. Date of Commencement of Regular Assessments; Due Dates: The Regular Assessments provided for in this Declaration shall commence as to all Lots covered by this Declaration on the earlier to occur of (i) the first day of the month following the first conveyance of a Lot to the purchaser thereof under authority of a Public Report, or (ii) upon the occupancy of a subdivision interest in the project. Subject to the provisions of Section 4.3 hereof, the Board of Directors shall use their best efforts to fix the amount of the Regular Assessment against each Lot and send written notice thereof to every Owner at least forty-five (45) days in advance of each Regular Assessment period, provided that failure to comply with the foregoing shall not affect the validity of any

Assessment levied by the Board. The due dates shall be established by the Board of Directors. The Association shall, upon demand, and for a reasonable charge, furnish a certificate signed by an officer of the Association setting forth whether the Assessments on a specified Lot have been paid. Such a certificate stating that Assessments have been paid shall be conclusive evidence of such payment.

4.7. Effect of Nonpayment of Assessments: Any Assessment not paid within fifteen (15) days after the due date shall be delinquent, shall bear interest at the rate of twelve percent (12%) per annum from thirty (30) days after the due date until paid, and shall incur a late payment penalty in an amount to be set by the Board from time to time, not to exceed the maximum permitted by applicable law.

4.8. Transfer of Lot by Sale or Foreclosure: Sale or transfer of any Lot shall not affect the Assessment Lien. However, the sale of any Lot pursuant to Foreclosure of a First Mortgage shall extinguish the Assessment Lien of any Assessments on that Lot (including attorneys' fees, late charges, or interest levied in connection therewith) as to payments which became due prior to such sale or transfer (except for Assessment Liens as to which a Notice of Delinquent Assessments has been recorded prior to the Mortgage). Any First Lender who obtains title to a Lot pursuant to remedies in the Mortgage or through foreclosure will not be liable for more than six (6) months of the Lot's unpaid regularly budgeted Assessments accrued before acquisition of the title to the Lot by the First Lender, and will be liable for fees or costs related to the collection of unpaid Assessments. No sale or transfer shall relieve such Lot from liability for any Assessments becoming due after the foreclosure sale or from the lien thereof.

The unpaid share of such Assessments shall be deemed to be Common Expenses collectible from all of the Lot Owners including such acquirer, his successors or assigns.

If a Lot is transferred, the grantor shall remain liable to the Association for all unpaid Assessments against the Lot through and including the date of the transfer. The grantee shall be entitled to a statement from the Association, dated as of the date of transfer, setting forth the amount of the unpaid Assessments against the Lot to be transferred and the Lot shall not be subject to a lien for unpaid Assessments in excess of the amount set forth in the statement, provided, however, the grantee shall be liable for any Assessments that become due after the date of the transfer.

4.9. Priorities; Enforcement; Remedies: If an Owner fails to pay an Assessment when due, the Association has the right, and option, to bring legal action against the Owner to enforce collection of the unpaid and past due Assessment, or may impose an Assessment Lien on the Lot owned by Owner pursuant to the provisions of Civil Code § 1367.1. Suit to recover a money judgment for unpaid Assessments and attorneys' fees, shall be maintainable without foreclosing or waiving the lien securing the same. The Association shall distribute the written notice described in subdivision (b) of Civil Code § 1365.1 entitled "Notice Assessments and Foreclosure" to each Member during the 60-day period immediately preceding the beginning of the Association's fiscal year. The notice is to be printed in at least 12-point type.

A. Statement of Charges: At least 30 days prior to the Association recording an Assessment Lien upon a Lot pursuant to Civil Code § 1367.1(a), the Association shall notify the owner of record in writing by certified mail of the following:

(1) A general description of the collection and lien enforcement procedures of the Association and the method of calculation of the amount owed, a statement that the Owner has the right to inspect the Association's records, pursuant to section 8333 of the Corporations Code, and the following statement in 14-point boldface type, if printed, or in capital letters, if typed: "IMPORTANT NOTICE: IF YOUR SEPARATE INTEREST IS PLACED IN FORECLOSURE BECAUSE YOU ARE BEHIND IN YOUR ASSESSMENTS, IT MAY BE SOLD WITHOUT COURT ACTION".

(2) An itemized statement of the charges owed by the Owner, including items on the statement which indicate the amount of any delinquent Assessments, the fees and reasonable costs of collection, reasonable attorney's fees, any late charges, and interest, if any.

(3) A statement that the Owner shall not be liable to pay the charges, interest, and costs of collection, if it is determined the Assessment was paid on time to the Association.

(4) The right to request a meeting with the Board as provided by Civil Code Section 1367.1(c)(3).

(5) The right to dispute the Assessment debt by submitting a written request for dispute resolution to the Association pursuant to the Association's "meet and confer" program required in Article 5 (commencing with Section 1363.810) of Chapter 4 of the Civil Code.

(6) The right to request alternative dispute resolution with a neutral third party pursuant to Article 2 (commencing with Section 1369.510) of Chapter 7 of the Civil Code before the Association may initiate foreclosure against the Owner's Lot, except that binding arbitration shall not be available if the Association intends to initiate a judicial foreclosure.

Note: Any payments made by the Owner toward the debt shall first be applied to the Assessments owed, and, only after the Assessments owed are paid in full shall the payments be applied to the fees and costs of collection, attorneys' fees, late charges, or interest. The Association need not accept any tender of a partial payment of an Assessment and all costs and attorneys' fees attributable thereto. Acceptance of any such tender does not waive the Association's right to demand and receive full payment. When an Owner makes a payment, the owner may request a receipt and the Association shall provide it. The receipt shall indicate the date of payment and the person who received it. The Association shall provide a mailing address for overnight payment of Assessments.

B. Payment Plan: An Owner may submit a written request to meet with the Board to discuss a payment plan for the Assessment debt noticed pursuant to section 4.9.A. The Association shall provide the Owners the standards for payment plans, if any exist. The Board shall meet with the Owner in executive session within forty five (45) days of the postmark of the request, if the request is mailed within fifteen (15) days of the date of the postmark of the notice, unless there is no regularly scheduled Board meeting within that period, in which case the Board may designate a committee of one or more members to meet with the Owner. Payment plans may incorporate any Assessments that accrue during the payment plan period. Payment plans shall not impede the Association's ability to record a lien on the Owner's Lot to secure payment of delinquent Assessments. Additional late fees shall not accrue during the payment plan period if the Owner is in compliance with the terms of the payment plan. In the event of a default on any payment plan, the Association may resume its efforts to collect the delinquent Assessments from the time prior to entering into the payment plan.

C. Notice of Delinquent Assessment: After compliance with the provisions of Civil Code § 1367.1(a), the Association may record a Notice of Delinquent Assessment and establish an Assessment Lien against the Lot of the delinquent Owner prior and superior to all other liens recorded subsequent to recordation of the Notice of Delinquent Assessment, except (1) all taxes, bonds, Assessments and other levies which, by law, would be superior thereto, and (2) the lien or charge of any First Mortgage of record recorded prior to recordation of the Notice of Delinquent Assessment. The Notice of Delinquent Assessment shall include an itemized statement of the charges owed by the Owner described in section 4.9A above, a description of the Lot against which the Assessment and other sums are levied, the name of the record Owner, and the name and address of the trustee authorized by the Association to enforce the lien by sale. The notice shall be signed by any officer of the Association or any management agent retained by the Association and shall be mailed by certified mail to every person whose name is shown as an Owner of the Lot in the Association's records no later than ten (10) calendar days after recordation.

D. Lien Releases: Within twenty-one (21) days after payment of the sums specified in the Notice of Delinquent Assessment, the Association shall record or cause to be recorded in the Office of the County Recorder in which the Notice of Delinquent Assessment is recorded a lien release or notice of rescission and provide the Owner a copy of the lien release or notice that the delinquent Assessment has been satisfied.

E. Enforcement of Assessment Lien and Limitations on Foreclosure: The collection by the Association of delinquent Regular Assessments or delinquent Special Assessments of an amount less than one thousand eight hundred dollars (\$1,800), not including any accelerated Assessments, late charges, fees and costs of collection, attorney's fees, or interest, may not be enforced through judicial or nonjudicial foreclosure, but may be collected or secured in any of the following ways:

(1) By a civil action in small claims court, pursuant to Chapter 5.5 (commencing with Section 116.110) of Title 1 of the Code of Civil Procedure. If the Association chooses to proceed by an action in small claims court, and prevails, the Association may enforce the judgment as permitted under Article 8 (commencing with Section 116.810) of Title 1 of the Code of Civil Procedure. The amount that may be recovered in small claims court to collect upon a debt for delinquent Assessments may not exceed the jurisdictional limits of the small claims court and shall be the sum of the following:

(a) The amount owed as of the date of filing the complaint in the small claims court proceeding.

(b) In the discretion of the court, an additional amount to that described in subparagraph (a) equal to the amount owed for the period from the date the complaint is filed until satisfaction of the judgment, which total amount may include accruing unpaid Assessments and any reasonable late charges, fees and costs of collection, attorney's fees, and interest, up to the jurisdictional limits of the small claims court.

(c) By recording a lien on the Owner's Lot upon which the Association may not foreclose until the amount of the delinquent Assessments secured by the lien, exclusive of any accelerated Assessments, late charges, fees and costs of collection, attorney's fees, or interest, equals or exceeds one thousand eight hundred dollars (\$1,800) or the Assessments are more than 12 months delinquent. If the Association chooses to record a lien under these provisions, prior to recording the lien, the Association shall offer the Owner and, if so

requested by the Owner, participate in dispute resolution as set forth in Article 5 (commencing with Section 1368.810) of Chapter 4.

(2) Any other manner provided by law, except for judicial or nonjudicial foreclosure.

F. Foreclosure: The Association may collect delinquent Regular Assessments or delinquent Special Assessments of an amount of one thousand eight hundred dollars (\$1,800) or more, not including any accelerated Assessments, late charges, fees and costs of collection, attorney's fees, or interest, or any Assessments that are more than 12 months delinquent, using judicial or nonjudicial foreclosure subject to the following conditions:

(1) Prior to initiating a foreclosure on an owner's separate interest, the Association shall offer the Owner and, if so requested by the Owner, participate in dispute resolution pursuant to the Association's "meet and confer" program required in Article 5 (commencing with Section 1363.810) of Chapter 4 or alternative dispute resolution as set forth in Article 2 (commencing with Section 1369.510) of Chapter 7. The decision to pursue dispute resolution or a particular type of alternative dispute resolution shall be the choice of the Owner, except that binding arbitration shall not be available if the Association intends to initiate a judicial foreclosure.

(2) The decision to initiate Foreclosure of an Assessment Lien for delinquent Assessments that has been validly recorded shall be made only by the Board and may not be delegated to an agent of the Association. The Board shall approve the decision by a majority vote of the Board members in an executive session. The Board shall record the vote in the minutes of the next meeting of the Board open to all members. The Board shall maintain the confidentiality of the Owner or Owners of the Lot by identifying the matter in the minutes by the Lot number of the property, rather than the name of the Owner or Owners. A Board vote to approve foreclosure of a lien shall take place at least 30 days prior to any public sale.

(3) The Board shall provide notice by personal service to an Owner of a Lot who occupies the Lot or to the owner's legal representative, if the Board votes to foreclose upon the Lot. The Board shall provide written notice to an Owner of a Lot who does not occupy the Lot by first-class mail, postage prepaid, at the most current address shown on the books of the Association. In the absence of written notification by the Owner to the Association, the address of the Owner's Lot may be treated as the Owner's mailing address.

(4) A nonjudicial foreclosure by the Association to collect upon a debt for delinquent Assessments shall be subject to a right of redemption. The redemption period within which the Lot may be redeemed from a foreclosure sale under this paragraph ends 90 days after the sale.

In addition to the requirements of Civil Code Section 2924, a notice of default shall be served by the Association on the Owner's legal representative in accordance with the manner of service of summons in Article 3 (commencing with Section 415.10) of Chapter 4 of Title 5 of Part 2 of the Code of Civil Procedure. Upon receipt of a written request by an Owner identifying a secondary address for purposes of collection notices, the Association shall send additional copies of any notices required by this section to the secondary address provided. The Association shall notify Owners of their right to submit secondary addresses to the Association, at the time the Association issues the pro forma operating budget pursuant to Section 1365. The Owner's request shall be in writing and shall be mailed to the Association in a manner that shall indicate the Association has received it. The Owner may identify or change a secondary address at any time, provided that, if a secondary

address is identified or changed during the collection process, the Association shall only be required to send notices to the indicated secondary address from the point the Association receives the request.

G. Sale by Trustee: Any sale by the trustee shall be conducted in accordance with the provisions of §§ 2924, 2924b, 2924c, 2924f, 2924g, 2924h and 2924j of the California Civil Code applicable to the exercise of powers of sale in mortgages and deeds of trust, including any successor statutes thereto, or in any other manner permitted by law. The fees of a trustee may not exceed the amounts prescribed in Civil Code §§ 2924c and 2924d. Nothing in this Declaration shall preclude the Association from bringing an action directly against an Owner for breach of the personal obligation to pay Assessments nor from taking a deed in lieu of foreclosure.

H. Purchase By Association: The Association, acting on behalf of the Lot Owners, shall have the power to bid for the Lot at a Foreclosure sale, and to acquire and hold, lease, mortgage and convey the Lot. If the purchase of a Lot would result in a five percent (5%) or greater increase in Assessments, the purchase shall require the vote or written consent of a majority of the total voting power of the Association, including a majority of Members other than Declarant. During the period a Lot is owned by the Association, following Foreclosure:

- (1) no right to vote shall be exercised on behalf of the Lot;
- (2) no Assessment shall be assessed or levied on the Lot; and
- (3) each other Lot shall be charged, in addition to its usual Assessment, its share of the Assessment that would have been charged to such Lot had it not been acquired by the Association as a result of Foreclosure.

After acquiring title to the Lot at Foreclosure sale following notice and publication, the Association may execute, acknowledge and record a deed conveying title to the Lot which deed shall be binding upon the Owners, successors, and all other parties.

I. Suspension of Rights of Delinquent Owner: The Board may temporarily suspend the voting rights and right to use Common Area facilities of a Member who is in default in payment of any Assessment, after notice and hearing, as provided in the Bylaws.

J. Fines and Penalties: In conformity to Civil Code §1367.1(e), fines and penalties imposed by the Association for violation of this Declaration as a disciplinary measure for failure of an Owner to comply with this Declaration or the Rules, except for late payments, are not "Assessments," and are not enforceable by Assessment Lien, but are enforceable by court proceedings; provided, however, pursuant to Civil Code § 1367.1(d), monetary penalties imposed by the Association to reimburse the Association for costs incurred for repair of damage to Common Area or facilities for which the Owner, or guests or tenants of an Owner, were responsible may become the subject of a lien. Provided however that any such enforcement as a lien shall only be permitted if there are no Lots in the Project that are subject to the jurisdiction of the Department of Real Estate under a Final Subdivision Public Report. In the event that Civil Code §1367.1(e) is amended to permit fines and penalties imposed by the Association for violation of this Declaration as a disciplinary measure for failure of an Owner to comply with this Declaration or the Rules to be enforceable by Assessment Lien, then this provision shall be deemed amended to conform to any such amendment of Civil Code §1367.1(e).

The provisions of this Section 4.9 are intended to comply with the requirements of Civil Code section 1367.1 in effect as of January 1, 2006. If these sections are amended or rescinded in any manner the provisions of this Section 4.9 automatically shall be amended or rescinded in the same manner. [Note: Civil Code section 1367.1 may have been amended by the State Legislature, and the Board should confirm the current statutory requirements.]

4.10. Reimbursement Charges: The Board may levy a Reimbursement Charge against a Member to reimburse the Association for costs incurred by the Association in the repair of damage to the Common Area and facilities for which the Member or the Member's guests or tenants were responsible and in bringing the Member and his Lot into compliance with the provisions of the Governing Documents in the amount required to reimburse the Association for the actual costs and expenses incurred and the amounts incurred to enforce the Association's rights under this Declaration as are then permitted by law. Reimbursement Charges shall be payable when directed by the Board after written notice to the Owners, which notice shall in no event be less than thirty (30) days. If an Owner disputes a Reimbursement Charge, the Owner may request a hearing before the Board.

4.11. Unallocated Taxes: In the event that any taxes are assessed against the Common Area, or the personal property of the Association, rather than being assessed to the Lots, said taxes shall be included in the Assessments made under the provisions of Section 4.1 and, if necessary, a special Assessment may be levied against the Lots in an amount equal to said taxes, to be paid in two (2) installments, thirty (30) days prior to the due date of each tax installment.

4.12. Estoppel Certificate: Within ten (10) days of the mailing or delivery of a written request by any Owner, the Board shall provide the Owner with a written statement containing the following information: (i) whether to the knowledge of the Association, the Owner or occupant of the Owner's Lot is in violation of any of the provisions of this Declaration, the Articles, Bylaws or Rules; (ii) the amount of Regular Assessments and Special Assessments, and Reimbursement Charges, including installment payments, paid by the Owner during the fiscal year in which the request is received; and (iii) the amount of any Assessments levied against the Owner's Lot that are unpaid as of the date of the statement, including any late charges, interest or costs of collection, and that, as of the date of the statement, are or may be made a lien against the Owner's Lot as provided by this Declaration. The Association may charge a fee to provide this information, provided the fee shall not exceed the Association's reasonable cost to prepare and reproduce the requested items.

ARTICLE V. DUTIES AND POWERS OF THE ASSOCIATION

5.1. Duties: In addition to the duties enumerated in the Articles and Bylaws, or elsewhere provided for in this Declaration, and without limiting the generality of those duties, the Association shall perform the following duties:

A. Maintenance: The Association shall maintain and repair the following:

(1) The Common Area, all improvements and landscaping thereon, and all property owned by the Association, including, without limitation, open space, habitat areas, conservation areas, sanctuary areas, trails, parking areas, driveways, private streets, irrigation systems, lighting fixtures, and utility, sewer or drainage systems not maintained by a public entity, utility company, or improvement district, and all facilities (including Utility Facilities).

Each Owner and occupant shall fully cooperate with the agents of the Association in the performance of the Association's maintenance and repair obligations described above. Such cooperation shall include, but is not limited to, immediate notification to the Board or its managing agent of any maintenance or repair problems for which the Association is responsible and access to the Owner or occupant's Lot as may be necessary to inspect and, if appropriate, to perform any necessary maintenance or repairs.

All such maintenance of the Common Areas shall be undertaken in a manner that complies with the requirements and criteria of the City. The storm drain inlets, ditches and creek shall be inspected and cleaned on a regular basis. Debris that is removed shall not be permitted to enter the inlets.

All maintenance and repair obligations for any Lot or any Residence or Residential Improvements shall be undertaken and completed by and at the expense of the Owner of the Lot as described in Section 7.19.

The responsibility of the Association for maintenance and repair shall not extend to repairs or replacements arising out of or caused by the willful or negligent act or omission of any Owner, or his guest, tenant, invitee or pet. Any such repairs or replacements not covered by insurance carried by the Association shall be made by the responsible Owner, provided the Board approves the person or entity actually making the repairs and the method of repair. If the responsible Owner fails to take the necessary steps to make the repairs within a reasonable time under the circumstances, the Association may cause the repairs to be made and shall impose a Reimbursement Charge upon the responsible Owner, which charge shall bear interest at the rate of twelve percent (12%) per annum (but no greater than the maximum rate allowed by law) until paid in full. If such repair is covered by the insurance carried by the Association, the Association shall be responsible for making the repairs, and the responsible Owner shall pay any deductible pursuant to the insurance policy. If the Owner fails to make such payment, then the Association may make such payment and charge the cost thereof as a Reimbursement Charge to the Responsible Owner, which charge shall bear interest at the rate of twelve percent (12%) per annum (but no greater than the maximum rate allowed by law) until paid in full. If the Owner disputes the charge, the Owner shall be entitled to a notice and a hearing as provided in the Bylaws before the charge may be imposed.

B. Inspection and Maintenance Guidelines: The Declarant has provided the Association with the inspection and maintenance guidelines and schedules [including manufacturers' guidelines and schedules] for the inspection and maintenance of the improvements within the Common Area ("Maintenance Guidelines"). The Board shall comply with the Maintenance Guidelines for the periodic inspection and maintenance of the Common Area improvements and landscaping that the Association is required to maintain under this Declaration, and any other improvements outside of the Common Area, which the Association has the responsibility to maintain. The Board shall take all appropriate actions to implement and comply with the Maintenance Guidelines. The Board periodically and at least once every three (3) years shall review and update the Maintenance Guidelines. The Maintenance Guidelines may not be modified by the Association to reduce the maintenance obligations and requirements of the Association without prior written approval of Declarant for a period of ten (10) years after the conveyance of the first Lot in the Project to an Owner other than the Declarant.

(1) The Association shall cause professional inspections of all Common Area infrastructure and improvements to be routinely made. The inspectors shall include, at least, an Architect, a Civil Engineer and a Landscape Architect. Inspections shall be made at least yearly,

and for appropriate items or events, more often. Inspections will include a review of all repair records since the previous inspection.

(2) The inspections shall be reported at the annual membership meeting and in writing, and shall include recommendations for cleaning, maintenance, repair, replacement, etc. (if any), as well as opinions of the costs. The reports shall address any noted deterioration which may require future attention. The reports may also recommend supplemental specialized investigations.

(3) The Association shall keep permanent records of all: (a) Complaints and potential problems, including description, date and by whom; (b) Reports, including inspections and recommendations; (c) Repairs, including description, location, date, by whom made and cost; and (d) Plans, including construction drawings, subsequent modifications, and repair plans.

(4) For a period of ten (10) years after the date of the last Close of Escrow in the Project, the Board shall also furnish to Declarant: (a) the report of each inspection performed for the Board, whenever such inspection is performed and for whatever portion of the Common Area that is inspected, within thirty (30) days after the completion of such inspection; and (b) the most recent inspection report prepared for any portion of the Project, within ten (10) days after the Association's receipt of a written request therefor from Declarant.

(5) The Board may, from time to time, make appropriate revisions to the Association's Maintenance Manual based on the Board's review thereof, to update such manual to provide for maintenance according to current industry practices so long as such changes do not reduce the useful life or functionality of the items being maintained. No changes may be made to the Maintenance Manual without the Declarant's prior written consent as long as there are Class B Members of the Association pursuant to the Bylaws.

(6) The Association shall maintain and operate the Common Area of the Project in accordance with all applicable municipal, state, and federal laws, statutes and ordinances, as the case may be. The Association shall also, as a separate and distinct responsibility, insure that third parties (including Owners and their guests) utilize the Common Area in accordance with the aforementioned regulations. The Association shall, when it becomes aware of any violation of the aforementioned regulations, expeditiously correct such violations.

(7) The Association shall have the power and duty to: (a) operate, maintain and inspect the Project and its various components in conformance with any Maintenance Guidelines and any Maintenance Manual; and (b) review any Maintenance Manual applicable to the Project for necessary or appropriate revisions no less than annually after the Board has prepared the budget; provided, however, that the Association shall not revise the Maintenance Manual to reduce the level of maintenance required of any improvement without the prior written consent of Declarant until ten (10) years after the last Close of Escrow for the sale of a Lot in the Project by Declarant.

C. Insurance: The Association shall obtain and maintain such policy or policies of insurance as are required by Section 8.2 of this Declaration.

D. Discharge of Liens: The Association shall discharge by payment, if necessary, any lien against the Common Area and charge the cost thereof to the Member or Members responsible for the existence of the lien after notice and hearing as provided in the Bylaws.

E. Assessments: The Association shall fix, levy, collect and enforce Assessments as set forth in Article IV hereof.

F. Payment of Expenses and Taxes: The Association shall pay all expenses and obligations incurred by the Association in the conduct of its business including, without limitation, all licenses, taxes or governmental charges levied or imposed against the property of the Association.

G. Enforcement: The Association shall be responsible for the enforcement of this Declaration.

The Association shall maintain and operate the Common Area of the Project in accordance with all applicable municipal, state, and federal laws, statutes and ordinances, as the case may be. The Association shall also, as a separate and distinct responsibility, insure that third parties (including Owners and their guests) utilize the Common Area in accordance with the aforementioned regulations. The Association shall, when it becomes aware of any violation of the aforementioned regulations, expeditiously correct such violations.

5.2. Powers: In addition to the powers enumerated in the Articles and Bylaws, or elsewhere provided for herein, and without limiting the generality thereof, the Association shall have the following powers:

A. Easements: The Association shall have authority by document signed by the President and the Secretary, to grant easements where necessary for roads, utilities, communication services, cable television, and sewer facilities over the Common Area to serve the Common Areas and Lots, and/or where necessary to satisfy or achieve appropriate governmental purpose or request. The Board of Directors may grant exclusive use easement rights over a portion of the Common Area to a Member with the affirmative vote of sixty-seven percent (67%) of the separate interests in the Project, and without the approval of the Members in those limited cases set forth in Civil Code § 1363.07.

B. Manager: The Association may employ a manager or other persons and contract with independent contractors or managing agents to perform all or any part of the duties and responsibilities of the Association, except for the responsibility to levy fines, impose discipline, hold hearings, file suit, record or foreclose liens, or make capital expenditures, provided that any contract with a firm or person appointed as a manager or managing agent shall not exceed a one (1) year term, shall provide for the right of the Association to terminate the same at the first annual meeting of the Members of the Association, and to terminate the same without cause or payment of a termination fee on ninety (90) days' written notice, or for cause on thirty (30) days' written notice.

C. Adoption of Rules: The Association or the Board, by majority vote, may adopt reasonable Rules not inconsistent with this Declaration relating to the use of the Common Area and all its facilities, and the conduct of Owners and their tenants and guests with respect to the Project and other Owners. Written copies of such Rules and any schedule of fines and penalties adopted by the Board shall be furnished to Owners. All changes to the Rules will become effective fifteen (15) days after they are either: (i) posted in a conspicuous place in the Common Area; or (ii) sent to the Owners via first-class mail or by any system or technology designed to record and communicate messages.

D. Access: For the purpose of performing construction, maintenance or emergency repair for the benefit of the Common Area or the Owners in common, and/or to perform maintenance work that a Lot Owner has failed to perform as provided in Section 7.19, the Association's agents or employees shall have the right, after reasonable notice (except in emergencies, not less than twenty-four (24) hours) to the Owner of the Lot in which maintenance work has not been performed, to enter the Lot at reasonable hours. Such entry shall be made with as little inconvenience to the Owner as practicable, and any damage caused by such entry shall be repaired by the Board at the expense of the Association.

E. Assessments, Liens, Penalties and Fines: The Board shall have the power to levy and collect Assessments in accordance with the provisions of [REDACTED] IV hereof. The Board may impose fines or take disciplinary action against any Owner for failure to pay Assessments or for violation of any provision of the Governing Documents and the Rules. Penalties may include, but are not limited to, fines, temporary suspension of voting rights, or other appropriate discipline, provided the Member is given notice and a hearing as provided in the Bylaws before the imposition of any fine or disciplinary action. The Board shall have the power to adopt a schedule of reasonable fines and penalties for violations of the terms of this Declaration, and for violations of any Rules adopted pursuant to Section 5.2C, provided that such schedule is approved by vote or written consent of a majority of all Members. The penalties prescribed may include suspension of all rights and privileges of membership; provided, however, that suspension for failure to pay Assessments shall be for a maximum period of thirty (30) days, renewable by the Board for an additional thirty (30) day period or periods until paid; and provided further that suspension for infraction of Rules or violation of this Declaration, other than for failure to pay Assessments, shall be limited to a maximum period of thirty (30) days per infraction or violation, and shall be imposed only after a hearing before the Board. The Board may extend that period for an additional thirty (30) day period or periods in the case of a continuing infraction or violation, and no hearing need be held for such extension. Written copies of Rules and the schedule of penalties shall be furnished to Owners. The Board shall levy fines and penalties and shall enforce such Assessments as appropriate under applicable law.

F. Enforcement: The Board shall have the authority to enforce this Declaration as per Section 9.1 hereof.

G. Acquisition and Disposition of Property: The Board shall have the power to acquire (by gift, purchase or otherwise), own, hold, improve, build upon, operate, maintain, convey, sell, lease, transfer, or otherwise dispose of real or personal property in connection with the affairs of the Association. Any transfer of property shall be by document signed or approved by two-thirds (2/3rds) of the total voting power of the Association which shall include two-thirds (2/3rds) of the Members other than Declarant, or where the two (2) class voting structure is still in effect, two-thirds (2/3rds) of the voting power of each class of Members.

H. Loans: The Board shall have the power to borrow money, and, only with the assent (by vote or written consent) of two-thirds (2/3rds) of the total voting power of the Association including two-thirds (2/3rds) of the Members other than Declarant, or where the two (2) class voting structure is still in effect, two-thirds (2/3rds) of the voting power of each class of Members, to mortgage, pledge, deed in trust, or hypothecate any or all of its real or personal property as security for money borrowed or debts incurred.

I. Dedication: The Board shall have the power to dedicate all or any part of the Common Area to any public agency, authority, or utility for such purposes and subject to such conditions as may be agreed to by the Members. No such dedication shall be effective unless an

instrument has been signed by two-thirds (2/3rds) of the Members of the Association including two-thirds (2/3rds) of the Members other than Declarant, or where the two (2) class voting structure is still in effect, two-thirds (2/3rds) of the Members of each class of Members, agreeing to such dedication.

J. Contracts: The Board shall have the power to contract for goods and/or services for the Common Area(s), for the Lots, or for the Association, subject to limitations set forth in the Bylaws, or elsewhere in this Declaration. The Board shall not enter into any contracts with an independent contractor until it meets the requirements of Section 8.2.A(3) herein.

K. Delegation: The Board, and the officers of the Association shall have the power to delegate their authority and powers to committees, officers or employees of the Association, or to a manager employed by the Association, provided that the Board shall not delegate its responsibility:

(1) to make expenditures for capital additions or improvements chargeable against the reserve funds;

(2) to conduct hearings concerning compliance by an Owner or his or her tenant, lessee, guest or invitee with the Declaration, Bylaws or Rules promulgated by the Board;

(3) to make a decision to levy monetary fines, levy Reimbursement Charges, temporarily suspend an Owner's rights as a Member of the Association or otherwise impose discipline;

(4) to make a decision to levy Regular Assessments or Special Assessments; or

(5) to make a decision to bring suit, record a claim of lien or institute Foreclosure proceedings for default in payment of Assessments.

L. Appointment of Trustee: The Board acting on behalf of the Association, has the power to appoint or designate a trustee to enforce Assessment Liens by sale as provided in Section 4.9 and California Civil Code § 1367.1(d).

M. Litigation/Arbitration: The Board of Directors has authority to enter into a contract with an attorney in a matter involving alleged design or construction defects in the Project, only as to the facilities or improvements the Association is responsible for maintaining as provided herein, only if the matter is not resolved pursuant to the procedures set forth in section 9.14, and only after getting the vote at a duly noticed and properly held membership meeting, of a majority of the Members other than Declarant.

If, and to the extent that, there is any inconsistency between this Section 5.2M and applicable provisions of the California Civil Code pertaining to the commencement of an action by the Association for construction defect litigation, the applicable provisions of the California statutes shall control.

N. Other Powers: In addition to the powers contained herein, the Board may exercise the powers granted to a nonprofit mutual benefit corporation under California Corporations Code § 7140.

O. Common Area Improvements: The Board shall have the authority and power to demolish, remove and reconstruct any and all improvements on or over or under the Common Area in a manner not inconsistent with this Declaration, and to construct, improve and repair improvements that are appropriate for the use and benefit of the Members of the Association, and to charge for the use of such improvements, provided that the Board shall not include in any Regular Assessment or Special Assessments the cost of any new capital improvement which exceeds \$5,000 in cost to be expended in any one calendar year, unless fifty-one percent (51%) or more of the voting power of the Association previously shall have approved said expenditure.

P. Granting Rights: The power to grant exclusive or non-exclusive easements, licenses, rights of way or fee interests in the Common Area, to the extent any such grant is reasonably required: (a) for utilities and facilities to serve the Common Area and the Lots; (b) for purposes of conformity with the as-built location of improvements installed or authorized by Declarant or the Association; (c) in connection with any lawful lot line adjustment; or (d) for other purposes consistent with the intended use of the Project. The Association may deannex any real property from the encumbrance of this Declaration in connection with any lawful lot line adjustment.

5.3. Commencement of Association's Duties and Powers: Until incorporation of the Association, all duties and powers of the Association as described in this Declaration, including all rights of consent and approval, shall be and remain the duties and powers of Declarant. After the date of incorporation of the Association, the Association shall assume all duties and powers, and Declarant shall be relieved of any further liability therefor.

ARTICLE VI. ARCHITECTURAL CONTROL

6.1. Purpose of Architectural Controls: The purpose and intent of this Article is to empower the Association to preserve property values within the Project. The Board has the ultimate responsibility, but may delegate that authority to an Architectural Control Committee.

6.2. Requirement for Approval of Plans: No Residence, Residential Improvement, or any other building, fence, wall, pool, spa, obstruction, outside or exterior wiring, balcony, screen, patio, patio cover, tent, awning, carport, carport cover, trellis, improvement, or structure of any kind shall be commenced, installed, erected, painted or maintained upon the Project, nor shall any alteration or improvement of any kind be made thereto, or to the exterior of any residence, until the same has been approved in writing by the Board, or by an Architectural Control Committee appointed by the Board. Plans and specifications showing the nature, kind, shape, color, size, materials and location of such Residence, Residential Improvement, or other improvements, alterations, etc., shall be submitted to the Board or to the Architectural Control Committee for approval as to quality of workmanship and design and harmony of external design with existing structures, and as to location in relation to surrounding structures, topography, and finish grade elevation. No fence or wall shall be erected, placed or altered on any Lot nearer to any street than the minimum building set back line. No permission or approval shall be required to repaint in accordance with Declarant's original color scheme, or to rebuild in accordance with Declarant's original plans and specifications. No permission or approval shall be required to repaint in accordance with a color scheme previously approved by the Committee or the Board, or to rebuild in accordance with plans and specifications previously approved by the Committee or by the Board. Nothing contained herein shall be construed to limit the right of an Owner to remodel the interior of his residence or to paint the interior of his residence any color desired. The Architectural Control Committee may consider the impact of views from other Lots along with other factors, including reasonable privacy right claims, passage of light and air, beneficial shading and other factors in

reviewing, approving or disapproving any proposed landscaping, construction or other improvements. However, neither the Declarant nor the Association warrants that any views in the Property are protected. No Lot is guaranteed the existence or unobstructed continuation of any particular view.

6.3. Architectural Control Committee Membership: The Architectural Control Committee shall consist of three (3) members. Declarant may appoint all of the original members of the Committee and all replacements until the first anniversary of the issuance of the original final Public Report for the Project. The Declarant reserves to itself the power to appoint a majority of the members to the Committee until ninety percent (90%) of all the Lots in the Project have been sold or until the fifth anniversary of the issuance of the final Public Report for the Project, whichever first occurs. After one (1) year from the date of the issuance of the original Public Report for the Project, the Board shall have the power to appoint one (1) member to the Architectural Control Committee until ninety percent (90%) of all of the Lots in the development have been sold or until the fifth anniversary date of the issuance of the final Public Report, whichever first occurs. Thereafter, the Board shall have the power to appoint all of the Architectural Control Committee Members. Members appointed to the Architectural Control Committee need not be Members of the Association. A majority of the Architectural Control Committee may designate a representative to act for it. In the event of death or resignation of any member of the Committee, the successor shall be appointed by the person, entity or group which appointed such member until Declarant no longer has the right to appoint any members to the Committee, and thereafter the Board shall appoint such a successor. Neither the members of the Committee nor its designated representative shall be entitled to any compensation for services performed pursuant hereto.

6.4. Architectural Control Committee Action: In the event the Architectural Control Committee fails to approve or disapprove plans and specifications in writing within thirty (30) days after the same have been submitted to it, approval will not be required and the related covenants shall be deemed to have been fully complied with. Approval of plans by the Committee or the Board shall in no way make the Committee or its members or the Board or its members responsible for or liable for the improvements built after approval of the plans, and the Owner whose plans are approved shall defend, indemnify and hold the Committee, the Board, the Association, and the members thereof, harmless from any and all liability arising out of such approval.

The Architectural Control Committee shall meet as necessary to perform its duties. The Committee may, by resolution unanimously adopted in writing, designate a Committee Representative (who may be a licensed architect or other professional consultant retained by the Committee) to review Applications and recommend action to be taken by the Committee or to take any other action or perform any other duties for and on behalf of the Committee except the granting of variances. In the absence of such designation, the vote or written consent of a majority of the Committee constitutes an act of the Committee. All approvals issued by the Committee must be in writing. Verbal approvals issued by the Committee, any individual Committee member or any other representative of the Association are not valid, are not binding on the Association and may not be relied on by any Person.

In reviewing and approving or disapproving a proposed alteration, modification or improvements to a Lot that is subject to review, the Association's Board or Architectural Committee shall satisfy the following requirements in accordance with California Civil Code section 1378:

(1) The Association's Board or Architectural Committee in the Design Guidelines shall provide a fair, reasonable, and expeditious procedure for making its decision. The procedure shall provide for prompt deadlines. The procedure shall state the maximum time for response to an application or a request for reconsideration by the Board of Directors.

(2) A decision on a proposed change shall be made in good faith any may not be unreasonable, arbitrary, or capricious.

(3) A decision on a proposed change shall be consistent with any governing provision of law, including, but not limited to, the Fair Employment and Housing Act (Part 2.8, commencing with Section 12900) of Division 3 of Title 2 of the Government Code.

(4) A decision on a proposed change shall be in writing. If a proposed change is disapproved, the written decision shall include both an explanation of why the proposed change is disapproved and a description of the procedure for reconsideration of the decision by the Board of Directors.

(5) If a proposed change is disapproved, the applicant is entitled to reconsideration by the Board of Directors that made the decision at an open meeting of the Board. This paragraph does not require reconsideration of a decision that is made by the Board or a body that has the same membership as the Board, at a meeting that satisfies the requirements of California Civil Code section 1363.05. Reconsideration by the Board does not constitute dispute resolution within the meaning of California Civil Code section 1363.820.

Nothing in this provision authorizes a physical change to the Common Area in a manner that is inconsistent with an association's governing documents or governing law.

6.5. Landscaping: No landscaping or other physical improvements or additions shall be made or added to any decks, balconies, patios or yards or portions of Lots which are visible from the street or from any Common Area by any Owner until plans and specifications showing the nature, kind, shape, and location of the materials shall have been submitted to and approved in writing by the Architectural Control Committee, or the Board.

6.6. [ALT: 6.5 Initial Front Yard Landscaping: Unless installed by Declarant, the first purchaser of each Lot shall submit landscaping plans for the unfenced portion of the front yard of the purchaser's Lot to the Architectural Control Committee within sixty (60) days after close of escrow and shall complete the installation of the landscaping within one hundred eighty (180) days after close of escrow or by such later date as the Committee may approve.

6.7. [ALT: Solar Energy: The Architectural Control Committee may impose only such restrictions on the installation of solar panels as are permitted by applicable state laws.]

6.8. [ALT: Governmental Approval: Before commencement of any alteration or improvements approved by the Architectural Control Committee, the Owner shall comply with all appropriate governmental laws and regulations. Approval by the Committee does not satisfy the appropriate approvals that may be required by any governmental entity with appropriate jurisdiction.]

6.9. [ALT: Structural Integrity: Nothing shall be done in or on any Lot or in or on the Common Area which will impair the structural integrity of any building.]

6.10. Completion of Work; Review of Work: Upon approval of the Committee or Board, the Owner shall diligently proceed with the commencement and completion of all work so approved by the Committee in compliance with the approvals granted. The work must be commenced within six months from the date of approval unless the Committee or Board permits the work to be commenced at a later time. If the work is not commenced within six months after the approval date, or such later time as the Committee or Board has granted, then the approval shall be deemed cancelled, and the Owner must reapply to the Committee or Board before undertaking any such work.

The Committee or Board shall inspect work within sixty days after a notice of completion has been delivered to the Committee or Board by the Owner. The Committee or Board may also inspect the work at any time prior to completion as it deems appropriate to determine that the Committee or Board approval is being followed. The Committee or Board is to inspect the work performed, and determine whether it was performed and completed in compliance with the approval granted in all material respects. If at any time during the construction of any work, the Committee or Board finds that the work was not performed or completed in compliance of the approval granted in all material respects, or if the Committee or Board finds that the appropriate approval which was required for any work was not obtained, the Committee or Board shall notify the Owner in writing of the non-compliance. The notice shall specify in writing the particulars of non-compliance, and shall set forth the requirement of the Owner to remedy the non-compliance. The Committee or Board shall determine in its reasonable judgment whether an alteration, modification or improvement complies with the approval as granted in material respects. Minor changes, deviations or imperfections that do not negatively affect or impact the Project shall not be considered as non-compliance. The Board shall act under this Section 6.10 only if the Board has undertaken the architectural review functions under this Article.

If the Committee or the Board has determined an Owner has not constructed an improvement in compliance of the approval granted in all material respects, and if the Owner fails to remedy such non-compliance in accordance with provisions of the notice of non-compliance, then after expiration of thirty (30) days from the date of such notification, if the Architectural Control Committee has undertaken the architectural review functions under this Article, the Committee shall notify the Board, and the Board shall provide Notice and Hearing to consider the Owner's continuing non-compliance. If the Board has undertaken the architectural review functions under this Article, the Board shall act after expiration of thirty (30) days from the date of such notification. At the Hearing, if the Board finds that there is no valid reason for the continuing non-compliance, the Board shall then require the Owner to remedy the non-compliance as necessary and appropriate in the determination of the Board as to result in the improvement being rendered as reasonably in compliance as is appropriate for the overall good and benefit of the Project, or remove the same within a period of not more than forty-five (45) days from the date of the Board's determination. If the Owner does not comply with the Board's ruling within such period, or within any extension of such period as the Board, in its discretion may grant, the Board may (1) remove the non-complying improvement, (2) remedy the non-compliance, or (3) institute legal proceedings to enforce compliance or completion.

After ninety percent (90%) of the Lots in the Project have been sold by the Declarant, an Owner who has submitted an application to the Committee may appeal a decision to deny or conditionally approve the Owner's application to the Board by written appeal to the Board. The Board shall notify the appealing Owner in writing of the date set for a hearing regarding the Owner's appeal within ten (10) days after receipt of the Owner's appeal. The hearing shall be held within thirty (30) days after receipt of the Owner's appeal by the Board. The Board shall make its

determination on the appeal in writing delivered to the appealing Owner within ten (10) days after the hearing. The determination of the Board shall be final.

6.11. No Waiver of Future Approvals: The Architectural Control Committee's approval of any proposals, plans and specifications or drawings for any work done or proposed in connection with any matter requiring the Committee's approval does not waive the right to withhold approval of any similar proposals, plans and specifications, drawings or matters subsequently or additionally submitted for approval.

6.12. Variances: The Architectural Control Committee may authorize variances from compliance with any of the architectural provisions of Declaration or the Design Guidelines, including restrictions on height, size, floor area or placement of structure, or similar restrictions, when circumstances such as hardship, aesthetic or environmental consideration require. Such variances must be evidenced in writing, must be signed by a majority of the Committee, and become effective on recordation. After Declarant's right to appoint a majority of the Committee's members expires, the Board must approve any variance recommended by the Committee before any such variance becomes effective. If variances are granted, no violation of the covenants, conditions and restrictions in this Declaration shall be deemed to have occurred with respect to the matter for which the variances were granted. The granting of a variance does not waive any of the provisions of this Declaration for any purpose except as to the particular property and particular provisions of this Declaration covered by the variance, nor does it affect the Owner's obligation to comply with all laws affecting the use of his Lot. The Committee's written variance shall be recorded against applicant's Lot in the Official Records. The cost of recording the variance shall be borne solely by the applicant.

ARTICLE VII. USE RESTRICTIONS

In addition to all of the covenants contained in this Declaration, the use of the Project and each Lot in the Project is subject to the following:

7.1. Use of Lot: No Lot shall be occupied and used except for residential purposes by the Owners, their tenants, and social guests, except that Declarant, its successors or assigns, may use the Project for a model homesite or sites, and display and sales/construction office during construction until the last Lot is sold by Declarant or, where Declarant elects to retain one (1) or more Lots as an investment, until three (3) years from the date of issuance of the public report, whichever occurs first. A home may be used as a combined residence and executive or professional office by the Owner or occupant thereof, so long as such use: (a) does not interfere with the quiet enjoyment by other Owners; (b) does not include visiting clients; (c) business activities take place solely inside the home; (d) does not generate in-person visits by suppliers or clientele; (e) complies with all laws, regulations and ordinances applicable to the Property, including zoning, health and licensing requirements; (f) otherwise complies with the Declaration and is consistent with the residential character of the Property; (g) no signs, logos, billboards, or other advertising materials or devices are displayed in the windows of the home, or on exterior of the Building, or on any Common Area, to advertise the activity; (h) the existence or operation of the business is not apparent or detectable outside the home by sight, sound or odor; and (i) the business does not increase the liability or casualty insurance obligation or premium of the Association. No tent, shack, trailer, basement, garage, outbuilding or structure of a temporary character shall be used on any Lot at any time as a residence, either temporarily or permanently.

No health care facilities operating as a business or charity, unless permitted by law or ordinance which preempts this restriction.

No family day care center shall be permitted within the Project except as specifically authorized by California Health and Safety Code §1597.40 and other applicable state statutes. The owner/operator of any such day care facility shall comply with all local and state laws regarding the licensing and operating of a day care center and, in addition, shall:

- A. Name the Association as an additional insured on the liability insurance policy or bond carried by the owner/operator of the day care center;
- B. Defend, indemnify and hold the Association harmless from any liability arising out of the existence and operation of the day care center;
- C. Abide by and comply with all of the Association's Rules;
- D. Supervise and be completely responsible for children at all times while they are within the project;
- E. Cooperate with the Association if the Association's insurance agent or carrier requires proof of insurance, proof of the agreement of the owner or operator of the center to these conditions, or other reasonable requests.

7.2. Nuisances: No noxious, illegal, or seriously offensive (to a reasonable person) activities shall be carried on within any Lot, or any part of the Project, nor shall anything be done thereon that may be or may become a serious annoyance or a nuisance to or which may in any way interfere with the quiet enjoyment of each of the Owners of his respective Lot. The Board is entitled to determine if any device, noise, odor or activity constitutes a nuisance.

7.3. Vehicle Restrictions and Towing: Except as otherwise permitted in this Section 7.3, only Permitted Vehicles shall be parked, stored or operated within the Project.

A. Permitted Vehicles shall mean appropriately licensed passenger automobiles, sports utility vehicles, motorcycles, and trucks having carrying capacity of $\frac{3}{4}$ ton or less, vans having seating capacity of eight (8) persons or less. Owners and their tenants and invitees shall park their Permitted Vehicles only in the garages or parking spaces located on the Lot. Vehicles that are not Permitted Vehicles shall not be parked or stored in the Project. Except for commercial vehicles or construction equipment that are providing services to a Lot or the Association (but only during the period of time in which such services are being provided and subject to the Rules), Permitted Vehicles shall not include any commercial vehicle, construction equipment, trailer, camper, mobile home, recreational vehicle, truck having carrying capacity of greater than $\frac{3}{4}$ ton, van having seating capacity in excess of eight (8) persons, inoperable vehicles, boats or similar equipment. Vehicles that are otherwise Permitted Vehicles that are used both for business and personal use are not prohibited, provided that any signs or markings of a commercial nature on such vehicles shall be unobtrusive and inoffensive as determined by the Board. No excessively noisy or polluting vehicles shall be operated on the Project.

B. The Association may install a sign at each vehicular entrance to the Project containing a statement that public parking is prohibited and that all vehicles not authorized to park on the Project will be removed at the owner's expense. The sign shall contain the telephone number of the local traffic law enforcement agency and shall not be less than 17 x 22 inches in size with lettering not less than one (1) inch in height.

C. The Association may cause the removal of any vehicle wrongfully parked on the Project in accordance with the applicable State and local laws.

7.4. Commercial Activity: No business, professional, or commercial activity of any kind shall be conducted on any Lot except as provided in Section 7.1. Notwithstanding the foregoing, a contractor, builder or Owner shall not be prevented from undertaking or completing construction of a Residence or Residential Improvements on a Lot based on the provisions of this section 7.4, provided that there has been substantial compliance in all material respects with all other provisions of this Declaration and the requirements of the City for such construction.

7.5. Storage in Common Area: Nothing shall be stored in the Common Area without the prior consent of the Board.

7.6. Signs: Subject to Civil Code §§ 712, 713 and 1353.6, no signs shall be displayed to the public view on any Lot or on any other portion of the Project except non-commercial signs may be displayed within a Lot that are approved by the Board or a committee appointed by the Board, that conform to the Rules regarding signs that comply with the requirements of State law or that conform to the requirements of State law, and applicable local ordinances. "For Sale" or "For Rent" or "For Exchange" signs shall be allowed to be displayed within areas of the Project that are designated in the Rules regarding such signs that comply with the requirements of State law or conform to the requirements of State law, and applicable local ordinances, provided the design, dimensions and locations are reasonable. An Owner or his or her agent may display one (1) such For Sale or For Rent or For Exchange sign within his or her Lot and one sign in the Common Area advertising directions to the Owner's Lot which is for sale, rent, or exchange, provided the design, dimensions and locations are reasonable and comply with the Rules regarding signs that comply with the requirements of State law, and applicable local ordinances.

7.7. Animals: Except as provided in this Declaration and permitted by the Rules, no animals of any kind shall be raised, bred, or kept in any Lot, or on any other portion of the Project. Trained dogs used for assistance by visually impaired, hearing impaired or physically handicapped persons may be kept by an occupant or invitee of an Owner. Owners, their tenants or other occupants of Lots may keep no more than two (2) dogs, or two (2) cats, or one (1) dog and one (1) cat, within a Lot, and may keep birds or fish that are kept in cages or aquariums, provided that no such dogs, cats or other animal or fish may kept, bred, or maintained for any commercial purposes. All pets shall be kept under reasonable control at all times. No pets shall be allowed in the Common Area except as may be permitted by Rules of the Board. No Owner shall allow his dog to enter the Common Area except on a leash. After making a reasonable attempt to notify the Owner, the Association or any Owner may cause any pet found within the Common Area in violation of the Rules of the Board or this Declaration to be removed by the Association (or any Owner) to a pound or animal shelter under the jurisdiction of the City or the County, by calling the appropriate authorities, whereupon the Owner may, upon payment of all expenses connected therewith, repossess the pet. Owners shall prevent their pets from soiling all portions of the Common Area and shall promptly clean up any waste left by their pets. Owners shall be fully responsible for any damage caused by their pets. No pet shall be permitted to run free within the Project except on the Owner's Lot, and dogs shall at all times while in other areas within the Project be on a hand held leash. An Owner is permitted to exercise his pet on the Project outside the confines of the Owner's Lot only upon the condition that solid bodily wastes of such pet are immediately removed. Each Owner shall be responsible for seeing that his pet or pets do not endanger health, make objectionable noise, or constitute a nuisance or inconvenience to the Owners of other Lots. No structure for the care, housing or confinement of any house or yard pet shall be maintained on a Lot so as to be visible from neighboring property.

7.8. Garbage and Refuse Disposal: All rubbish, trash recycling materials and garbage shall be regularly removed from the Lots, and shall not be allowed to accumulate therein. Trash, garbage, recycling materials and other waste shall only be kept in sanitary containers. All equipment for the storage or disposal of such materials shall be kept in a clean and sanitary condition, and shall be screened from view of neighboring Lots, Common Areas and streets. No toxic or hazardous materials shall be disposed of within the Project by dumping in the garbage containers or down the drains, or otherwise. Each Owner shall be responsible for removal of garbage from his Lot. All recycling and solid waste shall be confined to approved receptacles and enclosures. After completion of a Residence, no trash or garbage containers, recycling materials or other refuse shall be stored or kept in locations that are visible from other Lots or from the Private Street[s].

7.9. Radio and Television Antennas: No Owner shall construct, install and/or use and operate a radio and/or television antenna, satellite dish, other signal reception or transmission devices or related equipment in the Project, without the consent of the Board, which the Board shall have the discretion to withhold, subject to applicable legal requirements. In considering whether to approve applications for any such devices, the Board shall consider and give great weight to considerations of aesthetics, safety within the community, uniformity of appearance, and the requirements of any applicable laws. The Board shall, in acting upon requests for approval of a satellite dish or other signal reception or transmission devices comply with California Civil Code §1376 and FCC [Federal Communications Commission] regulations. The Board may adopt other Rules for installation and operation of any satellite dish or other signal reception or transmission devices that comply with California Civil Code §1376 and FCC regulations.

7.10. Clothes Lines: No outside clothesline or other outside clothes drying or airing facilities shall be maintained on the properties in any location where the same would be visible from any street or any neighboring Lot.

7.11. Power Equipment and Motor Vehicle Maintenance: No power equipment, hobby shops, or car maintenance (other than emergency work, and then only in the owner's garage, or driveway for a period not to exceed two days), or boat maintenance shall be permitted on the Project except with prior written approval of the Board. Power equipment, such as power saw or planer, may be operated only between 9:00 a.m. and 5:00 p.m., Monday-Saturday. Approval shall not be unreasonably withheld and, in deciding whether to grant approval, the Board shall consider the effects of noise, air pollution, dirt or grease, fire hazard, interference with radio or television reception, and similar objections. All hazardous waste shall be disposed of properly by each Owner.

7.12. Liability of Owners for Damage to Common Area: The Owner of each Lot shall be liable to the Association for all damage to the Common Area improvements (including landscaping) caused by such Owner or the Owner's agents, occupants, invitees, or pets, except for that portion of damage covered by insurance carried by the Association. The responsible Owner shall be charged with the cost of repairing such damage (including interest thereon) as described in Section 5.1A.

7.13. Right to Lease:

A. Any Owner who wishes to lease his Lot must meet each of the following requirements, and the lease will be subject to these requirements whether they are included within the lease or not:

- (1) all leases must be in writing;

(2) the lease must be for the entire Lot and not merely parts of the Lot, unless the Owner remains in occupancy;

(3) all leases shall be subject in all respects to provisions of the Declaration, the Bylaws, and all Rules adopted by the Board;

(4) all Owners who lease their Lots shall promptly notify the Secretary of the Association in writing of the names of all tenants and members of tenants' family occupying such Lots and shall provide the Secretary of the Association with a complete copy of the lease. All Owners leasing their Lot shall promptly notify the Secretary of the Association of the address and telephone number where such Owner can be reached;

(5) no Owner shall lease his Lot for a period of less than thirty (30) days.

