2.0 ENVIRONMENTAL SCREENING METHODOLOGY

The inputs to this environmental screening include the conceptual alignment plans, profiles, and cross-sections developed through Task 8 (*Detailed Definition of Alternatives Report*), existing published information, field reconnaissance, and application of industry standards. The following subsections describe the specific methodology used for each environmental element.

2.1 LAND USE AND SOCIOECONOMIC

Existing general plan documents and land use maps were reviewed to determine the planned land use characteristics of the corridor. A windshield survey of the corridors was undertaken to confirm existing general land uses. 1990 census tract data for the corridor was used to describe the general socioeconomic character of the area. Using the conceptual alignment drawings and typical cross-sections, the alternatives were evaluated in terms of (a) probable residential and business displacements, (b) compatibility with future land uses and policies, (c) potential effects on surrounding land uses, and (d) effects on community facilities and services.

2.2 CULTURAL RESOURCES

A Class I file search for previous projects and recorded historic and cultural resource sites was conducted at the California State Historic Preservation Office. This identified and located all known historic, archaeological, and other cultural resources adjacent to or potentially affected by any of the alternatives. Existing general plan documents and supporting environmental impact reports were reviewed to obtain any additional cultural information.

A qualitative discussion of each build alternative's potential impacts on these resources was documented.

2.3 NOISE AND VIBRATION

Using aerial photography and the windshield survey from previous tasks, ten representative noise-sensitive sites in the vicinity of the rail alignments were identified and approved by the Rail Oversight Committee. Existing ambient levels were measured at those locations for a 15-minute duration during the daytime hours of 8:00 a.m. to 6:00 p.m. These measurements were taken on November 28-29, 1995. The noise-sensitive sites included residential, schools, and open space. Agricultural, commercial, and industrial uses are not considered by federal agencies to be noise-sensitive. A screen check for the maximum sound level for alternative rail operations was estimated for the ten sensitive sites, and compared to FTA, FHWA and APTA guidelines. Any exceedance of these standards were noted and typical industry mitigation measures recommended.

Using the existing and predicted traffic volumes and speeds for Highway 1, noise levels from the highway were estimated and compared to standards and determinations of local general plan noise elements.

Future Transit Noise Levels: The future year transit noise level with and without the proposed project was determined. Noise predictions were modeled at each of the ten noise-sensitive locations adjoining the rail alignment based on reference data for the different types of rail

technology proposed under each of the alternatives. For the rack/adhesion technology proposed by Alternative 4, noise information provided by the manufacturer was used. Those areas where future build noise levels exceed industry criteria and those areas which have a substantial increase in predicted noise levels over existing noise levels were identified.

Future Transit Vibration Levels: Predicted groundborne vibration levels were determined for three sensitive receptors, based on the general assessment methodology detailed in the *Draft Guidance Manual for Transit Noise and Vibration Impact Assessment* (UMTA, 1990). The prediction methodology takes into account estimated soil-to-foundation coupling loss for different type buildings, rail discontinuities at crossovers and turnouts, train speed and distance. The end result is the estimated vertical vibration levels of the building floor surfaces, which were then compared to the industry criteria to determine the acceptability of the groundborne vibration.

Noise and Vibration Mitigation Measures: Conceptual noise mitigation measures were identified, such as the use of wayside noise barriers to shield noise-sensitive land uses. Industry vibration mitigation measures were identified in a separate Noise/Vibration Technical Report.

2.4 VISUAL IMPACTS

Using available topographic maps, the aerial photographs generated through the engineering tasks, and information contained in the region's planning and environmental documents, visual-sensitive receptors and visual resources were identified along the corridor. Using existing topographic maps and alternative conceptual engineering plans developed in Task 8, areas of major terrain alteration and/or vegetation removed by the introduction of the alternatives were noted.

For each alternative, areas of visual sensitivity were identified. The natural and man-made visual resources directly and indirectly affected by each alternative are discussed herein.

2.5 PARKS, RECREATION, AND OPEN SPACE

Potentially affected Section 4(f) resources, including parks, wetlands, and historic resources, were identified from land use maps, field survey, review of existing general plan documents, and the aerial photographs prepared in the engineering task. Using the conceptual engineering drawings from Task 8, the potential impacts on 4(f) resources are discussed herein.

2.6 PUBLIC SAFETY

Potential public safety problems with the introduction of new transportation facilities were identified using the conceptual engineering plans and operating scenarios for the alternatives. The number of grade controlled and uncontrolled crossings of the rail corridor was documented for each alternative. Relevant safety and security measures practiced on other systems during the construction and operation of alternative transportation modes were outlined as methods that could be applied as mitigation measures in the next phase of project development.

2.7 AIR QUALITY

Using available information from the Monterey Bay Unified Air Pollution Control District, the existing air quality conditions in the corridor were documented and compared with federal and state standards. Current air quality planning efforts are summarized. Based upon data from the travel forecasting tasks, an emission burden analysis was prepared for carbon monoxide, oxides of nitrogen, and reactive hydrocarbons for each build alternative.

2.8 BIOLOGICAL AND NATURAL RESOURCES

Using published information data sources such as the California Natural Diversity Data Base, National Wetland Inventory maps, aerial photographs, information contained in general plan documents, and field checks to verify locations, the vegetative, wetland, and water resource character of the corridor adjacent to each alignment was determined and the approximate locations documented on the mapping used in Task 8. Locations of potentially affected aquifer resources were determined from existing data sources.

Based on the types of habitats present or near the alignments and the list of associated endangered, threatened, or rare plant or animal species, the probable occurrence of these species in the vicinity of the alignment was qualitatively assessed.

The locations of other bodies of water, riparian areas and floodplains that may be crossed by any of the alternatives were documented and, based on the conceptual engineering from Task 8, the possible impacts of each alternative were qualitatively assessed.

2.9 POTENTIAL CONTAMINANTS

A records search of reported potential contaminant sites or incidents within and in the vicinity of the proposed alignments was undertaken to identify any known potential contaminant sites. Record sources reviewed included:

Federal sources:

National Priority List (NPL/Superfund sites)
NPL/Potentially Responsible Parties (PRP)
CERCLA sites
Emergency Response Notification Systems (ERNS)
Resource Conservation and Recovery Act (RCRA) Notifier Facilities
RCRA Correction Action Sites
RCRA Subtitle D (landfills)
Facility Index System (FINDS)

State sources:

Leaking Underground Storage Tanks (LUST)
Registered Underground Storage Tanks (RUST)
State landfills
State Superfund sites

The locations of these observed sites were shown on mapping. The relationships of these sites to the project alternatives were evaluated.

2.10 ENERGY

Planning level estimates of energy expenditures in the corridor were developed for each alternative. Data and information required for this analysis included systems and station operational characteristics (from Task 9), current and future year vehicles miles traveled (VMT), and typical construction techniques, equipment, and time frames. The standard Caltrans methodology was applied to determine the energy consumption for each alternative.