B. Any failure of a tenant to comply with the Declaration, Bylaws, and Association Rules, shall be a default under the lease, regardless of whether the lease so provides. In the event of any such default, the Owner immediately shall take all actions to cure the default including, if necessary, eviction of the tenant.

C. If any tenant is in violation of the provisions of the Declaration, Bylaws, or Rules of the Association, the Association may bring an action in its own name and/or in the name of the Owner to have the tenant evicted and/or to recover damages. If the court finds that the tenant is violating, or has violated any of the provisions of the Declaration, the Bylaws of the Association, or the Rules of the Association, the court may find the tenant guilty of unlawful detainer notwithstanding the fact that the Owner is not the plaintiff in the action and/or the tenant is not otherwise in violation of tenant's lease. For purposes of granting an unlawful detainer against the tenant, the court may assume that the Owner or person in whose name a contract (the lease or rental agreement) was made was acting for the benefit of the Association. The remedy provided by this subsection is not exclusive and is in addition to any other remedy or remedies which the Association has. If permitted by present or future law, the Association may recover all its costs, including court costs and reasonable attorneys' fees incurred in prosecuting the unlawful detainer action.

D. The Association shall give the tenant and the Owner notice in writing of the nature of the violation of the Declaration and/or Rules, and twenty (20) days from the mailing of the notice in which to cure the violation before the Association may file for eviction.

E. Each Owner shall provide a copy of the Declaration, Bylaws and all Rules of the Association to each tenant of his or her Lot. By becoming a tenant, each tenant agrees to be bound by the Declaration, the Bylaws and the Rules of the Association, and recognizes and accepts the right and power of the Association to evict a tenant for any violation by the tenant of the Declaration, the Bylaws, and Rules of the Association.

7.14. Commonly Metered Utilities: The Board may establish restrictions regarding the individual use of any utility on a common meter, and may impose reasonable charges for the individual use thereof.

7.15. Activities Causing Increase in Insurance Rates: Nothing shall be done or kept on any Lot or in any improvements constructed in any Lot, or in the Common Area, which will increase any applicable rate of insurance or which will result in the cancellation of insurance on any Lot or any part of the Common Area, or which would be in violation of any law.

7.16. Fuel Tanks: No fuel tanks will be allowed on any property.

7.17. Swimming Pools: Swimming pools shall be secured with fencing of no less than five (5) feet in height, approved by the City and in compliance with applicable laws. [CONFIRM]

7.18. Exterior Lighting: Exterior lighting shall be permitted within the subdivision only as approved by the Design Review Board of the City.

7.19. Maintenance of Lots and Improvements:

i) All Lots, whether occupied or unoccupied, shall at all times be maintained in such a manner as to prevent their becoming unsightly by reason of unattractive growth and/or the accumulation of rubbish, trash or debris. Shrubs, trees, grass and planting of every kind on any Lot, including setbacks and easement areas, shall be kept neatly trimmed at all times, properly cultivated, and free of trash, weeds and other unsightly material.

ii) All Residences, Residential Improvements and all other Improvements on a Lot shall at all times be kept in good condition and adequately painted or otherwise finished, and shall not be allowed to fall into a state of disrepair.

iii) If all or any portion of any Residence, any Residential Improvements or other Improvement on a Lot is damaged or destroyed by fire or other casualty it shall be the duty of the Owner of said Residence or other Improvement to rebuild, repair or reconstruct said Residence or structure in a timely manner, not exceeding one year, unless the Review Board grants an extension, if the Review Board finds extenuating circumstances justifying such an extension, which will restore it substantially to its appearance and condition immediately prior to the casualty. Any Owner whose Residence or other structure has suffered damage may apply to the Review Board for approval of reconstruction, rebuilding, or repair of the Residence or other structure in a manner which will provide for an exterior appearance and design different from that which existed prior to the date of the casualty. The Review Board shall grant such approval only if the design proposed by the Owner would result in a finished Residence or other structure in harmony of exterior design with other Residences on the properties.

iv) Sidewalks shall be maintained and repaired by the Owner of the Lot which abuts the sidewalk, including removal of soil or mud that may encroach upon the sidewalk.

v) In the event an Owner of any Lot shall fail to maintain his Lot and the improvements thereon as required herein, the Association's agents may, after notice and a hearing as provided in the Bylaws, enter the Lot and perform the necessary maintenance. The cost of such maintenance shall immediately be paid to the Association by the Owner of such Lot as a Reimbursement Charge, together with interest at the rate of twelve percent (12%) per annum (but not to exceed the maximum interest rate authorized by law) from the date the cost was incurred by the Association until the date the cost is paid by the Owner.

7.20. Drilling or Mining: No oil drilling, oil development operations, quarrying, or mining operations of any kind shall be permitted upon any Lot.

7.21. No Further Subdivision: No further subdivision shall be permitted of any Lot, provided, however, that Lot 11 may be subdivided into no more than two (2) Lots, provided the City approves a parcel map for the subdivision of Lot 11, and provided that the Bylaws and this Declaration are amended to provide for one (1) additional Lot, with both Lots into which Lot 11 is divided being entitled to membership in the Association and being subject to Assessments by the Association.

7.22. Emergency Vehicle Access Easements: There shall be established a 20' emergency vehicle access way easement and public access easement over and across portions of Lot 5 and Lot 6, as shown on the Map. The Owners of Lots 5 and 6 shall not in any way interfere with any such emergency vehicle access way or public access easement.

7.23. Fire Protection Measures: The Owners and the Association shall implement and carry out the mitigation measures attached hereto as Exhibit "A".

7.24. Temporary Structures: No structure of a temporary nature nor any house trailer, tent, tent-trailer, shack, garage, barn, basement, cellar, or other outbuildings or excavation shall be used at any time as a residence, either temporarily or permanently. Moveable tool storage sheds and outdoor toilets incidental to construction shall not be permitted to remain on any Lot in the Subdivision after construction is completed, or if not completed, for more than thirty (30) days after construction has closed.

7.25. No Excavation: No excavation or grading shall occur on any Lot which would change the natural or existing drainage of the Lot without the obtaining of applicable permit and review by the City Review Board. No excavating or grading shall be conducted on any Lot which would create an unsightly appearance that would be visible from any other Lot or the Private Road.

7.26. Water Quality Measures: The Owners of Lots shall take the following measures to insure protection of the water quality in the Project. No chlorinated swimming pool water shall be discharged into the storm drain system. Excessive landscape irrigation runoff and other contaminated water shall not be allowed to drain into the storm drain system. All storm drains shall be for rain water runoff only, no chemicals, oils or other waste shall be disposed of in the storm drains.

7.27. Private Street Access: The Private Street shall be accessible for police and other emergency vehicles to allow for enforcement of non-vehicle code violations, emergency situations and parking restrictions.

7.28. Radio and Television Antennas: No Owner shall construct, install and/or use and operate a radio and/or television antenna, satellite dish, other signal reception or transmission devices or related equipment in the Project, including without limitation, within any balconies, decks or patios, without the consent of the Board, which the Board shall have the discretion to withhold, subject to applicable legal requirements. In considering whether to approve applications for any such devices to be located within any balcony, deck or patio, the Board shall consider and give great weight to considerations of aesthetics, safety within the community, uniformity of appearance, and the requirements of any applicable laws. The Board shall, in acting upon requests for approval of a satellite dish or other signal reception or transmission devices comply with California Civil Code §1376 and FCC [Federal Communications Commission] regulations. The Board may adopt other Rules for installation and operation of any satellite dish or other signal reception or transmission devices that comply with California Civil Code §1376 and FCC regulations.

ARTICLE VIII. INSURANCE; DAMAGE OR DESTRUCTION; CONDEMNATION

8.1. Owner's Insurance: Each Owner shall obtain and maintain, at the Owner's sole expense, fire and casualty coverage for the Residence and other Residential Improvements on his or her Lot as may be required by any Mortgagee of the Lot and in no event less than the amount and type of fire and casualty insurance required to be obtained and maintained as determined by the Board, and with respect to amount, the coverage shall be for one hundred percent (100%) of current replacement cost of all improvements on his or her Lot. All such individually carried insurance shall contain a waiver of subrogation by the carrier as to the other Owners, the Association, Declarant, and the Mortgagees of such Lot. During the course of construction of the Residence and Residential Improvements on a Lot, the Owner shall obtain and maintain, or cause the contractor to obtain and maintain course of construction insurance insuring any improvements that are being constructed on a Lot.

8.2. Association Insurance: The Association shall obtain and maintain the following insurance:

A. Policies:

(1) a hazard policy insuring all improvements, equipment, and fixtures owned by the Association, unless the Board determines, in its sole discretion, that such insurance is not necessary.

(2) an occurrence version comprehensive general liability policy insuring the Association, its agents, the Owners and their respective family members, against liability incident to the ownership or use of the Common Area or any other Association owned or maintained real or personal property. The amount of general liability insurance that the Association shall carry at all times shall be not less than the minimum amounts required by California Civil Code § 1365.7 and 1365.9;

(3) workers' compensation insurance to the extent required by law (or such greater amount as the Board deems necessary). The Association shall obtain a Certificate of Insurance naming it as an additional insured in regard to workers' compensation claims from any independent contractor who performs any service for the Association, if the receipt of such a certificate is practicable;

(4) fidelity bonds or insurance covering officers, directors, and employees that have access to any Association funds;

(5) officers and directors liability insurance in the minimum amounts required by California Civil Code § 1365.7;

(6) insurance against water damage, and liability for non-owned and hired automobiles, and such other insurance as the Board in its discretion considers necessary or advisable; and

B. Amount, Term and Coverage. The amount, term and coverage of any policy required hereunder (including the type of endorsements, the amount of the deductible, the named insureds, the loss payees, standard mortgage clauses, notices of changes or cancellations, and the insurance company rating) shall satisfy the minimum requirements imposed for this type of

project by the Federal National Mortgage Association ("FNMA") and the Federal Home Loan Mortgage Corporation ("FHLMC") or any successor to either of those entities. If the FNMA or FHLMC requirements conflict, the more stringent requirement shall be met. If FNMA and FHLMC do not impose requirements on any policy required hereunder, the term, amount and coverage of such policy shall be no less than that which is customary for similar policies on similar projects in the area.

The Board shall adopt a policy regarding payment of deductibles on any insurance coverage. Unless the Board determines otherwise, the Association shall pay deductibles required under any insurance claim from Association funds, unless insufficient funds are available to the Association from the Association's accounts from funds borrowed by the Association in accordance with this Declaration, in which event the Association shall levy a Special Assessment, in accordance with sections 4.3B and 4.4 of this Declaration, with respect to the amount of any such deductible which exceeds funds available to the Association from Association funds or from borrowing.

C. Representation for Claims. Each Owner appoints the Association or any insurance trustee designated by the Association to act on behalf of the Owners in connection with all insurance matters arising from any insurance policy maintained by the Association, including without limitation, representing the Owners in any proceeding, negotiation, settlement or agreement.

D. Waiver of Subrogation. Any insurance maintained by the Association shall contain "waiver of subrogation" as to the Association and its officers, directors and Members, and the Owners and occupants of the Lots (including Declarant) and Mortgagees; and cross-liability and severability of interest coverage insuring each insured against liability to each other insured.

All individually owned insurance shall contain a waiver of subrogation as to the Association and its officers, directors and Members, and the Owners and occupants of the Lots and Mortgagees; and all Members are deemed to have waived subrogation rights as to the Association and/or other Members, whether or not their policies so provide.

E. Review of Policies. The Association shall periodically (and not less than annually) review all insurance policies maintained by the Association to determine the adequacy of the coverage and to adjust the policies accordingly.

F. Copies of Policies; Notice to Members. The Association shall make available to all Members a copy of the Association's policy to enable Members to insure their Lots without duplicating insurance carried by the Association and inadvertently triggering a co-insurance clause in the Association's policy referred to in Section 8.2.A(1). The Association shall distribute annually to the Members a summary of the Association's insurance policies as required by Civil Code section 1365(e) and as provided in the Bylaws. The Association, as soon as reasonably practical, shall notify its Members by first-class mail if any of the policies have been cancelled and not immediately renewed or restored or if there is a significant change such as a reduction in coverage or limits or an increase in the deductible for any policy. If the Association receives any notice of non-renewal of a policy, the Association immediately shall notify its Members if replacement coverage will not be in effect by the date the existing coverage will lapse.

To the extent that the information required to be disclosed, as described in Civil Code §1365(e), is specified in the insurance policy declaration page, the Association may meet its disclosure obligations by making copies of that page and distributing copies to all its Members.

G. Limitation on Liability. The Association, and its directors and officers, shall have no liability to any Owner or Mortgagee if, after a good faith effort, it is unable to obtain the insurance required hereunder, because the insurance is no longer available or, if available, can be

obtained only at a cost that the Board in its sole discretion determines is unreasonable under the circumstances, or the Members fail to approve any Assessment increase needed to fund the insurance premiums. In such event, the Board immediately shall notify each Member and any Mortgagee entitled to notice that the insurance will not be obtained or renewed.

H. Policies and Procedures Regarding the Filing and Processing of Claims:

The Board shall adopt policies and procedures regarding the filing and processing of claims for damage and destruction of Common Area improvements or any other matters covered by insurance maintained by the Association.

I. Owner's Insurance: Each Owner shall obtain and maintain, at the Owner's sole expense, fire and casualty coverage as may be required by any mortgagee of the Lot and in no event less than the amount and type of fire and casualty insurance required to be obtained and maintained as determined by the Board, and with respect to amount, the coverage shall be for one hundred percent (100%) of current replacement cost of all improvements on his Lot. All such individually carried insurance shall contain a waiver of subrogation by the carrier as to the other Owners, the Association, Declarant, and the mortgagees of such Lot.

8.3. Damage or Destruction: If any improvements or landscaping on any Lot other than a Common Area lot are damaged or destroyed by fire or other casualty, the Owner of such Lot shall repair or reconstruct the improvement in accordance with the original as-built plans and specifications, modified as may be required by applicable building codes and regulations in force at the time of such repair or reconstruction or as authorized by the Architectural Control Committee.

If Common Area improvements are damaged or destroyed by fire or other casualty, the improvements shall be repaired or reconstructed substantially in accordance with the original as-built plans and specifications, modified as may be required by applicable building codes and regulations in force at the time of such repair or reconstruction and subject to such alterations or upgrades as may be approved by the Architectural Control Committee, unless either of the following occurs: (1) the cost of repair or reconstruction is more than fifty percent (50%) of the current replacement costs of all Common Area improvements, available insurance proceeds are not sufficient to pay for at least eighty-five percent (85%) of the cost of such repairs or reconstruction, and three-fourths (3/4) of the total voting power of the Association residing in Members and their First Lenders vote against such repair and reconstruction; or (2) available insurance proceeds are not sufficient to substantially repair or reconstruct the improvements within a reasonable time as determined by the Board, a special Assessment levied to supplement the insurance fails to receive the requisite approval (if such approval is required) as provided in section 4.4, and the Board, without such approval by the Owners, is unable to supplement the insurance by borrowing on behalf of the Association sufficient monies to enable the improvements to be substantially repaired or reconstructed within a reasonable time.

In the case of damage or destruction of an individual home, whether by fire, earthquake or other causes, the Owner(s) of that Lot and home are responsible for the cost of reconstruction that is not covered by insurance or is within the deductible amount. If an Owner fails to pay the cost of reconstruction, the Association may elect to pay for the uninsured portion of the cost and shall have the right to assess the Owner(s) for the cost thereof and to enforce the Assessment as provided in this Declaration. In any case where insurance proceeds are pre-empted by any Owner's lender for application to said Owner's debt, the Association shall immediately impose an individual Assessment upon said Owner's Lot equal in amount to such preemption pursuant to section 4.3, and shall enforce such Assessment in accordance with sections 4.3 and 5.2E hereof. The proceeds of such Assessment or lien shall then be substituted for the pre-empted insurance proceeds.

A. Process for Repair or Reconstruction: If the improvement is to be repaired or reconstructed and the cost for repair or reconstruction is in excess of twenty-five percent (25%) of the current replacement cost of all the Common Area improvements, the Board shall designate a construction consultant, a general contractor, and an architect for the repair or reconstruction. All insurance proceeds, Association monies allocated for the repair or reconstruction, and any borrowings by the Association for the repair or reconstruction shall be deposited with a commercial lending institution experienced in the disbursement of construction loan funds (the "depository") as selected by the Board. Funds shall be disbursed in accordance with the normal construction loan practices of the depository that require as a minimum that the construction consultant, general contractor and architect certify within ten (10) days prior to any disbursement substantially the following:

(1) that all of the work completed as of the date of such request for disbursement has been done in compliance with the approved plans and specifications;

(2) that such disbursement request represents monies which either have been paid by or on behalf of the construction consultant, the general contractor or the architect and/or are justly due to contractors, subcontractors, materialmen, engineers, or other persons (whose name and address shall be stated) who have rendered or furnished certain services or materials for the work and giving a brief description of such services and materials and the principal subdivisions or categories thereof and the respective amounts paid or due to each of those persons in respect of such services and stating the progress of the work up to the date of the certificate;

(3) that the sum then requested to be disbursed plus all sums previously disbursed does not exceed the cost of the work insofar as actually accomplished up to the date of such certificate;

(4) that no part of the cost of the services and materials described in the foregoing section 8.2A(2) has been or is being made the basis for the disbursement of any funds in any previous or then pending application; and

(5) that the amount held by the depository, after payment of the amount requested in the pending disbursement request, will be sufficient to pay in full the costs necessary to complete the repair or reconstruction.

If the cost of repair or reconstruction is less than twenty-five percent (25%) of the current replacement cost of all the Common Area improvements, the Board shall disburse the available funds for the repair and reconstruction under such procedures as the Board deems appropriate under the circumstances.

The repair or reconstruction shall commence as soon as reasonably practicable after the date of such damage or destruction and shall be completed as quickly as is reasonably practicable after commencement of reconstruction, subject to delays that are beyond the control of the party responsible for making the repairs. The Owner of the damaged or destroyed improvement immediately shall take such steps as may be reasonably necessary to secure any hazardous condition and to screen any unsightly views resulting from the damage or destruction.

In the event the work required to maintain or to repair or restore damage or destruction involves work that is the responsibility of Owner and the Association as provided in sections 7.19 and 5.1A, then all of such work shall be directed by the Board, with the expense to be allocated

between Owner and the Association pursuant to sections 7.19 and 5.1A. If more than one Owner is involved, the expense to be paid by each Owner shall be apportioned by the Board. If the Association is involved in a dispute over the apportionment of such expenses, then the dispute shall be settled by arbitration pursuant to any appropriate alternative dispute process.

If the Association undertakes any work which section 7.19 requires an Owner to undertake, or any work which the Association is required to undertake at the expense of the Owner, the Board shall assess the Lot of the Owner for such work and shall so inform the Owner thereof in writing; provided, however, that the Assessment shall be reduced by the amount of any insurance proceeds paid to the Association as a result of damage to or destruction of the residence or the Lot involved. Such Assessment shall be a lien upon the Lot of the Owner and may be foreclosed, as set forth in section 4.9.

If the Association undertakes any work which section 7.19 requires an Owner to undertake, or any work which the Association is required to undertake at the expense of the Owner, the Board shall assess the Lot of the Owner for such work and shall so inform the Owner thereof in writing; provided, however, that the Assessment shall be reduced by the amount of any insurance proceeds paid to the Association as a result of damage to or destruction of the residence or the Lot involved. Such Assessment shall be a lien upon the Lot of the Owner and may be foreclosed, as set forth in Section 4.9.

B. Process If Repair or Reconstruction Not Undertaken: If the Common Area improvement is not required to be repaired or reconstructed in accordance with the foregoing, all available insurance proceeds shall be disbursed among the Owners of the damaged Lots and their respective Mortgagees in the same proportion that the Owners are assessed, subject to the rights of the Owners' Mortgagees, after first applying the proceeds to the cost of mitigating hazardous conditions on the Project, making provision for the continuance of public liability insurance to protect the interests of the Owners until the property can be sold, and complying with all other applicable requirements of governmental agencies.

8.3. Condemnation: If all or any part of a Lot (except the Common Area) is taken by eminent domain, the award shall be disbursed to the Owner of the Lot, subject to the rights of the Owner's Mortgagees. If the taking renders the Lot uninhabitable, the Owner shall be divested of any further interest in the Project, including membership in the Association, and the interest of the remaining Owners shall be adjusted accordingly. If all or any part of the Common Area is taken by eminent domain, the proceeds of condemnation shall be used to restore or replace the portion of the Common Area affected by condemnation, if restoration or replacement is possible, and any remaining funds, after payment of any and all fees and expenses incurred by the Association relating to such condemnation, shall be distributed among the Owners in the same proportion as such Owners are assessed, subject to the rights of Mortgagees. If necessary, the remaining portion of the Project shall be resurveyed to reflect such taking. The Association shall participate in the negotiations, and shall propose the method of division of the proceeds of condemnation, where Lots are not valued separately by the condemning authority by the court. The Association shall represent the Owners in any condemnation proceedings or in negotiations, settlements and agreements with the condemning authority for acquisition of the Common Area, or part of the Common Area(s).

ARTICLE IX. GENERAL PROVISIONS

9.1. Enforcement: The Association, or any Owner, shall have the right to enforce, by any proceeding at law or in equity, all restrictions, conditions, covenants, reservations, liens, and charges now or hereafter imposed by the provisions of this Declaration, the Articles and the Bylaws, and in such action shall be entitled to recover reasonable attorneys' fees as are ordered by the Court. Failure by the Association or by any Owner to enforce any covenant or restriction contained in this Declaration shall in no event be deemed a waiver of the right to do so thereafter.

9.2. Invalidity of Any Provision: Should any provision or portion of this Declaration be declared invalid or in conflict with any law of the jurisdiction where this Project is situated, the validity of all other provisions and portions hereof shall remain unaffected and in full force and effect.

9.3. Term: The covenants and restrictions of this Declaration shall run with and bind the Project, and shall inure to the benefit of and shall be enforceable by the Association or the Owner of any property subject to this Declaration, their respective legal representatives, heirs, successors and assigns, for a term of thirty (30) years from the date this Declaration is recorded, after which time they shall be automatically extended for successive periods of ten (10) years, unless an instrument in writing, signed by a majority of the then Owners of the Lots, has been recorded within the year preceding the beginning of each successive period of ten (10) years, agreeing to change the covenants and restrictions in whole or in part, or to terminate the same.

9.4. Amendments: Prior to close of escrow on the sale of the first Lot, Declarant may amend this Declaration, [with the consent of the Department of Real Estate of the State of California]. After sale of the first Lot, this Declaration may be amended only by the affirmative vote (in person or by proxy) or written consent of Members representing a majority of the total voting power of the Association, and a majority of the affirmative votes or written consent of Members other than the Declarant, or where the two (2) class voting structure is still in effect, a majority of each class of membership. However, the percentage of voting power necessary to amend a specific clause shall not be less than the prescribed percentage of affirmative votes required for action to be taken under that clause. Any amendment must be certified in a writing executed and acknowledged by the President or Vice President of the Association and recorded in the Recorder's Office of the County; further, all amendments affecting matters within the regulatory power of the City must be approved by the attorney for the City. No amendment shall adversely affect the rights of the holder of any Mortgage of record prior to the recordation of such amendment.

9.4.1. Amendments Regarding Initiation of Construction Defect Claims: Notwithstanding anything to the contrary contained in this Declaration, this Section 9.4.1 and Section 9.14 of this Declaration shall not be amended without the vote or approval by written ballot of at least (a) ninety percent (90%) of the voting power of the Members of the Association other than Declarant, and (b) at least ninety percent (90%) of the First Lenders.

9.5. Rights of First Lenders: No breach of any of the covenants, conditions and restrictions contained in this Declaration, nor the enforcement of any of its lien provisions, shall render invalid the lien of any First Lender on any Lot made in good faith and for value, but all of those covenants, conditions and restrictions shall be binding upon and effective against any Owner whose title is derived through Foreclosure or trustee's sale, or otherwise. Notwithstanding any provision in this Declaration to the contrary, First Lenders shall have the following rights:

A. Copies of Governing Documents: The Association shall make available to Owners and First Lenders, and to holders, insurers or guarantors of any First Mortgage, current copies of the Declaration, Bylaws, Articles or other Rules concerning the Project and the books, records and financial statements of the Association. "Available" means available for inspection and copying, upon request, during normal business hours or under other reasonable circumstances. The Board may impose a fee for providing the foregoing which may not exceed the reasonable cost to prepare and reproduce them.

B. Audited Statement: Any holder of a First Mortgage shall be entitled, upon written request, to have an audited financial statement for the immediately preceding fiscal year prepared at its expense if one is not otherwise available. Such statement shall be furnished within one hundred twenty (120) days of the Association's fiscal year-end.

C. Notice of Action: Upon written request to the Association, identifying the name and address of the Eligible Mortgage Holder or Eligible Insurer or Guarantor, and the Lot number or address, such Eligible Mortgage Holder or Eligible Insurer or Guarantor will be entitled to timely written notice of:

(1) any condemnation loss or any casualty loss which affects a material portion of the Project or any Lot on which there is a First Mortgage held, insured, or guaranteed by such Eligible Mortgage Holder or Eligible Insurer or Guarantor, as applicable;

(2) any default in performance of obligations under the Governing Documents or delinquency in the payment of Assessments or charges owed by an Owner of a Lot subject to a First Mortgage held, insured or guaranteed by such Eligible Mortgage Holder or Eligible Insurer or Guarantor, which remains uncured for a period of sixty (60) days;

(3) any lapse, cancellation or material modification of any insurance policy or fidelity bond maintained by the Association;

(4) any proposed action which would require the consent of a specified percentage of Eligible Mortgage Holders as specified in Section 9.5D.

The Association shall discharge its obligation to notify Eligible Mortgage Holders or Eligible Insurers or Guarantors by sending written notices required herein to such parties, at the address given on the current request for notice, in the manner prescribed by Section 9.9.

D. Consent to Action:

(1) Except as provided by statute or by other provision of the Governing Documents in case of substantial destruction or condemnation of the Project:

(a) the approval of Eligible Mortgage Holders holding Mortgages on Lots which have at least fifty-one percent (51%) of the votes of Lots subject to Eligible Mortgages, shall be required to terminate the legal status of the Project as a planned development Project after substantial destruction or condemnation of the Project occurs;

(b) the consent of Owners of Lots to which at least fifty-one percent (51%) of the votes of the Lots subject to Eligible Mortgages, shall be required to adopt any amendment of a material adverse nature to Eligible Mortgage Holders, including, without limitation, any of the following: (i) Assessment Liens, or the priority of Assessment Liens; (ii) reductions in

reserves for maintenance, repair, and replacement of Common Areas; (iii) convertibility of Lots into Common Areas or vice versa; (iv) imposition of any restrictions on an Owner's right to sell or transfer his Lot; (v) restoration or repair of the Project (after damage or partial condemnation) in a manner other than that specified in the Governing Documents; or (vi) any provisions that expressly benefit Mortgage holders, insurers, or guarantors;

(c) an Eligible Mortgage Holder who receives a written request to approve amendments without delivering or posting to the requesting party a negative response within sixty (60) days after the notice of the proposed amendment, shall be deemed to have approved such request, provided the notice has been delivered to the Eligible Mortgage Holder by certified or registered mail, return receipt requested.

(2) Except as provided by statute in case of condemnation or substantial loss to the Lots and/or common elements of the Project, unless the holder(s) of at least two-thirds (2/3) of the First Mortgages (based upon one (1) vote for each First Mortgage owned), or Owners of the individual Lots have given their prior written approval, the Association and/or the Owners shall not be entitled to:

(a) by act or omission, seek to abandon or terminate the Project as a planned development project (except for abandonment or termination provided by law in the case of substantial destruction by fire or other casualty or in the case of a taking by condemnation or eminent domain);

(b) [ALT: change the pro rata interest or obligations of any individual Lot for the purpose of: (i) levying Assessments or charges or allocating distributions of hazard insurance proceeds or condemnation awards, or (ii) determining the pro rata share of ownership of each Lot in the Common Area; provided that no Owner's undivided interest in the Common Area may be changed without the consent of that Owner;]

(c) partition or subdivide any Lot;

(d) [ALT: by act or omission, seek to abandon, partition, subdivide, encumber, sell or transfer the Common Area. (The granting of easements for public utilities or for other public purposes consistent with the intended use of the Common Area by the Project shall not be deemed a transfer within the meaning of this clause);]

(e) use hazard insurance proceeds for losses to any of the Project (whether to Lots or to Common Area) for other than the repair, replacement or reconstruction of such Project.

E. Right of First Refusal: The right of an Owner to sell, transfer, or otherwise convey his Lot shall not be subject to any right of first refusal or similar restriction, except in case of an option to repurchase retained by Declarant.

F. Reserves: Lot dues or charges shall include an adequate Reserve Fund for maintenance, repairs, and replacement of those improvements which the Association is obligated to maintain and that must be replaced on a periodic basis, and shall be payable in regular installments of Regular Assessments, rather than by Special Assessments.

G. Priority of Liens: Any Assessment Lien created under the provisions of this Declaration is expressly made subject and subordinate to the lien and encumbrance of any First Mortgage that encumbers all or any portion of the Project, or any Lot. Each First Lender who comes into possession of the Lot by virtue of Foreclosure of the Mortgage, or any purchaser at a Foreclosure, will take the Lot free of any claims for unpaid Assessments and fees, late charges, fines or interest levied in connection with such claims, against the Lot which accrue more than six (6) months prior to the time such First Lender or purchaser at a Foreclosure takes title to the Lot, except for fees or costs related to the collection of the unpaid Assessments, claims for a pro rata share of such Assessments or charges to all Lots including the mortgaged Lot, and except for Assessment Liens as to which a Notice of Delinquent Assessment has been recorded prior to the Mortgage.

H. Distribution of Insurance or Condemnation Proceeds: No provision of the Governing Documents gives an Owner, or any other party, priority over any rights of First Lenders in the case of a distribution to Owners of insurance proceeds or condemnation awards for losses to or taking of Lots and/or Common Area.

I. Status of Loan to Facilitate Resale: Any First Mortgage given to secure a loan to facilitate the resale of a Lot after acquisition by Foreclosure or by a deed in lieu of Foreclosure or by an assignment in lieu of Foreclosure, shall be deemed to be a loan made in good faith and for value and entitled to all of the rights and protections of Mortgages under this Declaration.

[If project includes "inclusionary zoning of BMR units, see new FNMA regs for declaration requirements.]

J. Contracts: Any agreement for professional management of the Project, or lease or any other contract providing for services of the developer, sponsor, or builder, may not exceed one (1) year. Any such agreement, contract, or lease, including a management contract entered into prior to passage of control of the Board to Lot purchasers, must provide for termination by either party for cause on thirty (30) days' written notice, or without cause and without payment of a termination fee or penalty on ninety (90) days' or less written notice.

K. Reserves: Association dues or charges shall include an adequate Reserve Fund for maintenance, repairs, and replacement of those improvements which the Association is obligated to maintain and that must be replaced on a periodic basis, and the Assessments therefor shall be payable in regular installments of Regular Assessments rather than by Special Assessments.

L. Priority of Liens: Any First Lender who obtains title to a Lot pursuant to the remedies provided in the Mortgage or Foreclosure of the Mortgage will not be liable for such Lot's unpaid Assessments and fees, late charges, fines or interest levied in connection with such claims which accrue prior to the acquisition of title to such Lot by the Mortgagee (except for claims for a pro rata share of such Assessments or charges resulting from a pro rata reallocation of such Assessments or charges to all Project Lots including the mortgaged Lot, and except for Assessment Liens as to which a Notice of Delinquent Assessment has been recorded prior to the Mortgage).

M. Distribution of Insurance or Condemnation Proceeds: No Owner or any other party shall have priority over any rights of First Lenders pursuant to their Mortgages in the case of a distribution to Owners of insurance proceeds or condemnation awards for losses to or taking of Common Area property [ALT. or of individual Lots].

N. Payment of Taxes or Insurance by Lenders: First Lenders may, jointly or singly, pay taxes or other charges which are in default and which may or have become a charge against the Common Area property and may pay overdue premiums on hazard insurance policies, or secure new hazard insurance coverage on the lapse of a policy, for such Common Area property, and First Lenders making such payment shall be owed immediate reimbursement therefor from the Association, provided that said lender(s) have given notice to the Association prior to the making of such payment(s) and the Association has failed to pay the same.

9.6. Limitation of Restrictions on Declarant: Declarant is undertaking the work of construction of a planned development and incidental improvements upon the Project. The completion of that work and the sale, rental, and other disposal of said Lots is essential to the establishment and welfare of the Project as a residential community. In order that work may be completed and the Project be established as a fully occupied residential community as rapidly as possible, nothing in this Declaration shall be understood or construed to:

A. Prevent Declarant, its contractors, or subcontractors from doing on the Project or any Lot, whatever is reasonably necessary or advisable in connection with the completion of said work; or

B. Prevent Declarant or its representatives from erecting, constructing and maintaining on the Project (except upon Lots owned by others), such structures as may be reasonable and necessary for developing the Project as a residential community and disposing of the same by sale, lease or otherwise; or

C. Prevent Declarant from conducting on the Project (except upon Lots owned by others) its business of completing the work and of establishing a plan of residential ownership and of disposing of the Project in Lots by sale, lease or otherwise; ;

D. Prevent Declarant from maintaining or displaying such sign(s), pennants and flag(s) on the Project (except upon Lots owned by others) as may be necessary for the sale, lease or disposition thereof; or

E. Subject Declarant to the architectural control provisions of Article VI for the construction of any residence or other improvements on the Project.

The foregoing rights of Declarant shall terminate upon sale of Declarant's entire interest in the Project. So long as Declarant, or its successors and assigns, owns one (1) or more of the Lots described herein, Declarant, or its successors and assigns, shall be subject to the provisions of this Declaration. Declarant shall make reasonable efforts to avoid disturbing the use and enjoyment of Lots and the Common Area by their Owners, while completing any work necessary to said Lots or Common Area.

9.7. Termination of Any Responsibility of Declarant: In the event Declarant shall assign or convey all of its rights, title and interest in and to the Project to any successor Declarant, then and in such event, Declarant shall be relieved of the performance of any further duties or obligations under this Declaration arising after such conveyance, and such successor Declarant

shall thereafter be obligated to perform all such duties and obligations of the Declarant. The obligations of Declarant to the City contained in the conditions of approval for the Project, which obligations are intended to be on-going after Declarant has sold its interest in the Project, shall become the obligations of the Association, and the Association shall indemnify Declarant against any liability arising out of the performance or non-performance of those obligations after Declarant has sold its interest in the Project and/or turned over the maintenance and management of the Project to the Association.

9.8. Owners' Compliance: Each Owner, tenant or occupant of a Lot shall comply with the provisions of this Declaration, and (to the extent they are not in conflict with the Declaration) the Articles and Bylaws, and the decisions and resolutions of the Association or the Board, as lawfully amended from time to time. Failure to comply with any such provisions, decisions, or resolutions shall be grounds for an action (1) to recover sums due, (2) for damages, (3) for injunctive relief, (4) for costs and attorneys' fees, or (5) any combination of the foregoing. All agreements and determinations lawfully made by the Association in accordance with the voting percentages established in this Declaration, or in the Articles or the Bylaws, shall be deemed to be binding on all Owners, their successors and assigns.

9.9. Notice: Any notice permitted or required by the Declaration or Bylaws may be delivered personally or by mail. If delivery is by mail, it shall be deemed to have been delivered seventy-two (72) hours after a copy of the same has been deposited in the United States mail, first-class or registered, postage prepaid, addressed to the person to be notified at the current address given by such person to the Secretary of the Board or addressed to the Lot of such person if no address has been given to the Secretary.

9.10. [OPTIONAL] Inspection and Acceptance of Common Area Improvements: The Association's inspection and acceptance of the Common Area Improvements shall be resolved in accordance with the following procedures:

A. Walk-Through Inspection: On completion of all or any portion of the Common Area Improvements in the Project ("Common Improvements"), Declarant shall notify the Association in writing. Within five (5) business days of the notice or such later date as is agreeable to the parties, representatives of the Association and Declarant shall meet for the purpose of inspecting and approving the Common Improvements and identifying any uncompleted or incorrectly completed items. With respect to those items that the parties agree need to be completed or corrected, Declarant shall have a reasonable time thereafter to complete or correct the items. No later than five (5) days after Declarant notifies the Association that it has completed or corrected the items, the items shall be reinspected.

B. Neutral Expert: If Declarant disagrees with any claim by the Association that a Common Improvement is not completed or is not completed correctly, Declarant may present the Association with a list of at least two qualified independent neutral experts to inspect the claim. The list shall contain a description of each expert's qualifications. If the Association will not accept any of the experts on the list, the Association shall notify the Declarant within five (5) days of receipt of the list and shall include in the notice a list of at least two experts from which Declarant may choose. The list shall contain a description of each expert's qualifications. If the Association fails to give the notice within the time required, Declarant may select one expert from Declarant's list. If the Association gives a timely response, Declarant shall have five (5) days to select an expert from the Association's list. If Declarant fails to respond in a timely manner, the Association may select an expert from Association's list. If the Declarant responds in a timely manner and will not accept any expert from the Association's list, either party immediately may request that a Special Master as

defined herein make the selection. The request shall include both lists, and the Special Master may select from either list or select an expert from outside the list. Any fees charged by the Special Master for this service shall be paid by the requesting party. For purposes herein, a "Special Master" shall be any person with at least three years' experience in construction defect litigation as a Special Master for a superior court in any county in California. The selection by the Special Master shall be binding on the parties.

(1) The reasonable fees of the neutral expert shall be paid by Declarant. Once a neutral expert has been selected, the expert shall be given immediate access to the Common Improvements to inspect the Common Improvements. The expert need only inspect the areas that are readily accessible and shall have no responsibility for inaccessible areas or any problems that are not readily apparent upon a visual inspection of accessible areas. Variations from strict adherence to plans and specifications as modified by any change orders shall not be characterized as defects if the variations are considered minor, are of no consequence, and reflect good workmanship and standard construction practices. The expert shall submit a report within thirty (30) days of completion of the inspection. The report shall constitute conclusive and binding evidence that, except as otherwise provided therein, and except for latent defects and building code violations, if any, the Common Improvements have been constructed in accordance with the plans and specifications as modified by any change orders. Declarant shall have a reasonable time thereafter to complete or correct any items noted in the report.

(2) On written request by either party, the expert shall reinspect such Common Improvements within thirty (30) days after the request to determine if such Common Improvements reasonably conform to the plans and specifications. Such reinspection shall be performed in the same manner as provided for in the first inspection and shall be limited only to those items contained in the report. Promptly after the reinspection is completed, the expert shall submit another written report (the "Reinspection Report") to Declarant and the Board specifying the defects specified in the report which have not been reasonably corrected, if any. If all such defects have been corrected, the Reinspection Report shall state that the Common Improvements reasonably conform to the plans and specifications described herein. The Reinspection Report shall constitute conclusive and binding evidence that, except as otherwise provided therein, the Common Improvements have been constructed in accordance with the plans and specifications described herein. Thereafter, Declarant shall have no further liability, duty or obligation with respect to such Common Improvements except to remedy any defects specified in the Reinspection Report. Additional inspections and Reinspection Reports may be made, if necessary, all in accordance with and with the same effect as provided hereinabove.

C. Acceptance and Release: Within ten (10) days after completion of the inspection described in subparagraph A, and no material items need to be corrected or completed or within ten days after all material items have been corrected and completed as evidenced by a report or Reinspection Report, the Board shall accept the Common Improvements, or the portion thereof covered by the report, in writing and, if applicable, shall release in writing any and all rights under any and all payments and performance, labor and material and completion bonds or other security arrangements (individually and collectively the "Bonds") pertaining to the Common Improvements, or portion thereof. For purposes herein, items shall be considered material items if the cost to correct or complete the items exceeds \$5000.

D. Bond Release Disputes: Any disputes regarding the release of the Bonds shall be resolved in accordance with the Bond escrow instructions or, if the instructions are not operative for any reason, in accordance with the provisions of Section 9.11.

9.11. Special Provisions Relating to Enforcement of Declarant's Obligation to Complete Common Area Improvements: Where the Project includes Common Area improvements which have not been completed prior to the close of escrow on the sale of the first Lots, and where the Association is obligee under a Bond or other arrangement (hereafter "Bond") to secure performance of the commitment of Declarant to complete said improvements, the Board shall consider and vote on the question of action by the Association to enforce the obligations under the Bond with respect to any improvement for which a notice of completion has not been filed within sixty (60) days after the completion date specified for those improvements in the planned construction statement appended to the Bond. If the Association has given an extension in writing for the completion of any Common Area improvement, the Board shall consider and vote on the aforesaid question if a notice of completion has not been filed within thirty (30) days after the expiration of the extension. A special meeting of Members of the Association for the purpose of: (i) voting to override a decision by the Board not to initiate action to enforce the obligations under the Bond; or (ii) to consider the failure of the Board to consider and vote on the question shall be held not less than thirty-five (35) days nor more than forty-five (45) days after receipt by the Board of a petition for such a meeting signed by Members representing five percent (5%) or more of the total voting power of the Association. At such special meeting a vote of a majority of Members of the Association other than the Declarant shall be required to take action to enforce the obligations under the Bond and a vote of a majority of the voting power of the Association, excluding Declarant, shall be deemed to be the decision of the Association, and the Board shall thereafter implement this decision by initiating and pursuing appropriate action in the name of the Association.

On satisfaction of the Declarant's obligation to complete the Common Area improvements, the Association shall acknowledge in writing that it approves the release of the Bond and shall execute any other documents as may be necessary to effect the release of the Bond. The Association shall not condition its approval of the release of the Bond on the satisfaction of any condition other than the completion of the Common Area improvements as described on the planned construction statement. Any dispute between the Declarant and the Association regarding the question of satisfaction of the Conditions for exoneration or release of the security shall, at the request of either party, be submitted to arbitration pursuant to Section 9.14 of this Declaration.

9.12. Special Provisions Relating to Enforcement of Declarant's Obligation to Pay Assessments: Where the Association is obligee under a Bond or other arrangement (hereafter "Bond") to secure performance of the commitment of Declarant to pay Assessments on Lots owned by Declarant, the Board shall consider and vote on the question of action by the Association to enforce the obligations under the Bond with respect to any of Declarant's Assessments which are delinquent for thirty (30) days. A special meeting of Members of the Association for the purpose of voting to override a decision by the Board not to initiate action to enforce the obligations under the Bond or such a meeting to consider the failure of the Board to consider and vote on the question shall be held not less than ten (10) days nor more than twenty (20) days after receipt by the Board of a petition for such a meeting signed by Members representing five percent (5%) or more of the total voting power of the Association. At such special meeting a vote of a majority of Members of the Association other than the Declarant shall be required to take action to enforce the obligations under the Bond and a majority of the voting power of the Association, excluding Declarant, shall be deemed to be the decision of the Association, and the Board shall thereafter implement this decision by initiating and pursuing appropriate action in the name of the Association.

Upon satisfaction of the Declarant's obligation to assure the availability of funds to pay Assessments upon unsold Lots as set forth in Title 10 Cal Code of Regs § 2792.9, the escrow holder holding the Bond shall return the Bond to Declarant, after delivery to said escrow holder of Declarant's written request for release of the Bond, and Declarant's written statement that [1]

Declarant has paid, as and when due, all Regular Assessments and Special Assessments levied by the Association against Lots owned by the Declarant and that [2] 80% of the Lots in the Project have been conveyed by Declarant, unless pursuant to Title 10 Cal Code of Regs § 2792.9, the Association delivers to said escrow holder its written objection to the return of the Bond to Declarant within forty (40) days after delivery of notice of Declarant's request from release and the statement to the Association. The Association shall not condition its approval of the release of the Bond on the satisfaction of any condition other than the payment of Assessments.

If the Association delivers to the escrow holder of the Bond a demand for remittance of the Bond or a portion thereof, or the proceeds thereof to the escrow holder of the Bond, which demand is accompanied by a written statement signed by an officer of the Association that the Declarant is delinquent in the payment of Regular Assessments or Special Assessments which have been levied by the Association against Lots owned by the Declarant, then all or some specified portion of the security as demanded shall be remitted to the Association upon the Declarant's failure to give the escrow holder within forty (40) days after receipt of delivery of the demand by the escrow holder, the subdivider's written objection to remittance of the security. Both the Declarant and the Association shall adhere and comply with the terms of escrow instructions with the escrow depository of the Bond, which shall be in the form approved by the Department of Real Estate, with respect to the holding of the Bond, the return or remittance of the Bond and other disposition of matters set forth in said escrow instructions with respect to the Bond. Any dispute between the Declarant and the Association regarding the question of satisfaction of the conditions for exoneration or release of the security shall, at the request of either party, be submitted to Arbitration as provided in Section 9.14.E hereof.

9.13. Fair Housing: No Owner shall, either directly or indirectly, forbid or restrict the conveyance, encumbrance, leasing, or mortgaging, or occupancy of his Lot to any person of a specified race, sex, sexual orientation, age, marital status, color, religion, ancestry, physical handicap, sexual orientation, or national origin.

9.14. Dispute Resolution: The Board is authorized to resolve any civil claim or action through alternative dispute resolution proceedings such as mediation, binding arbitration, or non-binding arbitration proceedings.

A. Claims for Declaratory Relief or Enforcement of Governing Documents: Prior to the filing of a civil action solely for declaratory relief or injunctive relief to enforce the Governing Documents, or for declaratory, injunctive or writ relief in conjunction with a claim for monetary damages not in excess of Five Thousand Dollars (\$5,000), the Board, or any Owner who seeks such relief, shall first endeavor to submit the matter to alternative dispute resolution in compliance with the provisions of California Civil Code Sections 1369.510-1369.580. The Board shall comply with the requirements of California Civil Code Section 1369.590 by providing Members of the Association annually with a summary of Article 2 (commencing with Civil Code Section 1369.510 of Chapter 7 of Title 6 (Division 2, part 4) of the California Civil Code, including the following language: "Failure of a Member of the Association to comply with the alternative dispute resolution requirements of Section 1369.520 of the Civil Code may result in the loss of your right to sue the Association or another Member of the Association regarding enforcement of the Governing Documents or the applicable law"

B. Design or Construction Defect Claims:

Actions by the Association pertaining to or based upon a claim for defects in the design or construction of improvements within the Project against the Declarant, or any architect, engineer or other consultant, or any contractor, subcontractor or materials supplier engaged by or on behalf of Declarant for the design and/or construction of the Project, or any element thereof, or otherwise defined in Civil Code sections 896 or 897 as an Actionable Defect ("Claim"), shall be resolved and administered in accordance with Civil Code sections 895 through 945.5, and Civil Code sections 1375 and 1375.05, as such sections may be amended, revised or superseded, from time to time.

If a Claim is subject to pre-litigation procedures in Civil Code sections 910 through 938, or any successor statutes, each Owner, and the Declarant, prior to filing any civil action, arbitration or action in judicial reference regarding such Claim shall comply with the prelitigation procedures of Civil Code sections 910 through 938. Notices of Claims shall specify all of the matters as set forth in Civil Code section 1368.5 and/or Civil Code sections 910 through 938, as applicable, and any successor statutes or laws.

The Association and not the individual Members shall have the power to pursue any Claims for alleged construction defects in the Common Area. Any recovery by the Association with respect to any damage to or defect in the Common Area shall be utilized solely for the purpose of paying for the costs of obtaining the recovery and for correcting such damage or defect.

If the Claim is not resolved by and pursuant to the prelitigation procedures under Civil Code sections 910 through 938, subject to the provisions of Civil Code section 1375 and 1375.05, then notwithstanding the provisions of California Code of Civil Procedure Section 1298.7, the Claim shall be resolved in accordance with the provisions of Section 9.14.D of this Declaration (Judicial Reference) and Section 9.14.E of this Declaration (Arbitration of Disputes).

C. Notices to Members of Legal Proceedings Against Declarant. In accordance with Civil Code Section 1368.5, at least 30 days prior to filing any civil action, including arbitration, against Declarant or other developer of the Project for alleged damage to (i) the Common Area, (ii) all or portions of Lots which the Association is required to maintain, or (iii) the Lots which arises from or is integrally related to alleged damage to the Common Area or all or portions of the Lots which the Association is required to maintain, the Board shall provide written notice to each Member specifying each of the following:

- (1) That a meeting will take place to discuss problems that may lead to the filing of a civil action;
- (2) The options, including civil actions, that are available to address the problems; and
- (3) The time and place of the meeting.
- (4) If the Association has reason to believe that the applicable statute of limitations will expire before the Association is able to give notice, hold the meeting and file the civil action, the Association may file the civil action first and then give the notice within thirty (30) days after filing of the action.

D. Judicial Reference for Certain Disputes: For any action by the Association or any Owner against the Declarant, any architect, engineer or other consultant, or any contractor, subcontractor or materials supplier engaged by or on behalf of Declarant for the design and/or construction of the Project, or any element thereof ("Developer Parties"), subject to the provisions of Civil Code sections 895 through 938, Civil Code section 1375 and Civil Code section 1375.05, or any other action by the Association or any Owner against the Declarant, except as otherwise provided herein, such claim shall be submitted to Judicial Reference as hereinafter provided:

(1) The dispute shall be submitted to binding general judicial reference pursuant to California Code of Civil Procedure Sections 638 through 645.2, or any successor statutes thereto pertaining to proceedings under judicial reference ("Judicial Reference"). The parties shall cooperate in good faith to ensure that all necessary and appropriate parties are included in the Judicial Reference proceeding. Declarant shall not be required to participate in the Judicial Reference proceeding unless it is satisfied that all necessary and appropriate parties will participate. The parties shall share the fees and costs of the Referee for the Judicial Reference proceeding as determined by the Referee.

(2) The Referee shall have the authority to try all issues, whether of fact or law, and to report a statement of decision to the court. The parties shall use the procedures adopted by Judicial Arbitration and Mediation Services ("JAMS") for judicial reference (or any other entity offering judicial reference dispute resolution procedures as may be mutually acceptable to the parties), provided that the following rules and procedures shall apply in all cases unless the parties agree otherwise:

(a) If the Declarant is a party to the Judicial Reference, then any fee to initiate the Judicial Reference shall be paid by Declarant, provided however, that the cost of the judicial reference shall ultimately be borne as determined by the Referee;

(b) The proceedings shall be heard in the County;

(c) The Referee must be a neutral and disinterested party who is a retired judge or a licensed attorney with at least ten (10) years' experience in relevant real estate matters;

(d) Any dispute regarding the selection of the Referee shall be resolved by JAMS or the entity providing the reference services, or, if no entity is involved, by the court with appropriate jurisdiction;

(e) The Referee may require one or more pre-hearing conferences;

(f) The parties shall be entitled to discovery, and the Referee shall oversee discovery and may enforce all discovery orders in the same manner as any trial court judge;

(g) A stenographic record of the Judicial Reference proceedings shall be made, provided that the record shall remain confidential except as may be necessary for post-hearing motions and any appeals;

(h) The Referee's statement of decision shall contain findings of fact and conclusions of law to the extent applicable;

(i) The Referee shall have the authority to rule on all post-hearing motions in the same manner as a trial judge;

(j) The Referee shall be authorized to provide all recognized remedies available in law or equity for any cause of action that is the basis of the Judicial Reference; and

(k) The statement of decision of the Referee upon all of the issues considered by the Referee shall be binding upon the parties, and upon filing of the statement of decision with the clerk of the court, or with the judge where there is no clerk, judgment may be entered thereon. The decision of the Referee shall be appealable as if rendered by the court.

(l) If submission of a disputed matter referenced in this Section 9.14D to Judicial Reference is not permitted under the then applicable law, then notwithstanding California Code of Civil Procedure Section 1298.7, if the dispute is not resolved through mediation, each Owner, the Association and Declarant shall resolve such dispute exclusively through binding arbitration conducted in accordance with the Judicial Arbitration and Mediation Services ("JAMS") pursuant to Section 9.14.E of this Declaration.

(3) Judicial Reference shall only proceed for any matter that is subject to the requirements of California Civil Code sections 1369.510-1369.580 after the parties have attempted to reasonably comply with the alternative dispute resolution requirements set forth in California Civil Code sections 1369.510-1369.580, as same may be amended from time to time.

(4) Notwithstanding the foregoing, any dispute under sections 9.11 and 9.12 of this Declaration between the Declarant and the Association regarding the question of satisfaction of the conditions for exoneration or release of the security shall, at the request of either party, be submitted to arbitration pursuant to Section 9.14E of this Declaration.

E. Arbitration of Disputes: If a dispute is the subject of binding arbitration under this Declaration, the following shall apply:

(1) costs and fees of the arbitration, including ongoing costs and fees of the arbitration shall be paid as agreed by the parties, and, if the parties cannot agree, as determined by the arbitrator; provided, however, if the Declarant is a party to the arbitration, then any fee to initiate arbitration shall be paid by Declarant, but the cost of arbitration shall ultimately be borne as determined by the arbitrator;

(2) a neutral and impartial individual shall be appointed to serve as arbitrator, with the arbitrator to be selected by mutual agreement of the parties. If the parties are unable to agree on an arbitrator within fifteen (15) days after any party initiates the arbitration, a neutral and impartial arbitrator shall be selected by the JAMS. In selecting the arbitrator, the provisions of §1297.121 of the Code of Civil Procedure shall apply. An arbitrator may be challenged for any of the grounds listed in §1297.121, or in §1297.124 of the Code of Civil Procedure;

(3) venue of the arbitration to be in the County;

(4) the arbitration shall commence in a prompt and timely manner in accordance with (i) the Commercial Rules of the JAMS, or if the rules do not specify a date by which arbitration is to commence, then (ii) by a date agreed upon by the parties, and if they cannot agree as to a commencement date, (iii) a date determined by the arbitrator. The arbitrator shall apply

California substantive law in rendering a final decision. The arbitrator shall have the power to grant all legal and equitable remedies and award compensatory damages. When the arbitrator is prepared to make the award, the arbitrator shall first so inform the parties, who shall have ten (10) days to attempt to resolve the matter by a binding agreement between them. If the parties resolve the matter, the arbitrator shall not make any award. If the parties do not so resolve the matter within the ten (10) day period, the arbitrator shall make the award on the eleventh day following the arbitrator's notice of being prepared to make the award;

(5) the arbitration shall be conducted in accordance with the Commercial Rules of the JAMS;

(6) the arbitration shall be conducted and concluded in a prompt and timely manner;

(7) the arbitrator shall be authorized to provide all recognized remedies available in law or equity for any cause of action that is the basis of arbitration;

(8) A judgment upon the award rendered by the arbitrator may be entered in any court having jurisdiction or application may be made to such court for judicial acceptance of the award and an order of enforcement. The parties agree to be bound by the decision of the arbitrator, which shall be final and non-appealable.

(9) Preliminary Procedures. If state or federal law requires an Owner, the Association or Declarant to take steps or procedures before commencing an action in arbitration, then the Owner, the Association or Declarant must take such steps or follow such procedures, as the case may be, before commencing the arbitration. For example, any claim or Disputes pursuant to California Civil Code Section 895 et seq., as hereafter amended may be subject to the non-adversarial procedures set forth in California Civil Code Section 910 through 938, prior to the initiation of any arbitration. In addition, nothing contained herein shall be deemed a waiver or limitation of the provisions of California Civil Code Sections 1368.5, 1375, 1375.05 or 1375.1;

(10) Participation by Other Parties. An Owner, the Association and Declarant, to such extent any such party is defending a claim in the arbitration, may, if it chooses, have all necessary and appropriate parties included as parties to the arbitration;

(11) Federal Arbitration Act. Because many of the materials and products incorporated into the home are manufactured in other states, the development and conveyance of the Property evidences a transaction involving interstate commerce and the Federal Arbitration Act (9 U.S.C. §1 et seq.) now in effect and as it may be hereafter amended will govern the interpretation and enforcement of the arbitration provisions set forth herein;

(12) ARBITRATION OF DISPUTES. BY EXECUTING THIS DECLARATION, DECLARANT AND BY ACCEPTING A DEED TO ANY PORTION OF THE PROPERTY, EACH OWNER AND THE ASSOCIATION SHALL BE DEEMED TO HAVE AGREED TO HAVE ANY DISPUTE DECIDED BY NEUTRAL ARBITRATION IN ACCORDANCE WITH THE FEDERAL ARBITRATION ACT AND THE CALIFORNIA ARBITRATION ACT, TO THE EXTENT THE CALIFORNIA ARBITRATION ACT IS CONSISTENT WITH THE FEDERAL ARBITRATION ACT, AND DECLARANT, THE ASSOCIATION AND EACH OWNER ARE GIVING UP ANY RIGHTS DECLARANT, THE ASSOCIATION AND EACH OWNER MIGHT POSSESS TO HAVE THE DISPUTE LITIGATED IN A COURT TRIAL. DECLARANT, THE ASSOCIATION AND EACH OWNER ARE GIVING UP JUDICIAL RIGHTS TO DISCOVERY AND APPEAL, UNLESS THOSE

RIGHTS ARE SPECIFICALLY INCLUDED IN THIS "ARBITRATION OF DISPUTES" PROVISION. IF DECLARANT, THE ASSOCIATION OR ANY OWNER REFUSES TO SUBMIT TO ARBITRATION AFTER AGREEING TO THIS PROVISION, DECLARANT, THE ASSOCIATION OR SUCH OWNER MAY BE COMPELLED TO ARBITRATE UNDER THE AUTHORITY OF THE CALIFORNIA CODE OF CIVIL PROCEDURE.

9.15. Number; Gender. The singular and plural number and the masculine, feminine and neuter gender shall each include the other where the context requires

9.16. "General Rules": This Declaration shall be liberally construed to effectuate its purpose of creating a uniform plan for creating and operating a residential planned development and maintaining the Common Area. As used in this Declaration, the singular includes the plural and the plural the singular. The masculine, feminine and neuter each includes the other, unless the context dictates otherwise.

9.17. "Articles, Sections and Exhibits": The Article and Section headings have been inserted for convenience only and may not be considered in resolving questions of interpretation or construction. Unless otherwise indicated, any references in this Declaration to articles, sections or exhibits are to Articles, Sections and Exhibits of this Declaration. Exhibit "A" attached to this Declaration is incorporated herein by this reference.

9.18. "Priorities and Inconsistencies": If there are conflicts or inconsistencies between this Declaration and the Articles, Bylaws and Rules, then the provisions of this Declaration shall prevail.

9.19. "Severability": The provisions of this Declaration are independent and severable. A determination of invalidity or partial invalidity or unenforceability of any one provision of this Declaration by a court of competent jurisdiction does not affect the validity or enforceability of any other provisions of this Declaration.

9.20. "Statutory References": All references made in this Declaration to statutes are to those statutes as currently in effect or to subsequently enacted replacement statutes.

IN WITNESS WHEREOF, the undersigned, being the Declarant herein, has executed this Declaration this ___ day of _____, 20__.

CROWN-NEWTON, LLC,
a California limited liability company

By: _____

Its: _____

STATE OF CALIFORNIA

)
) ss.
)

COUNTY OF

On this ____ day of _____, 20__, before me, _____,
a notary public for the state, personally appeared _____, known to me or
proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are
subscribed to the within instrument, and acknowledged to me that he/she/they executed the same in
his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the
person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Notary Public, State of California

EXHIBIT "A"
FIRE PROTECTION MEASURES

APPENDIX E
HERITAGE TREE SURVEY, TREE PROTECTION PLAN

06/29/06 05:00:03

06/29/06 05:00:03

Heritage Tree Survey & Tree Protection Plan

FOR

Stuart Newton

Roberts Road
Pacifica, CALIFORNIA

Prepared by:

Howard Linacre,
Certified Arborist I.S.A.: WC-5304
451 Norfolk Drive
Pacifica Ca, 94044

Bay Area Arborist Co-op Inc. CA #707545
Howard Linacre, Certified Arborist I.S.A. WC-5304
451 Norfolk Drive
Pacifica, California 94044
Home (650) 355-1302 Cell (415) 710-8353
Fax (415) 594-9091
<mailto:Earwigz@speakeasy.net>

April 23rd, 2006

Stuart Newton
Open Door Properties, Inc
338 Horizon Way, Suite 200
Pacifica, CA 94044
P: 650.355.3838 F: 650.355.4950 C: 650.678.6533
<mailto:stuart@odpinc.biz>

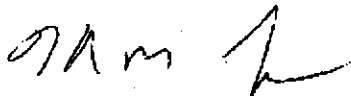
Re: Tree Survey of all Heritage Trees and other existing trees that need to be removed, so a new roadway can be constructed on an undeveloped lot above Roberts Road.

Dear Mr. Newton,

As you requested I went out to the site above Roberts Road in Pacifica to survey and inspect the Heritage Trees and all other trees that need to be removed for the new roadway. I also counted and inspected all the trees on the site. A tree protection plan will be described for all Heritage Trees and any other trees that are suitable for preservation on this site. I took the plans you gave me and used a Google Earth image to help determine the approximate locations of these Heritage Trees inside the boundaries of your property above Roberts Road.

I've concluded that there are a total of 12 Heritage trees and 58 other trees that need to be removed for the construction of the new roadway. I measured and tagged these trees on site and have marked them on the site plan you gave to me. I also counted and inspected all other trees on this and the neighboring properties. I've concluded that none of the 11 Monterey Pine (*Pinus radiata*) Heritage Trees are worthy of preservation. All the pine trees are dead or diseased. There is 1 Monterey Cypress (*Cupressus macrocarpa*) that is considered a Heritage Tree, however this tree also has a disease and is not worthy of preservation. This proposed development is designed to limit environmental impact. Two roads will be constructed and 13 houses will be built on separate lots within this parcel. A proposed bird, butterfly, and natural habitat areas will be maintained. The trees I've indicated in the report are the 12 Heritage Trees that need to be removed for the construction of the new roadway. I believe that almost all of the existing Monterey Pine trees on site may need to be removed due to their poor health and susceptibility to Pine Pitch Canker Disease (*Fusarium circinatum*). I'll talk more about this disease in the report. I would recommend a new planting of native tree species to enhance natural habitat. If you have any other questions, please give me a call. Thank you.

Sincerely,



Bay Area Arborist Co-op Inc. CA #707545
Howard Linacre, Certified Arborist I.S.A. WC-5304
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Pacifica, California 94044
Home (650) 355-1302 Cell (415) 710-8353
Fax (415) 594-9091
<mailto:Earwigz@speakeasy.net>

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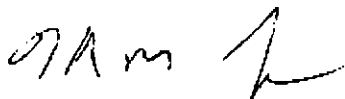
Re: Tree Survey of all Heritage Trees and other existing trees that need to be removed, so a new roadway can be constructed on an undeveloped lot above Roberts Road.

Dear Mr. Newton,

As you requested I went out to the site above Roberts Road in Pacifica to survey and inspect the Heritage Trees and all other trees that need to be removed for the new roadway. I also counted and inspected all the trees on the site. A tree protection plan will be described for all Heritage Trees and any other trees that are suitable for preservation on this site. I took the plans you gave me and used a Google Earth image to help determine the approximate locations of these Heritage Trees inside the boundaries of your property above Roberts Road.

I've concluded that there are a total of 12 Heritage trees and 58 other trees that need to be removed for the construction of the new roadway. I measured and tagged these trees on site and have marked them on the site plan you gave to me. I also counted and inspected all other trees on this and the neighboring properties. I've concluded that none of the 11 Monterey Pine (*Pinus radiata*) Heritage Trees are worthy of preservation. All the pine trees are dead or diseased. There is 1 Monterey Cypress (*Cupressus macrocarpa*) that is considered a Heritage Tree, however this tree also has a disease and is not worthy of preservation. This proposed development is designed to limit environmental impact. Two roads will be constructed and 13 houses will be built on separate lots within this parcel. A proposed bird, butterfly, and natural habitat areas will be maintained. The trees I've indicated in the report are the 12 Heritage Trees that need to be removed for the construction of the new roadway. I believe that almost all of the existing Monterey Pine trees on site may need to be removed due to their poor health and susceptibility to Pine Pitch Canker Disease (*Fusarium circinatum*). I'll talk more about this disease in the report. I would recommend a new planting of native tree species to enhance natural habitat. If you have any other questions, please give me a call. Thank you.

Sincerely,



Howard Linacre, C.A. I.S.A. WC-5304

Re: Tree Survey of all Heritage Trees and other existing trees that need to be removed, so a new roadway can be constructed on an undeveloped lot above Roberts Road.

Objectives:

#1 Locate and identify all Heritage Trees on site and to protect any trees that I believe are suitable for preservation.

#2 Cut down and remove all dead, diseased, and nonnative trees on this property. Cut down and remove all trees that stand in the way of the proposed new roadway.

Site Conditions: This site is a mostly barren, windy hilltop. The soil appears to be mostly of rock and heavy clay. The vegetation is coastal chaparral consisting of scrub brush, grasses, poison oak, and wildflowers, with a few scattered trees or groups of small windswept trees.

Description of trees: On the entire site there are a total of 212 trees. There are only 29 trees that are considered Heritage Trees. 12 of these Heritage Trees and 58 other trees stand in the way of the proposed roadway. All Heritage Trees to be removed for this roadway were measured at 24" above natural grade, and were 16" or more in diameter. I marked and numbered these trees on site and approximately where they stand on the scaled site plan. All the Heritage Trees counted are Monterey Pine (*Pinus radiata*) except for 1 tree that is a Monterey Cypress (*Cupressus macrocarpa*). The other 58 trees and saplings are almost all Monterey Pine and a few, Monterey Cypress. There are a few native Toyon, but they are not very significant in size. Monterey Pine and Monterey Cypress are not native trees to this area. They are native to the Monterey Peninsula, but have naturalized in Northern California. A total of 70 trees need to be removed for the construction of the roadway.

Tree Health: Monterey Cypress. There is 1 tree of this species considered a Heritage Tree that needs to be removed. This tree too has a disease that causes a bleeding of sap on the trunks and stems. It is not the same as *Fusarium*, but it kills the tree in the same type of manner. There are some healthier small Monterey Cypress trees scattered on the ridge top.

Tree Health: Monterey Pine. It is very unfortunate for all these Monterey Pine Heritage Trees, and all other Monterey Pine trees on this site. All the trees of heritage stature are dead or dying. They have all been devastated by a vascular disease commonly known as Pine Pitch Canker disease or (*Fusarium circinatum*), a bacterial infection constricts the flow of nutrients up and down the tree and kills branches, roots, and stems. It appears that 90% of all the pine species on the site show the symptoms of this disease. These symptoms are the oozing of pitch or sap on the branches, roots, and stems, as well as dieback on the branch tips or death of the entire branch, root, or stems.

Suitability for Preservation: Trees preserved on development sites must be carefully selected to make sure they may survive construction impacts, adapt to a new environment and perform well in the landscape. The goal is for long-term health, structural stability, and longevity. I have found that none of these Heritage Trees or any of the Monterey Pine are worthy of preservation. They all should be removed as soon as possible. All nonnative trees should also be removed as soon as possible. I recommend planting new native species such as, Coastal Redwood, Coastal Willow, Big Leaf Maple, Buckeye, Live Oak, Toyon, Madrone, Douglas Fir, Ceanothus, Manzanita, California

Handwritten signature

Redbud, California Bay laurel, or California Black Cherry. I believe that all of these species would be a benefit to the landscape and provide habitat for native plants, insects, birds, and animals.

Re: Heritage Trees that need to be removed for proposed new roadway.

All trees were measured at 24" above natural grade

Species: #1 Monterey Pine (*Pinus radiata*)

Size: Diameter = 38" Circumference = 82" Canopy = 18'

Aesthetics: This tree is dying from Pine Pitch Canker

Recommendations: Cut to ground and plant a more suitable tree.

Species: #2 Monterey Pine

Diameter = 25" Circumference = 63" Canopy = 12'

Aesthetics: This tree is dying from Pine Pitch Canker

Recommendations: Cut to ground and plant a more suitable tree.

Species: #3 Monterey Pine

Diameter = 38" Circumference = 68" Canopy = 18'

Aesthetics: This tree is dying from Pine Pitch Canker

Recommendations: Cut to ground and plant a more suitable tree.

Species: #4 Monterey Cypress (*Cupressus macrocarpa*) This tree is double stemmed above 24" at grade.

1st stem: Diameter = 16" Circumference = 40" Canopy = 12'

2nd stem: Diameter = 32" Circumference = 70" Canopy = 6'

Aesthetics: This tree has Cypress Cankers on it main trunk and branches.

Recommendations: Cut to ground and plant a more suitable tree.

Species: #5 Monterey Pine

Diameter = 32" Circumference = 70" Canopy = 14'

Aesthetics: This tree is dying from Pine Pitch Canker

Recommendations: Cut to ground and plant a more suitable tree.

Species: #6 Monterey Pine

Diameter = 24" Circumference = 52" Canopy = 14'

Aesthetics: This tree is dying from Pine Pitch Canker

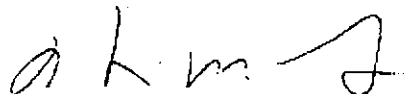
Recommendations: Cut to ground and plant a more suitable tree.

Species: #7 Monterey Pine

Diameter = 18" Circumference = 41" Canopy = 14'

Aesthetics: This tree is dying from Pine Pitch Canker

Recommendations: Cut to ground and plant a more suitable tree.



Species: #8 Monterey Pine This tree is quadruple stemmed above 24" at grade. Three significant stems were measured. They are more than 16" in diameter.

1st stem: Diameter = 42" Circumference = 90" Canopy = 18'

2nd stem: Diameter = 36" Circumference = 75" Canopy = 18'

3rd stem: Diameter = 32" Circumference = 68" Canopy = 18'

Aesthetics: This tree is dying from Pine Pitch Canker

Recommendations: Cut to ground and plant a more suitable tree.

Species: #9 Monterey Pine

Diameter = 17" Circumference = 38" Canopy = 6'

Aesthetics: This tree is dying from Pine Pitch Canker

Recommendations: Cut to ground and plant a more suitable tree.

Species: #10 Monterey Pine

Diameter = 17" Circumference = 37" Canopy = 8'

Aesthetics: This tree is dying from Pine Pitch Canker

Recommendations: Cut to ground and plant a more suitable tree.

Species: #11 Monterey Pine

Diameter = 16" Circumference = 34" Canopy = 10'

Aesthetics: This tree is dying from Pine Pitch Canker

Recommendations: Cut to ground and plant a more suitable tree.

Species: #12 Monterey Pine

Diameter = 16" Circumference = 31" Canopy = 9'

Aesthetics: This tree is dying from Pine Pitch Canker

Recommendations: Cut to ground and plant a more suitable tree.

Howard Linacre, C.A. I.S.A. WC-5304

415-710-8353 cell

415-594-9090 fax



Tree Survey Addendum

FOR

Stuart Newton

Roberts Road
Pacifica, CALIFORNIA

Prepared by:

Howard Linacre,
Certified Arborist I.S.A. WC-5304

Bay Area Arborist Co-op Inc. CA #707545
Howard Linacre, Certified Arborist I.S.A. WC-5304
451 Norfolk Drive
Pacifica, California 94044
Home (650) 355-1302 Cell (415) 710-8353
Fax (415) 594-9091
<mailto:Earwigz@speakeasy.net>

December 6, 2006

Stuart Newton
Open Door Properties, Inc
338 Horizon Way, Suite 200
Pacifica, CA 94044
P: 650.355.3838 F: 650.355.4950 C: 650.678.6533
<mailto:stuart@odpinc.biz>

Re: Addendum to Heritage Tree Survey

Dear Mr. Newton,

As you requested I went out to the site again above Roberts Road in Pacifica to survey and inspect the Heritage Trees and all other existing trees that are proposed to be removed from site building sites and from the construction of a new proposed roadway. I took the new plans you gave me and used a Google Earth image to help determine the approximate locations of all the trees requested within these zones. A total of 125 trees

were counted. All trees on site are Monterey Pine except for only 3 Monterey Cypress. Out of 125 trees, only 12 are considered Heritage Trees. 11 of the Heritage Trees are Monterey Pine and 1 is a Monterey Cypress.

I concluded that 9 of the Heritage Trees within these zones must be removed for construction. They are 8 Monterey Pine and 1 Monterey Cypress. The 3 other Heritage Trees stand in a private open space area zone. These 3 Heritage Trees are Monterey Pine. They are diseased with *Fusarium circinatum* and should be removed too. 90% of all the Monterey Pine trees on site are diseased. Many are in worst condition, since my last visit to the site in April, 2006. I outline in my report each zone and the number and size of the trees within each zone that need to be removed. 46 trees are in a zone for open space. They all should be removed too, because of their diseased condition. Zones are broken down by lot number or letter, new roadway, & open space. The species, heritage status, & quantity are reported for each zone. This is an addendum to the original report.

Howard Linacre, C.A. I.S.A. WC-5304

Bay Area Arborist Co-op Inc. CA #707545
Howard Linacre, Certified Arborist I.S.A. WC-5304
451 Norfolk Drive
Pacifica, California 94044
Home (650) 355-1302 Cell (415) 710-8353
Fax (415) 594-9091
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December 6, 2006

Stuart Newton
Open Door Properties, Inc
338 Horizon Way, Suite 200
Pacifica, CA 94044
P: 650.355.3838 F: 650.355.4950 C: 650.678.6533
<mailto:stuart@odpinc.biz>

Re: Tree survey for all trees within the zones of a development project above Roberts Road in Pacifica. The zones are broken down by lot number or letter, new roadway, & open space. All trees within site lots or construction of the new roadway need to be cut down. The species, heritage status, height, and quantity are reported.

Species	Heritage	Height	Quantity
Lot # 1: Cypress	No	10-15	1
Lot #2: Pine	Yes	30-35	2
Pine	No	15-20	8
Pine	No	5-10	8

Lot #3: Pine	Yes	30-35	1
Pine	No	15-20	2
Pine	No	5-10	5
Cypress	No	10-15	1

Lot #4: Pine	No	10-15	4
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Lot #5: Pine	No	5-10	1
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Lot #6: N/A	N/A	N/A	0
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Lot #7: Cypress	Yes	20-2	1
Pine	No	5-1	1

Lot #8: Pine	No	5-	2
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Lot #9: Pine	No	5-10	1
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Lot #10: N/A	No	N/A	0
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Lot #11: N/A	No	N/A	0
--------------	----	-----	---

Lot #A: Pine	No	10-15	3
--------------	----	-------	---

Lot #B: Pine	Yes	30-35	1
Pine	No	25-30	3
Pine	No	20-25	6
Pine	No	15-20	3
Pine	No	10-15	3

Open Space:

Pine	Yes	25-30	3
Pine	No	20-25	15
Pine	No	15-20	10
Pine	No	10-15	12
Pine	No	5-10	6

Roadway:

Pine	Yes	30-35	4
Pine	No	25-30	7
Pine	No	20-25	5
Pine	No	15-20	3
Pine	No	10-15	3

Grand Total Heritage Trees = 12

Grand Total Trees = 125

Re: Heritage Trees to addition for removal

All trees were measured at 24" above natural grade

Species: #10 Monterey Pine (*Pinus radiata*)

Size: Diameter = 35" Circumference = 78" Canopy = 16' Height = 35' (estimated)

Aesthetics: This tree is dying from Pine Pitch Canker

Recommendations: Cut to ground

Species: #12 Monterey Pine (*Pinus radiata*)

Diameter = 28" Circumference = 74" Canopy = 15' Height = 30' (estimated)

Aesthetics: This tree is dying from Pine Pitch Canker

Recommendations: Cut to ground

There are 3 Monterey Pine Heritage Trees that stand in an open space zone. These trees should be cut down too, because of their diseased condition.

They are numbers 8, 9, & 11 on the new site plan I marked.

Howard Linacre, C.A. I.S.A. WC-5304

415-710-8353 cell

Heritage Tree Survey & Tree Protection Plan

FOR

Stuart Newton

Roberts Road
Pacifica, CALIFORNIA 94044

Prepared by:

Howard Linacre,
Certified Arborist I.S.A. WC-5304
451 Norfolk Drive
Pacifica Ca, 94044

Bay Area Arborist Co-op Inc. CA #707545
Howard Linacre, Certified Arborist I.S.A. WC-5304
451 Norfolk Drive
Pacifica, California 94044
Home (650) 355-1302 Cell (415) 710-8353
Fax (415) 594-9091
<mailto:Earwigz@speakeasy.net>

February 19, 2007

Stuart Newton
Open Door Properties, Inc
338 Horizon Way, Suite 200
Pacifica, CA 94044
P: 650.355.3838 F: 650.355.4950 C: 650.678.6533
<mailto:stuart@odpinc.biz>

Re: Heritage Tree Survey & Tree Protection Plan for any trees that are worthy of preservation on this proposed construction site.

Dear Mr. Newton,

As you requested I went out to the site at Roberts Rd. in Pacifica to survey and inspect the Heritage Trees and evaluate a protection plan for all Heritage Trees and any other trees that are suitable for preservation on this site during the construction for the proposed project.

I concluded that there are twelve Heritage Trees that fall into the category of Pacifica Heritage Tree ordinance. I measured and inspected these trees on site and have labeled them on the site plan you gave to me. I've concluded that all the trees on your property should be removed for this project, because of their poor health. Out of 125 trees, all are Monterey Pine (*Pinus radiata*), except for 3 that are Monterey Cypress (*Cupressus macrocarpa*) 46 of these trees stand in an area designated for open space. This area can be protected by erecting a plastic barrier fence around the trees in this open space, however all the trees in this area are also diseased, dying, or dead. They all should be removed as soon as possible.

Sincerely,
Howard Linacre, C.A. I.S.A. WC-5304

Re: Heritage Tree Survey and Tree Protection Plan for all trees worthy of preservation at Roberts Road site in Pacifica.

Objectives: To locate and identify all Heritage Trees on site and to protect them and any other trees suitable for preservation. Cut down and remove all unsuitable trees.

Site Conditions: This site is a mostly barren, windy hilltop. The vegetation is coastal chaparral consisting of scrub brush, grasses, poison oak, and wildflowers, with a few scattered trees or groups of small windswept trees.

Description of trees: I counted a total of twelve trees that are considered Heritage Trees under Pacifica's tree ordinance. The trunks were measured at 24" above natural grade and were 16" or more in diameter. I marked and numbered these trees on the site plan you gave me. One of the Heritage Trees counted is Monterey Cypress (*Cupressus macrocarpa*) and eleven are Monterey Pine (*Pinus radiata*). They all are native to the Monterey Peninsula.

Tree Health: Monterey Cypress. There are three trees of this species at this site. One of them is a Heritage Tree. It shows signs of Cypress Cankers. It is a disease attacking many coastal trees. The other 2 Cypress are diseased too. All other trees are Monterey Pine. All are showing signs on Pine Pitch Canker disease or (*Fusarium circinatum*). It is a bacterial infection. It constricts the flow of nutrients up and down the tree and kills branches, roots, and stems. Monterey Pine has been severely inflicted by this disease in Pacifica. All the trees are infected with *Fusarium*.

Suitability for Preservation: Trees preserved on development sites must be carefully selected to make sure they may survive demolition or construction impacts, adapt to a new environment and perform well in the landscape. The goal is for long-term health, structural stability, and longevity. I have found, in my opinion, that none of these trees are worthy of preservation. It is not worth proposing a tree protection plan for these diseased or dying trees. For re-landscaping purposes, I recommend planting native species such as, Big Leaf Maple, Buckeye, Live Oak, Ceanothus, Fremontadendron, Toyon, Madrone, Douglas Fir, Manzanita, California Redbud, California Bay laurel, or California Black Cherry. I believe that all of these species would be a benefit to the landscape and provide habitat for native plants, insects, birds, and animals.

Howard Linacre, C.A. I.S.A. WC-5304

Re: Heritage Tree Survey at Roberts Road Site taken, 12/6/06

All trees were measured at 24" above natural grade

Species: #1 Monterey Pine (*Pinus radiata*)

Size: Diameter = 38" Circumference = 82" Canopy = 18'

Aesthetics: This tree is dying from Pine Pitch Canker

Recommendations: Cut to ground and plant a more suitable tree.

Species: #2 Monterey Pine

Diameter = 25" Circumference = 63" Canopy = 12'

Aesthetics: This tree is dying from Pine Pitch Canker

Recommendations: Cut to ground and plant a more suitable tree.

Species: #3 Monterey Pine

Diameter = 38" Circumference = 68" Canopy = 18'

Aesthetics: This tree is dying from Pine Pitch Canker

Recommendations: Cut to ground and plant a more suitable tree.

Species: #4 Monterey Cypress (*Cupressus macrocarpa*) this tree is double stemmed above 24" at grade.

1st stem: Diameter = 16" Circumference = 40" Canopy = 12'

2nd stem: Diameter = 32" Circumference = 70" Canopy = 6'

Aesthetics: This tree has Cypress Cankers on it main trunk and branches.

Recommendations: Cut to ground and plant a more suitable tree.

Species: #5 Monterey Pine

Diameter = 32" Circumference = 70" Canopy = 14'

Aesthetics: This tree is dying from Pine Pitch Canker

Recommendations: Cut to ground and plant a more suitable tree.

Species: #6 Monterey Pine

Diameter = 24" Circumference = 52" Canopy = 14'

Aesthetics: This tree is dying from Pine Pitch Canker

Recommendations: Cut to ground and plant a more suitable tree.

Species: #7 Monterey Pine

Diameter = 18" Circumference = 41" Canopy = 14'

Aesthetics: This tree is dying from Pine Pitch Canker

Recommendations: Cut to ground and plant a more suitable tree.

Species: #8 Monterey Pine This tree is quadruple stemmed above 24" at grade. Three significant stems were measured. They are more than 16" in diameter.

1st stem: Diameter = 42" Circumference = 90" Canopy = 18'

2nd stem: Diameter = 36" Circumference = 75" Canopy = 18'

3rd stem: Diameter = 32" Circumference = 68" Canopy = 18'

Aesthetics: This tree is dying from Pine Pitch Canker

Recommendations: Cut to ground and plant a more suitable tree.

Species: #9 Monterey Pine

Diameter = 17" Circumference = 38" Canopy = 6'

Aesthetics: This tree is dying from Pine Pitch Canker

Recommendations: Cut to ground and plant a more suitable tree.

Species: #10 Monterey Pine

Diameter = 17" Circumference = 37" Canopy = 8'

Aesthetics: This tree is dying from Pine Pitch Canker

Recommendations: Cut to ground and plant a more suitable tree.

Species: #11 Monterey Pine

Diameter = 16" Circumference = 34" Canopy = 10'

Aesthetics: This tree is dying from Pine Pitch Canker

Recommendations: Cut to ground and plant a more suitable tree.

Species: #12 Monterey Pine

Diameter = 16" Circumference = 31" Canopy = 9'

Aesthetics: This tree is dying from Pine Pitch Canker

Recommendations: Cut to ground and plant a more suitable tree.

Howard Linacre, C.A. I.S.A. WC-5304

415-710-8353 cell

415-594-9090 fax

APPENDIX F
BIOLOGICAL STUDIES

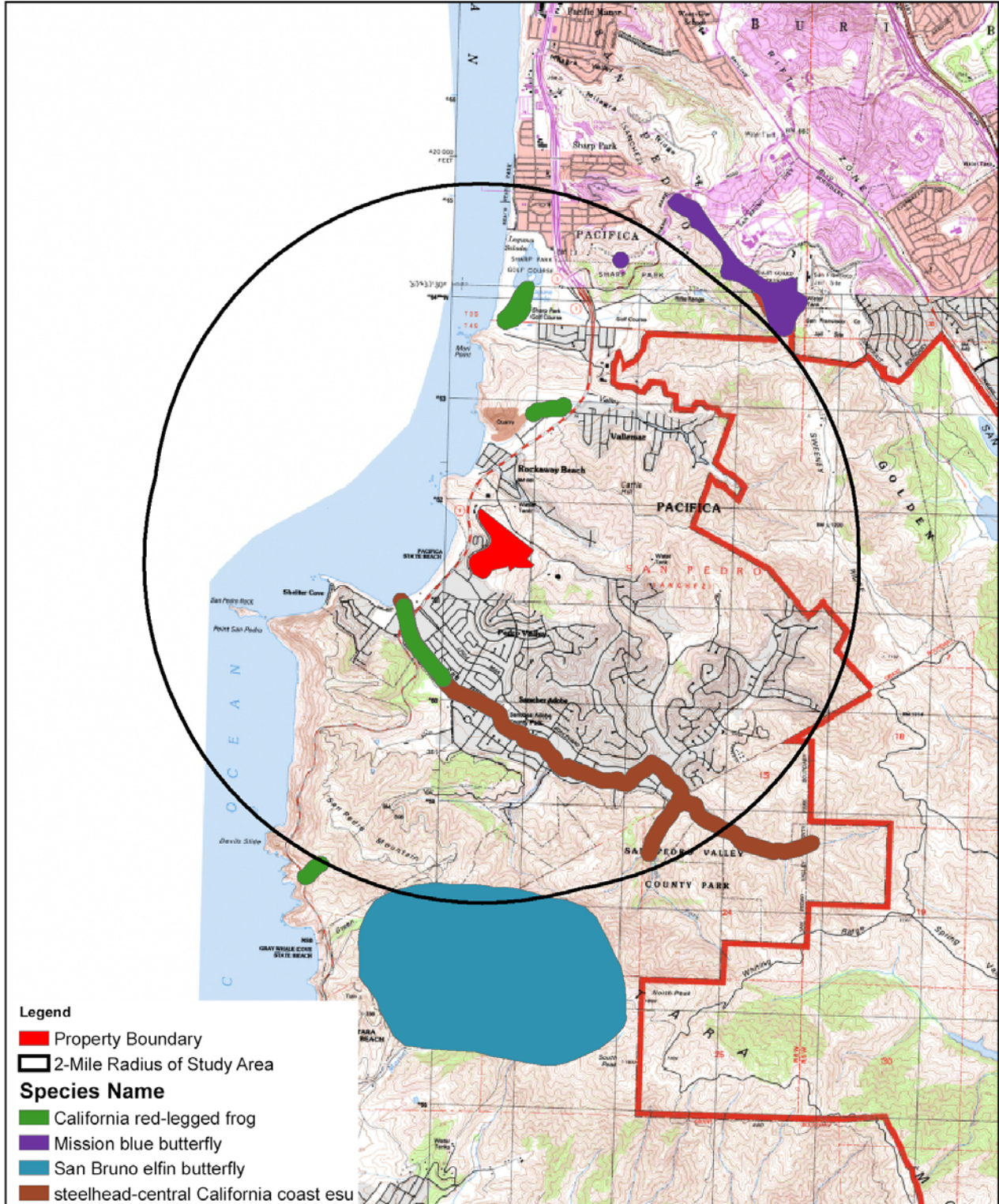
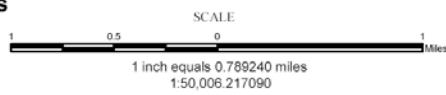


Figure 1: CNNDN Wildlife Occurrences within 5-mile Radius of Study Area

**Roberts Road
Pacifica, San Mateo County**



Map By: Sundaran Gillespie
BaseMap: USGS Topo Quad
FilePath: I:\KCAD2000 Files\15196\GIS\Arcmap\Figure2.mxd

Transmittal

To: Stuart Newton, Open Door Properties **From:** Geoff Smick
smick@wra-ca.com
Cc: File Ext. 37
Date: February 14, 2006
Subject: Biological Assessment - Roberts Road Parcel

Dear Mr. Newton,

Enclosed please find one (1) copy of the updated technical letter that addresses the potential occurrence of rare butterflies and other biological constraint issues for the Roberts Road Parcel in Pacifica. Please let me know if you have any questions.

Thank you and best regards,

Geoff Smick
Biologist

February 14, 2005

Stuart Newton
Open Door Properties, Inc
338 Horizon Way, Suite 200
Pacifica, CA 94044

RE: Technical Memorandum for Roberts Road Parcel APN 022-150-240 Biological Reconnaissance

Dear Mr. Newton:

On December 23, 2005 and February 10, 2006, a biological reconnaissance was conducted at the Roberts Road Parcel (APN 022-150-240) located in Pacifica, San Mateo County, California. The purpose of this reconnaissance is to provide an overview of potential sensitive habitats and species which may occur on the property. This assessment is based on information available at the time of the study and on site conditions that were observed on the date of the site visit.

The approximate 55-acre parcel (Study Area) is located on a coastal ridge line bordered by Roberts Road and Highway One to the west, residential development to the south, proposed development to the north adjacent to Fassler Avenue, and a narrow, open space corridor to the east. The Study Area is dominated by Northern Coastal Scrub with patches of Northern Coastal Bluff Scrub on the upper south facing slopes and Central Coast Riparian Scrub on the lower south facing slopes.

Methods

On December 23, 2005, and February 10, 2006, the Study Area was traversed on foot to determine (1) if sensitive habitats were present, and (2) if existing conditions provided suitable habitat for any special status plant or wildlife species.

Sensitive Habitats

The Study Area was surveyed to determine if any wetlands and “waters” potentially subject to jurisdiction by the Corps, RWQCB, or CDFG were present. The assessment was based primarily on the presence of wetland plant indicators, but may also include any observed indicators of wetland hydrology or wetland soils. A preliminary “waters” assessment was based primarily on the presence of unvegetated, ponded areas or flowing water, or evidence indicating their presence such as a high water mark or a defined drainage course. The banks of any drainages, streams and other aquatic features found within the Study Area were examined for hydrophytic or stream-dependent woody plant species (riparian species).

Special Status Species

Potential occurrence of special status species in the Study Area was evaluated by first determining which special status species occur in the vicinity of the Study Area through a literature and database search. Database searches for known occurrences of special status species included the Montara Mountain 7.5 minute USGS quadrangle and the four surrounding

USGS quadrangles. The following sources were reviewed to determine which special status plant and wildlife species have been documented to occur in the vicinity of the Study Area:

- California Natural Diversity Database records (CNDDDB) (CDFG 2006)
- USFWS Quadrangle Species Lists (USFWS 2006)
- CNPS Electronic Inventory records (CNPS 2005)

A site visit was conducted to search for suitable habitats within the Study Area for those species identified as occurring within the vicinity. Potential for special status species to occur in the Study Area was then evaluated according to the following criteria:

(1) Not Present. Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).

(2) Low Potential. Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.

(3) Moderate Potential. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.

(4) High Potential. All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.

(5) Present. Species is observed on the site or has been recorded (i.e. CNDDDB, other reports) on the site recently.

Table 1 presents the special status plant and wildlife species with a potential to occur within the Study Area, their habitat requirements, and a rating of potential for occurrence.

A site visit is intended to identify suitable habitat for special status species known to occur in the vicinity in order to determine their potential to occur within the Study Area. The site visit does not constitute a protocol-level survey and is not intended to determine the actual presence or absence of a species; however, if a special status species is observed during the site visit, its presence will be recorded and discussed.

Results

Sensitive Habitats - Wetlands and Waters

Two large erosional features and several smaller, new features on the lower southeast facing slope may be considered potentially jurisdictional according to CDFG. The two larger gullies contain defined drainage courses. Central Coast Riparian Scrub, characterized by the presence of willows (*Salix spp.*), and coyote brush (*Baccharis pilularis*), were observed in both drainages. Several smaller erosional features located between and immediately east of the inland drainage contain wetland indicators including wetland hydrology. No other wetlands or waters were observed within the Study Area. No other sensitive aquatic habitats were observed.

Special Status Species

Fifty-eight species of plants and thirteen species of wildlife were observed in or adjacent to the Study Area during the December 23, 2005 and February 10, 2006 site visits. All of the plant and wildlife observed in the Study Area are commonly found species. No special status plant or wildlife species were observed.

Plants

Based upon a review of the resources and databases. Thirty-one special status plant species have been documented in the general vicinity of the Study Area. Table 1 summarizes the potential for occurrence for these species in the Study Area. The Study Area contains suitable habitat for ten of these species.

Wildlife

Seventy-two special status species of wildlife have been recorded in the vicinity of the Study Area. Table 1 summarizes the potential for occurrence for these species in the Study Area. Of these species, sixteen species have a low potential to occur, and fifteen species have a moderate to high potential for occurrence. Species were considered to have a low potential if they were likely to occur only seasonally or to occasionally forage over the site, or if only limited habitat is available.

Species that have a moderate to high potential to occur and require additional considerations include:

Nesting raptors and breeding birds: white-tailed kite (*Elanus leucurus*), loggerhead shrike (*Lanius ludovicianus*), California thrasher (*Toxostoma redivivum*), Bell's sage sparrow (*Amphispiza belli*), Costa's hummingbird (*Calypte costae*), Rufous hummingbird (*Selasphorus rufus*), and Allen's hummingbird (*Selasphorus sasin*). Not documented during site visit, however suitable nesting habitat is present.

Species that have a low potential to occur but require additional considerations include:

California red-legged frog (CRLF) (*Rana aurora draytonii*): A Federal Threatened; may disperse through the Study Area from the eastern open space corridor. According to Critical Habitat definition for dispersal corridor, the area must provide a straight-line movement corridor between two known breeding populations. Known occurrences are located to the north and south of the Study Area (Figure 1). At present, development to the north and south of the property prevents movement across the site in this direction. Highway One may pose a significant barrier to the west. CRLF may potentially move across the eastern portion of the property where barriers are absent. No suitable aquatic habitat is present within the Study Area.

Four Federal Endangered butterflies: San Bruno elfin butterfly (*Incisalia mossii bayensis*), Mission blue butterfly (*Icaricia icarioides missionensis*), callippe-silverspot butterfly (*Speyeria callippe callippe*), and Myrtle's silverspot (*Speyeria zerene myrtleae*). Surveys for butterfly larval host plants were conducted in February, 2006, but none of the host plants were observed during the site visits. Although potential nectar sources were observed during the plant survey, the closest known occurrences for these species are over two miles distant (Milagro Ridge and San Bruno Mtn.). These butterflies have small ranges and are unlikely to be found over a mile from their breeding areas.

Recommendations

Wetlands and Waters

Based on wetland indicators found within several erosion gullies on the south facing slope of the Study Area, a formal wetland delineation is recommended. The Corps has discretionary decision making powers when determining whether or not erosion gullies are jurisdictional under the Clean Water Act. The approved wetland delineation is called a jurisdictional determination and will define the Corps jurisdiction within the Study Area (i.e., wetlands and waters boundaries). Additionally, the jurisdictional determination will identify those wetlands that are adjacent, isolated, or man-induced. Isolated and man-induced wetlands are not within the jurisdiction of the Corps; therefore, a permit from the Corps is not required to place fill within an isolated or man-induced wetland or within a non-impacted wetland. However, isolated and man-induced wetlands are considered "waters of the State". As a result, a permit from the Regional Water Quality Control Board (RWQCB) would be required. Moreover, mitigation would be required to replace any isolated or man-induced wetlands disturbed by the proposed project. If the area is not in the planned development area and no impacts are expected, generally a Corps or RWQCB permit is not required.

If either stream or riparian habitat is impacted by the proposed project, a 1602 Streambed Alteration Agreement permit from CDFG is required. A Streambed Alteration Agreement generally requires the inclusion of a mitigation plan describing proposed mitigation for impacted riparian habitat.

Special Status Species

Plants

There is a moderate potential for ten plant species of concern to occur in the Study Area. For this reason, one rare plant survey is recommended to be conducted in April during the common blooming periods of all of these species.

Breeding Birds

Seven special status bird species have been identified, and potentially nest, within the Study Area. These species include one raptor, white-tailed kite (*E. leucurus*). Disturbance resulting in abandonment or destruction of active nest is considered a significant impact under CEQA.

There are two approaches to avoid impacts to these species. The first approach is to limit any construction and/or remove vegetation (nesting habitat) to the time of year when birds are not nesting (September through March). The second approach is to conduct preconstruction surveys for nesting birds (a standard CEQA requirement). The purpose of these surveys is to avoid project related impacts and establish a disturbance buffer if nests are located. A minimum buffer of 25 feet is typically required by CDFG for songbird nests, and a minimum of 200 feet for raptor nests.

Federal Endangered Butterflies

None of the four larval host plant genera were observed during the December 23, 2005 site visit or the February 2006 larval host plant survey. No additional surveys are recommended for these species as they are unlikely to occur within the Study Area.

California red-legged frog (CRLF)

While suitable aquatic habitat for CRLF breeding is not present within the Study Area, there remains a low potential for CRLF to disperse through the Study Area from the eastern border. Suitable dispersal barriers exist including development to the north and south and Highway One west of the property. However, undeveloped open space to the east may provide suitable breeding and or dispersal opportunities for CRLF to and from nearby known breeding sites within one mile of the Study Area (Figure 1). Therefore, there is a low potential for CRLF to traverse onto the Study Area. The Study Area is not within any proposed Critical Habitat (USFWS, 2005).

To avoid impacts to CRLF which may disperse onto the property, installation and maintenance of a CRLF barrier fence around the eastern boundary of the Project Area is recommended. Generally, the fence is required to be constructed of silt fence or other smooth material (such as plywood), trenched in six inches, and stand a minimum of 24 to 36 inches tall. Fence construction should be conducted when CRLF are unlikely to be present. Installation should also be supervised by biologist. Pre-construction surveys should be conducted within three days of commencement of work, following installation of the barrier fence.

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Table 1. Special status species that have been recorded in the vicinity of the Study Area. List compiled from a review of records from the Montara Mountain, San Francisco South, Half Moon Bay, Woodside, and San Mateo 7.5 minute USGS quadrangles in the CDFG Natural Diversity Data Base (2006), other CDFG lists and publications (Jennings and Hayes 1994; Zeiner et al. 1990), USFWS unofficial San Mateo County species lists (2006), and the CNPS electronic inventory (2005).

SPECIES	STATUS	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE
Mammals			
Townsend's western big-eared bat <i>Corynorhinus townsendii townsendii</i>	FSC, CSC	Primarily found in rural settings in a wide variety of habitats including oak woodlands and mixed coniferous-deciduous forest. Day roosts highly associated with caves and mines. Very sensitive to human disturbance.	Not Present. No suitable roost habitat present.
long-eared myotis <i>Myotis evotis</i>	FSC	Primarily a forest associated species. Day roosts in hollow trees, under exfoliating bark, rock outcrop crevices and buildings. Other roosts include caves, mines and under bridges.	Not Present. No suitable roost habitat present.
fringed myotis <i>Myotis thysanodes</i>	FSC	Associated with a wide variety of habitats including mixed coniferous-deciduous forest and redwood/sequoia groves. Buildings, mines and large snags are important day and night roosts.	Not Present. No suitable roost habitat present.
long-legged myotis <i>Myotis volans</i>	FSC	Generally associated with woodlands and forested habitats. Large hollow trees, rock crevices and buildings are important day roosts. Other roosts include caves, mines and buildings. Occurs above elevation 8000 feet.	Not Present. No suitable roost habitat present. Study Area is below typical elevation.
Yuma myotis <i>Myotis yumanensis</i>	FSC	Known for its ability to survive in urbanized environments. Also found in heavily forested settings. Day roosts in buildings, trees, mines, caves, bridges and rock crevices. Night roosts associated with man-made structures.	Not Present. No suitable roost habitat present.
greater western mastiff bat <i>Eumops perotis californicus</i>	FSC, CSC	Found in a wide variety of habitat. Distribution appears to be tied to large rock structures which provide suitable roosting sites, including cliff crevices and cracks in boulders.	Low potential. Limited suitable roost habitat present in southeastern corner adjacent to site. No documented occurrences.

SPECIES	STATUS	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE
big free -tailed bat <i>Nyctinomops macrotis</i>	CSC	Low-lying arid areas, predominantly in southern California. Need high cliffs or rocky outcrops.	Low potential. Limited suitable roost habitat present in southeastern corner adjacent to site. Documented occurrence within 5 miles (CNDDDB 2006).
salt-marsh wandering shrew <i>Sorex vagrans halicoetes</i>	FSC, CSC	Salt marshes of the south arm of San Francisco bay. Medium high marsh 6-8 ft above sea level where abundant driftwood is scattered among <i>salicornia</i> plants.	Not Present. No suitable habitat present.
San Francisco dusky-footed woodrat <i>Neotoma fuscipes annectens</i>	FSC, CSC	Occurs in forest habitats of moderate canopy and moderate to dense understory. Also found in chaparral habitats. Feeds mainly on woody plants: live oak, maple, coffeeberry, alder, and elderberry.	Low Potential. Typical chaparral habitat not present. May occur immediately south of site. Documented occurrence within 5 miles (CNDDDB 2006).
salt-marsh harvest mouse <i>Reithrodontomys raviventris</i>	FE, SE	Found only in the saline emergent wetlands of San Francisco bay and its tributaries. Pickleweed is primary habitat. Builds loosely organized nests instead of burrows. Requires higher areas for flood escape.	Not Present. No suitable habitat present.
American badger <i>Taxidea taxus</i>	CSC	Most abundant in drier open stages of shrub, forest, and herbaceous habitats, with friable soils. Need sufficient food, friable soils & open, uncultivated ground. Prey on burrowing rodents. Dig burrows.	Low Potential. Suitable open stages of shrub habitat present. No large mammal burrows or prey observed. Documented occurrence within 5 miles inland of site (CNDDDB 2006).
BIRDS			
Ashy storm-petrel <i>Oceanodroma homochroa</i> (Rookery site)	FSC, CSC	Colonial nester on off-shore islands. Usually nests on driest part of islands. Forages over open ocean. Nest sites on islands are in crevices beneath loosely piled rocks or driftwood, or in caves.	Not Present. No suitable habitat present.
California brown pelican <i>Pelecanus occidentalis californicus</i> (Nesting and roosting colony)	FE, SE, CFP	Colonial nester on coastal islands just outside the surf line. Nests on coastal islands of small to moderate size which afford immunity from attack by ground-dwelling predators.	Not Present. No suitable habitat present.

SPECIES	STATUS	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE
Double-crested cormorant <i>Phalacrocorax auritus</i> (Rookery site)	CSC	Colonial nester on cliffs, offshore islands, & along lake margins in the interior of the state. Nests along coast on sequestered islets, usually on ground with sloping surface, or in tall trees along lake margins.	Not Present. No suitable habitat present.
American bittern <i>Botaurus lentiginosus</i>	FSC	Occurs in fresh emergent wetlands, often hiding, resting, and roosting solitarily amidst tall, dense, emergent vegetation, on ground, or near ground on log, stump, or on emergent plants.	Not Present. No suitable habitat present.
Harlequin duck <i>Histrionicus histrionicus</i> (Nesting)	FSC, CSC	Breeds on west slope of the Sierra Nevada, nesting along shores of swift, shallow rivers. Nest often built in a recess, sheltered overhead by stream bank, rocks, woody debris, usually within 7 ft of water.	Not Present. No suitable habitat present.
Cooper's hawk <i>Accipiter cooperi</i>	CSC	Uses many habitats in winter and during migration; nests in deciduous and coniferous woodlands. Usually not found without dense tree stands, or patchy woodland habitat.	Low Potential. Typical habitat not present. May occur in drainage basin south of Study Area.
Sharp-shinned hawk <i>Accipiter striatus</i>	CSC	Uses many habitats in winter and during migration; breeds in oak, conifer, and riparian forests.	Low Potential. May occasionally forage on-site during winter and migration. No suitable nesting habitat.
Ferruginous hawk <i>Buteo regalis</i> (Wintering)	FSC, CSC	Found in open grasslands, sagebrush flats, desert scrub, low foothills & fringes of pinyon-juniper habitats. Mostly eats lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.	High Potential. Likely forages on-site during winter periods.
White-tailed kite <i>Elanus leucurus</i> (Nesting)	FSC, CFP	Forages in open to herbaceous stages of many habitats. Nests in shrubs and trees adjacent to grasslands.	High Potential. Suitable nesting and foraging habitat present.
Northern harrier <i>Circus cyaneus</i>	CSC	Forages in open to herbaceous stages of many habitats. Nests on ground in shrubby vegetation, usually near wetlands.	Low Potential. May occasionally forage on-site. No suitable nesting habitat.

SPECIES	STATUS	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE
Bald eagle <i>Haliaeetus leucocephalus</i> (Nesting & wintering)	FT, SE, CFP	Utilizes ocean shore, lake margins and rivers for both nesting and wintering. Most nests within 1 mi of water. Nests in lg, old-growth, or dominant live tree w/open branches, especially ponderosa pine. Roosts communally in winter.	Not Present. No suitable habitat present.
Prairie falcon <i>Falco mexicanus</i> (Nesting)	CSC	Inhabits dry, open terrain, either level or hilly. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.	Low Potential. May occasionally forage on-site. No suitable nesting habitat present.
American peregrine falcon <i>Falco peregrinus anatum</i> (Nesting)	SE, FSC, CFP	Occurs near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also utilizes human-made structures. Nest consists of a scrape on a depression or ledge in an open site.	Not Present. No suitable nesting habitat present.
California black rail <i>Laterallus jamaicensis coturniculus</i>	ST	Mainly inhabits salt-marshes bordering larger bays. Occurs in tidal salt marsh heavily grown to pickleweed; also in fresh-water and brackish marshes, all at low elevation.	Not Present. No suitable habitat present.
California clapper rail <i>Rallus longirostris obsoletus</i>	FE, SE, CFP	Salt-water & brackish marshes traversed by tidal sloughs in the vicinity of San Francisco bay. Associated with pickleweed, but feeds away from cover in mud-bottomed sloughs.	Not Present. No suitable habitat present.
Western snowy plover <i>Charadrius alexandrinus nivosus</i> (Nesting)	FT, CSC	Federal listing applies only to the pacific coastal population. Sandy beaches, salt pond levees & shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	Not Present. No suitable habitat present.
Long-billed curlew <i>Numerius americanus</i> (Nesting)	FSC, CSC	Breeds in upland shortgrass prairies & wet meadows in northeastern California. Habitats on gravelly soils and gently rolling terrain are favored over others.	Not Present. No suitable nesting habitat present.

SPECIES	STATUS	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE
Whimbrel <i>Numenius phaeopus</i>	FSC	Migrates northward along Pacific coast in March. Forages on beaches, mud and sand flats, preying on insects, worms, spiders, small mollusks, crustaceans (often crabs). Also eats berries.	Not Present. No suitable habitat or prey present.
Elegant tern <i>Sterna elegans</i> (Nesting colony)	FSC, CSC	Nests on dikes between salt ponds in association with Caspian terns.	Not Present. No suitable nesting habitat present.
Marbled murrelet <i>Brachyramphus marmoratus</i> (Nesting)	FT, SE	Feeds near shore; nests inland along coast, from Eureka to Oregon border & from Half Moon Bay to Santa Cruz. Nests in old-growth redwood- dominated forests, up to six miles inland, often in douglas firs.	Not Present. No suitable nesting habitat present.
Burrowing owl <i>Athene cunicularia</i> (Burrow sites)	FSC, CSC	Inhabits open, dry annual or perennial grasslands, deserts and scrub lands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Not Present. No suitable habitat present. Study Area is in humid coastal zone. Small mammal burrows not observed.
Flammulated owl <i>Otus flammeolus</i> (Nesting)	FSC	Nesting habitat includes multi-age class stands with multiple canopy layers, including a veteran tree component for nesting and roosting. Secondary cavity nester, utilizing natural cavities or those excavated by woodpeckers.	Not Present. No suitable nesting habitat present.
Vaux's swift <i>Chaetura vauxi</i> (Nesting)	FSC, CSC	Occurs in redwood, douglas fir, and other coniferous forests. Nests in large hollow trees and snags, often in flocks. Forages over most terrains, but shows a preference for foraging over rivers and lakes.	Not Present. No suitable nesting or foraging habitat present.
Black swift <i>Cypseloides niger</i> (Nesting)	FSC, CSC	Central California coast; central and southern Sierra Nevada; San Bernardino and San Jacinto mountains. Breeds in small colonies on cliffs near waterfalls or on sea-bluffs above surf; forages widely.	Low Potential. No suitable nesting habitat present. May occasionally forage over site.

SPECIES	STATUS	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE
Costa's hummingbird <i>Calypte costae</i>	FSC	Occurs in arid habitats such as desert washes, edges of desert riparian and valley foothill riparian, coastal scrub, desert scrub, desert succulent shrub, lower-elevation chaparral, and palm oases.	High Potential. Suitable nesting and foraging habitat present.
Rufous hummingbird <i>Selasphorus rufus</i>	FSC	Found in a wide variety of habitats that provide nectar-producing flowers. A common migrant and uncommon summer resident of California.	High Potential. Suitable foraging habitat present.
Allen's hummingbird <i>Selasphorus sasin</i>	FSC	Breeds in sparse and open woodlands, coastal redwoods, and sparse to dense scrub habitats. Distribution highly dependent on abundance of nectar sources.	High Potential. Suitable nesting and foraging habitat present.
Red-breasted sapsucker <i>Sphyrapicus ruber</i>	FSC	Aspen-pine association and coniferous forest, including humid coastal lowlands; in migration and winter also in open woodland and parks. Nests in trees; bores its own nest-hole cavity.	Moderate Potential. May occur during migration or winter on-site. No suitable nesting habitat present.
Olive-sided flycatcher <i>Contopus cooperi</i>	FSC	Most often found in montane conifer forests where tall trees overlook canyons, meadows, lakes or other open terrain	Moderate Potential. Suitable foraging habitat present. No suitable nesting habitat.
Little willow flycatcher <i>Empidonax traillii brewsteri</i>	SE	Most numerous where extensive thickets of low, dense willows edge on wet meadows, ponds, or backwaters. Winter migrant.	Low Potential. Limited habitat available adjacent to site in southern drainage basin.
Loggerhead shrike <i>Lanius ludovicianus</i> (Nesting)	FSC, CSC	Inhabits woodlands, savannah, pinyon-juniper, joshua tree, & riparian woodlands, desert oases, scrub & washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	High Potential. Suitable nesting and foraging habitat present.
Bank swallow <i>Riparia riparia</i>	ST	Migrant in riparian and other lowland habitats in western California. Nests in riparian areas with vertical cliffs and bands with fine-textured or sandy soils in which to nest.	Not Present. No suitable nesting or foraging habitat present.

SPECIES	STATUS	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE
California thrasher <i>Toxostoma redivivum</i>	FSC	Common resident of foothills and lowlands in cismontane California. Occupies moderate to dense chaparral habitats and extensive thickets in young or open valley foothill riparian habitat.	High Potential. Suitable nesting and foraging habitat present.
Saltmarsh common yellowthroat <i>Geothlypis trichas sinuosa</i>	FSC, CSC	Frequents low, dense vegetation near water including fresh to saline emergent wetlands. Brushy habitats used in migration. Forages among wetland herbs and shrubs for insects primarily.	Not Present. No suitable nesting or foraging habitat present.
Bell's sage sparrow <i>Amphispiza belli</i>	FSC, CSC	Prefers dense chaparral and scrub habitats in breeding season. Found in more open habitats in winter.	High Potential. Suitable nesting and foraging habitat present.
Alameda (South Bay) song sparrow <i>Melospiza melodia pusillula</i>	FSC, CSC	Found in saline emergent wetlands of the south bay. Require low, dense vegetation for cover and nesting.	Not Present. No suitable nesting or foraging habitat present. Outside range.
Tricolored blackbird <i>Agelaius tricolor</i>	FSC, CSC	Usually nests over or near freshwater in dense cattails, tules, or thickets of willow, blackberry, wild rose or other tall herbs.	Not Present. No suitable nesting or foraging habitat present.
Lawrence's goldfinch <i>Carduelis lawrencei</i>	FSC	Inhabits oak woodlands, chaparral, riparian woodlands, pinyon-juniper associations, and weedy areas near water during the breeding season.	Low Potential. Limited suitable nesting habitat present adjacent to site in southern drainage basin.
AMPHIBIANS AND REPTILES			
western pond turtle <i>Clemmys marmorata</i>	CSC, FSC	Ponds and pools with woody debris, overhanging vegetation and rocky outcrops for basking and thermoregulation.	Not Present. No suitable nesting or foraging habitat present.
coast horned lizard <i>Phrynosoma coronatum (frontale)</i>	FSC, CSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, & abundant supply of native ants & other insects.	Not Present. No suitable nesting or foraging habitat present.

SPECIES	STATUS	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE
San Francisco garter snake <i>Thamnophis sirtalis tetrataenia</i>	FE, SE, CFP	Ponds, lakes, reservoirs, streams, and drainage ditches, that are bordered (at least partially) by dense emergent or riparian vegetation, and nearby grasslands and brush.	Low Potential. Suitable aquatic habitat is not present on-site. Unlikely to utilize site as dispersal corridor based on distance from nearest known suitable breeding area. Documented occurrence within 2 miles (CNDDDB 2006).
California tiger salamander <i>Ambystoma californiense</i>	FT, CSC	Inhabits annual grassland or vernal pool habitat and utilizes upland mammal burrows for estivation. Seasonal ponds, vernal or annual pools are crucial to breeding.	Not Present. No suitable habitat present. No documented occurrences within 2 miles.
California red-legged frog <i>Rana aurora draytonii</i>	FT, CSC	Ponds, pools, or in slow-moving perennial to ephemeral streams, where water remains long enough for breeding and development of young. Emergent or shoreline riparian vegetation is the preferred but not essential habitat.	Low Potential. Suitable breeding habitat is not present on-site. May utilize site as a migration corridor. Documented occurrence within one mile to the northeast and southwest of the Study Area (CNDDDB 2006).
foothill yellow-legged frog <i>Rana boylei</i>	FSC, CSC	Found in or near rocky streams in a variety of habitats. Feed on both aquatic and terrestrial invertebrates.	Not Present. No suitable aquatic habitat present.
FISH			
steelhead-Central California Coast ESU <i>Oncorhynchus mykiss</i>	FT, NMFS	Federal listing includes all runs from the Russian River, south to Soquel Creek, inclusive. Adults spawn in cool streams with a substrate of clean gravel and cobbles. Juveniles remain in the stream for one or more years before migrating to the sea.	Not Present. No suitable aquatic habitat present. Documented occurrence within one mile south of Study Area (CNDDDB 2006).
INVERTEBRATES			
Edgewood blind harvestman <i>Calicina minor</i>	FSC	Found on the underside of moist serpentine rocks near permanent springs.	Not Present. No suitable serpentine habitat present.
Edgewood microblind harvestman <i>Microcina edgewoodensis</i>	FSC	Found on the underside of moist serpentine rocks near permanent springs.	Not Present. No suitable serpentine habitat present.

SPECIES	STATUS	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE
Ricksecker's water scavenger beetle <i>Hydrochara rickseckeri</i>	FSC	Inhabits vernal pool and aquatic habitats. Poorly known species from the San Francisco Bay area.	Not Present. No suitable aquatic habitat present.
bumblebee scarab beetle <i>Lichnanthe ursina</i>	FSC	Inhabits coastal sand dunes from Sonoma county south to San Mateo County	Not Present. No suitable habitat present.
San Francisco forktail damselfly <i>Ischnura gemina</i>	none	Endemic to the San Francisco bay area and Santa Cruz. Found in weedy ditches, often near saltwater.	High Potential. May occur on southfacing slopes of Study Area. Documented occurrence within 5 miles of Study Area (CNDDDB 2006).
Opler's longhorn moth Adela oplerella	CSC	Restricted to native grasslands on outcrops of serpentine soil in the vicinity of San Francisco Bay.	Not Present. No suitable serpentine habitat present.
San Bruno elfin butterfly <i>Incisalia mossii bayensis</i>	FE	Found in coastal, mountainous area with grassy ground cover, mainly in the vicinity of San Bruno Mountain, San Mateo County. Larval host plant is <i>Sedum spathulifolium</i> .	Low Potential. Larval host plant not observed during host plant surveys. Documented occurrence within five miles of Study Area on San Pedro Mountain (CNDDDB 2006).
Mission blue butterfly <i>Icaricia icarioides missionensis</i>	FE	Inhabits grasslands of the San Francisco Peninsula. Three larval hostplants: <i>Lupinus albifrons</i> , <i>L. varicolor</i> , and <i>L. formosus</i> .	Low Potential. Larval host plant not observed during host plant surveys. Documented occurrence within five miles north of Study Area on San Bruno Mountain (CNDDDB 2006).
monarch butterfly <i>Danaus plexippus</i>	None	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind protected tree groves, with nectar and water sources nearby.	Not Present. No suitable habitat present.
Bay checkerspot butterfly <i>Euphydryas editha bayensis</i>	FT	Restricted to native grasslands on outcrops of serpentine soil in the vicinity of San Francisco Bay. <i>Plantago erecta</i> is the primary host plant.	Not Present. No suitable serpentine habitat present.
Callippe silverspot butterfly <i>Speyeria callippe callippe</i>	FE	Restricted to northern coastal scrub of the San Francisco peninsula. Hostplant is <i>Viola pedunculata</i> .	Low Potential. Larval host plant not observed during host plant surveys.

SPECIES	STATUS	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE
Myrtle's silverspot <i>Speyeria zerene myrtleae</i>	FE	Restricted to areas immediately adjacent to the coast: dunes, scrub, and grasslands. Hostplant: <i>Viola adunca</i> . Known from only 4 remaining populations.	Low Potential. Larval host plant not observed during host plant surveys. Documented historically within five miles Study Area (CNDDDB 2006), but not observed in San Mateo County for decades.

SPECIES	STATUS*	BLOOM PERIOD	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE
PLANTS				
Franciscan onion <i>Allium peninsulare</i> <i>var. franciscanum</i>	FSC, List 1B	May-June	Cismontane woodland, valley and foothill grassland/clay, often serpentine; 100-300 m elevation.	Low Potential. Typical habitat is not present.
<i>Amsinckia lunaris</i> bent-flowered fiddleneck	1B	March - June	Coastal bluff scrub, cismontane-woodland, valley and foothill grassland. 3-500m.	Moderate Potential. Suitable habitat present..
<i>Chorizanthe cuspidata</i> var <i>cuspidata</i> San Francisco Bay spineflower	FSC, 1B	<i>April- August</i>	Sandy soils in coastal bluff scrub, coastal dunes, coastal prairie, coastal scrub. 3-215 m.	Low Potential. Sandy soils not common in Study Area.
<i>Chorizanthe robusta</i> var <i>robusta</i> robust spineflower	FE, 1B	<i>April- September</i>	Sandy or gravelly soil in openings in cismontane woodlands, coastal dunes, coastal scrub. 3-300 m.	Low Potential. Sandy soils not common in Study Area.
<i>Cirsium andrewsii</i> Franciscan thistle	List 1B	<i>March-July</i>	Mesic, sometimes serpentine soils in broadleaved upland forest, coastal bluff scrub, coastal prairie, coastal scrub. 0-135 m.	Low Potential. Sandy soils not common in Study Area; no serpentic soils present onsite.

SPECIES	STATUS*	BLOOM PERIOD	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE
<i>Cirsium occidentale</i> var. <i>compactum</i> compact cobwebby thistle	FSC, List 1B	April-June	Chaparral, coastal dunes, coastal prairie, coastal scrub. On dunes and on clay in chaparral; also in grassland. 5-150 m.	Moderate Potential. Suitable habitat present.
<i>Collinsia multicolor</i> San Francisco collinsia	1B	(March - May)	Closed-cone coniferous forest, coastal scrub (sometimes serpentine). 30-250 m.	Moderate Potential. Suitable habitat present.
<i>Equisetum palustre</i> marsh horsetail	List 3		Marshes and swamps. 45-1000 m.	Not Present. No suitable habitat present.
<i>Eriogonum</i> <i>luteolum</i> ssp. <i>caninum</i> Tiburon buckwheat	List 3	June- September	Chaparral, coastal prairie, valley and foothill grassland/serpentine; 10-500 m elevation.	Low Potential. No serpentic soils present in Study Area.
<i>Fritillaria liliacea</i> fragrant fritillary	FSC, List 1B	February- April	Cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland / often serpentine; 3-410 m elevation.	Not Present. Species not observed during February plant survey.
<i>Gilia capitata</i> ssp. <i>chamissonis</i> dune gilia	List 1B	April-July	Coastal dunes, coastal scrub; 2-200 m elevation.	Moderate Potential. Suitable habitat present.
<i>Grindelia hirsutula</i> var. <i>maritima</i> San Francisco gumplant	FSC, List 1B	August- September	Sandy or serpentine soils in coastal bluff scrub, coastal scrub, valley and foothill grassland. 15-400 m.	Low Potential. Typical habitat is not present.
<i>Helianthella</i> <i>castanea</i> Diablo helianthella	FSC, List 1B	April-June	Broadleaved upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland. 60- 1300 m.	Low Potential. Some suitable habitat components present onsite.
<i>Hesperexax</i> <i>sparsiflora</i> ssp. <i>leucocephala</i> short-leaved evax	List 2	March- June	Coastal bluff scrub (sandy), coastal dunes; 0-215 m elevation.	Low Potential. Typical habitat is not present.

SPECIES	STATUS*	BLOOM PERIOD	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE
<i>Horkelia cuneata</i> ssp <i>sericea</i> Kellogg's horkelia	FSC, List 1B	April-September	Sandy or gravelly soil in openings in closed-cone coniferous forest, maritime chaparral, coastal scrub. 10-200 m.	Moderate Potential. Suitable habitat present.
<i>Horkelia marinensis</i> Point Reyes horkelia	List 1B	May-September	Sandy soils in coastal dunes, coastal prairie, coastal scrub. 5-350 m.	Low Potential. Typical soil is not present.
<i>Layia carnosa</i> beach layia	FE, SE, List 1B	March-July	Sandy soils in coastal dunes, coastal scrub. 0-60 m.	Low Potential. Typical soil is not present.
<i>Lessingia arachnoidea</i> Crystal Springs lessingia	FSC, List 1B	July-October	Serpentinite, often roadsides, in cismontane woodland, coastal scrub, valley and foothill grassland. 60-200 m.	Not Present. No suitable habitat present.
<i>Lessingia germanorum</i> San Francisco lessingia	FE, SE, List 1B	June-November	Remnant dunes in coastal scrub. 25-90 m.	Not Present. No suitable habitat present.
<i>Lessingia hololeuca</i> woolly-headed lessingia	List 3	June-October	Clay or serpentinite in broadleaved upland forest, coastal scrub, lower montane coniferous forest, valley and foothill grassland. 15-305 m.	Low Potential. Typical soils is not present.
<i>Lilium maritimum</i> coast lily	List 1B	May-July	Broadleaved upland forest, closed-cone coniferous forest, coastal prairie, coastal scrub, freshwater marshes and swamps, North Coast coniferous forest. 5-335 m.	Moderate Potential. Suitable habitat present.
<i>Linanthus croceus</i> coast yellow linanthus	List 1B	May	Coastal bluff scrub, coastal prairie, usually by the ocean. 10-150 m.	Moderate Potential. Suitable habitat present.
<i>Linanthus rosaceus</i> rose linanthus	FSC, List 1B	April-June	Coastal bluff scrub, usually by the ocean. 0-100 m.	Moderate Potential. Suitable habitat present.

SPECIES	STATUS*	BLOOM PERIOD	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE
<i>Lupinus eximius</i> San Mateo tree lupine	List 3	April-July	Chaparral, coastal scrub. 90-550 m.	Not Present. No perennial lupines observed during plant surveys.
<i>Microseris paludosa</i> marsh microseris	FSLC, List 1B	April-June	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland; 5-300 m elevation.	Moderate Potential. Suitable habitat present.
<i>Pentachaeta bellidiflora</i> white-rayed pentachaeta	FE, SE, List 1B	March-May	Valley and foothill grassland, often serpentinite. 35-620 m.	Not Present. No suitable habitat present.
<i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i> Choris's popcorn flower	List 1B	March-June	Mesic soils in chaparral, coastal prairie, coastal scrub. 15-100 m.	Low Potential. No mesic soils onsite.
<i>Potentilla hickmanii</i> Hickman's cinquefoil	FE, SE, List 1B	April-August	Coastal bluff scrub, closed-cone coniferous forest, vernal mesic meadows, freshwater marshes and swamps. 10-135 m.	Moderate Potential. Suitable habitat present.
<i>Sanicula maritima</i> adobe sanicle	SR, List 1B	February-May	Clay or serpentinite in chaparral, coastal prairie, meadows, valley and foothill grassland. 30-240 m.	Not Present. No suitable habitat present and species not observed during plant surveys.
<i>Silene verecunda</i> ssp. <i>verecunda</i> San Francisco campion	FSC, List 1B	March-August	Sandy soil in coastal bluff scrub, chaparral, coastal prairie, coastal scrub, valley and foothill grassland. 30-645 m.	Low Potential. Sandy soils not common in Study Area.
<i>Triphysaria floribunda</i> San Francisco owl's-clover	FSC, List 1B	April-June	Coastal prairie, coastal scrub, valley and foothill grassland, sometimes serpentinite. 10-160 m.	Low Potential. Although coastal scrub habitat present, no other potential habitat types or serpentinitic soils present.
<i>Triquetrella californica</i> coastal triquetrella	List 1B	n/a	Soil in coastal bluff scrub, coastal scrub. 10-100 m.	Low Potential. No known occurrences in San Mateo county; species not observed during plant survey.

* Key to status codes:

Status codes used above are:

FE - Federal Endangered

FT - Federal Threatened

FC - Federal Candidate

FPD - Federal Proposed Delisted

FSC - United States Fish and Wildlife Service Federal Species of Concern

NMFS - Species under the Jurisdiction of the National Marine Fisheries Service

SE - State Endangered

ST - State Threatened

CSC - CDFG Species of Special Concern, CSC (Draft) - 4 April 2001 Draft

CFP - California Fully Protected Species

None - No status given but rookery sites are monitored by CDFG

List 1B - CNPS 1B List, Endangered, Threatened, or Rare in California

List 2 - CNPS List 2 Plants that are rare, threatened, or endangered in California, but more common elsewhere

List 3 - CNPS List 3 Plants about which more information is needed - a review list

Table 2. Plant and wildlife species observed within Study Area.

Common Name	Scientific Name
Plants	
California sheepburr	<i>Acaena pinnatifida var. californica</i>
yarrow	<i>Achillea millefolium</i>
chamise	<i>Adenostoma fasciculatum</i>
pearly everlasting	<i>Anaphalis margaritaceae</i>
madrone	<i>Arbutus menziesii</i>
California sagebrush	<i>Artemisia californica</i>
mugwort	<i>Artemisia douglasii</i>
coyote brush	<i>Baccharis pilularis</i>
black mustard	<i>Brassica nigra</i>
sun cup	<i>Camissonia ovata</i>
iceplant	<i>Carpobrotus edulis</i>
paintbrush	<i>Castilleja sp.</i>
ceanothus	<i>Ceanothus sp.</i>
wavy-leafed soap plant	<i>Chlorogalum pomeridianum</i>
bull thistle	<i>Cirsium arvense</i>
poison hemlock	<i>Conium maculatum</i>
pampas grass	<i>Cortaderia selloana</i>
cotoneaster	<i>Cotoneaster sp.</i>
Monterey cypress	<i>Cupressus macrocarpa</i>
flat leaf tallsedge	<i>Cyperus eragrostis</i>
wild carrot	<i>Daucus carota</i>
teasel	<i>Dipsacus fullonum</i>
dudleya	<i>Dudleya sp.</i>
seaside daisy	<i>Erigeron glaucus</i>
yerba santa	<i>Eriodictyon californicum</i>
buckwheat	<i>Eriogonum sp.</i>
seaside wooly sunflower	<i>Eriophyllum staechadifolium</i>
long-beaked filaree	<i>Erodium botrys</i>
California poppy	<i>Eschscholzia californica</i>

eggleaf spurge	<i>Euphorbium oblongatum</i>
fennel	<i>Foeniculum vulgare</i>
coast strawberry	<i>Fragaria chiloensis</i>
Spanish broom	<i>Genista sp.</i>
cut leaf geranium	<i>Geranium dissectum</i>
everlasting	<i>Gnaphalium canescens</i>
hairy gumplant	<i>Grindelia hirsutula var. hirsutula</i>
horkelia	<i>Horkelia sp.</i>
common rush	<i>Juncus patens</i>
honeysuckle	<i>Lonicera sp.</i>
bush monkey flower	<i>Mimulus aurantiacus</i>
coyote mint	<i>Monardella villosa</i>
Bermuda buttercup	<i>Oxalis pes-caprae</i>
bristly ox-tongue	<i>Picris echioides</i>
Monterey pine	<i>Pinus radiata</i>
English plantain	<i>Plantago lanceolata</i>
california polypody	<i>Polypodium californicum</i>
California blackberry	<i>Rubus ursinus</i>
sheep sorrel	<i>Rumex acetosella</i>
curly dock	<i>Rumex crispus</i>
fiddle dock	<i>Rumex pulcher</i>
footsteps of spring	<i>Sanicula arctopoides</i>
California beeplant	<i>Scrophularia californica</i>
dwarf checkerbloom	<i>Sidalcea malvaeflora ssp. malvaeflora</i>
blue-eyed grass	<i>Sisyrinchium bellam</i>
poison oak	<i>Toxicodendron diversilobum</i>
clover	<i>Trifolium sp.</i>
common vetch	<i>Vicia sativa</i>
narrow leafed mule's ear	<i>Wyethia angustifolia</i>

Wildlife	
Western Scrub Jay	<i>Aphelocoma californica</i>
Rufous-Crowned Sparrow	<i>Aimophila ruficeps</i>
Wrentit	<i>Chamaea fasciata</i>
Northern Flicker	<i>Colaptes auratus</i>
American Kestrel	<i>Falco sparverius</i>
bobcat	<i>Felis rufus</i>
Song Sparrow	<i>Melospiza melodia</i>
Spotted Towhee	<i>Pipilo maculatus</i>
California Towhee	<i>Pipilo crissalis</i>
Chestnut-Backed Chickadee	<i>Poecile rufescens</i>
Bewick's Wren	<i>Thyromanes bewickii</i>
Ruby-Crowned Kinglet	<i>Regulus calendula</i>
White-Crowned Sparrow	<i>Zonotrichia leucophrys</i>

April 21, 2006

Stuart Newton
Open Door Properties, Inc
338 Horizon Way, Suite 200
Pacifica, CA 94044

RE: Addendum to Technical Memorandum for the new Roberts Road Parcel Biological Reconnaissance

Dear Mr. Newton:

On April 19, 2006, a biological reconnaissance was conducted at the newly acquired Roberts Road Parcel located in Pacifica, San Mateo County, California. The purpose of this reconnaissance is to provide an overview of potential sensitive habitats and species which may occur on the property. This assessment is based on information available at the time of the study and on site conditions that were observed on the date of the site visit. This addendum should be used in conjunction with the previous technical memo dated February 14, 2006, that addresses biological issues on the adjacent parcel (APN: 022-150-240). An updated observed species list was also compiled for the combined parcels and is included with this addendum.

The approximate 15-acre parcel (Study Area) is located along the south of Vassler Road bordered by Vassler Road to the north, Roberts Road to the west, a ridgeline to the south, and a narrow, open space corridor to the east. The Study Area is dominated by Northern Coastal Scrub with patches of ruderal vegetation adjacent to Vassler Road. There appears to be an old, unused paved road within the study area that has become overgrown with Pampas grass (*Cortaderia sp.*) and fennel (*Foeniculum vulgare*).

Methods

On April 19, 2006, the Study Area was traversed on foot to determine (1) if sensitive habitats were present, and (2) if existing conditions provided suitable habitat for any special status plant or wildlife species.

Sensitive Habitats

The Study Area was surveyed to determine if any wetlands and “waters” potentially subject to jurisdiction by the Corps, RWQCB, or CDFG were present. The assessment was based primarily on the presence of wetland plant indicators, but may also include any observed indicators of wetland hydrology or wetland soils. A preliminary “waters” assessment was based primarily on the presence of unvegetated, ponded areas or flowing water, or evidence indicating their presence such as a high water mark or a defined drainage course. The banks of any drainages, streams and other aquatic features found within the Study Area were examined for hydrophytic or stream-dependent woody plant species (riparian species).

Special Status Species

Potential occurrence of special status species in the Study Area was evaluated by first

determining which special status species occur in the vicinity of the Study Area through a literature and database search. Database searches for known occurrences of special status species included the Montara Mountain 7.5 minute USGS quadrangle and the four surrounding USGS quadrangles. The following sources were reviewed to determine which special status plant and wildlife species have been documented to occur in the vicinity of the Study Area:

- California Natural Diversity Database records (CNDDDB) (CDFG 2006)
- USFWS Quadrangle Species Lists (USFWS 2006)
- CNPS Electronic Inventory records (CNPS 2005)

Table 1 is provided in the original Technical Memo prepared by WRA dated February 14, 2006, and presents the special status plant and wildlife species with a potential to occur within the Study Area, their habitat requirements, and a rating of potential for occurrence.

A site visit is intended to identify suitable habitat for special status species known to occur in the vicinity in order to determine their potential to occur within the Study Area. The site visit does not constitute a protocol-level survey and is not intended to determine the actual presence or absence of a species; however, if a special status species is observed during the site visit, its presence will be recorded and discussed.

Results

Sensitive Habitats - Wetlands and Waters

One small (1 ft. wide by 0.5 ft. deep) man-made ditch was observed in the new parcel that runs in an east-west direction. The ditch appears to catch water flowing down the surface of the hill in order to prevent it from flowing onto Vasser Rd. Although the ditch had some saturated areas within it, the majority was not wet and would likely not contain any water for any length of time in a normal rainy season. Furthermore the ditch was dominated by upland species such as woodrush (*Luzula comosa*, NI), teasel (*Dipsacus sylvestris*, NI), and coyote brush (*Baccharis pilularis*, NL). There were small patches of a rush (*Juncus sp.*) in some areas of the ditch but this plant was common throughout other upland portions of the Study Area as well. Therefore this feature would not be considered Jurisdictional by the Corps, RWB, or DFG. No other potentially jurisdictional areas were observed within the Study Area. No other sensitive aquatic habitats were observed.

Special Status Species

Seventy species of plants and thirteen species of wildlife were observed in or adjacent to the combined Study Areas during the December 23, 2005 and February 10 and April 19, 2006 site visits. All of the plant and wildlife observed in the Study Area are commonly found species. No special status plant or wildlife species were observed.

Plants

Based upon a review of the resources and databases. Thirty-one special status plant species have been documented in the general vicinity of the Study Area. Table 1 provided in the original technical memorandum summarizes the potential for occurrence for these species in the Study Area. The Study Areas contains suitable habitat for ten of these species.

Wildlife

Seventy-two special status species of wildlife have been recorded in the vicinity of the Study Area. Table 1 summarizes the potential for occurrence for these species in the Study Area. Of these species, fifteen species have a low potential to occur, and fourteen species have a moderate to high potential for occurrence. Species were considered to have a low potential if they were likely to occur only seasonally or to occasionally forage over the site, or if only limited habitat is available.

Species that have a moderate to high potential to occur and require additional considerations include:

Nesting raptors and breeding birds: loggerhead shrike (*Lanius ludovicianus*), California thrasher (*Toxostoma redivivum*), Bell's sage sparrow (*Amphispiza belli*), Costa's hummingbird (*Calypte costae*), Rufous hummingbird (*Selasphorus rufus*), and Allen's hummingbird (*Selasphorus sasin*). Not documented during site visit, however suitable nesting habitat is present.

Species that have a low potential to occur but require additional considerations include:

Four Federal Endangered butterflies: San Bruno elfin butterfly (*Incisalia mossii bayensis*), Mission blue butterfly (*Icaricia icarioides missionensis*), callippe-silverspot butterfly (*Speyeria callippe callippe*), and Myrtle's silverspot (*Speyeria zerene myrtleae*). Surveys for butterfly larval host plants were conducted in February and April, 2006. The one species of lupine observed, *Lupinus nanus*, is an annual species that is not used by the Mission Blue Butterfly. Three small patches of *Viola pedunculata* were observed along the sides of the southern ridge totaling approximately 30 individuals. Due to the very small number of individuals of this species combined with the distance from known extant populations, there is a very low likelihood that these plants could support callippe-silverspot larvae. These butterflies have small ranges and are unlikely to be found over a mile from their breeding areas.

Recommendations

Wetlands and Waters

Since no potentially jurisdictional wetlands or waters were observed on this parcel, no further study is required.

Special Status Species

Plants

Although there was a moderate potential for 10 species to be present within the Study Area, the April 19, 2006 survey was conducted during the common blooming period for these species and none were observed. Although some native scrub habitat remains onsite, much of that habitat is dominated by dense thickets of blackberry (*Rubus sp.*) and poison oak (*Toxicodendron diversilobum*) precluding the growth of much other vegetation. The northern edge of the parcel is dominated by ruderal vegetation such as Pampas grass and fennel, especially adjacent to Vassler Road.

Breeding Birds

Six special status bird species have been identified, and potentially nest, within the Study Area. Disturbance resulting in abandonment or destruction of active nest is considered a significant impact under CEQA.

There are two approaches to avoid impacts to these species. The first approach is to limit any construction and/or remove vegetation (nesting habitat) to the time of year when birds are not nesting (September through March). The second approach is to conduct preconstruction surveys for nesting birds (a standard CEQA requirement). The purpose of these surveys is to avoid project related impacts and establish a disturbance buffer if nests are located. A minimum buffer of 25 feet is typically required by CDFG for songbird nests.

Federal Endangered Butterflies

No larval hostplants were observed in the newly acquired small parcel adjacent to Vassler Road. The larval hostplant for the callippe-silverspot butterfly, *Viola pedunculata*, was observed in three small patches along the southern ridgeline of parcel APN: 022-150-240. These plants only number approximately 30 in number, however, and the site is many miles from the closest known population of this species. Therefore this species is unlikely to visit the area nor utilize the plants as a food source. Additionally these plants appeared to be outside of the proposed construction area and would likely not be impacted. None of the host plants for the other three butterfly species were observed during the site visits. No additional surveys are recommended for these species as they are unlikely to occur within the Study Area.

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Table 1. Special status species that have been recorded in the vicinity of the Study Area. List compiled from a review of records from the Montara Mountain, San Francisco South, Half Moon Bay, Woodside, and San Mateo 7.5 minute USGS quadrangles in the CDFG Natural Diversity Data Base (2006), other CDFG lists and publications (Jennings and Hayes 1994; Zeiner et al. 1990), USFWS unofficial San Mateo County species lists (2006), and the CNPS electronic inventory (2005).

SPECIES	STATUS	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE
Mammals			
Townsend's western big-eared bat <i>Corynorhinus townsendii townsendii</i>	FSC, CSC	Primarily found in rural settings in a wide variety of habitats including oak woodlands and mixed coniferous-deciduous forest. Day roosts highly associated with caves and mines. Very sensitive to human disturbance.	Not Present. No suitable roost habitat present.
long-eared myotis <i>Myotis evotis</i>	FSC	Primarily a forest associated species. Day roosts in hollow trees, under exfoliating bark, rock outcrop crevices and buildings. Other roosts include caves, mines and under bridges.	Not Present. No suitable roost habitat present.
fringed myotis <i>Myotis thysanodes</i>	FSC	Associated with a wide variety of habitats including mixed coniferous-deciduous forest and redwood/sequoia groves. Buildings, mines and large snags are important day and night roosts.	Not Present. No suitable roost habitat present.
long-legged myotis <i>Myotis volans</i>	FSC	Generally associated with woodlands and forested habitats. Large hollow trees, rock crevices and buildings are important day roosts. Other roosts include caves, mines and buildings. Occurs above elevation 8000 feet.	Not Present. No suitable roost habitat present. Study Area is below typical elevation.
Yuma myotis <i>Myotis yumanensis</i>	FSC	Known for its ability to survive in urbanized environments. Also found in heavily forested settings. Day roosts in buildings, trees, mines, caves, bridges and rock crevices. Night roosts associated with man-made structures.	Not Present. No suitable roost habitat present.
greater western mastiff bat <i>Eumops perotis californicus</i>	FSC, CSC	Found in a wide variety of habitat. Distribution appears to be tied to large rock structures which provide suitable roosting sites, including cliff crevices and cracks in boulders.	Low potential. Limited suitable roost habitat present in southeastern corner adjacent to site. No documented occurrences.

SPECIES	STATUS	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE
big free -tailed bat <i>Nyctinomops macrotis</i>	CSC	Low-lying arid areas, predominantly in southern California. Need high cliffs or rocky outcrops.	Low potential. Limited suitable roost habitat present in southeastern corner adjacent to site. Documented occurrence within 5 miles (CNDDDB 2006).
salt-marsh wandering shrew <i>Sorex vagrans halicoetes</i>	FSC, CSC	Salt marshes of the south arm of San Francisco bay. Medium high marsh 6-8 ft above sea level where abundant driftwood is scattered among <i>salicornia</i> plants.	Not Present. No suitable habitat present.
San Francisco dusky-footed woodrat <i>Neotoma fuscipes annectens</i>	FSC, CSC	Occurs in forest habitats of moderate canopy and moderate to dense understory. Also found in chaparral habitats. Feeds mainly on woody plants: live oak, maple, coffeeberry, alder, and elderberry.	Low Potential. Typical chaparral habitat not present. May occur immediately south of site. Documented occurrence within 5 miles (CNDDDB 2006).
salt-marsh harvest mouse <i>Reithrodontomys raviventris</i>	FE, SE	Found only in the saline emergent wetlands of San Francisco bay and its tributaries. Pickleweed is primary habitat. Builds loosely organized nests instead of burrows. Requires higher areas for flood escape.	Not Present. No suitable habitat present.
American badger <i>Taxidea taxus</i>	CSC	Most abundant in drier open stages of shrub, forest, and herbaceous habitats, with friable soils. Need sufficient food, friable soils & open, uncultivated ground. Prey on burrowing rodents. Dig burrows.	Low Potential. Suitable open stages of shrub habitat present. No large mammal burrows or prey observed. Documented occurrence within 5 miles inland of site (CNDDDB 2006).
BIRDS			
Ashy storm-petrel <i>Oceanodroma homochroa</i> (Rookery site)	FSC, CSC	Colonial nester on off-shore islands. Usually nests on driest part of islands. Forages over open ocean. Nest sites on islands are in crevices beneath loosely piled rocks or driftwood, or in caves.	Not Present. No suitable habitat present.
California brown pelican <i>Pelecanus occidentalis californicus</i> (Nesting and roosting colony)	FE, SE, CFP	Colonial nester on coastal islands just outside the surf line. Nests on coastal islands of small to moderate size which afford immunity from attack by ground-dwelling predators.	Not Present. No suitable habitat present.

SPECIES	STATUS	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE
Double-crested cormorant <i>Phalacrocorax auritus</i> (Rookery site)	CSC	Colonial nester on cliffs, offshore islands, & along lake margins in the interior of the state. Nests along coast on sequestered islets, usually on ground with sloping surface, or in tall trees along lake margins.	Not Present. No suitable habitat present.
American bittern <i>Botaurus lentiginosus</i>	FSC	Occurs in fresh emergent wetlands, often hiding, resting, and roosting solitarily amidst tall, dense, emergent vegetation, on ground, or near ground on log, stump, or on emergent plants.	Not Present. No suitable habitat present.
Harlequin duck <i>Histrionicus histrionicus</i> (Nesting)	FSC, CSC	Breeds on west slope of the Sierra Nevada, nesting along shores of swift, shallow rivers. Nest often built in a recess, sheltered overhead by stream bank, rocks, woody debris, usually within 7 ft of water.	Not Present. No suitable habitat present.
Cooper's hawk <i>Accipiter cooperi</i>	CSC	Uses many habitats in winter and during migration; nests in deciduous and coniferous woodlands. Usually not found without dense tree stands, or patchy woodland habitat.	Low Potential. Typical habitat not present. May occur in drainage basin south of Study Area.
Sharp-shinned hawk <i>Accipiter striatus</i>	CSC	Uses many habitats in winter and during migration; breeds in oak, conifer, and riparian forests.	Low Potential. May occasionally forage on-site during winter and migration. No suitable nesting habitat.
Ferruginous hawk <i>Buteo regalis</i> (Wintering)	FSC, CSC	Found in open grasslands, sagebrush flats, desert scrub, low foothills & fringes of pinyon-juniper habitats. Mostly eats lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.	High Potential. Likely forages on-site during winter periods.
White-tailed kite <i>Elanus leucurus</i> (Nesting)	FSC, CFP	Forages in open to herbaceous stages of many habitats. Nests in shrubs and trees adjacent to grasslands.	High Potential. Suitable nesting and foraging habitat present on ridgeline.
Northern harrier <i>Circus cyaneus</i>	CSC	Forages in open to herbaceous stages of many habitats. Nests on ground in shrubby vegetation, usually near wetlands.	Low Potential. May occasionally forage on-site. No suitable nesting habitat.

SPECIES	STATUS	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE
Bald eagle <i>Haliaeetus leucocephalus</i> (Nesting & wintering)	FT, SE, CFP	Utilizes ocean shore, lake margins and rivers for both nesting and wintering. Most nests within 1 mi of water. Nests in lg, old-growth, or dominant live tree w/open branches, especially ponderosa pine. Roosts communally in winter.	Not Present. No suitable habitat present.
Prairie falcon <i>Falco mexicanus</i> (Nesting)	CSC	Inhabits dry, open terrain, either level or hilly. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.	Low Potential. May occasionally forage on-site. No suitable nesting habitat present.
American peregrine falcon <i>Falco peregrinus anatum</i> (Nesting)	SE, FSC, CFP	Occurs near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also utilizes human-made structures. Nest consists of a scrape on a depression or ledge in an open site.	Not Present. No suitable nesting habitat present.
California black rail <i>Laterallus jamaicensis coturniculus</i>	ST	Mainly inhabits salt-marshes bordering larger bays. Occurs in tidal salt marsh heavily grown to pickleweed; also in fresh-water and brackish marshes, all at low elevation.	Not Present. No suitable habitat present.
California clapper rail <i>Rallus longirostris obsoletus</i>	FE, SE, CFP	Salt-water & brackish marshes traversed by tidal sloughs in the vicinity of San Francisco bay. Associated with pickleweed, but feeds away from cover in mud-bottomed sloughs.	Not Present. No suitable habitat present.
Western snowy plover <i>Charadrius alexandrinus nivosus</i> (Nesting)	FT, CSC	Federal listing applies only to the pacific coastal population. Sandy beaches, salt pond levees & shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	Not Present. No suitable habitat present.
Long-billed curlew <i>Numerius americanus</i> (Nesting)	FSC, CSC	Breeds in upland shortgrass prairies & wet meadows in northeastern California. Habitats on gravelly soils and gently rolling terrain are favored over others.	Not Present. No suitable nesting habitat present.

SPECIES	STATUS	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE
Whimbrel <i>Numenius phaeopus</i>	FSC	Migrates northward along Pacific coast in March. Forages on beaches, mud and sand flats, preying on insects, worms, spiders, small mollusks, crustaceans (often crabs). Also eats berries.	Not Present. No suitable habitat or prey present.
Elegant tern <i>Sterna elegans</i> (Nesting colony)	FSC, CSC	Nests on dikes between salt ponds in association with Caspian terns.	Not Present. No suitable nesting habitat present.
Marbled murrelet <i>Brachyramphus marmoratus</i> (Nesting)	FT, SE	Feeds near shore; nests inland along coast, from Eureka to Oregon border & from Half Moon Bay to Santa Cruz. Nests in old-growth redwood- dominated forests, up to six miles inland, often in douglas firs.	Not Present. No suitable nesting habitat present.
Burrowing owl <i>Athene cunicularia</i> (Burrow sites)	FSC, CSC	Inhabits open, dry annual or perennial grasslands, deserts and scrub lands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Not Present. No suitable habitat present. Study Area is in humid coastal zone. Small mammal burrows not observed.
Flammulated owl <i>Otus flammeolus</i> (Nesting)	FSC	Nesting habitat includes multi-age class stands with multiple canopy layers, including a veteran tree component for nesting and roosting. Secondary cavity nester, utilizing natural cavities or those excavated by woodpeckers.	Not Present. No suitable nesting habitat present.
Vaux's swift <i>Chaetura vauxi</i> (Nesting)	FSC, CSC	Occurs in redwood, douglas fir, and other coniferous forests. Nests in large hollow trees and snags, often in flocks. Forages over most terrains, but shows a preference for foraging over rivers and lakes.	Not Present. No suitable nesting or foraging habitat present.
Black swift <i>Cypseloides niger</i> (Nesting)	FSC, CSC	Central California coast; central and southern Sierra Nevada; San Bernardino and San Jacinto mountains. Breeds in small colonies on cliffs near waterfalls or on sea-bluffs above surf; forages widely.	Low Potential. No suitable nesting habitat present. May occasionally forage over site.

SPECIES	STATUS	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE
Costa's hummingbird <i>Calypte costae</i>	FSC	Occurs in arid habitats such as desert washes, edges of desert riparian and valley foothill riparian, coastal scrub, desert scrub, desert succulent shrub, lower-elevation chaparral, and palm oases.	High Potential. Suitable nesting and foraging habitat present.
Rufous hummingbird <i>Selasphorus rufus</i>	FSC	Found in a wide variety of habitats that provide nectar-producing flowers. A common migrant and uncommon summer resident of California.	High Potential. Suitable foraging habitat present.
Allen's hummingbird <i>Selasphorus sasin</i>	FSC	Breeds in sparse and open woodlands, coastal redwoods, and sparse to dense scrub habitats. Distribution highly dependent on abundance of nectar sources.	High Potential. Suitable nesting and foraging habitat present.
Red-breasted sapsucker <i>Sphyrapicus ruber</i>	FSC	Aspen-pine association and coniferous forest, including humid coastal lowlands; in migration and winter also in open woodland and parks. Nests in trees; bores its own nest-hole cavity.	Moderate Potential. May occur during migration or winter on-site. No suitable nesting habitat present.
Olive-sided flycatcher <i>Contopus cooperi</i>	FSC	Most often found in montane conifer forests where tall trees overlook canyons, meadows, lakes or other open terrain	Moderate Potential. Suitable foraging habitat present. No suitable nesting habitat.
Little willow flycatcher <i>Empidonax traillii brewsteri</i>	SE	Most numerous where extensive thickets of low, dense willows edge on wet meadows, ponds, or backwaters. Winter migrant.	Low Potential. Limited habitat available adjacent to site in southern drainage basin.
Loggerhead shrike <i>Lanius ludovicianus</i> (Nesting)	FSC, CSC	Inhabits woodlands, savannah, pinyon-juniper, joshua tree, & riparian woodlands, desert oases, scrub & washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	High Potential. Suitable nesting and foraging habitat present.
Bank swallow <i>Riparia riparia</i>	ST	Migrant in riparian and other lowland habitats in western California. Nests in riparian areas with vertical cliffs and bands with fine-textured or sandy soils in which to nest.	Not Present. No suitable nesting or foraging habitat present.

SPECIES	STATUS	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE
California thrasher <i>Toxostoma redivivum</i>	FSC	Common resident of foothills and lowlands in cismontane California. Occupies moderate to dense chaparral habitats and extensive thickets in young or open valley foothill riparian habitat.	High Potential. Suitable nesting and foraging habitat present.
Saltmarsh common yellowthroat <i>Geothlypis trichas sinuosa</i>	FSC, CSC	Frequents low, dense vegetation near water including fresh to saline emergent wetlands. Brushy habitats used in migration. Forages among wetland herbs and shrubs for insects primarily.	Not Present. No suitable nesting or foraging habitat present.
Bell's sage sparrow <i>Amphispiza belli</i>	FSC, CSC	Prefers dense chaparral and scrub habitats in breeding season. Found in more open habitats in winter.	High Potential. Suitable nesting and foraging habitat present.
Alameda (South Bay) song sparrow <i>Melospiza melodia pusillula</i>	FSC, CSC	Found in saline emergent wetlands of the south bay. Require low, dense vegetation for cover and nesting.	Not Present. No suitable nesting or foraging habitat present. Outside range.
Tricolored blackbird <i>Agelaius tricolor</i>	FSC, CSC	Usually nests over or near freshwater in dense cattails, tules, or thickets of willow, blackberry, wild rose or other tall herbs.	Not Present. No suitable nesting or foraging habitat present.
Lawrence's goldfinch <i>Carduelis lawrencei</i>	FSC	Inhabits oak woodlands, chaparral, riparian woodlands, pinyon-juniper associations, and weedy areas near water during the breeding season.	Low Potential. Limited suitable nesting habitat present adjacent to site in southern drainage basin.
AMPHIBIANS AND REPTILES			
western pond turtle <i>Clemmys marmorata</i>	CSC, FSC	Ponds and pools with woody debris, overhanging vegetation and rocky outcrops for basking and thermoregulation.	Not Present. No suitable nesting or foraging habitat present.
coast horned lizard <i>Phrynosoma coronatum (frontale)</i>	FSC, CSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, & abundant supply of native ants & other insects.	Not Present. No suitable nesting or foraging habitat present.

SPECIES	STATUS	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE
San Francisco garter snake <i>Thamnophis sirtalis tetrataenia</i>	FE, SE, CFP	Ponds, lakes, reservoirs, streams, and drainage ditches, that are bordered (at least partially) by dense emergent or riparian vegetation, and nearby grasslands and brush.	Low Potential. Suitable aquatic habitat is not present on-site. Unlikely to utilize site as dispersal corridor based on distance from nearest known suitable breeding area. Documented occurrence within 2 miles (CNDDDB 2006).
California tiger salamander <i>Ambystoma californiense</i>	FT, CSC	Inhabits annual grassland or vernal pool habitat and utilizes upland mammal burrows for estivation. Seasonal ponds, vernal or annual pools are crucial to breeding.	Not Present. No suitable habitat present. No documented occurrences within 2 miles.
California red-legged frog <i>Rana aurora draytonii</i>	FT, CSC	Ponds, pools, or in slow-moving perennial to ephemeral streams, where water remains long enough for breeding and development of young. Emergent or shoreline riparian vegetation is the preferred but not essential habitat.	Low Potential. Suitable breeding habitat is not present on-site. May utilize eastern portion of site as a migration corridor. Documented occurrence within one mile to the northeast and southwest of the Study Area (CNDDDB 2006).
foothill yellow-legged frog <i>Rana boylei</i>	FSC, CSC	Found in or near rocky streams in a variety of habitats. Feed on both aquatic and terrestrial invertebrates.	Not Present. No suitable aquatic habitat present.
FISH			
steelhead-Central California Coast ESU <i>Oncorhynchus mykiss</i>	FT, NMFS	Federal listing includes all runs from the Russian River, south to Soquel Creek, inclusive. Adults spawn in cool streams with a substrate of clean gravel and cobbles. Juveniles remain in the stream for one or more years before migrating to the sea.	Not Present. No suitable aquatic habitat present. Documented occurrence within one mile south of Study Area (CNDDDB 2006).
INVERTEBRATES			
Edgewood blind harvestman <i>Calicina minor</i>	FSC	Found on the underside of moist serpentine rocks near permanent springs.	Not Present. No suitable serpentine habitat present.
Edgewood microblind harvestman <i>Microcina edgewoodensis</i>	FSC	Found on the underside of moist serpentine rocks near permanent springs.	Not Present. No suitable serpentine habitat present.

SPECIES	STATUS	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE
Ricksecker's water scavenger beetle <i>Hydrochara rickseckeri</i>	FSC	Inhabits vernal pool and aquatic habitats. Poorly known species from the San Francisco Bay area.	Not Present. No suitable aquatic habitat present.
bumblebee scarab beetle <i>Lichnanthe ursina</i>	FSC	Inhabits coastal sand dunes from Sonoma county south to San Mateo County	Not Present. No suitable habitat present.
San Francisco forktail damselfly <i>Ischnura gemina</i>	none	Endemic to the San Francisco bay area and Santa Cruz. Found in weedy ditches, often near saltwater.	High Potential. May occur on southfacing slopes of Study Area. Documented occurrence within 5 miles of Study Area (CNDDDB 2006).
Opler's longhorn moth Adela oplerella	CSC	Restricted to native grasslands on outcrops of serpentine soil in the vicinity of San Francisco Bay.	Not Present. No suitable serpentine habitat present.
San Bruno elfin butterfly <i>Incisalia mossii bayensis</i>	FE	Found in coastal, mountainous area with grassy ground cover, mainly in the vicinity of San Bruno Mountain, San Mateo County. Larval host plant is <i>Sedum spathulifolium</i> .	Low Potential. Larval host plant not observed during host plant surveys. Documented occurrence within five miles of Study Area on San Pedro Mountain (CNDDDB 2006).
Mission blue butterfly <i>Icaricia icarioides missionensis</i>	FE	Inhabits grasslands of the San Francisco Peninsula. Three larval hostplants: <i>Lupinus albifrons</i> , <i>L. varicolor</i> , and <i>L. formosus</i> .	Low Potential. Larval host plant not observed during host plant surveys. Documented occurrence within five miles north of Study Area on San Bruno Mountain (CNDDDB 2006).
monarch butterfly <i>Danaus plexippus</i>	None	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind protected tree groves, with nectar and water sources nearby.	Not Present. No suitable habitat present.
Bay checkerspot butterfly <i>Euphydryas editha bayensis</i>	FT	Restricted to native grasslands on outcrops of serpentine soil in the vicinity of San Francisco Bay. <i>Plantago erecta</i> is the primary host plant.	Not Present. No suitable serpentine habitat present.
Callippe silverspot butterfly <i>Speyeria callippe callippe</i>	FE	Restricted to northern coastal scrub of the San Francisco peninsula. Hostplant is <i>Viola pedunculata</i> .	Low Potential. Larval host plant not observed during host plant surveys.

SPECIES	STATUS	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE
Myrtle's silverspot <i>Speyeria zerene myrtleae</i>	FE	Restricted to areas immediately adjacent to the coast: dunes, scrub, and grasslands. Hostplant: <i>Viola adunca</i> . Known from only 4 remaining populations.	Low Potential. Larval host plant not observed during host plant surveys. Documented historically within five miles Study Area (CNDDDB 2006), but not observed in San Mateo County for decades.

SPECIES	STATUS*	BLOOM PERIOD	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE
PLANTS				
Franciscan onion <i>Allium peninsulare</i> <i>var. franciscanum</i>	FSC, List 1B	May-June	Cismontane woodland, valley and foothill grassland/clay, often serpentine; 100-300 m elevation.	Low Potential. Typical habitat is not present.
<i>Amsinckia lunaris</i> bent-flowered fiddleneck	1B	March - June	Coastal bluff scrub, cismontane-woodland, valley and foothill grassland. 3-500m.	Moderate Potential. Suitable habitat present..
<i>Chorizanthe cuspidata</i> var <i>cuspidata</i> San Francisco Bay spineflower	FSC, 1B	April- August	Sandy soils in coastal bluff scrub, coastal dunes, coastal prairie, coastal scrub. 3-215 m.	Low Potential. Sandy soils not common in Study Area.
<i>Chorizanthe robusta</i> var <i>robusta</i> robust spineflower	FE, 1B	April- September	Sandy or gravelly soil in openings in cismontane woodlands, coastal dunes, coastal scrub. 3-300 m.	Low Potential. Sandy soils not common in Study Area.
<i>Cirsium andrewsii</i> Franciscan thistle	List 1B	March-July	Mesic, sometimes serpentine soils in broadleaved upland forest, coastal bluff scrub, coastal prairie, coastal scrub. 0-135 m.	Low Potential. Sandy soils not common in Study Area; no serpentic soils present onsite.

SPECIES	STATUS*	BLOOM PERIOD	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE
<i>Cirsium occidentale</i> var. <i>compactum</i> compact cobwebby thistle	FSC, List 1B	April-June	Chaparral, coastal dunes, coastal prairie, coastal scrub. On dunes and on clay in chaparral; also in grassland. 5-150 m.	Moderate Potential. Suitable habitat present.
<i>Collinsia multicolor</i> San Francisco collinsia	1B	(March - May)	Closed-cone coniferous forest, coastal scrub (sometimes serpentine). 30-250 m.	Moderate Potential. Suitable habitat present.
<i>Equisetum palustre</i> marsh horsetail	List 3		Marshes and swamps. 45-1000 m.	Not Present. No suitable habitat present.
<i>Eriogonum</i> <i>luteolum</i> ssp. <i>caninum</i> Tiburon buckwheat	List 3	June- September	Chaparral, coastal prairie, valley and foothill grassland/serpentine; 10-500 m elevation.	Low Potential. No serpentic soils present in Study Area.
<i>Fritillaria liliacea</i> fragrant fritillary	FSC, List 1B	February- April	Cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland / often serpentine; 3-410 m elevation.	Not Present. Species not observed during February plant survey.
<i>Gilia capitata</i> ssp. <i>chamissonis</i> dune gilia	List 1B	April-July	Coastal dunes, coastal scrub; 2-200 m elevation.	Moderate Potential. Suitable habitat present.
<i>Grindelia hirsutula</i> var. <i>maritima</i> San Francisco gumplant	FSC, List 1B	August- September	Sandy or serpentine soils in coastal bluff scrub, coastal scrub, valley and foothill grassland. 15-400 m.	Low Potential. Typical habitat is not present.
<i>Helianthella</i> <i>castanea</i> Diablo helianthella	FSC, List 1B	April-June	Broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland. 60- 1300 m.	Low Potential. Some suitable habitat components present onsite.
<i>Hesperexax</i> <i>sparsiflora</i> ssp. <i>leucocephala</i> short-leaved evax	List 2	March- June	Coastal bluff scrub (sandy), coastal dunes; 0-215 m elevation.	Low Potential. Typical habitat is not present.

SPECIES	STATUS*	BLOOM PERIOD	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE
<i>Horkelia cuneata</i> ssp <i>sericea</i> Kellogg's horkelia	FSC, List 1B	April-September	Sandy or gravelly soil in openings in closed-cone coniferous forest, maritime chaparral, coastal scrub. 10-200 m.	Moderate Potential. Suitable habitat present.
<i>Horkelia marinensis</i> Point Reyes horkelia	List 1B	May-September	Sandy soils in coastal dunes, coastal prairie, coastal scrub. 5-350 m.	Low Potential. Typical soils is not present.
<i>Layia carnosa</i> beach layia	FE, SE, List 1B	March-July	Sandy soils in coastal dunes, coastal scrub. 0-60 m.	Low Potential. Typical soils is not present.
<i>Lessingia arachnoidea</i> Crystal Springs lessingia	FSC, List 1B	July-October	Serpentinite, often roadsides, in cismontane woodland, coastal scrub, valley and foothill grassland. 60-200 m.	Not Present. No suitable habitat present.
<i>Lessingia germanorum</i> San Francisco lessingia	FE, SE, List 1B	June-November	Remnant dunes in coastal scrub. 25-90 m.	Not Present. No suitable habitat present.
<i>Lessingia hololeuca</i> woolly-headed lessingia	List 3	June-October	Clay or serpentinite in broadleaved upland forest, coastal scrub, lower montane coniferous forest, valley and foothill grassland. 15-305 m.	Low Potential. Typical soils is not present.
<i>Lilium maritimum</i> coast lily	List 1B	May-July	Broadleaved upland forest, closed-cone coniferous forest, coastal prairie, coastal scrub, freshwater marshes and swamps, North Coast coniferous forest. 5-335 m.	Moderate Potential. Suitable habitat present.
<i>Linanthus croceus</i> coast yellow linanthus	List 1B	May	Coastal bluff scrub, coastal prairie, usually by the ocean. 10-150 m.	Moderate Potential. Suitable habitat present.
<i>Linanthus rosaceus</i> rose linanthus	FSC, List 1B	April-June	Coastal bluff scrub, usually by the ocean. 0-100 m.	Moderate Potential. Suitable habitat present.

SPECIES	STATUS*	BLOOM PERIOD	HABITAT REQUIREMENTS	POTENTIAL FOR OCCURRENCE
<i>Lupinus eximius</i> San Mateo tree lupine	List 3	April-July	Chaparral, coastal scrub. 90-550 m.	Not Present. No perennial lupines observed during plant surveys.
<i>Microseris paludosa</i> marsh microseris	FSLC, List 1B	April-June	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland; 5-300 m elevation.	Moderate Potential. Suitable habitat present.
<i>Pentachaeta bellidiflora</i> white-rayed pentachaeta	FE, SE, List 1B	March-May	Valley and foothill grassland, often serpentinite. 35-620 m.	Not Present. No suitable habitat present.
<i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i> Choris's popcorn flower	List 1B	March-June	Mesic soils in chaparral, coastal prairie, coastal scrub. 15-100 m.	Low Potential. No mesic soils onsite.
<i>Potentilla hickmanii</i> Hickman's cinquefoil	FE, SE, List 1B	April-August	Coastal bluff scrub, closed-cone coniferous forest, vernal mesic meadows, freshwater marshes and swamps. 10-135 m.	Moderate Potential. Suitable habitat present.
<i>Sanicula maritima</i> adobe sanicle	SR, List 1B	February-May	Clay or serpentinite in chaparral, coastal prairie, meadows, valley and foothill grassland. 30-240 m.	Not Present. No suitable habitat present and species not observed during plant surveys.
<i>Silene verecunda</i> ssp. <i>verecunda</i> San Francisco campion	FSC, List 1B	March-August	Sandy soil in coastal bluff scrub, chaparral, coastal prairie, coastal scrub, valley and foothill grassland. 30-645 m.	Low Potential. Sandy soils not common in Study Area.
<i>Triphysaria floribunda</i> San Francisco owl's-clover	FSC, List 1B	April-June	Coastal prairie, coastal scrub, valley and foothill grassland, sometimes serpentinite. 10-160 m.	Low Potential. Although coastal scrub habitat present, no other potential habitat types or serpentinitic soils present.
<i>Triquetrella californica</i> coastal triquetrella	List 1B	n/a	Soil in coastal bluff scrub, coastal scrub. 10-100 m.	Low Potential. No known occurrences in San Mateo county; species not observed during plant survey.

* Key to status codes:

Status codes used above are:

FE - Federal Endangered

FT - Federal Threatened

FC - Federal Candidate

FPD - Federal Proposed Delisted

FSC - United States Fish and Wildlife Service Federal Species of Concern

NMFS - Species under the Jurisdiction of the National Marine Fisheries Service

SE - State Endangered

ST - State Threatened

CSC - CDFG Species of Special Concern, CSC (Draft) - 4 April 2001 Draft

CFP - California Fully Protected Species

None - No status given but rookery sites are monitored by CDFG

List 1B - CNPS 1B List, Endangered, Threatened, or Rare in California

List 2 - CNPS List 2 Plants that are rare, threatened, or endangered in California, but more common elsewhere

List 3 - CNPS List 3 Plants about which more information is needed - a review list

Table 2. Plant and wildlife species observed within Study Area.

Common Name	Scientific Name
Plants	
California sheepburr	<i>Acaena pinnatifida var. californica</i>
yarrow	<i>Achillea millefolium</i>
chamise	<i>Adenostoma fasciculatum</i>
pearly everlasting	<i>Anaphalis margaritaceae</i>
madrone	<i>Arbutus menziesii</i>
California sagebrush	<i>Artemisia californica</i>
mugwort	<i>Artemisia douglasii</i>
wild oats	<i>Avena fatua</i>
coyote brush	<i>Baccharis pilularis</i>
black mustard	<i>Brassica nigra</i>
rip-gut brome	<i>Bromus diandrus</i>
sun cup	<i>Camissonia ovata</i>
iceplant	<i>Carpobrotus edulis</i>
paintbrush	<i>Castilleja sp.</i>
ceanothus	<i>Ceanothus sp.</i>
wavy-leafed soap plant	<i>Chlorogalum pomeridianum</i>
bull thistle	<i>Cirsium arvense</i>
poison hemlock	<i>Conium maculatum</i>
pampas grass	<i>Cortaderia selloana</i>
cotoneaster	<i>Cotoneaster sp.</i>
Monterey cypress	<i>Cupressus macrocarpa</i>
flat leaf tallsedge	<i>Cyperus eragrostis</i>
wild carrot	<i>Daucus carota</i>
teasel	<i>Dipsacus fullonum</i>
dudleya	<i>Dudleya sp.</i>
willowherb	<i>Epilobium ciliatum</i>
seaside daisy	<i>Erigeron glaucus</i>
yerba santa	<i>Eriodictyon californicum</i>
buckwheat	<i>Eriogonum sp.</i>

seaside wooly sunflower	<i>Eriophyllum staechadifolium</i>
long-beaked filaree	<i>Erodium botrys</i>
California poppy	<i>Eschscholzia californica</i>
eggleaf spurge	<i>Euphorbium oblongatum</i>
fennel	<i>Foeniculum vulgare</i>
coast strawberry	<i>Fragaria chiloensis</i>
tiny bedstraw	<i>Galium murale</i>
Spanish broom	<i>Genista sp.</i>
cut leaf geranium	<i>Geranium dissectum</i>
everlasting	<i>Gnaphalium canescens</i>
purple cudweed	<i>Gnaphalium purpureum</i>
hairy gumplant	<i>Grindelia hirsutula var. hirsutula</i>
horkelia	<i>Horkelia sp.</i>
common rush	<i>Juncus patens</i>
lomatium	<i>Lomatium sp.</i>
honeysuckle	<i>Lonicera sp.</i>
sky lupine	<i>Lupinus nanus</i>
woodrush	<i>Luzula comosa</i>
bush monkey flower	<i>Mimulus aurantiacus</i>
coyote mint	<i>Monardella villosa</i>
Bermuda buttercup	<i>Oxalis pes-caprae</i>
bristly ox-tongue	<i>Picris echioides</i>
Monterey pine	<i>Pinus radiata</i>
English plantain	<i>Plantago lanceolata</i>
california polypody	<i>Polypodium californicum</i>
California blackberry	<i>Rubus ursinus</i>
sheep sorrel	<i>Rumex acetosella</i>
curly dock	<i>Rumex crispus</i>
fiddle dock	<i>Rumex pulcher</i>
footsteps of spring	<i>Sanicula arctopoides</i>
California beeplant	<i>Scrophularia californica</i>

dwarf checkerbloom	<i>Sidalcea malvaeflora ssp. malvaeflora</i>
blue-eyed grass	<i>Sisyrinchium bellam</i>
goldenrod	<i>Solidago sp.</i>
common sow-thistle	<i>Sonchus oleraceous</i>
poison oak	<i>Toxicodendron diversilobum</i>
dwarf owl's clover	<i>Triphysaria pusilla</i>
clover	<i>Trifolium sp.</i>
common vetch	<i>Vicia sativa</i>
Johnny-jump-up	<i>Viola pedunculata</i>
brome fescue	<i>Vulpia bromoides</i>
narrow leafed mule's ear	<i>Wyethia angustifolia</i>
Wildlife	
Western Scrub Jay	<i>Aphelocoma californica</i>
Rufous-Crowned Sparrow	<i>Aimophila ruficeps</i>
Wrentit	<i>Chamaea fasciata</i>
Northern Flicker	<i>Colaptes auratus</i>
American Kestrel	<i>Falco sparverius</i>
bobcat	<i>Felis rufus</i>
Song Sparrow	<i>Melospiza melodia</i>
Spotted Towhee	<i>Pipilo maculatus</i>
California Towhee	<i>P. crissalis</i>
Chestnut-Backed Chickadee	<i>Poecile rufescens</i>
Bewick's Wren	<i>Thyromanes bewickii</i>
Ruby-Crowned Kinglet	<i>Regulus calendula</i>
White-Crowned Sparrow	<i>Zonotrichia leucophrys</i>

Table 2: Wildlife Species Observed by Site or Sign, at Harmony @ 1 Project site During Site Visits in November 2006 and March and April, 2007

<u>Common Name</u>		<u>Scientific Name</u>
	MAMMALS	
Domestic dog		<i>Canis domesticus</i>
Coyote		<i>Canis latrans</i>
Feral cat		<i>Felis catus</i>
Bobcat		<i>Lynx rufus</i>
Botta's Pocket gopher		<i>Thomomys bottae</i>
Black-tailed mule deer		<i>Odocoileus hemionus</i>
San Francisco dusky-footed woodrat		<i>Neotoma fuscipes annectens</i>
	BIRDS ¹	
American kestrel		<i>Falco sparverius</i>
Red-tailed hawk		<i>Buteo jamaicensis</i>
Anna's hummingbird		<i>Calypte anna</i>
Common raven		<i>Corvus corax</i>
Western scrub jay		<i>Aphelocoma californica</i>
Ruby-crowned kinglet		<i>Regulus calendula</i>
Chestnut-backed chickadee		<i>Poecile rufescens</i>
Wrentit		<i>Chamaea fasciata</i>
California thrasher		<i>Toxostoma redivivum</i>
Bushtit		<i>Psaltriparus minimus</i>
Bewick's wren		<i>Thryomanes bewickii</i>
Spotted towhee		<i>Pipilo maculatus</i>
Song sparrow		<i>Melospiza melodia</i>
White-crowned sparrow		<i>Zonotrichia leucophrys</i>
Western meadowlark		<i>Sturnella neglecta</i>
House finch		<i>Carpodacus mexicanus</i>
Lesser goldfinch		<i>Carduelis psaltria</i>
Loggerhead shrike		<i>Lanius ludovicianus</i>
'Myrtles' Yellow-rumped warbler		<i>Dendroica coronata</i>
Golden crowned sparrow		
	REPTILES	
Racer		<i>Coluber constrictor</i>
Western fence lizard		<i>Sceloporus occidentalis</i>
San Francisco alligator lizard		<i>Elgaria coerulea coerulea</i>
Western aquatic garter snake		<i>Thamnophis atratus atratus</i>
	INSECTS	
California ringlet		<i>Coenonympha tullia californica</i>
Anise swallowtail		<i>Papilio zelicaon</i>
Monarch		<i>Danaus plexippus</i>

¹ Notes: All birds listed could potentially breed on the project property with the exception of ruby-crowned kinglet (see Table 3). Species exhibiting courtship behavior, defending territories, or carrying nest materials include white-crowned sparrow, Anna's hummingbird, bushtit, Bewick's wren, song sparrow, California towhee, western scrub jay and chestnut-backed chickadee. Additionally, a pair of common ravens was observed adjacent to the site perching on light posts along Robert's Road.

Table 3: Bird Species Nesting Potential at Harmony @ 1 Project site

Species	Habitat/Nesting	Potential for Nesting Onsite
American kestrel (<i>Falco sparverius</i>)	Occurs in most open habitats, in a variety of shrub and early successional forest habitat and in forest openings. Nest in tree cavity.	High potential. Female observed during three site visits. May nest in Monterey pine or eucalyptus groves onsite.
Red-tailed hawk (<i>Buteo jamaicensis</i>)	Highly adaptable; uses grasslands, open brush habitats, and open stands of deciduous and conifer forests. Also frequents croplands, fields, and pastures. Platform nest built in crotch of tree or occasionally on cliff.	Moderate potential. May nest in Monterey pine or eucalyptus groves onsite.
Anna's hummingbird (<i>Calypte anna</i>)	A common resident throughout coastal California and much of the interior. Occurs in most woodland and forest habitats up to mixed conifer, and in most scrub and chaparral habitats; also common in agricultural and residential areas. Nest in tree or shrub.	High potential. Many individuals observed during site visit.
Northern flicker (<i>Colaptes auratus</i>)	Suitable habitat consists of open forest and shrub habitats with abundant ecotones for feeding, and snags for nest cavities. Trees, shrubs, nest and roost cavities provide cover. Commonly uses riparian deciduous areas and mature, open stands with snags.	Moderate potential. May nest in Monterey pine or eucalyptus groves onsite.
Common raven (<i>Corvus corax</i>)	Occurs in most habitats. Usually associated with large expanses of sparse, open terrain for foraging, and cliffs, bluffs, or sea walls for nest sites. Build cup nest in tree or on cliff.	Moderate potential. Pair observed adjacent to the site perching on light posts along Robert's Road.
Western scrub jay (<i>Aphelocoma californica</i>)	Frequents scrub habitats, especially with oaks; chaparral, coastal scrub, hardwood, hardwood-conifer, valley foothill riparian, pinyon-juniper, and urban. Build cup nest in shrub or tree from three feet to 30 feet off the ground.	High potential. Observed several individuals foraging onsite.
Ruby-crowned kinglet (<i>Regulus calendula</i>)	In summer, breeds and feeds in montane coniferous forests with open to moderate canopy. An array of tree and shrub habitats at lower elevations is used in winter.	None. This species winters in San Mateo County and is not known to breed within the county.
Chestnut-backed chickadee (<i>Poecile rufescens</i>)	Frequents conifer habitats, especially those with oaks, maples, and other hardwoods. Also feeds regularly in alders, willows, and other riparian vegetation. Cavity nester.	High potential. One pair observed near riparian habitat during site visit.
Wrentit (<i>Chamaea fasciata</i>)	Prefers dense stands of chaparral and coastal scrub. Sometimes found in sparse or open conifers or other woodlands with a heavy shrub understory. Build cup nest in shrub one foot to 15 feet off ground.	High potential. Males observed during site visit defending territory within scrub habitat.
California thrasher (<i>Toxostoma redivivum</i>)	A common resident of foothills and lowlands in cismontane California. Occupies moderate to dense chaparral habitats and, less commonly, extensive thickets in young or open valley	Moderate potential. One male observed during site visit perched within scrub

	foothill riparian habitat. Frequents chaparral habitat with dense canopy and openings next to ground. Also uses similar riparian thickets, especially with California blackberry and California wild grape. Build cup within shrub nest two feet to nine feet off ground.	and singing.
Bushtit (<i>Psaltriparus minimus</i>)	A common resident in a variety of habitats throughout most of the state, especially valley foothill and montane hardwood, valley foothill hardwood-conifer, and riparian. Found in open and dense brush habitats in all stages of growth. In woodlands, generally prefers open areas with a dense understory. Nest in tree or shrub, four feet to 50 feet off ground.	High potential. One pair observed carrying nest material into riparian vegetation.
Loggerhead Shrike (<i>Lanius ludovicianus</i>)	A common resident and winter visitor in lowlands and foothills throughout California. Prefers open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches. Builds cup nest in tree or shrub.	Moderate potential. Some suitable habitat onsite.
Bewick's wren (<i>Thryomanes bewickii</i>)	Principally a chaparral species; common in mixed and montane chaparral habitats. Also breeds commonly in pinyon-juniper habitat. May move outward from montane chaparral, particularly into riparian habitats, but also into borders of woodlands and coniferous forests with brushy understory. Prefers natural cavity or rock crevice for nesting. Dense shrubs, thickets, slash piles used for cover and foraging.	High potential. Many males observed singing and defending territories during site visit.
Yellow-rumped warbler (<i>Dendroica dominica</i>)	Widespread as a winter resident, occupying woodlands, chaparral, residential areas, even grasslands and agricultural areas where bordered by trees or shrubs. Rare breeder in San Mateo County. Nests in coniferous and coniferous/deciduous forest.	Low potential. Rare breeder in county and lack of dense forested habitats onsite.
Spotted towhee (<i>Pipilo maculatus</i>)	Found in chaparral and other shrub habitats and in open stands of riparian, hardwood, hardwood-conifer, and lower-elevation conifer habitats. Breeds and forages within dense brush or thickets with substantial accumulations of litter.	High potential. Observed in suitable nesting habitat during site visit.
Song sparrow (<i>Melospiza melodia</i>)	Breeds in dense riparian thickets, emergent wetlands, or dense thickets in other moist situations. An open overstory of trees may be present, but is not required. In winter, occurs in similar habitats, often far from water. Nests in shrubs or on ground.	High potential. Observed several territorial males during site visit.
Rufous-crowned sparrow (<i>Aimophila ruficeps</i>)	A common resident of sparse, mixed chaparral and coastal scrub habitats (especially coastal sage). Breeds and feeds on steep, dry, herbage-covered hillsides with scattered shrubs and rock outcrops. Typically nests on ground, occasionally in shrub.	Moderate potential. Suitable nesting habitat present within scrub patches.
White-crowned sparrow (<i>Zonotrichia leucophrys</i>)	Occurs primarily in open brushlands, in wet meadows with low shrubs, or in open, wooded habitats with understories of similar structure.	High potential. Several pairs observed and territorial males

	Optimal breeding habitats include open coastal scrub or willow thickets in wet meadows, or open, montane riparian habitat at high elevations.	during site visit.
Western meadowlark (<i>Sturnella neglecta</i>)	Occurs in herbaceous and cropland habitats with sufficient ground cover for concealment. Requires relatively dense, grassy habitat with vegetation tall enough to provide cover, along with a few low perches. Scattered trees and shrubs may be present, but not required. Nest on ground within grassland habitat.	Moderate potential. Flock of 10 to 15 individuals observed foraging in grassland. Suitable nesting habitat present in grassland.
House finch (<i>Carpodacus mexicanus</i>)	Most common in valley foothill hardwood, valley foothill hardwood-conifer, and riparian habitats, as well as in desert riparian, palm oasis, orchard-vineyard, and urban habitats. Occupies a variety of open habitats with suitable nest and roost sites, elevated escape perches, and drinking water within daily commuting distance. Nest in tree or shrub.	High potential. Suitable nesting habitat present throughout site.
Lesser goldfinch (<i>Carduelis psaltria</i>)	Prefers open habitats, especially valley foothill hardwood, valley foothill hardwood-conifer, and valley foothill riparian, with scattered trees, shrubs, or thickets of forbs. Frequents edges of denser brushlands and woodlands. Nest in tree or shrub.	High potential. Suitable nesting habitat present throughout site.

APPENDIX G
TRAFFIC STUDY



Civil and Transportation Engineering

TRAFFIC IMPACT ANALYSIS

**HARMONY@1 (ROBERTS ROAD RESIDENTIAL)
PACIFICA, CALIFORNIA**

May 31, 2007

Prepared for -
Cowan-Newton
338 Horizon Way
Pacifica, CA 94044

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INTRODUCTION

SECTION 1.

STUDY PURPOSE

The purpose of this study is to quantify and analyze the traffic impacts of a proposed residential subdivision in the City of Pacifica on vacant land on the east side of Roberts Road. See Figure 1, Location Map, page 2.

PROJECT DESCRIPTION

The project proposes to subdivide 67.4 acres for 14 single family detached residential housing units.

ANALYSIS METHODOLOGIES

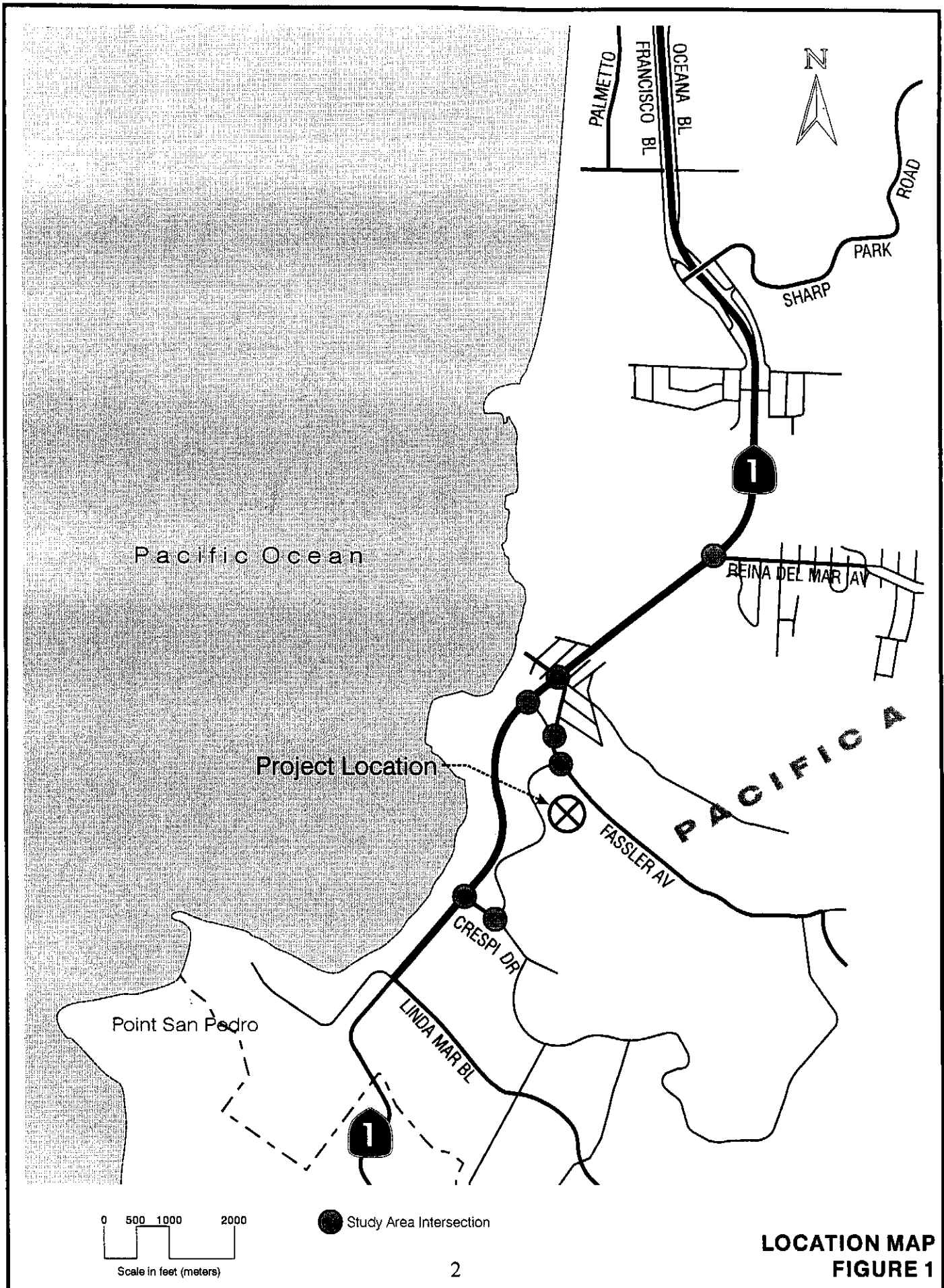
The seven designated study area intersections have been analyzed according to the methodologies contained in the 2000 edition of the *Highway Capacity Manual*. Using the TRAFFIX¹ network modeling program a traffic network model was created to analyze the streets and intersections within the project study area.

ANALYSIS SCENARIOS

Four scenarios have been developed and analyzed in this study.

1. **Existing Conditions.** Current (2006) traffic volumes within the study area.
2. **Background Conditions (Existing + Approved Projects).** Background traffic is that traffic expected to be present at the time the project is ready for occupancy. It consists of existing traffic plus traffic expected to be generated by those developments that are approved but were not built and occupied at the time the traffic counts were taken.
3. **Project Conditions. (Existing + Approved + Project)** Project trips are estimated based on the proposed land use and are then added to Background Conditions traffic in order to obtain the Project Conditions traffic scenario.
4. **Near-Term Cumulative Conditions. (Existing + Approved + Project + Future Development)** Cumulative traffic is that traffic expected to be present within the next five years. It consists of existing traffic plus trips from Approved Projects plus trips from the project plus trips from future development projects within the study area.

¹ Dowling Associates, TRAFFIX, Release 7.7.0715, ©2004



**LOCATION MAP
FIGURE 1**



EXISTING CONDITIONS

SECTION 2.

ROADWAY NETWORK

State Route 1. Route 1 through the project study area is a 4-lane, divided highway running generally north-south through the project study area.

Fassler Avenue. Fassler Avenue is a 4-lane arterial street through the project study area.

Roberts Road. Roberts Road is a 2-lane street connecting Fassler Avenue on the north with Crespi Drive on the south.

Crespi Drive. Between Route 1 and Roberts Road Crespi Drive is a 4-lane street. East of Roberts Road the street narrows to one lane each way.

INTERSECTION LANE CONFIGURATIONS

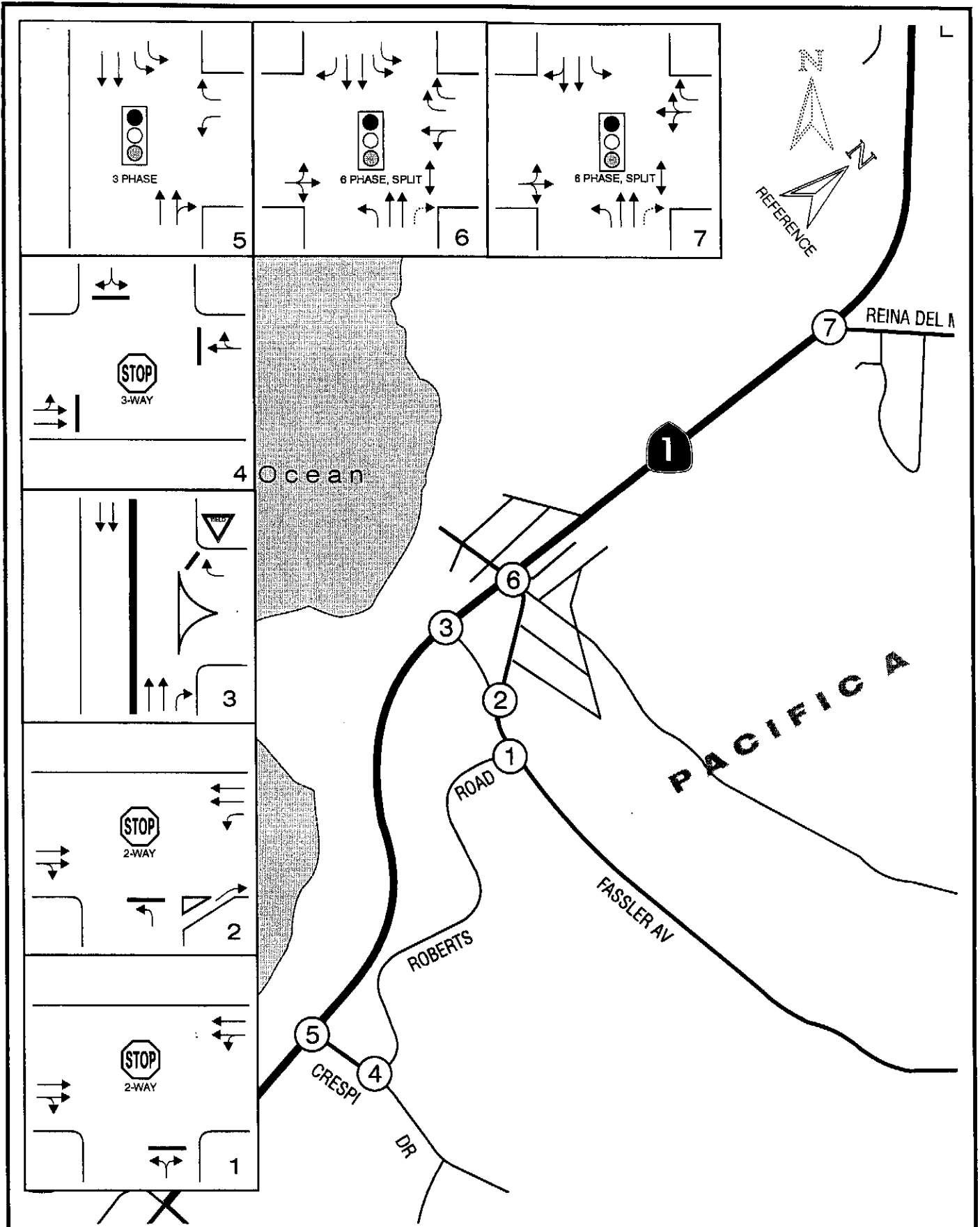
The lane configurations and controls of the seven study area intersections are shown on Figure 2, Existing Intersection Lane Configurations, page 4.

EXISTING TRAFFIC VOLUMES

Existing 2006 peak hour traffic volumes through the study area intersections are shown on Figure 3, Existing Peak Hour Traffic Volumes, page 5. Peak hours for purposes of this study are those that occur between 7 and 9 a.m. and between 4 and 6 p.m. on an average weekday. Traffic counts at each of the seven study area intersections were obtained during the months of January and February, 2006. Some of the peak hour volumes were adjusted for continuity between successive intersections. See Appendix A for traffic count data.

LEVELS OF SERVICE DEFINED

LOS (Levels of Service) methodologies are described in Section 1. Levels of Service define how well or how poorly a traffic facility (a street or an intersection) is operating. There are by definition six Levels of Service. These definitions are presented in Tables A and A1 on page 6.



NOTE: Intersections are oriented according to their placement in the TRAFFIX traffic network model. North orientation in TRAFFIX model is Reference North on this diagram.

**EXISTING INTERSECTION
LANE CONFIGURATIONS
FIGURE 2**



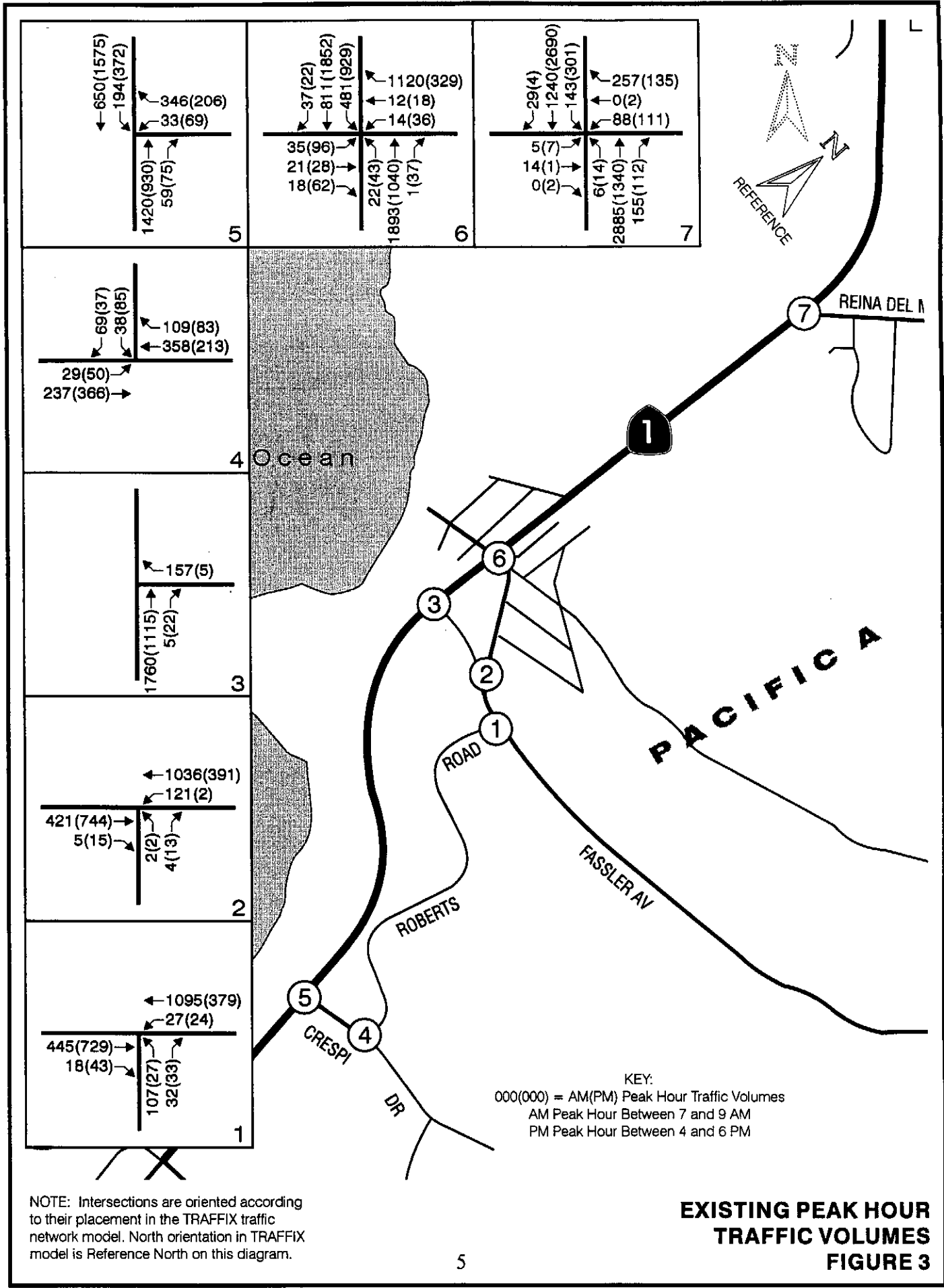


TABLE A: Levels of Service Definitions for 2-Way and All-Way STOP Controlled Intersections	
Level of Service	Traffic Conditions
A	Very low delay, less than or equal to 10.0 seconds of average control delay per vehicle.
B	Average control delay in the range of 10.1 to 15.0 seconds per vehicle
C	Average control delay in the range of 15.1 to 25.0 seconds per vehicle
D	Average control delay in the range of 25.1 to 35.0 seconds per vehicle
E	Average control delay in the range of 35.1 to 50.0 seconds per vehicle
F	Average control delay in excess of 50 seconds per vehicle.

Reference: *Highway Capacity Manual*, Chapter 17, HCM2000.

TABLE A1: Levels of Service Definitions for Signalized Intersections		
Level of Service	Traffic Flow Conditions	Control Delay per Vehicle (sec./veh)
A	Conditions of free flow; speed is controlled by driver's desires, stipulated speed limits, or physical roadway conditions.	≤10
B	Conditions of stable flow; operating speeds beginning to be restricted; little or no restrictions on maneuverability from other vehicles.	>10-20
C	Conditions of stable flow; speeds and maneuverability more closely restricted; occasional backups behind left-turning vehicles at intersections.	>20-35
D	Conditions approach unstable flow; tolerable speeds can be maintained but temporary restrictions may cause extensive delays; little freedom to maneuver; comfort and convenience low; at intersections some motorists, especially those making left turns, may wait through one or more signal changes.	>35-55
E	Conditions approach capacity; unstable flow with stoppages of momentary duration; maneuverability severely limited.	>55-80
F	Forced flow conditions; stoppages for long periods; low operating speeds. Delays at intersections average 60 seconds or more.	>80

Source: Exhibit 16-2, *Highway Capacity Manual*.

LEVELS OF SERVICE STANDARDS

For signalized intersections in Pacifica the project is said to create a significant adverse impact on traffic conditions at the intersection if for any peak hour -

1. The level of service at the intersection degrades from an acceptable LOS D or better under background conditions to an unacceptable LOS E or F under project conditions, or
2. If the intersection is already operating at an unacceptable LOS E and the addition of project traffic causes both the critical movement delay at the intersection to increase by two (2) or more seconds and the critical demand-to-capacity (V/C) ratio to increase by more than 0.010, or
3. If the intersection is already operating at an unacceptable LOS F and the addition of project traffic causes both the critical movement delay at the intersection to increase by one (1) or more seconds and the demand-to-capacity (V/C) to increase by more than 0.010.

An exception to this rule applies when the addition of project traffic reduces the amount of average delay for critical movements (i.e., the change in average delay for critical movements is negative). In this case the threshold of significance is an increase in the critical V/C value of more than 0.010.

EXISTING CONDITIONS LEVELS OF SERVICE

Levels of Service have been calculated for the existing conditions scenario using the analysis methods contained in the *2000 Highway Capacity Manual*. The results of the LOS calculations are summarized in Table B on page 8. The calculation worksheets are provided in Appendix B.

The LOS calculations do not necessarily reflect the extensive queuing that occurs on westbound Fassler Avenue and northbound Route 1 during the morning peak traffic period. The LOS calculations are based on the actual volumes entering the intersections and not on the volumes that could enter the intersections if adequate capacity was in place. The City of Pacifica and the San Mateo County Transportation Authority are planning on widening Route 1 between Fassler Avenue/Rockaway Beach Avenue and Reina Del Mar Avenue from four lanes to six lanes. The project is still in the planning stages of development. Once completed, that project will significantly reduce the queuing that presently occurs on Route 1 in the northbound direction during the morning peak traffic period.

During the morning peak traffic period the queue of vehicles westbound on Coast Lane at Route 1 extends back to Fassler Avenue. The LOS calculations do not take this into account. Based on observation the yield controlled approach on Coast Lane at Route 1 is operating at LOS E or F.

Three of the seven intersections presently operate at LOS F during the morning peak hour and

one during the PM peak hour.

TABLE B: Intersection Levels of Service Existing Conditions				
STOP or YIELD Controlled Intersections	Controlled Approach	Peak Hour	Existing Conditions	
			Delay	LOS
1 - Fassler Avenue & Roberts Road	Roberts Road	AM	51.2	F
		PM	17.2	C
2 - Fassler Avenue & Coast Lane	Coast Lane	AM	16.8	C
		PM	12.3	B
3 - Route 1 & Coast Lane	Coast Lane	AM	30.1	D
		PM	12.3	B
4 - Crespi Drive & Roberts Road	All-Way	AM	15.4	C
		PM	10.2	B
Signal Controlled Intersections	Peak Hour	V/C	Delay	LOS
5 - Route 1 & Crespi Drive	AM	0.842	12.9	B
	PM	0.665	8.2	A
6 - Route 1 & Fassler Ave./ Rockaway Bch.	AM	1.216	120.6	F
	PM	0.860	35.6	D
7 - Route 1 & Reina Del Mar Avenue	AM	1.244	110.4	F
	PM	1.131	82.9	F

Delay is Average Control Delay in seconds per vehicle.
V/C is the critical movement volume-to-capacity ratio.
LOS is Level of Service. See Tables A and A1 for definitions.

BACKGROUND CONDITIONS

SECTION 3.

Background Conditions are those traffic conditions which are expected to occur immediately prior to the completion and occupancy of the proposed subdivision. Traffic from developments that are approved and expected to be completed and occupied prior to the proposed project is added to existing traffic volumes to create this traffic analysis scenario.

APPROVED PROJECTS

For purposes of this study there are two projects that are considered approved. They are -

- a 23,800 sq .ft. specialty retail development on Old County Road, and
- a mixed use project in Pedro Point containing 1,000 sq. ft. of specialty retail and six residential condominium units.

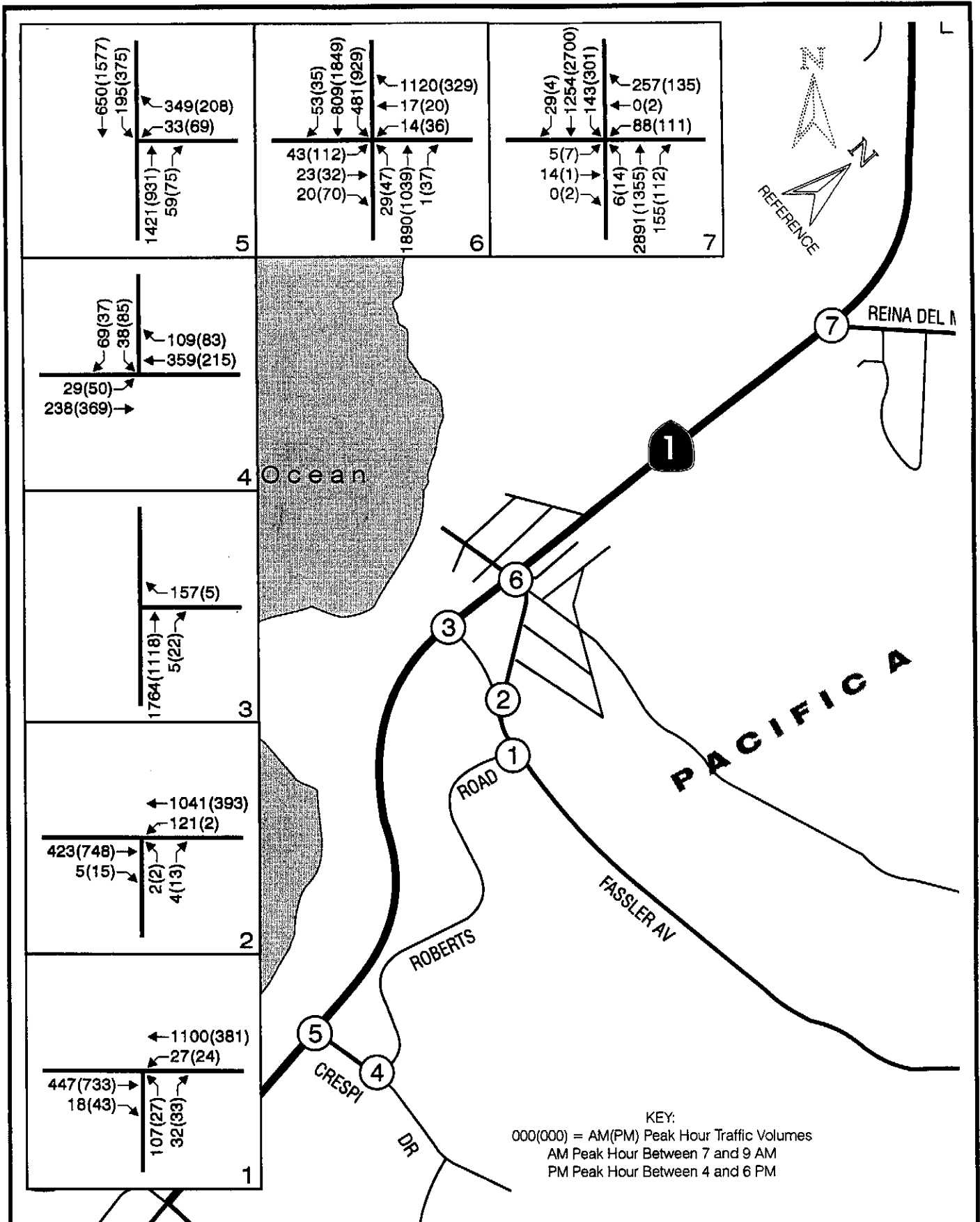
Projections of vehicle trip generation for these developments are provided in Appendix C.

BACKGROUND CONDITIONS PEAK HOUR TRAFFIC VOLUMES

Morning and afternoon street peak hour traffic volumes at the seven designated intersections are shown on Figure 4 page 10, for the Background Conditions scenario.

BACKGROUND CONDITIONS LEVELS OF SERVICE

Levels of Service have been calculated for the background conditions scenario using the analysis methods contained in the *2000 Highway Capacity Manual*. The results of the LOS calculations are summarized in Table C on page 11. The calculation worksheets are provided in Appendix B.



NOTE: Intersections are oriented according to their placement in the TRAFFIX traffic network model. North orientation in TRAFFIX model is Reference North on this diagram.

KEY:
 000(000) = AM(PM) Peak Hour Traffic Volumes
 AM Peak Hour Between 7 and 9 AM
 PM Peak Hour Between 4 and 6 PM

BACKGROUND PEAK HOUR TRAFFIC VOLUMES
FIGURE 4



TABLE C: Intersection Levels of Service Background Conditions								
STOP Controlled Intersections	Controlled Movement	Peak Hour	Existing Conditions			Background Conditions		
			V/C	Delay	LOS	V/C	Delay	LOS
1 - Fassler Avenue & Roberts Road	Roberts Road	AM		51.2	F		52.0	F
		PM		17.2	C		17.3	C
2 - Fassler Avenue & Coast Lane	Coast Lane	AM		16.8	C		16.8	C
		PM		12.3	B		12.3	B
3 - Route 1 & Coast Lane	Coast Lane	AM		30.1	D		30.7	D
		PM		12.3	B		12.3	B
4 - Crespi Drive & Roberts Road	All-Way	AM	0.753	15.4	C	0.758	15.6	C
		PM	0.399	10.2	B	0.402	10.2	B
Signal Controlled Intersections		Peak Hour	V/C	Delay	LOS	V/C	Delay	LOS
5 - Route 1 & Crespi Drive		AM	0.842	12.9	B	0.845	13.1	B
		PM	0.665	8.2	A	0.666	8.2	A
6 - Route 1 & Fassler Ave./ Rockaway Beach Ave.		AM	1.216	120.6	F	1.223	123.0	F
		PM	0.860	35.6	D	0.877	38.3	D
7 - Route 1 & Reina Del Mar Avenue		AM	1.244	110.4	F	1.246	110.7	F
		PM	1.131	82.9	F	1.135	83.8	F

Delay is Average Control Delay in seconds per vehicle.
V/C is the critical movement volume-to-capacity ratio.
LOS is Level of Service. See Tables A and A1 for definitions.

Only a slight change in delay or V/C ratio results when approved project trips are added to the roadway network.

PROJECT CONDITIONS

SECTION 4.

PROJECT DESCRIPTION

The subdivision will create a total of 14 single family detached residential housing units on 67.4 acres of vacant land bounded on the north by Fassler Avenue and on the west by Roberts Road.

PROJECT VEHICLE TRIP GENERATION

The estimate of vehicle trips to be generated by the project is shown in Table D below. The estimate is based on data contained in *Trip Generation*.² The AM Peak Hour is generally between 7 a.m. and 9 a.m. and the PM Peak Hour is generally between 4 p.m. and 6 p.m. A detailed trip generation table can be found in Appendix C.

Land Use	Size	Units	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Single Family Residential	14	DU	3	8	11	9	5	14

PROJECT VEHICLE TRIP DISTRIBUTION

Project vehicle trips have been distributed on the basis of current travel patterns and traffic volumes. The assumed vehicle trip distribution is shown on Figure 5, Project Vehicle Trip Distribution, page 13.

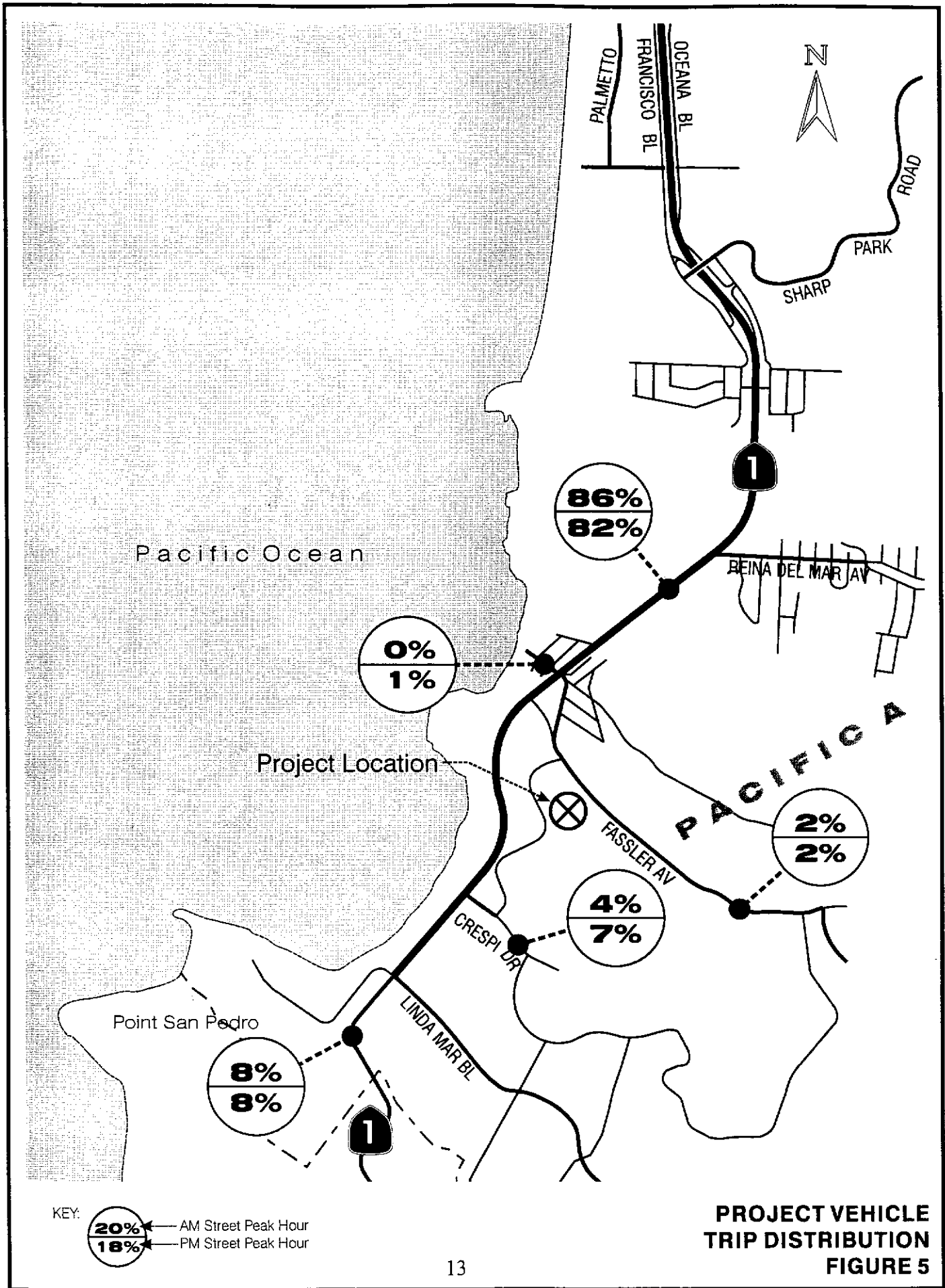
PROJECT PEAK HOUR TRAFFIC VOLUMES

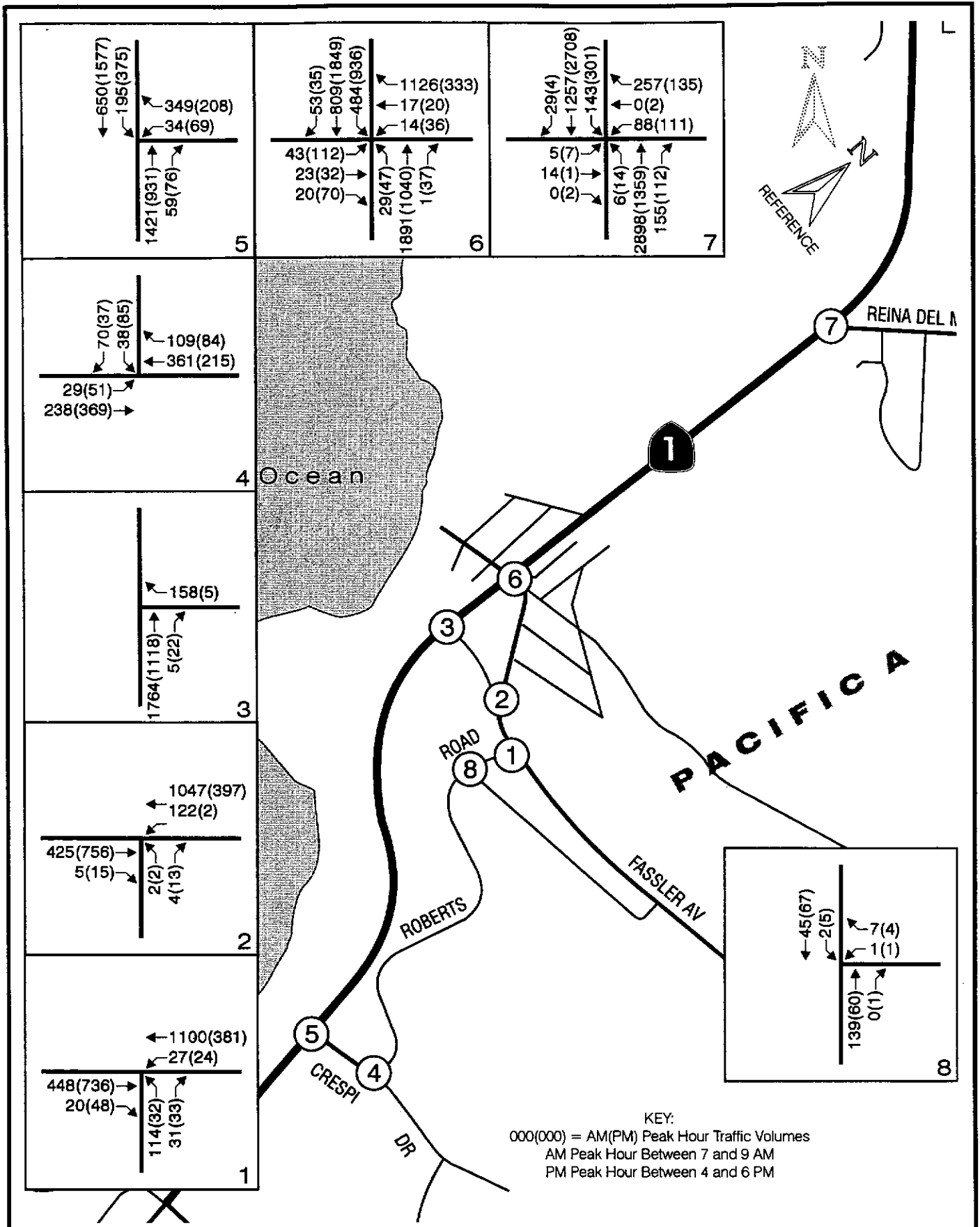
The Project Conditions (Existing + Approved + Project) peak hour traffic volumes at the seven study area intersections are shown on Figure 6, Project Peak Hour Traffic Volumes, page 14.

PROJECT CONDITIONS LEVELS OF SERVICE

Levels of Service have been calculated for the project conditions scenario using the analysis methods contained in the *2000 Highway Capacity Manual*. The results of the LOS calculations are summarized in Table E on page 15. The calculation worksheets are provided in Appendix B.

² Institute of Transportation Engineers, *Trip Generation*, 7th Edition. ©2003.





**PROJECT PEAK HOUR
 TRAFFIC VOLUMES
 FIGURE 6**

TABLE E: Intersection Levels of Service Project Conditions								
STOP Controlled Intersections	Controlled Movement	Peak Hour	Background Conditions			Project Conditions		
			V/C	Delay	LOS	V/C	Delay	LOS
1- Fassler Avenue & Roberts Road	Roberts Road	AM		52.0	F		57.9	F
		PM		17.3	C		18.1	C
2 - Fassler Avenue & Coast Lane	Coast Lane	AM		16.8	C		17.0	C
		PM		12.3	B		12.4	B
3 - Route 1 & Coast Lane	Coast Lane	AM		30.7	D		30.4	D
		PM		12.3	B		12.3	B
4 - Crespi Drive & Roberts Road	All-Way	AM	0.758	15.6	C	0.759	15.7	C
		PM	0.402	10.2	B	0.404	10.2	B
8 - Roberts Road & Site Access Street	Site Access Street	AM					9.6	A
		PM					8.8	A
Signal Controlled Intersections		Peak Hour	V/C	Delay	LOS	V/C	Delay	LOS
5 - Route 1 & Crespi Drive		AM	0.845	13.1	B	0.845	13.1	B
		PM	0.666	8.2	A	0.666	8.2	A
6 - Route 1 & Fassler Ave./ Rockaway Beach Ave.		AM	1.223	123.0	F	1.226	124.1	F
		PM	0.877	38.3	D	0.877	38.5	D
7 - Route 1 & Reina Del Mar Avenue		AM	1.246	110.7	F	1.248	111.4	F
		PM	1.135	83.8	F	1.138	84.6	F

Delay is Average Control Delay in seconds per vehicle.
V/C is the critical movement volume-to-capacity ratio.
LOS is Level of Service. See Tables A and A1 for definitions.

According to the City's new definitions of significant impact the project added traffic does not create a significant impact at any of the study area intersections.

NEAR-TERM CUMULATIVE CONDITIONS

SECTION 5.

CUMULATIVE CONDITIONS SCENARIO

The Cumulative Conditions scenario for purposes of this study are those that are expected to within the next five years. The city has identified four developments that could occur subsequent to the development of this project within this near-term cumulative scenario. They are -

five single family residential units on Piedmont Avenue, and
a 34 unit condominium development on Fassler Avenue, and
a 63 unit condominium development on Fassler Avenue at Route 1, and
11 single family residential units on Higgins Way.

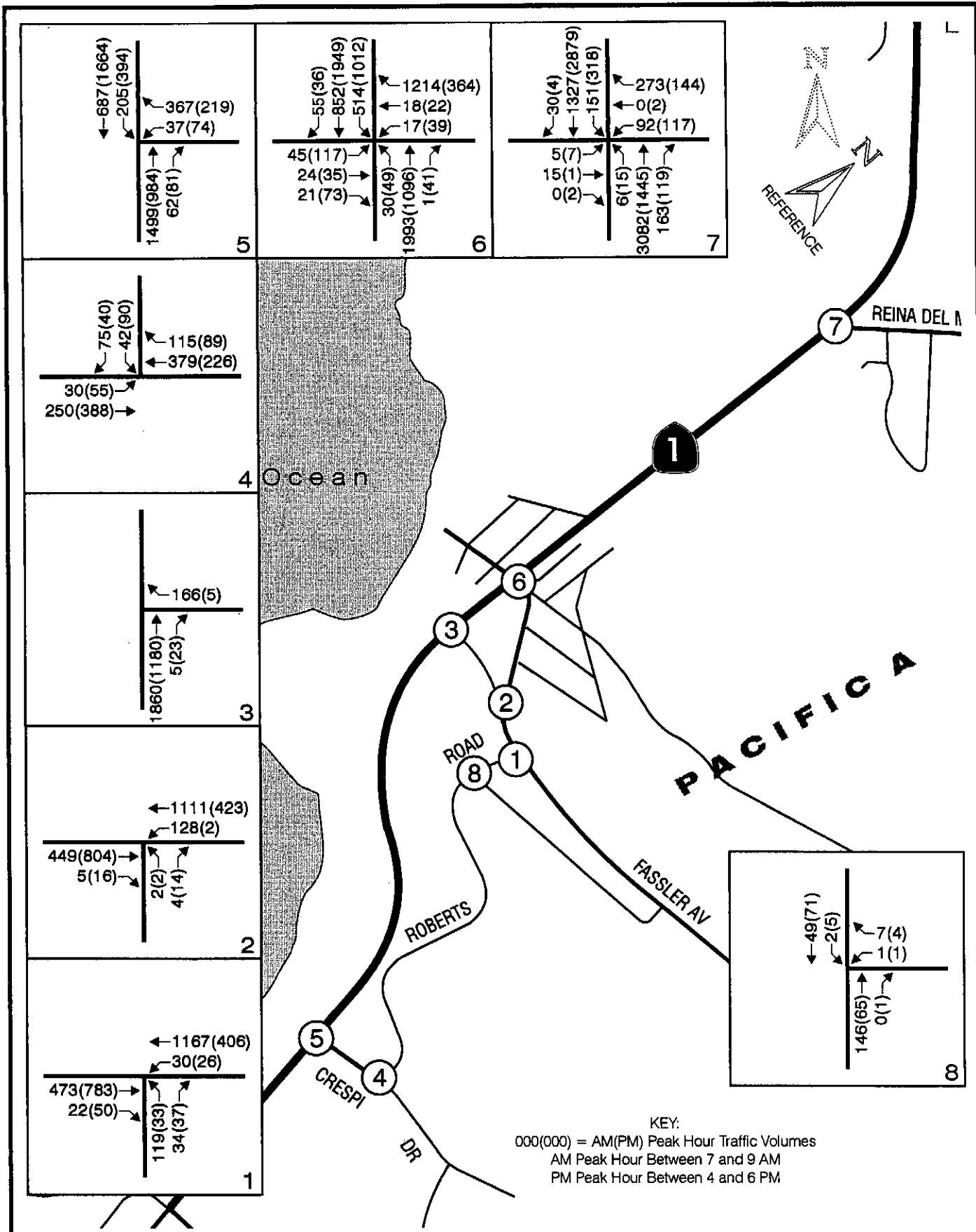
Projections of vehicle trip generation are provided in Appendix C.

CUMULATIVE CONDITIONS PEAK HOUR TRAFFIC VOLUMES

The near-term cumulative traffic volumes are shown on Figure 7, Near-Term Cumulative Peak Hour Traffic Volumes, page 17. Existing traffic volumes have been extrapolated by a 1% per year growth factor for the five year projection of traffic conditions.

CUMULATIVE CONDITIONS LEVELS OF SERVICE

Levels of Service have been calculated for cumulative conditions scenario using the analysis methods contained in the *2000 Highway Capacity Manual*. The results of the LOS calculations are summarized in Table F on page 18.



NEAR-TERM CUMULATIVE PEAK HOUR TRAFFIC VOLUMES
FIGURE 7



TABLE F: Intersection Levels of Service Near-Term Cumulative Conditions								
STOP Controlled Intersections	Controlled Movement	Peak Hour	Cumulative Conditions Without Project			Cumulative Conditions With Project		
			V/C	Delay	LOS	V/C	Delay	LOS
1 - Fassler Avenue & Roberts Road	Roberts Road	AM		73.4	F		83.4	F
		PM		18.9	C		19.8	C
2 - Fassler Avenue & Coast Lane	Coast Lane	AM		18.1	C		18.2	C
		PM		12.7	B		12.8	B
3 - Route 1 & Coast Lane	Coast Lane	AM		36.3	E		36.5	E
		PM		12.6	B		12.6	B
4 - Crespi Drive & Roberts Road	All-Way	AM	0.805	17.6	C	0.807	17.7	C
		PM	0.429	10.5	B	0.431	10.6	B
8 - Roberts Road & Site Access Street	Site Access Street	AM					9.7	A
		PM					8.9	A
Signal Controlled Intersections		Peak Hour	V/C	Delay	LOS	V/C	Delay	LOS
5 - Route 1 & Crespi Drive		AM	0.890	15.1	B	0.890	15.1	B
		PM	0.702	8.7	A	0.703	8.7	A
6 - Route 1 & Fassler Ave./ Rockaway Beach Ave.		AM	1.301	150.0	F	1.303	151.0	F
		PM	0.940	44.4	D	0.943	44.5	D
7 - Route 1 & Reina Del Mar Avenue		AM	1.322	134.1	F	1.324	134.8	F
		PM	1.206	104.9	F	1.209	105.6	F

Delay is Average Control Delay in seconds per vehicle.

V/C is the critical movement volume-to-capacity ratio.

LOS is Level of Service. See Tables A and A1 for definitions.

While the delay at the Route 1 & Fassler/Rockaway intersection increases by 1.0 seconds in the morning peak hour due to the addition of the project, the V/C ratio changes by only 0.002 and, thereby, does not create a significant impact.

SITE ACCESS AND CIRCULATION

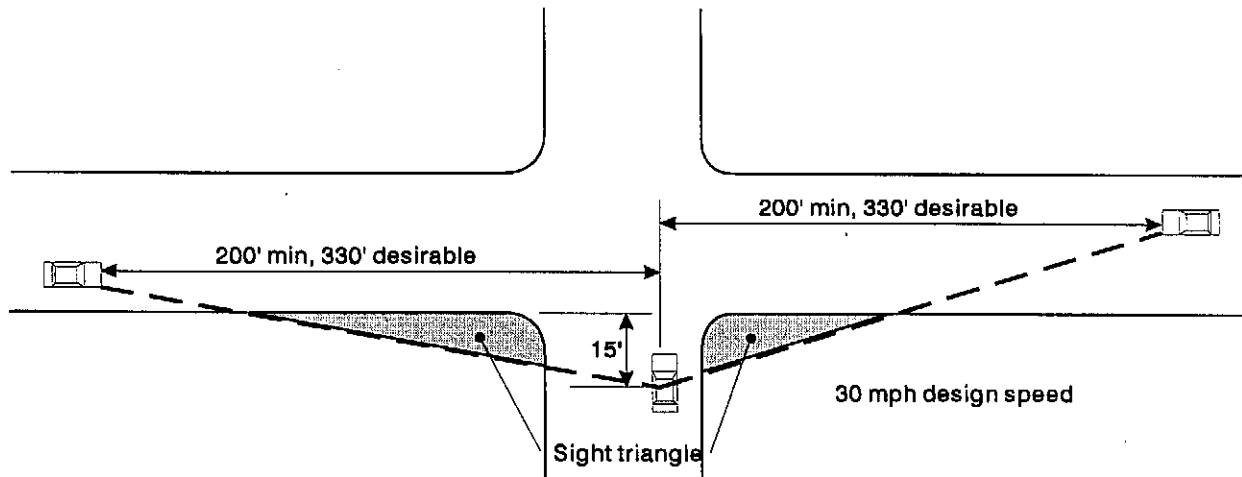
SECTION 6.

SITE PLAN

The proposed subdivision plan is shown on Figure 8, Site Plan, page 20.

SITE ACCESS

Access to the subdivision via a new street from Roberts Road southeasterly through the subdivision to an intersection on Fassler Avenue located approximately 1700 feet east of the Roberts Road intersection. At the easterly intersection on Fassler Avenue the movements will be restricted to right turn only.



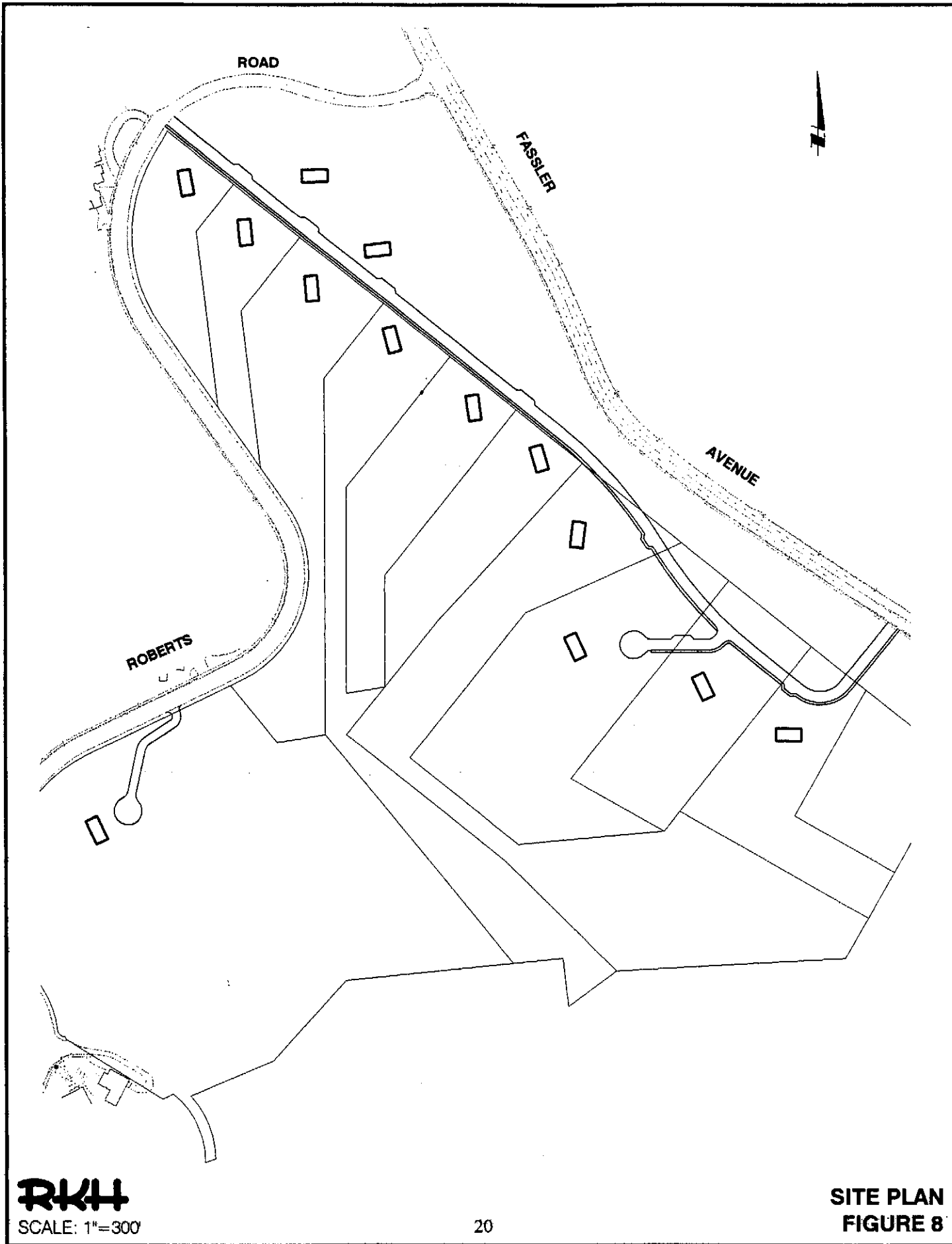
INTERSECTION CORNER SIGHT TRIANGLES

FIGURE 9

The corner sight distance shown in Figure 9 above is based on a 30 mph speed of approach on the major street. The new subdivision street intersection on Roberts Road is on the inside of a curve, the centerline radius varying from about 300 feet to 400 feet. In order to provide the desired corner sight distance the hillside on the inside of the curve of Roberts Road will have to be cut back. Figure 10, Corner Sight Distance, page 21, shows the corner sight lines in relationship to the current topography. The area between the sight line and the street will need to be brought level with Roberts Road so that a driver on the new subdivision street approach to Roberts Road will be able to see vehicles approaching from either direction on Roberts Road.

ON-SITE CIRCULATION

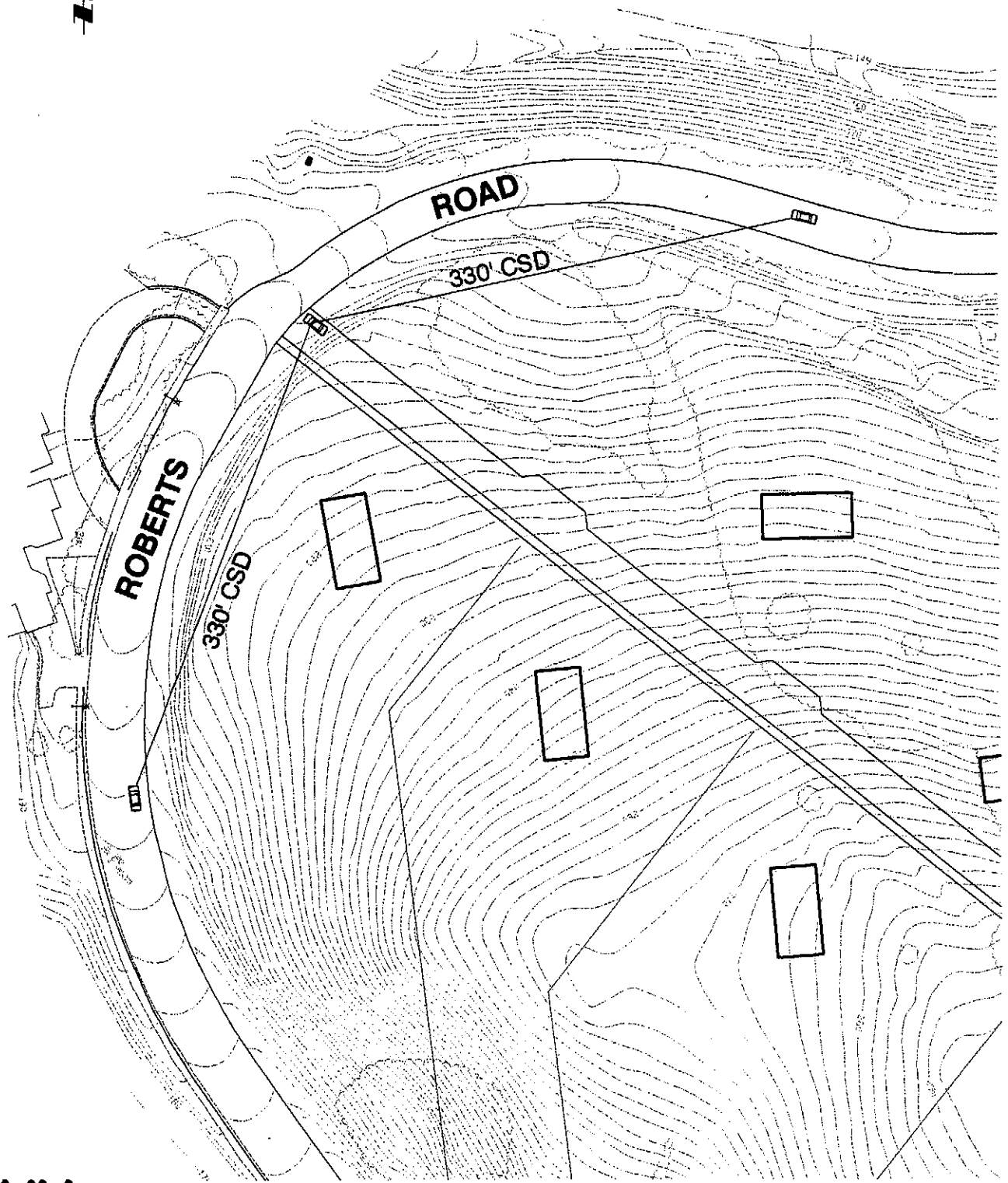
The subdivision street plan consists of a single long 2-lane street with one short cul-de-sac street near the southeasterly end of the site. There is a sharp curve on the street with centerline radius



RKH

SCALE: 1"=300'

**SITE PLAN
FIGURE 8**



of 73 feet. At that radius the comfortable speed is under 14 mph. A curve with centerline radius of 175 feet will provide a comfortable speed of 20 mph and provide better stopping sight distance through the curve.

The street is proposed to be 26 feet wide, curb-to-curb. At that width there is no room to park vehicles on the street and still maintain 2-way traffic. Additionally, the street will provide access for fire vehicles. Fire vehicles require a minimum of 20 feet clear roadway width. The site plan shows seven on-street parking bays: five 2-car bays and two 1-car bays. Additional visitor parking could be provided on the driveway aprons providing the driveway aprons are at least 25 feet in length and 16 feet wide from the street to the garage door.

The site plan shows no street lighting. The streets should be illuminated to a level of 0.4 minimum maintained average foot-candles with a uniformity ratio of 6:1, average to minimum.³

³ Illuminating Engineering Society of North America, *Roadway Lighting*, Table 2, © 1999.

CONCLUSIONS AND RECOMMENDATIONS

SECTION 7.

CONCLUSIONS

The subdivision is projected to generate an estimated 11 vehicle trips during the morning peak hour and 14 vehicle trips during the afternoon peak traffic hour. While the project in itself will not create a significant impact at any one intersection, it will contribute to the excessive delay conditions at a the two major intersections on Route 1 during the morning peak traffic period.

RECOMMENDATIONS

Off-site:

- 1) Contribute to the City of Pacifica Traffic Impact Mitigation Improvement Fund for Highway 1 Improvements.⁴ The fee for new residential units south of Sharp Park is approximately \$3,500 per dwelling unit.

On-site:

- 2) Place STOP signs and pavement legends on the subdivision street approaches to Roberts Road and Fassler Avenue with City authorization. (§21355 CVC)
- 2) Within the corner sight triangles at the Roberts Road intersection regrade the site to provide the desired sight lines as shown on Figure 10. Within the sight lines and the street there should be no fencing or signs that would obstruct visibility. Trees should be planted so as to not create a "wall" effect when viewed at a shallow angle. The type of shrubbery planted within the triangles should such that it will grow no higher than three feet above the adjacent roadway surface. Trees planted within the sight triangle areas should be large enough that the lowest limbs are at least seven feet above the surface of the adjacent roadway.
- 3) Enlarge the curve of the street from a centerline radius of 73 feet to 175 feet. Install W1-1a(20) curve warning signs on both approaches to the curve.
- 4) At the Fassler Avenue intersection, in addition to the R1 (STOP sign) install a R3-5 (RIGHT TURN ONLY) sign.
- 5) Provide street lighting to a level of 0.4 minimum maintained average foot-candles with a uniformity ratio of 6:1, average to minimum.

Richard K. Hopper, P.E., PTOE
Principal



⁴ City of Pacifica Municipal Code, Title 8 Building Regulations, Chapter 15.

APPENDICES
A. Traffic Count Data
B. Levels of Service Calculation Worksheets
C. Traffic Analysis Worksheets

A. Traffic Count Worksheets

City of Pacifica #1
Thursday

SUM-IT
COUNT DATE
01/26/06

1 - Roberts and Fassler

RAW DATA

15-Min Ending	RT	North		RT	East		RT	South		RT	West		LT
		TH	LT		TH	LT		TH	LT		TH	LT	
07:15	0	0	0	0	241	6	1	0	8	2	47	0	
07:30	0	0	0	0	531	14	6	0	17	7	128	0	
07:45	0	0	0	0	813	19	20	0	47	9	275	0	
08:00	0	0	0	0	1069	26	31	0	95	9	419	0	
08:15	0	0	0	0	1336	33	33	0	115	20	492	0	
08:30	0	0	0	0	1515	58	41	0	139	28	558	0	
08:45	0	0	0	0	1690	66	45	0	154	32	627	0	
09:00	0	0	0	0	1838	69	51	0	161	39	669	0	

* indicates data error - check raw data.

1 - Roberts and Fassler

INTERVAL DATA

15-Min Ending	RT	North		RT	East		RT	South		RT	West		Int. Total
		TH	LT		TH	LT		TH	LT		TH	LT	
07:15	0	0	0	0	241	6	1	0	8	2	47	0	305
07:30	0	0	0	0	290	8	5	0	9	5	81	0	398
07:45	0	0	0	0	282	5	14	0	30	2	147	0	480
08:00	0	0	0	0	256	7	11	0	48	0	144	0	466
08:15	0	0	0	0	267	7	2	0	20	11	73	0	380
08:30	0	0	0	0	179	25	8	0	24	8	66	0	310
08:45	0	0	0	0	175	8	4	0	15	4	69	0	275
09:00	0	0	0	0	148	3	6	0	7	7	42	0	213
Total	0	0	0	0	1838	69	51	0	161	39	669	0	2827

* indicates data error - check raw data.

1 - Roberts and Fassler

HOURLY SUMMARY

Hour Ending	RT	North		RT	East		RT	South		RT	West		Int. Total
		TH	LT		TH	LT		TH	LT		TH	LT	
07:15	0	0	0	0	241	6	1	0	8	2	47	0	305*
07:30	0	0	0	0	531	14	6	0	17	7	128	0	703*
07:45	0	0	0	0	813	19	20	0	47	9	275	0	1183*
08:00	0	0	0	0	1069	26	31	0	95	9	419	0	1649
08:15	0	0	0	0	1095	27	32	0	107	18	445	0	1724
08:30	0	0	0	0	984	44	35	0	122	21	430	0	1636
08:45	0	0	0	0	877	47	25	0	107	23	352	0	1431
09:00	0	0	0	0	769	43	20	0	66	30	250	0	1178

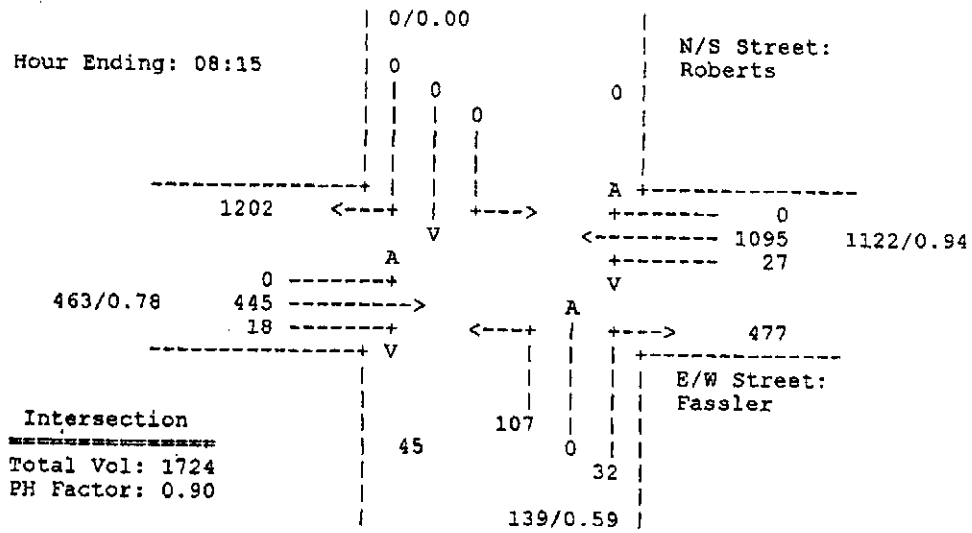
* indicates partial hour total.

City of Pacifica #1
Thursday

SUM-IT
COUNT DATE
01/26/06

1 - Roberts and Fassler

MORNING PEAK



City of Pacifica #1
Thursday

SUM-IT
COUNT DATE
01/26/06

1 - Roberts and Fassler

RAW DATA

15-Min Ending	North			East			South			West		
RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
16:15	0	0	0	0	87	6	10	0	7	5	170	0
16:30	0	0	0	0	150	15	16	0	12	18	325	0
16:45	0	0	0	0	231	27	29	0	14	27	494	0
17:00	0	0	0	0	327	38	38	0	17	37	680	0
17:15	0	0	0	0	417	45	46	0	29	45	865	0
17:30	0	0	0	0	510	49	51	0	35	58	1051	0
17:45	0	0	0	0	610	51	62	0	41	70	1223	0
18:00	0	0	0	0	680	57	70	0	50	78	1390	0

* indicates data error - check raw data.

1 - Roberts and Fassler

INTERVAL DATA

15-Min Ending	North			East			South			West			Int. Total
RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total	
16:15	0	0	0	0	87	6	10	0	7	5	170	0	285
16:30	0	0	0	0	63	9	6	0	5	13	155	0	251
16:45	0	0	0	0	81	12	13	0	2	9	169	0	286
17:00	0	0	0	0	96	11	9	0	3	10	186	0	315
17:15	0	0	0	0	90	7	8	0	12	8	185	0	310
17:30	0	0	0	0	93	4	5	0	6	13	186	0	307
17:45	0	0	0	0	100	2	11	0	6	12	172	0	303
18:00	0	0	0	0	70	6	8	0	9	8	167	0	268
Total	0	0	0	0	680	57	70	0	50	78	1390	0	2325

* indicates data error - check raw data.

1 - Roberts and Fassler

HOURLY SUMMARY

Hour Ending	North			East			South			West			Int. Total
RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total	
16:15	0	0	0	0	87	6	10	0	7	5	170	0	285*
16:30	0	0	0	0	150	15	16	0	12	18	325	0	536*
16:45	0	0	0	0	231	27	29	0	14	27	494	0	822*
17:00	0	0	0	0	327	38	38	0	17	37	680	0	1137
17:15	0	0	0	0	330	39	36	0	22	40	695	0	1162
17:30	0	0	0	0	360	34	35	0	23	40	726	0	1218
17:45	0	0	0	0	379	24	33	0	27	43	729	0	1235
18:00	0	0	0	0	353	19	32	0	33	41	710	0	1188

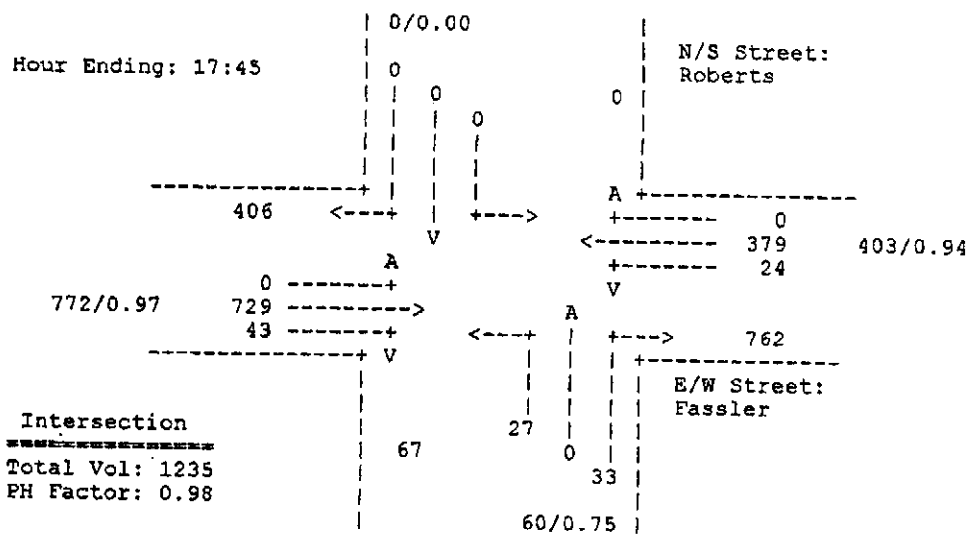
* indicates partial hour total.

City of Pacifica #1
Thursday

SUM-IT
COUNT DATE
01/26/06

1 - Roberts and Fassler

EVENING PEAK



City of Pacifica #2
Thursday

SUM-IT
COUNT DATE
01/26/06

1 - Fassler and Coast Lane/Sea Bowl

RAW DATA

15-Min Ending	North			East			South			West		
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
07:15	0	46	0	0	0	0	0	247	3	0	0	0
07:30	0	126	0	0	0	0	0	511	21	3	0	0
07:45	2	260	0	0	0	0	0	793	37	3	0	1
08:00	2	397	0	0	0	0	0	1045	84	3	0	1
08:15	5	467	0	0	0	0	0	1283	124	4	0	2
08:30	6	543	0	0	0	0	0	1462	137	4	0	2
08:45	6	613	0	0	0	0	0	1637	138	6	0	2
09:00	7	656	0	0	0	0	0	1778	140	8	0	2

* indicates data error - check raw data.

1 - Fassler and Coast Lane/Sea Bowl

INTERVAL DATA

15-Min Ending	North			East			South			West			Int. Total
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
07:15	0	46	0	0	0	0	0	247	3	0	0	0	296
07:30	0	80	0	0	0	0	0	264	18	3	0	0	365
07:45	2	134	0	0	0	0	0	282	16	0	0	1	435
08:00	0	137	0	0	0	0	0	252	47	0	0	0	436
08:15	3	70	0	0	0	0	0	238	40	1	0	1	353
08:30	1	76	0	0	0	0	0	179	13	0	0	0	269
08:45	0	70	0	0	0	0	0	175	1	2	0	0	248
09:00	1	43	0	0	0	0	0	141	2	2	0	0	189
Total	7	656	0	0	0	0	0	1778	140	8	0	2	2591

* indicates data error - check raw data.

1 - Fassler and Coast Lane/Sea Bowl

HOURLY SUMMARY

Hour Ending	North			East			South			West			Int. Total
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
07:15	0	46	0	0	0	0	0	247	3	0	0	0	296*
07:30	0	126	0	0	0	0	0	511	21	3	0	0	661*
07:45	2	260	0	0	0	0	0	793	37	3	0	1	1096*
08:00	2	397	0	0	0	0	0	1045	84	3	0	1	1532
08:15	5	421	0	0	0	0	0	1036	121	4	0	2	1589
08:30	6	417	0	0	0	0	0	951	116	1	0	2	1493
08:45	4	353	0	0	0	0	0	844	101	3	0	1	1306
09:00	5	259	0	0	0	0	0	733	56	5	0	1	1059

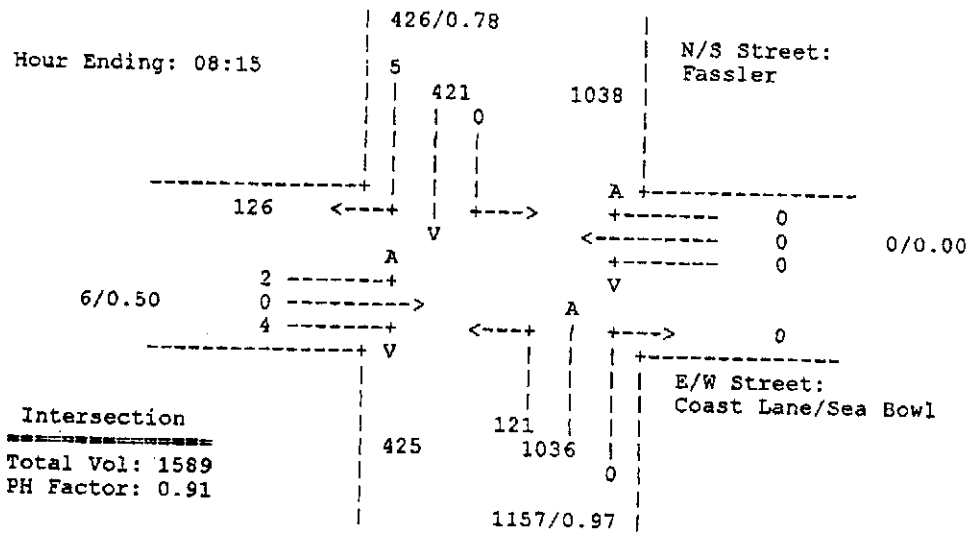
* indicates partial hour total.

City of Pacifica #2
Thursday

SUM-IT
COUNT DATE
01/26/06

1 - Fassler and Coast Lane/Sea Bowl

MORNING PEAK



City of Pacifica #2
Thursday

SUM-IT
COUNT DATE
01/26/06

1 - Fassler and Coast Lane/Sea Bowl

RAW DATA

15-Min Ending	RT	North			East			South			West		
		TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
16:15	0	163	0	0	0	0	0	89	2	4	0	0	
16:30	2	322	0	0	0	0	0	144	3	5	0	0	
16:45	8	493	0	0	0	0	0	226	4	10	0	0	
17:00	10	679	0	0	0	0	0	321	5	12	0	0	
17:15	11	867	0	0	0	0	0	416	5	15	0	0	
17:30	17	1063	0	0	0	0	0	519	5	17	0	1	
17:45	23	1237	0	0	0	0	0	617	6	23	0	2	
18:00	33	1400	0	0	0	0	0	691	6	24	0	2	

* indicates data error - check raw data.

1 - Fassler and Coast Lane/Sea Bowl

INTERVAL DATA

15-Min Ending	RT	North			East			South			West			Int. Total
		TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT		
16:15	0	163	0	0	0	0	0	89	2	4	0	0	258	
16:30	2	159	0	0	0	0	0	55	1	1	0	0	218	
16:45	6	171	0	0	0	0	0	82	1	5	0	0	265	
17:00	2	186	0	0	0	0	0	95	1	2	0	0	286	
17:15	1	188	0	0	0	0	0	95	0	3	0	0	287	
17:30	6	196	0	0	0	0	0	103	0	2	0	1	308	
17:45	6	174	0	0	0	0	0	98	1	6	0	1	286	
18:00	10	163	0	0	0	0	0	74	0	1	0	0	248	
Total	33	1400	0	0	0	0	0	691	6	24	0	2	2156	

* indicates data error - check raw data.

1 - Fassler and Coast Lane/Sea Bowl

HOURLY SUMMARY

Hour Ending	RT	North			East			South			West			Int. Total
		TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT		
16:15	0	163	0	0	0	0	0	89	2	4	0	0	258*	
16:30	2	322	0	0	0	0	0	144	3	5	0	0	476*	
16:45	8	493	0	0	0	0	0	226	4	10	0	0	741*	
17:00	10	679	0	0	0	0	0	321	5	12	0	0	1027	
17:15	11	704	0	0	0	0	0	327	3	11	0	0	1056	
17:30	15	741	0	0	0	0	0	375	2	12	0	1	1146	
17:45	15	744	0	0	0	0	0	391	2	13	0	2	1167	
18:00	23	721	0	0	0	0	0	370	1	12	0	2	1129	

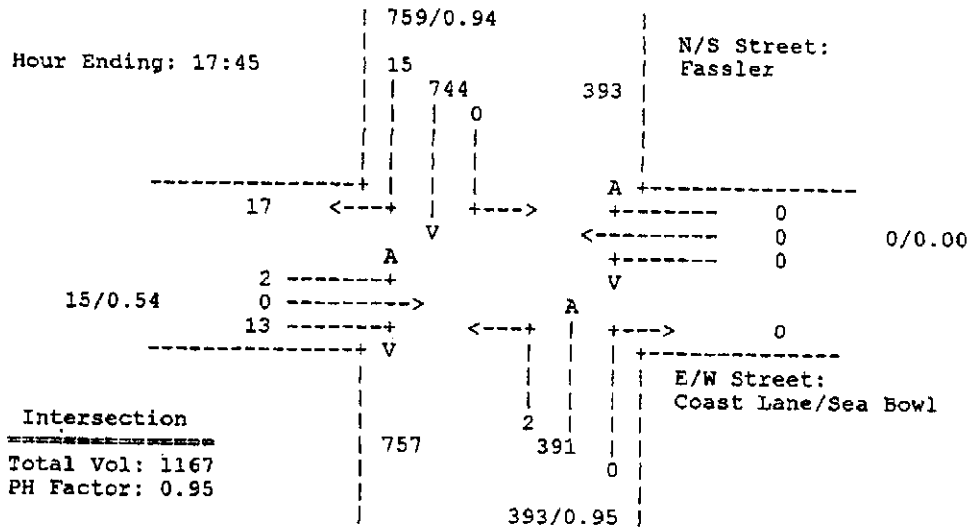
* indicates partial hour total.

City of Pacifica #2
Thursday

SUM-IT
COUNT DATE
01/26/06

1 - Fassler and Coast Lane/Sea Bowl

EVENING PEAK



City of Pacifica
 Tuesday
 RKH

SUM-IT
 COUNT DATE
 2/7/06

1 - SR1 and Coast/Sea Bowl

RAW DATA

15-Min Ending	RT	North			East			South			West		
		TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
07:15	0	185	0	0	0	0	3	400	0	0	0	0	
07:30	0	378	0	9	0	0	4	850	0	0	0	0	
07:45	0	619	0	30	0	0	5	1327	0	0	0	0	
08:00	0	895	0	69	0	0	5	1697	0	0	0	0	
08:15	0	1180	0	136	0	0	6	2077	0	0	0	0	
08:30	0	1472	0	174	0	0	7	2462	0	0	0	0	
08:45	0	1784	0	187	0	0	10	2942	0	0	0	0	
09:00	0	2034	0	194	0	0	11	3268	0	0	0	0	

* indicates data error - check raw data.

1 - SR1 and Coast/Sea Bowl

INTERVAL DATA

15-Min Ending	RT	North			East			South			West			Int. Total
		TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT		
07:15	0	185	0	0	0	0	3	400	0	0	0	0	588	
07:30	0	193	0	9	0	0	1	450	0	0	0	0	653	
07:45	0	241	0	21	0	0	1	477	0	0	0	0	740	
08:00	0	276	0	39	0	0	0	370	0	0	0	0	685	
08:15	0	285	0	67	0	0	1	380	0	0	0	0	733	
08:30	0	292	0	38	0	0	1	385	0	0	0	0	716	
08:45	0	312	0	13	0	0	3	480	0	0	0	0	808	
09:00	0	250	0	7	0	0	1	326	0	0	0	0	584	
Total	0	2034	0	194	0	0	11	3268	0	0	0	0	5507	

* indicates data error - check raw data.

1 - SR1 and Coast/Sea Bowl

HOURLY SUMMARY

Hour Ending	RT	North			East			South			West			Int. Total
		TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT		
07:15	0	185	0	0	0	0	3	400	0	0	0	0	588*	
07:30	0	378	0	9	0	0	4	850	0	0	0	0	1241*	
07:45	0	619	0	30	0	0	5	1327	0	0	0	0	1981*	
08:00	0	895	0	69	0	0	5	1697	0	0	0	0	2666	
08:15	0	995	0	136	0	0	3	1677	0	0	0	0	2811	
08:30	0	1094	0	165	0	0	3	1612	0	0	0	0	2874	
08:45	0	1165	0	157	0	0	5	1615	0	0	0	0	2942	
09:00	0	1139	0	125	0	0	6	1571	0	0	0	0	2841	

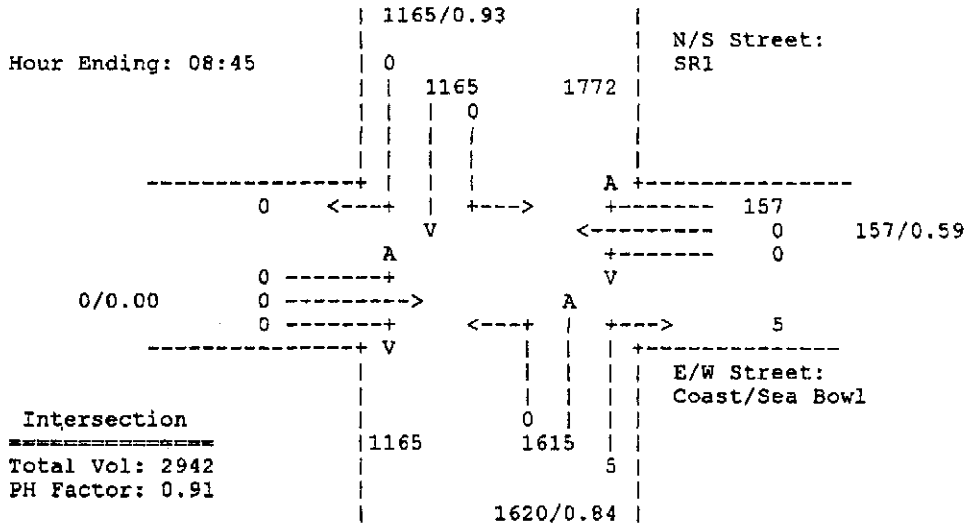
* indicates partial hour total.

City of Pacifica
 Tuesday
 RKH

SUM-IT
 COUNT DATE
 2/7/06

1 - SR1 and Coast/Sea Bowl

MORNING PEAK



City of Pacifica #3
Wednesday

SUM-IT
COUNT DATE
02/01/06

1 - State Route 1 and Coast Lane

RAW DATA

15-Min Ending	RT	North			East			South			West		
		TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
16:15	0	450	0	0	0	0	1	269	0	0	0	0	
16:30	0	899	0	3	0	0	7	481	0	0	0	0	
16:45	0	1322	0	4	0	0	7	736	0	0	0	0	
17:00	0	1834	0	6	0	0	11	1004	0	0	0	0	
17:15	0	2353	0	7	0	0	16	1301	0	0	0	0	
17:30	0	2821	0	9	0	0	24	1561	0	0	0	0	
17:45	0	3360	0	10	0	0	28	1846	0	0	0	0	
18:00	0	3976	0	11	0	0	33	2119	0	0	0	0	

* indicates data error - check raw data.

1 - State Route 1 and Coast Lane

INTERVAL DATA

15-Min Ending	RT	North			East			South			West			Int. Total
		TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT		
16:15	0	450	0	0	0	0	1	269	0	0	0	0	720	
16:30	0	449	0	3	0	0	6	212	0	0	0	0	670	
16:45	0	423	0	1	0	0	0	255	0	0	0	0	679	
17:00	0	512	0	2	0	0	4	268	0	0	0	0	786	
17:15	0	519	0	1	0	0	5	297	0	0	0	0	822	
17:30	0	468	0	2	0	0	8	260	0	0	0	0	738	
17:45	0	539	0	1	0	0	4	285	0	0	0	0	829	
18:00	0	616	0	1	0	0	5	273	0	0	0	0	895	
Total	0	3976	0	11	0	0	33	2119	0	0	0	0	6139	

* indicates data error - check raw data.

1 - State Route 1 and Coast Lane

HOURLY SUMMARY

Hour Ending	RT	North			East			South			West			Int. Total
		TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT		
16:15	0	450	0	0	0	0	1	269	0	0	0	0	720*	
16:30	0	899	0	3	0	0	7	481	0	0	0	0	1390*	
16:45	0	1322	0	4	0	0	7	736	0	0	0	0	2069*	
17:00	0	1834	0	6	0	0	11	1004	0	0	0	0	2855	
17:15	0	1903	0	7	0	0	15	1032	0	0	0	0	2957	
17:30	0	1922	0	6	0	0	17	1080	0	0	0	0	3025	
17:45	0	2038	0	6	0	0	21	1110	0	0	0	0	3175	
18:00	0	2142	0	5	0	0	22	1115	0	0	0	0	3284	

* indicates partial hour total.

City of Pacifica #4
Wednesday

SUM-IT
COUNT DATE
01/26/06

1 - Roberts and Crespi Drive

RAW DATA

15-Min Ending	North			East			South			West		
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	LT	
07:15	7	0	4	15	83	0	0	0	0	0	16	2
07:30	13	0	11	25	177	0	0	0	0	0	42	4
07:45	21	0	15	60	270	0	0	0	0	0	67	12
08:00	29	0	18	87	346	0	0	0	0	0	113	17
08:15	41	0	25	113	433	0	0	0	0	0	177	23
08:30	73	0	42	149	527	0	0	0	0	0	256	28
08:45	90	0	53	169	628	0	0	0	0	0	304	41
09:00	99	0	60	193	686	0	0	0	0	0	335	48

* indicates data error - check raw data.

1 - Roberts and Crespi Drive

INTERVAL DATA

15-Min Ending	North			East			South			West		Int. Total	
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	LT		
07:15	7	0	4	15	83	0	0	0	0	0	16	2	127
07:30	6	0	7	10	94	0	0	0	0	0	26	2	145
07:45	8	0	4	35	93	0	0	0	0	0	25	8	173
08:00	8	0	3	27	76	0	0	0	0	0	46	5	165
08:15	12	0	7	26	87	0	0	0	0	0	64	6	202
08:30	32	0	17	36	94	0	0	0	0	0	79	5	263
08:45	17	0	11	20	101	0	0	0	0	0	48	13	210
09:00	9	0	7	24	58	0	0	0	0	0	31	7	136
Total	99	0	60	193	686	0	0	0	0	0	335	48	1421

* indicates data error - check raw data.

1 - Roberts and Crespi Drive

HOURLY SUMMARY

Hour Ending	North			East			South			West		Int. Total	
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	LT		
07:15	7	0	4	15	83	0	0	0	0	0	16	2	127*
07:30	13	0	11	25	177	0	0	0	0	0	42	4	272*
07:45	21	0	15	60	270	0	0	0	0	0	67	12	445*
08:00	29	0	18	87	346	0	0	0	0	0	113	17	610
08:15	34	0	21	98	350	0	0	0	0	0	161	21	685
08:30	60	0	31	124	350	0	0	0	0	0	214	24	803
08:45	69	0	38	109	358	0	0	0	0	0	237	29	840
09:00	70	0	42	106	340	0	0	0	0	0	222	31	811

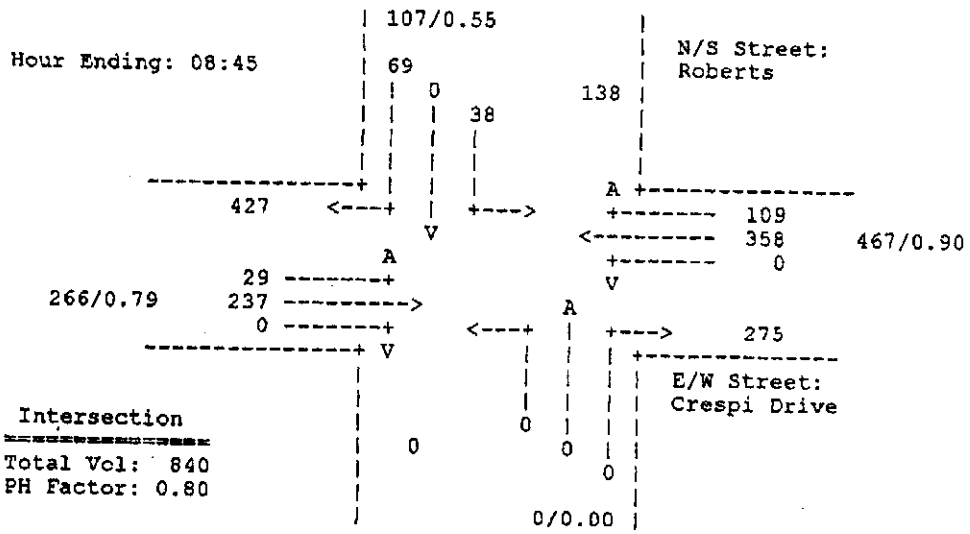
* indicates partial hour total.

City of Pacifica #4
 Wednesday

SUM-IT
 COUNT DATE
 01/26/06

1 - Roberts and Crespi Drive

MORNING PEAK



City of Pacifica #4
Tuesday

SUM-IT
COUNT DATE
01/31/06

1 - Roberts Road and Crespi Drive

RAW DATA

15-Min Ending	North			East			South			West		
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
16:15	12	0	21	12	44	0	0	0	0	0	84	11
16:30	19	0	44	31	83	0	0	0	0	0	166	24
16:45	31	0	63	51	142	0	0	0	0	0	254	36
17:00	45	0	82	70	197	0	0	0	0	0	342	50
17:15	50	0	103	91	250	0	0	0	0	0	433	59
17:30	56	0	129	114	296	0	0	0	0	0	532	74
17:45	65	0	153	129	347	0	0	0	0	0	626	83
18:00	68	0	170	138	393	0	0	0	0	0	716	93

* indicates data error - check raw data.

1 - Roberts Road and Crespi Drive

INTERVAL DATA

15-Min Ending	North			East			South			West			Int. Total
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
16:15	12	0	21	12	44	0	0	0	0	0	84	11	184
16:30	7	0	23	19	39	0	0	0	0	0	82	13	183
16:45	12	0	19	20	59	0	0	0	0	0	88	12	210
17:00	14	0	19	19	55	0	0	0	0	0	88	14	209
17:15	5	0	21	21	53	0	0	0	0	0	91	9	200
17:30	6	0	26	23	46	0	0	0	0	0	99	15	215
17:45	9	0	24	15	51	0	0	0	0	0	94	9	202
18:00	3	0	17	9	46	0	0	0	0	0	90	10	175
Total	68	0	170	138	393	0	0	0	0	0	716	93	1578

* indicates data error - check raw data.

1 - Roberts Road and Crespi Drive

HOURLY SUMMARY

Hour Ending	North			East			South			West			Int. Total
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
16:15	12	0	21	12	44	0	0	0	0	0	84	11	184*
16:30	19	0	44	31	83	0	0	0	0	0	166	24	367*
16:45	31	0	63	51	142	0	0	0	0	0	254	36	577*
17:00	45	0	82	70	197	0	0	0	0	0	342	50	786
17:15	38	0	82	79	206	0	0	0	0	0	349	48	802
17:30	37	0	85	83	213	0	0	0	0	0	366	50	834
17:45	34	0	90	78	205	0	0	0	0	0	372	47	826
18:00	23	0	88	68	196	0	0	0	0	0	374	43	792

* indicates partial hour total.

City of Pacifica #5
Thursday

SUM-IT
COUNT DATE
01/26/06

1 - State Route 1 and Crespi Drive

RAW DATA

15-Min Ending	North			East			South			West		
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
07:15	0	79	17	81	0	1	7	308	0	0	0	0
07:30	0	172	42	171	0	6	12	637	0	0	0	0
07:45	0	265	72	268	0	7	23	955	0	0	0	0
08:00	0	380	115	351	0	12	34	1224	0	0	0	0
08:15	0	517	170	426	0	19	48	1503	0	0	0	0
08:30	0	623	236	517	0	39	71	1777	0	0	0	0
08:45	0	766	274	607	0	56	85	2019	0	0	0	0
09:00	0	913	308	668	0	66	93	2249	0	0	0	0

* indicates data error - check raw data.

1 - State Route 1 and Crespi Drive

INTERVAL DATA

15-Min Ending	North			East			South			West			Int. Total
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
07:15	0	79	17	81	0	1	7	308	0	0	0	0	493
07:30	0	93	25	90	0	5	5	329	0	0	0	0	547
07:45	0	93	30	97	0	1	11	318	0	0	0	0	550
08:00	0	115	43	83	0	5	11	269	0	0	0	0	526
08:15	0	137	55	75	0	7	14	279	0	0	0	0	567
08:30	0	106	66	91	0	20	23	274	0	0	0	0	580
08:45	0	143	38	90	0	17	14	242	0	0	0	0	544
09:00	0	147	34	61	0	10	8	230	0	0	0	0	490
Total	0	913	308	668	0	66	93	2249	0	0	0	0	4297

* indicates data error - check raw data.

1 - State Route 1 and Crespi Drive

HOURLY SUMMARY

Hour Ending	North			East			South			West			Int. Total
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
07:15	0	79	17	81	0	1	7	308	0	0	0	0	493*
07:30	0	172	42	171	0	6	12	637	0	0	0	0	1040*
07:45	0	265	72	268	0	7	23	955	0	0	0	0	1590*
08:00	0	380	115	351	0	12	34	1224	0	0	0	0	2116
08:15	0	438	153	345	0	18	41	1195	0	0	0	0	2190
08:30	0	451	194	346	0	33	59	1140	0	0	0	0	2223
08:45	0	501	202	339	0	49	62	1064	0	0	0	0	2217
09:00	0	533	193	317	0	54	59	1025	0	0	0	0	2181

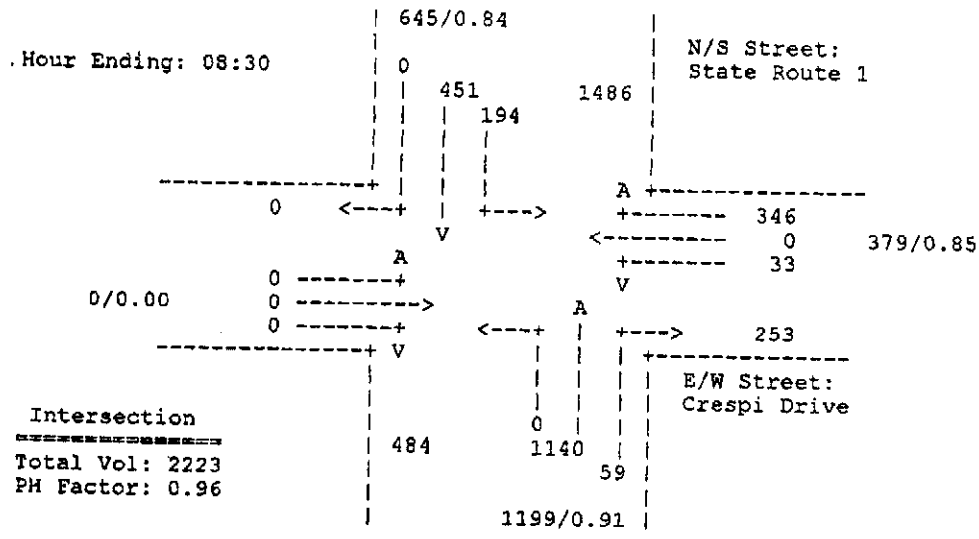
* indicates partial hour total.

City of Pacifica #5
Thursday

SUM-IT
COUNT DATE
01/26/06

1 - State Route 1 and Crespi Drive

MORNING PEAK



City of Pacifica #5
Wednesday

SUM-IT
COUNT DATE
01/25/06

1 - State Route 1 and Crespi Drive

RAW DATA

15-Min Ending	RT	North		East			South			West		LT
		TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
16:15	0	223	74	51	0	8	13	169	0	0	0	0
16:30	0	484	165	81	0	21	31	357	0	0	0	0
16:45	0	756	250	136	0	34	45	543	0	0	0	0
17:00	0	1076	352	187	0	47	65	717	0	0	0	0
17:15	0	1412	455	242	0	67	81	919	0	0	0	0
17:30	0	1723	548	286	0	76	99	1096	0	0	0	0
17:45	0	2012	622	342	0	103	120	1303	0	0	0	0
18:00	0	2257	713	404	0	119	135	1512	0	0	0	0

* indicates data error - check raw data.

1 - State Route 1 and Crespi Drive

INTERVAL DATA

15-Min Ending	RT	North		East			South			West		Int. Total	
		TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
16:15	0	223	74	51	0	8	13	169	0	0	0	0	538
16:30	0	261	91	30	0	13	18	188	0	0	0	0	601
16:45	0	272	85	55	0	13	14	186	0	0	0	0	625
17:00	0	320	102	51	0	13	20	174	0	0	0	0	680
17:15	0	336	103	55	0	20	16	202	0	0	0	0	732
17:30	0	311	93	44	0	9	18	177	0	0	0	0	652
17:45	0	289	74	56	0	27	21	207	0	0	0	0	674
18:00	0	245	91	62	0	16	15	209	0	0	0	0	638
Total	0	2257	713	404	0	119	135	1512	0	0	0	0	5140

* indicates data error - check raw data.

1 - State Route 1 and Crespi Drive

HOURLY SUMMARY

Hour Ending	RT	North		East			South			West		Int. Total	
		TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
16:15	0	223	74	51	0	8	13	169	0	0	0	0	538*
16:30	0	484	165	81	0	21	31	357	0	0	0	0	1139*
16:45	0	756	250	136	0	34	45	543	0	0	0	0	1764*
17:00	0	1076	352	187	0	47	65	717	0	0	0	0	2444
17:15	0	1189	381	191	0	59	68	750	0	0	0	0	2638
17:30	0	1239	383	205	0	55	68	739	0	0	0	0	2689
17:45	0	1256	372	206	0	69	75	760	0	0	0	0	2738
18:00	0	1181	361	217	0	72	70	795	0	0	0	0	2696

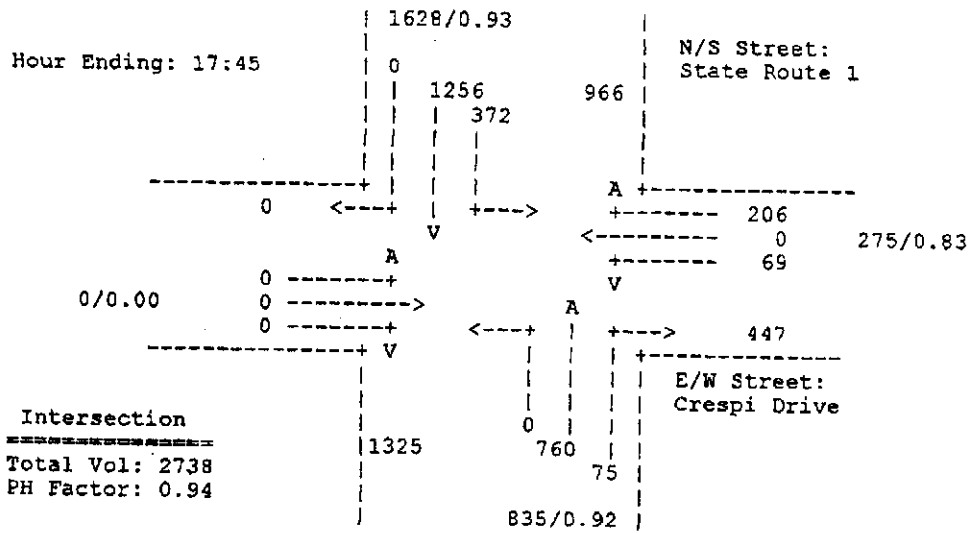
* indicates partial hour total.

City of Pacifica #5
Wednesday

SUM-IT
COUNT DATE
01/25/06

1. - State Route 1 and Crespi Drive

EVENING PEAK



City of Pacifica #6
Tuesday

SUM-IT
COUNT DATE
01/31/06

1 - State Route 1 and Fassler Avenue

RAW DATA

15-Min Ending	North			East			South			West		
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
07:15	3	85	61	254	1	0	2	472	2	4	0	7
07:30	4	208	132	554	2	2	3	982	7	7	1	13
07:45	11	345	312	835	4	5	3	1454	10	11	5	19
08:00	18	527	453	1136	7	8	3	1975	15	14	11	25
08:15	25	743	518	1472	9	9	4	2400	18	17	18	41
08:30	41	1019	613	1674	14	16	4	2875	29	25	22	48
08:45	46	1227	706	1892	20	21	4	3295	32	30	25	56
09:00	62	1447	766	2057	22	25	4	3627	39	38	28	67

* indicates data error - check raw data.

1 - State Route 1 and Fassler Avenue

INTERVAL DATA

15-Min Ending	North			East			South			West			Int. Total
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
07:15	3	85	61	254	1	0	2	472	2	4	0	7	891
07:30	1	123	71	300	1	2	1	510	5	3	1	6	1024
07:45	7	137	180	281	2	3	0	472	3	4	4	6	1099
08:00	7	182	141	301	3	3	0	521	5	3	6	6	1178
08:15	7	216	65	336	2	1	1	425	3	3	7	16	1082
08:30	16	276	95	202	5	7	0	475	11	8	4	7	1106
08:45	5	208	93	218	6	5	0	420	3	5	3	8	974
09:00	16	220	60	165	2	4	0	332	7	8	3	11	828
Total	62	1447	766	2057	22	25	4	3627	39	38	28	67	8182

* indicates data error - check raw data.

1 - State Route 1 and Fassler Avenue

HOURLY SUMMARY

Hour Ending	North			East			South			West			Int. Total
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
07:15	3	85	61	254	1	0	2	472	2	4	0	7	891*
07:30	4	208	132	554	2	2	3	982	7	7	1	13	1915*
07:45	11	345	312	835	4	5	3	1454	10	11	5	19	3014*
08:00	18	527	453	1136	7	8	3	1975	15	14	11	25	4192
08:15	22	658	457	1218	8	9	2	1928	16	13	18	34	4383
08:30	37	811	481	1120	12	14	1	1893	22	18	21	35	4465
08:45	35	882	394	1057	16	16	1	1841	22	19	20	37	4340
09:00	44	920	313	921	15	17	1	1652	24	24	17	42	3990

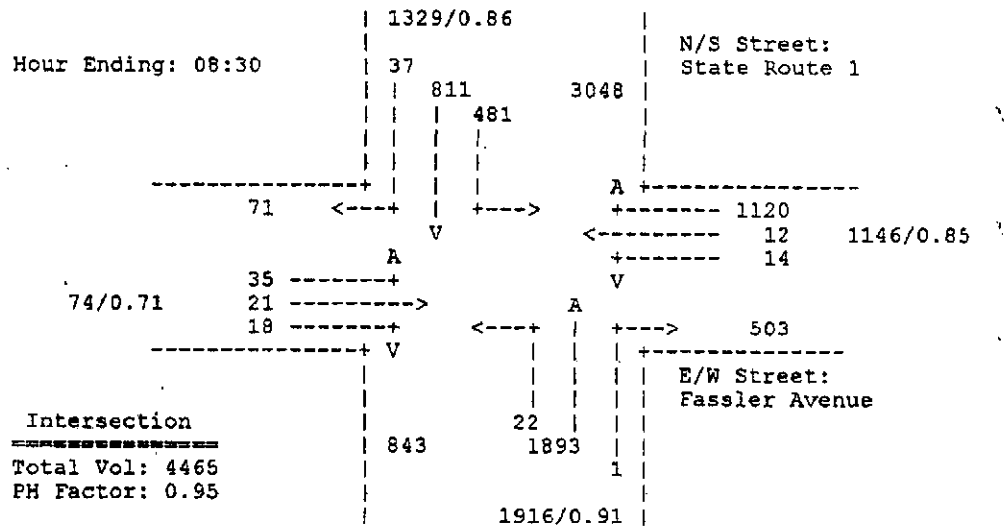
* indicates partial hour total.

City of Pacifica #6
 Tuesday

SUM-IT
 COUNT DATE
 01/31/06

1 - State Route 1 and Fassler Avenue

MORNING PEAK



City of Pacifica #6
Tuesday

SUM-IT
COUNT DATE
01/31/06

1 - State Route 1 and Fassler Avenue RAW DATA

15-Min Ending	RT	North			East			South			West		
		TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
16:15	20	405	141	67	7	7	2	205	5	14	5	19	
16:30	35	786	283	146	10	12	7	400	15	26	11	34	
16:45	45	1205	448	247	14	19	10	615	20	32	18	50	
17:00	55	1642	642	345	15	26	12	829	26	40	26	65	
17:15	63	2129	874	417	20	35	17	1071	39	63	33	90	
17:30	68	2585	1136	490	23	42	30	1310	49	79	41	107	
17:45	73	3065	1370	593	24	56	42	1564	60	93	48	136	
18:00	77	3494	1571	674	33	62	49	1779	69	102	54	161	

* indicates data error - check raw data.

1 - State Route 1 and Fassler Avenue INTERVAL DATA

15-Min Ending	RT	North			East			South			West			Int. Total
		TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT		
16:15	20	405	141	67	7	7	2	205	5	14	5	19	897	
16:30	15	381	142	79	3	5	5	195	10	12	6	15	868	
16:45	10	419	165	101	4	7	3	215	5	6	7	16	958	
17:00	10	437	194	98	1	7	2	214	6	8	8	15	1000	
17:15	8	487	232	72	5	9	5	242	13	23	7	25	1128	
17:30	5	456	262	73	3	7	13	239	10	16	8	17	1109	
17:45	5	480	234	103	1	14	12	254	11	14	7	29	1164	
18:00	4	429	201	81	9	6	7	215	9	9	6	25	1001	
Total	77	3494	1571	674	33	62	49	1779	69	102	54	161	8125	

* indicates data error - check raw data.

1 - State Route 1 and Fassler Avenue HOURLY SUMMARY

Hour Ending	RT	North			East			South			West			Int. Total
		TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT		
16:15	20	405	141	67	7	7	2	205	5	14	5	19	897*	
16:30	35	786	283	146	10	12	7	400	15	26	11	34	1765*	
16:45	45	1205	448	247	14	19	10	615	20	32	18	50	2723*	
17:00	55	1642	642	345	15	26	12	829	26	40	26	65	3723	
17:15	43	1724	733	350	13	28	15	866	34	49	28	71	3954	
17:30	33	1799	853	344	13	30	23	910	34	53	30	73	4195	
17:45	28	1860	922	346	10	37	32	949	40	61	30	86	4401	
18:00	22	1852	929	329	18	36	37	950	43	62	28	96	4402	

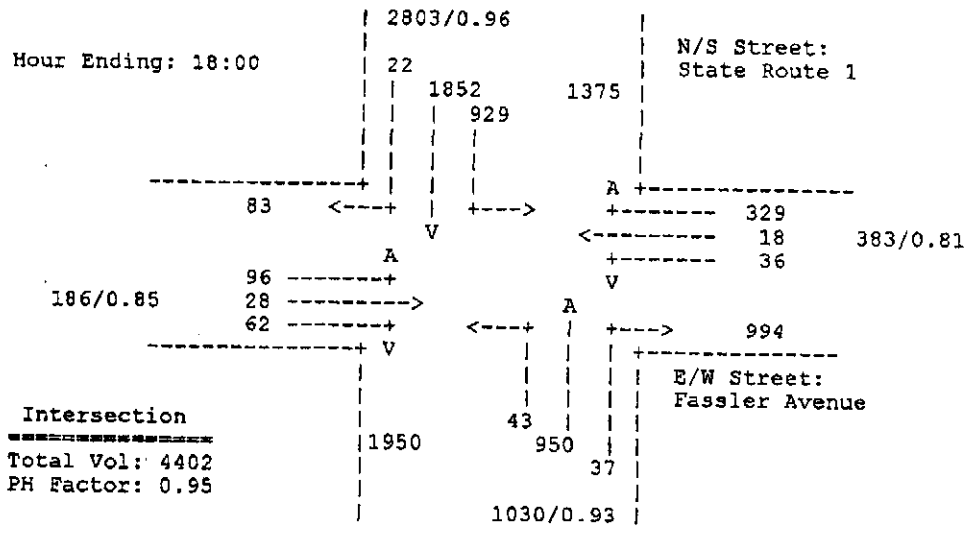
* indicates partial hour total.

City of Pacifica #6
Tuesday

SUM-IT
COUNT DATE
01/31/06

1 - State Route 1 and Fassler Avenue

EVENING PEAK



City of Pacifica #7
Wednesday

SUM-IT
COUNT DATE
01/25/06

1 - State Route 1 and Reina del Mar

RAW DATA

15-Min Ending	RT	North		East			South			West		LT
		TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	
07:15	0	150	12	36	0	9	15	593	0	0	0	1
07:30	1	340	28	78	0	19	40	1281	0	0	0	2
07:45	4	607	49	149	0	39	56	1934	1	0	0	3
08:00	10	877	91	220	0	63	90	2572	5	0	6	4
08:15	29	1143	155	293	0	97	170	3078	6	0	14	6
08:30	36	1353	202	362	1	137	246	3540	7	1	30	7
08:45	40	1569	224	449	1	173	283	4107	11	1	34	11
09:00	43	1819	261	494	1	199	296	4580	11	1	38	12

* indicates data error - check raw data.

1 - State Route 1 and Reina del Mar

INTERVAL DATA

15-Min Ending	RT	North		East			South			West		Int. Total	
		TH	LT	RT	TH	LT	RT	TH	LT	RT	TH		LT
07:15	0	150	12	36	0	9	15	593	0	0	0	1	816
07:30	1	190	16	42	0	10	25	688	0	0	0	1	973
07:45	3	267	21	71	0	20	16	653	1	0	0	1	1053
08:00	6	270	42	71	0	24	34	638	4	0	6	1	1096
08:15	19	266	64	73	0	34	80	506	1	0	8	2	1053
08:30	7	210	47	69	1	40	76	462	1	1	16	1	931
08:45	4	216	22	87	0	36	37	567	4	0	4	4	981
09:00	3	250	37	45	0	26	13	473	0	0	4	1	852
Total	43	1819	261	494	1	199	296	4580	11	1	38	12	7755

* indicates data error - check raw data.

1 - State Route 1 and Reina del Mar

HOURLY SUMMARY

Hour Ending	RT	North		East			South			West		Int. Total	
		TH	LT	RT	TH	LT	RT	TH	LT	RT	TH		LT
07:15	0	150	12	36	0	9	15	593	0	0	0	1	816*
07:30	1	340	28	78	0	19	40	1281	0	0	0	2	1789*
07:45	4	607	49	149	0	39	56	1934	1	0	0	3	2842*
08:00	10	877	91	220	0	63	90	2572	5	0	6	4	3938
08:15	29	993	143	257	0	88	155	2485	6	0	14	5	4175
08:30	35	1013	174	284	1	118	206	2259	7	1	30	5	4133
08:45	36	962	175	300	1	134	227	2173	10	1	34	8	4061
09:00	33	942	170	274	1	136	206	2008	6	1	32	8	3817

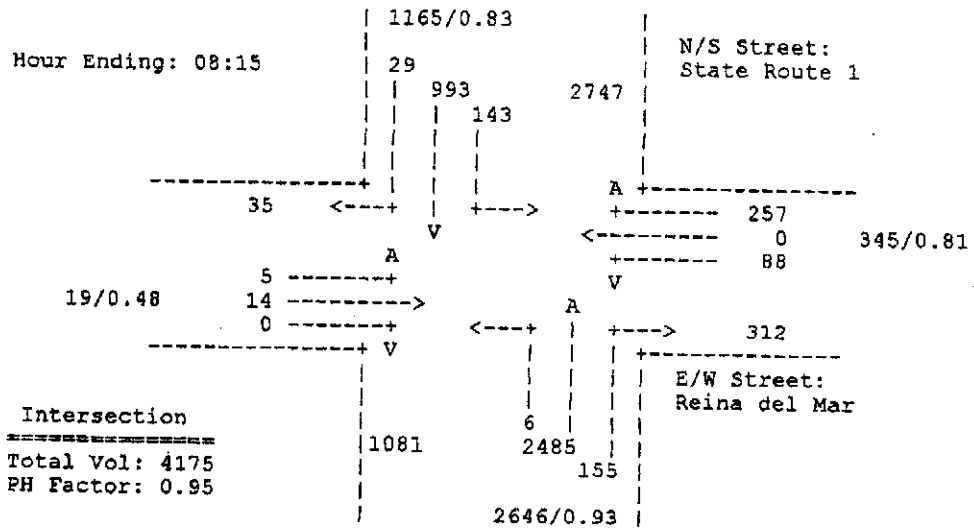
* indicates partial hour total.

City of Pacifica #7
 Wednesday

SUM-IT
 COUNT DATE
 01/25/06

1 - State Route 1 and Reina del Mar

MORNING PEAK



City of Pacifica #7
Thursday

SUM-IT
COUNT DATE
02/02/06

1 - State Route 1 and Reina del Mar

RAW DATA

15-Min Ending	RT	North			East			South			West		
		TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
16:15	6	466	64	32	1	30	17	249	5	3	1	4	
16:30	9	888	101	54	1	57	39	491	10	6	2	8	
16:45	11	1393	144	69	2	81	62	746	15	10	5	13	
17:00	12	1974	210	91	2	104	91	1016	21	10	6	13	
17:15	14	2520	272	142	3	133	110	1274	26	11	6	16	
17:30	15	3105	345	174	4	167	140	1562	28	11	6	19	
17:45	15	3689	445	204	4	192	174	1840	29	12	6	20	
18:00	16	4211	518	230	4	216	191	2125	29	13	6	22	

* indicates data error - check raw data.

1 - State Route 1 and Reina del Mar

INTERVAL DATA

15-Min Ending	RT	North			East			South			West			Int. Total
		TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT		
16:15	6	466	64	32	1	30	17	249	5	3	1	4	878	
16:30	3	422	37	22	0	27	22	242	5	3	1	4	788	
16:45	2	505	43	15	1	24	23	255	5	4	3	5	885	
17:00	1	581	66	22	0	23	29	270	6	0	1	0	999	
17:15	2	546	62	51	1	29	19	258	5	1	0	3	977	
17:30	1	585	73	32	1	34	30	288	2	0	0	3	1049	
17:45	0	584	100	30	0	25	34	278	1	1	0	1	1054	
18:00	1	522	73	26	0	24	17	285	0	1	0	2	951	
Total	16	4211	518	230	4	216	191	2125	29	13	6	22	7581	

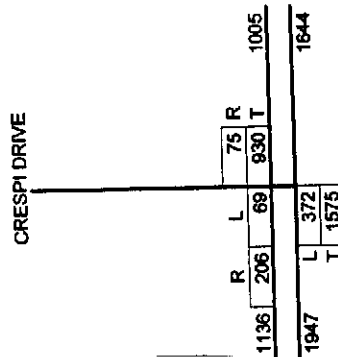
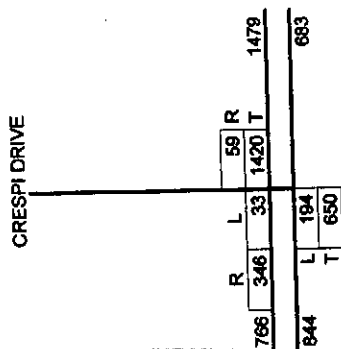
* indicates data error - check raw data.

1 - State Route 1 and Reina del Mar

HOURLY SUMMARY

Hour Ending	RT	North			East			South			West			Int. Total
		TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT		
16:15	6	466	64	32	1	30	17	249	5	3	1	4	878*	
16:30	9	888	101	54	1	57	39	491	10	6	2	8	1666*	
16:45	11	1393	144	69	2	81	62	746	15	10	5	13	2551*	
17:00	12	1974	210	91	2	104	91	1016	21	10	6	13	3550	
17:15	8	2054	208	110	2	103	93	1025	21	8	5	12	3649	
17:30	6	2217	244	120	3	110	101	1071	18	5	4	11	3910	
17:45	4	2296	301	135	2	111	112	1094	14	2	1	7	4079	
18:00	4	2237	308	139	2	112	100	1109	8	3	0	9	4031	

* indicates partial hour total.



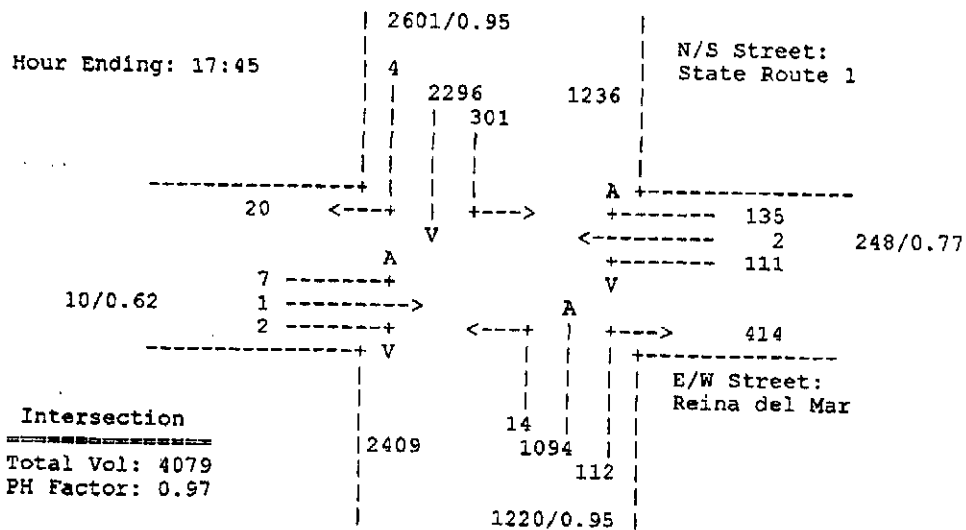
7

City of Pacifica #7
Thursday

SUM-IT
COUNT DATE
02/02/06

1 - State Route 1 and Reina del Mar

EVENING PEAK



B. Levels of Service Calculation Worksheets

ROBERTS ROAD RESIDENTIAL
EXISTING CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 Fassler Avenue & Roberts Road

Average Delay (sec/veh): 4.3 Worst Case Level Of Service: F[51.2]

Table with columns for Street Name (Roberts Road, Fassler Avenue), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Stop Sign, Uncontrolled), Rights (Include), and Lanes.

Table with columns for Volume Module: >> Count Date: 26 Jan 2006 <<. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume.

Table for Critical Gap Module: Critical Gap (6.8, 6.5, 6.9), FollowUpTim (3.5, 4.0, 3.3).

Table for Capacity Module: Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Table for Level Of Service Module: 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
EXISTING CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 Fassler Avenue & Coast Lane

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: C[16.8]

Table with columns: Street Name, Approach, Movement, Control, Rights, Lanes. Rows include Coast Lane and Fassler Avenue with various movement and control details.

Table with columns: Volume Module, Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume. Includes Count Date: 26 Jan 2006.

Table with columns: Critical Gap Module, Critical Gp, FollowUpTim. Shows gap values and follow-up times for different movements.

Table with columns: Capacity Module, Cnflct Vol, Potent Cap., Move Cap., Volume/Cap. Shows capacity and volume per capacity for various movements.

Table with columns: Level Of Service Module, 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS. Shows level of service and delay for different approaches.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
EXISTING CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #3 Route 1 & Coast Lane

Average Delay (sec/veh): 2.5 Worst Case Level Of Service: D[30.1]

Table with columns for Street Name, Approach, Movement, Control, Rights, Lanes, and Volume Module. Includes data for Route 1 and Coast Lane.

Table with columns for Volume Module, Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume.

Table with columns for Critical Gap Module, Critical Gp, FollowUpTim.

Table with columns for Capacity Module, Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Table with columns for Level Of Service Module, 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
EXISTING CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #4 Crespi Drive & Roberts Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.753
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 15.4
Optimal Cycle: 0 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include Roberts Road (North/South Bound) and Crespi Drive (East/West Bound).

Volume Module: >> Count Date: 26 Jan 2006 <<

Table showing traffic volume data including Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table showing saturation flow data including Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table showing capacity analysis data including Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
EXISTING CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 Route 1 & Crespi Dr.

Cycle (sec): 40 Critical Vol./Cap.(X): 0.842

Loss Time (sec): 9 (Y+R=5.0 sec) Average Delay (sec/veh): 12.9

Optimal Cycle: 54 Level Of Service: B

Street Name: Route 1 Crespi Drive
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Ovl
Min. Green: 0 10 10 4 10 0 0 0 0 4 0 4
Lanes: 0 0 1 1 0 2 0 2 0 0 0 0 0 0 0 1

Volume Module: >> Count Date: 26 Jan 2006 <<
Base Vol: 0 1420 59 194 650 0 0 0 0 33 0 346
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 1420 59 194 650 0 0 0 0 33 0 346
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96
PHF Volume: 0 1479 61 202 677 0 0 0 0 34 0 360
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 1479 61 202 677 0 0 0 0 34 0 360
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 1479 61 202 677 0 0 0 0 34 0 360

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 0.94 0.94 0.92 0.95 1.00 1.00 1.00 1.00 0.95 1.00 0.85
Lanes: 0.00 1.92 0.08 2.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00
Final Sat.: 0 3445 143 3502 3610 0 0 0 0 1805 0 1615

Capacity Analysis Module:
Vol/Sat: 0.00 0.43 0.43 0.06 0.19 0.00 0.00 0.00 0.00 0.02 0.00 0.22
Crit Moves: **** **** ****
Green/Cycle: 0.00 0.52 0.52 0.10 0.62 0.00 0.00 0.00 0.00 0.15 0.00 0.25
Volume/Cap: 0.00 0.82 0.82 0.58 0.30 0.00 0.00 0.00 0.00 0.13 0.00 0.89
Delay/Veh: 0.0 10.9 10.9 19.6 3.5 0.0 0.0 0.0 0.0 14.9 0.0 35.5
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 10.9 10.9 19.6 3.5 0.0 0.0 0.0 0.0 14.9 0.0 35.5
LOS by Move: A B B B A A A A A B A D
HCM2k95thQ: 0 21 21 5 5 0 0 0 0 1 0 16

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
EXISTING CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Route 1 & Fassler/Rockaway

Cycle (sec): 130 Critical Vol./Cap.(X): 1.216
Loss Time (sec): 12 (Y+R=5.0 sec) Average Delay (sec/veh): 120.6
Optimal Cycle: 180 Level Of Service: F

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes for Route 1 and Fassler Ave.

Volume Module: >> Count Date: 31 Jan 2006 <<

Table with columns for various volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
EXISTING CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #7 Route 1 & Reina Del Mar Avenue

Cycle (sec): 152 Critical Vol./Cap.(X): 1.244

Loss Time (sec): 16 (Y+R=5.0 sec) Average Delay (sec/veh): 110.4

Optimal Cycle: 180 Level Of Service: F

Street Name: Rotue 1 Reina Del Mar Avenue

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Split Phase Split Phase

Rights: Include Include Include Ovl

Min. Green: 4 20 20 4 10 10 4 4 4 4

Lanes: 1 0 1 1 0 1 0 1 1 0 0 1 0 0 0 0 0 0 1 0 1

Volume Module: >> Count Date: 25 Jan 2006 <<

Base Vol: 6 2885 155 143 1240 29 5 14 0 88 0 257

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 6 2885 155 143 1240 29 5 14 0 88 0 257

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96

PHF Volume: 6 3005 161 149 1292 30 5 15 0 92 0 268

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 6 3005 161 149 1292 30 5 15 0 92 0 268

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 6 3005 161 149 1292 30 5 15 0 92 0 268

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 0.95 0.94 0.94 0.95 0.95 0.95 0.99 0.99 1.00 0.88 1.00 0.88

Lanes: 1.00 1.90 0.10 1.00 1.95 0.05 0.26 0.74 0.00 0.41 0.00 1.59

Final Sat.: 1805 3399 183 1805 3517 82 493 1382 0 677 0 2654

Capacity Analysis Module:

Vol/Sat: 0.00 0.88 0.88 0.08 0.37 0.37 0.01 0.01 0.00 0.14 0.00 0.10

Crit Moves: **** **** **** ****

Green/Cycle: 0.05 0.70 0.70 0.07 0.71 0.71 0.03 0.03 0.00 0.11 0.00 0.17

Volume/Cap: 0.07 1.27 1.27 1.27 0.52 0.52 0.40 0.40 0.00 1.27 0.00 0.59

Delay/Veh: 69.0 148 147.5 243.1 10.2 10.2 78.1 78.1 0.0 213.9 0.0 59.5

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 69.0 148 147.5 243.1 10.2 10.2 78.1 78.1 0.0 213.9 0.0 59.5

LOS by Move: E F F F B B E E A F A E

HCM2k95thQ: 1 178 178 23 26 26 3 3 0 32 0 15

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
EXISTING CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 Fassler Avenue & Roberts Road

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: C[17.2]

Street Name:	Roberts Road						Fassler Avenue									
Approach:	North Bound			South Bound			East Bound			West Bound						
Movement:	L	T	R	L	T	R	L	T	R	L	T	R				
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled						
Rights:	Include			Include			Include			Include						
Lanes:	0	0	1	0	0	0	0	0	0	0	0	0				
	0	0	1	0	0	0	0	0	1	1	0	0	1	1	0	0

Volume Module: >> Count Date: 26 Jan 2006 <<

Base Vol:	27	0	33	0	0	0	0	729	43	24	379	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	27	0	33	0	0	0	0	729	43	24	379	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	28	0	34	0	0	0	0	744	44	24	387	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Volume:	28	0	34	0	0	0	0	744	44	24	387	0

Critical Gap Module:

Critical Gp:	6.8	6.5	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	1008	1202	394	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	788	xxxx	xxxxx
Potent Cap.:	240	186	611	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	841	xxxx	xxxxx
Move Cap.:	235	181	611	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	841	xxxx	xxxxx
Volume/Cap:	0.12	0.00	0.06	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.03	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.4	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	355	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shared Queue:	xxxxx	0.6	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Shrd ConDel:	xxxxx	17.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.4	xxxx	xxxxx
Shared LOS:	*	C	*	*	*	*	*	*	*	A	*	*
ApproachDel:	17.2			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	C			*			*			*		

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
EXISTING CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 Fassler Avenue & Coast Lane

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: B[12.3]

Table with columns for Street Name (Coast Lane, Fassler Avenue), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Stop Sign, Uncontrolled), Rights (Include), and Lanes (1 0 0 0 1, 0 0 0 0 0, 0 0 1 1 0, 1 0 2 0 0).

Table with columns for Volume Module: >> Count Date: 26 Jan 2006 <<. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume.

Table for Critical Gap Module: Critical Gp (6.8, 6.9, 4.1), FollowUpTim (3.5, 3.3, 2.2).

Table for Capacity Module: Conflict Vol (1001, 399, 799), Potent Cap. (243, 606, 833), Move Cap. (242, 606, 833), Volume/Cap. (0.01, 0.02, 0.00).

Table for Level Of Service Module: 2Way95thQ (0.0, 0.1, 0.0), Control Del (20.0, 11.1, 9.3), LOS by Move (C, B, A), Movement (LT-LTR-RT), Shared Cap. (xxxx), SharedQueue (xxxx), Shrd ConDel (xxxx), Shared LOS (*), ApproachDel (12.3), ApproachLOS (B).

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
EXISTING CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #3 Route 1 & Coast Lane

Average Delay (sec/veh): 0.1 Worst Case Level Of Service: B[12.3]

Table with columns for Street Name, Approach, Movement, Control, Rights, Lanes, and sub-columns for North Bound, South Bound, East Bound, and West Bound.

Table with columns for Volume Module, Count, Date, and various adjustment factors like Base Vol, Growth Adj, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume.

Table for Critical Gap Module with columns for Critical Gp, FollowUpTim, and values like 6.2, 3.3.

Table for Capacity Module with columns for Cnflct Vol, Potent Cap., Move Cap., Volume/Cap. and values like 606, 501, 501, 0.01.

Table for Level Of Service Module with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
EXISTING CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #4 Crespi Drive & Roberts Road

Cycle (sec): 100 Critical Vol./Cap. (X): 0.399
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 10.2
Optimal Cycle: 0 Level Of Service: B

Street Name:	Roberts Road						Crespi Drive					
	North Bound			South Bound			East Bound			West Bound		
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0	0	1	0	1	0	0	0	1

Volume Module: >> Count Date: 31 Jan 2006 <<

Base Vol:	0	0	0	85	0	37	50	366	0	0	213	83
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	85	0	37	50	366	0	0	213	83
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	0	0	0	88	0	38	52	377	0	0	220	86
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	88	0	38	52	377	0	0	220	86
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	88	0	38	52	377	0	0	220	86

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.70	0.00	0.30	0.24	1.76	0.00	0.00	0.72	0.28
Final Sat.:	0	0	0	436	0	190	164	1214	0	0	550	214

Capacity Analysis Module:

Vol/Sat:	xxxx	xxxx	xxxx	0.20	xxxx	0.20	0.31	0.31	xxxx	xxxx	0.40	0.40
Crit Moves:				****			****			****		
Delay/Veh:	0.0	0.0	0.0	9.6	0.0	9.6	10.2	10.1	0.0	0.0	10.6	10.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	9.6	0.0	9.6	10.2	10.1	0.0	0.0	10.6	10.6
LOS by Move:	*	*	*	A	*	A	B	B	*	*	B	B
ApproachDel:	xxxxxx				9.6			10.1			10.6	
Delay Adj:	xxxxxx				1.00			1.00			1.00	
ApprAdjDel:	xxxxxx				9.6			10.1			10.6	
LOS by Appr:	*				A			B			B	
AllWayAvgQ:	0.0	0.0	0.0	0.2	0.2	0.2	0.4	0.4	0.0	0.6	0.6	0.6

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
EXISTING CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 Route 1 & Crespi Dr.

Cycle (sec): 40 Critical Vol./Cap.(X): 0.665
Loss Time (sec): 9 (Y+R=5.0 sec) Average Delay (sec/veh): 8.2
Optimal Cycle: 38 Level Of Service: A

Table with columns for Street Name (Route 1, Crespi Drive), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected, Split Phase), Rights (Include, Ovl), and Lanes.

Table for Volume Module: >> Count Date: 25 Jan 2006 <<. Includes rows for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Table for Saturation Flow Module: Includes rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Table for Capacity Analysis Module: Includes rows for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
EXISTING CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Route 1 & Fassler/Rockaway

Cycle (sec): 130 Critical Vol./Cap.(X): 0.860

Loss Time (sec): 12 (Y+R=5.0 sec) Average Delay (sec/veh): 35.6

Optimal Cycle: 104 Level Of Service: D

Street Name: Route 1 Fassler Ave.
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Ovl
Min. Green: 5 20 20 4 25 25 4 4 4 4 4 4
Lanes: 1 0 1 1 0 2 0 1 1 0 0 0 1 0 0 2

Volume Module: >> Count Date: 31 Jan 2006 <<
Base Vol: 43 1040 37 929 1852 22 96 28 62 36 18 329
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 43 1040 37 929 1852 22 96 28 62 36 18 329
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.93 0.93 0.93 0.89 0.89 0.89 0.85 0.85 0.85 0.81 0.81 0.81
PHF Volume: 46 1118 40 1044 2081 25 113 33 73 44 22 406
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 46 1118 40 1044 2081 25 113 33 73 44 22 406
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 46 1118 40 1044 2081 25 113 33 73 44 22 406

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.95 0.95 0.92 0.95 0.95 0.93 0.93 0.93 0.97 0.97 0.75
Lanes: 1.00 1.93 0.07 2.00 1.98 0.02 0.52 0.15 0.33 0.67 0.33 2.00
Final Sat.: 1805 3469 123 3502 3560 42 913 266 590 1226 613 2842

Capacity Analysis Module:
Vol/Sat: 0.03 0.32 0.32 0.30 0.58 0.58 0.12 0.12 0.12 0.04 0.04 0.14
Crit Moves: ****
Green/Cycle: 0.04 0.37 0.37 0.35 0.68 0.68 0.14 0.14 0.14 0.04 0.04 0.39
Volume/Cap: 0.57 0.86 0.86 0.86 0.86 0.86 0.86 0.86 0.86 0.86 0.86 0.37
Delay/Veh: 70.7 43.3 43.3 45.9 19.7 19.7 78.7 78.7 78.7 119.6 120 28.5
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 70.7 43.3 43.3 45.9 19.7 19.7 78.7 78.7 78.7 119.6 120 28.5
LOS by Move: E D D D B B E E E F F C
HCM2k95thQ: 5 41 41 38 57 57 20 20 20 9 9 12

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
EXISTING CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #7 Route 1 & Reina Del Mar Avenue

Cycle (sec): 152 Critical Vol./Cap. (X): 1.131
Loss Time (sec): 16 (Y+R=5.0 sec) Average Delay (sec/veh): 82.9
Optimal Cycle: 180 Level Of Service: F

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include North Bound and South Bound for Route 1, and East Bound and West Bound for Reina Del Mar Avenue.

Volume Module: >> Count Date: 2 Feb 2006 <<
Base Vol: 14 1340 112 301 2690 4 7 1 2 111 2 135
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 14 1340 112 301 2690 4 7 1 2 111 2 135
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.87 0.87 0.87 0.62 0.62 0.62 0.77 0.77 0.77
PHF Volume: 15 1411 118 346 3092 5 11 2 3 144 3 175
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 15 1411 118 346 3092 5 11 2 3 144 3 175
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 15 1411 118 346 3092 5 11 2 3 144 3 175

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.94 0.94 0.95 0.95 0.95 0.94 0.94 0.94 0.90 0.90 0.90
Lanes: 1.00 1.85 0.15 1.00 1.99 0.01 0.70 0.10 0.20 0.61 0.01 1.38
Final Sat.: 1805 3292 275 1805 3605 5 1250 179 357 1049 19 2344

Capacity Analysis Module:
Vol/Sat: 0.01 0.43 0.43 0.19 0.86 0.86 0.01 0.01 0.01 0.14 0.14 0.07
Crit Moves: ****
Green/Cycle: 0.03 0.52 0.52 0.23 0.73 0.73 0.03 0.03 0.03 0.12 0.12 0.35
Volume/Cap: 0.31 0.82 0.82 0.82 1.18 1.18 0.34 0.34 0.34 1.18 1.18 0.21
Delay/Veh: 76.4 33.8 33.8 67.9 107 106.9 77.0 77.0 77.0 180.1 180 34.9
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 76.4 33.8 33.8 67.9 107 106.9 77.0 77.0 77.0 180.1 180 34.9
LOS by Move: E C C E F F E E E F F C
HCM2k95thQ: 2 52 52 30 159 159 2 2 2 31 31 8

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
BACKGROUND CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Fassler Avenue & Roberts Road

Average Delay (sec/veh): 4.3 Worst Case Level Of Service: F[52.0]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Roberts Road and Fassler Avenue with various movement and lane configurations.

Table with columns for Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, FinalVolume, Critical Gap Module, and FollowUpTim.

Table with columns for Capacity Module, Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Table with columns for Level Of Service Module, 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
BACKGROUND CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Fassler Avenue & Coast Lane

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: C(16.8)

Table with columns for Street Name (Coast Lane, Fassler Avenue), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Stop Sign, Uncontrolled), Rights (Include), and Lanes.

Table with columns for Volume Module: >> Count Date: 26 Jan 2006 <<. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and FinalVolume.

Table with columns for Critical Gap Module: Critical Gp, FollowUpTim. Values include 6.8, 6.9, 3.5, 4.1, 2.2.

Table with columns for Capacity Module: Cnflct Vol, Potent Cap., Move Cap., Volume/Cap. Values include 1305, 154, 140, 0.02, 235, 773, 773, 0.01, 470, 1102, 1102, 0.12.

Table with columns for Level Of Service Module: 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS. Values include 0.0, 31.1, D, LT-LTR-RT, 16.8, C.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
BACKGROUND CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Route 1 & Coast Lane

Average Delay (sec/veh): 2.5 Worst Case Level Of Service: D[30.2]

Street Name: Route 1 Coast Lane

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Uncontrolled Uncontrolled Yield Sign Yield Sign

Rights: Include Include Include Include

Lanes: 0 0 2 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 1

Volume Module: >> Count Date: 7 Feb 2006 <<

Base Vol: 0 1760 5 0 0 0 0 0 0 0 0 0 0 157

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 1760 5 0 0 0 0 0 0 0 0 0 0 157

Added Vol: 0 4 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 1764 5 0 0 0 0 0 0 0 0 0 0 157

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91

PHF Volume: 0 1938 5 0 0 0 0 0 0 0 0 0 0 173

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0

FinalVolume: 0 1938 5 0 0 0 0 0 0 0 0 0 0 173

Critical Gap Module:

Critical Gp: xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx 6.2

FollowUpTim: xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx 3.3

Capacity Module:

Cnflct Vol: xxxx xxxx xxxxxx xxxx xxxx xxxxxx xxxx xxxx xxxxxx xxxx xxxx 969

Potent Cap.: xxxx xxxx xxxxxx xxxx xxxx xxxxxx xxxx xxxx xxxxxx xxxx xxxx 310

Move Cap.: xxxx xxxx xxxxxx xxxx xxxx xxxxxx xxxx xxxx xxxxxx xxxx xxxx 310

Volume/Cap: xxxx xxxx xxxxxx xxxx xxxx xxxxxx xxxx xxxx xxxxxx xxxx xxxx 0.56

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxxx xxxx xxxx xxxxxx xxxx xxxx xxxxxx xxxx xxxx 3.2

Control Del: xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx 30.2

LOS by Move: * * * * * * * * * * * * * * D

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx xxxx xxxxxx xxxx xxxx xxxxxx xxxx xxxx xxxxxx xxxx xxxx xxxxxx

SharedQueue: xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx

Shrd ConDel: xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx

Shared LOS: * * * * * * * * * * * * * * *

ApproachDel: xxxxxx xxxxxx xxxxxx 30.2

ApproachLOS: * * * * * * * * * * * * * * D

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
BACKGROUND CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #4 Crespi Drive & Roberts Road

Cycle (sec): 100 Critical Vol./Cap. (X): 0.758

Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 15.6

Optimal Cycle: 0 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include Roberts Road (North and South Bound) and Crespi Drive (East and West Bound).

Volume Module: >> Count Date: 26 Jan 2006 <<

Table showing traffic volume data including Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and FinalVolume.

Saturation Flow Module:

Table showing saturation flow data including Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table showing capacity analysis data including Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

ROBERTS ROAD RESIDENTIAL
BACKGROUND CONDITIONS
AM PEAK HOUR

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Route 1 & Crespi Dr.

Cycle (sec): 40 Critical Vol./Cap. (X): 0.845

Loss Time (sec): 9 (Y+R=5.0 sec) Average Delay (sec/veh): 13.1

Optimal Cycle: 54 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Lanes, and sub-columns for Route 1 (North/South Bound) and Crespi Drive (East/West Bound).

Volume Module: >> Count Date: 26 Jan 2006 <<

Table with 12 columns showing various volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

Saturation Flow Module:

Table with 12 columns showing saturation flow and adjustment factors like Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 12 columns showing capacity analysis factors like Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
BACKGROUND CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 Route 1 & Fassler/Rockaway

Cycle (sec): 130 Critical Vol./Cap.(X): 1.223
Loss Time (sec): 12 (Y+R=5.0 sec) Average Delay (sec/veh): 123.0
Optimal Cycle: 180 Level Of Service: F

Street Name:	Route 1						Fassler Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ovl		
Min. Green:	5	20	20	4	25	25	4	4	4	4	4	4
Lanes:	1	0	1	1	0	0	2	0	1	1	0	0
	0	0	1	0	0	0	0	0	1	0	0	0

Volume Module: >> Count Date: 31 Jan 2006 <<

Base Vol:	22	1893	1	481	811	37	35	21	18	14	12	1120
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	22	1893	1	481	811	37	35	21	18	14	12	1120
Added Vol:	3	1	0	0	0	14	5	2	1	0	5	0
Old County :	4	-4	0	0	-2	2	3	0	1	0	0	0
Initial Fut:	29	1890	1	481	809	53	43	23	20	14	17	1120
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
PHF Volume:	33	2172	1	553	930	61	49	26	23	16	20	1287
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	33	2172	1	553	930	61	49	26	23	16	20	1287
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	33	2172	1	553	930	61	49	26	23	16	20	1287

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.92	0.94	0.94	0.95	0.95	0.95	0.98	0.98	0.75
Lanes:	1.00	1.99	0.01	2.00	1.88	0.12	0.50	0.27	0.23	0.45	0.55	2.00
Final Sat.:	1805	3608	2	3502	3358	220	898	481	418	839	1019	2842

Capacity Analysis Module:

Vol/Sat:	0.02	0.60	0.60	0.16	0.28	0.28	0.06	0.06	0.06	0.02	0.02	0.45
Crit Moves:	****			****			****			****		
Green/Cycle:	0.08	0.49	0.49	0.13	0.55	0.55	0.04	0.04	0.04	0.24	0.24	0.37
Volume/Cap:	0.24	1.22	1.22	1.22	0.51	0.51	1.22	1.22	1.22	0.08	0.08	1.22
Delay/Veh:	57.5	139	138.6	175.4	18.8	18.8	233.8	234	233.8	38.2	38.2	149.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	57.5	139	138.6	175.4	18.8	18.8	233.8	234	233.8	38.2	38.2	149.9
LOS by Move:	E	F	F	F	B	B	F	F	F	D	D	F
HCM2k95thQ:	3	109	109	34	23	23	16	16	16	2	2	73

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
BACKGROUND CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Route 1 & Reina Del Mar Avenue

Cycle (sec): 152 Critical Vol./Cap.(X): 1.246

Loss Time (sec): 16 (Y+R=5.0 sec) Average Delay (sec/veh): 110.7

Optimal Cycle: 180 Level Of Service: F

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include North Bound, South Bound, East Bound, and West Bound movements.

Volume Module: >> Count Date: 25 Jan 2006 <<

Table with columns for various volume and adjustment factors: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. values.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
BACKGROUND CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Fassler Avenue & Roberts Road

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: C[17.3]

Table with columns for Street Name, Approach, Movement, Control, Rights, Lanes. Rows include Roberts Road and Fassler Avenue with sub-columns for North Bound, South Bound, East Bound, West Bound.

Table with columns for Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume.

Table with columns for Critical Gap Module, Critical Gp, FollowUpTim.

Table with columns for Capacity Module, Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Table with columns for Level Of Service Module, 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
BACKGROUND CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Fassler Avenue & Coast Lane

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: B[12.3]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Coast Lane and Fassler Avenue with sub-columns for North Bound, South Bound, East Bound, and West Bound.

Table with columns for Volume Module, Count, Date, and various traffic volume metrics like Base Vol, Growth Adj, Initial Bse, etc.

Table with columns for Capacity Module, Conflict Vol, Potent Cap., Move Cap., and Volume/Cap.

Table with columns for Level Of Service Module, 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
BACKGROUND CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Route 1 & Coast Lane

Average Delay (sec/veh): 0.1 Worst Case Level Of Service: B[12.3]

Table with columns: Street Name, Approach, Movement, Control, Rights, Lanes. Rows include Route 1 (North/South Bound) and Coast Lane (East/West Bound) with details on control types and lane counts.

Table with columns: Volume Module, Count, Date, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume.

Table with columns: Critical Gap Module, FollowUpTim. Values include 6.2 and 3.3.

Table with columns: Capacity Module, Cnflct Vol, Potent Cap., Move Cap., Volume/Cap. Values include 608, 500, 500, 0.01.

Table with columns: Level Of Service Module, 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS. Values include 0.0, 12.3, B, 12.3, B.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
BACKGROUND CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #4 Crespi Drive & Roberts Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.402
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 10.2
Optimal Cycle: 0 Level Of Service: B

Street Name:	Roberts Road						Crespi Drive					
	North Bound			South Bound			East Bound			West Bound		
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0	1	0	0	1	0	0	0	1

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Volume Module: >> Count Date: 31 Jan 2006 <<

Base Vol:	0	0	0	85	0	37	50	366	0	0	213	83
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	85	0	37	50	366	0	0	213	83
Added Vol:	0	0	0	0	0	0	0	3	0	0	2	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	85	0	37	50	369	0	0	215	83
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	0	0	0	88	0	38	52	380	0	0	222	86
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	88	0	38	52	380	0	0	222	86
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	88	0	38	52	380	0	0	222	86

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Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.70	0.00	0.30	0.24	1.76	0.00	0.00	0.72	0.28
Final Sat.:	0	0	0	435	0	189	162	1215	0	0	551	213

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Capacity Analysis Module:

Vol/Sat:	xxxx	xxxx	xxxx	0.20	xxxx	0.20	0.32	0.31	xxxx	xxxx	0.40	0.40
Crit Moves:				****			****					****
Delay/Veh:	0.0	0.0	0.0	9.6	0.0	9.6	10.2	10.1	0.0	0.0	10.6	10.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	9.6	0.0	9.6	10.2	10.1	0.0	0.0	10.6	10.6
LOS by Move:	*	*	*	A	*	A	B	B	*	*	B	B
ApproachDel:	xxxxxx			9.6			10.1			10.6		
Delay Adj:	xxxxxx			1.00			1.00			1.00		
ApprAdjDel:	xxxxxx			9.6			10.1			10.6		
LOS by Appr:	*			A			B			B		
AllWayAvgQ:	0.0	0.0	0.0	0.2	0.2	0.2	0.4	0.4	0.0	0.6	0.6	0.6

ROBERTS ROAD RESIDENTIAL
BACKGROUND CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Route 1 & Crespi Dr.

Cycle (sec): 40 Critical Vol./Cap.(X): 0.666
Loss Time (sec): 9 (Y+R=5.0 sec) Average Delay (sec/veh): 8.2
Optimal Cycle: 38 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include Route 1 North/South Bound and Crespi Drive East/West Bound.

Table with columns for Volume Module, Count, Date, and various adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. for the Saturation Flow Module.

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ for the Capacity Analysis Module.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
BACKGROUND CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 Route 1 & Fassler/Rockaway

Cycle (sec): 130 Critical Vol./Cap. (X): 0.877
Loss Time (sec): 12 (Y+R=5.0 sec) Average Delay (sec/veh): 38.3
Optimal Cycle: 112 Level Of Service: D

Table with columns for Street Name (Route 1, Fassler Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected, Split Phase), Rights (Include, Ovl), Min. Green, and Lanes.

Table with columns for Volume Module: >> Count Date: 31 Jan 2006 <<. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, Old County, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Table with columns for Saturation Flow Module. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Table with columns for Capacity Analysis Module. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
BACKGROUND CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Route 1 & Reina Del Mar Avenue

Cycle (sec): 152 Critical Vol./Cap. (X): 1.135

Loss Time (sec): 16 (Y+R=5.0 sec) Average Delay (sec/veh): 83.8

Optimal Cycle: 180 Level Of Service: F

Street Name:	Route 1				Reina Del Mar Avenue					
	North Bound		South Bound		East Bound		West Bound			
Approach:	L	T	R	L	T	R	L	T	R	
Movement:										
Control:	Protected				Protected				Split Phase	
Rights:	Include				Include				Split Phase Ovl	
Min. Green:	4	20	20	4	10	10	4	4	4	
Lanes:	1	0	1	1	0	1	0	0	1	

Volume Module:	>>	Count	Date:	2 Feb 2006	<<							
Base Vol:	14	1340	112	301	2690	4	7	1	2	111	2	135
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	14	1340	112	301	2690	4	7	1	2	111	2	135
Added Vol:	0	15	0	0	10	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	14	1355	112	301	2700	4	7	1	2	111	2	135
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.87	0.87	0.87	0.62	0.62	0.62	0.77	0.77	0.77
PHF Volume:	15	1426	118	346	3103	5	11	2	3	144	3	175
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	1426	118	346	3103	5	11	2	3	144	3	175
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	15	1426	118	346	3103	5	11	2	3	144	3	175

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.95	0.95	0.94	0.94	0.94	0.90	0.90	0.90
Lanes:	1.00	1.85	0.15	1.00	1.99	0.01	0.70	0.10	0.20	0.61	0.01	1.38
Final Sat.:	1805	3298	273	1805	3605	5	1250	179	357	1049	19	2344

Capacity Analysis Module:												
Vol/Sat:	0.01	0.43	0.43	0.19	0.86	0.86	0.01	0.01	0.01	0.14	0.14	0.07
Crit Moves:	****			****			****			****		
Green/Cycle:	0.03	0.52	0.52	0.23	0.73	0.73	0.03	0.03	0.03	0.12	0.12	0.35
Volume/Cap:	0.31	0.83	0.83	0.83	1.19	1.19	0.34	0.34	0.34	1.19	1.19	0.22
Delay/Veh:	76.4	34.0	34.0	68.6	108	108.5	77.0	77.0	77.0	181.6	182	35.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	76.4	34.0	34.0	68.6	108	108.5	77.0	77.0	77.0	181.6	182	35.1
LOS by Move:	E	C	C	E	F	F	E	E	E	F	F	D
HCM2k95thQ:	2	53	53	30	160	160	2	2	2	31	31	8

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
PROJECT CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Fassler Avenue & Roberts Road

Average Delay (sec/veh): 5.0 Worst Case Level Of Service: F[57.9]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Roberts Road and Fassler Avenue with various movement and lane configurations.

Table with columns for Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and FinalVolume. Includes a date entry: 26 Jan 2006.

Table with columns for Critical Gap Module, Critical Gp, and FollowUpTim. Values include 6.8, 6.5, 6.9, 4.1, 3.5, 4.0, 3.3, 2.2.

Table with columns for Capacity Module, Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap. Values include 1180, 1791, 260, 520, 186, 82, 745, 1056, 182, 79, 745, 1056, 0.70, 0.00, 0.05, 0.03.

Table with columns for Level Of Service Module, 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS. Values include 0.1, 8.5, A, 218, 5.1, 57.9, 57.9, F.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
PROJECT CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Fassler Avenue & Coast Lane

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: C[17.0]

Table with columns for Street Name (Coast Lane, Fassler Avenue), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Stop Sign, Uncontrolled), Rights (Include), and Lanes.

Table with columns for Volume Module: Count Date (26 Jan 2006), Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume.

Table for Critical Gap Module: Critical Gp, FollowUpTim.

Table for Capacity Module: Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Table for Level Of Service Module: 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
PROJECT CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Route 1 & Coast Lane

Average Delay (sec/veh): 2.5 Worst Case Level Of Service: D[30.4]

Table with columns for Street Name, Approach, Movement, Control, Rights, Lanes, and Volume Module. Rows include North Bound, South Bound, East Bound, and West Bound for both Route 1 and Coast Lane.

Table with columns for Volume Module, Count, Date, and various volume metrics like Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume.

Table for Critical Gap Module with columns for Critical Gap, FollowUpTim, and values like 6.2 and 3.3.

Table for Capacity Module with columns for Cnflct Vol, Potent Cap., Move Cap., Volume/Cap. and values like 969, 310, 310, 0.56.

Table for Level Of Service Module with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS and values like 3.2, 30.4, D, 30.4, D.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
PROJECT CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #4 Crespi Drive & Roberts Road

Cycle (sec): 100 Critical Vol./Cap. (X): 0.759
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 15.7
Optimal Cycle: 0 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include Roberts Road and Crespi Drive with North, South, East, and West bounds.

Volume Module: >> Count Date: 26 Jan 2006 <<
Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:
Table with columns for Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:
Table with columns for Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ.

ROBERTS ROAD RESIDENTIAL
PROJECT CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Route 1 & Crespi Dr.

Cycle (sec): 40 Critical Vol./Cap.(X): 0.845
Loss Time (sec): 9 (Y+R=5.0 sec) Average Delay (sec/veh): 13.1
Optimal Cycle: 54 Level Of Service: B

Street Name:	Route 1						Crespi Drive												
	North Bound			South Bound			East Bound			West Bound									
Approach:	L	T	R	L	T	R	L	T	R	L	T	R							
Control:	Protected			Protected			Split Phase			Split Phase									
Rights:	Include			Include			Include			Ovl									
Min. Green:	0	10	10	4	10	0	0	0	0	4	0	4							
Lanes:	0	0	1	1	0	2	0	2	0	0	0	0	0	0	1	0	0	0	1

Volume Module: >> Count Date: 26 Jan 2006 <<

Base Vol:	0	1420	59	194	650	0	0	0	0	33	0	346
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1420	59	194	650	0	0	0	0	33	0	346
Added Vol:	0	1	0	1	0	0	0	0	0	1	0	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1421	59	195	650	0	0	0	0	34	0	349
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	0	1480	61	203	677	0	0	0	0	35	0	364
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1480	61	203	677	0	0	0	0	35	0	364
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1480	61	203	677	0	0	0	0	35	0	364

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.94	0.94	0.92	0.95	1.00	1.00	1.00	1.00	0.95	1.00	0.85
Lanes:	0.00	1.92	0.08	2.00	2.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3445	143	3502	3610	0	0	0	0	1805	0	1615

Capacity Analysis Module:

Vol/Sat:	0.00	0.43	0.43	0.06	0.19	0.00	0.00	0.00	0.00	0.02	0.00	0.23
Crit Moves:	****			****								
Green/Cycle:	0.00	0.52	0.52	0.10	0.62	0.00	0.00	0.00	0.00	0.15	0.00	0.25
Volume/Cap:	0.00	0.82	0.82	0.58	0.30	0.00	0.00	0.00	0.00	0.13	0.00	0.89
Delay/Veh:	0.0	11.0	11.0	19.6	3.6	0.0	0.0	0.0	0.0	14.9	0.0	35.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	11.0	11.0	19.6	3.6	0.0	0.0	0.0	0.0	14.9	0.0	35.6
LOS by Move:	A	B	B	B	A	A	A	A	A	B	A	D
HCM2k95thQ:	0	21	21	5	5	0	0	0	0	1	0	16

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
PROJECT CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 Route 1 & Fassler/Rockaway

Cycle (sec): 130 Critical Vol./Cap. (X): 1.226

Loss Time (sec): 12 (Y+R=5.0 sec) Average Delay (sec/veh): 124.1

Optimal Cycle: 180 Level Of Service: F

Street Name:	Route 1						Fassler Ave.					
	North Bound			South Bound			East Bound			West Bound		
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ovl		
Min. Green:	5	20	20	4	25	25	4	4	4	4	4	4
Lanes:	1	0	1	1	0	0	2	0	1	1	0	0
							0	0	1	0	0	0

Volume Module: >> Count Date: 31 Jan 2006 <<

Base Vol:	22	1893	1	481	811	37	35	21	18	14	12	1120
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	22	1893	1	481	811	37	35	21	18	14	12	1120
Added Vol:	3	2	0	3	0	14	5	2	1	0	5	6
Old County :	4	-4	0	0	-2	2	3	0	1	0	0	0
Initial Fut:	29	1891	1	484	809	53	43	23	20	14	17	1126
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
PHF Volume:	33	2174	1	556	930	61	49	26	23	16	20	1294
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	33	2174	1	556	930	61	49	26	23	16	20	1294
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	33	2174	1	556	930	61	49	26	23	16	20	1294

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.92	0.94	0.94	0.95	0.95	0.95	0.98	0.98	0.75
Lanes:	1.00	1.99	0.01	2.00	1.88	0.12	0.50	0.27	0.23	0.45	0.55	2.00
Final Sat.:	1805	3608	2	3502	3358	220	898	481	418	839	1019	2842

Capacity Analysis Module:

Vol/Sat:	0.02	0.60	0.60	0.16	0.28	0.28	0.06	0.06	0.06	0.02	0.02	0.46
Crit Moves:	****			****			****			****		
Green/Cycle:	0.08	0.49	0.49	0.13	0.55	0.55	0.04	0.04	0.04	0.24	0.24	0.37
Volume/Cap:	0.24	1.23	1.23	1.23	0.51	0.51	1.23	1.23	1.23	0.08	0.08	1.23
Delay/Veh:	57.5	140	140.0	176.5	18.8	18.8	235.0	235	235.0	38.2	38.2	151.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	57.5	140	140.0	176.5	18.8	18.8	235.0	235	235.0	38.2	38.2	151.1
LOS by Move:	E	F	F	F	B	B	F	F	F	D	D	F
HCM2k95thQ:	3	109	109	35	23	23	16	16	16	2	2	74

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
PROJECT CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Route 1 & Reina Del Mar Avenue

Cycle (sec): 152 Critical Vol./Cap.(X): 1.248
Loss Time (sec): 16 (Y+R=5.0 sec) Average Delay (sec/veh): 111.4
Optimal Cycle: 180 Level Of Service: F

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include North Bound, South Bound, East Bound, and West Bound for both Rotue 1 and Reina Del Mar Avenue.

Table with columns for Volume Module, Count, Date, and various adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Table for Saturation Flow Module with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Table for Capacity Analysis Module with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
PROJECT CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #8 Roberts Road & site access road

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: A[9.6]

Table with columns: Street Name, Approach, Movement, Control, Rights, Lanes. Rows include Roberts Road and site access road with various movement and control details.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume. Rows include Roberts Road and site access road.

Critical Gap Module: Table with columns for Critical Gp, FollowUpTim. Rows include Roberts Road and site access road.

Capacity Module: Table with columns for Cnflct Vol, Potent Cap., Move Cap., Volume/Cap. Rows include Roberts Road and site access road.

Level Of Service Module: Table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS. Rows include Roberts Road and site access road.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
PROJECT CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Fassler Avenue & Roberts Road

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: C [18.1]

Table with columns for Street Name (Roberts Road, Fassler Avenue), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Stop Sign, Uncontrolled), Rights (Include), and Lanes.

Table with columns for Volume Module: Count Date (26 Jan 2006), Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume.

Table with columns for Critical Gap Module: Critical Gap (6.8, 6.5, 6.9, 4.1), FollowUpTim (3.5, 4.0, 3.3, 2.2).

Table with columns for Capacity Module: Cnflict Vol, Potent Cap., Move Cap., Volume/Cap.

Table with columns for Level Of Service Module: 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
PROJECT CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Fassler Avenue & Coast Lane

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: B[12.4]

Table with columns for Street Name (Coast Lane, Fassler Avenue), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Stop Sign, Uncontrolled), Rights (Include), and Lanes.

Table with columns for Volume Module: >> Count Date: 26 Jan 2006 <<. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume.

Table for Critical Gap Module with rows for Critical Gap (6.8, 4.1) and FollowUpTim (3.5, 2.2).

Table for Capacity Module with rows for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Table for Level Of Service Module with rows for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
PROJECT CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Route 1 & Coast Lane

Average Delay (sec/veh): 0.1 Worst Case Level Of Service: B[12.3]

Street Name: Route 1 Coast Lane

Table with columns for Approach, Movement, Control, Rights, Lanes, and values for North Bound, South Bound, East Bound, and West Bound.

Volume Module: >> Count Date: 1 Feb 2006 <<

Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, FinalVolume.

Critical Gap Module:

Table with columns for Critical Gp, FollowUpTim, and values.

Capacity Module:

Table with columns for Cnflct Vol, Potent Cap., Move Cap., Volume/Cap., and values.

Level Of Service Module:

Table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS, and values.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
PROJECT CONDITIONS
FM PEAK HOUR

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #4 Crespi Drive & Roberts Road

Cycle (sec): 100 Critical Vol./Cap. (X): 0.404
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 10.2
Optimal Cycle: 0 Level Of Service: B

Table with columns for Street Name (Roberts Road, Crespi Drive), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Stop Sign), Rights (Include), Min. Green, and Lanes.

Volume Module: >> Count Date: 31 Jan 2006 <<
Base Vol: 0 0 0 85 0 37 50 366 0 0 213 83
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 85 0 37 50 366 0 0 213 83
Added Vol: 0 0 0 0 0 0 1 3 0 0 2 1
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 85 0 37 51 369 0 0 215 84
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97
PHF Volume: 0 0 0 88 0 38 53 380 0 0 222 87
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 88 0 38 53 380 0 0 222 87
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 0 0 88 0 38 53 380 0 0 222 87

Saturation Flow Module:
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.00 0.00 0.00 0.70 0.00 0.30 0.24 1.76 0.00 0.00 0.72 0.28
Final Sat.: 0 0 0 435 0 189 165 1212 0 0 549 214

Capacity Analysis Module:
Vol/Sat: xxxx xxxx xxxx 0.20 xxxx 0.20 0.32 0.31 xxxx xxxx 0.40 0.40
Crit Moves: ****
Delay/Veh: 0.0 0.0 0.0 9.6 0.0 9.6 10.3 10.1 0.0 0.0 10.6 10.6
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 9.6 0.0 9.6 10.3 10.1 0.0 0.0 10.6 10.6
LOS by Move: * * * A * A B B * * B B
ApproachDel: xxxxxx 9.6 10.1 10.6
Delay Adj: xxxxx 1.00 1.00 1.00
ApprAdjDel: xxxxxx 9.6 10.1 10.6
LOS by Appr: * A B B
AllWayAvgQ: 0.0 0.0 0.0 0.2 0.2 0.2 0.4 0.4 0.0 0.6 0.6 0.6

ROBERTS ROAD RESIDENTIAL
PROJECT CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Route 1 & Crespi Dr.

Cycle (sec): 40 Critical Vol./Cap.(X): 0.666
Loss Time (sec): 9 (Y+R=5.0 sec) Average Delay (sec/veh): 8.2
Optimal Cycle: 38 Level Of Service: A

Table with columns for Street Name (Route 1, Crespi Drive), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected, Split Phase), Rights (Include, Ovl), and Lanes.

Table for Volume Module: >> Count Date: 25 Jan 2006 <<. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Table for Saturation Flow Module. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Table for Capacity Analysis Module. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
PROJECT CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 Route 1 & Fassler/Rockway

Cycle (sec): 130 Critical Vol./Cap. (X): 0.877
Loss Time (sec): 12 (Y+R=5.0 sec) Average Delay (sec/veh): 38.5
Optimal Cycle: 112 Level Of Service: D

Table with columns for Street Name (Route 1, Fassler Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected, Split Phase), Rights (Include, Ovl), and Lanes.

Table with columns for Volume Module: >> Count Date: 31 Jan 2006 <<, Base Vol, Growth Adj, Initial Bse, Added Vol, Old County, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Table with columns for Saturation Flow Module: Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns for Capacity Analysis Module: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
PROJECT CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Route 1 & Reina Del Mar Avenue

Cycle (sec): 152 Critical Vol./Cap.(X): 1.138
Loss Time (sec): 16 (Y+R=5.0 sec) Average Delay (sec/veh): 84.6
Optimal Cycle: 180 Level Of Service: F

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include Rotue 1 and Reina Del Mar Avenue with various movement details.

Volume Module: >> Count Date: 2 Feb 2006 <<

Table with columns for various volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. values.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2k95thQ.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
PROJECT CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #8 Roberts Road & site access road

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: A[8.8]

Table with columns for Street Name, Approach, Movement, Control, Rights, Lanes, and Volume Module. Includes data for Roberts Road and site access road.

Table with columns for Volume Module metrics: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume.

Table with columns for Critical Gap Module metrics: Critical Gp, FollowUpTim.

Table with columns for Capacity Module metrics: Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Table with columns for Level Of Service Module metrics: 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
NEAR-TERM CUMULATIVE CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Fassler Avenue & Roberts Road

Average Delay (sec/veh): 7.1 Worst Case Level Of Service: F[83.4]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Roberts Road and Fassler Avenue with various lane configurations and control types like Stop Sign and Uncontrolled.

Table with columns for Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and FinalVolume. Includes a Count Date of 26 Jan 2006.

Table with columns for Critical Gap Module, Critical Gap, and FollowUpTim. Values include 6.8, 6.5, 6.9, 4.1, 3.5, 4.0, 3.3, 2.2.

Table with columns for Capacity Module, Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap. Values include 1253, 1901, 275, 550, 167, 70, 729, 1030, 163, 68, 729, 1030, 0.82, 0.00, 0.05, 0.03.

Table with columns for Level Of Service Module, 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS. Values include xxxxx, 0.1, 8.6, A, *.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
NEAR-TERM CUMULATIVE CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Fassler Avenue & Coast Lane

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: C [18.2]

Table with columns for Street Name (Coast Lane, Fassler Avenue), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Stop Sign, Uncontrolled), Rights (Include), and Lanes.

Table with columns for Volume Module: >> Count Date: 26 Jan 2006 <<. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume.

Table for Critical Gap Module: Critical Gap: 6.8, FollowUpTim: 3.5. Values are followed by 'xxxx'.

Table for Capacity Module: Cnflct Vol, Potent Cap., Move Cap., Volume/Cap. Values are followed by 'xxxx'.

Table for Level Of Service Module: 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS. Values are followed by 'xxxx' or '*'.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
NEAR-TERM CUMULATIVE CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Route 1 & Coast Lane

Average Delay (sec/veh): 3.0 Worst Case Level Of Service: E [36.5]

Table with columns for Street Name, Approach, Movement, Control, Rights, Lanes, and Volume Module. Rows include Route 1 and Coast Lane with various approach and movement details.

Table with columns for Volume Module and Count Date: 7 Feb 2006. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume.

Table with columns for Critical Gap Module. Rows include Critical Gap and FollowUpTim.

Table with columns for Capacity Module. Rows include Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Table with columns for Level Of Service Module. Rows include 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
NEAR-TERM CUMULATIVE CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #4 Crespi Drive & Roberts Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.807
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 17.7
Optimal Cycle: 0 Level Of Service: C

Table with columns for Street Name (Roberts Road, Crespi Drive), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Stop Sign), Rights (Include), Min. Green, and Lanes.

Table for Volume Module: >> Count Date: 26 Jan 2006 <<. Includes rows for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and FinalVolume.

Table for Saturation Flow Module: Adjustment, Lanes, and Final Sat. values.

Table for Capacity Analysis Module: Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

ROBERTS ROAD RESIDENTIAL
NEAR-TERM CUMULATIVE CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Route 1 & Crespi Dr.

Cycle (sec): 40 Critical Vol./Cap. (X): 0.890
Loss Time (sec): 9 (Y+R=5.0 sec) Average Delay (sec/veh): 15.1
Optimal Cycle: 60 Level Of Service: B

Street Name:	Route 1				Crespi Drive														
	North Bound		South Bound		East Bound		West Bound												
Approach:	L	T	R	L	T	R	L	T	R	L	T	R							
Control:	Protected				Protected				Split Phase										
Rights:	Include				Include				Split Phase										
Min. Green:	0	10	10	4	10	0	0	0	0	4	0	4							
Lanes:	0	0	1	1	0	2	0	2	0	0	0	0	0	0	1	0	0	0	1

Volume Module: >> Count Date: 26 Jan 2006 <<

Base Vol:	0	1420	59	194	650	0	0	0	0	33	0	346
Growth Adj:	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
Initial Bse:	0	1492	62	204	683	0	0	0	0	35	0	364
Added Vol:	0	7	0	1	4	0	0	0	0	2	0	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1499	62	205	687	0	0	0	0	37	0	367
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	0	1562	65	213	716	0	0	0	0	38	0	382
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1562	65	213	716	0	0	0	0	38	0	382
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1562	65	213	716	0	0	0	0	38	0	382

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.94	0.94	0.92	0.95	1.00	1.00	1.00	1.00	0.95	1.00	0.85
Lanes:	0.00	1.92	0.08	2.00	2.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3446	143	3502	3610	0	0	0	0	1805	0	1615

Capacity Analysis Module:

Vol/Sat:	0.00	0.45	0.45	0.06	0.20	0.00	0.00	0.00	0.00	0.02	0.00	0.24
Crit Moves:	****			****						****		
Green/Cycle:	0.00	0.52	0.52	0.10	0.62	0.00	0.00	0.00	0.00	0.16	0.00	0.26
Volume/Cap:	0.00	0.87	0.87	0.61	0.32	0.00	0.00	0.00	0.00	0.14	0.00	0.92
Delay/Veh:	0.0	13.4	13.4	20.4	3.7	0.0	0.0	0.0	0.0	14.8	0.0	40.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	13.4	13.4	20.4	3.7	0.0	0.0	0.0	0.0	14.8	0.0	40.6
LOS by Move:	A	B	B	C	A	A	A	A	A	B	A	D
HCM2k95thQ:	0	24	24	5	5	0	0	0	0	1	0	17

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
NEAR-TERM CUMULATIVE CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 Route 1 & Fassler/Rockaway

Cycle (sec): 130 Critical Vol./Cap. (X): 1.303
Loss Time (sec): 12 (Y+R=5.0 sec) Average Delay (sec/veh): 151.0
Optimal Cycle: 180 Level Of Service: F

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include Route 1 (North/South Bound) and Fassler Ave. (East/West Bound).

Volume Module: >> Count Date: 31 Jan 2006 <<
Base Vol: 22 1893 1 481 811 37 35 21 18 14 12 1120
Growth Adj: 1.05 1.05 1.05 1.05 1.05 1.05 1.05 1.05 1.05 1.05 1.05 1.05
Initial Bse: 23 1990 1 506 852 39 37 22 19 15 13 1177
Added Vol: 3 .7 0 8 2 14 5 2 1 2 5 37
Old County : 4 -4 0 0 -2 2 3 0 1 0 0 0
Initial Fut: 30 1993 1 514 852 55 45 24 21 17 18 1214
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.87 0.87 0.87 0.87 0.87 0.87 0.87 0.87 0.87 0.87 0.87 0.87
PHF Volume: 35 2290 1 590 980 63 51 28 24 19 20 1396
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 35 2290 1 590 980 63 51 28 24 19 20 1396
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 35 2290 1 590 980 63 51 28 24 19 20 1396

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.95 0.95 0.92 0.94 0.94 0.95 0.95 0.95 0.98 0.98 0.75
Lanes: 1.00 1.99 0.01 2.00 1.88 0.12 0.50 0.27 0.23 0.49 0.51 2.00
Final Sat.: 1805 3608 2 3502 3361 216 896 482 419 903 951 2842

Capacity Analysis Module:
Vol/Sat: 0.02 0.63 0.63 0.17 0.29 0.29 0.06 0.06 0.06 0.02 0.02 0.49
Crit Moves: **** **** ****
Green/Cycle: 0.07 0.49 0.49 0.13 0.54 0.54 0.04 0.04 0.04 0.25 0.25 0.38
Volume/Cap: 0.27 1.30 1.30 1.30 0.54 0.54 1.30 1.30 1.30 0.09 0.09 1.30
Delay/Veh: 58.2 174 174.2 208.5 19.3 19.3 264.6 265 264.6 37.7 37.7 184.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 58.2 174 174.2 208.5 19.3 19.3 264.6 265 264.6 37.7 37.7 184.0
LOS by Move: E F F F B B F F F D D F
HCM2k95thQ: 3 124 124 38 25 25 17 17 17 2 2 85

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
NEAR-TERM CUMULATIVE CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Route 1 & Reina Del Mar Avenue

Cycle (sec): 152 Critical Vol./Cap.(X): 1.324
Loss Time (sec): 16 (Y+R=5.0 sec) Average Delay (sec/veh): 134.8
Optimal Cycle: 180 Level Of Service: F

Street Name:	Rotue 1						Reina Del Mar Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ovl		
Min. Green:	4	20	20	4	10	10	4	4	4	4	4	4
Lanes:	1	0	1	1	0	1	0	1	0	0	0	0

Volume Module: >> Count Date: 25 Jan 2006 <<

Base Vol:	6	2885	155	143	1240	29	5	14	0	88	0	257
Growth Adj:	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
Initial Bse:	6	3032	163	150	1303	30	5	15	0	92	0	270
Added Vol:	0	.50	0	1	24	0	0	0	0	0	0	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	6	3082	163	151	1327	30	5	15	0	92	0	273
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	7	3211	170	158	1383	32	5	15	0	96	0	284
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	7	3211	170	158	1383	32	5	15	0	96	0	284
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	7	3211	170	158	1383	32	5	15	0	96	0	284

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.95	0.95	0.99	0.99	1.00	0.88	1.00	0.88
Lanes:	1.00	1.90	0.10	1.00	1.96	0.04	0.26	0.74	0.00	0.40	0.00	1.60
Final Sat.:	1805	3405	180	1805	3518	81	494	1382	0	673	0	2661

Capacity Analysis Module:

Vol/Sat:	0.00	0.94	0.94	0.09	0.39	0.39	0.01	0.01	0.00	0.14	0.00	0.11
Crit Moves:	****			****			****			****		
Green/Cycle:	0.05	0.70	0.70	0.06	0.71	0.71	0.03	0.03	0.00	0.11	0.00	0.17
Volume/Cap:	0.08	1.35	1.35	1.35	0.55	0.55	0.42	0.42	0.00	1.35	0.00	0.63
Delay/Veh:	69.5	184	183.7	275.1	10.5	10.5	78.6	78.6	0.0	247.6	0.0	60.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	69.5	184	183.7	275.1	10.5	10.5	78.6	78.6	0.0	247.6	0.0	60.6
LOS by Move:	E	F	F	F	B	B	E	E	A	F	A	E
HCM2k95thQ:	1	205	205	25	28	28	3	3	0	35	0	16

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
NEAR-TERM CUMULATIVE CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #8 Roberts Road & site access road

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: A[9.7]

Table with columns for Street Name, Approach, Movement, Control, Rights, Lanes, and Volume Module. Rows include Roberts Road and site access road with various movement and control details.

Table with columns for Volume Module metrics: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume.

Table with columns for Critical Gap Module metrics: Critical Gap, FollowUpTim.

Table with columns for Capacity Module metrics: Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Table with columns for Level Of Service Module metrics: 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
NEAR-TERM CUMULATIVE CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Fassler Avenue & Roberts Road

Average Delay (sec/veh): 1.2 Worst Case Level Of Service: C[19.8]

Table with columns for Street Name, Approach, Movement, Control, Rights, Lanes, and data for Roberts Road and Fassler Avenue.

Table with columns for Volume Module, Count, Date, and various traffic volume metrics like Base Vol, Growth Adj, Initial Bse, etc.

Table with columns for Capacity Module, Conflict Vol, Potent Cap., Move Cap., and Volume/Cap.

Table with columns for Level Of Service Module, 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, Approach Del, and Approach LOS.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
NEAR-TERM CUMULATIVE CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Fassler Avenue & Coast Lane

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: E[12.8]

Street Name:	Coast Lane					Fassler Avenue														
Approach:	North Bound			South Bound		East Bound			West Bound											
Movement:	L	T	R	L	T	R	L	T	R	L	T	R								
Control:	Stop Sign			Stop Sign		Uncontrolled			Uncontrolled											
Rights:	Include			Include		Include			Include											
Lanes:	1	0	0	0	1	0	0	0	0	0	0	0	1	1	0	1	0	2	0	0

Volume Module: >> Count Date: 26 Jan 2006 <<	Coast Lane NB			Coast Lane SB		Fassler Ave EB			Fassler Ave WB			
Base Vol:	2	0	13	0	0	0	0	744	15	2	391	0
Growth Adj:	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
Initial Bse:	2	0	14	0	0	0	0	782	16	2	411	0
Added Vol:	0	0	0	0	0	0	0	22	0	0	12	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	2	0	14	0	0	0	0	804	16	2	423	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	2	0	14	0	0	0	0	846	17	2	445	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	2	0	14	0	0	0	0	846	17	2	445	0

Critical Gap Module:	Coast Lane NB			Coast Lane SB		Fassler Ave EB			Fassler Ave WB			
Critical Gp:	6.8	xxxx	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxxx
FollowUpTim:	3.5	xxxx	3.3	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	2.2	xxxx	xxxxxx

Capacity Module:	Coast Lane NB			Coast Lane SB		Fassler Ave EB			Fassler Ave WB			
Cnflct Vol:	1082	xxxx	431	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	863	xxxx	xxxxxx
Potent Cap.:	216	xxxx	578	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	788	xxxx	xxxxxx
Move Cap.:	215	xxxx	578	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	788	xxxx	xxxxxx
Volume/Cap:	0.01	xxxx	0.02	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx

Level Of Service Module:	Coast Lane NB			Coast Lane SB		Fassler Ave EB			Fassler Ave WB			
2Way95thQ:	0.0	xxxx	0.1	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	0.0	xxxx	xxxxxx
Control Del:	21.9	xxxx	11.4	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	9.6	xxxx	xxxxxx
LOS by Move:	C	*	B	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	12.8			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	B			*			*			*		

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
NEAR-TERM CUMULATIVE CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Route 1 & Coast Lane

Average Delay (sec/veh): 0.1 Worst Case Level Of Service: B[12.6]

Table with columns for Street Name (Route 1, Coast Lane), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Uncontrolled, Yield Sign), Rights (Include), and Lanes (0-2).

Table with columns for Volume Module: Count Date (1 Feb 2006), Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume.

Table for Critical Gap Module: Critical Gp, FollowUpTim.

Table for Capacity Module: Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Table for Level Of Service Module: 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
NEAR-TERM CUMULATIVE CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #4 Crespi Drive & Roberts Road

Cycle (sec): 100 Critical Vol./Cap. (X): 0.431

Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 10.6

Optimal Cycle: 0 Level Of Service: B

Street Name:	Roberts Road				Crespi Drive			
Approach:	North Bound		South Bound		East Bound		West Bound	
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	

Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	1	0	0	0	1

Volume Module: >> Count Date: 31 Jan 2006 <<

Base Vol:	0	0	0	85	0	37	50	366	0	0	213	83
Growth Adj:	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
Initial Bse:	0	0	0	89	0	39	53	385	0	0	224	87
Added Vol:	0	0	0	1	0	1	2	3	0	0	2	2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	90	0	40	55	388	0	0	226	89
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	0	0	0	93	0	41	56	400	0	0	233	92
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	93	0	41	56	400	0	0	233	92
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	93	0	41	56	400	0	0	233	92

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.69	0.00	0.31	0.25	1.75	0.00	0.00	0.72	0.28
Final Sat.:	0	0	0	427	0	188	166	1198	0	0	541	214

Capacity Analysis Module:

Vol/Sat:	xxxx	xxxx	xxxx	0.22	xxxx	0.22	0.34	0.33	xxxx	xxxx	0.43	0.43
Crit Moves:				****			****			****		
Delay/Veh:	0.0	0.0	0.0	9.8	0.0	9.8	10.6	10.4	0.0	0.0	11.0	11.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	9.8	0.0	9.8	10.6	10.4	0.0	0.0	11.0	11.0
LOS by Move:	*	*	*	A	*	A	B	B	*	*	B	B
ApproachDel:	xxxxxx			9.8			10.4			11.0		
Delay Adj:	xxxxxx			1.00			1.00			1.00		
ApprAdjDel:	xxxxxx			9.8			10.4			11.0		
LOS by Appr:	*			A			B			B		
AllWayAvgQ:	0.0	0.0	0.0	0.2	0.2	0.2	0.5	0.5	0.0	0.7	0.7	0.7

ROBERTS ROAD RESIDENTIAL
NEAR-TERM CUMULATIVE CONDITIONS
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Route 1 & Crespi Dr.

Cycle (sec): 40 Critical Vol./Cap. (X): 0.703
Loss Time (sec): 9 (Y+R=5.0 sec) Average Delay (sec/veh): 8.7
Optimal Cycle: 41 Level Of Service: A

Table with columns for Street Name (Route 1, Crespi Drive), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Table with columns for Volume Module: Count, Date (25 Jan 2006), and various adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. under Saturation Flow Module.

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2k95thQ under Capacity Analysis Module.

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
NEAR-TERM CUMULATIVE CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 Route 1 & Fassler/Rockaway

Cycle (sec): 130 Critical Vol./Cap.(X): 0.943
Loss Time (sec): 12 (Y+R=5.0 sec) Average Delay (sec/veh): 44.5
Optimal Cycle: 158 Level Of Service: D

Table with columns for Street Name (Route 1, Fassler Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected, Split Phase), Rights (Include, Ovl), Min. Green, and Lanes.

Volume Module: >> Count Date: 31 Jan 2006 <<
Base Vol: 43 1040 37 929 1852 22 96 28 62 36 18 329
Growth Adj: 1.05 1.05 1.05 1.05 1.05 1.05 1.05 1.05 1.05 1.05 1.05 1.05
Initial Bse: 45 1093 39 976 1946 23 101 29 65 38 19 346
Added Vol: 2 5 2 36 8 8 14 6 3 1 3 18
Old County: 2 -2 0 0 -5 5 2 0 5 0 0 0
Initial Fut: 49 1096 41 1012 1949 36 117 35 73 39 22 364
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.93 0.93 0.93 0.89 0.89 0.89 0.85 0.85 0.85 0.81 0.81 0.81
PHF Volume: 53 1179 44 1138 2190 41 138 42 86 48 27 449
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 53 1179 44 1138 2190 41 138 42 86 48 27 449
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 53 1179 44 1138 2190 41 138 42 86 48 27 449

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.95 0.95 0.92 0.95 0.95 0.93 0.93 0.93 0.97 0.97 0.75
Lanes: 1.00 1.93 0.07 2.00 1.96 0.04 0.52 0.16 0.32 0.64 0.36 2.00
Final Sat.: 1805 3463 129 3502 3534 65 918 278 575 1177 664 2842

Capacity Analysis Module:
Vol/Sat: 0.03 0.34 0.34 0.32 0.62 0.62 0.15 0.15 0.15 0.04 0.04 0.16
Crit Moves: ****
Green/Cycle: 0.04 0.36 0.36 0.34 0.66 0.66 0.16 0.16 0.16 0.04 0.04 0.39
Volume/Cap: 0.71 0.94 0.94 0.94 0.93 0.93 0.94 0.94 0.94 0.94 0.94 0.41
Delay/Veh: 88.9 53.8 53.8 55.7 26.8 26.8 92.5 92.5 92.5 143.4 143 29.2
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 88.9 53.8 53.8 55.7 26.8 26.8 92.5 92.5 92.5 143.4 143 29.2
LOS by Move: F D D E C C F F F F F C
HCM2k95thQ: 7 47 47 44 70 70 25 25 25 11 11 14

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
NEAR-TERM CUMULATIVE CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Route 1 & Reina Del Mar Avenue

Cycle (sec): 152 Critical Vol./Cap.(X): 1.209
Loss Time (sec): 16 (Y+R=5.0 sec) Average Delay (sec/veh): 105.6
Optimal Cycle: 180 Level Of Service: F

Street Name:	Rotue 1						Reina Del Mar Avenue									
	North Bound			South Bound			East Bound			West Bound						
Approach:	L	T	R	L	T	R	L	T	R	L	T	R				
Control:	Protected			Protected			Split Phase			Split Phase						
Rights:	Include			Include			Include			Ovl						
Min. Green:	4	20	20	4	10	10	4	4	4	4	4	4				
Lanes:	1	0	1	1	0	0	0	0	1	0	0	0	0	1	0	1

Volume Module: >> Count Date: 2 Feb 2006 <<

Base Vol:	14	1340	112	301	2690	4	7	1	2	111	2	135
Growth Adj:	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
Initial Bse:	15	1408	118	316	2827	4	7	1	2	117	2	142
Added Vol:	0	37	1	2	52	0	0	0	0	0	0	2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	15	1445	119	318	2879	4	7	1	2	117	2	144
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.87	0.87	0.87	0.62	0.62	0.62	0.77	0.77	0.77
PHF Volume:	15	1521	125	366	3309	5	12	2	3	152	3	187
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	1521	125	366	3309	5	12	2	3	152	3	187
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	15	1521	125	366	3309	5	12	2	3	152	3	187

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.95	0.95	0.94	0.94	0.94	0.90	0.90	0.90
Lanes:	1.00	1.85	0.15	1.00	1.99	0.01	0.70	0.10	0.20	0.61	0.01	1.38
Final Sat.:	1805	3299	271	1805	3605	5	1250	179	357	1044	19	2349

Capacity Analysis Module:

Vol/Sat:	0.01	0.46	0.46	0.20	0.92	0.92	0.01	0.01	0.01	0.15	0.15	0.08
Crit Moves:	****			****			****			****		
Green/Cycle:	0.03	0.52	0.52	0.23	0.73	0.73	0.03	0.03	0.03	0.11	0.11	0.35
Volume/Cap:	0.33	0.88	0.88	0.88	1.26	1.26	0.36	0.36	0.36	1.26	1.26	0.23
Delay/Veh:	76.7	37.3	37.3	75.7	142	142.1	77.4	77.4	77.4	211.7	212	35.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	76.7	37.3	37.3	75.7	142	142.1	77.4	77.4	77.4	211.7	212	35.5
LOS by Move:	E	D	D	E	F	F	E	E	E	F	F	D
HCM2k95thQ:	2	59	59	33	185	185	2	2	2	34	34	9

Note: Queue reported is the number of cars per lane.

ROBERTS ROAD RESIDENTIAL
NEAR-TERM CUMULATIVE CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #8 Roberts Road & site access road

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: A[8.9]

Table with columns for Street Name, Approach, Movement, Control, Rights, Lanes, and Volume Module. Includes data for Roberts Road and site access road.

Table with columns for Volume Module metrics: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume.

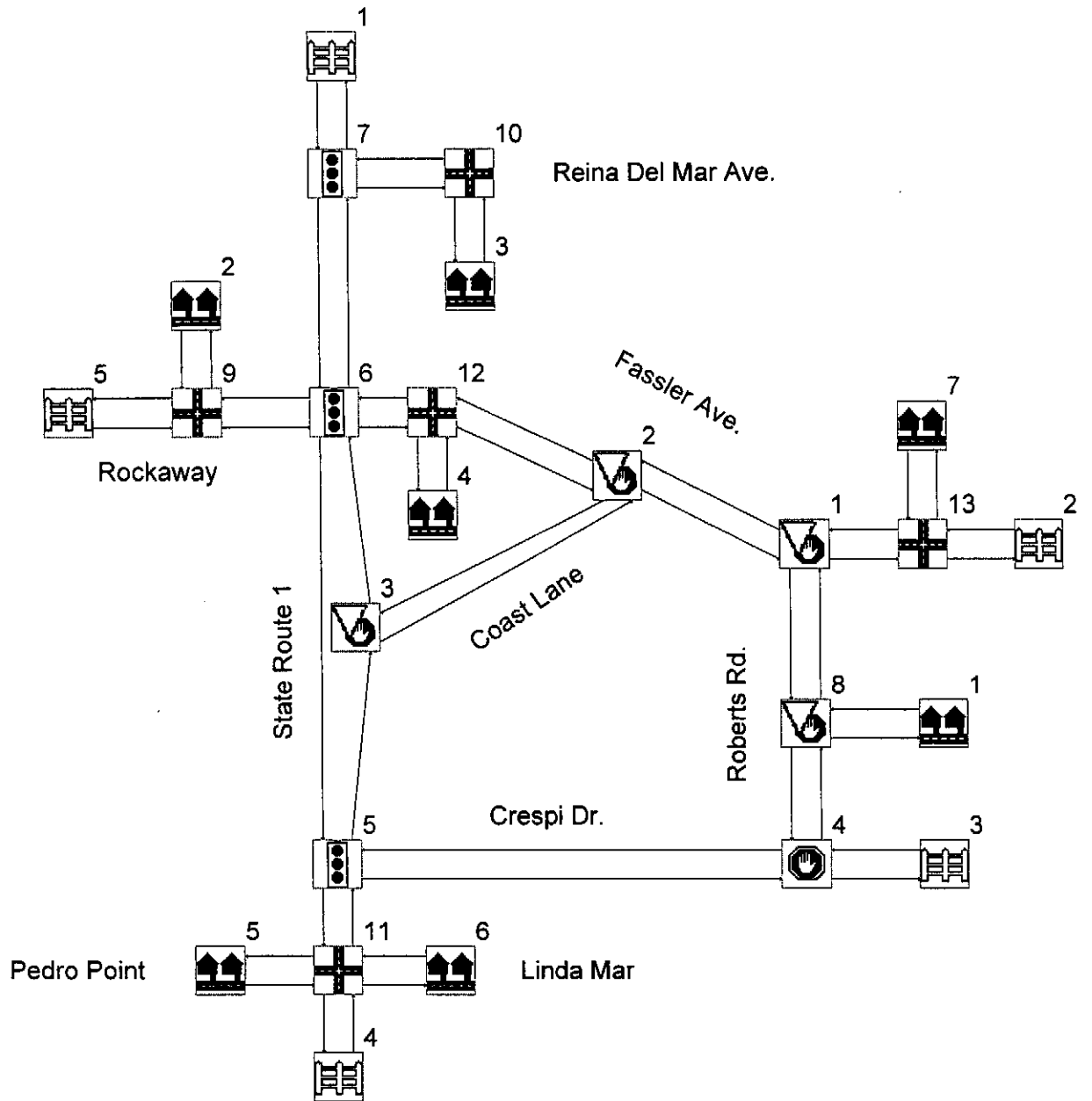
Table with columns for Critical Gap Module metrics: Critical Gp, FollowUpTim.

Table with columns for Capacity Module metrics: Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Table with columns for Level Of Service Module metrics: 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

Note: Queue reported is the number of cars per lane.

C. Traffic Analysis Worksheets



**ROBERTS ROAD RESIDENTIAL
VEHICLE TRIP GENERATION
NET NEW VEHICLE TRIPS**

No.	LOCATION	LAND USE	SIZE	UNITS	TRIP GENERATION RATE						TRIP GENERATION VOLUME					
					A.M. PEAK HOUR			P.M. PEAK HOUR			A.M. PEAK HOUR			P.M. PEAK HOUR		
					IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
BACKGROUND CONDITIONS																
1	Old County Rd.	Commercial	23.80	KSF	1.12	0.44	1.56	0.67	1.14	1.81	27	10	37	16	27	43
								36% Pass-by Trips:			6	4	10	7	7	14
2	Pedro Point	Condo	6	DU	0.07	0.37	0.44	0.36	0.18	0.54	0	2	3	2	1	3
3	Pedro Point	Specialty Retail	1.00	KSF	0.33	0.22	0.55	0.75	0.99	1.74	0	0	1	1	1	2

Assumes 33% pass-by trips for specialty retail

No.	LOCATION	LAND USE	SIZE	UNITS	TRIP GENERATION RATE						TRIP GENERATION VOLUME					
					A.M. PEAK HOUR			P.M. PEAK HOUR			A.M. PEAK HOUR			P.M. PEAK HOUR		
					IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
PROJECT CONDITIONS																
4	Roberts Road	SFR	14	DU	0.19	0.56	0.75	0.65	0.36	1.01	3	8	11	9	5	14

No.	LOCATION	LAND USE	SIZE	UNITS	TRIP GENERATION RATE						TRIP GENERATION VOLUME					
					A.M. PEAK HOUR			P.M. PEAK HOUR			A.M. PEAK HOUR			P.M. PEAK HOUR		
					IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
CUMULATIVE CONDITIONS																
5	Piedmont Ave.	SFR	5	DU	0.19	0.56	0.75	0.65	0.36	1.01	1	3	4	3	2	5
6	Fassler Ave.	Condo/Townhouse	34	DU	0.07	0.37	0.44	0.36	0.18	0.54	3	12	15	12	6	18
7	Fassler Ave. @ Rte. 1	Condo/Townhouse	63	DU	0.07	0.37	0.44	0.36	0.18	0.54	5	23	28	23	11	34
12	1570 Higgins Way	SFR	11	DU	0.19	0.56	0.75	0.65	0.36	1.01	2	6	8	7	4	11

FACSIMILE TRANSMITTAL

RKH

Civil and Transportation Engineering
837 Columba Lane • Foster City, CA 94404
(650)212-0837 • Fax: (650)212-3150
E-Mail: RichardHopperRKH@aol.com

To: Kate Werner, TRA **Date:** June 4, 2007
Fax #: 650-327-4024 **Pages:** 6, including this cover sheet.
From: Richard Hopper
Subject: Harmony @1; signal warrants for Roberts Road & Fassler Avenue

COMMENTS:

I did a warrants analysis for the intersection and the only warrant that might be considered is the one-hour warrant. It barely meets the volume criteria for the Background and Project Conditions during the morning peak hour. It does not meet the volume warrant for the p.m. peak hour.

Because of the extensive queuing on Fassler Avenue through the intersection during the morning peak hour, a traffic signal would not be effective. It is not a warrant that normally is applied to a local street intersection like this under these circumstances.

Without having 24 hour approach volume counts at the intersection, I could not do a complete warrants analysis. However, based on an extrapolation of the peak hour volumes it does not appear that the intersection would meet the normal volume warrants criteria for signalization. The approach volume would be too low.

**PEAK HOUR VOLUME TRAFFIC SIGNAL WARRANTS
URBAN LOCATION
Figure 4C-3***

Intersection: Fassler Avenue & Roberts Road BY: RKH
 Location: Pacifica DATE: 06/04/2007
 Conditions: 2007 Background Conditions

Morning Peak Hour: 8-9 a.m.

Major Street: Fassler Avenue			Minor Street: Roberts Road			Minimum Volume Warrant	Warrant Met?
Approaches			Approaches				
Direction	Volume	Lanes	Direction	Volume	Lanes		
EB	465	2	NB	139	0	130	Yes
WB	1127	2	SB	0	1		
TOTAL:	1592	2	MAX:	139	1		

Afternoon Peak Hour: 5-6 p.m.

Major Street: Fassler Avenue			Minor Street: Roberts Road			Minimum Volume Warrant	Warrant Met?
Approaches			Approaches				
Direction	Volume	Lanes	Direction	Volume	Lanes		
EB	776	2	NB	60	0	230	No
WB	405	2	SB	0	1		
TOTAL:	1181	2	MAX:	60	1		

* MUTCD 2003 Edition

Volume Input

Major Street	Dir.	Peak Hour			Avg.	Factor	Daily Volume
		AM	PM				
Fassler Avenue	EB	465	776	621	10.0	6200	
	WB	1127	405	766	10.0	7700	
TOTAL:		1592	1181			13900	

Minor Street	Dir.	Peak Hour			Avg.	Factor	Daily Volume
		AM	PM				
Roberts Road	NB	139	60	100	10.0	1000	
	SB	0	0	0	10.0	0	
		MAX:				1000	

RKH - Civil and Transportation Engineering - Foster City, California

**PEAK HOUR VOLUME TRAFFIC SIGNAL WARRANTS
URBAN LOCATION
Figure 4C-3***

Intersection: Fassler Avenue & Roberts Road
 Location: Pacifica
 Conditions: 2007 with Project

BY: RKH
 DATE: 06/04/2007

Morning Peak Hour: 8-9 a.m.

Major Street: Fassler Avenue			Minor Street: Roberts Road			Minimum Volume Warrant	Warrant Met?
Approaches			Approaches				
Direction	Volume	Lanes	Direction	Volume	Lanes		
EB	488	2	NB	145	1	130	Yes
WB	1127	2	SB	0	0		
TOTAL:		1595	2	MAX:	145	1	

Afternoon Peak Hour: 5-6 p.m.

Major Street: Fassler Avenue			Minor Street: Roberts Road			Minimum Volume Warrant	Warrant Met?
Approaches			Approaches				
Direction	Volume	Lanes	Direction	Volume	Lanes		
EB	784	2	NB	65	1	230	No
WB	405	2	SB	0	0		
TOTAL:		1189	2	MAX:	65	1	

* MUTCD 2003 Edition

Volume Input

Major Street	Dir.	Peak Hour		Avg.	Factor	Daily Volume
		AM	PM			
Fassler Avenue	EB	488	784	626	10.0	6300
	WB	1127	405	766	10.0	7700
TOTAL:		1595	1189			14000

Minor Street	Dir.	Peak Hour		Avg.	Factor	Daily Volume
		AM	PM			
Roberts Road	NB	145	65	105	10.0	1100
	SB	0	0	0	10.0	0
		MAX:				1100

These major-street and minor-street volumes shall be for the same 8 hours for each condition; however, the 8 hours satisfied in Condition A shall not be required to be the same 8 hours satisfied in Condition B. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

Option:

If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds ~~70 km/h~~ 64 km/h or exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, the traffic volumes in the 56 percent columns in Table 4C-1 may be used in place of the 80 percent columns.

Section 4C.03 Warrant 2, Four-Hour Vehicular Volume

Support:

The Four-Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal.

Standard:

The need for a traffic control signal shall be considered if an engineering study finds that, for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) all fall above the applicable curve in Figure 4C-1 for the existing combination of approach lanes. On the minor street, the higher volume shall not be required to be on the same approach during each of these 4 hours.

Option:

If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds ~~70 km/h~~ 64 km/h or exceeds 40 mph or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, Figure 4C-2 may be used in place of Figure 4C-1.

Section 4C.04 Warrant 3, Peak Hour

Support:

The Peak Hour signal warrant is intended for use at a location where traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street.

Standard:

This signal warrant shall be applied only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.

The need for a traffic control signal shall be considered if an engineering study finds that the criteria in either of the following two categories are met:

- A. If all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:
 1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and
 2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and
 3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.
- B. The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average

day falls above the applicable curve in Figure 4C-3 for the existing combination of approach lanes.

Option:

If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 70 km/h (64 km/h or exceeds 40 mph), or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, Figure 4C-4 may be used in place of Figure 4C-3 to satisfy the criteria in the second category of the Standard.

Section 4C.05 Warrant 4. Pedestrian Volume

Support:

The Pedestrian Volume signal warrant is intended for application where the traffic volume on a major street is so heavy that pedestrians experience excessive delay in crossing the major street.

Standard:

The need for a traffic control signal at an intersection or midblock crossing shall be considered if an engineering study finds that both of the following criteria are met:

- A. The pedestrian volume crossing the major street at an intersection or midblock location during an average day is 100 or more for each of any 4 hours or 190 or more during any 1 hour; and
 - B. There are fewer than 60 gaps per hour in the traffic stream of adequate length to allow pedestrians to cross during the same period when the pedestrian volume criterion is satisfied.
- Where there is a divided street having a median of sufficient width for pedestrians to wait, the requirement applies separately to each direction of vehicular traffic.

The Pedestrian Volume signal warrant shall not be applied at locations where the distance to the nearest traffic control signal along the major street is less than 90 m (300 ft), unless the proposed traffic control signal will not restrict the progressive movement of traffic.

If this warrant is met and a traffic control signal is justified by an engineering study, the traffic control signal shall be equipped with pedestrian signal heads conforming to requirements set forth in Chapter 4E.

Guidance:

If this warrant is met and a traffic control signal is justified by an engineering study, then:

- A. If at an intersection, the traffic control signal should be traffic-actuated and should include pedestrian detectors.
- B. If at a nonintersection crossing, the traffic control signal should be pedestrian-actuated, parking and other sight obstructions should be prohibited for at least 30 m (100 ft) in advance of and at least 6.1 m (20 ft) beyond the crosswalk, and the installation should include suitable standard signs and pavement markings.
- C. Furthermore, if installed within a signal system, the traffic control signal should be coordinated.

Option:

The criterion for the pedestrian volume crossing the major roadway may be reduced as much as 50 percent if the average crossing speed of pedestrians is less than 1.2 m/sec (4 ft/sec).

A traffic control signal may not be needed at the study location if adjacent coordinated traffic control signals consistently provide gaps of adequate length for pedestrians to cross the street, even if the rate of gap occurrence is less than one per minute.

Section 4C.06 Warrant 5. School Crossing

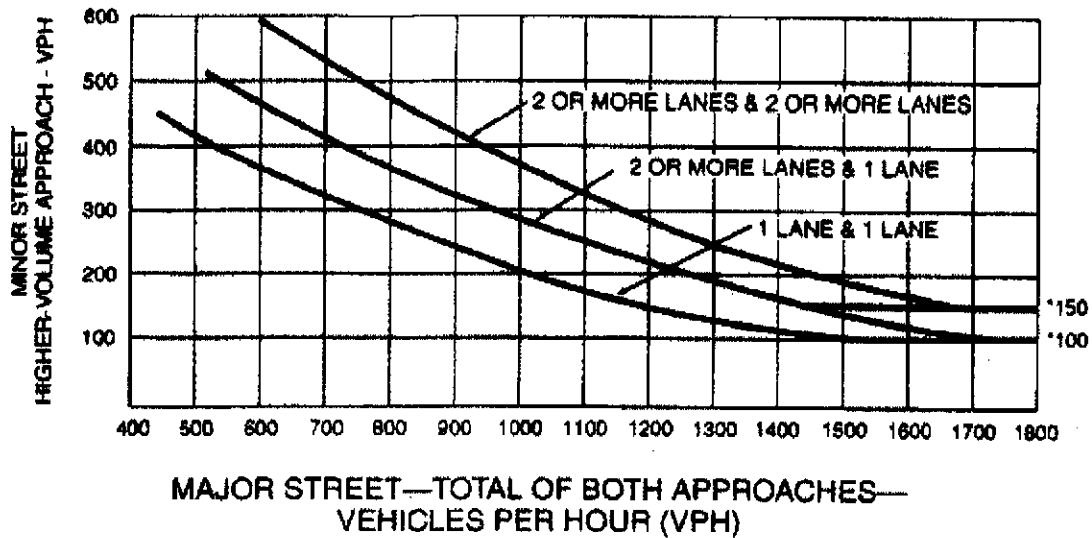
Support:

The School Crossing signal warrant is intended for application where the fact that school children cross the major street is the principal reason to consider installing a traffic control signal.

Standard:

The need for a traffic control signal shall be considered when an engineering study of the frequency and adequacy of gaps in the vehicular traffic stream as related to the number and size of groups of school children at an established school crossing across the major street shows that the number of adequate gaps in the traffic stream during the period when the children are using the

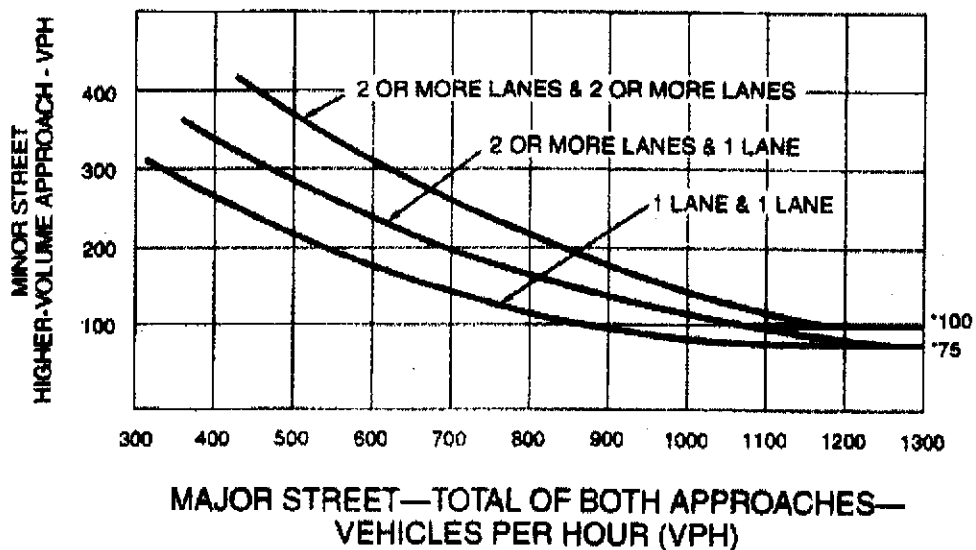
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h OR ABOVE 40 mph ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.